

ThinkPad® Laptops

U.S.

Product Specifications Reference

PSREF

Version 468, February 2015

ThinkPad® Laptops

Including:

- L Series
- T Series
- W Series
- X Series
- E Series
- S Series

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Summary of Changes

This section describes the technical changes made in this edition.

This edition might also include minor corrections and editorial changes which are not identified.

February 11, 2015 - Version 468

Additions in this update

▶ **New product(s)**

None

▶ **New model(s)**

ThinkPad L450 new models announced February 2015

ThinkPad 11e new models announced February 2015

▶ **Others**

None

Changes in this update

▶ **None**

Withdrawals in this update

▶ **Withdrawn product(s)**

None



Lenovo® ThinkPad L440



Lenovo ThinkPad L440



Lenovo ThinkPad L440



Lenovo ThinkPad L440



Lenovo ThinkPad L440

ThinkPad L440 Platform Specifications

Product Specifications Reference (PSREF)

Positioning	Mainstream value performance; two spindles							WLAN ⁴	<p>One of the following, configurable by model:</p> <ul style="list-style-type: none"> ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card Intel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card
Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor							WWAN (optional)	<p>One of the following, configurable by model (mutually exclusive with M.2 SSD):</p> <ul style="list-style-type: none"> Wireless WAN upgradable Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 card (US models) Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card (WE models) Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card (WE models)
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics	
	Cel 2950M	2	4	2 GHz	-	2MB	DDR3L-1600	Intel HD Graphics	
	i3-4000M			2.4 GHz	-	3MB		Intel HD Graphics	
	i5-4200M			2.5 GHz	3.1 GHz	3MB		Intel HD Graphics	
	i5-4210M			2.6 GHz	3.2 GHz	3MB		Intel HD Graphics	
	i5-4300M			2.6 GHz	3.3 GHz	3MB		Intel HD Graphics	
	i5-4330M			2.8 GHz	3.5 GHz	3MB		Intel HD Graphics	
	i7-4600M			2.9 GHz	3.6 GHz	4MB		Intel HD Graphics	
	i7-4702MQ	4	8	2.2 GHz	3.2 GHz	6MB			
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets							SIM card (optional)	<p>One of the following, configurable by model:</p> <ul style="list-style-type: none"> AT&T® or Verizon® LTE (4G), contract required with service provider (US models) Lenovo SIM, out-of-box service, pay-as-you-go via credit card, no contract required (WE models) User selectable, contract required with service provider
Optical Storage	DVD burner, 9.5mm high, fixed, not removable, tray-in Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ Some: SSHD with 8GB NAND flash memory Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card							Bluetooth™ Ethernet	<p>Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter HM86 model: Intel Ethernet Connection I217-V (Clarkville) QM87 model: Intel Ethernet Connection I217-LM (Clarkville)</p>
M.2 SSD								Security Security chip vPro (optional) Fingerprint reader	<p>Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Intel vPro Technology Optional: Fingerprint reader on the keyboard bezel, swipe sensor</p>
Widescreen display	Some: 14.0" (355mm) HD (1366x768), anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 500:1 contrast ratio							Limited warranty ¹²	<p>One of the following, configurable by model:</p> <ul style="list-style-type: none"> 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service²⁴ 3-year/1-yr battery limited onsite service, IWS (International Warranty Service¹⁷)
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus							Preload	<p>Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit</p> <ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support ThinkVantage Product Recovery Rescue and Recovery™ ThinkVantage System Update Lenovo Cloud Storage by SugarSync PC Device Stage Nitro Pro Evernote® Skype™ Microsoft® Office preloaded; purchase a product key to activate Norton™ Internet Security (30 days of virus definitions) Cyberlink PowerDVD Cyberlink Power2Go Cyberlink PowerProducer <p>Some: Windows 8 / 8.1 64-bit Some: Windows 8 / 8.1 Pro 64-bit</p> <ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support Lenovo Companion ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync - Metro (Windows 8 model) Lenovo Cloud Storage by SugarSync (Windows 8 model) PC Device Stage AccuWeather Amazon Kindle Nitro Pro Evernote Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD Cyberlink Power2Go Cyberlink PowerProducer
Graphics	Intel HD Graphics 4600 in processor, supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports dual independent display; Max resolution: 3840x2160@30Hz (DP via mDP cable); 1920x1200@60Hz (VGA)							Environment	EPEAT™ Gold; ENERGY STAR® 6.0; RoHS-compliant
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch								
ThinkLight™	None								
Dimensions ³ Weight ²	14.0W" (WxDxH): 13.54" x 9.41" x 1.14-1.35"; 344mm x 239mm x 29.0-34.25mm								
	Models	6-cell 48Wh		6-cell 56Wh		9-cell 99.9Wh			
	Weight	4.96 lb / 2.25kg		5.0 lb / 2.27kg		5.36 lb / 2.43kg			
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic								
Battery type	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication								
Max battery life ¹⁰	Models	6-cell 48Wh		6-cell 56Wh		9-cell 99.9Wh			
	Win7 (MobileMark® 2007)	10 hr		11 hr		21 hr			
	Win8 (MobileMark 2012)	6.2 hr		7.5 hr		13 hr			
AC adapter	65-watt AC adapter								
Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset								
ExpressCard	HM86 model: One slot (ExpressCard/34, ExpressCard/54)								
Smart card reader	Optional: Smart card reader								
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)								
Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector								
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack								

ThinkPad L440 20AT (TopSeller)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Chipset	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Fingerprint reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AT0042US	Cel 2950M	No	HD 4600	HM86	4GBx1	14" HD	500G 7200	7260 ac+BT	EM7355	Select	None	Exp/54	720p	None	6(56wh)	65W	Win8.1 DG Win7	1-depot	No	03/14
20AT0043US	Cel 2950M	No	HD 4600	HM86	2GBx1	14" HD	500G 7200	11b/g/n+BT	EM7355	Select	None	Exp/54	720p	None	6(56wh)	65W	Win8.1 DG Win7	1-depot	No	03/14
20AT001YUS	i3-4000M	No	HD 4600	HM86	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	1-depot	No	09/13
20AT0020US	i5-4200M	No	HD 4600	HM86	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	1-depot	No	09/13
20AT0021US	i5-4200M	No	HD 4600	HM86	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	None	6(56wh)	65W	Win8 DG Win7	1-depot	No	09/13
20AT002AUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	None	720p	None	6(56wh)	65W	Win8 DG Win7	1-depot	No	11/13
20AT002MUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	1-depot	No	11/13
20AT002NUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	Smart	None	720p	Finger	9	65W	Win8 DG Win7	1-depot	No	11/13
20AT002SUS	i5-4330M	vPro	HD 4600	QM87	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	Smart	None	720p	None	6(56wh)	65W	Win8 DG Win7	1-depot	No	11/13
20AT002XUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	1-depot	No	11/13
20AT0027US	i7-4702MQ	No	HD 4600	HM86	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	09/13
20AT0028US	i7-4702MQ	No	HD 4600	HM86	4GBx1	14" HD+	1T 5400	7260 ac+BT	16GB	None	None	Exp/54	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	09/13
20AT0029US	i7-4702MQ	No	HD 4600	HM86	4GBx1	14" HD+	256G SSD Opal	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	09/13
20AT002BUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AT002CUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD+	128G SSD	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AT002DUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	None	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	11/13
20AT002EUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD+	180G SSD Opal	6235 a/b/g/n+BT	Upg	None	None	None	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	10/13
20AT002FUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD+	180G SSD Opal	6235 a/b/g/n+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	10/13
20AT002GUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD+	256G SSD Opal	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AT002HUS	i7-4600M	vPro	HD 4600	QM87	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	None	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	11/13

• For detailed platform specifications, please see [ThinkPad L440 Platform Specifications sheet](#)

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch																																						
	<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr> <td>Cel 2950M</td> <td rowspan="6">2</td> <td>2 GHz</td> <td>-</td> <td>2MB</td> <td rowspan="6">DDR3L-1600</td> </tr> <tr> <td>i3-4000M</td> <td>2.4 GHz</td> <td>-</td> <td>3MB</td> </tr> <tr> <td>i5-4200M</td> <td>2.5 GHz</td> <td>3.1 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4300M</td> <td>2.6 GHz</td> <td>3.3 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4330M</td> <td>2.8 GHz</td> <td>3.5 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-4600M</td> <td>2.9 GHz</td> <td>3.6 GHz</td> <td>4MB</td> </tr> <tr> <td>i7-4702MQ</td> <td>4</td> <td>2.2 GHz</td> <td>3.2 GHz</td> <td>6MB</td> <td></td> </tr> </tbody> </table>	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Cel 2950M	2	2 GHz	-	2MB	DDR3L-1600	i3-4000M	2.4 GHz	-	3MB	i5-4200M	2.5 GHz	3.1 GHz	3MB	i5-4300M	2.6 GHz	3.3 GHz	3MB	i5-4330M	2.8 GHz	3.5 GHz	3MB	i7-4600M	2.9 GHz	3.6 GHz	4MB	i7-4702MQ	4	2.2 GHz	3.2 GHz	6MB		ThinkLight™	None
Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																																				
Cel 2950M	2	2 GHz	-	2MB	DDR3L-1600																																				
i3-4000M		2.4 GHz	-	3MB																																					
i5-4200M		2.5 GHz	3.1 GHz	3MB																																					
i5-4300M		2.6 GHz	3.3 GHz	3MB																																					
i5-4330M		2.8 GHz	3.5 GHz	3MB																																					
i7-4600M		2.9 GHz	3.6 GHz	4MB																																					
i7-4702MQ	4	2.2 GHz	3.2 GHz	6MB																																					
		Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset																																						
		ExpressCard	<i>HM86 model:</i> One slot (ExpressCard/34, ExpressCard/54)																																						
		Smart card reader	<i>Optional:</i> Smart card reader																																						
		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																						
		Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector																																						
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	WLAN ⁴	<i>11b/g/n+BT:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card <i>7260 b/g/n+BT:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>6235 a/b/g/n+BT:</i> Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT, M.2 card <i>7260 a/b/g/n+BT:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 ac+BT:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card																																						
Optical Storage	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> SSHD with 8GB NAND flash memory	WWAN (optional)	<i>Upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS																																						
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card	SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>Select:</i> User selectable, contract required with service provider																																						
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 500:1 contrast ratio	Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																						
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	Ethernet	<i>HM86 model:</i> Intel Ethernet Connection I217-V (Clarkville) <i>QM87 model:</i> Intel Ethernet Connection I217-LM (Clarkville)																																						
Graphics	Intel HD Graphics 4600 in processor	Security	Power-on password, hard disk password, supervisor password, security keyhole																																						
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.14-1.35"; 344mm x 239mm x 29.0-34.25mm	Security chip	Trusted Platform Module, TCG 1.2-compliant																																						
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Weight	4.96 lb / 2.25kg	5.0 lb / 2.27kg	5.36 lb / 2.43kg																																						
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor																																						
Battery type	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication	Preload	<i>Win8 / 8.1 DG Win7:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit																																						
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AC adapter	65-watt AC adapter																																								
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																																								

See footnotes for more detailed information

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ThinkPad L440 20AT (TopSeller) - II

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Chipset	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Fingerprint reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AT002JUS	i7-4600M	vPro	HD 4600	QM87	4GBx1	14" HD+	1T 5400	7260 ac+BT	16GB	None	None	None	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	11/13
20AT002KUS	i7-4600M	vPro	HD 4600	QM87	4GBx1	14" HD+	256G SSD Opal	7260 ac+BT	Upg	None	None	None	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	11/13
20AT002LUS	i7-4600M	vPro	HD 4600	QM87	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	Smart	None	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	11/13
20AT002PUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD+	500G 7200	7260 ac+BT	EM7355	Select	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AT002QUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD+	180G SSD Opal	6235 a/b/g/n+BT	EM7355	Select	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	10/13
20AT002RUS	i7-4600M	vPro	HD 4600	QM87	4GBx1	14" HD+	500G 7200	7260 ac+BT	EM7355	Select	Smart	None	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	11/13
20AT002TUS	i5-4330M	vPro	HD 4600	QM87	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AT002UUS	i5-4330M	vPro	HD 4600	QM87	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	Smart	None	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	11/13
20AT002VUS	i5-4330M	vPro	HD 4600	QM87	4GBx1	14" HD+	180G SSD Opal	6235 a/b/g/n+BT	Upg	None	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	10/13
20AT002WUS	i5-4330M	vPro	HD 4600	QM87	4GBx1	14" HD+	256G SSD Opal	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13

• For detailed platform specifications, please see [ThinkPad L440 Platform Specifications sheet](#)

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch																																						
	<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr> <td>Cel 2950M</td> <td rowspan="6">2</td> <td>2 GHz</td> <td>-</td> <td>2MB</td> <td rowspan="6">DDR3L-1600</td> </tr> <tr> <td>i3-4000M</td> <td>2.4 GHz</td> <td>-</td> <td>3MB</td> </tr> <tr> <td>i5-4200M</td> <td>2.5 GHz</td> <td>3.1 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4300M</td> <td>2.6 GHz</td> <td>3.3 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4330M</td> <td>2.8 GHz</td> <td>3.5 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-4600M</td> <td>2.9 GHz</td> <td>3.6 GHz</td> <td>4MB</td> </tr> <tr> <td>i7-4702MQ</td> <td>4</td> <td>2.2 GHz</td> <td>3.2 GHz</td> <td>6MB</td> <td></td> </tr> </tbody> </table>	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Cel 2950M	2	2 GHz	-	2MB	DDR3L-1600	i3-4000M	2.4 GHz	-	3MB	i5-4200M	2.5 GHz	3.1 GHz	3MB	i5-4300M	2.6 GHz	3.3 GHz	3MB	i5-4330M	2.8 GHz	3.5 GHz	3MB	i7-4600M	2.9 GHz	3.6 GHz	4MB	i7-4702MQ	4	2.2 GHz	3.2 GHz	6MB		ThinkLight™	None
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i7-4600M		2.9 GHz	3.6 GHz	4MB																																					
i7-4702MQ	4	2.2 GHz	3.2 GHz	6MB																																					
		Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset																																						
		ExpressCard	<i>HM86 model:</i> One slot (ExpressCard/34, ExpressCard/54)																																						
		Smart card reader	<i>Optional:</i> Smart card reader																																						
		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																						
		Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector																																						
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Optical Storage	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> SSHD with 8GB NAND flash memory <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card	WWAN (optional)	<i>Upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS																																						
M.2 SSD		SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>Select:</i> User selectable, contract required with service provider																																						
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 500:1 contrast ratio	Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																						
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	Ethernet	<i>HM86 model:</i> Intel Ethernet Connection I217-V (Clarkville) <i>QM87 model:</i> Intel Ethernet Connection I217-LM (Clarkville)																																						
Graphics	Intel HD Graphics 4600 in processor	Security	Power-on password, hard disk password, supervisor password, security keyhole																																						
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Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor																																						
Battery type	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication	Preload	<i>Win8 / 8.1 DG Win7:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit																																						
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AC adapter	65-watt AC adapter																																								
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																																								

See footnotes for more detailed information

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ThinkPad L440 20AS

Model	Processor	vPro	Graphics	Chipset	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Fingerprint reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AS0063US	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD	500G 7200	7260 a/b/g/n+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	1-depot	Yes	04/14
20AS005TUS	i5-4200M	No	HD 4600	HM86	4GBx1	14" HD	128G SSD	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	3-depot	No	04/14
20AS002CUS	i3-4000M	No	HD 4600	HM86	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	09/13
20AS002DUS	i3-4000M	No	HD 4600	HM86	2GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	09/13
20AS002EUS	i5-4200M	No	HD 4600	HM86	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	None	6(56wh)	65W	Win8 DG Win7	3-depot	No	09/13
20AS002FUS	i5-4200M	No	HD 4600	HM86	4GBx1	14" HD	500G 7200	6235 a/b/g/n+BT	Upg	None	None	Exp/54	720p	None	6(56wh)	65W	Win8 DG Win7	3-depot	No	09/13
20AS002GUS	i5-4200M	No	HD 4600	HM86	4GBx1	14" HD	128G SSD	6235 a/b/g/n+BT	Upg	None	None	Exp/54	720p	None	6(56wh)	65W	Win8 DG Win7	3-depot	No	09/13
20AS002HUS	i5-4200M	No	HD 4600	HM86	4GBx1	14" HD	128G SSD	6235 a/b/g/n+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	09/13
20AS002JUS	i7-4702MQ	No	HD 4600	HM86	8GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	09/13
20AS002KUS	i7-4702MQ	No	HD 4600	HM86	8GBx1	14" HD	1T 5400	6235 a/b/g/n+BT	Upg	None	None	Exp/54	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	09/13
20AS002LUS	i7-4702MQ	No	HD 4600	HM86	8GBx1	14" HD	128G SSD	6235 a/b/g/n+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	09/13
20AS002MUS	i7-4702MQ	No	HD 4600	HM86	8GBx1	14" HD+	128G SSD	6235 a/b/g/n+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	09/13
20AS002NUS	i7-4702MQ	No	HD 4600	HM86	8GBx1	14" HD+	128G SSD	6235 a/b/g/n+BT	Upg	None	None	Exp/54	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	09/13
20AS002SUS	i7-4702MQ	No	HD 4600	HM86	8GBx1	14" HD+	1T 5400	7260 ac+BT	EM7355	Select	None	Exp/54	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	09/13
20AS002TUS	i7-4702MQ	No	HD 4600	HM86	8GBx1	14" HD+	256G SSD Opal	7260 ac+BT	EM7355	Select	None	Exp/54	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	09/13
20AS005UUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD	128G SSD	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	3-depot	No	04/14
20AS005VUS	i5-4300M	vPro	HD 4600	QM87	8GBx1	14" HD	256G SSD Opal	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	3-depot	No	04/14
20AS005WUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD	500G 7200 Opal	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	3-depot	No	04/14
20AS005XUS	i5-4300M	vPro	HD 4600	QM87	8GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	None	720p	Finger	9	65W	Win8.1 DG Win7	3-depot	No	04/14
20AS005YUS	i7-4600M	vPro	HD 4600	QM87	8GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	3-depot	No	04/14

• For detailed platform specifications, please see [ThinkPad L440 Platform Specifications sheet](#)

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch																																						
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i7-4600M		2.9 GHz	3.6 GHz	4MB																																					
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		Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset																																						
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		Smart card reader	<i>Optional:</i> Smart card reader																																						
		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																						
		Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector																																						
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	WLAN ⁴	<i>11b/g/n+BT:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card <i>7260 b/g/n+BT:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>6235 a/b/g/n+BT:</i> Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT, M.2 card <i>7260 a/b/g/n+BT:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 ac+BT:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card																																						
Optical Storage	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> SSHD with 8GB NAND flash memory	WWAN (optional)	<i>Upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS																																						
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card	SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>Select:</i> User selectable, contract required with service provider																																						
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 500:1 contrast ratio	Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																						
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	Ethernet	<i>HM86 model:</i> Intel Ethernet Connection I217-V (Clarkville) <i>QM87 model:</i> Intel Ethernet Connection I217-LM (Clarkville)																																						
Graphics	Intel HD Graphics 4600 in processor	Security	Power-on password, hard disk password, supervisor password, security keyhole																																						
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.14-1.35"; 344mm x 239mm x 29.0-34.25mm	Security chip	Trusted Platform Module, TCG 1.2-compliant																																						
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Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor																																						
Battery type	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication	Preload	<i>Win8 / 8.1 DG Win7:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit																																						
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Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																																								

See footnotes for more detailed information

ThinkPad L440 20AS - II

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Chipset	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Finger-print reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AS0060US	i7-4600M	vPro	HD 4600	QM87	8GBx1	14" HD+	500G 7200 Opal	7260 ac+BT	Upg	None	Smart	None	720p	Finger	9	65W	Win8.1 DG Win7	3-depot	No	04/14
20AS0061US	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD+	500G 7200	7260 a/b/g/n+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	3-depot	Yes	04/14
20AS0062US	i7-4600M	vPro	HD 4600	QM87	8GBx1	14" HD+	256G SSD Opal	7260 a/b/g/n+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	3-depot	Yes	04/14
20AS0064US	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD	500G 7200	7260 a/b/g/n+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	3-depot	Yes	04/14
20AS0065US	i5-4300M	vPro	HD 4600	QM87	8GBx1	14" HD+	256G SSD Opal	7260 a/b/g/n+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	3-depot	Yes	04/14
20AS0066US	i7-4600M	vPro	HD 4600	QM87	4GBx1	14" HD+	500G 7200	7260 a/b/g/n+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	3-depot	Yes	04/14
20AS001NUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AS002UUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD	500G 7200	6235 a/b/g/n+BT	Upg	None	None	None	720p	None	6(56wh)	65W	Win8 DG Win7	3-depot	No	09/13
20AS002VUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	14" HD	500G 7200	6235 a/b/g/n+BT	Upg	None	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	09/13
20AS002WUS	i5-4330M	vPro	HD 4600	QM87	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AS002XUS	i5-4330M	vPro	HD 4600	QM87	4GBx1	14" HD	500G 7200	7260 ac+BT	16GB	None	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AS002YUS	i5-4330M	vPro	HD 4600	QM87	4GBx1	14" HD	128G SSD	7260 ac+BT	Upg	None	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AS0030US	i5-4330M	vPro	HD 4600	QM87	8GBx1	14" HD	128G SSD	6235 a/b/g/n+BT	Upg	None	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	09/13
20AS0031US	i7-4600M	vPro	HD 4600	QM87	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AS0032US	i7-4600M	vPro	HD 4600	QM87	8GBx1	14" HD+	500G 7200	6235 a/b/g/n+BT	16GB	None	None	None	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	09/13
20AS0033US	i7-4600M	vPro	HD 4600	QM87	8GBx1	14" HD+	128G SSD	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AS0034US	i7-4600M	vPro	HD 4600	QM87	8GBx1	14" HD+	256G SSD Opal	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13

• For detailed platform specifications, please see [ThinkPad L440 Platform Specifications sheet](#)

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch																																						
	<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr> <td>Cel 2950M</td> <td rowspan="6">2</td> <td>2 GHz</td> <td>-</td> <td>2MB</td> <td rowspan="6">DDR3L-1600</td> </tr> <tr> <td>i3-4000M</td> <td>2.4 GHz</td> <td>-</td> <td>3MB</td> </tr> <tr> <td>i5-4200M</td> <td>2.5 GHz</td> <td>3.1 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4300M</td> <td>2.6 GHz</td> <td>3.3 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4330M</td> <td>2.8 GHz</td> <td>3.5 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-4600M</td> <td>2.9 GHz</td> <td>3.6 GHz</td> <td>4MB</td> </tr> <tr> <td>i7-4702MQ</td> <td>4</td> <td>2.2 GHz</td> <td>3.2 GHz</td> <td>6MB</td> <td></td> </tr> </tbody> </table>	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Cel 2950M	2	2 GHz	-	2MB	DDR3L-1600	i3-4000M	2.4 GHz	-	3MB	i5-4200M	2.5 GHz	3.1 GHz	3MB	i5-4300M	2.6 GHz	3.3 GHz	3MB	i5-4330M	2.8 GHz	3.5 GHz	3MB	i7-4600M	2.9 GHz	3.6 GHz	4MB	i7-4702MQ	4	2.2 GHz	3.2 GHz	6MB		ThinkLight™	None
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		Smart card reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																						
		Multicard reader	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector																																						
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Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	WLAN ⁴	<i>11b/g/n+BT:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card <i>7260 b/g/n+BT:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>6235 a/b/g/n+BT:</i> Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT, M.2 card <i>7260 a/b/g/n+BT:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 ac+BT:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card																																						
Optical Storage	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> SSHD with 8GB NAND flash memory <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card	WWAN (optional)	<i>Upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS																																						
M.2 SSD		SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>Select:</i> User selectable, contract required with service provider																																						
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 500:1 contrast ratio	Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																						
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	Ethernet	<i>HM86 model:</i> Intel Ethernet Connection I217-V (Clarkville) <i>QM87 model:</i> Intel Ethernet Connection I217-LM (Clarkville)																																						
Graphics	Intel HD Graphics 4600 in processor	Security	Power-on password, hard disk password, supervisor password, security keyhole																																						
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.14-1.35"; 344mm x 239mm x 29.0-34.25mm	Security chip	Trusted Platform Module, TCG 1.2-compliant																																						
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Battery type	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication	Preload	<i>Win8 / 8.1 DG Win7:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit																																						
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See footnotes for more detailed information

(OS1-4) © Lenovo

ThinkPad L440 20AS (Windows 8)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Chipset	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Fingerprint reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AS0003US	i5-4200M	No	HD 4600	HM86	4GBx1	14" HD	500G 7200	7260 b/g/n+BT	Upg	None	None	Exp/54	720p	None	6(48wh)	65W	Win8 64	3-depot	No	09/13
20AS0012US	i5-4200M	No	HD 4600	HM86	4GBx1	14" HD	500G 7200	6235 a/b/g/n+BT	Upg	None	None	Exp/54	720p	None	6(48wh)	65W	Win8 P64	3-depot	Yes	09/13

• For detailed platform specifications, please see [ThinkPad L440 Platform Specifications sheet](#)

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Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	WLAN ⁴	<i>11b/g/n+BT:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card <i>7260 b/g/n+BT:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>6235 a/b/g/n+BT:</i> Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT, M.2 card <i>7260 a/b/g/n+BT:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 ac+BT:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card																																						
Optical Storage	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> SSHD with 8GB NAND flash memory <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card	WWAN (<i>optional</i>)	<i>Upg:</i> Wireless WAN upgradable Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS																																						
M.2 SSD		SIM card (<i>optional</i>)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>Select:</i> User selectable, contract required with service provider																																						
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 500:1 contrast ratio	Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																						
Camera (<i>optional</i>)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	Ethernet	<i>HM86 model:</i> Intel Ethernet Connection I217-V (Clarkville) <i>QM87 model:</i> Intel Ethernet Connection I217-LM (Clarkville)																																						
Graphics	Intel HD Graphics 4600 in processor	Security	Power-on password, hard disk password, supervisor password, security keyhole																																						
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.14-1.35"; 344mm x 239mm x 29.0-34.25mm	Security chip	Trusted Platform Module, TCG 1.2-compliant																																						
Weight ²	<table border="1"> <thead> <tr> <th>Models</th> <th>6-cell 48Wh</th> <th>6-cell 56Wh</th> <th>9-cell 99.9Wh</th> </tr> </thead> <tbody> <tr> <td><i>Weight</i></td> <td>4.96 lb / 2.25kg</td> <td>5.0 lb / 2.27kg</td> <td>5.36 lb / 2.43kg</td> </tr> </tbody> </table>	Models	6-cell 48Wh	6-cell 56Wh	9-cell 99.9Wh	<i>Weight</i>	4.96 lb / 2.25kg	5.0 lb / 2.27kg	5.36 lb / 2.43kg	vPro (<i>optional</i>)	Intel vPro Technology																														
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Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor																																						
Battery type	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication	Preload	<i>Win8 / 8.1 DG Win7:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit																																						
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AC adapter	65-watt AC adapter																																								
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																																								

See footnotes for more detailed information

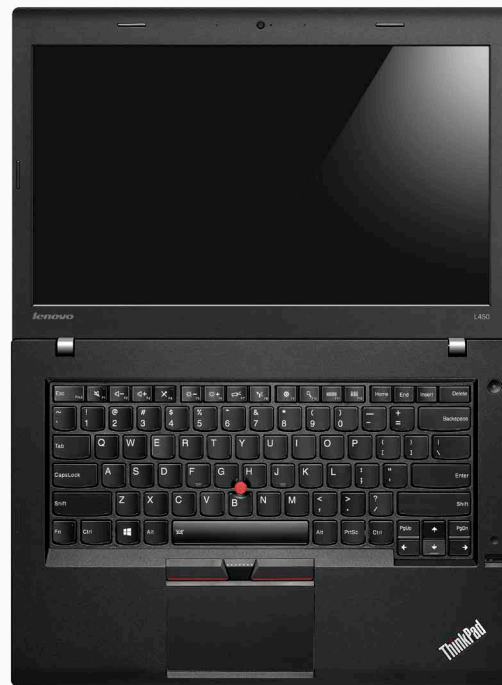
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Lenovo® ThinkPad L450



Lenovo ThinkPad L450



Lenovo ThinkPad L450



Lenovo ThinkPad L450



Lenovo ThinkPad L450

ThinkPad L450 Platform Specifications

Product Specifications Reference (PSREF)

Processor	<p>4th Generation Intel® Core™ i5 or 5th Generation Intel Core i3 / i5 / i7 Processor</p> <table border="1"> <thead> <tr> <th>Processor Number</th> <th># of Cores</th> <th># of Threads</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> <th>Processor Graphics</th> </tr> </thead> <tbody> <tr> <td>i5-4300U</td> <td rowspan="5">2</td> <td rowspan="5">4</td> <td>1.9 GHz</td> <td>2.9 GHz</td> <td>3MB</td> <td rowspan="5">DDR3L-1600</td> <td>Intel HD Graphics 4400</td> </tr> <tr> <td>i3-5005U</td> <td>2 GHz</td> <td>-</td> <td>3MB</td> <td rowspan="4">Intel HD Graphics 5500</td> </tr> <tr> <td>i5-5200U</td> <td>2.2 GHz</td> <td>2.7 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-5300U</td> <td>2.3 GHz</td> <td>2.9 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-5500U</td> <td>2.4 GHz</td> <td>3 GHz</td> <td>4MB</td> </tr> </tbody> </table>	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics	i5-4300U	2	4	1.9 GHz	2.9 GHz	3MB	DDR3L-1600	Intel HD Graphics 4400	i3-5005U	2 GHz	-	3MB	Intel HD Graphics 5500	i5-5200U	2.2 GHz	2.7 GHz	3MB	i5-5300U	2.3 GHz	2.9 GHz	3MB	i7-5500U	2.4 GHz	3 GHz	4MB	<p>Dimensions³ 14.0" (WxDxH): 13.34" x 9.23" x 0.95"; 339mm x 235mm x 24.3mm</p> <p>Weight²</p> <table border="1"> <thead> <tr> <th>Models</th> <th>3-cell</th> <th>6-cell</th> </tr> </thead> <tbody> <tr> <td>Integrated</td> <td>4.25 lb / 1.93 kg</td> <td>4.43 lb / 2.01 kg</td> </tr> <tr> <td>Discrete</td> <td>4.30 lb / 1.95 kg</td> <td>4.50 lb / 2.04 kg</td> </tr> </tbody> </table> <p>Case material PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic</p>	Models	3-cell	6-cell	Integrated	4.25 lb / 1.93 kg	4.43 lb / 2.01 kg	Discrete	4.30 lb / 1.95 kg	4.50 lb / 2.04 kg
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i5-5300U			2.3 GHz	2.9 GHz	3MB																																							
i7-5500U			2.4 GHz	3 GHz	4MB																																							
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Integrated	4.25 lb / 1.93 kg	4.43 lb / 2.01 kg																																										
Discrete	4.30 lb / 1.95 kg	4.50 lb / 2.04 kg																																										
Graphics	<p>Intel HD Graphics 4400 or 5500 in processor only, or Intel HD Graphics 5500 in processor and AMD Radeon™ R5 M240, 2GB memory; supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays; Max resolution: 3840x2160@60Hz (DP via mDP cable); 1920x1200@60Hz (VGA)</p>	<p>Smart card reader <i>Optional:</i> Smart card reader</p> <p>Multicard reader 4-in-1 reader (MMC, SD, SDHC, SDXC)</p> <p>Ports Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)</p> <p>Camera (<i>optional</i>) HD720p resolution, low light sensitive, fixed focus</p> <p>Audio support HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack</p>																																										
Chipset	<p>Intel SoC (System on Chip) platform 16GB max⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets</p>	<p>Keyboard 6-row, spill-resistant, multimedia Fn keys</p> <p>UltraNav™ TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch</p> <p>Security Power-on password, hard disk password, supervisor password, security keyhole</p> <p>Security chip Trusted Platform Module, TCG 1.2-compliant</p> <p>ThinkEngine Delivers improved thermal and power efficiency, up to 30 day standby, faster resume time, enhanced security, as well as anti-tampering measures</p> <p>vPro (<i>optional</i>) Intel vPro Technology</p> <p>Fingerprint reader <i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor</p>																																										
Display	<p><i>Some:</i> 14.0" (355mm) HD (1366x768), anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio</p> <p><i>Some:</i> 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS</p>	<p>Battery type Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)</p> <p>Max battery life¹⁰</p> <table border="1"> <thead> <tr> <th>Models</th> <th>3-cell 23Wh</th> <th>6-cell 48Wh</th> <th>6-cell 72Wh</th> </tr> </thead> <tbody> <tr> <td>Integrated</td> <td>5.2 hr</td> <td>10.7 hr</td> <td>16 hr</td> </tr> <tr> <td>Discrete</td> <td>5.1 hr</td> <td>10.6 hr</td> <td>15.9 hr</td> </tr> </tbody> </table> <p>AC adapter 45W AC adapter or 65W AC adapter</p>	Models	3-cell 23Wh	6-cell 48Wh	6-cell 72Wh	Integrated	5.2 hr	10.7 hr	16 hr	Discrete	5.1 hr	10.6 hr	15.9 hr																														
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Multi-touch	None	<p>Preload Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit</p> <ul style="list-style-type: none"> Lenovo Solution Center Lenovo SHAREit Lenovo Companion ThinkVantage Product Recovery Rescue and Recovery™ ThinkVantage System Update PC Device Stage Adobe® Reader® Evernote® Skype™ Maxthon Cloud Browser Microsoft® Office preloaded; purchase a product key to activate Norton™ Internet Security (30 days of virus definitions) <p><i>Some:</i> Windows 8.1 64-bit</p> <ul style="list-style-type: none"> Lenovo Solution Center Lenovo SHAREit Lenovo Companion ThinkVantage System Update PC Device Stage Weather Channel Evernote Maxthon Cloud Browser Bing Translator Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) 																																										
Storage	<p><i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable</p> <p><i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™</p> <p><i>Some:</i> SSHD with 8GB NAND flash memory</p> <p>M.2 Solid State Drive (SSD), via M.2 card slot</p>	<p>Limited warranty¹² <i>One of the following, configurable by model:</i></p> <ul style="list-style-type: none"> 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service²⁴ 3-year/1-yr battery limited onsite service, IWS (International Warranty Service¹⁷) 																																										
M.2 SSD (<i>opt</i>)	None	<p>Environment EPEAT™ Gold; ENERGY STAR® 6.1; GREENGUARD®; RoHS-compliant</p>																																										
Optical	None																																											
Ethernet	<p><i>Non-vPro model:</i> Intel Ethernet Connection I218-V (Clarkville)</p> <p><i>vPro model:</i> Intel Ethernet Connection I218-LM (Clarkville)</p>																																											
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																											
WLAN ⁴	<p><i>One of the following, configurable by model:</i></p> <ul style="list-style-type: none"> 11b/g/n, ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card 11b/g/n, Intel Wireless-N 7265, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card 11a/b/g/n, Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT adapter, M.2 card 11ac, Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT adapter, M.2 card 																																											
WWAN (<i>optional</i>)	<p><i>One of the following, configurable by model:</i></p> <ul style="list-style-type: none"> Wireless WAN upgradable Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card 																																											
SIM card (<i>opt</i>)	AT&T® or Verizon® LTE (4G), contract required with service provider																																											

ThinkPad L450 20DT (TopSeller)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Finger-print reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20DT000WUS	i3-5005U	No	HD 5500	4GBx1	14" HD	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DT000QUS	i5-5200U	No	HD 5500	4GBx1	14" HD	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DT000RUS	i5-5200U	No	HD 5500	8GBx1	14" HD	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DT000TUS	i5-5200U	No	HD 5500	8GBx1	14" HD	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DT0010US	i5-5200U	No	HD 5500	4GBx1	14" HD	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DT000SUS	i5-5200U	No	HD 5500	8GBx1	14" HD	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DT000YUS	i5-5200U	No	HD 5500	4GBx1	14" HD	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DT001AUS	i5-4300U	vPro	HD 4400	4GBx1	14" HD	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	1-depot	No	02/15
20DT001BUS	i5-4300U	vPro	HD 4400	8GBx1	14" HD	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	1-depot	No	02/15
20DT001CUS	i5-4300U	vPro	HD 4400	4GBx1	14" HD	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	1-depot	No	02/15
20DT001DUS	i5-4300U	vPro	HD 4400	8GBx1	14" HD	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	1-depot	No	02/15

• For detailed platform specifications, please see [ThinkPad L450 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i5 or 5th Generation Intel Core i3 / i5 / i7 Processor	Dimensions ³ Weight ²	14.0" (WxDxH): 13.34" x 9.23" x 0.95"; 339mm x 235mm x 24.3mm																																				
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Chipset	Intel SoC (System on Chip) platform	Smart card reader	Optional: Smart card reader																																				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																				
Display	Some: 14.0" (355mm) HD (1366x768), 220 nits, 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 220 nits, 700:1 contrast ratio, IPS	Ports	Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)																																				
Multi-touch	None	Camera (optional)	HD720p resolution, low light sensitive, fixed focus																																				
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory	Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																																				
M.2 SSD (opt)	M.2 Solid State Drive (SSD), via M.2 card slot	Keyboard	6-row, spill-resistant, multimedia Fn keys																																				
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Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)	Security	Power-on password, hard disk password, supervisor password, security keyhole																																				
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WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor																																				
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		AC adapter	45W AC adapter or 65W AC adapter																																				
		Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit																																				
		Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																				

See footnotes for more detailed information

(LR1-1) © Lenovo

ThinkPad L450 20DT (Discrete) - TopSeller

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Finger-print reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20DT000PUS	i7-5500U	No	R5 M240	8GBx2	14" FHD IPS	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DT000XUS	i7-5500U	No	R5 M240	4GBx1	14" FHD IPS	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DT0011US	i7-5500U	No	R5 M240	8GBx1	14" FHD IPS	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DT000UUS	i7-5500U	No	R5 M240	4GBx1	14" FHD IPS	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20DT000VUS	i7-5500U	No	R5 M240	8GBx1	14" FHD IPS	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	65W	Win8.1 DG Win7	3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad L450 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i5 or 5th Generation Intel Core i3 / i5 / i7 Processor						Dimensions ³ Weight ²	14.0" (WxDxH): 13.34" x 9.23" x 0.95"; 339mm x 235mm x 24.3mm			
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed		Models	3-cell	6-cell	
	i5-4300U	2	1.9 GHz	2.9 GHz	3MB	DDR3L-1600		Integrated	4.25 lb / 1.93 kg	4.43 lb / 2.01 kg	
	i3-5005U		2 GHz	-	3MB			Discrete	4.30 lb / 1.95 kg	4.50 lb / 2.04 kg	
	i5-5200U		2.2 GHz	2.7 GHz	3MB						
	i5-5300U		2.3 GHz	2.9 GHz	3MB						
i7-5500U	2.4 GHz		3 GHz	4MB							
	Case material						PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic				
	Smart card reader						Optional: Smart card reader				
	Multicard reader						4-in-1 reader (MMC, SD, SDHC, SDXC)				
	Ports						Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)				
Graphics	Intel HD Graphics 4400 or 5500 in processor only, or Intel HD Graphics 5500 in processor and AMD Radeon™ R5 M240, 2GB memory						Camera (optional)	HD720p resolution, low light sensitive, fixed focus			
Chipset	Intel SoC (System on Chip) platform						Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack			
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						Keyboard	6-row, spill-resistant, multimedia Fn keys			
Display	Some: 14.0" (355mm) HD (1366x768), 220 nits, 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 220 nits, 700:1 contrast ratio, IPS						UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch			
Multi-touch	None						Security	Power-on password, hard disk password, supervisor password, security keyhole			
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory						Security chip	Trusted Platform Module, TCG 1.2-compliant			
M.2 SSD (opt)	M.2 Solid State Drive (SSD), via M.2 card slot						vPro (optional)	Intel vPro Technology			
Optical	None						Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor			
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)						Battery type	Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)			
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter						Max battery life ¹⁰	Models	3-cell 23Wh	6-cell 48Wh	6-cell 72Wh
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card						Integrated	5.2 hr	10.7 hr	16 hr	
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card						Discrete	5.1 hr	10.6 hr	15.9 hr	
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider						AC adapter	45W AC adapter or 65W AC adapter			
							Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit			
							Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS			

See footnotes for more detailed information

(LR1-2) © Lenovo

ThinkPad L450 20DS

Model	Processor	vPro	Graphics	Memory	Display	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Finger-print reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20DS001SUS	i5-4300U	vPro	HD 4400	4GBx1	14" FHD IPS	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS001UUS	i5-4300U	vPro	HD 4400	4GBx1	14" FHD IPS	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS001WUS	i5-4300U	vPro	HD 4400	8GBx1	14" HD	128G SSD	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS001XUS	i5-4300U	vPro	HD 4400	4GBx1	14" HD	128G SSD	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS001YUS	i5-4300U	vPro	HD 4400	4GBx1	14" HD	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS0020US	i5-4300U	vPro	HD 4400	8GBx1	14" FHD IPS	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS0021US	i5-4300U	vPro	HD 4400	4GBx1	14" HD	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS0022US	i5-4300U	vPro	HD 4400	4GBx1	14" FHD IPS	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS0023US	i5-4300U	vPro	HD 4400	4GBx1	14" FHD IPS	500G 7200	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS0024US	i5-4300U	vPro	HD 4400	8GBx1	14" HD	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS0025US	i5-4300U	vPro	HD 4400	8GBx1	14" FHD IPS	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS0026US	i5-4300U	vPro	HD 4400	4GBx1	14" HD	128G SSD	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS000VUS	i5-5200U	No	HD 5500	4GBx1	14" HD	128G SSD	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS0019US	i5-5200U	No	HD 5500	8GBx1	14" HD	128G SSD	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS001HUS	i5-5200U	No	HD 5500	4GBx1	14" HD	500G 7200	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS001MUS	i5-5200U	No	HD 5500	4GBx2	14" HD	500G 7200	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS000TUS	i5-5300U	vPro	HD 5500	4GBx1	14" HD	500G 7200	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS0011US	i5-5300U	vPro	HD 5500	4GBx1	14" FHD IPS	128G SSD	None	7265 ac+BT	Upg	None	None	720p	Finger	3(23wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS0012US	i5-5300U	vPro	HD 5500	4GBx1	14" FHD IPS	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	3(23wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS0013US	i5-5300U	vPro	HD 5500	4GBx1	14" FHD IPS	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad L450 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i5 or 5th Generation Intel Core i3 / i5 / i7 Processor	Dimensions ³ Weight ²	14.0" (WxDxH): 13.34" x 9.23" x 0.95"; 339mm x 235mm x 24.3mm																																				
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Integrated	4.25 lb / 1.93 kg	4.43 lb / 2.01 kg																																					
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Graphics	Intel HD Graphics 4400 or 5500 in processor only, or Intel HD Graphics 5500 in processor and AMD Radeon™ R5 M240, 2GB memory	Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic																																				
Chipset	Intel SoC (System on Chip) platform	Smart card reader	Optional: Smart card reader																																				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																				
Display	Some: 14.0" (355mm) HD (1366x768), 220 nits, 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 220 nits, 700:1 contrast ratio, IPS	Ports	Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)																																				
Multi-touch	None	Camera (optional)	HD720p resolution, low light sensitive, fixed focus																																				
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory	Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																																				
M.2 SSD (opt)	M.2 Solid State Drive (SSD), via M.2 card slot	Keyboard	6-row, spill-resistant, multimedia Fn keys																																				
Optical	None	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch																																				
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)	Security	Power-on password, hard disk password, supervisor password, security keyhole																																				
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Security chip	Trusted Platform Module, TCG 1.2-compliant																																				
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card	vPro (optional)	Intel vPro Technology																																				
WWAN (optional)	Upg: Wireless WAN upgrade N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor																																				
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	Battery type	Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)																																				
		Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Models</th> <th>3-cell 23Wh</th> <th>6-cell 48Wh</th> <th>6-cell 72Wh</th> </tr> </thead> <tbody> <tr> <td>Integrated</td> <td>5.2 hr</td> <td>10.7 hr</td> <td>16 hr</td> </tr> <tr> <td>Discrete</td> <td>5.1 hr</td> <td>10.6 hr</td> <td>15.9 hr</td> </tr> </tbody> </table>	Models	3-cell 23Wh	6-cell 48Wh	6-cell 72Wh	Integrated	5.2 hr	10.7 hr	16 hr	Discrete	5.1 hr	10.6 hr	15.9 hr																								
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		Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																				

See footnotes for more detailed information

ThinkPad L450 20DS - II

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Finger-print reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20DS0014US	i5-5300U	vPro	HD 5500	8GBx1	14" FHD IPS	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	3(23wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS0016US	i5-5300U	vPro	HD 5500	4GBx1	14" HD	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS0018US	i5-5300U	vPro	HD 5500	8GBx1	14" HD	500G 7200	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS001AUS	i5-5300U	vPro	HD 5500	8GBx1	14" FHD IPS	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS001CUS	i5-5300U	vPro	HD 5500	8GBx1	14" HD	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS001DUS	i5-5300U	vPro	HD 5500	4GBx1	14" HD	128G SSD	None	7265 ac+BT	Upg	None	None	720p	None	3(23wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20DS001GUS	i5-5300U	vPro	HD 5500	8GBx1	14" HD	128G SSD	None	7265 ac+BT	Upg	None	None	720p	None	3(23wh)	45W	Win8.1 DG Win7	3-depot	No	01/15

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Processor	4th Generation Intel® Core™ i5 or 5th Generation Intel Core i3 / i5 / i7 Processor	Dimensions ³ Weight ²	14.0" (WxDxH): 13.34" x 9.23" x 0.95"; 339mm x 235mm x 24.3mm																																				
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Graphics	Intel HD Graphics 4400 or 5500 in processor only, or Intel HD Graphics 5500 in processor and AMD Radeon™ R5 M240, 2GB memory	Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic																																				
Chipset	Intel SoC (System on Chip) platform	Smart card reader	Optional: Smart card reader																																				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																				
Display	Some: 14.0" (355mm) HD (1366x768), 220 nits, 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 220 nits, 700:1 contrast ratio, IPS	Ports	Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)																																				
Multi-touch	None	Camera (optional)	HD720p resolution, low light sensitive, fixed focus																																				
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory	Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																																				
M.2 SSD (opt)	M.2 Solid State Drive (SSD), via M.2 card slot	Keyboard	6-row, spill-resistant, multimedia Fn keys																																				
Optical	None	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch																																				
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)	Security	Power-on password, hard disk password, supervisor password, security keyhole																																				
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Security chip	Trusted Platform Module, TCG 1.2-compliant																																				
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card	vPro (optional)	Intel vPro Technology																																				
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor																																				
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	Battery type	Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)																																				
		Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Models</th> <th>3-cell 23Wh</th> <th>6-cell 48Wh</th> <th>6-cell 72Wh</th> </tr> </thead> <tbody> <tr> <td>Integrated</td> <td>5.2 hr</td> <td>10.7 hr</td> <td>16 hr</td> </tr> <tr> <td>Discrete</td> <td>5.1 hr</td> <td>10.6 hr</td> <td>15.9 hr</td> </tr> </tbody> </table>	Models	3-cell 23Wh	6-cell 48Wh	6-cell 72Wh	Integrated	5.2 hr	10.7 hr	16 hr	Discrete	5.1 hr	10.6 hr	15.9 hr																								
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		AC adapter	45W AC adapter or 65W AC adapter																																				
		Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit																																				
		Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																				

See footnotes for more detailed information

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ThinkPad L450 20DS (Onsite)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Finger-print reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20DS000XUS	i5-5200U	No	HD 5500	8GBx1	14" HD	128G SSD	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20DS000YUS	i5-5200U	No	HD 5500	4GBx1	14" HD	128G SSD	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20DS0017US	i5-5200U	No	HD 5500	8GBx1	14" HD	500G 7200	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20DS001JUS	i5-5200U	No	HD 5500	4GBx1	14" HD	500G 7200	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20DS000UUS	i5-5300U	vPro	HD 5500	4GBx1	14" HD	128G SSD	None	7265 ac+BT	Upg	None	None	720p	Finger	3(23wh)	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20DS000WUS	i5-5300U	vPro	HD 5500	8GBx1	14" FHD IPS	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20DS0010US	i5-5300U	vPro	HD 5500	4GBx1	14" FHD IPS	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20DS0015US	i5-5300U	vPro	HD 5500	8GBx1	14" HD	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	6(48wh)	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20DS001BUS	i5-5300U	vPro	HD 5500	8GBx1	14" HD	128G SSD	None	7265 ac+BT	Upg	None	None	720p	Finger	3(23wh)	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20DS001EUS	i5-5300U	vPro	HD 5500	8GBx1	14" HD	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20DS001FUS	i5-5300U	vPro	HD 5500	4GBx1	14" HD	500G 7200	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20DS001KUS	i5-5300U	vPro	HD 5500	4GBx1	14" HD	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	None	6(48wh)	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20DS001LUS	i5-5300U	vPro	HD 5500	4GBx1	14" FHD IPS	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	3(23wh)	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20DS001NUS	i5-5300U	vPro	HD 5500	8GBx1	14" FHD IPS	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Finger	3(23wh)	45W	Win8.1 DG Win7	3-onsite	Yes	01/15

• For detailed platform specifications, please see [ThinkPad L450 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i5 or 5th Generation Intel Core i3 / i5 / i7 Processor	Dimensions ³ Weight ²	14.0" (WxDxH): 13.34" x 9.23" x 0.95"; 339mm x 235mm x 24.3mm																																				
	<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr> <td>i5-4300U</td> <td rowspan="6">2</td> <td>1.9 GHz</td> <td>2.9 GHz</td> <td>3MB</td> <td rowspan="6">DDR3L-1600</td> </tr> <tr> <td>i3-5005U</td> <td>2 GHz</td> <td>-</td> <td>3MB</td> </tr> <tr> <td>i5-5200U</td> <td>2.2 GHz</td> <td>2.7 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-5300U</td> <td>2.3 GHz</td> <td>2.9 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-5500U</td> <td>2.4 GHz</td> <td>3 GHz</td> <td>4MB</td> </tr> </tbody> </table>	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	i5-4300U	2	1.9 GHz	2.9 GHz	3MB	DDR3L-1600	i3-5005U	2 GHz	-	3MB	i5-5200U	2.2 GHz	2.7 GHz	3MB	i5-5300U	2.3 GHz	2.9 GHz	3MB	i7-5500U	2.4 GHz	3 GHz	4MB	<table border="1"> <thead> <tr> <th>Models</th> <th>3-cell</th> <th>6-cell</th> </tr> </thead> <tbody> <tr> <td>Integrated</td> <td>4.25 lb / 1.93 kg</td> <td>4.43 lb / 2.01 kg</td> </tr> <tr> <td>Discrete</td> <td>4.30 lb / 1.95 kg</td> <td>4.50 lb / 2.04 kg</td> </tr> </tbody> </table>	Models	3-cell	6-cell	Integrated	4.25 lb / 1.93 kg	4.43 lb / 2.01 kg	Discrete	4.30 lb / 1.95 kg	4.50 lb / 2.04 kg
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Graphics	Intel HD Graphics 4400 or 5500 in processor only, or Intel HD Graphics 5500 in processor and AMD Radeon™ R5 M240, 2GB memory	Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic																																				
Chipset	Intel SoC (System on Chip) platform	Smart card reader	Optional: Smart card reader																																				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																				
Display	Some: 14.0" (355mm) HD (1366x768), 220 nits, 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 220 nits, 700:1 contrast ratio, IPS	Ports	Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)																																				
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Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory	Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																																				
M.2 SSD (opt)	M.2 Solid State Drive (SSD), via M.2 card slot	Keyboard	6-row, spill-resistant, multimedia Fn keys																																				
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WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card	vPro (optional)	Intel vPro Technology																																				
WWAN (optional)	Upg: Wireless WAN upgrade N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor																																				
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	Battery type	Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)																																				
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		Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																				

See footnotes for more detailed information

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Lenovo® ThinkPad L540



Lenovo ThinkPad L540



Lenovo ThinkPad L540



Lenovo ThinkPad L540



Lenovo ThinkPad L540

ThinkPad L540 Platform Specifications

Product Specifications Reference (PSREF)

Positioning	Mainstream business performance; two spindles				WLAN ⁴	<p>One of the following, configurable by model:</p> <ul style="list-style-type: none"> ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card Intel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card 																																																
Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor				WWAN (optional)	<p>One of the following, configurable by model (mutually exclusive with M.2 SSD):</p> <ul style="list-style-type: none"> Wireless WAN upgradable Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 card (US models) Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card (WE models) Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card (WE models) 																																																
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Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets				SIM card (optional)	<p>One of the following, configurable by model:</p> <ul style="list-style-type: none"> AT&T® or Verizon® LTE (4G), contract required with service provider (US models) Lenovo SIM, out-of-box service, pay-as-you-go via credit card, no contract required (WE models) User selectable, contract required with service provider 																																																
Optical Storage	DVD burner, 9.5mm high, fixed, not removable, tray-in Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ Some: SSHD with 8GB NAND flash memory Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card				Bluetooth™ Ethernet	<p>Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter HM86 model: Intel Ethernet Connection I217-V (Clarkville) QM87 model: Intel Ethernet Connection I217-LM (Clarkville)</p>																																																
M.2 SSD					Security Security chip vPro (optional) Fingerprint reader	<p>Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Intel vPro Technology Optional: Fingerprint reader on the palm rest, swipe sensor</p>																																																
Widescreen display	Some: 15.6" (396mm) HD (1366x768), anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio				Limited warranty ¹²	<p>One of the following, configurable by model:</p> <ul style="list-style-type: none"> 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service²⁴ 3-year/1-yr battery limited onsite service, IWS (International Warranty Service¹⁷) 																																																
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus				Preload	<p>Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit</p> <ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support ThinkVantage Product Recovery Rescue and Recovery™ ThinkVantage System Update Lenovo Cloud Storage by SugarSync PC Device Stage Nitro Pro Evernote® Skype™ Microsoft® Office preloaded; purchase a product key to activate Norton™ Internet Security (30 days of virus definitions) Cyberlink PowerDVD Cyberlink Power2Go Cyberlink PowerProducer <p>Some: Windows 8 / 8.1 64-bit Some: Windows 8 / 8.1 Pro 64-bit</p> <ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support Lenovo Companion ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync - Metro (Windows 8 model) Lenovo Cloud Storage by SugarSync (Windows 8 model) PC Device Stage AccuWeather Amazon Kindle Nitro Pro Evernote Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD Cyberlink Power2Go Cyberlink PowerProducer 																																																
Graphics	Intel HD Graphics 4600 in processor, supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports dual independent display; Max resolution: 3840x2160@30Hz (DP via mDP cable); 1920x1200@60Hz (VGA)				Environment	EPEAT™ Gold; ENERGY STAR® 6.0; RoHS-compliant																																																
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch																																																					
ThinkLight™	None																																																					
Dimensions ³	HD (WxDxH): 14.84" x 9.72" x 1.13-1.34"; 377mm x 247mm x 28.8-34.05mm FHD (WxDxH): 14.84" x 9.72" x 1.22-1.43"; 377mm x 247mm x 31.0-36.25mm																																																					
Weight ²	<table border="1"> <thead> <tr> <th>Models</th> <th>6-cell 48Wh</th> <th>6-cell 56Wh</th> <th>9-cell 99.9Wh</th> </tr> </thead> <tbody> <tr> <td>HD</td> <td>5.54lb / 2.52kg</td> <td>5.60lb / 2.54kg</td> <td>5.95lb / 2.70kg</td> </tr> <tr> <td>FHD</td> <td>5.68lb / 2.58kg</td> <td>5.73lb / 2.60kg</td> <td>6.08lb / 2.76kg</td> </tr> </tbody> </table>				Models	6-cell 48Wh	6-cell 56Wh	9-cell 99.9Wh	HD	5.54lb / 2.52kg	5.60lb / 2.54kg	5.95lb / 2.70kg	FHD	5.68lb / 2.58kg	5.73lb / 2.60kg	6.08lb / 2.76kg																																						
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Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic																																																					
Battery type	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication																																																					
Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Models</th> <th>6-cell 48Wh</th> <th>6-cell 56Wh</th> <th>9-cell 99.9Wh</th> </tr> </thead> <tbody> <tr> <td>Win7 (MobileMark® 2007)</td> <td>9 hr</td> <td>11 hr</td> <td>19 hr</td> </tr> <tr> <td>Win8 (MobileMark 2012)</td> <td>6 hr</td> <td>7 hr</td> <td>12 hr</td> </tr> </tbody> </table>				Models	6-cell 48Wh	6-cell 56Wh	9-cell 99.9Wh	Win7 (MobileMark® 2007)	9 hr	11 hr	19 hr	Win8 (MobileMark 2012)	6 hr	7 hr	12 hr																																						
Models	6-cell 48Wh	6-cell 56Wh	9-cell 99.9Wh																																																			
Win7 (MobileMark® 2007)	9 hr	11 hr	19 hr																																																			
Win8 (MobileMark 2012)	6 hr	7 hr	12 hr																																																			
AC adapter	65-watt AC adapter																																																					
Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset																																																					
ExpressCard	HM86 model: One slot (ExpressCard/34, ExpressCard/54)																																																					
Smart card reader	Optional: Smart card reader																																																					
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																																					
Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector																																																					
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																																																					

ThinkPad L540 20AV (TopSeller)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Chipset	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Finger-print reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AV0024US	i3-4000M	No	HD 4600	HM86	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	1-depot	No	09/13
20AV0025US	i5-4200M	No	HD 4600	HM86	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	1-depot	No	09/13
20AV0026US	i5-4200M	No	HD 4600	HM86	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	None	6(56wh)	65W	Win8 DG Win7	1-depot	No	09/13
20AV002VUS	i5-4200M	No	HD 4600	HM86	4GBx1	15.6" HD	500G 7200	11b/g/n+BT	Upg	None	None	Exp/54	720p	None	6(56wh)	65W	Win8 DG Win7	1-depot	No	09/13
20AV0027US	i5-4300M	vPro	HD 4600	QM87	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	None	720p	None	6(56wh)	65W	Win8 DG Win7	1-depot	No	11/13
20AV002FUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	15.6" HD	500G 7200	6235 a/b/g/n+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	1-depot	No	11/13
20AV0028US	i5-4200M	No	HD 4600	HM86	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	09/13
20AV0029US	i5-4200M	No	HD 4600	HM86	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	09/13
20AV002AUS	i5-4200M	No	HD 4600	HM86	4GBx1	15.6" FHD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	10/13
20AV002BUS	i5-4200M	No	HD 4600	HM86	4GBx1	15.6" FHD	256G SSD Opal	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	09/13
20AV002GUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AV002HUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	15.6" HD	128G SSD	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AV002JUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	None	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	11/13
20AV002KUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	15.6" HD	180G SSD Opal	6235 a/b/g/n+BT	Upg	None	None	None	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	10/13
20AV002LUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	15.6" FHD	180G SSD Opal	6235 a/b/g/n+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	10/13
20AV002MUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	15.6" FHD	256G SSD Opal	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AV002NUS	i7-4600M	vPro	HD 4600	QM87	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	None	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	11/13
20AV002PUS	i7-4600M	vPro	HD 4600	QM87	4GBx1	15.6" FHD	1T 5400	7260 ac+BT	16GB	None	None	None	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	11/13
20AV002QUS	i7-4600M	vPro	HD 4600	QM87	4GBx1	15.6" FHD	256G SSD Opal	7260 ac+BT	Upg	None	None	None	720p	Finger	9	65W	Win8 DG Win7	3-depot	No	11/13

• For detailed platform specifications, please see [ThinkPad L540 Platform Specifications](#) sheet

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor						Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack												
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch												
	Cel 2950M	2	2 GHz	-	2MB	DDR3L-1600	ThinkLight™	None												
	i3-4000M		2.4 GHz	-	3MB															
	i5-4200M		2.5 GHz	3.1 GHz	3MB															
	i5-4300M		2.6 GHz	3.3 GHz	3MB															
	i5-4330M		2.8 GHz	3.5 GHz	3MB															
	i7-4600M		2.9 GHz	3.6 GHz	4MB															
	i7-4702MQ	4	2.2 GHz	3.2 GHz	6MB	Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset													
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						ExpressCard	<i>HM86 model:</i> One slot (ExpressCard/34, ExpressCard/54)												
Optical Storage	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> SSHD with 8GB NAND flash memory <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						Smart card reader	<i>Optional:</i> Smart card reader												
M.2 SSD							Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)												
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) , 220 nits, 500:1 contrast ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio						Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector												
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						WLAN ⁴	<i>11b/g/n+BT:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card <i>7260 b/g/n+BT:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>6235 a/b/g/n+BT:</i> Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT, M.2 card <i>7260 a/b/g/n+BT:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 ac+BT:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card												
Graphics	Intel HD Graphics 4600 in processor						WWAN (optional)	<i>Upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS												
Dimensions ³	<i>HD (WxDxH):</i> 14.84" x 9.72" x 1.13-1.34"; 377mm x 247mm x 28.8-34.05mm <i>FHD (WxDxH):</i> 14.84" x 9.72" x 1.22-1.43"; 377mm x 247mm x 31.0-36.25mm						SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>Select:</i> User selectable, contract required with service provider												
Weight ²	<table border="1"> <thead> <tr> <th>Models</th> <th>6-cell 48Wh</th> <th>6-cell 56Wh</th> <th>9-cell 99.9Wh</th> </tr> </thead> <tbody> <tr> <td>HD</td> <td>5.54lb / 2.52kg</td> <td>5.60lb / 2.54kg</td> <td>5.95lb / 2.70kg</td> </tr> <tr> <td>FHD</td> <td>5.68lb / 2.58kg</td> <td>5.73lb / 2.60kg</td> <td>6.08lb / 2.76kg</td> </tr> </tbody> </table>						Models	6-cell 48Wh	6-cell 56Wh	9-cell 99.9Wh	HD	5.54lb / 2.52kg	5.60lb / 2.54kg	5.95lb / 2.70kg	FHD	5.68lb / 2.58kg	5.73lb / 2.60kg	6.08lb / 2.76kg	Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
Models	6-cell 48Wh	6-cell 56Wh	9-cell 99.9Wh																	
HD	5.54lb / 2.52kg	5.60lb / 2.54kg	5.95lb / 2.70kg																	
FHD	5.68lb / 2.58kg	5.73lb / 2.60kg	6.08lb / 2.76kg																	
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic						Ethernet	<i>HM86 model:</i> Intel Ethernet Connection I217-V (Clarkville) <i>QM87 model:</i> Intel Ethernet Connection I217-LM (Clarkville)												
Battery type	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication						Security	Power-on password, hard disk password, supervisor password, security keyhole												
Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Models</th> <th>6-cell 48Wh</th> <th>6-cell 56Wh</th> <th>9-cell 99.9Wh</th> </tr> </thead> <tbody> <tr> <td>Win7 (MobileMark® 2007)</td> <td>9 hr</td> <td>11 hr</td> <td>19 hr</td> </tr> <tr> <td>Win8 (MobileMark 2012)</td> <td>6 hr</td> <td>7 hr</td> <td>12 hr</td> </tr> </tbody> </table>						Models	6-cell 48Wh	6-cell 56Wh	9-cell 99.9Wh	Win7 (MobileMark® 2007)	9 hr	11 hr	19 hr	Win8 (MobileMark 2012)	6 hr	7 hr	12 hr	Security chip (optional)	Trusted Platform Module, TCG 1.2-compliant
Models	6-cell 48Wh	6-cell 56Wh	9-cell 99.9Wh																	
Win7 (MobileMark® 2007)	9 hr	11 hr	19 hr																	
Win8 (MobileMark 2012)	6 hr	7 hr	12 hr																	
AC adapter	65-watt AC adapter						Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor												
							Preload	<i>Win8 / 8.1 DG Win7:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit												
							Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite												

See footnotes for more detailed information

(PD1-1) © Lenovo

ThinkPad L540 20AV (TopSeller) - II

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Chipset	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Fingerprint reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AV002RUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	EM7355	Select	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AV002SUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	15.6" FHD	128G SSD	7260 ac+BT	EM7355	Select	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AV002TUS	i7-4600M	vPro	HD 4600	QM87	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	EM7355	Select	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	No	11/13
20AV002UUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	Smart	None	None	Finger	6(48wh)	65W	Win8 DG Win7	3-depot	No	11/13

• For detailed platform specifications, please see [ThinkPad L540 Platform Specifications sheet](#)

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor						Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack				
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard UltraNav™ ThinkLight™ Chipset ExpressCard Smart card reader Multicard reader Ports	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset HM86 model: One slot (ExpressCard/34, ExpressCard/54) Optional: Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector				
	Cel 2950M	2	2 GHz	-	2MB	DDR3L-1600						
	i3-4000M		2.4 GHz	-	3MB							
	i5-4200M		2.5 GHz	3.1 GHz	3MB							
	i5-4300M		2.6 GHz	3.3 GHz	3MB							
	i5-4330M		2.8 GHz	3.5 GHz	3MB							
	i7-4600M		2.9 GHz	3.6 GHz	4MB							
i7-4702MQ	4	2.2 GHz	3.2 GHz	6MB								
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 6235 a/b/g/n+BT: Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card				
Optical Storage	DVD burner, 9.5mm high, fixed, not removable, tray-in Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS				
M.2 SSD	Some: 15.6" (396mm) HD (1366x768) , 220 nits, 500:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio Camera (optional) HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider				
Widescreen display	Some: 15.6" (396mm) HD (1366x768) , 220 nits, 500:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio						Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter HM86 model: Intel Ethernet Connection I217-V (Clarkville) QM87 model: Intel Ethernet Connection I217-LM (Clarkville)				
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Ethernet	Intel Ethernet Connection I217-V (Clarkville) QM87 model: Intel Ethernet Connection I217-LM (Clarkville)				
Graphics	Intel HD Graphics 4600 in processor						Security	Power-on password, hard disk password, supervisor password, security keyhole				
Dimensions ³	HD (WxDxH): 14.84" x 9.72" x 1.13-1.34"; 377mm x 247mm x 28.8-34.05mm FHD (WxDxH): 14.84" x 9.72" x 1.22-1.43"; 377mm x 247mm x 31.0-36.25mm						Security chip	Trusted Platform Module, TCG 1.2-compliant				
Weight ²	Models	6-cell 48Wh		6-cell 56Wh		9-cell 99.9Wh		vPro (optional)	Intel vPro Technology			
	HD	5.54lb / 2.52kg		5.60lb / 2.54kg		5.95lb / 2.70kg		Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor			
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic						Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit				
	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication							Win8 / 8.1 64: Windows 8 / 8.1 64-bit				
	Max battery life ¹⁰							Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit				
Battery type	Models	6-cell 48Wh		6-cell 56Wh		9-cell 99.9Wh		Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite				
	Win7 (MobileMark® 2007)	9 hr		11 hr		19 hr						
Max battery life ¹⁰	Win8 (MobileMark 2012)	6 hr		7 hr		12 hr						
	AC adapter	65-watt AC adapter										

See footnotes for more detailed information

(PD1-2) © Lenovo

ThinkPad L540 20AU

Model	Processor	vPro	Graphics	Chipset	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Fingerprint reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AU002NUS	i5-4300M	No	HD 4600	HM86	4GBx1	15.6" FHD	128G SSD	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU002PUS	i7-4702MQ	No	HD 4600	HM86	8GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU002QUS	i5-4330M	No	HD 4600	HM86	4GBx1	15.6" HD	128G SSD	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU002RUS	i5-4330M	No	HD 4600	HM86	4GBx1	15.6" HD	1T 5400	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU002SUS	i5-4330M	No	HD 4600	HM86	4GBx1	15.6" HD	128G SSD	6235 a/b/g/n+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU002TUS	i7-4702MQ	No	HD 4600	HM86	8GBx1	15.6" HD	128G SSD	6235 a/b/g/n+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU002VUS	i5-4200M	No	HD 4600	HM86	4GBx1	15.6" HD	128G SSD	6235 a/b/g/n+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU002WUS	i5-4300M	No	HD 4600	HM86	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	None	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU002XUS	i3-4000M	No	HD 4600	HM86	2GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU0030US	i7-4702MQ	No	HD 4600	HM86	8GBx1	15.6" FHD	128G SSD	6235 a/b/g/n+BT	Upg	None	None	Exp/54	720p	Finger	9	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU0032US	i5-4200M	No	HD 4600	HM86	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	None	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU0033US	i5-4300M	No	HD 4600	HM86	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU0034US	i5-4330M	No	HD 4600	HM86	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU0035US	i5-4300M	No	HD 4600	HM86	4GBx1	15.6" HD	128G SSD	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	9	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU0036US	i5-4200M	No	HD 4600	HM86	4GBx1	15.6" HD	500G 7200	6235 a/b/g/n+BT	Upg	None	None	Exp/54	720p	None	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU0037US	i7-4702MQ	No	HD 4600	HM86	8GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	9	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU0039US	i7-4702MQ	No	HD 4600	HM86	8GBx1	15.6" FHD	128G SSD	6235 a/b/g/n+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU003BUS	i7-4702MQ	No	HD 4600	HM86	8GBx1	15.6" HD	1T 5400	6235 a/b/g/n+BT	16GB	None	None	Exp/54	720p	Finger	9	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU003CUS	i5-4300M	No	HD 4600	HM86	4GBx1	15.6" HD	128G SSD	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU003EUS	i3-4000M	No	HD 4600	HM86	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13

* For detailed platform specifications, please see [ThinkPad L540 Platform Specifications sheet](#)

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor	Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																																						
Processor	<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr><td>Cel 2950M</td><td rowspan="6">2</td><td>2 GHz</td><td>-</td><td>2MB</td><td rowspan="6">DDR3L-1600</td></tr> <tr><td>i3-4000M</td><td>2.4 GHz</td><td>-</td><td>3MB</td></tr> <tr><td>i5-4200M</td><td>2.5 GHz</td><td>3.1 GHz</td><td>3MB</td></tr> <tr><td>i5-4300M</td><td>2.6 GHz</td><td>3.3 GHz</td><td>3MB</td></tr> <tr><td>i5-4330M</td><td>2.8 GHz</td><td>3.5 GHz</td><td>3MB</td></tr> <tr><td>i7-4600M</td><td>2.9 GHz</td><td>3.6 GHz</td><td>4MB</td></tr> <tr><td>i7-4702MQ</td><td>4</td><td>2.2 GHz</td><td>3.2 GHz</td><td>6MB</td><td></td></tr> </tbody> </table>	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Cel 2950M	2	2 GHz	-	2MB	DDR3L-1600	i3-4000M	2.4 GHz	-	3MB	i5-4200M	2.5 GHz	3.1 GHz	3MB	i5-4300M	2.6 GHz	3.3 GHz	3MB	i5-4330M	2.8 GHz	3.5 GHz	3MB	i7-4600M	2.9 GHz	3.6 GHz	4MB	i7-4702MQ	4	2.2 GHz	3.2 GHz	6MB		Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad
Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																																				
Cel 2950M	2	2 GHz	-	2MB	DDR3L-1600																																				
i3-4000M		2.4 GHz	-	3MB																																					
i5-4200M		2.5 GHz	3.1 GHz	3MB																																					
i5-4300M		2.6 GHz	3.3 GHz	3MB																																					
i5-4330M		2.8 GHz	3.5 GHz	3MB																																					
i7-4600M		2.9 GHz	3.6 GHz	4MB																																					
i7-4702MQ	4	2.2 GHz	3.2 GHz	6MB																																					
		UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch																																						
		ThinkLight™	None																																						
		Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset																																						
		ExpressCard	HM86 model: One slot (ExpressCard/34, ExpressCard/54)																																						
		Smart card reader	Optional: Smart card reader																																						
		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																						
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector																																						
Optical Storage	DVD burner, 9.5mm high, fixed, not removable, tray-in Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card	WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 6235 a/b/g/n+BT: Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card																																						
M.2 SSD		WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS																																						
Widescreen display	Some: 15.6" (396mm) HD (1366x768) , 220 nits, 500:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio	SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider																																						
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																						
Graphics	Intel HD Graphics 4600 in processor	Ethernet	HM86 model: Intel Ethernet Connection I217-V (Clarkville) QM87 model: Intel Ethernet Connection I217-LM (Clarkville)																																						
Dimensions ³	HD (WxDxH): 14.84" x 9.72" x 1.13-1.34"; 377mm x 247mm x 28.8-34.05mm FHD (WxDxH): 14.84" x 9.72" x 1.22-1.43"; 377mm x 247mm x 31.0-36.25mm	Security	Power-on password, hard disk password, supervisor password, security keyhole																																						
Weight ²	<table border="1"> <thead> <tr> <th>Models</th> <th>6-cell 48Wh</th> <th>6-cell 56Wh</th> <th>9-cell 99.9Wh</th> </tr> </thead> <tbody> <tr><td>HD</td><td>5.54lb / 2.52kg</td><td>5.60lb / 2.54kg</td><td>5.95lb / 2.70kg</td></tr> <tr><td>FHD</td><td>5.68lb / 2.58kg</td><td>5.73lb / 2.60kg</td><td>6.08lb / 2.76kg</td></tr> </tbody> </table>	Models	6-cell 48Wh	6-cell 56Wh	9-cell 99.9Wh	HD	5.54lb / 2.52kg	5.60lb / 2.54kg	5.95lb / 2.70kg	FHD	5.68lb / 2.58kg	5.73lb / 2.60kg	6.08lb / 2.76kg	Security chip (optional)	Trusted Platform Module, TCG 1.2-compliant																										
Models	6-cell 48Wh	6-cell 56Wh	9-cell 99.9Wh																																						
HD	5.54lb / 2.52kg	5.60lb / 2.54kg	5.95lb / 2.70kg																																						
FHD	5.68lb / 2.58kg	5.73lb / 2.60kg	6.08lb / 2.76kg																																						
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor																																						
Battery type	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication	Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit																																						
Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Models</th> <th>6-cell 48Wh</th> <th>6-cell 56Wh</th> <th>9-cell 99.9Wh</th> </tr> </thead> <tbody> <tr><td>Win7 (MobileMark® 2007)</td><td>9 hr</td><td>11 hr</td><td>19 hr</td></tr> <tr><td>Win8 (MobileMark 2012)</td><td>6 hr</td><td>7 hr</td><td>12 hr</td></tr> </tbody> </table>	Models	6-cell 48Wh	6-cell 56Wh	9-cell 99.9Wh	Win7 (MobileMark® 2007)	9 hr	11 hr	19 hr	Win8 (MobileMark 2012)	6 hr	7 hr	12 hr	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite																										
Models	6-cell 48Wh	6-cell 56Wh	9-cell 99.9Wh																																						
Win7 (MobileMark® 2007)	9 hr	11 hr	19 hr																																						
Win8 (MobileMark 2012)	6 hr	7 hr	12 hr																																						
AC adapter	65-watt AC adapter																																								

ThinkPad L540 20AU - II

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Chipset	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Fingerprint reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AU003FUS	i5-4200M	No	HD 4600	HM86	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU003JUS	i5-4200M	No	HD 4600	HM86	4GBx1	15.6" HD	128G SSD	6235 a/b/g/n+BT	Upg	None	None	Exp/54	720p	None	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU003LUS	i7-4702MQ	No	HD 4600	HM86	8GBx1	15.6" FHD	256G SSD Opal	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	9	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU003MUS	i7-4702MQ	No	HD 4600	HM86	8GBx1	15.6" FHD	1T 5400	7260 ac+BT	Upg	None	None	Exp/54	720p	Finger	9	65W	Win8 DG Win7	3-depot	Yes	09/13
20AU005YUS	i7-4600M	vPro	HD 4600	QM87	8GBx1	15.6" FHD	500G 7200	7260 a/b/g/n+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	3-depot	Yes	04/14
20AU0060US	i7-4600M	vPro	HD 4600	QM87	8GBx1	15.6" FHD	180G SSD Opal	7260 a/b/g/n+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	3-depot	Yes	04/14
20AU0061US	i7-4600M	vPro	HD 4600	QM87	8GBx1	15.6" FHD	256G SSD Opal	7260 a/b/g/n+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	3-depot	Yes	04/14
20AU0062US	i5-4300M	vPro	HD 4600	QM87	4GBx1	15.6" FHD	500G 7200	7260 a/b/g/n+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	3-depot	Yes	04/14
20AU0063US	i5-4300M	vPro	HD 4600	QM87	4GBx1	15.6" HD	500G 7200	7260 a/b/g/n+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	3-depot	Yes	04/14
20AU000YUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	11/13
20AU001EUS	i5-4330M	vPro	HD 4600	QM87	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	Smart	None	720p	Finger	6(56wh)	65W	Win8.1 DG Win7	3-depot	Yes	11/13
20AU002UUS	i5-4330M	vPro	HD 4600	QM87	4GBx1	15.6" HD	128G SSD	7260 ac+BT	Upg	None	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	11/13
20AU002YUS	i7-4600M	vPro	HD 4600	QM87	8GBx1	15.6" FHD	500G 7200	7260 ac+BT	16GB	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	11/13
20AU0031US	i5-4330M	vPro	HD 4600	QM87	4GBx1	15.6" HD	500G 7200	7260 ac+BT	16GB	None	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	11/13
20AU0038US	i5-4330M	vPro	HD 4600	QM87	8GBx1	15.6" HD	128G SSD	7260 ac+BT	Upg	None	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	11/13
20AU003AUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	Smart	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	11/13
20AU003DUS	i5-4300M	vPro	HD 4600	QM87	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	None	720p	None	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	11/13
20AU003GUS	i7-4600M	vPro	HD 4600	QM87	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	11/13
20AU003HUS	i7-4600M	vPro	HD 4600	QM87	8GBx1	15.6" FHD	128G SSD	7260 ac+BT	Upg	None	None	None	720p	Finger	6(56wh)	65W	Win8 DG Win7	3-depot	Yes	11/13
20AU003KUS	i7-4600M	vPro	HD 4600	QM87	8GBx1	15.6" FHD	128G SSD	7260 ac+BT	Upg	None	None	None	720p	Finger	9	65W	Win8 DG Win7	3-depot	Yes	11/13

* For detailed platform specifications, please see [ThinkPad L540 Platform Specifications sheet](#)

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor					Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	
	Cel 2950M	2	2 GHz	-	2MB	DDR3L-1600	Keyboard
	i3-4000M		2.4 GHz	-	3MB		UltraNav™
	i5-4200M		2.5 GHz	3.1 GHz	3MB		TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch
	i5-4300M		2.6 GHz	3.3 GHz	3MB		ThinkLight™
	i5-4330M		2.8 GHz	3.5 GHz	3MB		None
	i7-4600M		2.9 GHz	3.6 GHz	4MB		Chipset
	i7-4702MQ	4	2.2 GHz	3.2 GHz	6MB	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset	
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets					ExpressCard	HM86 model: One slot (ExpressCard/34, ExpressCard/54)
Optical Storage	DVD burner, 9.5mm high, fixed, not removable, tray-in Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card					Smart card reader	Optional: Smart card reader
M.2 SSD						Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Widescreen display	Some: 15.6" (396mm) HD (1366x768), 220 nits, 500:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080), 300 nits, 500:1 contrast ratio					Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 6235 a/b/g/n+BT: Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card
Graphics	Intel HD Graphics 4600 in processor					WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE / HSPA+/EVDO/GSM/GPRS/EDGE, GPS
Dimensions ³	HD (WxDxH): 14.84" x 9.72" x 1.13-1.34"; 377mm x 247mm x 28.8-34.05mm FHD (WxDxH): 14.84" x 9.72" x 1.22-1.43"; 377mm x 247mm x 31.0-36.25mm					SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider
Weight ²						Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
	Models	6-cell 48Wh	6-cell 56Wh	9-cell 99.9Wh		Ethernet	HM86 model: Intel Ethernet Connection I217-V (Clarkville) QM87 model: Intel Ethernet Connection I217-LM (Clarkville)
	HD	5.54lb / 2.52kg	5.60lb / 2.54kg	5.95lb / 2.70kg		Security	Power-on password, hard disk password, supervisor password, security keyhole
	FHD	5.68lb / 2.58kg	5.73lb / 2.60kg	6.08lb / 2.76kg		Security chip	Trusted Platform Module, TCG 1.2-compliant
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic					vPro (optional)	Intel vPro Technology
Battery type	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication					Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor
Max battery life ¹⁰	Models	6-cell 48Wh	6-cell 56Wh	9-cell 99.9Wh		Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit
	Win7 (MobileMark® 2007)	9 hr	11 hr	19 hr		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite
	Win8 (MobileMark 2012)	6 hr	7 hr	12 hr			
AC adapter	65-watt AC adapter						

See footnotes for more detailed information

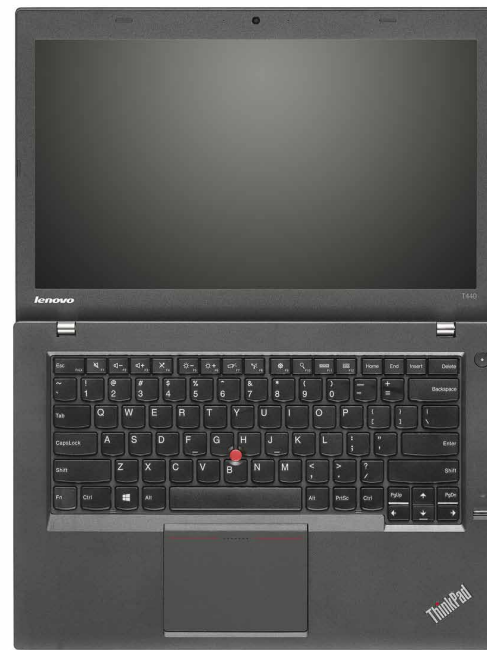
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Lenovo® ThinkPad T440



Lenovo ThinkPad T440



Lenovo ThinkPad T440



Lenovo ThinkPad T440



Lenovo ThinkPad T440

ThinkPad T440 Platform Specifications

Product Specifications Reference (PSREF)

Positioning	Mainstream Ultrabook™ or Thinbook; one spindle							Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch		
Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor							ThinkLight™	None		
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics	WLAN ⁴ <i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card Intel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card 		
	i3-4010U	2	4	1.7 GHz	-	3MB	DDR3L-1600				Intel HD graphics 4400
	i3-4030U			1.9 GHz	-	3MB					
	i5-4200U			1.6 GHz	2.6 GHz	3MB					
	i5-4210U			1.7 GHz	2.7 GHz	3MB					
	i5-4300U			1.9 GHz	2.9 GHz	3MB					
	i7-4500U			1.8 GHz	3 GHz	4MB					
i7-4600U	2.1 GHz			3.3 GHz	4MB						
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)							WWAN (optional)	<i>One of the following, configurable by model (mutually exclusive with M.2 SSD):</i> <ul style="list-style-type: none"> Wireless WAN upgradable Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 card (US models) Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card (WE models) Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card (WE models) 		
Optical Storage	None <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ <i>Some:</i> SSHD with 8GB NAND flash memory							SIM card (optional)	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> AT&T® or Verizon® LTE (4G), contract required with service provider (US models) Lenovo SIM, out-of-box service, pay-as-you-go via credit card, no contract required (WE models) User selectable, contract required with service provider 		
M.2 SSD	<i>Some:</i> Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader <i>Some:</i> Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card							Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768), anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 350:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio							Ethernet	<i>Non-vPro model:</i> Intel Ethernet Connection I218-V (Clarkville) <i>vPro model:</i> Intel Ethernet Connection I218-LM (Clarkville) <i>Optional:</i> Near Field Communication		
Multi-touch Camera	<i>Some:</i> Capacitive-type multi-touch, supports 10-finger gesture HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus							NFC	Security Security chip vPro (optional) Fingerprint reader		
Graphics	Intel HD Graphics 4400 in processor only, or Intel HD Graphics 4400 in processor and NVIDIA GeForce® GT 720M, PCI Express® x8, 1GB memory, NVIDIA® Optimus™ technology; supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays; <i>Max external resolution:</i> 1920x1200@60Hz (VGA); 3840x2160@30Hz (DisplayPort via Mini DisplayPort cable on integrated models); 2560x1600@60Hz (DisplayPort via Mini DisplayPort cable on optimus models)							Security chip	Trusted Platform Module, TCG 1.2-compliant		
Dimensions ³	14.0W" (WxDxH): 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm 14.0W" MultiTouch (WxDxH): 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm							vPro (optional)	Intel vPro Technology		
Weight ²	Models	3-cell + 3-cell		3-cell + 6-cell				Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor		
	Integrated Non-MultiTouch	3.79 lb / 1.72kg		4.10 lb / 1.86kg				Limited warranty ¹²	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service²⁴ 3-year/1-yr battery limited onsite service, IWS (International Warranty Service)¹⁷ 		
	Integrated MultiTouch	4.03 lb / 1.83kg		4.33 lb / 1.97kg				Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Some:</i> Windows 8 / 8.1 Pro 64-bit <ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support ThinkVantage Product Recovery Rescue and Recovery™ ThinkVantage System Update Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype™ Microsoft® Office preloaded; purchase a product key to activate Norton™ Internet Security (30 days of virus definitions) 		
	Optimus Non-MultiTouch	3.73 lb / 1.69kg		4.04 lb / 1.83kg							
	Optimus MultiTouch	3.97 lb / 1.80kg		4.33 lb / 1.97kg							
	Case material	Glass-Fiber Reinforced Plastic									
Internal battery	<i>Optional:</i> Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication										
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication										
Max battery life ¹⁰	Models	3-cell + 3-cell		3-cell + 6-cell 47.5Wh		3-cell + 6-cell 72Wh					
	Integrated	8.6 hr		12.9 hr		17.2 hr					
	Optimus	7.7 hr		11.6 hr		15.4 hr					
AC adapter	Integrated models: 45-watt AC adapter; Optimus models: 65-watt AC adapter										
Chipset	Intel SoC (System on Chip) platform										
Smart card reader	<i>Optional:</i> Smart card reader, exclusive with M.2 SSD										
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)										
Ports	Two USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)										
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack							Environment	EPEAT™ Gold (US) or EPEAT Silver (WE); ENERGY STAR® 6.0; GREENGUARD®; RoHS-compliant		

ThinkPad T440 20B6 (TopSeller)

Product Specifications Reference (PSREF)

Model	Processor vPro	Graphics	Memory (soldered +DIMM)	Multi-Display touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)		
20B6009TUS	i3-4030U	No	HD 4400	0+4GB	14" HD	No	500G 7200	7260 b/g/n+BT	Upp	None	None	720p	None	Finger	None	3+3	45W	Win8.1 DG Win7	1-depot	No	09/14
20B60057US	i5-4200U	No	HD 4400	0+4GB	14" HD	No	500G 7200	7260 b/g/n+BT	Upp	None	16GB	720p	None	None	None	3+3	45W	Win8 DG Win7	1-depot	No	09/13
20B6005FUS	i5-4200U	No	HD 4400	0+4GB	14" HD	No	500G 7200	7260 b/g/n+BT	Upp	None	None	720p	None	None	None	No+6(47.5wh)	45W	Win8 DG Win7	1-depot	No	09/13
20B6006CUS	i5-4200U	No	HD 4400	0+4GB	14" HD	No	500G 7200	7260 ac+BT	Upp	None	None	720p	None	Finger	None	3+3	45W	Win8 DG Win7	1-depot	No	11/13
20B6008EUS	i5-4200U	No	HD 4400	4+0GB	14" HD	No	500G 7200	7260 ac+BT	Upp	None	None	720p	None	Finger	None	3+3	45W	Win8 DG Win7	1-depot	No	03/14
20B60058US	i5-4300U	vPro	HD 4400	0+4GB	14" HD	No	500G 7200	7260 ac+BT	Upp	None	16GB	720p	None	None	None	3+3	45W	Win8 DG Win7	1-depot	No	09/13
20B6005GUS	i5-4300U	No	HD 4400	0+4GB	14" HD	No	500G 7200	7260 b/g/n+BT	Upp	None	None	720p	None	None	None	No+6(47.5wh)	45W	Win8 DG Win7	1-depot	No	09/13
20B6005RUS	i5-4300U	vPro	HD 4400	0+4GB	14" HD	No	500G 7200	7260 ac+BT	Upp	None	None	720p	None	Finger	None	3+3	45W	Win8 DG Win7	1-depot	No	09/13
20B6008CUS	i5-4200U	No	HD 4400	4+0GB	14" HD+	MT	500G 7200	7260 ac+BT	Upp	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8.1 DG Win7	3-depot	No	03/14
20B60059US	i5-4300U	vPro	HD 4400	0+4GB	14" HD	No	500G 7200	7260 ac+BT	Upp	None	16GB	720p	None	None	None	3+3	45W	Win8 DG Win7	3-depot	No	09/13
20B6005AUS	i5-4300U	vPro	HD 4400	0+4GB	14" HD	No	500G 7200	7260 ac+BT	Upp	None	16GB	720p	None	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	09/13
20B6005BUS	i5-4300U	vPro	HD 4400	0+4GB	14" HD+	No	500G 7200	7260 ac+BT	Upp	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	09/13
20B6005CUS	i5-4300U	vPro	HD 4400	0+8GB	14" HD+	No	500G 7200	7260 ac+BT	Upp	None	16GB	720p	None	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	09/13
20B6005DUS	i5-4300U	vPro	HD 4400	0+8GB	14" HD+	No	500G 7200	7260 ac+BT	Upp	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	09/13
20B6005HUS	i5-4300U	vPro	HD 4400	0+4GB	14" HD+	No	180G SSD Opal	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	10/13
20B6005JUS	i5-4300U	vPro	HD 4400	0+8GB	14" HD+	No	180G SSD Opal	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	10/13
20B6005KUS	i5-4300U	vPro	HD 4400	0+8GB	14" HD+	No	256G SSD eDrive	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	09/13
20B6005LUS	i5-4300U	vPro	HD 4400	0+4GB	14" HD	No	500G 7200	7260 ac+BT	Upp	None	None	720p	None	Finger	None	No+6(47.5wh)	45W	Win8 DG Win7	3-depot	No	09/13
20B6005MUS	i5-4300U	vPro	HD 4400	0+4GB	14" HD	No	500G 7200	7260 ac+BT	Upp	None	None	720p	None	None	None	No+6(47.5wh)	45W	Win8 DG Win7	3-depot	No	09/13

• For detailed platform specifications, please see [ThinkPad T440 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch	
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	ThinkLight™	None	
	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600	Chipset	Intel SoC (System on Chip) platform	
	i3-4030U		1.9 GHz	-	3MB		Smart card reader	Optional: Smart card reader	
	i5-4200U		1.6 GHz	2.6 GHz	3MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector	
	i7-4500U		1.8 GHz	3 GHz	4MB		Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack	
	i7-4600U		2.1 GHz	3.3 GHz	4MB		Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)	
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory						WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card	
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card						WWAN (optional)	Upp: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS	
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio						SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider	
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture						Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)	
Graphics	Intel HD Graphics 4400 in processor						NFC	Optional: Near Field Communication	
Dimensions ³	14.0W" (WxDxH):		13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm			Security	Power-on password, hard disk password, supervisor password, security keyhole		
Weight ²	14.0W" MultiTouch (WxDxH):		13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm			Security chip	Trusted Platform Module, TCG 1.2-compliant		
	Models	3-cell + 3-cell		3-cell + 6-cell		vPro (optional)	Intel vPro Technology		
	Non-MultiTouch	3.79 lb / 1.72kg		4.10 lb / 1.86kg		Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor		
	MultiTouch	4.03 lb / 1.83kg		4.33 lb / 1.97kg		Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit		
Case material	Glass-Fiber Reinforced Plastic						Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite		
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication								
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication								
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell		3-cell + 6-cell 47.5Wh		3-cell + 6-cell 72Wh			
	Battery life	8.6 hr		12.9 hr		17.2 hr			
AC adapter	45-watt AC adapter								

See footnotes for more detailed information

(CB1-1) © Lenovo

ThinkPad T440 20B6 (TopSeller) - II

Product Specifications Reference (PSREF)

Model	Processor vPro	Graphics	Memory (soldered +DIMM)	Multi-Display touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20B6006AUS	i5-4300U	vPro HD 4400	0+4GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	No+6(47.5wh)	45W	Win8 DG Win7	3-depot	No	11/13
20B6009MUS	i5-4300U	vPro HD 4400	4+4GB 14" HD+	No	512G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 DG Win7	3-depot	No	07/14
20B6008FUS	i5-4300U	vPro HD 4400	4+0GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	03/14
20B6008GUS	i5-4300U	vPro HD 4400	4+4GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	03/14
20B6008HUS	i5-4300U	vPro HD 4400	4+0GB 14" HD+	No	500G 7200 Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	03/14
20B6009NUS	i7-4600U	vPro HD 4400	4+4GB 14" HD+	No	512G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 DG Win7	3-depot	No	07/14
20B6005EUS	i7-4600U	vPro HD 4400	4+0GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	09/13
20B6005NUS	i7-4600U	vPro HD 4400	4+0GB 14" HD+	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	10/13
20B6005PUS	i7-4600U	vPro HD 4400	4+0GB 14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	09/13
20B6006BUS	i7-4600U	vPro HD 4400	4+4GB 14" HD+	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	11/13
20B6006DUS	i7-4600U	vPro HD 4400	4+4GB 14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	11/13
20B6006EUS	i7-4600U	vPro HD 4400	4+4GB 14" HD+	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	11/13
20B6008DUS	i7-4600U	vPro HD 4400	4+0GB 14" HD	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	03/14
20B6008JUS	i7-4600U	vPro HD 4400	4+4GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	03/14

• For detailed platform specifications, please see [ThinkPad T440 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor					Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch	
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	ThinkLight™	None
	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600	Chipset	Intel SoC (System on Chip) platform
	i3-4030U		1.9 GHz	-	3MB		Smart card reader	Optional: Smart card reader
	i5-4200U		1.6 GHz	2.6 GHz	3MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector
	i7-4500U		1.8 GHz	3 GHz	4MB		Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
	i7-4600U		2.1 GHz	3.3 GHz	4MB		WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)					WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS	
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory					SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider	
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card					Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio					Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)	
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture					NFC	Optional: Near Field Communication	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					Security	Power-on password, hard disk password, supervisor password, security keyhole	
Graphics	Intel HD Graphics 4400 in processor					Security chip	Trusted Platform Module, TCG 1.2-compliant	
Dimensions ³	14.0W" (WxDxH): 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm 14.0W" MultiTouch (WxDxH): 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm					vPro (optional)	Intel vPro Technology	
Weight ²	Models	3-cell + 3-cell		3-cell + 6-cell		Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor	
	Non-MultiTouch	3.79 lb / 1.72kg		4.10 lb / 1.86kg		Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit	
	MultiTouch	4.03 lb / 1.83kg		4.33 lb / 1.97kg		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite	
Case material	Glass-Fiber Reinforced Plastic					Battery configuration	3-cell + 3-cell 3-cell + 6-cell 47.5Wh 3-cell + 6-cell 72Wh	
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication					Battery life	8.6 hr 12.9 hr 17.2 hr	
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication					AC adapter	45-watt AC adapter	
Max battery life ¹⁰								

See footnotes for more detailed information

(CB1-2) © Lenovo

ThinkPad T440 20B6 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor vPro	Graphics	Memory (soldered +DIMM)	Multi-Display touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)	
20B60076US	i5-4200U	No HD	4400	0+4GB 14" HD+	MT	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	None	None	3+3	45W	Win8.1 P64	1-depot	No	01/14
20B60077US	i5-4300U	vPro HD	4400	0+4GB 14" HD+	MT	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	01/14
20B60078US	i5-4300U	vPro HD	4400	0+4GB 14" HD+	MT	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	01/14
20B60079US	i5-4300U	vPro HD	4400	0+4GB 14" HD+	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	01/14
20B6002AUS	i5-4300U	vPro HD	4400	0+4GB 14" HD+	MT	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	09/13
20B6002BUS	i5-4300U	vPro HD	4400	0+4GB 14" HD+	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	09/13
20B6008KUS	i5-4300U	vPro HD	4400	4+0GB 14" HD+	MT	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	03/14
20B6007AUS	i7-4600U	vPro HD	4400	4+0GB 14" HD+	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	01/14
20B6007BUS	i7-4600U	vPro HD	4400	4+0GB 14" HD+	MT	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	01/14
20B6009PUS	i7-4600U	vPro HD	4400	4+4GB 14" HD+	MT	512G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	07/14
20B6002CUS	i7-4600U	vPro HD	4400	4+0GB 14" HD+	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	09/13
20B6002DUS	i7-4600U	vPro HD	4400	4+0GB 14" HD+	MT	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	09/13

• For detailed platform specifications, please see [ThinkPad T440 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch		
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	ThinkLight™	None		
	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600	Chipset	Intel SoC (System on Chip) platform		
	i3-4030U		1.9 GHz	-	3MB		Smart card reader	Optional: Smart card reader		
	i5-4200U		1.6 GHz	2.6 GHz	3MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector		
	i7-4500U		1.8 GHz	3 GHz	4MB		Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack		
	i7-4600U		2.1 GHz	3.3 GHz	4MB		WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card		
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)						WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS		
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory						SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider		
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card						Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio						Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)		
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture						NFC	Optional: Near Field Communication		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Security	Power-on password, hard disk password, supervisor password, security keyhole		
Graphics	Intel HD Graphics 4400 in processor						Security chip	Trusted Platform Module, TCG 1.2-compliant		
Dimensions ³	14.0W" (WxDxH):		13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm			vPro (optional)	Intel vPro Technology			
Weight ²	Models	3-cell + 3-cell		3-cell + 6-cell		Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor			
	Non-MultiTouch	3.79 lb / 1.72kg		4.10 lb / 1.86kg		Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit			
	MultiTouch	4.03 lb / 1.83kg		4.33 lb / 1.97kg		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite			
Case material	Glass-Fiber Reinforced Plastic									
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication									
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication									
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell		3-cell + 6-cell 47.5Wh		3-cell + 6-cell 72Wh				
	Battery life	8.6 hr		12.9 hr		17.2 hr				
AC adapter	45-watt AC adapter									

See footnotes for more detailed information

(CB1-3) © Lenovo

ThinkPad T440 20B7

Model	Processor vPro	Graphics	Memory (soldered +DIMM)	Multi-Display touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)	
20B70044US	i5-4300U vPro	HD 4400	0+4GB	14" HD+	No	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	No+6(47.5wh)	45W	Win8 DG Win7	3-depot	Yes	11/13
20B70047US	i5-4300U vPro	HD 4400	0+4GB	14" HD	No	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	No+6(47.5wh)	45W	Win8 DG Win7	3-depot	Yes	11/13
20B7004CUS	i5-4300U vPro	HD 4400	0+8GB	14" HD+	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	None	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	11/13
20B7004FUS	i5-4300U vPro	HD 4400	0+8GB	14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	None	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	11/13
20B7004HUS	i5-4300U vPro	HD 4400	0+4GB	14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	None	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	11/13
20B7004JUS	i5-4300U vPro	HD 4400	0+8GB	14" HD+	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	None	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	11/13
20B7004MUS	i5-4300U vPro	HD 4400	0+8GB	14" HD	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	None	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	11/13
20B7008UUS	i5-4300U vPro	HD 4400	4+4GB	14" HD+	No	256G SSD eDrive	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 DG Win7	3-depot	Yes	04/14
20B7008WUS	i5-4300U vPro	HD 4400	4+0GB	14" HD	No	500G 7200	7260 a/b/g/n+BT	Upg	None	None	720p	None	Finger	None	3+3	45W	Win8.1 DG Win7	3-depot	Yes	04/14
20B7008YUS	i5-4300U vPro	HD 4400	4+0GB	14" HD+	No	500G 7200	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 DG Win7	3-depot	Yes	04/14
20B7008VUS	i7-4600U vPro	HD 4400	4+0GB	14" HD+	No	500G 7200	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 DG Win7	3-depot	Yes	04/14
20B7008XUS	i7-4600U vPro	HD 4400	4+4GB	14" HD+	No	256G SSD eDrive	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 DG Win7	3-depot	Yes	04/14
20B7004BUS	i7-4600U vPro	HD 4400	4+4GB	14" HD+	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	None	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	11/13
20B7004DUS	i7-4600U vPro	HD 4400	4+4GB	14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	None	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	11/13
20B7004GUS	i7-4600U vPro	HD 4400	4+0GB	14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	None	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	11/13
20B7004QUS	i7-4600U vPro	HD 4400	4+4GB	14" HD+	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	None	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	11/13

• For detailed platform specifications, please see [ThinkPad T440 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch		
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	ThinkLight™	None		
	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600	Chipset	Intel SoC (System on Chip) platform		
	i3-4030U		1.9 GHz	-	3MB		Smart card reader	Optional: Smart card reader		
	i5-4200U		1.6 GHz	2.6 GHz	3MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector		
	i7-4500U		1.8 GHz	3 GHz	4MB		Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack		
	i7-4600U		2.1 GHz	3.3 GHz	4MB		WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card		
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)						WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS		
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory						SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider		
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card						Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio						Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)		
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture						NFC	Optional: Near Field Communication		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Security	Power-on password, hard disk password, supervisor password, security keyhole		
Graphics	Intel HD Graphics 4400 in processor						Security chip	Trusted Platform Module, TCG 1.2-compliant		
Dimensions ³	14.0W" (WxDxH):		13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm			vPro (optional)	Intel vPro Technology			
Weight ²	14.0W" MultiTouch (WxDxH):		13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm			Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor			
	Models	3-cell + 3-cell		3-cell + 6-cell		Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit			
	Non-MultiTouch	3.79 lb / 1.72kg		4.10 lb / 1.86kg			Win8 / 8.1 64: Windows 8 / 8.1 64-bit			
Case material	Glass-Fiber Reinforced Plastic							Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit		
	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication						Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite			
	External battery Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication									
Max battery life ¹⁰										
	Battery configuration	3-cell + 3-cell		3-cell + 6-cell 47.5Wh		3-cell + 6-cell 72Wh				
	Battery life	8.6 hr		12.9 hr		17.2 hr				
AC adapter	45-watt AC adapter									

See footnotes for more detailed information

ThinkPad T440 20B7 (Windows 8)

Product Specifications Reference (PSREF)

Model	Processor vPro	Graphics	Memory (soldered +DIMM)	Multi-Display touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20B7005KUS	i5-4300U	vPro HD 4400	0+4GB 14" HD+	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	01/14
20B7005MUS	i5-4300U	vPro HD 4400	0+4GB 14" HD+	MT	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	01/14
20B70005US	i5-4300U	vPro HD 4400	0+4GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	No+6(47.5wh)	45W	Win8 P64	3-depot	Yes	09/13
20B70009US	i5-4300U	vPro HD 4400	0+4GB 14" HD+	MT	500G 7200	7260 ac+BT	Upg	None	16GB	720p	None	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	09/13
20B7000BUS	i5-4300U	vPro HD 4400	0+4GB 14" HD+	MT	128G SSD	7260 ac+BT	Upg	None	None	720p	None	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	09/13
20B7000FUS	i5-4300U	vPro HD 4400	0+4GB 14" HD+	No	128G SSD	7260 ac+BT	Upg	None	None	720p	None	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	09/13
20B7000JUS	i5-4300U	vPro HD 4400	0+4GB 14" HD	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	None	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	09/13
20B7000NUS	i5-4300U	vPro HD 4400	0+4GB 14" HD	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	None	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	09/13
20B7000QUS	i5-4300U	vPro HD 4400	0+4GB 14" HD	No	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	No+6(47.5wh)	45W	Win8 P64	3-depot	Yes	09/13
20B7000TUS	i5-4300U	vPro HD 4400	0+4GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	None	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	09/13
20B7000UUS	i5-4300U	vPro HD 4400	0+4GB 14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	None	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	09/13
20B7000VUS	i5-4300U	vPro HD 4400	0+4GB 14" HD+	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	None	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	09/13
20B7000WUS	i5-4300U	vPro HD 4400	0+4GB 14" HD	No	128G SSD	7260 ac+BT	Upg	None	None	720p	None	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	09/13
20B7003SUS	i5-4300U	vPro HD 4400	0+8GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	None	Finger	None	3+3	45W	Win8 P64	3-depot	No	09/13
20B7003UUS	i5-4300U	vPro HD 4400	0+8GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	No+6(47.5wh)	45W	Win8 P64	3-depot	No	09/13
20B7003VUS	i5-4300U	vPro HD 4400	0+8GB 14" HD+	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	09/13
20B70061US	i5-4300U	vPro HD 4400	4+0GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	None	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	03/14
20B70062US	i5-4300U	vPro HD 4400	4+0GB 14" HD+	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	03/14
20B70065US	i5-4300U	vPro HD 4400	4+0GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	03/14

• For detailed platform specifications, please see [ThinkPad T440 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch		
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	ThinkLight™	None		
	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600	Chipset	Intel SoC (System on Chip) platform		
	i3-4030U		1.9 GHz	-	3MB		Smart card reader	Optional: Smart card reader		
	i5-4200U		1.6 GHz	2.6 GHz	3MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector		
	i7-4500U		1.8 GHz	3 GHz	4MB		Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack		
	i7-4600U		2.1 GHz	3.3 GHz	4MB		WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card		
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)						WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS		
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory						SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider		
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card						Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio						Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)		
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture						NFC	Optional: Near Field Communication		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Security	Power-on password, hard disk password, supervisor password, security keyhole		
Graphics	Intel HD Graphics 4400 in processor						Security chip	Trusted Platform Module, TCG 1.2-compliant		
Dimensions ³	14.0W" (WxDxH):		13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm			vPro (optional)	Intel vPro Technology			
Weight ²	Models		3-cell + 3-cell		3-cell + 6-cell		Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor		
	Non-MultiTouch		3.79 lb / 1.72kg		4.10 lb / 1.86kg		Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit		
	MultiTouch		4.03 lb / 1.83kg		4.33 lb / 1.97kg		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite		
Case material	Glass-Fiber Reinforced Plastic						AC adapter	45-watt AC adapter		
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication									
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication									
Max battery life ¹⁰	Battery configuration		3-cell + 3-cell		3-cell + 6-cell 47.5Wh		3-cell + 6-cell 72Wh			
	Battery life		8.6 hr		12.9 hr		17.2 hr			

See footnotes for more detailed information

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ThinkPad T440 20B7 (Windows 8) - II

Product Specifications Reference (PSREF)

Model	Processor vPro	Graphics	Memory (soldered +DIMM)	Multi-Display touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20B70066US	i5-4300U	vPro HD 4400	4+0GB 14" HD	No	500G 7200	7260 ac+BT	Upg	None	16GB 720p	None	None	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	03/14
20B70068US	i5-4300U	vPro HD 4400	4+0GB 14" HD+	No	240G SSD Opal	7260 ac+BT	Upg	None	None 720p	Backlit	Finger	None	None	3+3	45W	Win8 P64	3-depot	Yes	03/14
20B70069US	i5-4300U	vPro HD 4400	4+0GB 14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg	None	None 720p	Backlit	Finger	None	None	3+3	45W	Win8 P64	3-depot	Yes	03/14
20B7005LUS	i7-4600U	vPro HD 4400	4+0GB 14" HD+	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None 720p	Backlit	Finger	None	None	3+3	45W	Win8.1 P64	3-depot	Yes	01/14
20B7005NUS	i7-4600U	vPro HD 4400	4+0GB 14" HD+	MT	500G 7200	7260 ac+BT	Upg	None	16GB 720p	Backlit	Finger	None	None	3+3	45W	Win8.1 P64	3-depot	Yes	01/14
20B70006US	i7-4600U	vPro HD 4400	4+0GB 14" HD+	MT	500G 7200	7260 ac+BT	Upg	None	16GB 720p	None	Finger	None	None	3+3	45W	Win8 P64	3-depot	Yes	09/13
20B70008US	i7-4600U	vPro HD 4400	4+0GB 14" HD+	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None 720p	None	Finger	None	None	3+3	45W	Win8 P64	3-depot	Yes	09/13
20B7000GUS	i7-4600U	vPro HD 4400	4+0GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB 720p	None	Finger	None	None	3+3	45W	Win8 P64	3-depot	Yes	09/13
20B7000RUS	i7-4600U	vPro HD 4400	4+0GB 14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg	None	None 720p	None	Finger	None	None	3+3	45W	Win8 P64	3-depot	Yes	09/13

• For detailed platform specifications, please see [ThinkPad T440 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor					Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	ThinkLight™	None			
	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600	Chipset	Intel SoC (System on Chip) platform			
	i3-4030U		1.9 GHz	-	3MB		Smart card reader	Optional: Smart card reader			
	i5-4200U		1.6 GHz	2.6 GHz	3MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector			
	i7-4500U		1.8 GHz	3 GHz	4MB		Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack			
	i7-4600U		2.1 GHz	3.3 GHz	4MB		WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card			
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)					WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS				
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory					SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider				
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card					Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter				
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio					Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)				
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture					NFC	Optional: Near Field Communication				
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					Security	Power-on password, hard disk password, supervisor password, security keyhole				
Graphics	Intel HD Graphics 4400 in processor					Security chip	Trusted Platform Module, TCG 1.2-compliant				
Dimensions ³	14.0W" (WxDxH):		13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm			vPro (optional)	Intel vPro Technology				
Weight ²	14.0W" MultiTouch (WxDxH):		13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm			Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor				
	Models	3-cell + 3-cell		3-cell + 6-cell		Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit				
	Non-MultiTouch	3.79 lb / 1.72kg		4.10 lb / 1.86kg		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite				
Case material	Glass-Fiber Reinforced Plastic										
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication										
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication										
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell		3-cell + 6-cell 47.5Wh		3-cell + 6-cell 72Wh					
	Battery life	8.6 hr		12.9 hr		17.2 hr					
AC adapter	45-watt AC adapter										

See footnotes for more detailed information

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ThinkPad T440 20B7 (Onsite)

Model	Processor vPro	Graphics	Memory (soldered +DIMM)	Multi-Display touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20B70048US	i5-4300U	vPro HD 4400	0+4GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB 720p	None	None	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	11/13
20B70049US	i5-4300U	vPro HD 4400	0+4GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	No+6(47.5wh)	45W	Win8 DG Win7	3-onsite	Yes	11/13
20B7004EUS	i5-4300U	vPro HD 4400	0+8GB 14" HD	No	500G 7200	7260 ac+BT	Upg	None	16GB 720p	None	None	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	11/13
20B7004LUS	i5-4300U	vPro HD 4400	0+8GB 14" HD+	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	None	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	11/13
20B7004NUS	i5-4300U	vPro HD 4400	0+8GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB 720p	None	None	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	11/13
20B7004PUS	i5-4300U	vPro HD 4400	0+4GB 14" HD	No	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	No+6(47.5wh)	45W	Win8 DG Win7	3-onsite	Yes	11/13
20B7004RUS	i5-4300U	vPro HD 4400	0+8GB 14" HD+	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	None	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	11/13
20B70045US	i7-4600U	vPro HD 4400	4+0GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB 720p	None	None	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	11/13
20B70046US	i7-4600U	vPro HD 4400	4+4GB 14" HD+	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	None	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	11/13
20B7004AUS	i7-4600U	vPro HD 4400	4+4GB 14" HD+	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	None	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	11/13
20B7004KUS	i7-4600U	vPro HD 4400	4+4GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB 720p	None	None	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	11/13

• For detailed platform specifications, please see [ThinkPad T440 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch		
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	ThinkLight™	None		
	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600	Chipset	Intel SoC (System on Chip) platform		
	i3-4030U		1.9 GHz	-	3MB		Smart card reader	Optional: Smart card reader		
	i5-4200U		1.6 GHz	2.6 GHz	3MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector		
	i7-4500U		1.8 GHz	3 GHz	4MB		Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack		
	i7-4600U		2.1 GHz	3.3 GHz	4MB		WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card		
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)						WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS		
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory						SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider		
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card						Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio						Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)		
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture						NFC	Optional: Near Field Communication		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Security	Power-on password, hard disk password, supervisor password, security keyhole		
Graphics	Intel HD Graphics 4400 in processor						Security chip	Trusted Platform Module, TCG 1.2-compliant		
Dimensions ³	14.0W" (WxDxH):		13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm				vPro (optional)	Intel vPro Technology		
Weight ²	14.0W" MultiTouch (WxDxH):		13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm				Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor		
	Models	3-cell + 3-cell		3-cell + 6-cell				Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit	
	Non-MultiTouch	3.79 lb / 1.72kg		4.10 lb / 1.86kg				Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite	
	MultiTouch	4.03 lb / 1.83kg		4.33 lb / 1.97kg						
Case material	Glass-Fiber Reinforced Plastic									
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication									
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication									
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell		3-cell + 6-cell 47.5Wh		3-cell + 6-cell 72Wh				
	Battery life	8.6 hr		12.9 hr		17.2 hr				
AC adapter	45-watt AC adapter									

See footnotes for more detailed information

ThinkPad T440 20B7 (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor vPro	Graphics	Memory (soldered +DIMM)	Multi-Display touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20B70007US	i5-4300U	vPro HD 4400	0+4GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB 720p	None	None	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	09/13
20B7000DUS	i5-4300U	vPro HD 4400	0+4GB 14" HD	No	500G 7200	7260 ac+BT	Upg	None	16GB 720p	None	None	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	09/13
20B7000HUS	i5-4300U	vPro HD 4400	0+4GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	None 720p	None	None	Finger	None	No+6(47.5wh)	45W	Win8 P64	3-onsite	Yes	09/13
20B7000LUS	i5-4300U	vPro HD 4400	0+4GB 14" HD	No	128G SSD	7260 ac+BT	Upg	None	None 720p	None	None	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	09/13
20B7000MUS	i5-4300U	vPro HD 4400	0+4GB 14" HD	No	500G 7200	7260 ac+BT	Upg	None	None 720p	None	None	Finger	None	No+6(47.5wh)	45W	Win8 P64	3-onsite	Yes	09/13
20B7000PUS	i5-4300U	vPro HD 4400	0+4GB 14" HD+	No	128G SSD	7260 ac+BT	Upg	None	None 720p	None	None	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	09/13
20B7000SUS	i5-4300U	vPro HD 4400	0+4GB 14" HD	No	256G SSD eDrive	7260 ac+BT	Upg	None	None 720p	None	None	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	09/13
20B7000XUS	i5-4300U	vPro HD 4400	0+4GB 14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg	None	None 720p	None	None	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	09/13
20B7003TUS	i5-4300U	vPro HD 4400	0+8GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB 720p	None	None	Finger	None	3+3	45W	Win8 P64	3-onsite	No	09/13
20B7003WUS	i5-4300U	vPro HD 4400	0+8GB 14" HD+	No	128G SSD	7260 ac+BT	Upg	None	None 720p	Backlit	Finger	None	None	3+3	45W	Win8 P64	3-onsite	No	09/13
20B70063US	i5-4300U	vPro HD 4400	4+0GB 14" HD+	MT	180G SSD Opal	7260 ac+BT	Upg	None	None 720p	Backlit	Finger	None	None	3+3	45W	Win8.1 P64	3-onsite	Yes	03/14
20B70064US	i5-4300U	vPro HD 4400	4+0GB 14" HD+	MT	240G SSD Opal	7260 ac+BT	Upg	None	None 720p	Backlit	Finger	None	None	3+3	45W	Win8.1 P64	3-onsite	Yes	03/14
20B70067US	i5-4300U	vPro HD 4400	4+0GB 14" HD+	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None 720p	Backlit	Finger	None	None	3+3	45W	Win8.1 P64	3-onsite	Yes	03/14
20B7006AUS	i5-4300U	vPro HD 4400	4+0GB 14" HD+	MT	500G 7200	7260 ac+BT	Upg	None	16GB 720p	Backlit	Finger	None	None	3+3	45W	Win8.1 P64	3-onsite	Yes	03/14
20B7000CUS	i7-4600U	vPro HD 4400	4+0GB 14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB 720p	None	None	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	09/13

• For detailed platform specifications, please see [ThinkPad T440 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch		
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	ThinkLight™	None		
	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600	Chipset	Intel SoC (System on Chip) platform		
	i3-4030U		1.9 GHz	-	3MB		Smart card reader	Optional: Smart card reader		
	i5-4200U		1.6 GHz	2.6 GHz	3MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector		
	i7-4500U		1.8 GHz	3 GHz	4MB		Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack		
	i7-4600U		2.1 GHz	3.3 GHz	4MB		WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card		
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)						WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS		
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory						SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider		
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card						Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio						Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)		
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture						NFC	Optional: Near Field Communication		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Security	Power-on password, hard disk password, supervisor password, security keyhole		
Graphics	Intel HD Graphics 4400 in processor						Security chip	Trusted Platform Module, TCG 1.2-compliant		
Dimensions ³	14.0W" (WxDxH):		13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm			vPro (optional)	Intel vPro Technology			
Weight ²	Models	3-cell + 3-cell		3-cell + 6-cell		Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor			
	Non-MultiTouch	3.79 lb / 1.72kg		4.10 lb / 1.86kg		Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit			
	MultiTouch	4.03 lb / 1.83kg		4.33 lb / 1.97kg		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite			
Case material	Glass-Fiber Reinforced Plastic									
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication									
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication									
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell		3-cell + 6-cell 47.5Wh		3-cell + 6-cell 72Wh				
	Battery life	8.6 hr		12.9 hr		17.2 hr				
AC adapter	45-watt AC adapter									

See footnotes for more detailed information

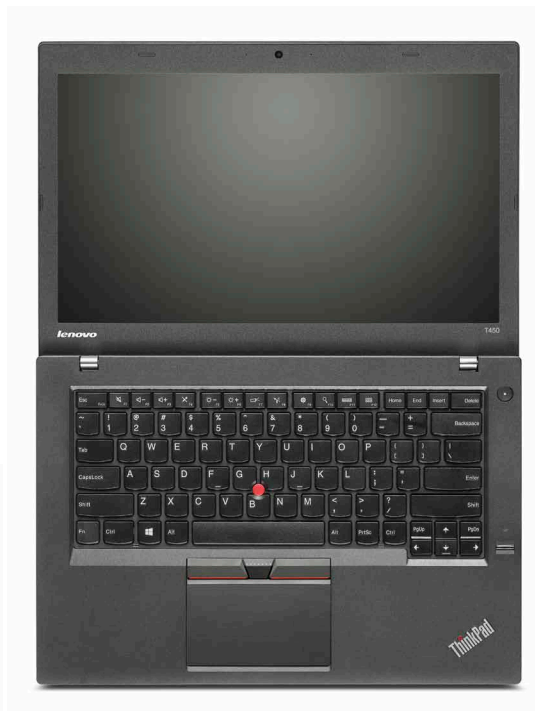
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Lenovo® ThinkPad T450



Lenovo ThinkPad T450



Lenovo ThinkPad T450



Lenovo ThinkPad T450



Lenovo ThinkPad T450

ThinkPad T450 Platform Specifications

Product Specifications Reference (PSREF)

Processor	4th Generation Intel® Core™ i5 or 5th Generation Intel Core i3 / i5 / i7 Processor							Smart card reader Multicard reader Ports	Optional: Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)														
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed		Processor Graphics	Camera Audio support	HD720p resolution, low light sensitive, fixed focus HD Audio, Realtek® ALC3232 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack												
	i5-4300U	2	4	1.9 GHz	2.9 GHz	3MB	DDR3L-1600		Intel HD Graphics 4400														
	i3-5010U			2.1 GHz	-	3MB			Intel HD Graphics 5500														
	i5-5200U			2.2 GHz	2.7 GHz	3MB																	
	i5-5300U			2.3 GHz	2.9 GHz	3MB																	
	i7-5500U			2.4 GHz	3 GHz	4MB																	
i7-5600U	2.6 GHz			3.2 GHz	4MB																		
Graphics	Intel HD Graphics 4400 or 5500 in processor only, or Intel HD Graphics 5500 in processor and NVIDIA GeForce® 940M, 1GB memory; supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays; Max resolution: 3840x2160@60Hz (DP via mDP cable); 1920x1200@60Hz (VGA)							Keyboard UltraNav™		6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch													
Chipset Memory	Intel SoC (System on Chip) platform 16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets							Security Security chip ThinkEngine	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Delivers improved thermal and power efficiency, up to 30 day standby, faster resume time, enhanced security, as well as anti-tampering measures														
Display	Some: 14.0" (355mm) HD (1366x768), anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio							vPro (optional) Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor														
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 212.5 nits							Internal battery External battery Max battery life ¹⁰	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23Wh) Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)														
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ Some: SSHD with 8GB NAND flash memory							<table border="1"> <thead> <tr> <th>Models</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell 48Wh</th> <th>3-cell + 6-cell 72Wh</th> </tr> </thead> <tbody> <tr> <td>Integrated</td> <td>10.08 hr</td> <td>14.78 hr</td> <td>19.78 hr</td> </tr> <tr> <td>Discrete</td> <td>9.51 hr</td> <td>13.94 hr</td> <td>18.66 hr</td> </tr> </tbody> </table>				Models	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh	Integrated	10.08 hr	14.78 hr	19.78 hr	Discrete	9.51 hr	13.94 hr	18.66 hr
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Integrated	10.08 hr	14.78 hr	19.78 hr																				
Discrete	9.51 hr	13.94 hr	18.66 hr																				
M.2 SSD (opt) Optical	Single-sided M.2 SSD, via M.2 card slot None							AC adapter	45W AC adapter, 65W Slim AC adapter, or 65W AC adapter														
Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)							Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Some: Windows 8.1 Pro 64-bit														
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter							<ul style="list-style-type: none"> • Lenovo Solution Center • Lenovo SHAREit • ThinkVantage Product Recovery • Rescue and Recovery™ • ThinkVantage System Update • PC Device Stage • Adobe® Reader® • Evernote® • Skype™ • Maxthon Cloud Browser • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) 															
WLAN ⁴	One of the following, configurable by model: • 11b/g/n, ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card • 11b/g/n, Intel Wireless-N 7265, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card • 11a/b/g/n, Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT adapter, M.2 card • 11ac, Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT adapter, M.2 card							Limited warranty ¹²	One of the following, configurable by model: • 1-year depot repair service • 3-year/1-yr battery depot repair service • 3-year/1-yr battery limited onsite service ²⁴ • 3-year/1-yr battery limited onsite service, IWS (International Warranty Service ¹⁷)														
WWAN (optional)	One of the following, configurable by model: • Wireless WAN upgradable • Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card • Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card							Environment	EPEAT™ Gold (US) or EPEAT Silver (WE); ENERGY STAR® 6.1; GREENGUARD®; RoHS-compliant														
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider																						
Dimensions ³	14.0" (WxDxH): 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm 14.0" Touch (WxDxH): 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm																						
Weight ²	Models		No + 3-cell		3-cell + 3-cell		3-cell + 6-cell																
	Integrated Non-touch		3.58 lb / 1.63 kg		3.81 lb / 1.73 kg		4.21 lb / 1.91 kg																
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Case material	Display cover: Glass-Fiber Reinforced Plastic (non-touch model) or Carbon-Fiber Reinforced Plastic (multi-touch model); Bottom: Glass-Fiber Reinforced Plastic																						

ThinkPad T450 20BV (TopSeller)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit keyboard	Fingerprint reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BV0007US	i3-5010U	No	HD 5500	4GBx1	14" HD	No	500G 7200	None	11b/g/n+BT	Upg	None	None	720p	None	Finger	3+3	45W	Win8.1 DG Win7	1-depot	No	01/15
20BV0005US	i5-5200U	No	HD 5500	4GBx1	14" HD	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	None	Finger	3+3	45W	Win8.1 DG Win7	1-depot	No	01/15
20BV0000CUS	i5-5300U	vPro	HD 5500	4GBx1	14" HD	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	None	Finger	3+3	45W	Win8.1 DG Win7	1-depot	No	01/15
20BV0001US	i5-5300U	vPro	HD 5500	4GBx1	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BV0002US	i5-5300U	vPro	HD 5500	8GBx1	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BV0009US	i5-5300U	vPro	HD 5500	8GBx1	14" HD+	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BV0000AUS	i5-5300U	vPro	HD 5500	8GBx1	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BV0000EUS	i5-5300U	vPro	HD 5500	4GBx1	14" HD+	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BV0003US	i7-5600U	vPro	HD 5500	8GBx1	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BV0000DUS	i7-5600U	vPro	HD 5500	8GBx1	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad T450 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 or 5th Generation Intel Core i3 / i5 / i7 Processor	Dimensions ³	14.0" (WxDxH): 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm 14.0" Touch (WxDxH): 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm																																																				
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Graphics	Intel HD Graphics 4400 or 5500 in processor only, or Intel HD Graphics 5500 in processor and NVIDIA GeForce® 940M, 1GB memory	Case material	Display cover: GFRP (non-touch model) or CFRP (multi-touch model); Bottom: Glass-Fiber Reinforced Plastic																																																				
Chipset	Intel SoC (System on Chip) platform	Smart card reader	Optional: Smart card reader																																																				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Multi-card reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																																				
Display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio	Ports	Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)																																																				
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 212.5 nits	Camera	HD720p resolution, low light sensitive, fixed focus																																																				
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory	Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																																																				
M.2 SSD (opt)	Single-sided M.2 SSD, via M.2 card slot	Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight																																																				
Optical	None	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch																																																				
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)	Security	Power-on password, hard disk password, supervisor password, security keyhole																																																				
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Security chip	Trusted Platform Module, TCG 1.2-compliant																																																				
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card	vPro (optional)	Intel vPro Technology																																																				
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor																																																				
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23Wh)																																																				
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		Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																																				

See footnotes for more detailed information

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ThinkPad T450 20BV (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Multi-Display	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit keyboard	Fingerprint reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BV0006US	i7-5600U	vPro	HD 5500	8GBx1	14" HD+ MT	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 P64	3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad T450 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 or 5th Generation Intel Core i3 / i5 / i7 Processor	Dimensions ³	14.0" (WxDxH): 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm 14.0" Touch (WxDxH): 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm																																																				
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		Case material	Display cover: GFRP (non-touch model) or CFRP (multi-touch model); Bottom: Glass-Fiber Reinforced Plastic																																																				
Graphics	Intel HD Graphics 4400 or 5500 in processor only, or Intel HD Graphics 5500 in processor and NVIDIA GeForce® 940M, 1GB memory	Smart card reader	Optional: Smart card reader																																																				
Chipset	Intel SoC (System on Chip) platform	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																																				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Ports	Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)																																																				
Display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio	Camera	HD720p resolution, low light sensitive, fixed focus																																																				
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Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory	Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight																																																				
M.2 SSD (opt)	Single-sided M.2 SSD, via M.2 card slot	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch																																																				
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Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	vPro (optional)	Intel vPro Technology																																																				
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor																																																				
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23Wh)																																																				
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	External battery	Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)																																																				
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See footnotes for more detailed information

(CB2-2) © Lenovo

ThinkPad T450 20BU

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit keyboard	Fingerprint reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)		
20BU0000US	i5-5300U	vPro	HD 5500	4GBx1	14" HD+	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	None	Finger	No+6(48wh)	45W	Win8.1 DG	Win7	3-depot	No	01/15
20BU0006US	i5-5300U	vPro	HD 5500	4GBx1	14" HD	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	None	Finger	No+6(48wh)	45W	Win8.1 DG	Win7	3-depot	No	01/15
20BU0009US	i5-5300U	vPro	HD 5500	8GBx1	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7	3-depot	No	01/15
20BU000AUS	i5-5300U	vPro	HD 5500	8GBx1	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7	3-depot	No	01/15
20BU000CUS	i5-5300U	vPro	HD 5500	4GBx1	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7	3-depot	No	01/15
20BU000GUS	i5-5300U	vPro	HD 5500	4GBx1	14" HD+	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7	3-depot	No	01/15
20BU000DUS	i7-5600U	vPro	HD 5500	8GBx1	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7	3-depot	No	01/15
20BU000HUS	i7-5600U	vPro	HD 5500	8GBx1	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7	3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad T450 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 or 5th Generation Intel Core i3 / i5 / i7 Processor	Dimensions ³	14.0" (WxDxH): 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm 14.0" Touch (WxDxH): 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm																																																				
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M.2 SSD (opt)	Single-sided M.2 SSD, via M.2 card slot	Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight																																																				
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Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)	Security	Power-on password, hard disk password, supervisor password, security keyhole																																																				
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SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23Wh)																																																				
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See footnotes for more detailed information

(CB2-3) © Lenovo

ThinkPad T450 20BU (Windows 8)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Multi-Display	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit keyboard	Fingerprint reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Ann date (m/y)	
20BU0008US	i5-5300U	vPro	HD 5500	8GBx1	14" HD+ MT	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 P64	3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad T450 Platform Specifications sheet](#)

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Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					AC adapter	45W AC adapter, 65W Slim AC adapter, or 65W AC adapter																								
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card					Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit																								
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card					Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																								
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider																														

See footnotes for more detailed information

(CB2-4) © Lenovo

ThinkPad T450 20BU (Onsite)

Model	Processor	vPro	Graphics	Memory	Multi-Display touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)	
20BU0002US	i5-5300U	vPro	HD 5500	4GBx1	14" HD	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	None	Finger	No+6(48wh)	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20BU0003US	i5-5300U	vPro	HD 5500	8GBx1	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20BU0005US	i5-5300U	vPro	HD 5500	4GBx1	14" HD+	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20BU000BUS	i5-5300U	vPro	HD 5500	4GBx1	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20BU000EUS	i5-5300U	vPro	HD 5500	4GBx1	14" HD+	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	None	Finger	No+6(48wh)	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20BU000FUS	i5-5300U	vPro	HD 5500	8GBx1	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20BU0001US	i7-5600U	vPro	HD 5500	8GBx1	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20BU0007US	i7-5600U	vPro	HD 5500	8GBx1	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15

• For detailed platform specifications, please see [ThinkPad T450 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 or 5th Generation Intel Core i3 / i5 / i7 Processor	Dimensions ³	14.0" (WxDxH): 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm 14.0" Touch (WxDxH): 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm																																																				
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		Case material	Display cover: GFRP (non-touch model) or CFRP (multi-touch model); Bottom: Glass-Fiber Reinforced Plastic																																																				
Graphics	Intel HD Graphics 4400 or 5500 in processor only, or Intel HD Graphics 5500 in processor and NVIDIA GeForce® 940M, 1GB memory	Smart card reader	Optional: Smart card reader																																																				
Chipset	Intel SoC (System on Chip) platform	Multi-card reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																																				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Ports	Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)																																																				
Display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio	Camera	HD720p resolution, low light sensitive, fixed focus																																																				
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 212.5 nits	Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																																																				
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory	Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight																																																				
M.2 SSD (opt)	Single-sided M.2 SSD, via M.2 card slot	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch																																																				
Optical	None	Security	Power-on password, hard disk password, supervisor password, security keyhole																																																				
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)	Security chip	Trusted Platform Module, TCG 1.2-compliant																																																				
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	vPro (optional)	Intel vPro Technology																																																				
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor																																																				
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23Wh)																																																				
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	External battery	Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)																																																				
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		Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																																				

See footnotes for more detailed information

ThinkPad T450 20BU (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Multi-Display touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Cam-era	Backlit keyboard	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Ann date Global (m/y)
20BU0004US	i5-5300U	vPro	HD 5500	8GBx1	14" HD+ MT	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 P64	3-onsite IWS	Yes 01/15

• For detailed platform specifications, please see [ThinkPad T450 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 or 5th Generation Intel Core i3 / i5 / i7 Processor	Dimensions ³	14.0" (WxDxH): 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm 14.0" Touch (WxDxH): 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm																																																				
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		Case material	Display cover: GFRP (non-touch model) or CFRP (multi-touch model); Bottom: Glass-Fiber Reinforced Plastic																																																				
Graphics	Intel HD Graphics 4400 or 5500 in processor only, or Intel HD Graphics 5500 in processor and NVIDIA GeForce® 940M, 1GB memory	Smart card reader	Optional: Smart card reader																																																				
Chipset	Intel SoC (System on Chip) platform	Multi-card reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																																				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Ports	Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)																																																				
Display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio	Camera	HD720p resolution, low light sensitive, fixed focus																																																				
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 212.5 nits	Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																																																				
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory	Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight																																																				
M.2 SSD (opt)	Single-sided M.2 SSD, via M.2 card slot	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch																																																				
Optical	None	Security	Power-on password, hard disk password, supervisor password, security keyhole																																																				
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)	Security chip	Trusted Platform Module, TCG 1.2-compliant																																																				
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	vPro (optional)	Intel vPro Technology																																																				
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WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23Wh)																																																				
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		Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																																				

See footnotes for more detailed information

(CB2-6) © Lenovo



Lenovo® ThinkPad T440p



Lenovo ThinkPad T440p



Lenovo ThinkPad T440p



Lenovo ThinkPad T440p



Lenovo ThinkPad T440p

ThinkPad T440p Platform Specifications

Product Specifications Reference (PSREF)

Positioning	<i>Mainstream performance; two spindles</i>								Chipset	Mobile Intel QM87 Express Chipset																													
Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor								Smart card reader	Optional: Smart card reader																													
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																													
	i3-4000M	2	4	2.4 GHz	-	3MB	DDR3L-1600	Intel HD Graphics 4600	Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector																													
	i3-4100M			2.5 GHz	-	3MB			WLAN ⁴	<i>One of the following, configurable by model:</i>																													
	i5-4200M			2.5 GHz	3.1 GHz	3MB				<ul style="list-style-type: none"> ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card Intel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card 																													
	i5-4210M			2.6 GHz	3.2 GHz	3MB				WWAN (optional)	<i>One of the following, configurable by model (mutually exclusive with M.2 SSD):</i>																												
	i5-4300M			2.6 GHz	3.3 GHz	3MB					<ul style="list-style-type: none"> Wireless WAN upgradable Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 card (US models) Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card (WE models) Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card (WE models) 																												
	i5-4330M			2.8 GHz	3.5 GHz	3MB					SIM card (optional)	<i>One of the following, configurable by model:</i>																											
	i7-4600M	2.9 GHz	3.6 GHz	4MB	<ul style="list-style-type: none"> AT&T® or Verizon® LTE (4G), contract required with service provider (US models) Lenovo SIM, out-of-box service, pay-as-you-go via credit card, no contract required (WE models) User selectable, contract required with service provider 																																		
	i7-4700MQ	2.4 GHz	3.4 GHz	6MB	Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																	
	i7-4710MQ	2.5 GHz	3.5 GHz	6MB		Ethernet						Intel Ethernet Connection I217-LM (Clarkville)																											
	i7-4800MQ	2.7 GHz	3.7 GHz	6MB								NFC	<i>Optional:</i> Near Field Communication																										
	i7-4900MQ	2.8 GHz	3.8 GHz	8MB									Security chip	Power-on password, hard disk password, supervisor password, security keyhole																									
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets													vPro (optional)	Trusted Platform Module, TCG 1.2-compliant																								
Optical	DVD burner, 9.5mm Ultrabay slim, removable														Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor																							
UltraBay	One modular bay for removable devices (right side, cold swap), 9.5mm high, bottom access								Limited warranty ¹²							<i>One of the following, configurable by model:</i>																							
Storage	<i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high															Preload	Windows® 7 Professional 64																						
	<i>Some:</i> Hard Disk Drive (HDD) / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™									Environment							preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit																						
M.2 SSD	<i>All:</i> removable, upgradable, supports the second disk, Shock Mounted																PEPEAT™ Gold; ENERGY STAR® 6.0; GREENGUARD®; RoHS-compliant	<ul style="list-style-type: none"> 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service²⁴ 3-year/1-yr battery limited onsite service, IWS (International Warranty Service¹⁷) 																					
	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card										Keyboard							<ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support Lenovo Companion ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync Lenovo Cloud Storage - Metro (Windows 8 model) Lenovo Cloud Storage by SugarSync (Windows 8 model) PC Device Stage AccuWeather Amazon Kindle Nitro Pro Evernote Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 																					
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768), anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio																	UltraNav™	<ul style="list-style-type: none"> ThinkVantage Product Recovery Rescue and Recovery™ ThinkVantage System Update Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype™ Microsoft® Office preloaded; purchase a product key to activate Norton™ Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 																				
	<i>Some:</i> 14.0" (355mm) HD+ (1600x900), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 or 500:1 contrast ratio																		ThinkLight™	None																			
	<i>Some:</i> 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS																			Dimensions ³	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18"; 335mm x 229.1mm x 27.9-29.95mm																		
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus											Weight ²									<table border="1"> <thead> <tr> <th>Models</th> <th>6-cell</th> <th>9-cell</th> </tr> </thead> <tbody> <tr> <td>Integrated</td> <td>4.70 lb / 2.14kg</td> <td>4.92 lb / 2.23kg</td> </tr> <tr> <td>Optimus</td> <td>4.77 lb / 2.16kg</td> <td>5.10 lb / 2.31kg</td> </tr> </tbody> </table>								Models	6-cell	9-cell	Integrated	4.70 lb / 2.14kg	4.92 lb / 2.23kg	Optimus	4.77 lb / 2.16kg	5.10 lb / 2.31kg		
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Integrated	4.70 lb / 2.14kg	4.92 lb / 2.23kg																																					
Optimus	4.77 lb / 2.16kg	5.10 lb / 2.31kg																																					
Graphics	Intel HD Graphics 4600 in processor only, or Intel HD Graphics 4600 in processor and NVIDIA GeForce® GT 730M, PCI Express® x8, 1GB memory, NVIDIA® Optimus™ technology; supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays; <i>Max resolution:</i> 1920x1200@60Hz (VGA); 3840x2160@60Hz (DP via mDP cable)								Case material				Display cover: Glass-Fiber Reinforced Plastic; Bottom: Carbon-Fiber Reinforced Plastic																										
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight												Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																									
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch									Max battery life ¹⁰				<table border="1"> <thead> <tr> <th>Models</th> <th>6-cell</th> <th>9-cell</th> </tr> </thead> <tbody> <tr> <td>Integrated</td> <td>7.4 hr</td> <td>13.2 hr</td> </tr> <tr> <td>Optimus</td> <td>7.2 hr</td> <td>12.7 hr</td> </tr> </tbody> </table>								Models	6-cell	9-cell	Integrated	7.4 hr	13.2 hr	Optimus	7.2 hr	12.7 hr									
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Dimensions ³	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18"; 335mm x 229.1mm x 27.9-29.95mm											Audio support		HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																									
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Models	6-cell	9-cell																																					
Integrated	4.70 lb / 2.14kg	4.92 lb / 2.23kg																																					
Optimus	4.77 lb / 2.16kg	5.10 lb / 2.31kg																																					
Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Carbon-Fiber Reinforced Plastic								Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																													
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Models	dual-core	quad-core																																					
Integrated	65-watt	90-watt																																					
Optimus	90-watt	135-watt																																					

ThinkPad T440p 20AN (TopSeller)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	NFC	Bat-tery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AN0069US	i5-4200M	No	HD 4600	4GBx1	14" HD	500G 7200	7260 b/g/n+BT	Upg	None	None	720p	None	None	None	6	65W	Win8 DG Win7	1-depot	No	10/13
20AN006AUS	i5-4300M	No	HD 4600	4GBx1	14" HD	500G 7200	7260 b/g/n+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 DG Win7	1-depot	No	10/13
20AN006BUS	i5-4300M	No	HD 4600	4GBx1	14" HD	500G 7200	7260 b/g/n+BT	Upg	None	None	720p	None	None	None	6	65W	Win8 DG Win7	1-depot	No	10/13
20AN006CUS	i5-4300M	vPro	HD 4600	4GBx1	14" FHD IPS	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	6	65W	Win8 DG Win7	3-depot	No	10/13
20AN006DUS	i5-4300M	vPro	HD 4600	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	6	65W	Win8 DG Win7	3-depot	No	10/13
20AN006EUS	i5-4300M	vPro	HD 4600	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 DG Win7	3-depot	No	10/13
20AN006FUS	i5-4300M	vPro	HD 4600	4GBx1	14" HD+	128G SSD	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 DG Win7	3-depot	No	10/13
20AN006GUS	i5-4300M	vPro	HD 4600	4GBx1	14" HD+	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 DG Win7	3-depot	No	10/13
20AN006HUS	i5-4300M	vPro	HD 4600	4GBx1	14" HD+	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 DG Win7	3-depot	No	10/13
20AN006JUS	i5-4300M	vPro	HD 4600	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	720p	None	None	None	6	65W	Win8 DG Win7	3-depot	No	10/13
20AN006KUS	i5-4300M	vPro	HD 4600	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 DG Win7	3-depot	No	10/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Audio support		HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack													
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard		6-row, spill-resistant, multimedia Fn keys, optional LED backlight UltraNav™ TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch													
	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	ThinkLight™		None													
	i5-4200M		2.5 GHz	3.1 GHz	3MB		Chipset		Mobile Intel QM87 Express Chipset													
	i5-4300M		2.6 GHz	3.3 GHz	3MB		Smart card reader		Optional: Smart card reader													
	i5-4330M		2.8 GHz	3.5 GHz	3MB		Multicard reader		Optional: 4-in-1 reader (MMC, SD, SDHC, SDXC)													
	i7-4600M	4	2.9 GHz	3.6 GHz	4MB		Ports		Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector													
	i7-4700MQ		2.4 GHz	3.4 GHz	6MB		WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card													
	i7-4800MQ		2.7 GHz	3.7 GHz	6MB		WWAN (optional)		Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS													
	i7-4900MQ		2.8 GHz	3.8 GHz	8MB		SIM card (optional)		AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider													
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						Bluetooth™		Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter													
Optical	DVD burner, 9.5mm Ultrabay slim, removable						Ethernet		Intel Ethernet Connection I217-LM (Clarkville)													
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						NFC		Optional: Near Field Communication													
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						Security		Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant													
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						vPro (optional)		Intel vPro Technology													
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 or 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS						Fingerprint reader		Optional: Fingerprint reader on the keyboard bezel, swipe sensor													
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Preload		Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit													
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M, 1GB memory (Optimus)						Limited warranty ¹²		1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite													
Dimensions ³	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18", 335mm x 229.1mm x 27.9-29.95mm																					
Weight ²	Models	6-cell		9-cell																		
	Integrated	4.70 lb / 2.14kg		4.92 lb / 2.23kg																		
	Optimus	4.77 lb / 2.16kg		5.10 lb / 2.31kg																		
Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Carbon-Fiber Reinforced Plastic																					
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																					
Max battery life ¹⁰	Models	6-cell		9-cell																		
	Integrated	7.4 hr		13.2 hr																		
	Optimus	7.2 hr		12.7 hr																		
AC adapter	65-watt, 90-watt, or 135-watt AC adapter																					

See footnotes for more detailed information

(OA1-1) © Lenovo

ThinkPad T440p 20AN (Optimus) - TopSeller

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	NFC	Bat-tery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AN00DBUS	i7-4600M	vPro	GT 730M	8GBx1	14" FHD IPS	512G SSD	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8.1 DG Win7	3-depot	No	10/14
20AN00DCUS	i7-4600M	vPro	GT 730M	8GBx1	14" FHD IPS	512G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8.1 DG Win7	3-depot	No	10/14
20AN006LUS	i7-4600M	vPro	GT 730M	8GBx1	14" FHD IPS	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 DG Win7	3-depot	No	10/13
20AN006MUS	i7-4600M	vPro	GT 730M	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 DG Win7	3-depot	No	10/13
20AN006NUS	i5-4300M	vPro	GT 730M	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 DG Win7	3-depot	No	10/13
20AN007HUS	i7-4600M	vPro	GT 730M	4GBx2	14" HD+	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 DG Win7	3-depot	No	11/13
20AN007JUS	i5-4300M	vPro	GT 730M	4GBx1	14" HD+	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 DG Win7	3-depot	No	11/13
20AN0096US	i7-4600M	vPro	GT 730M	8GBx1	14" HD+	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 DG Win7	3-depot	No	01/14
20AN009CUS	i7-4600M	vPro	GT 730M	8GBx1	14" HD+	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 DG Win7	3-depot	No	01/14
20AN00ANUS	i7-4700MQ	No	GT 730M	8GBx1	14" HD+	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	135W	Win8 DG Win7	3-depot	No	03/14
20AN00APUS	i5-4300M	vPro	GT 730M	8GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 DG Win7	3-depot	No	03/14

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Audio support		HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack												
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard		6-row, spill-resistant, multimedia Fn keys, optional LED backlight UltraNav™ TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch												
	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	ThinkLight™		None												
	i5-4200M		2.5 GHz	3.1 GHz	3MB		Chipset		Mobile Intel QM87 Express Chipset												
	i5-4300M		2.6 GHz	3.3 GHz	3MB		Smart card reader		Optional: Smart card reader												
	i5-4330M		2.8 GHz	3.5 GHz	3MB		Multicard reader		Optional: 4-in-1 reader (MMC, SD, SDHC, SDXC)												
	i7-4600M		2.9 GHz	3.6 GHz	4MB		Ports		Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector												
	i7-4700MQ	4	2.4 GHz	3.4 GHz	6MB		WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card												
	i7-4800MQ		2.7 GHz	3.7 GHz	6MB		WWAN (optional)		Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS												
	i7-4900MQ		2.8 GHz	3.8 GHz	8MB		SIM card (optional)		AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider												
							Bluetooth™		Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter												
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						Ethernet		Intel Ethernet Connection I217-LM (Clarkville)												
Optical	DVD burner, 9.5mm Ultrabay slim, removable						NFC		Optional: Near Field Communication												
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						Security		Power-on password, hard disk password, supervisor password, security keyhole												
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS						Security chip		Trusted Platform Module, TCG 1.2-compliant												
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						vPro (optional)		Intel vPro Technology												
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 or 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS						Fingerprint reader		Optional: Fingerprint reader on the keyboard bezel, swipe sensor												
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Preload		Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit												
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M, 1GB memory (Optimus)						Limited warranty ¹²		1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite												
Dimensions ³	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18", 335mm x 229.1mm x 27.9-29.95mm																				
Weight ²	Models	6-cell		9-cell																	
	Integrated	4.70 lb / 2.14kg		4.92 lb / 2.23kg																	
	Optimus	4.77 lb / 2.16kg		5.10 lb / 2.31kg																	
Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Carbon-Fiber Reinforced Plastic																				
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																				
Max battery life ¹⁰	Models	6-cell		9-cell																	
	Integrated	7.4 hr		13.2 hr																	
	Optimus	7.2 hr		12.7 hr																	
AC adapter	65-watt, 90-watt, or 135-watt AC adapter																				

See footnotes for more detailed information

(OA1-2) © Lenovo

ThinkPad T440p 20AW

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	NFC	Bat-tery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AW0090US	i5-4300M	vPro	HD 4600	4GBx1	14" HD+	500G 7200	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	6	65W	Win8.1 DG Win7	3-depot	Yes	04/14
20AW0091US	i5-4300M	vPro	HD 4600	8GBx1	14" HD+	256G SSD eDrive	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	6	65W	Win8.1 DG Win7	3-depot	Yes	04/14
20AW004BUS	i5-4300M	vPro	HD 4600	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 DG Win7	3-depot	Yes	11/13
20AW004DUS	i5-4300M	vPro	HD 4600	4GBx2	14" HD	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 DG Win7	3-depot	Yes	11/13
20AW004HUS	i5-4300M	vPro	HD 4600	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 DG Win7	3-depot	Yes	11/13
20AW004JUS	i5-4300M	vPro	HD 4600	4GBx2	14" FHD IPS	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 DG Win7	3-depot	Yes	11/13
20AW004KUS	i5-4300M	vPro	HD 4600	4GBx2	14" FHD IPS	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 DG Win7	3-depot	Yes	11/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Audio support		HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack														
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard		6-row, spill-resistant, multimedia Fn keys, optional LED backlight UltraNav™ TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch														
	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	ThinkLight™		None														
	i5-4200M		2.5 GHz	3.1 GHz	3MB		Chipset		Mobile Intel QM87 Express Chipset														
	i5-4300M		2.6 GHz	3.3 GHz	3MB		Smart card reader		Optional: Smart card reader														
	i5-4330M		2.8 GHz	3.5 GHz	3MB		Multicard reader		Optional: 4-in-1 reader (MMC, SD, SDHC, SDXC)														
	i7-4600M	4	2.9 GHz	3.6 GHz	4MB		Ports		Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector														
	i7-4700MQ		2.4 GHz	3.4 GHz	6MB		WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card														
	i7-4800MQ		2.7 GHz	3.7 GHz	6MB		WWAN (optional)		Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS														
	i7-4900MQ		2.8 GHz	3.8 GHz	8MB		SIM card (optional)		AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider														
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						Bluetooth™		Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter														
Optical	DVD burner, 9.5mm Ultrabay slim, removable						Ethernet		Intel Ethernet Connection I217-LM (Clarkville)														
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						NFC		Optional: Near Field Communication														
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						Security		Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant														
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						vPro (optional)		Intel vPro Technology														
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 or 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS						Fingerprint reader		Optional: Fingerprint reader on the keyboard bezel, swipe sensor														
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Preload		Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit														
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M, 1GB memory (Optimus)						Limited warranty ¹²		1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite														
Dimensions ³	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18", 335mm x 229.1mm x 27.9-29.95mm																						
Weight ²	Models	6-cell		9-cell																			
	Integrated	4.70 lb / 2.14kg		4.92 lb / 2.23kg																			
	Optimus	4.77 lb / 2.16kg		5.10 lb / 2.31kg																			
Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Carbon-Fiber Reinforced Plastic																						
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																						
Max battery life ¹⁰	Models	6-cell		9-cell																			
	Integrated	7.4 hr		13.2 hr																			
	Optimus	7.2 hr		12.7 hr																			
AC adapter	65-watt, 90-watt, or 135-watt AC adapter																						

See footnotes for more detailed information

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ThinkPad T440p 20AW (Windows 8)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	NFC	Bat-tery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AW0000US	i5-4300M	vPro	HD 4600	4GBx1	14" HD	128G SSD	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13
20AW0001US	i5-4300M	vPro	HD 4600	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13
20AW0005US	i5-4300M	vPro	HD 4600	4GBx1	14" HD+	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13
20AW0007US	i5-4300M	vPro	HD 4600	4GBx1	14" HD+	128G SSD	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13
20AW0008US	i5-4300M	vPro	HD 4600	4GBx1	14" FHD IPS	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13
20AW000CUS	i5-4300M	vPro	HD 4600	4GBx1	14" HD	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13
20AW000DUS	i5-4300M	vPro	HD 4600	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13
20AW000HUS	i7-4600M	vPro	HD 4600	4GBx1	14" FHD IPS	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13
20AW000KUS	i7-4600M	vPro	HD 4600	4GBx1	14" FHD IPS	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13
20AW000MUS	i7-4600M	vPro	HD 4600	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13
20AW000QUS	i7-4600M	vPro	HD 4600	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Audio support		HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack												
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard		6-row, spill-resistant, multimedia Fn keys, optional LED backlight UltraNav™ TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch												
	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	ThinkLight™		None												
	i5-4200M		2.5 GHz	3.1 GHz	3MB		Chipset		Mobile Intel QM87 Express Chipset												
	i5-4300M		2.6 GHz	3.3 GHz	3MB		Smart card reader		Optional: Smart card reader												
	i5-4330M		2.8 GHz	3.5 GHz	3MB		Multicard reader		Optional: 4-in-1 reader (MMC, SD, SDHC, SDXC)												
	i7-4600M		2.9 GHz	3.6 GHz	4MB		Ports		Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector												
	i7-4700MQ	4	2.4 GHz	3.4 GHz	6MB		WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card												
	i7-4800MQ		2.7 GHz	3.7 GHz	6MB		WWAN (optional)		Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS												
	i7-4900MQ		2.8 GHz	3.8 GHz	8MB		SIM card (optional)		AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider												
							Bluetooth™		Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter												
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						Ethernet		Intel Ethernet Connection I217-LM (Clarkville)												
Optical	DVD burner, 9.5mm Ultrabay slim, removable						NFC		Optional: Near Field Communication												
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						Security		Power-on password, hard disk password, supervisor password, security keyhole												
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS						Security chip		Trusted Platform Module, TCG 1.2-compliant												
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						vPro (optional)		Intel vPro Technology												
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 or 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS						Fingerprint reader		Optional: Fingerprint reader on the keyboard bezel, swipe sensor												
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Preload		Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit												
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M, 1GB memory (Optimus)						Limited warranty ¹²		1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite												
Dimensions ³	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18", 335mm x 229.1mm x 27.9-29.95mm																				
Weight ²	Models	6-cell		9-cell																	
	Integrated	4.70 lb / 2.14kg		4.92 lb / 2.23kg																	
	Optimus	4.77 lb / 2.16kg		5.10 lb / 2.31kg																	
Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Carbon-Fiber Reinforced Plastic																				
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																				
Max battery life ¹⁰	Models	6-cell		9-cell																	
	Integrated	7.4 hr		13.2 hr																	
	Optimus	7.2 hr		12.7 hr																	
AC adapter	65-watt, 90-watt, or 135-watt AC adapter																				

See footnotes for more detailed information

(OA1-4) © Lenovo

ThinkPad T440p 20AW (Optimus)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	NFC	Bat-tery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AW008YUS	i7-4600M	vPro	GT 730M	8GBx1	14" HD+	256G SSD eDrive	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8.1 DG Win7	3-depot	Yes	04/14
20AW0092US	i5-4300M	vPro	GT 730M	4GBx1	14" HD+	500G 7200	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8.1 DG Win7	3-depot	Yes	04/14
20AW0094US	i7-4600M	vPro	GT 730M	8GBx1	14" HD+	500G 7200	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8.1 DG Win7	3-depot	Yes	04/14
20AW004AUS	i7-4600M	vPro	GT 730M	4GBx1	14" FHD IPS	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 DG Win7	3-depot	Yes	11/13
20AW004CUS	i7-4600M	vPro	GT 730M	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 DG Win7	3-depot	Yes	11/13
20AW004FUS	i5-4300M	vPro	GT 730M	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 DG Win7	3-depot	Yes	11/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Audio support		HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack													
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard		6-row, spill-resistant, multimedia Fn keys, optional LED backlight UltraNav™ TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch													
	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	ThinkLight™		None													
	i5-4200M		2.5 GHz	3.1 GHz	3MB		Chipset		Mobile Intel QM87 Express Chipset													
	i5-4300M		2.6 GHz	3.3 GHz	3MB		Smart card reader		Optional: Smart card reader													
	i5-4330M		2.8 GHz	3.5 GHz	3MB		Multicard reader		Optional: 4-in-1 reader (MMC, SD, SDHC, SDXC)													
	i7-4600M	4	2.9 GHz	3.6 GHz	4MB		Ports		Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector													
	i7-4700MQ		2.4 GHz	3.4 GHz	6MB		WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card													
	i7-4800MQ		2.7 GHz	3.7 GHz	6MB		WWAN (optional)		Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS													
	i7-4900MQ		2.8 GHz	3.8 GHz	8MB		SIM card (optional)		AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider													
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						Bluetooth™		Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter													
Optical	DVD burner, 9.5mm Ultrabay slim, removable						Ethernet		Intel Ethernet Connection I217-LM (Clarkville)													
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						NFC		Optional: Near Field Communication													
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						Security		Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant													
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						vPro (optional)		Intel vPro Technology													
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 or 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS						Fingerprint reader		Optional: Fingerprint reader on the keyboard bezel, swipe sensor													
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Preload		Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit													
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M, 1GB memory (Optimus)						Limited warranty ¹²		1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite													
Dimensions ³	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18", 335mm x 229.1mm x 27.9-29.95mm																					
Weight ²	Models	6-cell		9-cell																		
	Integrated	4.70 lb / 2.14kg		4.92 lb / 2.23kg																		
	Optimus	4.77 lb / 2.16kg		5.10 lb / 2.31kg																		
Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Carbon-Fiber Reinforced Plastic																					
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																					
Max battery life ¹⁰	Models	6-cell		9-cell																		
	Integrated	7.4 hr		13.2 hr																		
	Optimus	7.2 hr		12.7 hr																		
AC adapter	65-watt, 90-watt, or 135-watt AC adapter																					

See footnotes for more detailed information

(OA1-5) © Lenovo

ThinkPad T440p 20AW (Optimus) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	NFC	Bat-tery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AW0006US	i7-4600M	vPro	GT 730M	4GBx1	14" FHD IPS	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 P64	3-depot	Yes	10/13
20AW0009US	i7-4600M	vPro	GT 730M	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 P64	3-depot	Yes	10/13
20AW000AUS	i7-4600M	vPro	GT 730M	4GBx1	14" FHD IPS	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 P64	3-depot	Yes	10/13
20AW000GUS	i5-4300M	vPro	GT 730M	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 P64	3-depot	Yes	10/13
20AW000RUS	i7-4600M	vPro	GT 730M	4GBx1	14" FHD IPS	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 P64	3-depot	Yes	10/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Audio support		HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack													
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard		6-row, spill-resistant, multimedia Fn keys, optional LED backlight UltraNav™ TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch													
	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	ThinkLight™		None													
	i5-4200M		2.5 GHz	3.1 GHz	3MB		Chipset		Mobile Intel QM87 Express Chipset													
	i5-4300M		2.6 GHz	3.3 GHz	3MB		Smart card reader		Optional: Smart card reader													
	i5-4330M		2.8 GHz	3.5 GHz	3MB		Multicard reader		4-in-1 reader (MMC, SD, SDHC, SDXC)													
	i7-4600M	4	2.9 GHz	3.6 GHz	4MB		Ports		Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector													
	i7-4700MQ		2.4 GHz	3.4 GHz	6MB		WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card													
	i7-4800MQ		2.7 GHz	3.7 GHz	6MB		WWAN (optional)		Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS													
	i7-4900MQ		2.8 GHz	3.8 GHz	8MB		SIM card (optional)		AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider													
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						Bluetooth™		Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter													
Optical	DVD burner, 9.5mm Ultrabay slim, removable						Ethernet		Intel Ethernet Connection I217-LM (Clarkville)													
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						NFC		Optional: Near Field Communication													
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						Security		Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant													
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						vPro (optional)		Intel vPro Technology													
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 or 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS						Fingerprint reader		Optional: Fingerprint reader on the keyboard bezel, swipe sensor													
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Preload		Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit													
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M, 1GB memory (Optimus)						Limited warranty ¹²		1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite													
Dimensions ³	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18", 335mm x 229.1mm x 27.9-29.95mm																					
Weight ²	Models	6-cell		9-cell																		
	Integrated	4.70 lb / 2.14kg		4.92 lb / 2.23kg																		
	Optimus	4.77 lb / 2.16kg		5.10 lb / 2.31kg																		
Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Carbon-Fiber Reinforced Plastic																					
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																					
Max battery life ¹⁰	Models	6-cell		9-cell																		
	Integrated	7.4 hr		13.2 hr																		
	Optimus	7.2 hr		12.7 hr																		
AC adapter	65-watt, 90-watt, or 135-watt AC adapter																					

See footnotes for more detailed information

(OA1-6) © Lenovo

ThinkPad T440p 20AW (Onsite)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	NFC	Bat-tery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AW0046US	i5-4300M	vPro	HD 4600	4GBx2	14" FHD IPS	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 DG Win7	3-onsite	Yes	11/13
20AW0048US	i5-4300M	vPro	HD 4600	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 DG Win7	3-onsite	Yes	11/13
20AW0049US	i5-4300M	vPro	HD 4600	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 DG Win7	3-onsite	Yes	11/13
20AW004LUS	i5-4300M	vPro	HD 4600	4GBx2	14" HD	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 DG Win7	3-onsite	Yes	11/13
20AW004MUS	i5-4300M	vPro	HD 4600	4GBx2	14" FHD IPS	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 DG Win7	3-onsite	Yes	11/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Audio support		HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack												
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard		6-row, spill-resistant, multimedia Fn keys, optional LED backlight UltraNav™ TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch												
	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	ThinkLight™		None												
	i5-4200M		2.5 GHz	3.1 GHz	3MB		Chipset		Mobile Intel QM87 Express Chipset												
	i5-4300M		2.6 GHz	3.3 GHz	3MB		Smart card reader		Optional: Smart card reader												
	i5-4330M		2.8 GHz	3.5 GHz	3MB		Multicard reader		Optional: 4-in-1 reader (MMC, SD, SDHC, SDXC)												
	i7-4600M	4	2.9 GHz	3.6 GHz	4MB		Ports		Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector												
	i7-4700MQ		2.4 GHz	3.4 GHz	6MB		WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card												
	i7-4800MQ		2.7 GHz	3.7 GHz	6MB	WWAN (optional)		Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS													
	i7-4900MQ		2.8 GHz	3.8 GHz	8MB	SIM card (optional)		AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider													
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						Bluetooth™		Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter												
Optical	DVD burner, 9.5mm Ultrabay slim, removable						Ethernet		Intel Ethernet Connection I217-LM (Clarkville)												
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						NFC		Optional: Near Field Communication												
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS						Security		Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant												
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						vPro (optional)		Intel vPro Technology												
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 or 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS						Fingerprint reader		Optional: Fingerprint reader on the keyboard bezel, swipe sensor												
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Preload		Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit												
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M, 1GB memory (Optimus)						Limited warranty ¹²		1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite												
Dimensions ³	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18", 335mm x 229.1mm x 27.9-29.95mm																				
Weight ²	Models	6-cell		9-cell																	
	Integrated	4.70 lb / 2.14kg		4.92 lb / 2.23kg																	
	Optimus	4.77 lb / 2.16kg		5.10 lb / 2.31kg																	
Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Carbon-Fiber Reinforced Plastic																				
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																				
Max battery life ¹⁰	Models	6-cell		9-cell																	
	Integrated	7.4 hr		13.2 hr																	
	Optimus	7.2 hr		12.7 hr																	
AC adapter	65-watt, 90-watt, or 135-watt AC adapter																				

See footnotes for more detailed information

(OA1-7) © Lenovo

ThinkPad T440p 20AW (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	NFC	Bat-tery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AW0002US	i5-4300M	vPro	HD 4600	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	Yes	10/13
20AW0003US	i5-4300M	vPro	HD 4600	4GBx1	14" HD+	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	Yes	10/13
20AW0004US	i5-4300M	vPro	HD 4600	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	Yes	10/13
20AW000EUS	i5-4300M	vPro	HD 4600	4GBx1	14" HD+	128G SSD	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	Yes	10/13
20AW000JUS	i7-4600M	vPro	HD 4600	4GBx1	14" HD	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	Yes	10/13
20AW000LUS	i7-4600M	vPro	HD 4600	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	Yes	10/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Audio support		HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack													
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard		6-row, spill-resistant, multimedia Fn keys, optional LED backlight UltraNav™ TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch													
	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	ThinkLight™		None													
	i5-4200M		2.5 GHz	3.1 GHz	3MB		Chipset		Mobile Intel QM87 Express Chipset													
	i5-4300M		2.6 GHz	3.3 GHz	3MB		Smart card reader		Optional: Smart card reader													
	i5-4330M		2.8 GHz	3.5 GHz	3MB		Multicard reader		4-in-1 reader (MMC, SD, SDHC, SDXC)													
	i7-4600M	4	2.9 GHz	3.6 GHz	4MB		Ports		Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector													
	i7-4700MQ		2.4 GHz	3.4 GHz	6MB		WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card													
	i7-4800MQ		2.7 GHz	3.7 GHz	6MB		WWAN (optional)		Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS													
	i7-4900MQ		2.8 GHz	3.8 GHz	8MB		SIM card (optional)		AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider													
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						Bluetooth™		Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter													
Optical	DVD burner, 9.5mm Ultrabay slim, removable						Ethernet		Intel Ethernet Connection I217-LM (Clarkville)													
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						NFC		Optional: Near Field Communication													
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						Security		Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant													
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						vPro (optional)		Intel vPro Technology													
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 or 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS						Fingerprint reader		Optional: Fingerprint reader on the keyboard bezel, swipe sensor													
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Preload		Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit													
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M, 1GB memory (Optimus)						Limited warranty ¹²		1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite													
Dimensions ³	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18", 335mm x 229.1mm x 27.9-29.95mm																					
Weight ²	Models	6-cell		9-cell																		
	Integrated	4.70 lb / 2.14kg		4.92 lb / 2.23kg																		
	Optimus	4.77 lb / 2.16kg		5.10 lb / 2.31kg																		
Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Carbon-Fiber Reinforced Plastic																					
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																					
Max battery life ¹⁰	Models	6-cell		9-cell																		
	Integrated	7.4 hr		13.2 hr																		
	Optimus	7.2 hr		12.7 hr																		
AC adapter	65-watt, 90-watt, or 135-watt AC adapter																					

See footnotes for more detailed information

(OA1-8) © Lenovo

ThinkPad T440p 20AW (Optimus) - Onsite

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	NFC	Bat-tery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AW0047US	i5-4300M	vPro	GT 730M	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 DG Win7	3-onsite	Yes	11/13
20AW004EUS	i7-4600M	vPro	GT 730M	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 DG Win7	3-onsite	Yes	11/13
20AW004GUS	i7-4600M	vPro	GT 730M	4GBx1	14" FHD IPS	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 DG Win7	3-onsite	Yes	11/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Audio support		HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack												
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard		6-row, spill-resistant, multimedia Fn keys, optional LED backlight UltraNav™ TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch												
	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	ThinkLight™		None												
	i5-4200M		2.5 GHz	3.1 GHz	3MB		Chipset		Mobile Intel QM87 Express Chipset												
	i5-4300M		2.6 GHz	3.3 GHz	3MB		Smart card reader		Optional: Smart card reader												
	i5-4330M		2.8 GHz	3.5 GHz	3MB		Multicard reader		Optional: 4-in-1 reader (MMC, SD, SDHC, SDXC)												
	i7-4600M	4	2.9 GHz	3.6 GHz	4MB		Ports		Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector												
	i7-4700MQ		2.4 GHz	3.4 GHz	6MB		WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card												
	i7-4800MQ		2.7 GHz	3.7 GHz	6MB		WWAN (optional)		Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS												
	i7-4900MQ		2.8 GHz	3.8 GHz	8MB		SIM card (optional)		AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider												
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						Bluetooth™		Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter												
Optical	DVD burner, 9.5mm Ultrabay slim, removable						Ethernet		Intel Ethernet Connection I217-LM (Clarkville)												
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						NFC		Optional: Near Field Communication												
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS						Security		Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant												
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						vPro (optional)		Intel vPro Technology												
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 or 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS						Fingerprint reader		Optional: Fingerprint reader on the keyboard bezel, swipe sensor												
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Preload		Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit												
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M, 1GB memory (Optimus)						Limited warranty ¹²		1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite												
Dimensions ³	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18", 335mm x 229.1mm x 27.9-29.95mm																				
Weight ²	Models	6-cell		9-cell																	
	Integrated	4.70 lb / 2.14kg		4.92 lb / 2.23kg																	
	Optimus	4.77 lb / 2.16kg		5.10 lb / 2.31kg																	
Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Carbon-Fiber Reinforced Plastic																				
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																				
Max battery life ¹⁰	Models	6-cell		9-cell																	
	Integrated	7.4 hr		13.2 hr																	
	Optimus	7.2 hr		12.7 hr																	
AC adapter	65-watt, 90-watt, or 135-watt AC adapter																				

See footnotes for more detailed information

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ThinkPad T440p 20AW (Optimus) - Onsite (Windows 8)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	NFC	Bat-tery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AW000BUS	i7-4600M	vPro	GT 730M	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 P64	3-onsite	Yes	10/13
20AW000PUS	i5-4300M	vPro	GT 730M	4GBx1	14" HD+	500G 7200	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	9	90W	Win8 P64	3-onsite	Yes	10/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Audio support		HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack												
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard		6-row, spill-resistant, multimedia Fn keys, optional LED backlight UltraNav™ TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch												
	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	ThinkLight™		None												
	i5-4200M		2.5 GHz	3.1 GHz	3MB		Chipset		Mobile Intel QM87 Express Chipset												
	i5-4300M		2.6 GHz	3.3 GHz	3MB		Smart card reader		Optional: Smart card reader												
	i5-4330M		2.8 GHz	3.5 GHz	3MB		Multicard reader		4-in-1 reader (MMC, SD, SDHC, SDXC)												
	i7-4600M	4	2.9 GHz	3.6 GHz	4MB		Ports		Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector												
	i7-4700MQ		2.4 GHz	3.4 GHz	6MB		WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card												
	i7-4800MQ		2.7 GHz	3.7 GHz	6MB	WWAN (optional)		Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS													
	i7-4900MQ		2.8 GHz	3.8 GHz	8MB	SIM card (optional)		AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider													
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						Bluetooth™		Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter												
Optical	DVD burner, 9.5mm Ultrabay slim, removable						Ethernet		Intel Ethernet Connection I217-LM (Clarkville)												
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						NFC		Optional: Near Field Communication												
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						Security		Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant												
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						vPro (optional)		Intel vPro Technology												
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 or 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS						Fingerprint reader		Optional: Fingerprint reader on the keyboard bezel, swipe sensor												
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Preload		Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit												
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M, 1GB memory (Optimus)						Limited warranty ¹²		1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite												
Dimensions ³	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18", 335mm x 229.1mm x 27.9-29.95mm																				
Weight ²	Models	6-cell	9-cell																		
	Integrated	4.70 lb / 2.14kg	4.92 lb / 2.23kg																		
	Optimus	4.77 lb / 2.16kg	5.10 lb / 2.31kg																		
Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Carbon-Fiber Reinforced Plastic																				
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																				
Max battery life ¹⁰	Models	6-cell	9-cell																		
	Integrated	7.4 hr	13.2 hr																		
	Optimus	7.2 hr	12.7 hr																		
AC adapter	65-watt, 90-watt, or 135-watt AC adapter																				

See footnotes for more detailed information

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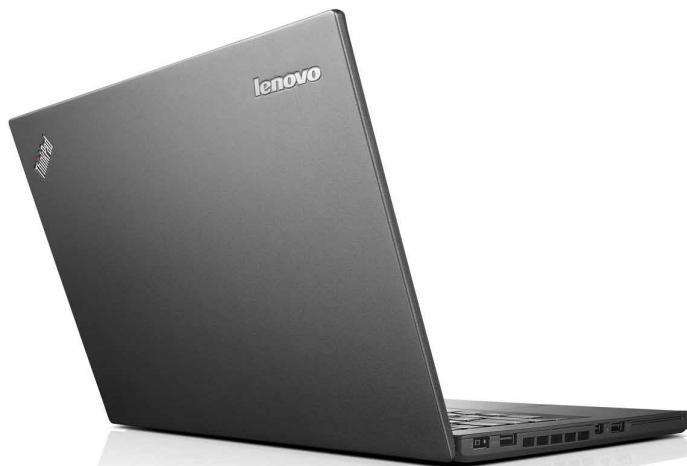
Lenovo® ThinkPad T440s



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Lenovo ThinkPad T440s



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ThinkPad T440s Platform Specifications

Product Specifications Reference (PSREF)

Positioning	Premium Ultrabook™ or Thinbook; one spindle								WLAN ⁴	One of the following, configurable by model: <ul style="list-style-type: none"> ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card Intel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card 																												
Processor	4th Generation Intel® Core™ i5 / i7 Processor								<table border="1"> <thead> <tr> <th>Processor Number</th> <th># of Cores</th> <th># of Threads</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> <th>Processor Graphics</th> </tr> </thead> <tbody> <tr> <td>i5-4200U</td> <td rowspan="4">2</td> <td rowspan="4">4</td> <td>1.6 GHz</td> <td>2.6 GHz</td> <td>3MB</td> <td rowspan="4">DDR3L-1600</td> <td rowspan="4">Intel HD graphics 4400</td> </tr> <tr> <td>i5-4210U</td> <td>1.7 GHz</td> <td>2.7 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4300U</td> <td>1.9 GHz</td> <td>2.9 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-4600U</td> <td>2.1 GHz</td> <td>3.3 GHz</td> <td>4MB</td> </tr> </tbody> </table>	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics	i5-4200U	2	4	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	Intel HD graphics 4400	i5-4210U	1.7 GHz	2.7 GHz	3MB	i5-4300U	1.9 GHz	2.9 GHz	3MB	i7-4600U	2.1 GHz	3.3 GHz	4MB	WWAN (optional) One of the following, configurable by model (mutually exclusive with M.2 SSD): <ul style="list-style-type: none"> Wireless WAN upgradable Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 card (US models) Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card (WE models) Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card (WE models)
Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics																															
i5-4200U	2	4	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	Intel HD graphics 4400																															
i5-4210U			1.7 GHz	2.7 GHz	3MB																																	
i5-4300U			1.9 GHz	2.9 GHz	3MB																																	
i7-4600U			2.1 GHz	3.3 GHz	4MB																																	
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket								SIM card (optional) One of the following, configurable by model: <ul style="list-style-type: none"> AT&T® or Verizon® LTE (4G), contract required with service provider (US models) Lenovo SIM, out-of-box service, pay-as-you-go via credit card, no contract required (WE models) User selectable, contract required with service provider 																													
Optical Storage	None <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ <i>Some:</i> SSHD with 8GB NAND flash memory																																					
M.2 SSD	<i>Some:</i> Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader <i>Some:</i> Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card								Bluetooth™ Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Ethernet <i>Non-vPro model:</i> Intel Ethernet Connection I218-V (Clarkville) <i>vPro model:</i> Intel Ethernet Connection I218-LM (Clarkville) NFC <i>Optional:</i> Near Field Communication																													
Widescreen display	<i>Some:</i> 14.0" (355mm) HD+ (1600x900) , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> 14.0" (355mm) FHD (1920x1080) , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS <i>Some:</i> Capacitive-type multi-touch, supports 10-finger gesture Camera (optional) HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus																																					
Multi-touch	<i>Some:</i> Capacitive-type multi-touch, supports 10-finger gesture Camera (optional) HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus								Security chip vPro (optional) Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro (optional) Intel vPro Technology Fingerprint reader (optional) <i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor																													
Graphics	Intel HD Graphics 4400 in processor only, or Intel HD Graphics 4400 in processor and NVIDIA GeForce® GT 730M , PCI Express® x8, 1GB memory, NVIDIA® Optimus™ technology; supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays; <i>Max external resolution:</i> 1920x1200@60Hz (VGA); 3840x2160@30Hz (DisplayPort via Mini DisplayPort cable on integrated models); 3840x2160@60Hz (DisplayPort via Mini DisplayPort cable on optimus models)																																					
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch								Limited warranty¹² One of the following, configurable by model: <ul style="list-style-type: none"> 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service²⁴ 3-year/1-yr battery limited onsite service, IWS (International Warranty Service¹⁷) 																													
ThinkLight™	None																																					
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.81; 331mm x 226mm x 20.65mm 14.0W" MultiTouch (WxDxH): 13.0" x 8.9" x 0.90; 331mm x 226mm x 22.94mm								Preload Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <ul style="list-style-type: none"> Lenovo Solution Center ThinkVantage Product Recovery Rescue and Recovery™ ThinkVantage System Update Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype™ Microsoft® Office preloaded; purchase a product key to activate Norton™ Internet Security (30 days of virus definitions) <i>Some:</i> Windows 8 / 8.1 64-bit <i>Some:</i> Windows 8 / 8.1 Pro 64-bit <ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support Lenovo Companion ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync - Metro (Windows 8 model) Lenovo Cloud Storage by SugarSync (Windows 8 model) PC Device Stage AccuWeather Amazon Kindle Nitro Pro Evernote Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) 																													
Weight ²	<table border="1"> <thead> <tr> <th>Models</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell</th> </tr> </thead> <tbody> <tr> <td>Non-MultiTouch</td> <td>3.5 lb / 1.59kg</td> <td>3.9 lb / 1.77kg</td> </tr> <tr> <td>MultiTouch</td> <td>3.9 lb / 1.76</td> <td>4.2 lb / 1.94kg</td> </tr> </tbody> </table>									Models	3-cell + 3-cell	3-cell + 6-cell	Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg	MultiTouch	3.9 lb / 1.76	4.2 lb / 1.94kg																				
Models	3-cell + 3-cell	3-cell + 6-cell																																				
Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg																																				
MultiTouch	3.9 lb / 1.76	4.2 lb / 1.94kg																																				
Case material	<i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy																																					
Internal battery	Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication								Environment EPEAT™ Gold (US) or EPEAT Silver (WE); ENERGY STAR® 6.0; GREENGUARD®; RoHS-compliant																													
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication																																					
Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Models</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell 47.5Wh</th> <th>3-cell + 6-cell 72Wh</th> </tr> </thead> <tbody> <tr> <td>Integrated</td> <td>8.4 hr</td> <td>12.6 hr</td> <td>16.8 hr</td> </tr> <tr> <td>Optimus</td> <td>8.3 hr</td> <td>12.4 hr</td> <td>16.6 hr</td> </tr> </tbody> </table>									Models	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh	Integrated	8.4 hr	12.6 hr	16.8 hr	Optimus	8.3 hr	12.4 hr	16.6 hr																	
Models	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh																																			
Integrated	8.4 hr	12.6 hr	16.8 hr																																			
Optimus	8.3 hr	12.4 hr	16.6 hr																																			
AC adapter	45-watt (integrated models only), 65-watt, or 65-watt Slim AC adapter																																					
Chipset	Intel SoC (System on Chip) platform																																					
Smart card reader	<i>Optional:</i> Smart card reader, exclusive with M.2 SSD																																					
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																					
Ports	Three USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector																																					
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																																					

ThinkPad T440s 20AQ (TopSeller)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit keyboard	Fingerprint reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AQ005NUS	i5-4200U	No	HD 4400	4+0GB 14" HD+	No	500G 7200	7260 ac+BT	Upg None	16GB	720p	None	Finger	None	3+3	45W	Win8 DG Win7	1-depot	No	20/13		
20AQ005PUS	i5-4200U	No	HD 4400	4+0GB 14" HD+	No	500G 7200	7260 ac+BT	Upg None	16GB	720p	None	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13		
20AQ009GUS	i5-4300U	vPro	HD 4400	4+4GB 14" FHD IPS	No	512G SSD	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 DG Win7	3-depot	No	20/14		
20AQ005QUS	i5-4300U	vPro	HD 4400	4+0GB 14" HD+	No	500G 7200	7260 ac+BT	Upg None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13		
20AQ005SUS	i5-4300U	vPro	HD 4400	4+0GB 14" FHD IPS	No	500G 7200	7260 ac+BT	Upg None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13		
20AQ005TUS	i5-4300U	vPro	HD 4400	4+0GB 14" HD+	No	180G SSD Opal	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13		
20AQ005UUS	i5-4300U	vPro	HD 4400	4+0GB 14" FHD IPS	No	180G SSD Opal	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13		
20AQ005VUS	i5-4300U	vPro	HD 4400	4+0GB 14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13		
20AQ006JUS	i5-4300U	vPro	HD 4400	4+0GB 14" HD+	No	128G SSD	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13		
20AQ008FUS	i5-4300U	vPro	HD 4400	4+4GB 14" HD+	No	180G SSD Opal	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/14		
20AQ008GUS	i5-4300U	vPro	HD 4400	4+0GB 14" FHD IPS	No	500G 7200 Opal	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/14		
20AQ009HUS	i7-4600U	vPro	HD 4400	4+4GB 14" FHD IPS	No	512G SSD	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 DG Win7	3-depot	No	20/14		
20AQ005WUS	i7-4600U	vPro	HD 4400	4+0GB 14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13		
20AQ005XUS	i7-4600U	vPro	HD 4400	4+0GB 14" HD+	No	180G SSD Opal	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13		
20AQ008YUS	i7-4600U	vPro	HD 4400	4+0GB 14" FHD IPS	No	180G SSD Opal	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13		
20AQ006FUS	i7-4600U	vPro	HD 4400	4+4GB 14" FHD IPS	No	180G SSD Opal	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13		
20AQ006GUS	i7-4600U	vPro	HD 4400	4+4GB 14" FHD IPS	No	240G SSD Opal	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13		
20AQ006HUS	i7-4600U	vPro	HD 4400	4+4GB 14" FHD IPS	No	256G SSD eDrive	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13		

• For detailed platform specifications, please see [ThinkPad T440s Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor					Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch					
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	ThinkLight™	None				
	i5-4200U	2	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	Chipset	Intel SoC (System on Chip) platform				
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Smart card reader	Optional: Smart card reader				
	i7-4600U		2.1 GHz	3.3 GHz	4MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)				
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket					Ports	Three USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector					
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory					WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card					
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card					WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS					
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio					SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider					
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture					Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication					
Graphics	Intel HD Graphics 4400 in processor					NFC	Optional: Near Field Communication					
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.81; 331mm x 226mm x 20.65mm 14.0W" MultiTouch (WxDxH): 13.0" x 8.9" x 0.90; 331mm x 226mm x 22.94mm					Security	Power-on password, hard disk password, supervisor password, security keyhole					
Weight ²	Models	3-cell + 3-cell	3-cell + 6-cell			Security chip	Trusted Platform Module, TCG 1.2-compliant					
	Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg			vPro (optional)	Intel vPro Technology					
	MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg			Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor					
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy					Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit					
Internal battery	Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication						Win8 / 8.1 P64: Windows 8 / 8.1 64-bit					
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication						Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit					
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell	47.5Wh	3-cell + 6-cell	72Wh	Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite					
	Battery life	8.4 hr	12.6 hr		16.8 hr							
AC adapter	45-watt AC adapter											
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack											

See footnotes for more detailed information

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ThinkPad T440s 20AQ (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit keyboard	Finger-print reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AQ0071US	i5-4300U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	20/14
20AQ0074US	i5-4300U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	20/14
20AQ004EUS	i5-4300U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AQ004FUS	i5-4300U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AQ004GUS	i5-4300U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AQ006DUS	i5-4300U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AQ006EUS	i5-4300U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AQ0072US	i7-4600U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	20/14
20AQ0073US	i7-4600U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	20/14
20AQ009JUS	i7-4600U	vPro	HD 4400	4+4GB	14" FHD IPS	MT	512G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	20/14
20AQ004HUS	i7-4600U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AQ004JUS	i7-4600U	vPro	HD 4400	4+4GB	14" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AQ004KUS	i7-4600U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13

• For detailed platform specifications, please see [ThinkPad T440s Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor					Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch					
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	ThinkLight™	None				
	i5-4200U	2	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	Chipset	Intel SoC (System on Chip) platform				
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Smart card reader	Optional: Smart card reader				
	i7-4600U		2.1 GHz	3.3 GHz	4MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)				
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket					Ports	Three USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector					
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory					WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card					
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card					WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS					
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio					SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider					
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture					Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication					
Graphics	Intel HD Graphics 4400 in processor					NFC	Optional: Near Field Communication					
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.81; 331mm x 226mm x 20.65mm 14.0W" MultiTouch (WxDxH): 13.0" x 8.9" x 0.90; 331mm x 226mm x 22.94mm					Security	Power-on password, hard disk password, supervisor password, security keyhole					
Weight ²	Models	3-cell + 3-cell	3-cell + 6-cell			Security chip	Trusted Platform Module, TCG 1.2-compliant					
	Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg			vPro (optional)	Intel vPro Technology					
	MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg			Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor					
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy					Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit					
Internal battery	Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication						Win8 / 8.1 64: Windows 8 / 8.1 64-bit					
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication						Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit					
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell	47.5Wh	3-cell + 6-cell	72Wh	Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite					
	Battery life	8.4 hr	12.6 hr		16.8 hr							
AC adapter	45-watt AC adapter											
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack											

See footnotes for more detailed information

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ThinkPad T440s 20AR

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AR006RUS	i5-4300U	vPro	HD 4400	4+0GB	14" HD+	No	500G 7200	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 DG Win7	3-depot	Yes	20/14
20AR006SUS	i5-4300U	vPro	HD 4400	4+4GB	14" HD+	No	256G SSD eDrive	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 DG Win7	3-depot	Yes	20/14
20AR003XUS	i5-4300U	vPro	HD 4400	4+4GB	14" FHD IPS	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	20/13
20AR0040US	i5-4300U	vPro	HD 4400	4+4GB	14" HD+	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	20/13
20AR0042US	i5-4300U	vPro	HD 4400	4+4GB	14" HD+	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	20/13
20AR0043US	i5-4300U	vPro	HD 4400	4+0GB	14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	20/13
20AR0045US	i5-4300U	vPro	HD 4400	4+4GB	14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	20/13
20AR0049US	i5-4300U	vPro	HD 4400	4+0GB	14" HD+	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	20/13
20AR006TUS	i7-4600U	vPro	HD 4400	4+0GB	14" HD+	No	500G 7200	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 DG Win7	3-depot	Yes	20/14
20AR006UUS	i7-4600U	vPro	HD 4400	4+4GB	14" FHD IPS	No	256G SSD eDrive	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 DG Win7	3-depot	Yes	20/14
20AR002TUS	i7-4600U	vPro	HD 4400	4+4GB	14" FHD IPS	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	20/13
20AR003YUS	i7-4600U	vPro	HD 4400	4+4GB	14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	20/13
20AR0047US	i7-4600U	vPro	HD 4400	4+4GB	14" FHD IPS	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	Yes	20/13

• For detailed platform specifications, please see [ThinkPad T440s Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor					Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch	
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	ThinkLight™	None
	i5-4200U	2	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	Chipset	Intel SoC (System on Chip) platform
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Smart card reader	Optional: Smart card reader
	i7-4600U		2.1 GHz	3.3 GHz	4MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket					Ports	Three USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector	
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory					WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card	
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card					WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS	
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio					SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider	
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture					Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)	
Graphics	Intel HD Graphics 4400 in processor					NFC	Optional: Near Field Communication	
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.81; 331mm x 226mm x 20.65mm		14.0W" MultiTouch (WxDxH): 13.0" x 8.9" x 0.90; 331mm x 226mm x 22.94mm			Security	Power-on password, hard disk password, supervisor password, security keyhole	
Weight ²	Models	3-cell + 3-cell		3-cell + 6-cell		Security chip	Trusted Platform Module, TCG 1.2-compliant	
	Non-MultiTouch	3.5 lb / 1.59kg		3.9 lb / 1.77kg		vPro (optional)	Intel vPro Technology	
	MultiTouch	3.9 lb / 1.76kg		4.2 lb / 1.94kg		Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor	
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy					Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit	
Internal battery	Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication						Win8 / 8.1 P64: Windows 8 / 8.1 64-bit	
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication						Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit	
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell		3-cell + 6-cell 47.5Wh		3-cell + 6-cell 72Wh		
	Battery life	8.4 hr		12.6 hr		16.8 hr		
AC adapter	45-watt AC adapter					Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite		
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack							

See footnotes for more detailed information

(STG1-3) © Lenovo

ThinkPad T440s 20AR (Windows 8)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit keyboard	Fingerprint reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AR0059US	i5-4300U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AR005AUS	i5-4300U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AR000VUS	i5-4300U	vPro	HD 4400	4+4GB	14" HD+	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	None	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AR000WUS	i5-4300U	vPro	HD 4400	4+0GB	14" FHD IPS	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AR0013US	i5-4300U	vPro	HD 4400	4+0GB	14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	None	None	None	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AR0014US	i5-4300U	vPro	HD 4400	4+0GB	14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	None	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AR001CUS	i5-4300U	vPro	HD 4400	4+0GB	14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AR001EUS	i5-4300U	vPro	HD 4400	4+0GB	14" FHD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AR001FUS	i5-4300U	vPro	HD 4400	4+0GB	14" HD+	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	None	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AR001GUS	i5-4300U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AR001HUS	i5-4300U	vPro	HD 4400	4+4GB	14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AR001MUS	i5-4300U	vPro	HD 4400	4+0GB	14" HD+	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AR0057US	i7-4600U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AR0058US	i7-4600U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AR000UUS	i7-4600U	vPro	HD 4400	4+4GB	14" FHD IPS	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AR0015US	i7-4600U	vPro	HD 4400	4+0GB	14" FHD IPS	MT	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AR0017US	i7-4600U	vPro	HD 4400	4+0GB	14" FHD IPS	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AR0018US	i7-4600U	vPro	HD 4400	4+4GB	14" FHD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AR001AUS	i7-4600U	vPro	HD 4400	4+4GB	14" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AR001QUS	i7-4600U	vPro	HD 4400	4+4GB	14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13

• For detailed platform specifications, please see [ThinkPad T440s Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor					Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch					
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	ThinkLight™	None				
	i5-4200U	2	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	Chipset	Intel SoC (System on Chip) platform				
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Smart card reader	Optional: Smart card reader				
	i7-4600U		2.1 GHz	3.3 GHz	4MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)				
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket					Ports	Three USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector					
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory					WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card					
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card					WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS					
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio					SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider					
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture					Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication					
Graphics	Intel HD Graphics 4400 in processor					Security	Power-on password, hard disk password, supervisor password, security keyhole					
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.81; 331mm x 226mm x 20.65mm 14.0W" MultiTouch (WxDxH): 13.0" x 8.9" x 0.90; 331mm x 226mm x 22.94mm					Security chip vPro (optional)	Trusted Platform Module, TCG 1.2-compliant Intel vPro Technology					
Weight ²	Models	3-cell + 3-cell	3-cell + 6-cell			Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor					
	Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg			Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit					
	MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg			Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite					
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy											
Internal battery	Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication											
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication											
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell	47.5Wh	3-cell + 6-cell	72Wh						
	Battery life	8.4 hr	12.6 hr		16.8 hr							
AC adapter	45-watt AC adapter											
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack											

See footnotes for more detailed information

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ThinkPad T440s 20AR (Onsite)

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit keyboard	Fingerprint reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AR003TUS	i5-4300U	vPro	HD 4400	4+4GB 14" HD+	No	500G 7200	7260 ac+BT	Upg None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	20/13		
20AR003UUS	i5-4300U	vPro	HD 4400	4+0GB 14" HD+	No	500G 7200	7260 ac+BT	Upg None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	20/13		
20AR003VUS	i5-4300U	vPro	HD 4400	4+4GB 14" HD+	No	240G SSD Opal	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	20/13		
20AR0046US	i5-4300U	vPro	HD 4400	4+4GB 14" FHD IPS	No	240G SSD Opal	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	20/13		
20AR0048US	i5-4300U	vPro	HD 4400	4+0GB 14" HD+	No	180G SSD Opal	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	20/13		
20AR004AUS	i5-4300U	vPro	HD 4400	4+4GB 14" HD+	No	180G SSD Opal	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	20/13		
20AR003WUS	i7-4600U	vPro	HD 4400	4+4GB 14" HD+	No	500G 7200	7260 ac+BT	Upg None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	20/13		
20AR0041US	i7-4600U	vPro	HD 4400	4+4GB 14" FHD IPS	No	240G SSD Opal	7260 ac+BT	Upg None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	20/13		
20AR0044US	i7-4600U	vPro	HD 4400	4+4GB 14" FHD IPS	No	500G 7200	7260 ac+BT	Upg None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-onsite	Yes	20/13		

• For detailed platform specifications, please see [ThinkPad T440s Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor					Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch					
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	ThinkLight™	None				
	i5-4200U	2	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	Chipset	Intel SoC (System on Chip) platform				
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Smart card reader	Optional: Smart card reader				
	i7-4600U		2.1 GHz	3.3 GHz	4MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)				
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket					Ports	Three USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector					
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory					WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card					
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card					WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS					
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio					SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider					
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture					Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication					
Graphics	Intel HD Graphics 4400 in processor					NFC	Optional: Near Field Communication					
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.81; 331mm x 226mm x 20.65mm 14.0W" MultiTouch (WxDxH): 13.0" x 8.9" x 0.90; 331mm x 226mm x 22.94mm					Security	Power-on password, hard disk password, supervisor password, security keyhole					
Weight ²	Models	3-cell + 3-cell	3-cell + 6-cell			Security chip	Trusted Platform Module, TCG 1.2-compliant					
	Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg			vPro (optional)	Intel vPro Technology					
	MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg			Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor					
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy					Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit					
Internal battery	Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication						Win8 / 8.1 P64: Windows 8 / 8.1 64-bit					
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication						Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit					
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell	47.5Wh	3-cell + 6-cell	72Wh	Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite					
	Battery life	8.4 hr	12.6 hr									
AC adapter	45-watt AC adapter											
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack											

See footnotes for more detailed information

ThinkPad T440s 20AR (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit keyboard	Finger-print reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AR000TUS	i5-4300U	vPro	HD 4400	4+4GB	14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AR000XUS	i5-4300U	vPro	HD 4400	4+0GB	14" FHD IPS	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AR0010US	i5-4300U	vPro	HD 4400	4+0GB	14" HD+	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AR0012US	i5-4300U	vPro	HD 4400	4+0GB	14" HD+	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	None	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AR0016US	i5-4300U	vPro	HD 4400	4+0GB	14" FHD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AR001BUS	i5-4300U	vPro	HD 4400	4+4GB	14" HD+	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	None	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AR001DUS	i5-4300U	vPro	HD 4400	4+0GB	14" HD+	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AR000YUS	i7-4600U	vPro	HD 4400	4+0GB	14" FHD IPS	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AR0011US	i7-4600U	vPro	HD 4400	4+4GB	14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13

• For detailed platform specifications, please see [ThinkPad T440s Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor					Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch					
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	ThinkLight™	None				
	i5-4200U	2	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	Chipset	Intel SoC (System on Chip) platform				
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Smart card reader	Optional: Smart card reader				
	i7-4600U		2.1 GHz	3.3 GHz	4MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)				
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket					Ports	Three USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector					
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory					WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card					
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card					WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS					
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio					SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider					
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture					Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication					
Graphics	Intel HD Graphics 4400 in processor					NFC	Optional: Near Field Communication					
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.81; 331mm x 226mm x 20.65mm 14.0W" MultiTouch (WxDxH): 13.0" x 8.9" x 0.90; 331mm x 226mm x 22.94mm					Security	Power-on password, hard disk password, supervisor password, security keyhole					
Weight ²	Models	3-cell + 3-cell	3-cell + 6-cell			Security chip	Trusted Platform Module, TCG 1.2-compliant					
	Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg			vPro (optional)	Intel vPro Technology					
	MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg			Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor					
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy					Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit					
Internal battery	Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication						Win8 / 8.1 64: Windows 8 / 8.1 64-bit					
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication						Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit					
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell	47.5Wh	3-cell + 6-cell	72Wh	Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite					
	Battery life	8.4 hr	12.6 hr	16.8 hr								
AC adapter	45-watt AC adapter											
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack											

See footnotes for more detailed information

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Lenovo® ThinkPad T450s



Lenovo ThinkPad T450s



Lenovo ThinkPad T450s



Lenovo ThinkPad T450s



Lenovo ThinkPad T450s

ThinkPad T450s Platform Specifications

Product Specifications Reference (PSREF)

Processor	5th Generation Intel® Core™ i5 / i7 Processor	Smart card reader <i>Optional</i> : Smart card reader																								
Graphics	<table border="1"> <thead> <tr> <th>Processor Number</th> <th># of Cores</th> <th># of Threads</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> <th>Processor Graphics</th> </tr> </thead> <tbody> <tr> <td>i5-5200U</td> <td rowspan="3">2</td> <td rowspan="3">4</td> <td>2.2 GHz</td> <td>2.7 GHz</td> <td>3MB</td> <td rowspan="3">DDR3L-1600</td> <td rowspan="3">Intel HD Graphics 5500</td> </tr> <tr> <td>i5-5300U</td> <td>2.3 GHz</td> <td>2.9 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-5600U</td> <td>2.6 GHz</td> <td>3.2 GHz</td> <td>4MB</td> </tr> </tbody> </table>	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics	i5-5200U	2	4	2.2 GHz	2.7 GHz	3MB	DDR3L-1600	Intel HD Graphics 5500	i5-5300U	2.3 GHz	2.9 GHz	3MB	i7-5600U	2.6 GHz	3.2 GHz	4MB	Multicard reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Ports Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)
Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics																			
i5-5200U	2	4	2.2 GHz	2.7 GHz	3MB	DDR3L-1600	Intel HD Graphics 5500																			
i5-5300U			2.3 GHz	2.9 GHz	3MB																					
i7-5600U			2.6 GHz	3.2 GHz	4MB																					
Chipset Memory	Intel SoC (System on Chip) platform 12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket	Camera HD720p resolution, low light sensitive, fixed focus Audio support HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																								
Display	<i>Some</i> : 14.0" (355mm) HD+ (1600x900), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some</i> : 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS	Keyboard 6-row, spill-resistant, multimedia Fn keys, optional LED backlight UltraNav™ TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch																								
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 264 nits	Security Power-on password, hard disk password, supervisor password, security keyhole Security chip Trusted Platform Module, TCG 1.2-compliant ThinkEngine Delivers improved thermal and power efficiency, up to 30 day standby, faster resume time, enhanced security, as well as anti-tampering measures																								
Storage	<i>Some</i> : SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some</i> : HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™	vPro (optional) Intel vPro Technology Fingerprint reader <i>Optional</i> : Fingerprint reader on the keyboard bezel, swipe sensor																								
M.2 SSD (opt)	<i>Some</i> : SSHD with 8GB NAND flash memory	Internal battery <i>Optional</i> : Integrated Li-Ion or Li-Polymer 3-cell (23Wh) External battery Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh) Max battery life ¹⁰ <table border="1"> <thead> <tr> <th>Models</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell 48Wh</th> <th>3-cell + 6-cell 72Wh</th> </tr> </thead> <tbody> <tr> <td>Integrated</td> <td>10.16 hr</td> <td>14.9 hr</td> <td>19.9 hr</td> </tr> <tr> <td>Discrete</td> <td>10.5 hr</td> <td>15.4 hr</td> <td>20.6 hr</td> </tr> </tbody> </table>	Models	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh	Integrated	10.16 hr	14.9 hr	19.9 hr	Discrete	10.5 hr	15.4 hr	20.6 hr												
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Optical	None	AC adapter 45W AC adapter, 65W Slim AC adapter, or 65W AC adapter																								
Ethernet	<i>Non-vPro model</i> : Intel Ethernet Connection I218-V (Clarkville) <i>vPro model</i> : Intel Ethernet Connection I218-LM (Clarkville)	Preload Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit																								
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	<ul style="list-style-type: none"> • Lenovo Solution Center • Lenovo SHAREit • ThinkVantage Product Recovery • Rescue and Recovery™ • ThinkVantage System Update • PC Device Stage • Evernote® • Skype™ • Maxthon Cloud Browser • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) 																								
WLAN ⁴	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> • 11b/g/n, ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card • 11b/g/n, Intel Wireless-N 7265, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card • 11a/b/g/n, Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT adapter, M.2 card • 11ac, Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT adapter, M.2 card 	<ul style="list-style-type: none"> • Lenovo Solution Center • Lenovo SHAREit • Lenovo Companion • ThinkVantage System Update • PC Device Stage • Weather Channel • Evernote • Maxthon Cloud Browser • Bing Translator • Norton Studio • Microsoft Office preloaded; purchase a product key to activate • Norton Internet Security (30 days of virus definitions) 																								
WWAN (optional)	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> • Wireless WAN upgradable • Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card • Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card 	Limited warranty ¹² <i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> • 1-year depot repair service • 3-year/1-yr battery depot repair service • 3-year/1-yr battery limited onsite service²⁴ • 3-year/1-yr battery limited onsite service, IWS (International Warranty Service¹⁷) 																								
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	Environment EPEAT™ Gold (US) or EPEAT Silver (WE); ENERGY STAR® 6.1; GREENGUARD®; RoHS-compliant																								
Dimensions ³	14.0" (WxDxH): 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm 14.0" Touch (WxDxH): 13.03" x 8.90" x 0.90"; 331mm x 226mm x 22.94mm																									
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Case material	<i>Display cover</i> : Carbon-Fiber Reinforced Plastic; <i>Bottom</i> : Magnesium/Aluminum																									

ThinkPad T450s 20BX (TopSeller)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit keyboard	Fingerprint reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BX001PUS	i5-5200U	No	HD 5500	4+0GB 14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	None	Finger	3+3	45W	Win8.1 DG Win7	1-depot	No	01/15	
20BX0015US	i5-5300U	vPro	HD 5500	4+0GB 14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	None	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15	
20BX0016US	i5-5300U	vPro	HD 5500	4+4GB 14" HD+	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15	
20BX0017US	i5-5300U	vPro	HD 5500	4+4GB 14" HD+	No	128G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15	
20BX0018US	i5-5300U	vPro	HD 5500	4+4GB 14" FHD IPS	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15	
20BX0019US	i5-5300U	vPro	HD 5500	4+0GB 14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15	
20BX001AUS	i5-5300U	vPro	HD 5500	4+4GB 14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15	
20BX001DUS	i5-5300U	vPro	HD 5500	4+4GB 14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	None	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15	
20BX001EUS	i5-5300U	vPro	HD 5500	4+4GB 14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15	
20BX001HUS	i5-5300U	vPro	HD 5500	4+0GB 14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15	
20BX001JUS	i5-5300U	vPro	HD 5500	4+4GB 14" HD+	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15	
20BX001KUS	i5-5300U	vPro	HD 5500	4+4GB 14" FHD IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15	
20BX001NUS	i5-5300U	vPro	HD 5500	4+0GB 14" HD+	No	128G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15	
20BX001BUS	i7-5600U	vPro	HD 5500	4+4GB 14" HD+	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15	
20BX001CUS	i7-5600U	vPro	HD 5500	4+4GB 14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15	
20BX001FUS	i7-5600U	vPro	HD 5500	4+4GB 14" FHD IPS	No	512G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15	
20BX001LUS	i7-5600U	vPro	HD 5500	4+4GB 14" FHD IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15	

• For detailed platform specifications, please see [ThinkPad T450s Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i5 / i7 Processor	Dimensions ³	14.0" (WxDxH): 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm 14.0" Touch (WxDxH): 13.03" x 8.90" x 0.90"; 331mm x 226mm x 22.94mm																																								
	<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr> <td>i5-5200U</td> <td rowspan="3">2</td> <td>2.2 GHz</td> <td>2.7 GHz</td> <td>3MB</td> <td rowspan="3">DDR3L-1600</td> </tr> <tr> <td>i5-5300U</td> <td>2.3 GHz</td> <td>2.9 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-5600U</td> <td>2.6 GHz</td> <td>3.2 GHz</td> <td>4MB</td> </tr> </tbody> </table>	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	i5-5200U	2	2.2 GHz	2.7 GHz	3MB	DDR3L-1600	i5-5300U	2.3 GHz	2.9 GHz	3MB	i7-5600U	2.6 GHz	3.2 GHz	4MB	Weight ²	<table border="1"> <thead> <tr> <th>Models</th> <th>No + 3-cell</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell</th> </tr> </thead> <tbody> <tr> <td>Integrated Non-touch</td> <td>3.26 lb / 1.48 kg</td> <td>3.49 lb / 1.59 kg</td> <td>3.90 lb / 1.77 kg</td> </tr> <tr> <td>Integrated Multi-touch</td> <td>3.79 lb / 1.72 kg</td> <td>4.02 lb / 1.82 kg</td> <td>4.42 lb / 2.01 kg</td> </tr> <tr> <td>Discrete Non-touch</td> <td>3.27 lb / 1.48 kg</td> <td>3.51 lb / 1.59 kg</td> <td>3.91 lb / 1.77 kg</td> </tr> <tr> <td>Discrete Multi-touch</td> <td>3.80 lb / 1.72 kg</td> <td>4.03 lb / 1.83 kg</td> <td>4.43 lb / 2.01 kg</td> </tr> </tbody> </table>	Models	No + 3-cell	3-cell + 3-cell	3-cell + 6-cell	Integrated Non-touch	3.26 lb / 1.48 kg	3.49 lb / 1.59 kg	3.90 lb / 1.77 kg	Integrated Multi-touch	3.79 lb / 1.72 kg	4.02 lb / 1.82 kg	4.42 lb / 2.01 kg	Discrete Non-touch	3.27 lb / 1.48 kg	3.51 lb / 1.59 kg	3.91 lb / 1.77 kg	Discrete Multi-touch	3.80 lb / 1.72 kg	4.03 lb / 1.83 kg	4.43 lb / 2.01 kg
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i5-5300U		2.3 GHz	2.9 GHz	3MB																																							
i7-5600U		2.6 GHz	3.2 GHz	4MB																																							
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Discrete Multi-touch	3.80 lb / 1.72 kg	4.03 lb / 1.83 kg	4.43 lb / 2.01 kg																																								
Graphics	Intel HD Graphics 5500 in processor only, or Intel HD Graphics 5500 in processor and NVIDIA GeForce® 940M, 1GB memory	Case material	Display cover: Carbon-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum																																								
Chipset	Intel SoC (System on Chip) platform	Smart card reader	Optional: Smart card reader																																								
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																								
Display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS	Ports	Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)																																								
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 264 nits	Camera	HD720p resolution, low light sensitive, fixed focus																																								
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory	Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																																								
M.2 SSD (opt)	Single-sided M.2 SSD, via M.2 card slot	Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight																																								
Optical	None	UltraNav™	TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch																																								
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)	Security	Power-on password, hard disk password, supervisor password, security keyhole																																								
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Security chip	Trusted Platform Module, TCG 1.2-compliant																																								
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card	vPro (optional)	Intel vPro Technology																																								
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor																																								
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23Wh)																																								
		External battery	Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)																																								
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		AC adapter	45W AC adapter, 65W Slim AC adapter, or 65W AC adapter																																								
		Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit																																								
		Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																								

See footnotes for more detailed information

(STG2-1) © Lenovo

ThinkPad T450s 20BX (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit keyboard	Fingerprint reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BX001GUS	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	MT	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 P64	3-depot	No	01/15
20BX001MUS	i7-5600U	vPro	HD 5500	4+4GB	14" FHD IPS	MT	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 P64	3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad T450s Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i5 / i7 Processor						Dimensions ³ 14.0" (WxDxH): 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm 14.0" Touch (WxDxH): 13.03" x 8.90" x 0.90"; 331mm x 226mm x 22.94mm												
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed													
	i5-5200U	2	2.2 GHz	2.7 GHz	3MB	DDR3L-1600													
	i5-5300U		2.3 GHz	2.9 GHz	3MB														
i7-5600U	2.6 GHz		3.2 GHz	4MB															
Graphics	Intel HD Graphics 5500 in processor only, or Intel HD Graphics 5500 in processor and NVIDIA GeForce® 940M, 1GB memory																		
Chipset	Intel SoC (System on Chip) platform						Case material Display cover: Carbon-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum												
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket																		
Display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS																		
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 264 nits																		
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory						Smart card reader Optional: Smart card reader Multicard reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Ports Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)												
M.2 SSD (opt)	Single-sided M.2 SSD, via M.2 card slot																		
Optical	None																		
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)																		
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter						Camera HD720p resolution, low light sensitive, fixed focus Audio support HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack												
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card																		
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card																		
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider																		
Security							Power-on password, hard disk password, supervisor password, security keyhole Security chip Trusted Platform Module, TCG 1.2-compliant vPro (optional) Intel vPro Technology Fingerprint reader Optional: Fingerprint reader on the keyboard bezel, swipe sensor												
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Preload							Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit												
Limited warranty ¹²							1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS												

See footnotes for more detailed information

(STG2-2) © Lenovo

ThinkPad T450s 20BW

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit keyboard	Fingerprint reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)	
20BW0004US	i5-5300U	vPro	HD 5500	4+0GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7	3-depot	No	01/15
20BW0006US	i5-5300U	vPro	HD 5500	4+4GB	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7	3-depot	No	01/15
20BW0009US	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7	3-depot	No	01/15
20BW000BUS	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7	3-depot	No	01/15
20BW000CUS	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7	3-depot	No	01/15
20BW000AUS	i7-5600U	vPro	HD 5500	4+4GB	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7	3-depot	No	01/15
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20BW000JUS	i7-5600U	vPro	HD 5500	4+4GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7	3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad T450s Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i5 / i7 Processor						Dimensions ³ 14.0" (WxDxH): 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm 14.0" Touch (WxDxH): 13.03" x 8.90" x 0.90"; 331mm x 226mm x 22.94mm																			
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																				
	i5-5200U	2	2.2 GHz	2.7 GHz	3MB	DDR3L-1600																				
	i5-5300U		2.3 GHz	2.9 GHz	3MB																					
i7-5600U	2.6 GHz		3.2 GHz	4MB																						
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Graphics	Intel HD Graphics 5500 in processor only, or Intel HD Graphics 5500 in processor and NVIDIA GeForce® 940M, 1GB memory						Case material	Display cover: Carbon-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum																		
Chipset	Intel SoC (System on Chip) platform						Smart card reader	Optional: Smart card reader																		
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket						Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																		
Display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS						Ports	Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)																		
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 264 nits						Camera	HD720p resolution, low light sensitive, fixed focus																		
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory						Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																		
M.2 SSD (opt)	Single-sided M.2 SSD, via M.2 card slot						Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight																		
Optical	None						UltraNav™	TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch																		
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)						Security	Power-on password, hard disk password, supervisor password, security keyhole																		
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter						Security chip	Trusted Platform Module, TCG 1.2-compliant																		
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card						vPro (optional)	Intel vPro Technology																		
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card						Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor																		
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider						Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23Wh)																		
							External battery	Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)																		
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							Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																		

See footnotes for more detailed information

(STG2-3) © Lenovo

ThinkPad T450s 20BW (Windows 8)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit keyboard	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Ann date (m/y)	
20BW0007US	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	MT	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 P64	3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad T450s Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i5 / i7 Processor						Dimensions ³ 14.0" (WxDxH): 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm 14.0" Touch (WxDxH): 13.03" x 8.90" x 0.90"; 331mm x 226mm x 22.94mm																				
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																					
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i7-5600U	2.6 GHz		3.2 GHz	4MB																							
Graphics	Intel HD Graphics 5500 in processor only, or Intel HD Graphics 5500 in processor and NVIDIA GeForce® 940M, 1GB memory						Weight ² <table border="1"> <thead> <tr> <th>Models</th> <th>No + 3-cell</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell</th> </tr> </thead> <tbody> <tr> <td>Integrated Non-touch</td> <td>3.26 lb / 1.48 kg</td> <td>3.49 lb / 1.59 kg</td> <td>3.90 lb / 1.77 kg</td> </tr> <tr> <td>Integrated Multi-touch</td> <td>3.79 lb / 1.72 kg</td> <td>4.02 lb / 1.82 kg</td> <td>4.42 lb / 2.01 kg</td> </tr> <tr> <td>Discrete Non-touch</td> <td>3.27 lb / 1.48 kg</td> <td>3.51 lb / 1.59 kg</td> <td>3.91 lb / 1.77 kg</td> </tr> <tr> <td>Discrete Multi-touch</td> <td>3.80 lb / 1.72 kg</td> <td>4.03 lb / 1.83 kg</td> <td>4.43 lb / 2.01 kg</td> </tr> </tbody> </table>	Models	No + 3-cell	3-cell + 3-cell	3-cell + 6-cell	Integrated Non-touch	3.26 lb / 1.48 kg	3.49 lb / 1.59 kg	3.90 lb / 1.77 kg	Integrated Multi-touch	3.79 lb / 1.72 kg	4.02 lb / 1.82 kg	4.42 lb / 2.01 kg	Discrete Non-touch	3.27 lb / 1.48 kg	3.51 lb / 1.59 kg	3.91 lb / 1.77 kg	Discrete Multi-touch	3.80 lb / 1.72 kg	4.03 lb / 1.83 kg	4.43 lb / 2.01 kg
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Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory						Smart card reader Optional: Smart card reader Multicard reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Ports Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)																				
M.2 SSD (opt)	Single-sided M.2 SSD, via M.2 card slot																										
Optical	None																										
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)																										
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter						Camera HD720p resolution, low light sensitive, fixed focus Audio support HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																				
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card																										
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card																										
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Limited warranty ¹²							1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																				

See footnotes for more detailed information

(STG2-4) © Lenovo

ThinkPad T450s 20BW (Onsite)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BW0003US	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20BW0005US	i5-5300U	vPro	HD 5500	4+0GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20BW000EUS	i5-5300U	vPro	HD 5500	4+4GB	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
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20BW000GUS	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20BW0008US	i7-5600U	vPro	HD 5500	4+4GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20BW000DUS	i7-5600U	vPro	HD 5500	4+4GB	14" FHD IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
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• For detailed platform specifications, please see [ThinkPad T450s Platform Specifications sheet](#)

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Graphics	Intel HD Graphics 5500 in processor only, or Intel HD Graphics 5500 in processor and NVIDIA GeForce® 940M, 1GB memory	Case material	Display cover: Carbon-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum																																								
Chipset	Intel SoC (System on Chip) platform	Smart card reader	Optional: Smart card reader																																								
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																								
Display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS	Ports	Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)																																								
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 264 nits	Camera	HD720p resolution, low light sensitive, fixed focus																																								
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory	Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																																								
M.2 SSD (opt)	Single-sided M.2 SSD, via M.2 card slot	Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight																																								
Optical	None	UltraNav™	TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch																																								
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)	Security	Power-on password, hard disk password, supervisor password, security keyhole																																								
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Security chip	Trusted Platform Module, TCG 1.2-compliant																																								
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card	vPro (optional)	Intel vPro Technology																																								
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor																																								
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23Wh)																																								
		External battery	Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)																																								
		Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Models</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell 48Wh</th> <th>3-cell + 6-cell 72Wh</th> </tr> </thead> <tbody> <tr> <td>Integrated</td> <td>10.16 hr</td> <td>14.9 hr</td> <td>19.9 hr</td> </tr> <tr> <td>Discrete</td> <td>10.5 hr</td> <td>15.4 hr</td> <td>20.6 hr</td> </tr> </tbody> </table>	Models	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh	Integrated	10.16 hr	14.9 hr	19.9 hr	Discrete	10.5 hr	15.4 hr	20.6 hr																												
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		AC adapter	45W AC adapter, 65W Slim AC adapter, or 65W AC adapter																																								
		Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit																																								
		Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																								

See footnotes for more detailed information

(STG2-5) © Lenovo

ThinkPad T450s 20BW (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit keyboard	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Ann date Global (m/y)
20BW000KUS	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	MT	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 P64	3-onsite IWS	Yes 01/15

• For detailed platform specifications, please see [ThinkPad T450s Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i5 / i7 Processor						Dimensions ³ 14.0" (WxDxH): 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm 14.0" Touch (WxDxH): 13.03" x 8.90" x 0.90"; 331mm x 226mm x 22.94mm																				
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																					
	i5-5200U	2	2.2 GHz	2.7 GHz	3MB	DDR3L-1600																					
	i5-5300U		2.3 GHz	2.9 GHz	3MB																						
i7-5600U	2.6 GHz		3.2 GHz	4MB																							
Graphics	Intel HD Graphics 5500 in processor only, or Intel HD Graphics 5500 in processor and NVIDIA GeForce® 940M, 1GB memory						Weight ² <table border="1"> <thead> <tr> <th>Models</th> <th>No + 3-cell</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell</th> </tr> </thead> <tbody> <tr> <td>Integrated Non-touch</td> <td>3.26 lb / 1.48 kg</td> <td>3.49 lb / 1.59 kg</td> <td>3.90 lb / 1.77 kg</td> </tr> <tr> <td>Integrated Multi-touch</td> <td>3.79 lb / 1.72 kg</td> <td>4.02 lb / 1.82 kg</td> <td>4.42 lb / 2.01 kg</td> </tr> <tr> <td>Discrete Non-touch</td> <td>3.27 lb / 1.48 kg</td> <td>3.51 lb / 1.59 kg</td> <td>3.91 lb / 1.77 kg</td> </tr> <tr> <td>Discrete Multi-touch</td> <td>3.80 lb / 1.72 kg</td> <td>4.03 lb / 1.83 kg</td> <td>4.43 lb / 2.01 kg</td> </tr> </tbody> </table>	Models	No + 3-cell	3-cell + 3-cell	3-cell + 6-cell	Integrated Non-touch	3.26 lb / 1.48 kg	3.49 lb / 1.59 kg	3.90 lb / 1.77 kg	Integrated Multi-touch	3.79 lb / 1.72 kg	4.02 lb / 1.82 kg	4.42 lb / 2.01 kg	Discrete Non-touch	3.27 lb / 1.48 kg	3.51 lb / 1.59 kg	3.91 lb / 1.77 kg	Discrete Multi-touch	3.80 lb / 1.72 kg	4.03 lb / 1.83 kg	4.43 lb / 2.01 kg
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Chipset	Intel SoC (System on Chip) platform						Case material Display cover: Carbon-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum																				
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket																										
Display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS																										
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 264 nits																										
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory						Smart card reader Optional: Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Ports Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)																				
M.2 SSD (opt)	Single-sided M.2 SSD, via M.2 card slot																										
Optical	None																										
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)																										
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter						Camera HD720p resolution, low light sensitive, fixed focus Audio support HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																				
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card																										
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card																										
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider																										
Security							Keyboard 6-row, spill-resistant, multimedia Fn keys, optional LED backlight UltraNav™ TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch																				
Security chip																											
vPro (optional)																											
Fingerprint reader																											
Internal battery							Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Intel vPro Technology Optional: Fingerprint reader on the keyboard bezel, swipe sensor																				
External battery																											
Max battery life ¹⁰																											
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AC adapter							45W AC adapter, 65W Slim AC adapter, or 65W AC adapter																				
Preload							Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit																				
Limited warranty ¹²							1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																				

See footnotes for more detailed information

(STG2-6) © Lenovo



Lenovo® ThinkPad T540p



Lenovo ThinkPad T540p



Lenovo ThinkPad T540p



Lenovo ThinkPad T540p



Lenovo ThinkPad T540p

ThinkPad T540p Platform Specifications

Product Specifications Reference (PSREF)

Positioning	<i>Premiere performance; two spindles</i>								Chipset	Mobile Intel QM87 Express Chipset	
Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor								ExpressCard	One slot (ExpressCard/34)	
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics	Smart card reader	<i>Optional:</i> Smart card reader	
	i3-4000M	2	4	2.4 GHz	-	3MB	DDR3L-1600	Intel HD Graphics 4600	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
	i3-4100M			2.5 GHz	-	3MB			Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector	
	i5-4200M			2.5 GHz	3.1 GHz	3MB			WLAN ⁴	<i>One of the following, configurable by model:</i>	
	i5-4210M			2.6 GHz	3.2 GHz	3MB			<ul style="list-style-type: none"> ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card Intel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card 		
	i5-4300M			2.6 GHz	3.3 GHz	3MB			WWAN (<i>optional</i>)	<i>One of the following, configurable by model (mutually exclusive with M.2 SSD):</i>	
	i5-4330M	2.8 GHz	3.5 GHz	3MB	<ul style="list-style-type: none"> Wireless WAN upgradable Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 card (US models) Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card (WE models) Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card (WE models) 						
	i7-4600M	2.9 GHz	3.6 GHz	4MB							
	i7-4700MQ	2.4 GHz	3.4 GHz	6MB							
	i7-4710MQ	2.5 GHz	3.5 GHz	6MB							
	i7-4800MQ	2.7 GHz	3.7 GHz	6MB							
	i7-4900MQ	2.8 GHz	3.8 GHz	8MB							
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets								SIM card (<i>optional</i>)	<i>One of the following, configurable by model:</i>	
Optical Ultrabay	DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high, bottom access								<ul style="list-style-type: none"> AT&T® or Verizon® LTE (4G), contract required with service provider (US models) Lenovo SIM, out-of-box service, pay-as-you-go via credit card, no contract required (WE models) User selectable, contract required with service provider 		
Storage	<i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive (HDD) / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™								Security chip vPro (<i>optional</i>)	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant	
M.2 SSD	<i>All:</i> removable, upgradable, supports the second disk, Shock Mounted <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card								Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor	
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080) , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620) , anti-glare, LED backlight, 350 nits, 16:9 aspect ratio, 1000:1 contrast ratio, IPS								Limited warranty ¹²	<i>One of the following, configurable by model:</i>	
Camera (<i>optional</i>)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus								<ul style="list-style-type: none"> 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service²⁴ 3-year/1-yr battery limited onsite service, IWS (International Warranty Service¹⁷) 		
Graphics	Intel HD Graphics 4600 in processor only, or Intel HD Graphics 4600 in processor and NVIDIA GeForce® GT 730M , PCI Express® x8, 1GB memory, NVIDIA® Optimus™ technology; supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays; <i>Max resolution:</i> 1920x1200@60Hz (VGA); 3840x2160@60Hz (DP via mDP cable)								Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit	<i>Some:</i> Windows 8 / 8.1 64-bit
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch								<ul style="list-style-type: none"> Lenovo Solution Center ThinkVantage Product Recovery Rescue and Recovery™ ThinkVantage System Update Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype™ Microsoft® Office preloaded; purchase a product key to activate Norton™ Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 	<ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support Lenovo Companion ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync - Metro (Windows 8 model) Lenovo Cloud Storage by SugarSync (Windows 8 model) PC Device Stage AccuWeather Amazon Kindle Nitro Pro Evernote Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 	
ThinkLight™	None										
Dimensions ³	<i>HD (WxDxH):</i> 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm <i>FHD / 3K:</i> 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm										
Weight ²	<i>Models</i>	<i>6-cell</i>		<i>9-cell</i>							
	<i>Integrated</i>	5.31 lb / 2.41kg		5.65 lb / 2.56kg							
	<i>Optimus</i>	5.43 lb / 2.46kg		5.80 lb / 2.63kg							
Case material	Glass-Fiber Reinforced Plastic										
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication										
Max battery life ¹⁰	<i>Models</i>	<i>6-cell</i>		<i>9-cell</i>							
	<i>Integrated</i>	7 hr		12.5 hr							
	<i>Optimus</i>	6.2 hr		11 hr							
AC adapter	65-watt, 90-watt, or 135-watt AC adapter										
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack										
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter								Environment	EPEAT™ Gold; ENERGY STAR® 6.0; GREENGUARD®; RoHS-compliant	
Ethernet	Intel Ethernet Connection I217-LM (Clarkville)										
NFC	<i>Optional:</i> Near Field Communication										

ThinkPad T540p 20BE (TopSeller)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Backlit keyboard	Fingerprint reader	NFC	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BE003AUS	i5-4200M	No	HD 4600	4GBx1	15.6" HD	500G 7200	7260 b/g/n+BT	Upg	None	None	Exp/34	720p	None	None	None	6	65W	Win8 DG Win7	1-depot	No	10/13
20BE003CUS	i5-4300M	No	HD 4600	4GBx1	15.6" HD	500G 7200	7260 b/g/n+BT	Upg	None	None	Exp/34	720p	None	None	None	6	65W	Win8 DG Win7	1-depot	No	10/13
20BE003DUS	i5-4300M	No	HD 4600	4GBx1	15.6" HD	500G 7200	7260 b/g/n+BT	Upg	None	None	Exp/34	720p	None	None	None	6	65W	Win8 DG Win7	3-depot	No	10/13
20BE003EUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	None	None	None	6	65W	Win8 DG Win7	3-depot	No	10/13
20BE003FUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 DG Win7	3-depot	No	10/13
20BE003GUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" HD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 DG Win7	3-depot	No	10/13
20BE003HUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 DG Win7	3-depot	No	10/13
20BE003JUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" FHD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 DG Win7	3-depot	No	10/13
20BE003KUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 DG Win7	3-depot	No	10/13
20BE004EUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	6	65W	Win8 DG Win7	3-depot	No	11/13
20BE0095US	i5-4300M	vPro	HD 4600	8GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	6	65W	Win8 DG Win7	3-depot	No	03/14

• For detailed platform specifications, please see [ThinkPad T540p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor	Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																																								
	<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr> <td>i3-4000M</td> <td rowspan="4">2</td> <td>2.4 GHz</td> <td>-</td> <td>3MB</td> <td rowspan="8">DDR3L-1600</td> </tr> <tr> <td>i5-4200M</td> <td>2.5 GHz</td> <td>3.1 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4300M</td> <td>2.6 GHz</td> <td>3.3 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4330M</td> <td>2.8 GHz</td> <td>3.5 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-4600M</td> <td rowspan="4">4</td> <td>2.9 GHz</td> <td>3.6 GHz</td> <td>4MB</td> </tr> <tr> <td>i7-4700MQ</td> <td>2.4 GHz</td> <td>3.4 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-4800MQ</td> <td>2.7 GHz</td> <td>3.7 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-4900MQ</td> <td>2.8 GHz</td> <td>3.8 GHz</td> <td>8MB</td> </tr> </tbody> </table>	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	i5-4200M	2.5 GHz	3.1 GHz	3MB	i5-4300M	2.6 GHz	3.3 GHz	3MB	i5-4330M	2.8 GHz	3.5 GHz	3MB	i7-4600M	4	2.9 GHz	3.6 GHz	4MB	i7-4700MQ	2.4 GHz	3.4 GHz	6MB	i7-4800MQ	2.7 GHz	3.7 GHz	6MB	i7-4900MQ	2.8 GHz	3.8 GHz	8MB	Keyboard UltraNav™ TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch ThinkLight™ None
Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																																						
i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600																																						
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i5-4330M		2.8 GHz	3.5 GHz	3MB																																							
i7-4600M	4	2.9 GHz	3.6 GHz	4MB																																							
i7-4700MQ		2.4 GHz	3.4 GHz	6MB																																							
i7-4800MQ		2.7 GHz	3.7 GHz	6MB																																							
i7-4900MQ		2.8 GHz	3.8 GHz	8MB																																							
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Chipset ExpressCard Smart card reader Multicard reader Ports	Mobile Intel QM87 Express Chipset One slot (ExpressCard/34) <i>Optional:</i> Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector																																								
Optical	DVD burner, 9.5mm Ultrabay slim, removable	WLAN ⁴	<i>11b/g/n+BT:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card <i>7260 b/g/n+BT:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 a/b/g/n+BT:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 ac+BT:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card																																								
Storage	One modular bay for removable devices (right side, cold swap), 9.5mm high <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card	WWAN (optional)	<i>Upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS																																								
M.2 SSD		SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>Select:</i> User selectable, contract required with service provider																																								
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768), 220 nits, 400:1 contrast ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080), 300 nits, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620), 350 nits, 1000:1 contrast ratio, IPS	Bluetooth™ Ethernet NFC	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel Ethernet Connection I217-LM (Clarkville) <i>Optional:</i> Near Field Communication																																								
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	Security Security chip vPro (optional) Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Intel vPro Technology <i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor																																								
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M, 1GB memory (Optimus)	Preload	<i>Win8 / 8.1 DG Win7:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit																																								
Dimensions ³	<i>HD (WxDxH):</i> 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm <i>FHD / 3K:</i> 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite																																								
Weight ²	<table border="1"> <thead> <tr> <th>Models</th> <th>6-cell</th> <th>9-cell</th> </tr> </thead> <tbody> <tr> <td><i>Integrated</i></td> <td>5.31 lb / 2.41kg</td> <td>5.65 lb / 2.56kg</td> </tr> <tr> <td><i>Optimus</i></td> <td>5.43 lb / 2.46kg</td> <td>5.80 lb / 2.63kg</td> </tr> </tbody> </table>	Models	6-cell	9-cell	<i>Integrated</i>	5.31 lb / 2.41kg	5.65 lb / 2.56kg	<i>Optimus</i>	5.43 lb / 2.46kg	5.80 lb / 2.63kg																																	
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Case material	Glass-Fiber Reinforced Plastic																																										
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																																										
Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Models</th> <th>6-cell</th> <th>9-cell</th> </tr> </thead> <tbody> <tr> <td><i>Integrated</i></td> <td>7 hr</td> <td>12.5 hr</td> </tr> <tr> <td><i>Optimus</i></td> <td>6.2 hr</td> <td>11 hr</td> </tr> </tbody> </table>	Models	6-cell	9-cell	<i>Integrated</i>	7 hr	12.5 hr	<i>Optimus</i>	6.2 hr	11 hr																																	
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<i>Integrated</i>	7 hr	12.5 hr																																									
<i>Optimus</i>	6.2 hr	11 hr																																									
AC adapter	65-watt, 90-watt, or 135-watt AC adapter																																										

See footnotes for more detailed information

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ThinkPad T540p 20BE (Optimus) - TopSeller

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Backlit key-board	Finger-print reader	NFC	Bat-tery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)	
20BE00BPUS	i7-4600M	vPro	GT 730M	8GBx1	15.6" FHD	512G SSD	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8.1 DG	Win7	3-depot	No	10/14
20BE003LUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 DG	Win7	3-depot	No	10/13
20BE003MUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 DG	Win7	3-depot	No	10/13
20BE003NUS	i7-4600M	vPro	GT 730M	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 DG	Win7	3-depot	No	10/13
20BE003PUS	i7-4600M	vPro	GT 730M	4GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 DG	Win7	3-depot	No	10/13
20BE003QUS	i7-4600M	vPro	GT 730M	4GBx1	15.6" FHD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 DG	Win7	3-depot	No	10/13
20BE003RUS	i7-4600M	vPro	GT 730M	4GBx1	15.5" 3K IPS	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 DG	Win7	3-depot	No	10/13
20BE003SUS	i7-4600M	vPro	GT 730M	4GBx1	15.5" 3K IPS	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 DG	Win7	3-depot	No	10/13
20BE004FUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 DG	Win7	3-depot	No	11/13
20BE004GUS	i7-4600M	vPro	GT 730M	4GBx2	15.6" FHD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 DG	Win7	3-depot	No	11/13
20BE007YUS	i7-4600M	vPro	GT 730M	8GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 DG	Win7	3-depot	No	01/14
20BE0085US	i7-4600M	vPro	GT 730M	8GBx1	15.6" FHD	240G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 DG	Win7	3-depot	No	01/14
20BE0096US	i7-4700MQ	No	GT 730M	8GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	135W	Win8 DG	Win7	3-depot	No	03/14

• For detailed platform specifications, please see [ThinkPad T540p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor					Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack					
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight				
	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				
	i5-4200M		2.5 GHz	3.1 GHz	3MB		ThinkLight™	None				
	i5-4300M		2.6 GHz	3.3 GHz	3MB		Chipset	Mobile Intel QM87 Express Chipset				
	i5-4330M		2.8 GHz	3.5 GHz	3MB		ExpressCard	One slot (ExpressCard/34)				
	i7-4600M		2.9 GHz	3.6 GHz	4MB		Smart card reader	Optional: Smart card reader				
	i7-4700MQ	4	2.4 GHz	3.4 GHz	6MB	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)					
	i7-4800MQ		2.7 GHz	3.7 GHz	6MB	Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector					
	i7-4900MQ		2.8 GHz	3.8 GHz	8MB	WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card					
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets					WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS					
Optical	DVD burner, 9.5mm Ultrabay slim, removable					SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider					
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high					Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card					Ethernet	Intel Ethernet Connection I217-LM (Clarkville)					
M.2 SSD						NFC	Optional: Near Field Communication					
Widescreen display	Some: 15.6" (396mm) HD (1366x768) , 220 nits, 400:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio Some: 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS					Security	Power-on password, hard disk password, supervisor password, security keyhole					
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					Security chip	Trusted Platform Module, TCG 1.2-compliant					
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M, 1GB memory (Optimus)					vPro (optional)	Intel vPro Technology					
Dimensions ³	HD (WxDxH): 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm FHD / 3K: 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm					Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor					
Weight ²	Models	6-cell	9-cell									
	Integrated	5.31 lb / 2.41kg	5.65 lb / 2.56kg									
	Optimus	5.43 lb / 2.46kg	5.80 lb / 2.63kg									
Case material	Glass-Fiber Reinforced Plastic					Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit					
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication					Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite					
Max battery life ¹⁰	Models	6-cell	9-cell									
	Integrated	7 hr	12.5 hr									
	Optimus	6.2 hr	11 hr									
AC adapter	65-watt, 90-watt, or 135-watt AC adapter											

See footnotes for more detailed information

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ThinkPad T540p 20BF

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Backlit keyboard	Finger-print reader	NFC	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BF005UUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" HD	500G 7200	7260 a/b/g/n+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8.1 DG Win7	1-depot	Yes	04/14
20BF005SUS	i7-4600M	vPro	HD 4600	8GBx1	15.6" FHD	256G SSD eDrive	7260 a/b/g/n+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	6	65W	Win8.1 DG Win7	3-depot	Yes	04/14

• For detailed platform specifications, please see [ThinkPad T540p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Audio support		HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack													
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard		6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight													
	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	UltraNav™		TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch													
	i5-4200M		2.5 GHz	3.1 GHz	3MB		ThinkLight™		None													
	i5-4300M		2.6 GHz	3.3 GHz	3MB		Chipset		Mobile Intel QM87 Express Chipset													
	i5-4330M		2.8 GHz	3.5 GHz	3MB		ExpressCard		One slot (ExpressCard/34)													
	i7-4600M	4	2.9 GHz	3.6 GHz	4MB		Smart card reader		Optional: Smart card reader													
	i7-4700MQ		2.4 GHz	3.4 GHz	6MB		Multicard reader		4-in-1 reader (MMC, SD, SDHC, SDXC)													
	i7-4800MQ		2.7 GHz	3.7 GHz	6MB	Ports		Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector														
	i7-4900MQ		2.8 GHz	3.8 GHz	8MB	WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card														
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						WWAN (optional)		Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS													
Optical	DVD burner, 9.5mm Ultrabay slim, removable						SIM card (optional)		AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider													
Ultrabay Storage	One modular bay for removable devices (right side, cold swap), 9.5mm high <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						Bluetooth™		Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter													
M.2 SSD							Ethernet		Intel Ethernet Connection I217-LM (Clarkville)													
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) , 220 nits, 400:1 contrast ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS						NFC		Optional: Near Field Communication													
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Security		Power-on password, hard disk password, supervisor password, security keyhole													
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)						Security chip		Trusted Platform Module, TCG 1.2-compliant													
Dimensions ³	HD (WxDxH): 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm FHD / 3K: 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm						vPro (optional)		Intel vPro Technology													
Weight ²	Models	6-cell		9-cell		Fingerprint reader		Optional: Fingerprint reader on the palm rest, swipe sensor														
	Integrated	5.31 lb / 2.41kg		5.65 lb / 2.56kg		Preload		Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit														
	Optimus	5.43 lb / 2.46kg		5.80 lb / 2.63kg		Limited warranty ¹²		1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite														
Case material	Glass-Fiber Reinforced Plastic						AC adapter		65-watt, 90-watt, or 135-watt AC adapter													
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																					
Max battery life ¹⁰	Models	6-cell		9-cell																		
	Integrated	7 hr		12.5 hr																		
	Optimus	6.2 hr		11 hr																		

See footnotes for more detailed information

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ThinkPad T540p 20BF (Windows 8)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Backlit keyboard	Fingerprint reader	NFC	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BF001LUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" FHD	128G SSD	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-depot	No	10/13
20BF001NUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-depot	No	10/13
20BF001PUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-depot	No	10/13
20BF001RUS	i7-4600M	vPro	HD 4600	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-depot	No	10/13
20BF001TUS	i7-4600M	vPro	HD 4600	4GBx1	15.6" FHD	128G SSD	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	6	65W	Win8 P64	3-depot	No	10/13
20BF001WUS	i7-4600M	vPro	HD 4600	4GBx1	15.6" FHD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	6	65W	Win8 P64	3-depot	No	11/13
20BF001XUS	i7-4600M	vPro	HD 4600	4GBx1	15.6" FHD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	6	65W	Win8 P64	3-depot	No	11/13
20BF0021US	i7-4600M	vPro	HD 4600	8GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	6	65W	Win8 P64	3-depot	No	10/13
20BF0022US	i7-4600M	vPro	HD 4600	4GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-depot	No	10/13
20BF002DUS	i7-4600M	vPro	HD 4600	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13
20BF002GUS	i7-4600M	vPro	HD 4600	4GBx1	15.5" 3K IPS	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13
20BF002PUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" HD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13
20BF0030US	i5-4300M	vPro	HD 4600	4GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13
20BF0034US	i7-4600M	vPro	HD 4600	4GBx1	15.6" HD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13
20BF0037US	i5-4300M	vPro	HD 4600	4GBx1	15.6" HD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-depot	Yes	10/13

• For detailed platform specifications, please see [ThinkPad T540p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor	Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																																								
	<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr> <td>i3-4000M</td> <td rowspan="4">2</td> <td>2.4 GHz</td> <td>-</td> <td>3MB</td> <td rowspan="8">DDR3L-1600</td> </tr> <tr> <td>i5-4200M</td> <td>2.5 GHz</td> <td>3.1 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4300M</td> <td>2.6 GHz</td> <td>3.3 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4330M</td> <td>2.8 GHz</td> <td>3.5 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-4600M</td> <td rowspan="4">4</td> <td>2.9 GHz</td> <td>3.6 GHz</td> <td>4MB</td> </tr> <tr> <td>i7-4700MQ</td> <td>2.4 GHz</td> <td>3.4 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-4800MQ</td> <td>2.7 GHz</td> <td>3.7 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-4900MQ</td> <td>2.8 GHz</td> <td>3.8 GHz</td> <td>8MB</td> </tr> </tbody> </table>	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	i5-4200M	2.5 GHz	3.1 GHz	3MB	i5-4300M	2.6 GHz	3.3 GHz	3MB	i5-4330M	2.8 GHz	3.5 GHz	3MB	i7-4600M	4	2.9 GHz	3.6 GHz	4MB	i7-4700MQ	2.4 GHz	3.4 GHz	6MB	i7-4800MQ	2.7 GHz	3.7 GHz	6MB	i7-4900MQ	2.8 GHz	3.8 GHz	8MB	Keyboard UltraNav™ TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch ThinkLight™ None
Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																																						
i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600																																						
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i7-4800MQ		2.7 GHz	3.7 GHz	6MB																																							
i7-4900MQ		2.8 GHz	3.8 GHz	8MB																																							
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Chipset	Mobile Intel QM87 Express Chipset																																								
Optical	DVD burner, 9.5mm Ultrabay slim, removable	ExpressCard	One slot (ExpressCard/34)																																								
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high	Smart card reader	Optional: Smart card reader																																								
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																								
M.2 SSD		Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector																																								
Widescreen display	Some: 15.6" (396mm) HD (1366x768) , 220 nits, 400:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio Some: 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS	WLAN ⁴	<i>11b/g/n+BT:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card <i>7260 b/g/n+BT:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 a/b/g/n+BT:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 ac+BT:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card																																								
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	WWAN (optional)	<i>Upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS																																								
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)	SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>Select:</i> User selectable, contract required with service provider																																								
Dimensions ³	<i>HD (WxDxH):</i> 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm <i>FHD / 3K:</i> 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm	Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																								
Weight ²	<table border="1"> <thead> <tr> <th>Models</th> <th>6-cell</th> <th>9-cell</th> </tr> </thead> <tbody> <tr> <td><i>Integrated</i></td> <td>5.31 lb / 2.41kg</td> <td>5.65 lb / 2.56kg</td> </tr> <tr> <td><i>Optimus</i></td> <td>5.43 lb / 2.46kg</td> <td>5.80 lb / 2.63kg</td> </tr> </tbody> </table>	Models	6-cell	9-cell	<i>Integrated</i>	5.31 lb / 2.41kg	5.65 lb / 2.56kg	<i>Optimus</i>	5.43 lb / 2.46kg	5.80 lb / 2.63kg	Ethernet	Intel Ethernet Connection I217-LM (Clarkville)																															
Models	6-cell	9-cell																																									
<i>Integrated</i>	5.31 lb / 2.41kg	5.65 lb / 2.56kg																																									
<i>Optimus</i>	5.43 lb / 2.46kg	5.80 lb / 2.63kg																																									
Case material	Glass-Fiber Reinforced Plastic	NFC	Optional: Near Field Communication																																								
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication	Security	Power-on password, hard disk password, supervisor password, security keyhole																																								
Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Models</th> <th>6-cell</th> <th>9-cell</th> </tr> </thead> <tbody> <tr> <td><i>Integrated</i></td> <td>7 hr</td> <td>12.5 hr</td> </tr> <tr> <td><i>Optimus</i></td> <td>6.2 hr</td> <td>11 hr</td> </tr> </tbody> </table>	Models	6-cell	9-cell	<i>Integrated</i>	7 hr	12.5 hr	<i>Optimus</i>	6.2 hr	11 hr	Security chip	Trusted Platform Module, TCG 1.2-compliant																															
Models	6-cell	9-cell																																									
<i>Integrated</i>	7 hr	12.5 hr																																									
<i>Optimus</i>	6.2 hr	11 hr																																									
AC adapter	65-watt, 90-watt, or 135-watt AC adapter	vPro (optional)	Intel vPro Technology																																								
		Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor																																								
		Preload	<i>Win8 / 8.1 DG Win7:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit																																								
		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite																																								

See footnotes for more detailed information

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ThinkPad T540p 20BF (Optimus)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Backlit keyboard	Finger-print reader	NFC	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BF005RUS	i7-4600M	vPro	GT 730M	8GBx1	15.6" FHD	256G SSD eDrive	7260 a/b/g/n+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8.1 DG	Win7 3-depot	Yes	04/14
20BF005TUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" FHD	500G 7200	7260 a/b/g/n+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8.1 DG	Win7 3-depot	Yes	04/14

• For detailed platform specifications, please see [ThinkPad T540p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Audio support		HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack													
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard		6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight													
	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	UltraNav™		TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch													
	i5-4200M		2.5 GHz	3.1 GHz	3MB		ThinkLight™		None													
	i5-4300M		2.6 GHz	3.3 GHz	3MB		Chipset		Mobile Intel QM87 Express Chipset													
	i5-4330M		2.8 GHz	3.5 GHz	3MB		ExpressCard		One slot (ExpressCard/34)													
	i7-4600M	4	2.9 GHz	3.6 GHz	4MB		Smart card reader		Optional: Smart card reader													
	i7-4700MQ		2.4 GHz	3.4 GHz	6MB		Multicard reader		4-in-1 reader (MMC, SD, SDHC, SDXC)													
	i7-4800MQ		2.7 GHz	3.7 GHz	6MB		Ports		Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector													
	i7-4900MQ		2.8 GHz	3.8 GHz	8MB		WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card													
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						WWAN (optional)		Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS													
Optical	DVD burner, 9.5mm Ultrabay slim, removable						SIM card (optional)		AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider													
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						Bluetooth™		Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter													
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS						Ethernet		Intel Ethernet Connection I217-LM (Clarkville)													
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						NFC		Optional: Near Field Communication													
Widescreen display	Some: 15.6" (396mm) HD (1366x768), 220 nits, 400:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080), 300 nits, 500:1 contrast ratio Some: 15.5" (394mm) 3K (2880x1620), 350 nits, 1000:1 contrast ratio, IPS						Security		Power-on password, hard disk password, supervisor password, security keyhole													
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Security chip		Trusted Platform Module, TCG 1.2-compliant													
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M, 1GB memory (Optimus)						vPro (optional)		Intel vPro Technology													
Dimensions ³	HD (WxDxH): 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm FHD / 3K: 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm						Fingerprint reader		Optional: Fingerprint reader on the palm rest, swipe sensor													
Weight ²	Models	6-cell		9-cell		Preload		Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit														
	Integrated	5.31 lb / 2.41kg		5.65 lb / 2.56kg		Limited warranty ¹²		1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite														
	Optimus	5.43 lb / 2.46kg		5.80 lb / 2.63kg																		
Case material	Glass-Fiber Reinforced Plastic																					
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																					
Max battery life ¹⁰	Models	6-cell		9-cell																		
	Integrated	7 hr		12.5 hr																		
	Optimus	6.2 hr		11 hr																		
AC adapter	65-watt, 90-watt, or 135-watt AC adapter																					

See footnotes for more detailed information

(KM1-5) © Lenovo

ThinkPad T540p 20BF (Optimus) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Backlit keyboard	Fingerprint reader	NFC	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BF0015US	i7-4600M	vPro	GT 730M	4GBx1	15.6" FHD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 P64	3-depot	No	11/13
20BF0017US	i7-4600M	vPro	GT 730M	4GBx1	15.5" 3K IPS	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 P64	3-depot	No	11/13
20BF0018US	i7-4600M	vPro	GT 730M	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 P64	3-depot	No	10/13
20BF001AUS	i7-4600M	vPro	GT 730M	4GBx1	15.6" FHD	128G SSD	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 P64	3-depot	No	10/13
20BF001DUS	i7-4600M	vPro	GT 730M	4GBx1	15.5" 3K IPS	128G SSD	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 P64	3-depot	No	10/13
20BF001EUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-depot	No	10/13
20BF001GUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" FHD	128G SSD	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-depot	No	10/13
20BF001KUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" FHD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-depot	No	11/13
20BF0024US	i7-4600M	vPro	GT 730M	4GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 P64	3-depot	No	10/13
20BF002FUS	i7-4600M	vPro	GT 730M	4GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-depot	Yes	10/13
20BF002HUS	i7-4600M	vPro	GT 730M	4GBx1	15.5" 3K IPS	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-depot	Yes	10/13
20BF002KUS	i7-4600M	vPro	GT 730M	8GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-depot	Yes	10/13
20BF002LUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-depot	Yes	10/13
20BF002MUS	i7-4600M	vPro	GT 730M	8GBx1	15.5" 3K IPS	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-depot	Yes	10/13
20BF002QUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" HD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-depot	Yes	10/13
20BF002VUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-depot	Yes	10/13
20BF002XUS	i7-4600M	vPro	GT 730M	4GBx1	15.5" 3K IPS	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-depot	Yes	10/13
20BF0033US	i5-4300M	vPro	GT 730M	4GBx1	15.6" HD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-depot	Yes	10/13

• For detailed platform specifications, please see [ThinkPad T540p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack													
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight													
	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch													
	i5-4200M		2.5 GHz	3.1 GHz	3MB		ThinkLight™	None													
	i5-4300M		2.6 GHz	3.3 GHz	3MB		Chipset	Mobile Intel QM87 Express Chipset													
	i5-4330M		2.8 GHz	3.5 GHz	3MB		ExpressCard	One slot (ExpressCard/34)													
	i7-4600M	4	2.9 GHz	3.6 GHz	4MB		Smart card reader	Optional: Smart card reader													
	i7-4700MQ		2.4 GHz	3.4 GHz	6MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)													
	i7-4800MQ		2.7 GHz	3.7 GHz	6MB		Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector													
	i7-4900MQ		2.8 GHz	3.8 GHz	8MB	WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card														
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS													
Optical	DVD burner, 9.5mm Ultrabay slim, removable						SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider													
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter													
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						Ethernet	Intel Ethernet Connection I217-LM (Clarkville)													
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						NFC	Optional: Near Field Communication													
Widescreen display	Some: 15.6" (396mm) HD (1366x768) , 220 nits, 400:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio Some: 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS						Security	Power-on password, hard disk password, supervisor password, security keyhole													
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						Security chip	Trusted Platform Module, TCG 1.2-compliant													
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)						vPro (optional)	Intel vPro Technology													
Dimensions ³	HD (WxDxH): 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm FHD / 3K: 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm						Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor													
Weight ²	Models	6-cell		9-cell		Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit														
	Integrated	5.31 lb / 2.41kg		5.65 lb / 2.56kg		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite														
	Optimus	5.43 lb / 2.46kg		5.80 lb / 2.63kg																	
Case material	Glass-Fiber Reinforced Plastic						AC adapter	65-watt, 90-watt, or 135-watt AC adapter													
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																				
Max battery life ¹⁰	Models	6-cell		9-cell																	
	Integrated	7 hr		12.5 hr																	
	Optimus	6.2 hr		11 hr																	

See footnotes for more detailed information

(KM1-6) © Lenovo

ThinkPad T540p 20BF (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Backlit keyboard	Fingerprint reader	NFC	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BF0014US	i5-4300M	vPro	HD 4600	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	No	10/13
20BF001MUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" FHD	128G SSD	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	No	10/13
20BF001QUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	No	10/13
20BF001SUS	i7-4600M	vPro	HD 4600	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	No	10/13
20BF001UUS	i7-4600M	vPro	HD 4600	4GBx1	15.6" FHD	128G SSD	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	6	65W	Win8 P64	3-onsite	No	10/13
20BF001VUS	i7-4600M	vPro	HD 4600	4GBx1	15.6" FHD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	6	65W	Win8 P64	3-onsite	No	11/13
20BF001YUS	i7-4600M	vPro	HD 4600	4GBx1	15.6" FHD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	6	65W	Win8 P64	3-onsite	No	11/13
20BF0020US	i7-4600M	vPro	HD 4600	8GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	6	65W	Win8 P64	3-onsite	No	10/13
20BF0023US	i7-4600M	vPro	HD 4600	4GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	No	10/13
20BF002BUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" HD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	Yes	10/13
20BF002EUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	Yes	10/13
20BF002TUS	i7-4600M	vPro	HD 4600	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	Yes	10/13
20BF002WUS	i5-4300M	vPro	HD 4600	4GBx1	15.6" HD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	Yes	10/13
20BF002YUS	i7-4600M	vPro	HD 4600	4GBx1	15.6" HD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	Yes	10/13
20BF0036US	i7-4600M	vPro	HD 4600	4GBx1	15.5" 3K IPS	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	6	65W	Win8 P64	3-onsite	Yes	10/13

• For detailed platform specifications, please see [ThinkPad T540p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor					<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr> <td>i3-4000M</td> <td rowspan="4">2</td> <td>2.4 GHz</td> <td>-</td> <td>3MB</td> <td rowspan="8">DDR3L-1600</td> </tr> <tr> <td>i5-4200M</td> <td>2.5 GHz</td> <td>3.1 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4300M</td> <td>2.6 GHz</td> <td>3.3 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4330M</td> <td>2.8 GHz</td> <td>3.5 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-4600M</td> <td rowspan="4">4</td> <td>2.9 GHz</td> <td>3.6 GHz</td> <td>4MB</td> </tr> <tr> <td>i7-4700MQ</td> <td>2.4 GHz</td> <td>3.4 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-4800MQ</td> <td>2.7 GHz</td> <td>3.7 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-4900MQ</td> <td>2.8 GHz</td> <td>3.8 GHz</td> <td>8MB</td> </tr> </tbody> </table>		Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	i5-4200M	2.5 GHz	3.1 GHz	3MB	i5-4300M	2.6 GHz	3.3 GHz	3MB	i5-4330M	2.8 GHz	3.5 GHz	3MB	i7-4600M	4	2.9 GHz	3.6 GHz	4MB	i7-4700MQ	2.4 GHz	3.4 GHz	6MB	i7-4800MQ	2.7 GHz	3.7 GHz	6MB	i7-4900MQ	2.8 GHz	3.8 GHz	8MB	Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																																													
i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600																																													
i5-4200M		2.5 GHz	3.1 GHz	3MB																																														
i5-4300M		2.6 GHz	3.3 GHz	3MB																																														
i5-4330M		2.8 GHz	3.5 GHz	3MB																																														
i7-4600M	4	2.9 GHz	3.6 GHz	4MB																																														
i7-4700MQ		2.4 GHz	3.4 GHz	6MB																																														
i7-4800MQ		2.7 GHz	3.7 GHz	6MB																																														
i7-4900MQ		2.8 GHz	3.8 GHz	8MB																																														
							Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch																																										
							ThinkLight™	None																																										
							Chipset	Mobile Intel QM87 Express Chipset																																										
							ExpressCard	One slot (ExpressCard/34)																																										
							Smart card reader	Optional: Smart card reader																																										
							Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																										
							Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector																																										
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets					WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card																																										
Optical	DVD burner, 9.5mm Ultrabay slim, removable					WWAN (optional)		Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS																																										
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high					SIM card (optional)		AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider																																										
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card					Bluetooth™		Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																										
M.2 SSD						Ethernet		Intel Ethernet Connection I217-LM (Clarkville)																																										
Widescreen display	Some: 15.6" (396mm) HD (1366x768), 220 nits, 400:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080), 300 nits, 500:1 contrast ratio Some: 15.5" (394mm) 3K (2880x1620), 350 nits, 1000:1 contrast ratio, IPS					NFC		Optional: Near Field Communication																																										
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					Security		Power-on password, hard disk password, supervisor password, security keyhole																																										
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M, 1GB memory (Optimus)					Security chip		Trusted Platform Module, TCG 1.2-compliant																																										
Dimensions ³	HD (WxDxH): 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm FHD / 3K: 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm					vPro (optional)		Intel vPro Technology																																										
Weight ²	Models		6-cell		9-cell		Fingerprint reader		Optional: Fingerprint reader on the palm rest, swipe sensor																																									
	Integrated		5.31 lb / 2.41kg		5.65 lb / 2.56kg		Preload		Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit																																									
	Optimus		5.43 lb / 2.46kg		5.80 lb / 2.63kg				Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit																																									
Case material	Glass-Fiber Reinforced Plastic					Limited warranty ¹²		1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite																																										
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																																																	
Max battery life ¹⁰	Models		6-cell		9-cell																																													
	Integrated		7 hr		12.5 hr																																													
	Optimus		6.2 hr		11 hr																																													
AC adapter	65-watt, 90-watt, or 135-watt AC adapter																																																	

See footnotes for more detailed information

(KM1-7) © Lenovo

ThinkPad T540p 20BF (Optimus) - Onsite (Windows 8)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Express-Card	Camera	Backlit keyboard	Fingerprint reader	NFC	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BF0016US	i7-4600M	vPro	GT 730M	4GBx1	15.6" FHD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 P64	3-onsite	No	11/13
20BF0019US	i7-4600M	vPro	GT 730M	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 P64	3-onsite	No	10/13
20BF001BUS	i7-4600M	vPro	GT 730M	4GBx1	15.6" FHD	128G SSD	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 P64	3-onsite	No	10/13
20BF001CUS	i7-4600M	vPro	GT 730M	4GBx1	15.5" 3K IPS	128G SSD	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 P64	3-onsite	No	10/13
20BF001FUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" FHD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-onsite	No	10/13
20BF001HUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" FHD	128G SSD	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-onsite	No	10/13
20BF001JUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" FHD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-onsite	No	11/13
20BF0025US	i7-4600M	vPro	GT 730M	4GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	Backlit	Finger	None	9	90W	Win8 P64	3-onsite	No	10/13
20BF002CUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" HD	500G 7200	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-onsite	Yes	10/13
20BF002JUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" HD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-onsite	Yes	10/13
20BF002NUS	i7-4600M	vPro	GT 730M	4GBx1	15.5" 3K IPS	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-onsite	Yes	10/13
20BF002RUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-onsite	Yes	10/13
20BF002SUS	i7-4600M	vPro	GT 730M	8GBx1	15.5" 3K IPS	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-onsite	Yes	10/13
20BF002UUS	i5-4300M	vPro	GT 730M	4GBx1	15.6" HD	180G SSD Opal	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-onsite	Yes	10/13
20BF0031US	i7-4600M	vPro	GT 730M	8GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-onsite	Yes	10/13
20BF0032US	i5-4300M	vPro	GT 730M	4GBx1	15.5" 3K IPS	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-onsite	Yes	10/13
20BF0035US	i7-4600M	vPro	GT 730M	4GBx1	15.6" FHD	256G SSD eDrive	7260 ac+BT	Upg	None	None	Exp/34	720p	None	Finger	None	9	90W	Win8 P64	3-onsite	Yes	10/13

• For detailed platform specifications, please see [ThinkPad T540p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor	Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																																								
	<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr> <td>i3-4000M</td> <td rowspan="4">2</td> <td>2.4 GHz</td> <td>-</td> <td>3MB</td> <td rowspan="8">DDR3L-1600</td> </tr> <tr> <td>i5-4200M</td> <td>2.5 GHz</td> <td>3.1 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4300M</td> <td>2.6 GHz</td> <td>3.3 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4330M</td> <td>2.8 GHz</td> <td>3.5 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-4600M</td> <td rowspan="4">4</td> <td>2.9 GHz</td> <td>3.6 GHz</td> <td>4MB</td> </tr> <tr> <td>i7-4700MQ</td> <td>2.4 GHz</td> <td>3.4 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-4800MQ</td> <td>2.7 GHz</td> <td>3.7 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-4900MQ</td> <td>2.8 GHz</td> <td>3.8 GHz</td> <td>8MB</td> </tr> </tbody> </table>	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	i5-4200M	2.5 GHz	3.1 GHz	3MB	i5-4300M	2.6 GHz	3.3 GHz	3MB	i5-4330M	2.8 GHz	3.5 GHz	3MB	i7-4600M	4	2.9 GHz	3.6 GHz	4MB	i7-4700MQ	2.4 GHz	3.4 GHz	6MB	i7-4800MQ	2.7 GHz	3.7 GHz	6MB	i7-4900MQ	2.8 GHz	3.8 GHz	8MB	Keyboard UltraNav™ TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch ThinkLight™ None
Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																																						
i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600																																						
i5-4200M		2.5 GHz	3.1 GHz	3MB																																							
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i7-4600M	4	2.9 GHz	3.6 GHz	4MB																																							
i7-4700MQ		2.4 GHz	3.4 GHz	6MB																																							
i7-4800MQ		2.7 GHz	3.7 GHz	6MB																																							
i7-4900MQ		2.8 GHz	3.8 GHz	8MB																																							
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Chipset	Mobile Intel QM87 Express Chipset																																								
Optical	DVD burner, 9.5mm Ultrabay slim, removable	ExpressCard	One slot (ExpressCard/34)																																								
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high	Smart card reader	Optional: Smart card reader																																								
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																								
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card	Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector																																								
Widescreen display	Some: 15.6" (396mm) HD (1366x768) , 220 nits, 400:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio Some: 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS	WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card																																								
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS																																								
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)	SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider																																								
Dimensions ³	HD (WxDxH): 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm FHD / 3K: 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm	Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																								
Weight ²	<table border="1"> <thead> <tr> <th>Models</th> <th>6-cell</th> <th>9-cell</th> </tr> </thead> <tbody> <tr> <td>Integrated</td> <td>5.31 lb / 2.41kg</td> <td>5.65 lb / 2.56kg</td> </tr> <tr> <td>Optimus</td> <td>5.43 lb / 2.46kg</td> <td>5.80 lb / 2.63kg</td> </tr> </tbody> </table>	Models	6-cell	9-cell	Integrated	5.31 lb / 2.41kg	5.65 lb / 2.56kg	Optimus	5.43 lb / 2.46kg	5.80 lb / 2.63kg	Ethernet	Intel Ethernet Connection I217-LM (Clarkville)																															
Models	6-cell	9-cell																																									
Integrated	5.31 lb / 2.41kg	5.65 lb / 2.56kg																																									
Optimus	5.43 lb / 2.46kg	5.80 lb / 2.63kg																																									
Case material	Glass-Fiber Reinforced Plastic	NFC	Optional: Near Field Communication																																								
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication	Security	Power-on password, hard disk password, supervisor password, security keyhole																																								
Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Models</th> <th>6-cell</th> <th>9-cell</th> </tr> </thead> <tbody> <tr> <td>Integrated</td> <td>7 hr</td> <td>12.5 hr</td> </tr> <tr> <td>Optimus</td> <td>6.2 hr</td> <td>11 hr</td> </tr> </tbody> </table>	Models	6-cell	9-cell	Integrated	7 hr	12.5 hr	Optimus	6.2 hr	11 hr	Security chip	Trusted Platform Module, TCG 1.2-compliant																															
Models	6-cell	9-cell																																									
Integrated	7 hr	12.5 hr																																									
Optimus	6.2 hr	11 hr																																									
AC adapter	65-watt, 90-watt, or 135-watt AC adapter	vPro (optional)	Intel vPro Technology																																								
		Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor																																								
		Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit																																								
		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite																																								

See footnotes for more detailed information

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Lenovo® ThinkPad T550



Lenovo ThinkPad T550



Lenovo ThinkPad T550



Lenovo ThinkPad T550



Lenovo ThinkPad T550

ThinkPad T550 Platform Specifications

Product Specifications Reference (PSREF)

Processor	5th Generation Intel® Core™ i5 / i7 Processor								Smart card reader <i>Optional</i> : Smart card reader																							
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																						
	i5-5200U	2	4	2.2 GHz	2.7 GHz	3MB	DDR3L-1600	Intel HD Graphics 5500	Ports	Three USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector																						
	i5-5300U			2.3 GHz	2.9 GHz	3MB			Camera (<i>optional</i>)	HD720p resolution, low light sensitive, fixed focus																						
	i7-5600U			2.6 GHz	3.2 GHz	4MB			Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																						
Graphics	Intel HD Graphics 5500 in processor only, or Intel HD Graphics 5500 in processor and NVIDIA GeForce® 940M, 1GB memory; supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays; Max resolution: 3840x2160@60Hz (DP via mDP cable); 2560x1600@60Hz (VGA)								Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight																						
									UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch																						
									Security	Power-on password, hard disk password, supervisor password, security keyhole																						
									Security chip	Trusted Platform Module, TCG 1.2-compliant																						
									ThinkEngine	Delivers improved thermal and power efficiency, up to 30 day standby, faster resume time, enhanced security, as well as anti-tampering measures																						
Chipset	Intel SoC (System on Chip) platform								vPro (<i>optional</i>)	Intel vPro Technology																						
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets								Fingerprint reader	<i>Optional</i> : Fingerprint reader on the palm rest, swipe sensor																						
Display	<p><i>Some</i>: 15.6" (396mm) HD (1366x768), anti-glare, LED backlight, 200 or 220 nits, 16:9 aspect ratio, 350:1 or 400:1 contrast ratio</p> <p><i>Some</i>: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 400:1 or 500:1 contrast ratio</p> <p><i>Some</i>: 15.5" (394mm) 3K (2880x1620), anti-glare, LED backlight, 350 nits, 16:9 aspect ratio, 1000:1 contrast ratio, IPS</p>								Internal battery	<i>Optional</i> : Integrated Li-Polymer 3-cell (44Wh)																						
									External battery	Li-lon or Li-Polymer 3-cell (23Wh) or Li-lon 6-cell (48Wh or 72Wh)																						
									Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Models</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell 48Wh</th> <th>3-cell + 6-cell 72Wh</th> </tr> </thead> <tbody> <tr> <td>Battery life</td> <td>14.8 hr</td> <td>20 hr</td> <td>25.2 hr</td> </tr> </tbody> </table>			Models	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh	Battery life	14.8 hr	20 hr	25.2 hr												
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Battery life	14.8 hr	20 hr	25.2 hr																													
Multi-touch (<i>opt</i>)	Capacitive-type multi-touch, supports 10-finger gesture, 315 nits								AC adapter	45W AC adapter, 65W Slim AC adapter, or 65W AC adapter																						
Storage	<p><i>Some</i>: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable</p> <p><i>Some</i>: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™</p> <p><i>Some</i>: SSHD with 8GB NAND flash memory</p>								Preload	<p>Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit</p> <ul style="list-style-type: none"> • Lenovo Solution Center • Lenovo SHAREit • Lenovo Companion • ThinkVantage Product Recovery • Rescue and Recovery™ • ThinkVantage System Update • PC Device Stage • Adobe® Reader® • Evernote® • Skype™ • Maxthon Cloud Browser • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) <p><i>Some</i>: Windows 8.1 64-bit</p> <ul style="list-style-type: none"> • Lenovo Solution Center • Lenovo SHAREit • Lenovo Companion • ThinkVantage System Update • PC Device Stage • Weather Channel • Evernote • Maxthon Cloud Browser • Bing Translator • Norton Studio • Microsoft Office preloaded; purchase a product key to activate • Norton Internet Security (30 days of virus definitions) 																						
M.2 SSD (<i>opt</i>)	Single-sided M.2 SSD, via M.2 card slot								Limited warranty ¹² <i>One of the following, configurable by model:</i>																							
Optical	None								<ul style="list-style-type: none"> • 1-year depot repair service • 3-year/1-yr battery depot repair service • 3-year/1-yr battery limited onsite service²⁴ • 3-year/1-yr battery limited onsite service, IWS (International Warranty Service¹⁷) 																							
Ethernet	<p><i>Non-vPro model</i>: Intel Ethernet Connection I218-V (Clarkville)</p> <p><i>vPro model</i>: Intel Ethernet Connection I218-LM (Clarkville)</p>								Environment																							
Bluetooth™	Intel 4G wireless, integrated in Wi-Fi + Bluetooth combo adapter								EPEAT™ Gold (US) or EPEAT Silver (WE); ENERGY STAR® 6.1; GREENGUARD®; RoHS-compliant																							
WLAN ⁴	<p><i>One of the following, configurable by model:</i></p> <ul style="list-style-type: none"> • 11b/g/n, ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card • 11b/g/n, Intel Wireless-N 7265, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card • 11a/b/g/n, Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT adapter, M.2 card • 11ac, Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT adapter, M.2 card 																															
WWAN (<i>optional</i>)	<p><i>One of the following, configurable by model:</i></p> <ul style="list-style-type: none"> • Wireless WAN upgradable • Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card • Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card 																															
SIM card (<i>opt</i>)	AT&T® or Verizon® LTE (4G), contract required with service provider																															
Dimensions ³	<p>15.6" (WxDxH): 14.98" x 10.17" x 0.88"; 380.6mm x 258.2mm x 22.45mm</p> <p>15.6" Touch (WxDxH): 14.98" x 10.17" x 0.92"; 380.6mm x 258.2mm x 23.30mm</p>																															
Weight ²	<table border="1"> <thead> <tr> <th>Models</th> <th>No + 6-cell</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell</th> </tr> </thead> <tbody> <tr> <td>Integrated Non-touch</td> <td>4.93 lb / 2.23 kg</td> <td>4.70 lb / 2.13 kg</td> <td>5.04 lb / 2.29 kg</td> </tr> <tr> <td>Integrated Multi-touch</td> <td>-</td> <td>5.01 lb / 2.27 kg</td> <td>5.35 lb / 2.43 kg</td> </tr> <tr> <td>Discrete Non-touch</td> <td>5.01 lb / 2.27 kg</td> <td>4.78 lb / 2.17 kg</td> <td>5.12 lb / 2.32 kg</td> </tr> <tr> <td>Discrete Multi-touch</td> <td>-</td> <td>5.09 lb / 2.31 kg</td> <td>5.43 lb / 2.46 kg</td> </tr> </tbody> </table>								Models	No + 6-cell	3-cell + 3-cell	3-cell + 6-cell	Integrated Non-touch	4.93 lb / 2.23 kg	4.70 lb / 2.13 kg	5.04 lb / 2.29 kg	Integrated Multi-touch	-	5.01 lb / 2.27 kg	5.35 lb / 2.43 kg	Discrete Non-touch	5.01 lb / 2.27 kg	4.78 lb / 2.17 kg	5.12 lb / 2.32 kg	Discrete Multi-touch	-	5.09 lb / 2.31 kg	5.43 lb / 2.46 kg				
Models	No + 6-cell	3-cell + 3-cell	3-cell + 6-cell																													
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Discrete Multi-touch	-	5.09 lb / 2.31 kg	5.43 lb / 2.46 kg																													
Case material	<p><i>Display cover</i>: Glass-Fiber Reinforced Plastic (non-touch model) or Carbon-Fiber Reinforced Plastic (multi-touch model);</p> <p><i>Bottom</i>: Glass-Fiber Reinforced Plastic</p>																															

ThinkPad T550 20CK (TopSeller)

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit keyboard	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20CK000GUS	i5-5200U	No	HD 5500	4GBx1	15.6" HD	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	None	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CK000BUS	i5-5300U	vPro	HD 5500	8GBx1	15.6" FHD	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CK000CUS	i5-5300U	vPro	HD 5500	4GBx1	15.6" HD	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CK000FUS	i5-5300U	vPro	HD 5500	4GBx1	15.6" HD	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CK000HUS	i5-5300U	vPro	HD 5500	4GBx1	15.6" HD	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CK000KUS	i5-5300U	vPro	HD 5500	8GBx1	15.6" FHD	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CK000LUS	i5-5300U	vPro	HD 5500	8GBx1	15.6" HD	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CK000MUS	i5-5300U	vPro	HD 5500	4GBx1	15.6" FHD	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CK000DUS	i7-5600U	vPro	HD 5500	8GBx1	15.6" FHD	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CK000EUS	i7-5600U	vPro	HD 5500	4GBx1	15.6" HD	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CK000JUS	i7-5600U	vPro	HD 5500	8GBx1	15.6" FHD	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad T550 Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i5 / i7 Processor					Dimensions ³	15.6" (WxDxH): 14.98" x 10.17" x 0.88"; 380.6mm x 258.2mm x 22.45mm 15.6" Touch (WxDxH): 14.98" x 10.17" x 0.92"; 380.6mm x 258.2mm x 23.30mm				
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Weight ²	Models	No + 6-cell	3-cell + 3-cell	3-cell + 6-cell
	i5-5200U	2	2.2 GHz	2.7 GHz	3MB	DDR3L-1600		Integrated Non-touch	4.93 lb / 2.23 kg	4.70 lb / 2.13 kg	5.04 lb / 2.29 kg
	i5-5300U		2.3 GHz	2.9 GHz	3MB			Integrated Multi-touch	-	5.01 lb / 2.27 kg	5.35 lb / 2.43 kg
	i7-5600U		2.6 GHz	3.2 GHz	4MB			Discrete Non-touch	5.01 lb / 2.27 kg	4.78 lb / 2.17 kg	5.12 lb / 2.32 kg
							Discrete Multi-touch	-	5.09 lb / 2.31 kg	5.43 lb / 2.46 kg	
Graphics	Intel HD Graphics 5500 in processor only, or Intel HD Graphics 5500 in processor and NVIDIA GeForce® 940M, 1GB memory					Case material	Display cover: Glass-Fiber Reinforced Plastic (non-touch model) or Carbon-Fiber Reinforced Plastic (multi-touch model); Bottom: Glass-Fiber Reinforced Plastic				
Chipset Memory	Intel SoC (System on Chip) platform 16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets					Smart card reader	Optional: Smart card reader				
Display	Some: 15.6" (396mm) HD (1366x768), 200 / 220 nits, 350:1 / 400:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080), 300 nits, 400:1 or 500:1 contrast ratio Some: 15.5" (394mm) 3K (2880x1620), 350 nits, 1000:1 contrast ratio, IPS					Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)				
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 315 nits					Ports	Three USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector				
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, APS Some: SSHD with 8GB NAND flash memory					Camera (optional)	HD720p resolution, low light sensitive, fixed focus				
M.2 SSD (opt)	Single-sided M.2 SSD, via M.2 card slot					Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack				
Optical	None					Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight				
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)					UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch				
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					Security	Power-on password, hard disk password, supervisor password, security keyhole				
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card					Security chip	Trusted Platform Module, TCG 1.2-compliant				
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card					vPro (optional)	Intel vPro Technology				
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider					Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor				
						Internal battery	Optional: Integrated Li-Polymer 3-cell (44Wh)				
						External battery	Li-Ion or Li-Polymer 3-cell (23Wh) or Li-Ion 6-cell (48Wh or 72Wh)				
						Max battery life ¹⁰	Models	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh	
							Battery life	14.8 hr	20 hr	25.2 hr	
						AC adapter	45W AC adapter, 65W Slim AC adapter, or 65W AC adapter				
						Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit				
							Win8.1 64:		Windows 8.1 64-bit		
							Win8.1 P64:		Windows 8.1 Pro 64-bit		
						Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS				

ThinkPad T550 20CJ

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit keyboard	Fingerprint reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20CJ000AUS	i5-5300U	vPro	HD 5500	8GBx1	15.6" FHD	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7 3-depot	No	01/15
20CJ000BUS	i5-5300U	vPro	HD 5500	4GBx1	15.6" HD	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	None	Finger	No+6(48wh)	45W	Win8.1 DG	Win7 3-depot	No	01/15
20CJ000CUS	i5-5300U	vPro	HD 5500	8GBx1	15.6" FHD	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7 3-depot	No	01/15
20CJ000GUS	i5-5300U	vPro	HD 5500	4GBx1	15.6" FHD	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7 3-depot	No	01/15
20CJ000LUS	i5-5300U	vPro	HD 5500	4GBx1	15.6" HD	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7 3-depot	No	01/15
20CJ000MUS	i5-5300U	vPro	HD 5500	8GBx1	15.6" HD	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7 3-depot	No	01/15
20CJ0005US	i7-5600U	vPro	HD 5500	8GBx1	15.6" FHD	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7 3-depot	No	01/15
20CJ000EUS	i7-5600U	vPro	HD 5500	8GBx1	15.6" HD	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7 3-depot	No	01/15
20CJ000NUS	i7-5600U	vPro	HD 5500	8GBx1	15.6" HD	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7 3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad T550 Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i5 / i7 Processor	Dimensions ³	15.6" (WxDxH): 14.98" x 10.17" x 0.88"; 380.6mm x 258.2mm x 22.45mm 15.6" Touch (WxDxH): 14.98" x 10.17" x 0.92"; 380.6mm x 258.2mm x 23.30mm																																								
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Graphics	Intel HD Graphics 5500 in processor only, or Intel HD Graphics 5500 in processor and NVIDIA GeForce® 940M, 1GB memory	Case material	Display cover: Glass-Fiber Reinforced Plastic (non-touch model) or Carbon-Fiber Reinforced Plastic (multi-touch model); Bottom: Glass-Fiber Reinforced Plastic																																								
Chipset Memory	Intel SoC (System on Chip) platform 16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Smart card reader	Optional: Smart card reader																																								
Display	Some: 15.6" (396mm) HD (1366x768), 200 / 220 nits, 350:1 / 400:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080), 300 nits, 400:1 or 500:1 contrast ratio Some: 15.5" (394mm) 3K (2880x1620), 350 nits, 1000:1 contrast ratio, IPS	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																								
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 315 nits	Ports	Three USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector																																								
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, APS Some: SSHD with 8GB NAND flash memory	Camera (optional)	HD720p resolution, low light sensitive, fixed focus																																								
M.2 SSD (opt)	Single-sided M.2 SSD, via M.2 card slot	Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																																								
Optical	None	Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight																																								
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch																																								
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Security	Power-on password, hard disk password, supervisor password, security keyhole																																								
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card	Security chip	Trusted Platform Module, TCG 1.2-compliant																																								
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	vPro (optional)	Intel vPro Technology																																								
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor																																								
		Internal battery	Optional: Integrated Li-Polymer 3-cell (44Wh)																																								
		External battery	Li-Ion or Li-Polymer 3-cell (23Wh) or Li-Ion 6-cell (48Wh or 72Wh)																																								
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		AC adapter	45W AC adapter, 65W Slim AC adapter, or 65W AC adapter																																								
		Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit																																								
		Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																								

ThinkPad T550 20CJ (Onsite)

Model	Processor vPro	Graphics	Memory	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Cam-era	Backlit keyboard	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Glob-al	Ann date (m/y)
20CJ0006US	i5-5300U vPro	HD 5500	4GBx1	15.6" HD	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	None	Finger	No+6(48wh)	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20CJ0008US	i5-5300U vPro	HD 5500	8GBx1	15.6" HD	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20CJ000FUS	i5-5300U vPro	HD 5500	4GBx1	15.6" HD	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20CJ000HUS	i5-5300U vPro	HD 5500	8GBx1	15.6" FHD	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20CJ000JUS	i5-5300U vPro	HD 5500	8GBx1	15.6" FHD	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20CJ000KUS	i5-5300U vPro	HD 5500	4GBx1	15.6" FHD	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20CJ0007US	i7-5600U vPro	HD 5500	8GBx1	15.6" FHD	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20CJ0009US	i7-5600U vPro	HD 5500	8GBx1	15.6" HD	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20CJ000DUS	i7-5600U vPro	HD 5500	8GBx1	15.6" HD	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15

• For detailed platform specifications, please see [ThinkPad T550 Platform Specifications sheet](#)

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WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	vPro (optional)	Intel vPro Technology																																								
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor																																								
		Internal battery	Optional: Integrated Li-Polymer 3-cell (44Wh)																																								
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		Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																								



Lenovo® ThinkPad W540



Lenovo ThinkPad W540



Lenovo ThinkPad W540



Lenovo ThinkPad W540



Lenovo ThinkPad W540

ThinkPad W540 Platform Specifications

Product Specifications Reference (PSREF)

Positioning	<i>Mobile workstation; two spindles</i>								Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack	
Processor	4th Generation Intel® Core™ i5 / i7 / i7 Extreme Processor								WLAN ⁴	One of the following, configurable by model:	
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics		<ul style="list-style-type: none"> ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card Intel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card 	
	i5-4200M	2	4	2.5 GHz	3.1 GHz	3MB	DDR3L-1600	Intel HD Graphics 4600		<i>WWAN (optional)</i> One of the following, configurable by model (mutually exclusive with M.2 SSD): <ul style="list-style-type: none"> Wireless WAN upgradable Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 card (US models) Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card (WE models) Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card (WE models) 	
	i5-4210M			2.6 GHz	3.2 GHz	3MB					
	i5-4330M			2.8 GHz	3.5 GHz	3MB					
	i7-4600M			2.9 GHz	3.6 GHz	4MB					
	i7-4700MQ	4	8	2.4 GHz	3.4 GHz	6MB					
	i7-4710MQ			2.5 GHz	3.5 GHz	6MB					
	i7-4800MQ			2.7 GHz	3.7 GHz	6MB					
	i7-4810MQ			2.8 GHz	3.8 GHz	6MB					
i7-4900MQ	2.8 GHz			3.8 GHz	8MB						
i7-4910MQ	2.9 GHz			3.9 GHz	8MB						
i7-4930MX	3 GHz	3.9 GHz	8MB								
Memory	<i>dual-core model:</i> 16GB max ⁷ , two 204-pin SO-DIMM sockets <i>quad-core model:</i> 32GB max, four 204-pin SO-DIMM sockets, 4+4, 8+8, 4+4+4+4, or 8+8+8+8 combinations support <i>All:</i> PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable								SIM card (optional)	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> AT&T® or Verizon® LTE (4G), contract required with service provider (US models) Lenovo SIM, out-of-box service, pay-as-you-go via credit card, no contract required (WE models) User selectable, contract required with service provider 	
Optical (optional)	DVD burner, 9.5mm Ultrabay slim, removable								Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high, bottom access								Ethernet	Intel Ethernet Connection I217-LM (Clarkville)	
Storage	<i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high								NFC	<i>Optional:</i> Near Field Communication	
	<i>Some:</i> Hard Disk Drive (HDD) / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™								Security chip	Power-on password, hard disk password, supervisor password, security keyhole	
M.2 SSD	<i>All:</i> removable, upgradable, supports the second disk, Shock Mounted								vPro (optional)	Trusted Platform Module, TCG 1.2-compliant	
	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card								Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor	
Widescreen display	<i>Some:</i> 15.6" (396mm) FHD (1920x1080) , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio								Limited warranty ¹² One of the following, configurable by model:		
Multi-touch	<i>Some:</i> 15.5" (394mm) 3K (2880x1620) , anti-glare, LED backlight, 350 nits, 16:9 aspect ratio, 1000:1 contrast ratio, IPS								<ul style="list-style-type: none"> 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service²⁴ 3-year/1-yr battery limited onsite service, IWS (International Warranty Service¹⁷) 		
	Color calibration	<i>None</i>								Preload	Windows® 7 Professional 64
Camera (optional)	<i>Optional:</i> Pantone® color calibrator by X-Rite® color calibration sensor in palm rest, LED indicator								preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit		
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4600 in processor, and NVIDIA Quadro® K1100M or K2100M , PCI Express® x16, 2GB memory, supports external analog monitor via VGA and digital monitor via Mini DisplayPort / Thunderbolt™; supports three independent displays;								<ul style="list-style-type: none"> Lenovo Solution Center ThinkVantage Product Recovery Rescue and Recovery™ ThinkVantage System Update Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype™ Microsoft® Office preloaded; purchase a product key to activate Norton™ Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 		
	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch								<ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support Lenovo Companion ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync - Metro (Windows 8 model) Lenovo Cloud Storage by SugarSync (Windows 8 model) PC Device Stage AccuWeather Amazon Kindle Nitro Pro Evernote Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 	
ThinkLight™	<i>None</i>								<i>Some:</i> Windows 8 / 8.1 64-bit <i>Some:</i> Windows 8 / 8.1 Pro 64-bit		
Dimensions ³	15.6W" (WxDxH): 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm								<ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 		
Weight ²	6-cell: starting at 5.57 lb (2.53kg); 9-cell: starting at 5.95 lb (2.70kg)								<ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 		
Case material	Glass-Fiber Reinforced Plastic								<ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 		
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication								<ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 		
Max battery life ¹⁰	6-cell: up to 6.2 hr; 9-cell: up to 11.1 hr								<ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 		
AC adapter	<i>dual-core:</i> 135-watt AC adapter; <i>quad-core:</i> 170-watt AC adapter								<ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 		
Chipset	Mobile Intel QM87 Express Chipset								<ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 		
ExpressCard	One slot (ExpressCard/34)								<ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 		
Smart card reader	<i>Optional:</i> Smart card reader								<ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 		
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card								<ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 		
Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort / Thunderbolt, Ethernet (RJ-45), Dock connector								<ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) 		
Environment	EPEAT™ Gold; ENERGY STAR® 6.0; RoHS-compliant								<i>For ISV certifications, please visit www.lenovo.com/support/ISV</i>		

ThinkPad W540 20BG (Optimus) - TopSeller

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	RAID	Optical	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	NFC	Color cali-brator	Bat-tery adapter (watt)	Power	Preload	Base warranty (year)	Glob-al	Ann date (m/y)
20BG0010US	i7-4700MQ	No	K1100M	4GBx2	15.6" FHD	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 DG Win7	3-depot	No	11/13
20BG0011US	i7-4700MQ	No	K1100M	4GBx2	15.6" FHD	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 DG Win7	3-depot	No	11/13
20BG0012US	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 DG Win7	3-depot	No	11/13
20BG0013US	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	180G SSD Opal	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 DG Win7	3-depot	No	11/13
20BG0014US	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 DG Win7	3-depot	No	11/13
20BG001YUS	i7-4700MQ	No	K1100M	8GBx1	15.6" FHD	240G SSD Opal	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 DG Win7	3-depot	No	11/13
20BG0020US	i7-4800MQ	vPro	K1100M	8GBx1	15.6" FHD	240G SSD Opal	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 DG Win7	3-depot	No	11/13
20BG0022US	i7-4800MQ	vPro	K1100M	8GBx1	15.5" 3K IPS	240G SSD Opal	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 DG Win7	3-depot	No	11/13
20BG004HUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	512G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 DG Win7	3-depot	No	07/14
20BG0015US	i7-4800MQ	vPro	K2100M	4GBx2	15.6" FHD	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 DG Win7	3-depot	No	11/13
20BG0016US	i7-4800MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	X-Rite	9	170W	Win8 DG Win7	3-depot	No	11/13
20BG0017US	i7-4800MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	180G SSD Opal	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	X-Rite	9	170W	Win8 DG Win7	3-depot	No	11/13
20BG0021US	i7-4800MQ	vPro	K2100M	8GBx1	15.6" FHD	240G SSD Opal	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 DG Win7	3-depot	No	11/13
20BG004GUS	i7-4800MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	512G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	X-Rite	9	170W	Win8 DG Win7	3-depot	No	07/14

• For detailed platform specifications, please see [ThinkPad W540 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 / i7 Extreme Processor	Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																																				
	<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr> <td>i5-4200M</td> <td rowspan="3">2</td> <td>2.5 GHz</td> <td>3.1 GHz</td> <td>3MB</td> <td rowspan="6">DDR3L-1600</td> </tr> <tr> <td>i5-4330M</td> <td>2.8 GHz</td> <td>3.5 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-4600M</td> <td>2.9 GHz</td> <td>3.6 GHz</td> <td>4MB</td> </tr> <tr> <td>i7-4700MQ</td> <td rowspan="4">4</td> <td>2.4 GHz</td> <td>3.4 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-4800MQ</td> <td>2.7 GHz</td> <td>3.7 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-4900MQ</td> <td>2.8 GHz</td> <td>3.8 GHz</td> <td>8MB</td> </tr> <tr> <td>i7-4930MX</td> <td>3 GHz</td> <td>3.9 GHz</td> <td>8MB</td> </tr> </tbody> </table>	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	i5-4200M	2	2.5 GHz	3.1 GHz	3MB	DDR3L-1600	i5-4330M	2.8 GHz	3.5 GHz	3MB	i7-4600M	2.9 GHz	3.6 GHz	4MB	i7-4700MQ	4	2.4 GHz	3.4 GHz	6MB	i7-4800MQ	2.7 GHz	3.7 GHz	6MB	i7-4900MQ	2.8 GHz	3.8 GHz	8MB	i7-4930MX	3 GHz	3.9 GHz	8MB	Keyboard UltraNav™ TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch
Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																																		
i5-4200M	2	2.5 GHz	3.1 GHz	3MB	DDR3L-1600																																		
i5-4330M		2.8 GHz	3.5 GHz	3MB																																			
i7-4600M		2.9 GHz	3.6 GHz	4MB																																			
i7-4700MQ	4	2.4 GHz	3.4 GHz	6MB																																			
i7-4800MQ		2.7 GHz	3.7 GHz	6MB																																			
i7-4900MQ		2.8 GHz	3.8 GHz	8MB																																			
i7-4930MX		3 GHz	3.9 GHz	8MB																																			
		ThinkLight™	None																																				
		Chipset	Mobile Intel QM87 Express Chipset																																				
		ExpressCard	One slot (ExpressCard/34)																																				
		Smart card reader	Optional: Smart card reader																																				
		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card																																				
Memory	<i>dual-core model:</i> 16GB max ⁷ , two 204-pin SO-DIMM sockets <i>quad-core model:</i> 32GB max, four 204-pin SO-DIMM sockets, 4+4, 8+8, 4+4+4+4, or 8+8+8+8 combinations support <i>All:</i> PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable	Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort / Thunderbolt, Ethernet (RJ-45), Dock connector																																				
Optical	<i>Some:</i> DVD burner, 9.5mm Ultrabay slim, removable	WLAN ⁴	<i>11b/g/n+BT:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card <i>7260 b/g/n+BT:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 a/b/g/n+BT:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 ac+BT:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card																																				
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high	WWAN (optional)	<i>Upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS																																				
Storage	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card	SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>Select:</i> User selectable, contract required with service provider																																				
M.2 SSD		Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																				
Widescreen display	<i>Some:</i> 15.6" (396mm) FHD (1920x1080), 300 nits, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620), 350 nits, 1000:1 contrast ratio, IPS	Ethernet	Intel Ethernet Connection I217-LM (Clarkville)																																				
Multi-touch	None	NFC	Optional: Near Field Communication																																				
Color calibration	Optional: Pantone® color calibrator by X-Rite® color calibration sensor in palm rest	Security	Power-on password, hard disk password, supervisor password, security keyhole																																				
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	Security chip	Trusted Platform Module, TCG 1.2-compliant																																				
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4600 in processor, and NVIDIA Quadro® K1100M or K2100M, PCI Express® x16, 2GB memory	vPro (optional)	Intel vPro Technology																																				
Dimensions ³	15.6W" (WxDxH): 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm	Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor																																				
Weight ²	6-cell: starting at 5.57 lb (2.53kg); 9-cell: starting at 5.95 lb (2.70kg)	Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit																																				
Case material	Glass-Fiber Reinforced Plastic	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite																																				
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																																						
Max battery life ¹⁰	6-cell: up to 6.2 hr; 9-cell: up to 11.1 hr																																						
AC adapter	<i>dual-core:</i> 135-watt AC adapter; <i>quad-core:</i> 170-watt AC adapter																																						

See footnotes for more detailed information

(KM1W-1) © Lenovo

ThinkPad W540 20BH (Optimus) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	RAID	Optical	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	NFC	Color cali-brator	Bat-tery adapter	Power (watt)	Preload	Base warranty (year)	Glob-al	Ann date (m/y)
20BH001BUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	None	Finger	None	None	9	170W	Win8 P64	3-depot	No	11/13
20BH001DUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	128G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-depot	No	11/13
20BH001FUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	2x500G 7200	0	None	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-depot	No	11/13
20BH001GUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	2x500G 7200	1	None	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-depot	No	11/13
20BH001VUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	None	Finger	None	None	9	170W	Win8 P64	3-depot	No	11/13
20BH002CUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	180G SSD Opal	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-depot	Yes	11/13
20BH002DUS	i7-4800MQ	vPro	K1100M	4GBx2	15.5" 3K IPS	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-depot	Yes	11/13
20BH002FUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-depot	Yes	11/13
20BH002HUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-depot	Yes	11/13
20BH002RUS	i7-4800MQ	vPro	K1100M	8GBx1	15.6" FHD	240G SSD Opal	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-depot	Yes	11/13
20BH002TUS	i7-4800MQ	vPro	K1100M	8GBx1	15.5" 3K IPS	240G SSD Opal	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-depot	Yes	11/13
20BH004MUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	180G SSD Opal	No	DVD±RW	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-depot	Yes	04/14
20BH004NUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	500G 7200	No	DVD±RW	7260 a/b/g/n+BT	Upg	None	None	720p	None	Finger	None	None	9	170W	Win8 P64	3-depot	Yes	04/14
20BH004QUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	128G SSD	No	DVD±RW	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-depot	Yes	04/14
20BH001PUS	i7-4900MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	500G 5400	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	NFC	X-Rite	9	170W	Win8 P64	3-depot	No	01/14
20BH001TUS	i7-4900MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	512G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	NFC	X-Rite	9	170W	Win8 P64	3-depot	No	01/14
20BH001UUS	i7-4900MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	180G SSD Opal	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	NFC	X-Rite	9	170W	Win8 P64	3-depot	No	01/14
20BH001XUS	i7-4900MQ	vPro	K2100M	4GBx2	15.6" FHD	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	None	Finger	None	None	9	170W	Win8 P64	3-depot	No	11/13
20BH002KUS	i7-4800MQ	vPro	K2100M	4GBx2	15.6" FHD	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-depot	Yes	11/13
20BH002PUS	i7-4800MQ	vPro	K2100M	4GBx2	15.5" 3K IPS	512G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	X-Rite	9	170W	Win8 P64	3-depot	Yes	11/13

• For detailed platform specifications, please see [ThinkPad W540 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 / i7 Extreme Processor	Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																																				
	<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr> <td>i5-4200M</td> <td rowspan="3">2</td> <td>2.5 GHz</td> <td>3.1 GHz</td> <td>3MB</td> <td rowspan="6">DDR3L-1600</td> </tr> <tr> <td>i5-4330M</td> <td>2.8 GHz</td> <td>3.5 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-4600M</td> <td>2.9 GHz</td> <td>3.6 GHz</td> <td>4MB</td> </tr> <tr> <td>i7-4700MQ</td> <td rowspan="4">4</td> <td>2.4 GHz</td> <td>3.4 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-4800MQ</td> <td>2.7 GHz</td> <td>3.7 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-4900MQ</td> <td>2.8 GHz</td> <td>3.8 GHz</td> <td>8MB</td> </tr> <tr> <td>i7-4930MX</td> <td>3 GHz</td> <td>3.9 GHz</td> <td>8MB</td> </tr> </tbody> </table>	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	i5-4200M	2	2.5 GHz	3.1 GHz	3MB	DDR3L-1600	i5-4330M	2.8 GHz	3.5 GHz	3MB	i7-4600M	2.9 GHz	3.6 GHz	4MB	i7-4700MQ	4	2.4 GHz	3.4 GHz	6MB	i7-4800MQ	2.7 GHz	3.7 GHz	6MB	i7-4900MQ	2.8 GHz	3.8 GHz	8MB	i7-4930MX	3 GHz	3.9 GHz	8MB	Keyboard UltraNav™ TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch ThinkLight™ None
Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																																		
i5-4200M	2	2.5 GHz	3.1 GHz	3MB	DDR3L-1600																																		
i5-4330M		2.8 GHz	3.5 GHz	3MB																																			
i7-4600M		2.9 GHz	3.6 GHz	4MB																																			
i7-4700MQ	4	2.4 GHz	3.4 GHz	6MB																																			
i7-4800MQ		2.7 GHz	3.7 GHz	6MB																																			
i7-4900MQ		2.8 GHz	3.8 GHz	8MB																																			
i7-4930MX		3 GHz	3.9 GHz	8MB																																			
Memory	<i>dual-core model:</i> 16GB max ⁷ , two 204-pin SO-DIMM sockets <i>quad-core model:</i> 32GB max, four 204-pin SO-DIMM sockets, 4+4, 8+8, 4+4+4+4, or 8+8+8+8 combinations support All: PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable	Chipset Mobile Intel QM87 Express Chipset ExpressCard One slot (ExpressCard/34) Smart card reader Optional: Smart card reader Multicard reader 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Ports Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort / Thunderbolt, Ethernet (RJ-45), Dock connector																																					
Optical	<i>Some:</i> DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card	WLAN ⁴ 11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card																																					
M.2 SSD		WWAN (optional) Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS																																					
Widescreen display	<i>Some:</i> 15.6" (396mm) FHD (1920x1080), 300 nits, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620), 350 nits, 1000:1 contrast ratio, IPS	SIM card (optional) AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider																																					
Multi-touch	None	Bluetooth™ Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																					
Color calibration	Optional: Pantone® color calibrator by X-Rite® color calibration sensor in palm rest	Ethernet Intel Ethernet Connection I217-LM (Clarkville) Optional: Near Field Communication																																					
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	Security Power-on password, hard disk password, supervisor password, security keyhole Security chip Trusted Platform Module, TCG 1.2-compliant vPro (optional) Intel vPro Technology Fingerprint reader Optional: Fingerprint reader on the palm rest, swipe sensor																																					
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4600 in processor, and NVIDIA Quadro® K1100M or K2100M, PCI Express® x16, 2GB memory	Preload Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit																																					
Dimensions ³	15.6W" (WxDxH): 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm	Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite																																					
Weight ²	6-cell: starting at 5.57 lb (2.53kg); 9-cell: starting at 5.95 lb (2.70kg)																																						
Case material	Glass-Fiber Reinforced Plastic																																						
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																																						
Max battery life ¹⁰	6-cell: up to 6.2 hr; 9-cell: up to 11.1 hr																																						
AC adapter	dual-core: 135-watt AC adapter; quad-core: 170-watt AC adapter																																						

See footnotes for more detailed information

(KM1W-2) © Lenovo

ThinkPad W540 20BH (Optimus) - Windows 8 - II

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	RAID	Optical	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Camera	Backlit keyboard	Fingerprint reader	NFC	Color calibration	Battery adapter	Power (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BH004PUS	i7-4800MQ	vPro	K2100M	4GBx2	15.5" 3K IPS	512G SSD	No	DVD±RW	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	X-Rite	9	170W	Win8 P64	3-depot	Yes	04/14
20BH004RUS	i7-4900MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	512G SSD	No	DVD±RW	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	NFC	X-Rite	9	170W	Win8 P64	3-depot	Yes	04/14

• For detailed platform specifications, please see [ThinkPad W540 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 / i7 Extreme Processor						Audio support		HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																																																		
	<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr> <td>i5-4200M</td> <td rowspan="3">2</td> <td>2.5 GHz</td> <td>3.1 GHz</td> <td>3MB</td> <td rowspan="7">DDR3L-1600</td> </tr> <tr> <td>i5-4330M</td> <td>2.8 GHz</td> <td>3.5 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-4600M</td> <td>2.9 GHz</td> <td>3.6 GHz</td> <td>4MB</td> </tr> <tr> <td>i7-4700MQ</td> <td rowspan="4">4</td> <td>2.4 GHz</td> <td>3.4 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-4800MQ</td> <td>2.7 GHz</td> <td>3.7 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-4900MQ</td> <td>2.8 GHz</td> <td>3.8 GHz</td> <td>8MB</td> </tr> <tr> <td>i7-4930MX</td> <td>3 GHz</td> <td>3.9 GHz</td> <td>8MB</td> </tr> </tbody> </table>						Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	i5-4200M	2	2.5 GHz	3.1 GHz	3MB	DDR3L-1600	i5-4330M	2.8 GHz	3.5 GHz	3MB	i7-4600M	2.9 GHz	3.6 GHz	4MB	i7-4700MQ	4	2.4 GHz	3.4 GHz	6MB	i7-4800MQ	2.7 GHz	3.7 GHz	6MB	i7-4900MQ	2.8 GHz	3.8 GHz	8MB	i7-4930MX	3 GHz	3.9 GHz	8MB	Keyboard		6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight													
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																																																					
	i5-4200M	2	2.5 GHz	3.1 GHz	3MB	DDR3L-1600																																																					
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i7-4930MX	3 GHz		3.9 GHz	8MB																																																							
						UltraNav™		TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch																																																			
						ThinkLight™		None																																																			
						Chipset		Mobile Intel QM87 Express Chipset																																																			
						ExpressCard		One slot (ExpressCard/34)																																																			
Memory	<i>dual-core model:</i> 16GB max ⁷ , two 204-pin SO-DIMM sockets						Smart card reader		<i>Optional:</i> Smart card reader																																																		
	<i>quad-core model:</i> 32GB max, four 204-pin SO-DIMM sockets, 4+4, 8+8, 4+4+4+4, or 8+8+8+8 combinations support						Multicard reader		4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card																																																		
	<i>All:</i> PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable						Ports		Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort / Thunderbolt, Ethernet (RJ-45), Dock connector																																																		
Optical	<i>Some:</i> DVD burner, 9.5mm Ultrabay slim, removable						WLAN ⁴		<i>11b/g/n+BT:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card <i>7260 b/g/n+BT:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 a/b/g/n+BT:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 ac+BT:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card																																																		
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						WWAN (<i>optional</i>)		<i>Upg:</i> Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS																																																		
Storage	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high						SIM card (<i>optional</i>)		<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>Select:</i> User selectable, contract required with service provider																																																		
<i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						Bluetooth™		Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																																		
M.2 SSD							Ethernet		Intel Ethernet Connection I217-LM (Clarkville)																																																		
Widescreen display	<i>Some:</i> 15.6" (396mm) FHD (1920x1080), 300 nits, 500:1 contrast ratio						NFC		<i>Optional:</i> Near Field Communication																																																		
Multi-touch	<i>Some:</i> 15.5" (394mm) 3K (2880x1620), 350 nits, 1000:1 contrast ratio, IPS						Security		Power-on password, hard disk password, supervisor password, security keyhole																																																		
Color calibration	<i>None</i>						Security chip		Trusted Platform Module, TCG 1.2-compliant																																																		
Camera (<i>optional</i>)	<i>Optional:</i> Pantone® color calibrator by X-Rite® color calibration sensor in palm rest						vPro (<i>optional</i>)		Intel vPro Technology																																																		
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4600 in processor, and NVIDIA Quadro® K1100M or K2100M, PCI Express® x16, 2GB memory						Fingerprint reader		<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor																																																		
Dimensions ³	15.6W" (WxDxH): 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm						Preload		<i>Win8 / 8.1 DG Win7:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit																																																		
Weight ²	6-cell: starting at 5.57 lb (2.53kg); 9-cell: starting at 5.95 lb (2.70kg)						Limited warranty ¹²		1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite																																																		
Case material	Glass-Fiber Reinforced Plastic																																																										
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																																																										
Max battery life ¹⁰	6-cell: up to 6.2 hr; 9-cell: up to 11.1 hr																																																										
AC adapter	<i>dual-core:</i> 135-watt AC adapter; <i>quad-core:</i> 170-watt AC adapter																																																										

See footnotes for more detailed information

(KM1W-3) © Lenovo

ThinkPad W540 20BH (Optimus) - Onsite (Windows 8)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	RAID	Optical	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	NFC	Color cali-brator	Bat- tery cells	Power adapter (watt)	Preload	Base warranty (year)	Glob- al	Ann date (m/y)
20BH001AUS	i7-4800MQ	vPro	K1100M	4GBx1	15.6" FHD	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	None	Finger	None	None	9	170W	Win8 P64	3-onsite	No	11/13
20BH001CUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	None	Finger	None	None	9	170W	Win8 P64	3-onsite	No	11/13
20BH001EUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	128G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-onsite	No	11/13
20BH001HUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	2x500G 7200	1	None	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-onsite	No	11/13
20BH001WUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	None	Finger	None	None	9	170W	Win8 P64	3-onsite	No	11/13
20BH002EUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	2x500G 7200	0	None	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-onsite	Yes	11/13
20BH002JUS	i7-4800MQ	vPro	K1100M	4GBx2	15.5" 3K IPS	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-onsite	Yes	11/13
20BH002MUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-onsite	Yes	11/13
20BH002NUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-onsite	Yes	11/13
20BH002QUS	i7-4800MQ	vPro	K1100M	4GBx2	15.6" FHD	180G SSD Opal	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-onsite	Yes	11/13
20BH002SUS	i7-4800MQ	vPro	K1100M	8GBx1	15.6" FHD	240G SSD Opal	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-onsite	Yes	11/13
20BH002UUS	i7-4800MQ	vPro	K1100M	8GBx1	15.5" 3K IPS	240G SSD Opal	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-onsite	Yes	11/13
20BH001KUS	i7-4900MQ	vPro	K2100M	4GBx2	15.6" FHD	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-onsite	No	11/13
20BH001MUS	i7-4900MQ	vPro	K2100M	4GBx2	15.6" FHD	128G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-onsite	No	11/13
20BH001NUS	i7-4900MQ	vPro	K2100M	4GBx2	15.6" FHD	180G SSD Opal	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-onsite	No	11/13
20BH001QUS	i7-4900MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	500G 5400	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	NFC	X-Rite	9	170W	Win8 P64	3-onsite	No	01/14
20BH001RUS	i7-4900MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	180G SSD Opal	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	NFC	X-Rite	9	170W	Win8 P64	3-onsite	No	01/14
20BH001SUS	i7-4900MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	512G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	NFC	X-Rite	9	170W	Win8 P64	3-onsite	No	01/14
20BH001YUS	i7-4900MQ	vPro	K2100M	4GBx2	15.6" FHD	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	None	Finger	None	None	9	170W	Win8 P64	3-onsite	No	11/13
20BH002GUS	i7-4800MQ	vPro	K2100M	4GBx2	15.6" FHD	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8 P64	3-onsite	Yes	11/13
20BH002LUS	i7-4800MQ	vPro	K2100M	4GBx2	15.5" 3K IPS	512G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	X-Rite	9	170W	Win8 P64	3-onsite	Yes	11/13

• For detailed platform specifications, please see [ThinkPad W540 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 / i7 Extreme Processor	Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																																				
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Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																																		
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i7-4700MQ	4	2.4 GHz	3.4 GHz	6MB																																			
i7-4800MQ		2.7 GHz	3.7 GHz	6MB																																			
i7-4900MQ		2.8 GHz	3.8 GHz	8MB																																			
i7-4930MX		3 GHz	3.9 GHz	8MB																																			
Memory	dual-core model: 16GB max ⁷ , two 204-pin SO-DIMM sockets quad-core model: 32GB max, four 204-pin SO-DIMM sockets, 4+4, 8+8, 4+4+4+4, or 8+8+8+8 combinations support All: PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable	Chipset: Mobile Intel QM87 Express Chipset ExpressCard: One slot (ExpressCard/34) Smart card reader: <i>Optional:</i> Smart card reader Multicard reader: 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Ports: Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort / Thunderbolt, Ethernet (RJ-45), Dock connector																																					
Optical	Some: DVD burner, 9.5mm Ultrabay slim, removable	WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card																																				
Ultrabay Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card	WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+ / EVDO/GSM/GPRS/EDGE, GPS																																				
M.2 SSD		SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider																																				
Widescreen display	Some: 15.6" (396mm) FHD (1920x1080), 300 nits, 500:1 contrast ratio Some: 15.5" (394mm) 3K (2880x1620), 350 nits, 1000:1 contrast ratio, IPS	Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																				
Multi-touch	None	Ethernet	Intel Ethernet Connection I217-LM (Clarkville)																																				
Color calibration	<i>Optional:</i> Pantone® color calibrator by X-Rite® color calibration sensor in palm rest	NFC	<i>Optional:</i> Near Field Communication																																				
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	Security	Power-on password, hard disk password, supervisor password, security keyhole																																				
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4600 in processor, and NVIDIA Quadro® K1100M or K2100M, PCI Express® x16, 2GB memory	Security chip vPro (optional)	Trusted Platform Module, TCG 1.2-compliant																																				
Dimensions ³	15.6W" (WxDxH): 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm	Fingerprint reader	Intel vPro Technology <i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor																																				
Weight ²	6-cell: starting at 5.57 lb (2.53kg); 9-cell: starting at 5.95 lb (2.70kg)	Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit																																				
Case material	Glass-Fiber Reinforced Plastic	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite																																				
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																																						
Max battery life ¹⁰	6-cell: up to 6.2 hr; 9-cell: up to 11.1 hr																																						
AC adapter	dual-core: 135-watt AC adapter; quad-core: 170-watt AC adapter																																						

See footnotes for more detailed information

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Lenovo® ThinkPad W541



Lenovo ThinkPad W541



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Lenovo ThinkPad W541



Lenovo ThinkPad W541

ThinkPad W541 Platform Specifications

Product Specifications Reference (PSREF)

Processor	<p>4th Generation Intel® Core™ i5 / i7 / i7 Extreme Processor</p> <table border="1"> <thead> <tr> <th>Processor Number</th> <th># of Cores</th> <th># of Threads</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> <th>Processor Graphics</th> </tr> </thead> <tbody> <tr> <td>i5-4210M</td> <td rowspan="3">2</td> <td rowspan="3">4</td> <td>2.6 GHz</td> <td>3.2 GHz</td> <td>3MB</td> <td rowspan="8">DDR3L-1600</td> <td rowspan="8">Intel HD Graphics 4600</td> </tr> <tr> <td>i5-4340M</td> <td>2.9 GHz</td> <td>3.6 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-4600M</td> <td>2.9 GHz</td> <td>3.6 GHz</td> <td>4MB</td> </tr> <tr> <td>i7-4710MQ</td> <td rowspan="4">4</td> <td rowspan="4">8</td> <td>2.5 GHz</td> <td>3.5 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-4810MQ</td> <td>2.8 GHz</td> <td>3.8 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-4910MQ</td> <td>2.9 GHz</td> <td>3.9 GHz</td> <td>8MB</td> </tr> <tr> <td>i7-4940MX</td> <td>3.1 GHz</td> <td>4 GHz</td> <td>8MB</td> </tr> </tbody> </table>	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics	i5-4210M	2	4	2.6 GHz	3.2 GHz	3MB	DDR3L-1600	Intel HD Graphics 4600	i5-4340M	2.9 GHz	3.6 GHz	3MB	i7-4600M	2.9 GHz	3.6 GHz	4MB	i7-4710MQ	4	8	2.5 GHz	3.5 GHz	6MB	i7-4810MQ	2.8 GHz	3.8 GHz	6MB	i7-4910MQ	2.9 GHz	3.9 GHz	8MB	i7-4940MX	3.1 GHz	4 GHz	8MB	<p>Smart card reader <i>Optional</i>: Smart card reader ExpressCard One slot (ExpressCard/34) Multicard reader 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Ports Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort / Thunderbolt, Ethernet (RJ-45), Dock connector</p> <p>Camera <i>(optional)</i> HD720p resolution, low light sensitive, fixed focus Audio support HD Audio, Realtek® ALC3232 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack</p> <p>Keyboard 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight UltraNav™ TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch</p>
Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics																																					
i5-4210M	2	4	2.6 GHz	3.2 GHz	3MB	DDR3L-1600	Intel HD Graphics 4600																																					
i5-4340M			2.9 GHz	3.6 GHz	3MB																																							
i7-4600M			2.9 GHz	3.6 GHz	4MB																																							
i7-4710MQ	4	8	2.5 GHz	3.5 GHz	6MB																																							
i7-4810MQ			2.8 GHz	3.8 GHz	6MB																																							
i7-4910MQ			2.9 GHz	3.9 GHz	8MB																																							
i7-4940MX			3.1 GHz	4 GHz	8MB																																							
Graphics	<p>Intel HD Graphics 4600 in processor and NVIDIA Quadro® K1100M or K2100M, 2GB memory; supports external analog monitor via VGA and digital monitor via Mini DisplayPort / Thunderbolt™; supports three independent displays; Max resolution: 3840x2160@60Hz (DisplayPort via Mini DisplayPort cable); 3840x2160@60Hz (Thunderbolt); 1920x1200@60Hz (VGA)</p>	<p>Security Power-on password, hard disk password, supervisor password, security keyhole Security chip Trusted Platform Module, TCG 1.2-compliant ThinkEngine Delivers improved thermal and power efficiency, up to 30 day standby, faster resume time, enhanced security, as well as anti-tampering measures</p> <p>vPro <i>(optional)</i> Intel vPro Technology Fingerprint reader <i>Optional</i>: Fingerprint reader on the palm rest, swipe sensor Color calibration <i>Optional</i>: Pantone® color calibrator by X-Rite® color calibration sensor in palm rest, LED indicator</p>																																										
Chipset Memory	<p>Mobile Intel QM87 Express Chipset <i>dual-core model</i>: 16GB max⁷, two 204-pin SO-DIMM sockets <i>quad-core model</i>: 32GB max, four 204-pin SO-DIMM sockets, 4+4, 8+8, 4+4+4+4, or 8+8+8+8 combinations support <i>All</i>: PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable</p>	<p>Battery type Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication Max battery life¹⁰ <i>6-cell</i>: up to 6.2 hr; <i>9-cell</i>: up to 11.1 hr AC adapter <i>dual-core</i>: 135W AC adapter; <i>quad-core</i>: 170W AC adapter</p>																																										
Display	<p><i>Some</i>: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some</i>: 15.5" (394mm) 3K (2880x1620), anti-glare, LED backlight, 350 nits, 16:9 aspect ratio, 1000:1 contrast ratio, IPS</p>	<p>Preload Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <ul style="list-style-type: none"> Lenovo Solution Center ThinkVantage Product Recovery Rescue and Recovery™ ThinkVantage System Update Lenovo Cloud Storage by SugarSync PC Device Stage Adobe® Reader® Nitro Pro Evernote® Skype™ Microsoft® Office preloaded; purchase a product key to activate Norton™ Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) <p><i>Some</i>: Windows 8.1 64-bit <i>Some</i>: Windows 8.1 Pro 64-bit <ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support Lenovo Companion ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync - Metro (Windows 8 model) Lenovo Cloud Storage by SugarSync (Windows 8 model) PC Device Stage AccuWeather Amazon Kindle Nitro Pro Evernote Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) Cyberlink PowerDVD (DVD±RW) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) </p> </p>																																										
Multi-touch	None																																											
Storage	<p><i>Some</i>: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some</i>: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Shock Mounted Hard Drive, Active Protection System™ <i>All</i>: removable, upgradable, supports the second disk</p>																																											
M.2 SSD <i>(opt)</i> Optical <i>(optional)</i> Ultrabay	<p>M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high, bottom access</p>																																											
Ethernet Bluetooth™	<p>Intel Ethernet Connection I217-LM (Clarkville) Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter</p>																																											
WLAN ⁴	<p><i>One of the following, configurable by model:</i></p> <ul style="list-style-type: none"> 11b/g/n, ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card 11b/g/n, Intel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card 11a/b/g/n, Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT adapter, M.2 card 11ac, Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT adapter, M.2 card 																																											
WWAN <i>(optional)</i>	<p><i>One of the following, configurable by model (mutually exclusive with M.2 SSD):</i></p> <ul style="list-style-type: none"> Wireless WAN upgradable Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 card (US models) Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card (WE models) Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card (WE models) 	<p><i>For ISV certifications, please visit www.lenovo.com/support/ISV</i></p>																																										
SIM card <i>(optional)</i>	<p><i>One of the following, configurable by model:</i></p> <ul style="list-style-type: none"> AT&T® or Verizon® LTE (4G), contract required with service provider User selectable, contract required with service provider 	<p>Limited warranty¹² <i>One of the following, configurable by model:</i></p> <ul style="list-style-type: none"> 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service²⁴ 3-year/1-yr battery limited onsite service, IWS (International Warranty Service¹⁷) 																																										
Dimensions ³ Weight ² Case material	<p>15.6" (WxDxH): 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm <i>6-cell</i>: starting at 5.57 lb (2.53 kg); <i>9-cell</i>: starting at 5.95 lb (2.70 kg) Glass-Fiber Reinforced Plastic</p>	<p>Environment EPEAT™ Gold; ENERGY STAR® 6.1; GREENGUARD®; RoHS-compliant</p>																																										

ThinkPad W541 20EF (Discrete) - TopSeller

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	RAID	Optical	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	NFC	Color calibrator	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Glob-al	Ann date (m/y)
20EF000HUS	i7-4710MQ	No	K1100M	8GBx1	15.6" FHD	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8.1 DG	Win7 3-depot	No	01/15
20EF000KUS	i7-4710MQ	No	K1100M	8GBx1	15.6" FHD	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8.1 DG	Win7 3-depot	No	01/15
20EF000NUS	i7-4810MQ	vPro	K1100M	8GBx1	15.6" FHD	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8.1 DG	Win7 3-depot	No	01/15
20EF000PUS	i7-4810MQ	vPro	K1100M	8GBx1	15.6" FHD	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8.1 DG	Win7 3-depot	No	01/15
20EF000JUS	i7-4810MQ	vPro	K2100M	8GBx1	15.6" FHD	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8.1 DG	Win7 3-depot	No	01/15
20EF000LUS	i7-4810MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8.1 DG	Win7 3-depot	No	01/15
20EF000MUS	i7-4810MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	512G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	X-Rite	9	170W	Win8.1 DG	Win7 3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad W541 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 / i7 Extreme Processor						WWAN (optional) Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS	
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	SIM card (optional) AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider	Dimensions ³ 15.6" (WxDxH): 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm Weight ² 6-cell: starting at 5.57 lb (2.53 kg); 9-cell: starting at 5.95 lb (2.70 kg) Case material Glass-Fiber Reinforced Plastic
	i5-4210M	2	2.6 GHz	3.2 GHz	3MB	DDR3L-1600		
	i5-4340M		2.9 GHz	3.6 GHz	3MB			
	i7-4600M		2.9 GHz	3.6 GHz	4MB			
	i7-4710MQ	4	2.5 GHz	3.5 GHz	6MB			
	i7-4810MQ		2.8 GHz	3.8 GHz	6MB			
	i7-4910MQ		2.9 GHz	3.9 GHz	8MB			
i7-4940MX	3.1 GHz		4 GHz	8MB				
Graphics	Intel HD Graphics 4600 and NVIDIA Quadro® K1100M or K2100M, 2GB memory						Smart card reader Optional: Smart card reader ExpressCard One slot (ExpressCard/34)	
Chipset	Mobile Intel QM87 Express Chipset						Multicard reader 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card	
Memory	dual-core model: 16GB max ⁷ , two 204-pin SO-DIMM sockets quad-core model: 32GB max, four 204-pin SO-DIMM sockets, 4+4, 8+8, 4+4+4+4, or 8+8+8+8 combinations support All: PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable						Ports Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort / Thunderbolt, Ethernet (RJ-45), Dock connector	
Display	Some: 15.6" (396mm) FHD (1920x1080), 300 nits, 500:1 contrast ratio Some: 15.5" (394mm) 3K (2880x1620), 350 nits, 1000:1 contrast ratio, IPS						Camera (optional) HD720p resolution, low light sensitive, fixed focus	
Multi-touch	None						Audio support HD Audio, Realtek® ALC3232 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack	
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS						Keyboard 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight UltraNav™ TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch	
M.2 SSD (opt)	M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						Security Power-on password, hard disk password, supervisor password, security keyhole Security chip Trusted Platform Module, TCG 1.2-compliant	
Optical (optional)	DVD burner, 9.5mm Ultrabay slim, removable						vPro (optional) Intel vPro Technology	
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						Fingerprint reader Optional: Fingerprint reader on the palm rest, swipe sensor	
Ethernet	Intel Ethernet Connection I217-LM (Clarkville)						Color calibration Optional: Pantone® color calibrator by X-Rite® color calibration sensor in palm rest	
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter						Battery type Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication	
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card						Max battery life ¹⁰ 6-cell: up to 6.2 hr; 9-cell: up to 11.1 hr AC adapter dual-core: 135W AC adapter; quad-core: 170W AC adapter	
							Preload Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit	
							Limited warranty ¹² 1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS	

See footnotes for more detailed information

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ThinkPad W541 20EG (Discrete)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	RAID	Optical	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Cam-era	Backlit key-board	Finger-print reader	NFC	Color calibrator	Bat-tery adapter	Power (watt)	Preload	Base warranty (year)	Glob-al	Ann date (m/y)
20EG0001US	i7-4810MQ	vPro	K1100M	8GBx1	15.6" FHD	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8.1 DG	Win7 3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad W541 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 / i7 Extreme Processor						WWAN (optional) Upg: Wireless WAN upgradable	
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS	
	i5-4210M	2	2.6 GHz	3.2 GHz	3MB	DDR3L-1600	SIM card (optional) AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider	
	i5-4340M		2.9 GHz	3.6 GHz	3MB		Select: User selectable, contract required with service provider	
	i7-4600M		2.9 GHz	3.6 GHz	4MB		Dimensions ³ 15.6" (WxDxH): 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm	
	i7-4710MQ	4	2.5 GHz	3.5 GHz	6MB		Weight ² 6-cell: starting at 5.57 lb (2.53 kg); 9-cell: starting at 5.95 lb (2.70 kg)	
	i7-4810MQ		2.8 GHz	3.8 GHz	6MB		Case material Glass-Fiber Reinforced Plastic	
	i7-4910MQ		2.9 GHz	3.9 GHz	8MB		Smart card reader Optional: Smart card reader	
i7-4940MX	3.1 GHz		4 GHz	8MB	ExpressCard One slot (ExpressCard/34)			
Graphics	Intel HD Graphics 4600 and NVIDIA Quadro® K1100M or K2100M, 2GB memory						Multicard reader 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card	
Chipset	Mobile Intel QM87 Express Chipset						Ports Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort / Thunderbolt, Ethernet (RJ-45), Dock connector	
Memory	dual-core model: 16GB max ⁷ , two 204-pin SO-DIMM sockets quad-core model: 32GB max, four 204-pin SO-DIMM sockets, 4+4, 8+8, 4+4+4+4, or 8+8+8+8 combinations support All: PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable						Camera (optional) HD720p resolution, low light sensitive, fixed focus Audio support HD Audio, Realtek® ALC3232 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack	
Display	Some: 15.6" (396mm) FHD (1920x1080), 300 nits, 500:1 contrast ratio Some: 15.5" (394mm) 3K (2880x1620), 350 nits, 1000:1 contrast ratio, IPS None						Keyboard 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight UltraNav™ TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch	
Multi-touch	None						Security Power-on password, hard disk password, supervisor password, security keyhole	
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS						Security chip Trusted Platform Module, TCG 1.2-compliant	
M.2 SSD (opt)	M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						vPro (optional) Intel vPro Technology	
Optical (optional)	DVD burner, 9.5mm Ultrabay slim, removable						Fingerprint reader Optional: Fingerprint reader on the palm rest, swipe sensor	
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						Color calibration Optional: Pantone® color calibrator by X-Rite® color calibration sensor in palm rest	
Ethernet	Intel Ethernet Connection I217-LM (Clarkville)						Battery type Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication	
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter						Max battery life ¹⁰ 6-cell: up to 6.2 hr; 9-cell: up to 11.1 hr	
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card						AC adapter dual-core: 135W AC adapter; quad-core: 170W AC adapter	
							Preload Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit	
							Limited warranty ¹² 1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS	

See footnotes for more detailed information

(KM15W-2) © Lenovo

ThinkPad W541 20EG (Discrete) - Onsite

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	RAID	Optical	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	NFC	Color cali-brator	Bat-tery adapter	Power (watt)	Preload	Base warranty (year)	Glob-al	Ann date (m/y)	
20EG0002US	i7-4810MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	512G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	X-Rite	9	170W	Win8.1 DG	Win7	3-onsite	No	01/15
20EG0003US	i7-4810MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	512G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8.1 DG	Win7	3-onsite	No	01/15
20EG0004US	i7-4810MQ	vPro	K2100M	8GBx1	15.6" FHD	256G SSD eDrive	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8.1 DG	Win7	3-onsite	No	01/15
20EG000HUS	i7-4940MX	vPro	K2100M	8GBx4	15.5" 3K IPS	512G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	X-Rite	9	170W	Win8.1 DG	Win7	3-onsite	No	01/15
20EG0006US	i7-4810MQ	vPro	K1100M	8GBx1	15.5" 3K IPS	512G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	X-Rite	9	170W	Win8.1 DG	Win7	3-onsite IWS	Yes	01/15
20EG0009US	i7-4810MQ	vPro	K1100M	8GBx1	15.6" FHD	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	X-Rite	9	170W	Win8.1 DG	Win7	3-onsite IWS	Yes	01/15
20EG000BUS	i7-4810MQ	vPro	K1100M	8GBx1	15.6" FHD	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8.1 DG	Win7	3-onsite IWS	Yes	01/15
20EG000EUS	i7-4810MQ	vPro	K1100M	8GBx1	15.5" 3K IPS	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	X-Rite	9	170W	Win8.1 DG	Win7	3-onsite IWS	Yes	01/15
20EG0005US	i7-4810MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	512G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	X-Rite	9	170W	Win8.1 DG	Win7	3-onsite IWS	Yes	01/15
20EG0007US	i7-4910MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	X-Rite	9	170W	Win8.1 DG	Win7	3-onsite IWS	Yes	01/15
20EG0008US	i7-4810MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	512G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8.1 DG	Win7	3-onsite IWS	Yes	01/15
20EG000AUS	i7-4810MQ	vPro	K2100M	8GBx1	15.6" FHD	512G SSD	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8.1 DG	Win7	3-onsite IWS	Yes	01/15
20EG000CUS	i7-4810MQ	vPro	K2100M	8GBx1	15.5" 3K IPS	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	None	9	170W	Win8.1 DG	Win7	3-onsite IWS	Yes	01/15
20EG000DUS	i7-4910MQ	vPro	K2100M	8GBx1	15.6" FHD	500G 7200	No	DVD±RW	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	X-Rite	9	170W	Win8.1 DG	Win7	3-onsite IWS	Yes	01/15

• For detailed platform specifications, please see [ThinkPad W541 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 / i7 Extreme Processor						WWAN (optional) Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS	
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider
	i5-4210M	2	2.6 GHz	3.2 GHz	3MB	DDR3L-1600	Dimensions ³	15.6" (WxDxH): 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm
	i5-4340M		2.9 GHz	3.6 GHz	3MB		Weight ²	6-cell: starting at 5.57 lb (2.53 kg); 9-cell: starting at 5.95 lb (2.70 kg)
	i7-4600M		2.9 GHz	3.6 GHz	4MB		Case material	Glass-Fiber Reinforced Plastic
	i7-4710MQ	4	2.5 GHz	3.5 GHz	6MB		Smart card reader	Optional: Smart card reader
	i7-4810MQ		2.8 GHz	3.8 GHz	6MB		ExpressCard	One slot (ExpressCard/34)
	i7-4910MQ		2.9 GHz	3.9 GHz	8MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card
	i7-4940MX		3.1 GHz	4 GHz	8MB		Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort / Thunderbolt, Ethernet (RJ-45), Dock connector
Graphics	Intel HD Graphics 4600 and NVIDIA Quadro® K1100M or K2100M, 2GB memory						Camera (optional)	HD720p resolution, low light sensitive, fixed focus
Chipset	Mobile Intel QM87 Express Chipset						Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
Memory	dual-core model: 16GB max ⁷ , two 204-pin SO-DIMM sockets quad-core model: 32GB max, four 204-pin SO-DIMM sockets, 4+4, 8+8, 4+4+4+4, or 8+8+8+8 combinations support All: PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable						Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight
Display	Some: 15.6" (396mm) FHD (1920x1080), 300 nits, 500:1 contrast ratio Some: 15.5" (394mm) 3K (2880x1620), 350 nits, 1000:1 contrast ratio, IPS						UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
Multi-touch	None						Security	Power-on password, hard disk password, supervisor password, security keyhole
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS						Security chip	Trusted Platform Module, TCG 1.2-compliant
M.2 SSD (opt)	M.2 Solid State Drive (SSD), via M.2 card slot, exclusive with WWAN card						vPro (optional)	Intel vPro Technology
Optical (optional)	DVD burner, 9.5mm Ultrabay slim, removable						Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						Color calibration	Optional: Pantone® color calibrator by X-Rite® color calibration sensor in palm rest
Ethernet	Intel Ethernet Connection I217-LM (Clarkville)						Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter						Max battery life ¹⁰	6-cell: up to 6.2 hr; 9-cell: up to 11.1 hr
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card						AC adapter	dual-core: 135W AC adapter; quad-core: 170W AC adapter
	7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card						Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit
	7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card							Win8.1 64: Windows 8.1 64-bit
	7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card							Win8.1 P64: Windows 8.1 Pro 64-bit
							Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS

See footnotes for more detailed information

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Lenovo® ThinkPad W550s



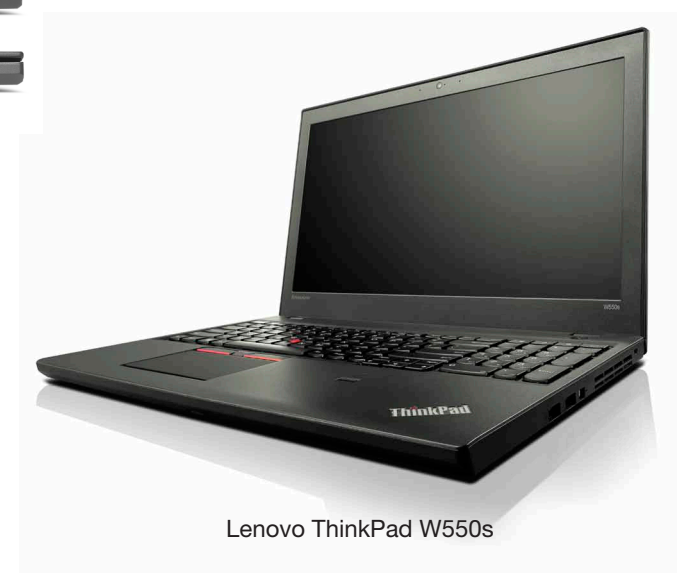
Lenovo ThinkPad W550s



Lenovo ThinkPad W550s



Lenovo ThinkPad W550s



Lenovo ThinkPad W550s

ThinkPad W550s Platform Specifications

Product Specifications Reference (PSREF)

Processor	5th Generation Intel® Core™ i5 / i7 Processor								Smart card reader <i>Optional</i> : Smart card reader											
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics	Multicard reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector										
	i5-5300U	2	4	2.3 GHz	2.9 GHz	3MB	DDR3L-1600	Intel HD Graphics 5500	Camera	HD720p resolution, low light sensitive, fixed focus										
	i7-5500U			2.4 GHz	3 GHz	4MB			Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack										
i7-5600U	2.6 GHz			3.2 GHz	4MB	Keyboard UltraNav™			6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch											
Graphics	Intel HD Graphics 5500 in processor and NVIDIA Quadro® K620M, 2GB memory; supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays; Max resolution: 3840x2160@60Hz (DP via mDP cable); 2560x1600@60Hz (VGA)								Security Security chip ThinkEngine	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Delivers improved thermal and power efficiency, up to 30 day standby, faster resume time, enhanced security, as well as anti-tampering measures										
Chipset Memory	Intel SoC (System on Chip) platform 16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets								vPro (optional) Fingerprint reader	Intel vPro Technology <i>Optional</i> : Fingerprint reader on the palm rest, swipe sensor										
Display	<i>Some</i> : 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 400:1 or 500:1 contrast ratio <i>Some</i> : 15.5" (394mm) 3K (2880x1620), anti-glare, LED backlight, 350 nits, 16:9 aspect ratio, 1000:1 contrast ratio, IPS								Internal battery	<i>Optional</i> : Integrated Li-Polymer 3-cell (44Wh)										
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 315 nits								External battery	Li-Ion or Li-Polymer 3-cell (23Wh) or Li-Ion 6-cell (48Wh or 72Wh)										
Storage	<i>Some</i> : SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some</i> : HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ <i>Some</i> : SSHD with 8GB NAND flash memory								Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Models</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell 48Wh</th> <th>3-cell + 6-cell 72Wh</th> </tr> </thead> <tbody> <tr> <td>Battery life</td> <td>12.7 hr</td> <td>17.3 hr</td> <td>21.8 hr</td> </tr> </tbody> </table>			Models	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh	Battery life	12.7 hr	17.3 hr	21.8 hr
Models	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh																	
Battery life	12.7 hr	17.3 hr	21.8 hr																	
M.2 SSD (opt) Optical	Single-sided M.2 SSD, via M.2 card slot None								AC adapter	65W Slim or 65W AC adapter										
Ethernet	<i>Non-vPro model</i> : Intel Ethernet Connection I218-V (Clarkville) <i>vPro model</i> : Intel Ethernet Connection I218-LM (Clarkville)								Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit <ul style="list-style-type: none"> Lenovo Solution Center Lenovo SHAREit Lenovo Companion ThinkVantage Product Recovery Rescue and Recovery™ ThinkVantage System Update PC Device Stage Adobe® Reader® Evernote® Skype™ Maxthon Cloud Browser Microsoft® Office preloaded; purchase a product key to activate Norton™ Internet Security (30 days of virus definitions) <i>For ISV certifications, please visit www.lenovo.com/support/ISV</i>										
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter								Limited warranty ¹²	<i>One of the following, configurable by model</i> : <ul style="list-style-type: none"> 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service²⁴ 3-year/1-yr battery limited onsite service, IWS (International Warranty Service¹⁷) 										
WLAN ⁴	<i>One of the following, configurable by model</i> : <ul style="list-style-type: none"> 11b/g/n, ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card 11b/g/n, Intel Wireless-N 7265, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card 11a/b/g/n, Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT adapter, M.2 card 11ac, Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT adapter, M.2 card 								Environment	EPEAT™ Gold (US) or EPEAT Silver (WE); ENERGY STAR® 6.1; GREENGUARD®; RoHS-compliant										
WWAN (optional)	<i>One of the following, configurable by model</i> : <ul style="list-style-type: none"> Wireless WAN upgradable Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card 																			
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider																			
Dimensions ³	15.6" (WxDxH): 14.98" x 10.17" x 0.88"; 380.6mm x 258.2mm x 22.45mm 15.6" Touch (WxDxH): 14.98" x 10.17" x 0.92"; 380.6mm x 258.2mm x 23.30mm																			
Weight ²	Models	No + 6-cell		3-cell + 3-cell		3-cell + 6-cell														
	Non-touch	5.01 lb / 2.27 kg		4.78 lb / 2.17 kg		5.12 lb / 2.32 kg														
	Multi-touch	-		5.09 lb / 2.31 kg		5.43 lb / 2.46 kg														
Case material	<i>Display cover</i> : Glass-Fiber Reinforced Plastic (non-touch model) or Carbon-Fiber Reinforced Plastic (multi-touch model); <i>Bottom</i> : Glass-Fiber Reinforced Plastic																			

ThinkPad W550s 20E2 (Discrete) - TopSeller

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Glob-al	Ann date (m/y)
20E2000TUS	i7-5500U	No	K620M	8GBx1	15.5" 3K IPS	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+6(72wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20E2000VUS	i7-5500U	No	K620M	8GBx2	15.5" 3K IPS	No	512G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+6(72wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20E2000XUS	i7-5500U	No	K620M	8GBx1	15.6" FHD	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+6(72wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20E2000YUS	i7-5500U	No	K620M	8GBx1	15.6" FHD	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	No+6(48wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20E20010US	i7-5500U	No	K620M	8GBx1	15.5" 3K IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	No+6(48wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20E20017US	i7-5500U	No	K620M	8GBx1	15.6" FHD	No	256G SSD Opal2	None	7265 ac+BT	None	None	None	720p	Backlit	Finger	3+3	65W	Win8.1 DG Win7	3-depot	No	01/15
20E2000QUS	i7-5600U	vPro	K620M	8GBx1	15.5" 3K IPS MT		500G 7200	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	65W	Win8.1 DG Win7	3-depot	No	01/15
20E2000RUS	i7-5600U	vPro	K620M	8GBx2	15.5" 3K IPS MT		512G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	65W	Win8.1 DG Win7	3-depot	No	01/15
20E2000SUS	i7-5600U	vPro	K620M	8GBx1	15.5" 3K IPS MT		256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	65W	Win8.1 DG Win7	3-depot	No	01/15
20E2000UUS	i7-5600U	vPro	K620M	8GBx2	15.6" FHD	No	512G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+6(72wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20E2000WUS	i7-5600U	vPro	K620M	8GBx1	15.6" FHD	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+6(48wh)	65W	Win8.1 DG Win7	3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad W550s Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i5 / i7 Processor	Dimensions ³	15.6" (WxDxH): 14.98" x 10.17" x 0.88"; 380.6mm x 258.2mm x 22.45mm 15.6" Touch (WxDxH): 14.98" x 10.17" x 0.92"; 380.6mm x 258.2mm x 23.30mm																																		
	<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr> <td>i5-5300U</td> <td rowspan="3">2</td> <td>2.3 GHz</td> <td>2.9 GHz</td> <td>3MB</td> <td rowspan="3">DDR3L-1600</td> </tr> <tr> <td>i7-5500U</td> <td>2.4 GHz</td> <td>3 GHz</td> <td>4MB</td> </tr> <tr> <td>i7-5600U</td> <td>2.6 GHz</td> <td>3.2 GHz</td> <td>4MB</td> </tr> </tbody> </table>	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	i5-5300U	2	2.3 GHz	2.9 GHz	3MB	DDR3L-1600	i7-5500U	2.4 GHz	3 GHz	4MB	i7-5600U	2.6 GHz	3.2 GHz	4MB	Weight ²	<table border="1"> <thead> <tr> <th>Models</th> <th>No + 6-cell</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell</th> </tr> </thead> <tbody> <tr> <td>Non-touch</td> <td>5.01 lb / 2.27 kg</td> <td>4.78 lb / 2.17 kg</td> <td>5.12 lb / 2.32 kg</td> </tr> <tr> <td>Multi-touch</td> <td>-</td> <td>5.09 lb / 2.31 kg</td> <td>5.43 lb / 2.46 kg</td> </tr> </tbody> </table>			Models	No + 6-cell	3-cell + 3-cell	3-cell + 6-cell	Non-touch	5.01 lb / 2.27 kg	4.78 lb / 2.17 kg	5.12 lb / 2.32 kg	Multi-touch	-	5.09 lb / 2.31 kg	5.43 lb / 2.46 kg
Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																																
i5-5300U	2	2.3 GHz	2.9 GHz	3MB	DDR3L-1600																																
i7-5500U		2.4 GHz	3 GHz	4MB																																	
i7-5600U		2.6 GHz	3.2 GHz	4MB																																	
Models	No + 6-cell	3-cell + 3-cell	3-cell + 6-cell																																		
Non-touch	5.01 lb / 2.27 kg	4.78 lb / 2.17 kg	5.12 lb / 2.32 kg																																		
Multi-touch	-	5.09 lb / 2.31 kg	5.43 lb / 2.46 kg																																		
Graphics	Intel HD Graphics 5500 in processor and NVIDIA Quadro® K620M, 2GB memory	Case material	Display cover: Glass-Fiber Reinforced Plastic (non-touch model) or Carbon-Fiber Reinforced Plastic (multi-touch model); Bottom: Glass-Fiber Reinforced Plastic																																		
Chipset	Intel SoC (System on Chip) platform	Smart card reader	Optional: Smart card reader																																		
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																		
Display	Some: 15.6" (396mm) FHD (1920x1080), 300 nits, 400:1 or 500:1 contrast ratio Some: 15.5" (394mm) 3K (2880x1620), 350 nits, 1000:1 contrast ratio, IPS	Ports	Three USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector																																		
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 315 nits	Camera	HD720p resolution, low light sensitive, fixed focus																																		
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, APS Some: SSHD with 8GB NAND flash memory	Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																																		
M.2 SSD (opt)	Single-sided M.2 SSD, via M.2 card slot	Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight UltraNav™																																		
Optical	None	Security	Power-on password, hard disk password, supervisor password, security keyhole																																		
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)	Security chip	Trusted Platform Module, TCG 1.2-compliant																																		
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	vPro (optional)	Intel vPro Technology																																		
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card	Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor																																		
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	Internal battery	Optional: Integrated Li-Polymer 3-cell (44Wh)																																		
		External battery	Li-Ion or Li-Polymer 3-cell (23Wh) or Li-Ion 6-cell (48Wh or 72Wh)																																		
		Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Models</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell 48Wh</th> <th>3-cell + 6-cell 72Wh</th> </tr> </thead> <tbody> <tr> <td>Battery life</td> <td>12.7 hr</td> <td>17.3 hr</td> <td>21.8 hr</td> </tr> </tbody> </table>			Models	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh	Battery life	12.7 hr	17.3 hr	21.8 hr																								
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Battery life	12.7 hr	17.3 hr	21.8 hr																																		
		AC adapter	65W Slim or 65W AC adapter																																		
		Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit																																		
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																		

See footnotes for more detailed information

(SZ1W-1) © Lenovo

ThinkPad W550s 20E1 (Discrete) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Glob-al	Ann date (m/y)
20E1000WUS	i7-5600U	vPro	K620M	8GBx2	15.5" 3K IPS	MT	512G SSD	None	7265 ac+BT	EM7345	AT&T	None	720p	Backlit	Finger	3+3	65W	Win8.1 P64	3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad W550s Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i5 / i7 Processor						Dimensions ³ 15.6" (WxDxH): 14.98" x 10.17" x 0.88"; 380.6mm x 258.2mm x 22.45mm 15.6" Touch (WxDxH): 14.98" x 10.17" x 0.92"; 380.6mm x 258.2mm x 23.30mm
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	
Graphics	i5-5300U	2	2.3 GHz	2.9 GHz	3MB	DDR3L-1600	
	i7-5500U		2.4 GHz	3 GHz	4MB		
	i7-5600U		2.6 GHz	3.2 GHz	4MB		
Chipset	Intel SoC (System on Chip) platform						Weight ² Models: No + 6-cell, 3-cell + 3-cell, 3-cell + 6-cell Non-touch: 5.01 lb / 2.27 kg, 4.78 lb / 2.17 kg, 5.12 lb / 2.32 kg Multi-touch: -, 5.09 lb / 2.31 kg, 5.43 lb / 2.46 kg
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						
Display	Some: 15.6" (396mm) FHD (1920x1080), 300 nits, 400:1 or 500:1 contrast ratio Some: 15.5" (394mm) 3K (2880x1620), 350 nits, 1000:1 contrast ratio, IPS						Case material Display cover: Glass-Fiber Reinforced Plastic (non-touch model) or Carbon-Fiber Reinforced Plastic (multi-touch model); Bottom: Glass-Fiber Reinforced Plastic
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 315 nits						
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, APS Some: SSHD with 8GB NAND flash memory						Smart card reader Optional: Smart card reader Multicard reader: 4-in-1 reader (MMC, SD, SDHC, SDXC) Ports: Three USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector
M.2 SSD (opt)	Single-sided M.2 SSD, via M.2 card slot						
Optical	None						Camera HD720p resolution, low light sensitive, fixed focus Audio support: HD Audio, Realtek® ALC3232 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)						
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter						Keyboard UltraNav™: 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card						
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card						Security Power-on password, hard disk password, supervisor password, security keyhole Security chip: Trusted Platform Module, TCG 1.2-compliant vPro (optional): Intel vPro Technology Fingerprint reader: Optional: Fingerprint reader on the palm rest, swipe sensor
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider						
Internal battery External battery Max battery life ¹⁰							Optional: Integrated Li-Polymer 3-cell (44Wh) Li-Ion or Li-Polymer 3-cell (23Wh) or Li-Ion 6-cell (48Wh or 72Wh)
							Models: 3-cell + 3-cell, 3-cell + 6-cell 48Wh, 3-cell + 6-cell 72Wh Battery life: 12.7 hr, 17.3 hr, 21.8 hr
AC adapter							65W Slim or 65W AC adapter
Preload							Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit
Limited warranty ¹²							1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS

See footnotes for more detailed information

(SZ1W-2) © Lenovo

ThinkPad W550s 20E1 (Discrete) - Onsite

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit key-board	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Glob-al	Ann date (m/y)
20E10000US	i7-5600U	vPro	K620M	8GBx1	15.6" FHD	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+6(72wh)	65W	Win8.1 DG Win7	3-onsite	No	01/15
20E10001US	i7-5600U	vPro	K620M	8GBx1	15.6" FHD	No	512G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+6(72wh)	65W	Win8.1 DG Win7	3-onsite	No	01/15
20E10002US	i7-5600U	vPro	K620M	8GBx1	15.5" 3K IPS	MT	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	65W	Win8.1 DG Win7	3-onsite	No	01/15
20E10003US	i7-5600U	vPro	K620M	8GBx1	15.5" 3K IPS	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+6(72wh)	65W	Win8.1 DG Win7	3-onsite	No	01/15
20E10004US	i7-5600U	vPro	K620M	8GBx1	15.5" 3K IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+6(72wh)	65W	Win8.1 DG Win7	3-onsite	No	01/15
20E10005US	i7-5600U	vPro	K620M	8GBx1	15.5" 3K IPS	No	512G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+6(72wh)	65W	Win8.1 DG Win7	3-onsite	No	01/15
20E10006US	i7-5600U	vPro	K620M	8GBx1	15.5" 3K IPS	MT	512G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	65W	Win8.1 DG Win7	3-onsite	No	01/15
20E1000GUS	i7-5600U	vPro	K620M	8GBx2	15.5" 3K IPS	No	512G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+6(72wh)	65W	Win8.1 DG Win7	3-onsite	No	01/15
20E10007US	i7-5600U	vPro	K620M	8GBx1	15.6" FHD	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+6(72wh)	65W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20E10008US	i7-5600U	vPro	K620M	8GBx2	15.5" 3K IPS	MT	512G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	65W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20E10009US	i7-5600U	vPro	K620M	8GBx1	15.5" 3K IPS	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+6(72wh)	65W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20E1000AUS	i7-5600U	vPro	K620M	8GBx1	15.5" 3K IPS	MT	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	65W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20E1000BUS	i7-5600U	vPro	K620M	8GBx2	15.5" 3K IPS	No	512G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+6(72wh)	65W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20E1000CUS	i7-5600U	vPro	K620M	8GBx2	15.6" FHD	No	512G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+6(72wh)	65W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15
20E1000DUS	i7-5600U	vPro	K620M	8GBx1	15.5" 3K IPS	MT	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	65W	Win8.1 DG Win7	3-onsite IWS	Yes	01/15

• For detailed platform specifications, please see [ThinkPad W550s Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i5 / i7 Processor	Dimensions ³	15.6" (WxDxH): 14.98" x 10.17" x 0.88"; 380.6mm x 258.2mm x 22.45mm 15.6" Touch (WxDxH): 14.98" x 10.17" x 0.92"; 380.6mm x 258.2mm x 23.30mm																																		
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Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																																
i5-5300U	2	2.3 GHz	2.9 GHz	3MB	DDR3L-1600																																
i7-5500U		2.4 GHz	3 GHz	4MB																																	
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Graphics	Intel HD Graphics 5500 in processor and NVIDIA Quadro® K620M, 2GB memory	Case material	Display cover: Glass-Fiber Reinforced Plastic (non-touch model) or Carbon-Fiber Reinforced Plastic (multi-touch model); Bottom: Glass-Fiber Reinforced Plastic																																		
Chipset	Intel SoC (System on Chip) platform	Smart card reader	Optional: Smart card reader																																		
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																		
Display	Some: 15.6" (396mm) FHD (1920x1080), 300 nits, 400:1 or 500:1 contrast ratio Some: 15.5" (394mm) 3K (2880x1620), 350 nits, 1000:1 contrast ratio, IPS	Ports	Three USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector																																		
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 315 nits	Camera	HD720p resolution, low light sensitive, fixed focus																																		
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, APS Some: SSHD with 8GB NAND flash memory	Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																																		
M.2 SSD (opt)	Single-sided M.2 SSD, via M.2 card slot	Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight																																		
Optical	None	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch																																		
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)	Security	Power-on password, hard disk password, supervisor password, security keyhole																																		
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Security chip	Trusted Platform Module, TCG 1.2-compliant																																		
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card	vPro (optional)	Intel vPro Technology																																		
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor																																		
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	Internal battery	Optional: Integrated Li-Polymer 3-cell (44Wh)																																		
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		Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit																																		
		Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																		



Lenovo® ThinkPad 11e



Lenovo ThinkPad 11e



Lenovo ThinkPad 11e

ThinkPad 11e 20D9 (TopSeller)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	Top color	Camera	Finger-print reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20D90008US	Cel N2920	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 DG Win7	1-depot	No	05/14
20D90005US	Cel N2930	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 DG Win7	1-depot	No	09/14
20D90016US	Cel N2940	No	Intel HD	4GBx1	11.6" HD	320G 7200	7260 ac+BT	Black	720p	None	4	45W	Win8.1 DG Win7	1-depot	No	12/14
20D9001BUS	Cel N2940	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 ac+BT	Black	720p	None	4	45W	Win8.1 DG Win7	1-depot	No	12/14

Processor	Intel® Celeron® processor N2920, N2930, or N2940							Chipset	Intel SoC (System on Chip) platform									
	Processor Number	# of Cores	# of Threads	Base Frequency	Burst Frequency	Cache	Memory Speed	Processor Graphics	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)								
	N2920	4	4	1.86 GHz	2 GHz	2MB	DDR3L-1066	Intel HD graphics	Ports	One USB 3.0, one powered USB 2.0, HDMI, Ethernet (RJ-45)								
	N2930			1.83 GHz	2.16 GHz		DDR3L-1333		Control buttons	Power button, volume control button								
	N2940			1.83 GHz	2.25 GHz		WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card									
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket								WWAN	None								
Optical Storage	None Some: SSD / SATA 3.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™								Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter								
Widescreen display	11.6" (295mm) HD (1366x768), anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio								Ethernet	Realtek RTL8111GUS-CG Gigabit Network Connection								
Multi-touch	None								NFC	None								
Hinge	Normal hinge, 180 degree								Security	Power-on password, hard disk password, supervisor password, security keyhole								
Camera (optional)	HD720p resolution, low light sensitive								Security chip	None								
Graphics	Intel HD Graphics in processor, supports external digital monitor via HDMI™ supports dual independent display; Max resolution: 1920x1080 (HDMI) @60Hz								vPro (optional)	None								
Dimensions ³	11.6W" (WxDxH): 11.81" x 8.50" x 0.88"; 300mm x 216mm x 22.3mm								Fingerprint reader	None								
Weight ²	from 3.28 lb (1.49kg)								Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available For Lenovo service upgrade options, please go to QP-TA sheet								
Case color	Display cover: Graphite Black or Silver Bottom: Graphite Black								Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Some: Windows 8.1 Pro 64-bit								
Case material	Display cover: PolyCarbonate/Glass-Fiber Reinforced Plastic; Bottom: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic									<ul style="list-style-type: none"> • Lenovo Solution Center • Lenovo Support - Metro • Lenovo QuickCast - Metro • Lenovo Companion - Metro • ThinkVantage System Update • ThinkVantage System Update • Lenovo Reach • PC Device Stage • Nitro Pro • Evernote® • Skype™ • Microsoft® Office preloaded; purchase a product key to activate 								
Battery type	Integrated Lithium Ion 4-cell (35Wh)									<ul style="list-style-type: none"> • Lenovo Reach • Hightail - Metro • PC Device Stage • AccuWeather • Amazon Kindle • Nitro Pro • Evernote • Skype • Rara Streaming • Norton Studio • Microsoft Office preloaded; purchase a product key to activate • Norton Internet Security (30 days of virus definitions) 								
Max battery life ¹⁰	Models	Windows 7	Windows 8						Environment	EPEAT™ Gold; ENERGY STAR® 6.0; GREENGUARD®; RoHS-compliant								
	MobileMark® 2007	7.0 hr	-															
	MobileMark 2012	6.0 hr	6.5 hr															
AC adapter	45-watt AC adapter																	
Audio support	HD Audio, Realtek® ALC283 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / monaural digital microphone, combo audio/mic jack																	
Keyboard	ThinkPad Windows keyboard, 6-row, multimedia Fn keys																	
Touchpad	Buttonless touchpad below keyboard, multi-touch																	
ThinkLight™	None																	

See footnotes for more detailed information

(MR1W-1) © Lenovo

ThinkPad 11e 20D9 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	Top color	Camera	Finger-print reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20D90009US	Cel N2920	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 64	1-depot	No	05/14
20D9000MUS	Cel N2920	No	Intel HD	4GBx1	11.6" HD	320G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 64	1-depot	No	05/14
20D9000GUS	Cel N2920	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 P64	1-depot	No	05/14
20D9000AUS	Cel N2930	No	Intel HD	4GBx1	11.6" HD	320G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 64	1-depot	No	09/14
20D9000NUS	Cel N2930	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 64	1-depot	No	09/14
20D9000FUS	Cel N2930	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 P64	1-depot	No	09/14
20D90015US	Cel N2940	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 ac+BT	Black	720p	None	4	45W	Win8.1 P64	1-depot	No	12/14
20D90017US	Cel N2940	No	Intel HD	4GBx1	11.6" HD	320G 7200	7260 ac+BT	Black	720p	None	4	45W	Win8.1 P64	1-depot	No	12/14
20D9001EUS	Cel N2940	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 ac+BT	Black	720p	None	4	45W	Win8.1 64	1-depot	No	02/15
20D9001HUS	Cel N2940	No	Intel HD	4GBx1	11.6" HD	320G 7200	7260 ac+BT	Black	720p	None	4	45W	Win8.1 64	1-depot	No	02/15

Processor	Intel® Celeron® processor N2920, N2930, or N2940							Chipset	Intel SoC (System on Chip) platform			
	Processor Number	# of Cores	# of Threads	Base Frequency	Burst Frequency	Cache	Memory Speed	Processor Graphics	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
	N2920	4	4	1.86 GHz	2 GHz	2MB	DDR3L-1066	Intel HD graphics	Ports	One USB 3.0, one powered USB 2.0, HDMI, Ethernet (RJ-45)		
	N2930			1.83 GHz	2.16 GHz		Control buttons		Power button, volume control button			
	N2940			1.83 GHz	2.25 GHz		WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card			
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket							WWAN	None			
Optical Storage	None Some: SSD / SATA 3.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™							Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter			
Widescreen display	11.6" (295mm) HD (1366x768) , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio							Ethernet	Realtek RTL8111GUS-CG Gigabit Network Connection			
Multi-touch	None							NFC	None			
Hinge	Normal hinge, 180 degree							Security	Power-on password, hard disk password, supervisor password, security keyhole			
Camera (optional)	HD720p resolution, low light sensitive							Security chip	None			
Graphics	Intel HD Graphics in processor, supports external digital monitor via HDMI™ supports dual independent display; <i>Max resolution: 1920x1080 (HDMI) @60Hz</i>							vPro (optional)	None			
Dimensions ³	11.6W" (WxDxH): 11.81" x 8.50" x 0.88"; 300mm x 216mm x 22.3mm							Fingerprint reader	None			
Weight ²	from 3.28 lb (1.49kg)							Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available <i>For Lenovo service upgrade options, please go to QP-TA sheet</i>			
Case color	Display cover: Graphite Black or Silver Bottom: Graphite Black							Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit • Lenovo Solution Center • ThinkVantage Product Recovery • Rescue and Recovery™ • ThinkVantage System Update • Lenovo Reach • PC Device Stage • Nitro Pro • Evernote® • Skype™ • Microsoft® Office preloaded; purchase a product key to activate			
Case material	Display cover: PolyCarbonate/Glass-Fiber Reinforced Plastic; Bottom: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic								Some: Windows 8.1 64-bit Some: Windows 8.1 Pro 64-bit • Lenovo Solution Center • Lenovo Support - Metro • Lenovo QuickCast - Metro • Lenovo Companion - Metro • ThinkVantage System Update • Lenovo Reach • Hightail - Metro • PC Device Stage • AccuWeather • Amazon Kindle • Nitro Pro • Evernote • Skype • Rara Streaming • Norton Studio • Microsoft Office preloaded; purchase a product key to activate • Norton Internet Security (30 days of virus definitions)			
Battery type	Integrated Lithium Ion 4-cell (35Wh)											
Max battery life ¹⁰	Models	Windows 7	Windows 8									
	MobileMark® 2007	7.0 hr	-									
	MobileMark 2012	6.0 hr	6.5 hr									
AC adapter	45-watt AC adapter							Environment	EPEAT™ Gold; ENERGY STAR® 6.0; GREENGUARD®; RoHS-compliant			
Audio support	HD Audio, Realtek® ALC283 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / monaural digital microphone, combo audio/mic jack											
Keyboard	ThinkPad Windows keyboard, 6-row, multimedia Fn keys											
Touchpad	Buttonless touchpad below keyboard, multi-touch											
ThinkLight™	None											

See footnotes for more detailed information

(MR1W-2) © Lenovo

ThinkPad 11e 20DA

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	Top color	Camera	Finger-print reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20DA000QUS	Cel N2920	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 DG Win7	1-depot	No	05/14
20DA000RUS	Cel N2920	No	Intel HD	4GBx1	11.6" HD	320G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 DG Win7	1-depot	No	05/14
20DA000SUS	Cel N2920	No	Intel HD	4GBx1	11.6" HD	128G SSD	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 DG Win7	1-depot	No	05/14
20DA000GUS	Cel N2930	No	Intel HD	4GBx1	11.6" HD	320G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 DG Win7	1-depot	No	09/14
20DA000JUS	Cel N2930	No	Intel HD	4GBx1	11.6" HD	128G SSD	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 DG Win7	1-depot	No	09/14
20DA000MUS	Cel N2930	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 DG Win7	1-depot	No	09/14
20DA001UUS	Cel N2940	No	Intel HD	4GBx1	11.6" HD	320G 7200	7260 ac+BT	Black	720p	None	4	45W	Win8.1 DG Win7	1-depot	No	12/14
20DA001YUS	Cel N2940	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 ac+BT	Black	720p	None	4	45W	Win8.1 DG Win7	1-depot	No	12/14
20DA0020US	Cel N2940	No	Intel HD	4GBx1	11.6" HD	128G SSD	7260 ac+BT	Black	720p	None	4	45W	Win8.1 DG Win7	1-depot	No	12/14

Processor	Intel® Celeron® processor N2920, N2930, or N2940							Chipset	Intel SoC (System on Chip) platform			
	Processor Number	# of Cores	# of Threads	Base Frequency	Burst Frequency	Cache	Memory Speed	Processor Graphics	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
	N2920	4	4	1.86 GHz	2 GHz	2MB	DDR3L-1066	Intel HD graphics	Ports	One USB 3.0, one powered USB 2.0, HDMI, Ethernet (RJ-45)		
	N2930			1.83 GHz	2.16 GHz		DDR3L-1333		Control buttons	Power button, volume control button		
	N2940			1.83 GHz	2.25 GHz		WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card			
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket							WWAN	None			
Optical Storage	None Some: SSD / SATA 3.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™							Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter			
Widescreen display	11.6" (295mm) HD (1366x768) , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio							Ethernet	Realtek RTL8111GUS-CG Gigabit Network Connection			
Multi-touch	None							NFC	None			
Hinge	Normal hinge, 180 degree							Security	Power-on password, hard disk password, supervisor password, security keyhole			
Camera (optional)	HD720p resolution, low light sensitive							Security chip	None			
Graphics	Intel HD Graphics in processor, supports external digital monitor via HDMI™ supports dual independent display; <i>Max resolution: 1920x1080 (HDMI) @60Hz</i>							vPro (optional)	None			
Dimensions ³	11.6W" (WxDxH): 11.81" x 8.50" x 0.88"; 300mm x 216mm x 22.3mm							Fingerprint reader	None			
Weight ²	from 3.28 lb (1.49kg)							Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available <i>For Lenovo service upgrade options, please go to QP-TA sheet</i>			
Case color	Display cover: Graphite Black or Silver Bottom: Graphite Black							Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit • Lenovo Solution Center • Lenovo Vantage Product Recovery • Rescue and Recovery™ • ThinkVantage System Update • Lenovo Reach • PC Device Stage • Nitro Pro • Evernote® • Skype™ • Microsoft® Office preloaded; purchase a product key to activate			
Case material	Display cover: PolyCarbonate/Glass-Fiber Reinforced Plastic; Bottom: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic								Some: Windows 8.1 64-bit Some: Windows 8.1 Pro 64-bit • Lenovo Solution Center • Lenovo Support - Metro • Lenovo QuickCast - Metro • Lenovo Companion - Metro • ThinkVantage System Update • Lenovo Reach • Hightail - Metro • PC Device Stage • AccuWeather • Amazon Kindle • Nitro Pro • Evernote • Skype • Rara Streaming • Norton Studio • Microsoft Office preloaded; purchase a product key to activate • Norton Internet Security (30 days of virus definitions)			
Battery type	Integrated Lithium Ion 4-cell (35Wh)											
Max battery life ¹⁰	Models	Windows 7	Windows 8									
	MobileMark® 2007	7.0 hr	-									
	MobileMark 2012	6.0 hr	6.5 hr									
AC adapter	45-watt AC adapter							Environment	EPEAT™ Gold; ENERGY STAR® 6.0; GREENGUARD®; RoHS-compliant			
Audio support	HD Audio, Realtek® ALC283 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / monaural digital microphone, combo audio/mic jack											
Keyboard	ThinkPad Windows keyboard, 6-row, multimedia Fn keys											
Touchpad	Buttonless touchpad below keyboard, multi-touch											
ThinkLight™	None											

See footnotes for more detailed information

(MR1W-3) © Lenovo

ThinkPad 11e 20DA (Windows 8)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	Top color	Camera	Finger-print reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20DA000TUS	Cel N2920	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 64	1-depot	No	05/14
20DA000UUS	Cel N2920	No	Intel HD	4GBx1	11.6" HD	320G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 64	1-depot	No	05/14
20DA000VUS	Cel N2920	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 P64	1-depot	No	05/14
20DA000WUS	Cel N2920	No	Intel HD	4GBx1	11.6" HD	320G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 P64	1-depot	No	05/14
20DA000XUS	Cel N2920	No	Intel HD	4GBx1	11.6" HD	128G SSD	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 P64	1-depot	No	05/14
20DA0004US	Cel N2930	No	Intel HD	4GBx1	11.6" HD	320G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 64	1-depot	No	09/14
20DA000NUS	Cel N2930	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 64	1-depot	No	09/14
20DA000AUS	Cel N2930	No	Intel HD	4GBx1	11.6" HD	320G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 P64	1-depot	No	09/14
20DA000BUS	Cel N2930	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 P64	1-depot	No	09/14
20DA000CUS	Cel N2930	No	Intel HD	4GBx1	11.6" HD	128G SSD	7260 a/b/g/n+BT	Black	720p	None	4	45W	Win8.1 P64	1-depot	No	09/14
20DA001VUS	Cel N2940	No	Intel HD	4GBx1	11.6" HD	128G SSD	7260 ac+BT	Black	720p	None	4	45W	Win8.1 P64	1-depot	No	12/14
20DA001WUS	Cel N2940	No	Intel HD	4GBx1	11.6" HD	500G 7200	7260 ac+BT	Black	720p	None	4	45W	Win8.1 P64	1-depot	No	12/14
20DA001XUS	Cel N2940	No	Intel HD	4GBx1	11.6" HD	320G 7200	7260 ac+BT	Black	720p	None	4	45W	Win8.1 P64	1-depot	No	12/14

Processor	Intel® Celeron® processor N2920, N2930, or N2940							Chipset	Intel SoC (System on Chip) platform			
	Processor Number	# of Cores	# of Threads	Base Frequency	Burst Frequency	Cache	Memory Speed	Processor Graphics	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
	N2920	4	4	1.86 GHz	2 GHz	2MB	DDR3L-1066	Intel HD graphics	Ports	One USB 3.0, one powered USB 2.0, HDMI, Ethernet (RJ-45)		
	N2930			1.83 GHz	2.16 GHz		Control buttons		Power button, volume control button			
	N2940			1.83 GHz	2.25 GHz		WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card			
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket							WWAN	None			
Optical Storage	None Some: SSD / SATA 3.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™							Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter			
Widescreen display	11.6" (295mm) HD (1366x768) , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio							Ethernet	Realtek RTL8111GUS-CG Gigabit Network Connection			
Multi-touch	None							NFC	None			
Hinge	Normal hinge, 180 degree							Security	Power-on password, hard disk password, supervisor password, security keyhole			
Camera (optional)	HD720p resolution, low light sensitive							Security chip	None			
Graphics	Intel HD Graphics in processor, supports external digital monitor via HDMI™ supports dual independent display; <i>Max resolution: 1920x1080 (HDMI) @60Hz</i>							vPro (optional)	None			
Dimensions ³	11.6W" (WxDxH): 11.81" x 8.50" x 0.88"; 300mm x 216mm x 22.3mm							Fingerprint reader	None			
Weight ²	from 3.28 lb (1.49kg)							Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available <i>For Lenovo service upgrade options, please go to QP-TA sheet</i>			
Case color	Display cover: Graphite Black or Silver Bottom: Graphite Black							Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit			
Case material	Display cover: PolyCarbonate/Glass-Fiber Reinforced Plastic; Bottom: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic								<ul style="list-style-type: none"> • Lenovo Solution Center • Lenovo Support - Metro • Lenovo QuickCast - Metro • Lenovo Companion - Metro • ThinkVantage System Update • ThinkVantage System Update • Lenovo Reach • PC Device Stage • Nitro Pro • Evernote® • Skype™ • Microsoft® Office preloaded; purchase a product key to activate 			
Battery type	Integrated Lithium Ion 4-cell (35Wh)								<ul style="list-style-type: none"> • Some: Windows 8.1 64-bit • Some: Windows 8.1 Pro 64-bit • Lenovo Solution Center • Lenovo Support - Metro • Lenovo QuickCast - Metro • Lenovo Companion - Metro • ThinkVantage System Update • ThinkVantage System Update • Lenovo Reach • Hightail - Metro • PC Device Stage • AccuWeather • Amazon Kindle • Nitro Pro • Evernote • Skype • Rara Streaming • Norton Studio • Microsoft Office preloaded; purchase a product key to activate • Norton Internet Security (30 days of virus definitions) 			
Max battery life ¹⁰	Models	Windows 7	Windows 8					Environment	EPEAT™ Gold; ENERGY STAR® 6.0; GREENGUARD®; RoHS-compliant			
	MobileMark® 2007	7.0 hr	-									
	MobileMark 2012	6.0 hr	6.5 hr									
AC adapter	45-watt AC adapter											
Audio support	HD Audio, Realtek® ALC283 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / monaural digital microphone, combo audio/mic jack											
Keyboard	ThinkPad Windows keyboard, 6-row, multimedia Fn keys											
Touchpad	Buttonless touchpad below keyboard, multi-touch											
ThinkLight™	None											

See footnotes for more detailed information

(MR1W-4) © Lenovo



Lenovo® ThinkPad 11e Chromebook



Lenovo ThinkPad 11e Chromebook



Lenovo ThinkPad 11e Chromebook

ThinkPad 11e Chromebook 20DU (TopSeller)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	Top color	Camera	Finger-print reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20DU0003US	Cel N2930	No	Intel HD	4GBx1	11.6" HD	16GB eMMC	7260 ac+BT	Black	720p	None	4	45W	Google Chrome	1-depot	No	06/14
20DU0009US	Cel N2940	No	Intel HD	4GBx1	11.6" HD	16GB eMMC	7260 ac+BT	Black	720p	None	4	45W	Google Chrome	1-depot	No	12/14

Processor	Intel® Celeron® processor N2920, N2930, or N2940							Audio support	HD Audio, Maxim MAX98090AETL+T codec / stereo speakers, 2W x 2 / monaural digital microphone, combo audio/mic jack								
	Processor Number	# of Cores	# of Threads	Base Frequency	Burst Frequency	Cache	Memory Speed	Processor Graphics	Keyboard	ThinkPad Chrome keyboard, 6-row, multimedia Fn keys							
	N2920	4	4	1.86 GHz	2 GHz	2MB	DDR3L-1066	Intel HD graphics	Touchpad	Buttonless touchpad below keyboard, multi-touch							
	N2930			1.83 GHz	2.16 GHz		DDR3L-1333		ThinkLight™	None							
	N2940			1.83 GHz	2.25 GHz												
Memory	2GB or 4GB / DDR3L-1600MHz / soldered to systemboard, no sockets								Chipset	Intel SoC (System on Chip) platform							
Optical Storage	None								Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)							
Widescreen display	11.6" (295mm) HD (1366x768) , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio								Ports	One USB 3.0, one USB 2.0, HDMI							
Multi-touch	None								Control buttons	Power button, volume control button							
Hinge	Normal hinge, 180 degree								WLAN ⁴	<i>11a/b/g/n+BT</i> : ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT, M.2 card							
Camera	HD720p resolution, low light sensitive								WWAN	<i>7260 ac+BT</i> : Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card							
Graphics	Intel HD Graphics in processor, supports external digital monitor via HDMI™ supports dual independent display; <i>Max resolution</i> : 1920x1080 (HDMI) @60Hz								Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter							
									Ethernet	None							
									NFC	None							
Dimensions ³	<i>11.6W"</i> (WxDxH): 11.81" x 8.50" x 0.88"; 300mm x 216mm x 22.3mm								Security	Security keyhole							
Weight ²	from 3.09 lb (1.4kg)								Security chip	Trusted Platform Module, TCG 1.2-compliant							
Case color	<i>Display cover</i> : Graphite Black or Silver <i>Bottom</i> : Graphite Black								vPro (optional)	None							
Case material	<i>Display cover</i> : PolyCarbonate/Glass-Fiber Reinforced Plastic; <i>Bottom</i> : PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic								Fingerprint reader	None							
Battery type	Integrated Lithium Ion 4-cell (35Wh)								Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available <i>For Lenovo service upgrade options, please go to QP-TA sheet</i>							
Max battery life ¹⁰	more than 8 hours								Preload	Google Chrome OS							
AC adapter	45-watt AC adapter								Environment	EPEAT™ Gold; ENERGY STAR® 6.0; GREENGUARD®; RoHS-compliant							

See footnotes for more detailed information

(MR1C-1) © Lenovo

ThinkPad 11e Chromebook 20DB

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Storage	WLAN & Bluetooth	Top color	Camera	Finger-print reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20DB0006US	Cel N2930	No	Intel HD	2GBx1	11.6" HD	16GB eMMC	7260 ac+BT	Black	720p	None	4	45W	Google Chrome	1-depot	No	06/14
20DB0007US	Cel N2930	No	Intel HD	4GBx1	11.6" HD	16GB eMMC	7260 ac+BT	Black	720p	None	4	45W	Google Chrome	1-depot	No	06/14
20DB000FUS	Cel N2940	No	Intel HD	4GBx1	11.6" HD	16GB eMMC	7260 ac+BT	Black	720p	None	4	45W	Google Chrome	1-depot	No	12/14

Processor	Intel® Celeron® processor N2920, N2930, or N2940								Audio support	HD Audio, Maxim MAX98090AETL+T codec / stereo speakers, 2W x 2 / monaural digital microphone, combo audio/mic jack							
	Processor Number	# of Cores	# of Threads	Base Frequency	Burst Frequency	Cache	Memory Speed	Processor Graphics	Keyboard	ThinkPad Chrome keyboard, 6-row, multimedia Fn keys							
	N2920	4	4	1.86 GHz	2 GHz	2MB	DDR3L-1066	Intel HD graphics	Touchpad	Buttonless touchpad below keyboard, multi-touch							
	N2930			1.83 GHz	2.16 GHz		DDR3L-1333		ThinkLight™	None							
	N2940			1.83 GHz	2.25 GHz												
Memory	2GB or 4GB / DDR3L-1600MHz / soldered to systemboard, no sockets																
Optical Storage	None 16GB eMMC (embedded Multi Media Card) flash memory on board																
Widescreen display	11.6" (295mm) HD (1366x768) , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio																
Multi-touch	None																
Hinge	Normal hinge, 180 degree																
Camera	HD720p resolution, low light sensitive																
Graphics	Intel HD Graphics in processor, supports external digital monitor via HDMI™ supports dual independent display; <i>Max resolution: 1920x1080 (HDMI) @60Hz</i>								Chipset	Intel SoC (System on Chip) platform							
									Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)							
									Ports	One USB 3.0, one USB 2.0, HDMI							
									Control buttons	Power button, volume control button							
									WLAN ⁴	<i>11a/b/g/n+BT</i> : ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT, M.2 card <i>7260 ac+BT</i> : Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card							
									WWAN	None							
									Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter							
									Ethernet	None							
									NFC	None							
									Security	Security keyhole							
									Security chip	Trusted Platform Module, TCG 1.2-compliant							
									vPro (optional)	None							
									Fingerprint reader	None							
Dimensions ³	<i>11.6W"</i> (WxDxH): 11.81" x 8.50" x 0.88"; 300mm x 216mm x 22.3mm																
Weight ²	from 3.09 lb (1.4kg)																
Case color	<i>Display cover</i> : Graphite Black or Silver <i>Bottom</i> : Graphite Black																
Case material	<i>Display cover</i> : PolyCarbonate/Glass-Fiber Reinforced Plastic; <i>Bottom</i> : PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic																
Battery type	Integrated Lithium Ion 4-cell (35Wh)																
Max battery life ¹⁰	more than 8 hours																
AC adapter	45-watt AC adapter																
									Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available <i>For Lenovo service upgrade options, please go to QP-TA sheet</i>							
									Preload	Google Chrome OS							
									Environment	EPEAT™ Gold; ENERGY STAR® 6.0; GREENGUARD®; RoHS-compliant							

See footnotes for more detailed information

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Lenovo® ThinkPad X240



Lenovo ThinkPad X240



Lenovo ThinkPad X240



Lenovo ThinkPad X240



Lenovo ThinkPad X240

ThinkPad X240 Platform Specifications

Product Specifications Reference (PSREF)

Positioning	Ultraportable Ultrabook™ or Thinbook; one spindle							WLAN ⁴	One of the following, configurable by model: <ul style="list-style-type: none"> ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card Intel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card 																															
Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor							<table border="1"> <thead> <tr> <th>Processor Number</th> <th># of Cores</th> <th># of Threads</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> <th>Processor Graphics</th> </tr> </thead> <tbody> <tr> <td>i3-4010U</td> <td rowspan="5">2</td> <td rowspan="5">4</td> <td>1.7 GHz</td> <td>-</td> <td>3MB</td> <td rowspan="5">DDR3L-1600</td> <td rowspan="5">Intel HD graphics 4400</td> </tr> <tr> <td>i5-4200U</td> <td>1.6 GHz</td> <td>2.6 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4210U</td> <td>1.7 GHz</td> <td>2.7 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4300U</td> <td>1.9 GHz</td> <td>2.9 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-4600U</td> <td>2.1 GHz</td> <td>3.3 GHz</td> <td>4MB</td> </tr> </tbody> </table>	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics	i3-4010U	2	4	1.7 GHz	-	3MB	DDR3L-1600	Intel HD graphics 4400	i5-4200U	1.6 GHz	2.6 GHz	3MB	i5-4210U	1.7 GHz	2.7 GHz	3MB	i5-4300U	1.9 GHz	2.9 GHz	3MB	i7-4600U	2.1 GHz	3.3 GHz	4MB
Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics																																	
i3-4010U	2	4	1.7 GHz	-	3MB	DDR3L-1600	Intel HD graphics 4400																																	
i5-4200U			1.6 GHz	2.6 GHz	3MB																																			
i5-4210U			1.7 GHz	2.7 GHz	3MB																																			
i5-4300U			1.9 GHz	2.9 GHz	3MB																																			
i7-4600U			2.1 GHz	3.3 GHz	4MB																																			
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket							WWAN (optional)	One of the following, configurable by model (mutually exclusive with M.2 SSD): <ul style="list-style-type: none"> Wireless WAN upgradable Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 card (US models) Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card (WE models) Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card (WE models) 																															
Optical Storage	None <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ <i>Some:</i> SSHD with 8GB NAND flash memory							SIM card (optional)	One of the following, configurable by model: <ul style="list-style-type: none"> AT&T® or Verizon® LTE (4G), contract required with service provider (US models) Lenovo SIM, out-of-box service, pay-as-you-go via credit card, no contract required (WE models) User selectable, contract required with service provider 																															
M.2 SSD	<i>Some:</i> Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader <i>Some:</i> Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card							Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																															
Widescreen display	<i>Some:</i> 12.5" (317.5mm) HD (1366x768) , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio, TN <i>Some:</i> 12.5" (317.5mm) HD (1366x768) , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS <i>Some:</i> 12.5" (317.5mm) FHD (1920x1080) , anti-glare, LED backlight, 400 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS							Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)																															
Multi-touch	<i>Some:</i> Capacitive-type multi-touch, supports 10-finger gesture							NFC	Optional: Near Field Communication																															
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus							Security chip	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant																															
Graphics	Intel HD Graphics 4400 in processor, supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays; <i>Max resolution:</i> 3840x2160@30Hz (DP via mDP cable); 1920x1200@60Hz (VGA)							vPro (optional)	Intel vPro Technology																															
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch							Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor																															
ThinkLight™	None							Limited warranty ¹²	One of the following, configurable by model: <ul style="list-style-type: none"> 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service²⁴ 3-year/1-yr battery limited onsite service, IWS (International Warranty Service¹⁷) 																															
Dimensions ³	12.5W" (WxDxH): 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm 12.5W" MultiTouch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm							Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <ul style="list-style-type: none"> Lenovo Solution Center ThinkVantage Product Recovery Rescue and Recovery™ ThinkVantage System Update Lenovo Cloud Storage by SugarSync PC Device Stage Nitro Pro Evernote® Skype™ Microsoft® Office preloaded; purchase a product key to activate Norton™ Internet Security (30 days of virus definitions) 																															
Weight ²	<table border="1"> <thead> <tr> <th>Models</th> <th>No + 3-cell</th> <th>No + 6-cell</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell</th> </tr> </thead> <tbody> <tr> <td>Non-MultiTouch</td> <td>2.88 lb / 1.31kg</td> <td>3.23 lb / 1.47kg</td> <td>3.13 lb / 1.42kg</td> <td>3.48 lb / 1.58kg</td> </tr> <tr> <td>MultiTouch</td> <td>-</td> <td>-</td> <td>3.29 lb / 1.49kg</td> <td>3.64 lb / 1.65kg</td> </tr> </tbody> </table>							Models	No + 3-cell	No + 6-cell	3-cell + 3-cell	3-cell + 6-cell	Non-MultiTouch	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg	3.48 lb / 1.58kg	MultiTouch	-	-	3.29 lb / 1.49kg	3.64 lb / 1.65kg		<i>Some:</i> Windows 8 / 8.1 64-bit <i>Some:</i> Windows 8 / 8.1 Pro 64-bit <ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support Lenovo Companion ThinkVantage System Update Lenovo Reach (Windows 8.1 model) Hightail - Metro (Windows 8.1 model) Lenovo Cloud Storage by SugarSync - Metro (Windows 8 model) Lenovo Cloud Storage by SugarSync (Windows 8 model) PC Device Stage AccuWeather Amazon Kindle Nitro Pro Evernote Skype Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) 																
Models	No + 3-cell	No + 6-cell	3-cell + 3-cell	3-cell + 6-cell																																				
Non-MultiTouch	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg	3.48 lb / 1.58kg																																				
MultiTouch	-	-	3.29 lb / 1.49kg	3.64 lb / 1.65kg																																				
Case material	Glass-Fiber Reinforced Plastic							Environment	EPEAT™ Gold; ENERGY STAR® 6.0; GREENGUARD®; RoHS-compliant																															
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication																																							
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication																																							
Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Battery configuration</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell 47.5Wh</th> <th>3-cell + 6-cell 72Wh</th> </tr> </thead> <tbody> <tr> <td>Battery life</td> <td>8.7 hr</td> <td>13.1 hr</td> <td>17.4 hr</td> </tr> </tbody> </table>							Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh	Battery life	8.7 hr	13.1 hr	17.4 hr																									
Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh																																					
Battery life	8.7 hr	13.1 hr	17.4 hr																																					
AC adapter	45-watt AC adapter																																							
Chipset	Intel SoC (System on Chip) platform																																							
Smart card reader	Optional: Smart card reader, exclusive with M.2 SSD																																							
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																							
Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector																																							
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack																																							

ThinkPad X240 20AL (TopSeller)

Product Specifications Reference (PSREF)

Model	Processor vPro	Graphics	Memory	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit keyboard	Fingerprint reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AL00FRUS	i3-4010U	No	HD 4400 4GBx1	12.5" HD	No	500G 7200	7260 b/g/n+BT	Upg	None	None	None	None	Finger	None	3+3	45W	Win8 DG Win7	1-depot	No	20/14
20AL00FSUS	i3-4010U	No	HD 4400 4GBx1	12.5" HD	No	500G 7200	7260 b/g/n+BT	Upg	None	None	None	None	Finger	None	No+6(47.5wh)	45W	Win8 DG Win7	1-depot	No	20/14
20AL00FTUS	i3-4010U	No	HD 4400 4GBx1	12.5" HD	No	180G SSD Opal	7260 b/g/n+BT	Upg	None	None	None	None	Finger	None	3+3	45W	Win8 DG Win7	1-depot	No	20/14
20AL008WUS	i5-4200U	No	HD 4400 4GBx1	12.5" HD	No	500G 7200	7260 b/g/n+BT	Upg	None	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 DG Win7	3-depot	No	20/13
20AL008XUS	i5-4200U	No	HD 4400 4GBx1	12.5" HD	No	500G 7200	7260 b/g/n+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13
20AL008YUS	i5-4300U vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13
20AL0090US	i5-4300U vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 DG Win7	3-depot	No	20/13
20AL0091US	i5-4300U vPro	HD 4400	8GBx1	12.5" HD IPS	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13
20AL0096US	i5-4300U vPro	HD 4400	8GBx1	12.5" HD IPS	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13
20AL0097US	i5-4300U vPro	HD 4400	4GBx1	12.5" HD	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13
20AL0098US	i5-4300U vPro	HD 4400	4GBx1	12.5" HD	No	128G SSD	7260 ac+BT	Upg	None	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 DG Win7	3-depot	No	20/13
20AL0099US	i5-4300U vPro	HD 4400	4GBx1	12.5" HD	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 DG Win7	3-depot	No	20/13
20AL009AUS	i5-4300U vPro	HD 4400	4GBx1	12.5" HD	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13
20AL009BUS	i5-4300U vPro	HD 4400	8GBx1	12.5" HD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13
20AL009EUS	i5-4300U vPro	HD 4400	8GBx1	12.5" HD IPS	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13
20AL009FUS	i5-4300U vPro	HD 4400	4GBx1	12.5" HD	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13
20AL009HUS	i5-4300U vPro	HD 4400	4GBx1	12.5" HD	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 DG Win7	3-depot	No	20/13
20AL009JUS	i5-4300U vPro	HD 4400	8GBx1	12.5" HD IPS	No	512G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/14
20AL0092US	i7-4600U vPro	HD 4400	8GBx1	12.5" HD IPS	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13
20AL0093US	i7-4600U vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13
20AL0094US	i7-4600U vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 DG Win7	3-depot	No	20/13

• For detailed platform specifications, please see [ThinkPad X240 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor					Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack					
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				
	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600	ThinkLight™	None				
	i5-4200U		1.6 GHz	2.6 GHz	3MB		Chipset	Intel SoC (System on Chip) platform				
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Smart card reader	Optional: Smart card reader				
	i7-4600U		2.1 GHz	3.3 GHz	4MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)				
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket					Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector					
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory					WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card					
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card					WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS					
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768), 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080), 400 nits, 700:1 contrast ratio, IPS					SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider					
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture					Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication					
Graphics	Intel HD Graphics 4400 in processor					NFC	None					
Dimensions ³	12.5W" (WxDxH): 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm 12.5W" MultiTouch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm					Security	Power-on password, hard disk password, supervisor password, security keyhole					
Weight ²	Models	3-cell only	6-cell only	3-cell + 3-cell	3-cell + 6-cell	Security chip	Trusted Platform Module, TCG 1.2-compliant					
	Non-MultiTouch	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg	3.48 lb / 1.58kg	vPro (optional)	Intel vPro Technology					
	MultiTouch	-	-	3.29 lb / 1.49kg	3.64 lb / 1.65kg	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor					
Case material	Glass-Fiber Reinforced Plastic					Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit					
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication					Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite					
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication											
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell	47.5Wh	3-cell + 6-cell	72Wh						
	Battery life	8.7 hr	13.1 hr		17.4 hr							
AC adapter	45-watt AC adapter											

See footnotes for more detailed information

(WV1-1) © Lenovo

ThinkPad X240 20AL (TopSeller) - II

Product Specifications Reference (PSREF)

Model	Processor vPro	Graphics	Memory	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AL0095US	i7-4600U vPro	HD 4400	8GBx1	12.5" HD IPS	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13
20AL009CUS	i7-4600U vPro	HD 4400	8GBx1	12.5" HD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13
20AL009DUS	i7-4600U vPro	HD 4400	8GBx1	12.5" HD IPS	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13
20AL009GUS	i7-4600U vPro	HD 4400	4GBx1	12.5" HD	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/13
20AL00FKUS	i7-4600U vPro	HD 4400	8GBx1	12.5" HD IPS	No	512G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/14
20AL00FLUS	i7-4600U vPro	HD 4400	8GBx1	12.5" FHD IPS	MT	512G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 DG Win7	3-depot	No	20/14

• For detailed platform specifications, please see [ThinkPad X240 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor					Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack							
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard UltraNav™ TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch ThinkLight™ None	Chipset Intel SoC (System on Chip) platform Smart card reader Optional: Smart card reader Multicard reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Ports Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector	WLAN ⁴ 11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card	WWAN (optional) Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS	SIM card (optional) AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider	Bluetooth™ Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Ethernet Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) NFC Optional: Near Field Communication	Security Power-on password, hard disk password, supervisor password, security keyhole Security chip Trusted Platform Module, TCG 1.2-compliant vPro (optional) Intel vPro Technology Fingerprint reader Optional: Fingerprint reader on the keyboard bezel, swipe sensor	Preload Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit
	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600								
	i5-4200U		1.6 GHz	2.6 GHz	3MB									
	i5-4300U		1.9 GHz	2.9 GHz	3MB									
i7-4600U	2.1 GHz		3.3 GHz	4MB										
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket													
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory													
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card													
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768), 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080), 400 nits, 700:1 contrast ratio, IPS													
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture													
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Graphics	Intel HD Graphics 4400 in processor													
Dimensions ³	12.5W" (WxDxH): 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm 12.5W" MultiTouch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm													
Weight ²	Models	3-cell only	6-cell only	3-cell + 3-cell	3-cell + 6-cell									
	Non-MultiTouch	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg	3.48 lb / 1.58kg									
	MultiTouch	-	-	3.29 lb / 1.49kg	3.64 lb / 1.65kg									
Case material	Glass-Fiber Reinforced Plastic													
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication													
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication													
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell	47.5Wh	3-cell + 6-cell	72Wh								
	Battery life	8.7 hr	13.1 hr	17.4 hr										
AC adapter	45-watt AC adapter					Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite								

See footnotes for more detailed information

(WV1-2) © Lenovo

ThinkPad X240 20AL (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Glob-al	Ann date (m/y)
20AL00D9US	i5-4200U	No	HD 4400	4GBx1	12.5" FHD IPS	MT	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	20/14
20AL008GUS	i5-4200U	No	HD 4400	4GBx1	12.5" HD IPS	MT	500G 7200	7260 b/g/n+BT	Upg	None	16GB	720p	None	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AL008HUS	i5-4200U	No	HD 4400	4GBx1	12.5" HD IPS	MT	128G SSD	7260 b/g/n+BT	Upg	None	None	720p	None	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AL00D3US	i5-4300U	vPro	HD 4400	4GBx1	12.5" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	20/14
20AL00D4US	i5-4300U	vPro	HD 4400	4GBx1	12.5" FHD IPS	MT	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	20/14
20AL008JUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	MT	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AL008KUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	MT	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AL008NUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AL008PUS	i5-4300U	vPro	HD 4400	8GBx1	12.5" HD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AL009JUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	MT	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AL00D5US	i7-4600U	vPro	HD 4400	8GBx1	12.5" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	20/14
20AL00D7US	i7-4600U	vPro	HD 4400	8GBx1	12.5" FHD IPS	MT	512G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	No	20/14
20AL008LUS	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD IPS	MT	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AL008MUS	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AL008QUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" HD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AL008RUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" HD IPS	MT	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AL009KUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" HD IPS	MT	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13

• For detailed platform specifications, please see [ThinkPad X240 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor					Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack							
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache		Memory Speed	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch					
	i3-4010U	2	1.7 GHz	-	3MB		DDR3L-1600		ThinkLight™ None	Chipset Intel SoC (System on Chip) platform Optional: Smart card reader Multicard reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Ports Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector				
	i5-4200U		1.6 GHz	2.6 GHz	3MB									
i5-4300U	1.9 GHz		2.9 GHz	3MB										
i7-4600U	2.1 GHz		3.3 GHz	4MB										
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket					WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card							
Optical Storage	None Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card						WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS						
M.2 SSD								SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider					
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768), 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080), 400 nits, 700:1 contrast ratio, IPS Some: Capacitive-type multi-touch, supports 10-finger gesture								Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter				
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture					Ethernet				Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)				
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						NFC			Optional: Near Field Communication				
Graphics	Intel HD Graphics 4400 in processor							Security		Power-on password, hard disk password, supervisor password, security keyhole				
Dimensions ³	12.5W" (WxDxH): 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm 12.5W" MultiTouch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm								Security chip	Trusted Platform Module, TCG 1.2-compliant				
Weight ²	Models	3-cell only	6-cell only	3-cell + 3-cell	3-cell + 6-cell	vPro (optional)				Intel vPro Technology				
	Non-MultiTouch	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg	3.48 lb / 1.58kg		Fingerprint reader			Optional: Fingerprint reader on the keyboard bezel, swipe sensor				
	MultiTouch	-	-	3.29 lb / 1.49kg	3.64 lb / 1.65kg			Preload		Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit				
Case material	Glass-Fiber Reinforced Plastic								Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite					
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication													
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication													
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell	47.5Wh	3-cell + 6-cell	72Wh								
AC adapter	Battery life	8.7 hr		13.1 hr		17.4 hr								
	45-watt AC adapter													

See footnotes for more detailed information

(WV1-3) © Lenovo

ThinkPad X240 20AM (Windows 8)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells(adapter (int+ext))	Power (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AM009FUS	i5-4300U	vPro	HD 4400	8GBx1	12.5" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AM009JUS	i5-4300U	vPro	HD 4400	8GBx1	12.5" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AM009KUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AM009MUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" FHD IPS	MT	128G SSD	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AM009PUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" FHD IPS	MT	500G 7200	7260 ac+BT	Upp	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AM00AMUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	180G SSD Opal	7260 a/b/g/n+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AM00ANUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 a/b/g/n+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AM00AQUS	i5-4300U	vPro	HD 4400	8GBx1	12.5" HD IPS	No	180G SSD Opal	7260 a/b/g/n+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AM0014US	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	MT	500G 7200	7260 ac+BT	Upp	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM0016US	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 ac+BT	Upp	None	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 P64	3-depot	Yes	20/13
20AM0019US	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 ac+BT	Upp	None	16GB	720p	None	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM001CUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	MT	128G SSD	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM001FUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	128G SSD	7260 ac+BT	Upp	None	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 P64	3-depot	Yes	20/13
20AM001JUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	No	500G 7200	7260 ac+BT	Upp	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM001VUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	128G SSD	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM004MUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	No	180G SSD Opal	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM004RUS	i5-4300U	vPro	HD 4400	8GBx1	12.5" HD IPS	No	180G SSD Opal	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM004TUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	180G SSD Opal	7260 ac+BT	Upp	None	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 P64	3-depot	Yes	20/13
20AM004VUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	180G SSD Opal	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM004YUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 ac+BT	EM7355	Select	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM0052US	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	128G SSD	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13

• For detailed platform specifications, please see [ThinkPad X240 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor					Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack					
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				
	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600	ThinkLight™	None				
	i5-4200U		1.6 GHz	2.6 GHz	3MB		Chipset	Intel SoC (System on Chip) platform				
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Smart card reader	Optional: Smart card reader				
	i7-4600U		2.1 GHz	3.3 GHz	4MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)				
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket					Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector					
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory					WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card					
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card					WWAN (optional)	Upp: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS					
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768), 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080), 400 nits, 700:1 contrast ratio, IPS					SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider					
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture					Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)					
Graphics	Intel HD Graphics 4400 in processor					NFC	Optional: Near Field Communication					
Dimensions ³	12.5W" (WxDxH): 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm 12.5W" MultiTouch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm					Security	Power-on password, hard disk password, supervisor password, security keyhole					
Weight ²	Models	3-cell only	6-cell only	3-cell + 3-cell	3-cell + 6-cell	Security chip	Trusted Platform Module, TCG 1.2-compliant					
	Non-MultiTouch	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg	3.48 lb / 1.58kg	vPro (optional)	Intel vPro Technology					
	MultiTouch	-	-	3.29 lb / 1.49kg	3.64 lb / 1.65kg	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor					
Case material	Glass-Fiber Reinforced Plastic					Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit					
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication						Win8 / 8.1 64: Windows 8 / 8.1 64-bit					
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication						Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit					
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell	47.5Wh	3-cell + 6-cell	72Wh						
	Battery life	8.7 hr	13.1 hr		17.4 hr							
AC adapter	45-watt AC adapter					Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite						

See footnotes for more detailed information

(WV1-4) © Lenovo

ThinkPad X240 20AM (Windows 8) - II

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells(adapter (int+ext))	Power (watt)	Preload	Base warranty (year)	Glob-al	Ann date (m/y)
20AM0054US	i5-4300U	vPro	HD 4400	8GBx1	12.5" HD IPS	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM0057US	i5-4300U	vPro	HD 4400	8GBx1	12.5" HD	No	180G SSD Opal	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM0059US	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 ac+BT	EM7355	Select	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 P64	3-depot	Yes	20/13
20AM0060US	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 P64	3-depot	No	20/13
20AM0061US	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AM0066US	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AM006FUS	i5-4300U	vPro	HD 4400	8GBx1	12.5" HD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AM009RUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" FHD IPS	MT	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AM009UUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AM009XUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AM009YUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" FHD IPS	MT	180G SSD Opal	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AM00APUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" HD IPS	No	180G SSD Opal	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AM00ARUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" HD IPS	No	256G SSD eDrive	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-depot	Yes	20/14
20AM001BUS	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD IPS	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM001DUS	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM001KUS	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD IPS	MT	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM001LUS	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 P64	3-depot	Yes	20/13
20AM001QUS	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD IPS	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM004LUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" HD IPS	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM0053US	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD IPS	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM005AUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" HD IPS	MT	180G SSD Opal	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13

• For detailed platform specifications, please see [ThinkPad X240 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor					Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack					
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				
	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600	ThinkLight™	None				
	i5-4200U		1.6 GHz	2.6 GHz	3MB		Chipset	Intel SoC (System on Chip) platform				
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Smart card reader	Optional: Smart card reader				
	i7-4600U		2.1 GHz	3.3 GHz	4MB		Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)				
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket					Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector					
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory					WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card					
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card					WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS					
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768), 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080), 400 nits, 700:1 contrast ratio, IPS					SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider					
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture					Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)					
Graphics	Intel HD Graphics 4400 in processor					NFC	Optional: Near Field Communication					
Dimensions ³	12.5W" (WxDxH): 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm 12.5W" MultiTouch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm					Security	Power-on password, hard disk password, supervisor password, security keyhole					
Weight ²	Models	3-cell only	6-cell only	3-cell + 3-cell	3-cell + 6-cell	Security chip	Trusted Platform Module, TCG 1.2-compliant					
	Non-MultiTouch	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg	3.48 lb / 1.58kg	vPro (optional)	Intel vPro Technology					
	MultiTouch	-	-	3.29 lb / 1.49kg	3.64 lb / 1.65kg	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor					
Case material	Glass-Fiber Reinforced Plastic					Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit					
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication						Win8 / 8.1 64: Windows 8 / 8.1 64-bit					
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication						Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit					
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell	47.5Wh	3-cell + 6-cell	72Wh						
	Battery life	8.7 hr	13.1 hr		17.4 hr							
AC adapter	45-watt AC adapter					Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite					

See footnotes for more detailed information

(WV1-5) © Lenovo

ThinkPad X240 20AM (Windows 8) - III

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells(adapter (int+ext))	Power (watt)	Preload	Base warranty (year)	Glob-al	Ann date (m/y)
20AM005BUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" HD IPS	MT	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	Yes	20/13
20AM0062US	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AM0069US	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AM006AUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" HD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13
20AM006GUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" HD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-depot	No	20/13

• For detailed platform specifications, please see [ThinkPad X240 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Audio support		HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack																																				
	<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr> <td>i3-4010U</td> <td rowspan="4">2</td> <td>1.7 GHz</td> <td>-</td> <td>3MB</td> <td rowspan="4">DDR3L-1600</td> </tr> <tr> <td>i5-4200U</td> <td>1.6 GHz</td> <td>2.6 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-4300U</td> <td>1.9 GHz</td> <td>2.9 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-4600U</td> <td>2.1 GHz</td> <td>3.3 GHz</td> <td>4MB</td> </tr> </tbody> </table>						Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600	i5-4200U	1.6 GHz	2.6 GHz	3MB	i5-4300U	1.9 GHz	2.9 GHz	3MB	i7-4600U	2.1 GHz	3.3 GHz	4MB	Keyboard		6-row, spill-resistant, multimedia Fn keys, optional LED backlight												
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																																							
	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600																																							
	i5-4200U		1.6 GHz	2.6 GHz	3MB																																								
i5-4300U	1.9 GHz		2.9 GHz	3MB																																									
i7-4600U	2.1 GHz		3.3 GHz	4MB																																									
						ThinkLight™		None																																					
						Chipset		Intel SoC (System on Chip) platform																																					
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket						Smart card reader		Optional: Smart card reader																																				
Optical Storage	None						Multicard reader		4-in-1 reader (MMC, SD, SDHC, SDXC)																																				
M.2 SSD	Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high						Ports		Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector																																				
	Some: SSDH with 8GB NAND flash memory						WLAN ⁴		11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card																																				
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768), 200 nits, 300:1 contrast ratio						WWAN (optional)		Upg: Wireless WAN upgradable																																				
Multi-touch	Some: 12.5" (317.5mm) HD (1366x768), 300 nits, 700:1 contrast ratio, IPS						SIM card (optional)		AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider																																				
	Some: 12.5" (317.5mm) FHD (1920x1080), 400 nits, 700:1 contrast ratio, IPS						Bluetooth™		Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																				
Camera (optional)	Some: Capacitive-type multi-touch, supports 10-finger gesture						Ethernet		Non-vPro model: Intel Ethernet Connection I218-V (Clarkville)																																				
Graphics	Intel HD Graphics 4400 in processor						vPro model:		Intel Ethernet Connection I218-LM (Clarkville)																																				
Dimensions ³	12.5W" (WxDxH): 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm						NFC		Optional: Near Field Communication																																				
	12.5W" MultiTouch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm						Security		Power-on password, hard disk password, supervisor password, security keyhole																																				
Weight ²	<table border="1"> <thead> <tr> <th>Models</th> <th>3-cell only</th> <th>6-cell only</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell</th> </tr> </thead> <tbody> <tr> <td>Non-MultiTouch</td> <td>2.88 lb / 1.31kg</td> <td>3.23 lb / 1.47kg</td> <td>3.13 lb / 1.42kg</td> <td>3.48 lb / 1.58kg</td> </tr> <tr> <td>MultiTouch</td> <td>-</td> <td>-</td> <td>3.29 lb / 1.49kg</td> <td>3.64 lb / 1.65kg</td> </tr> </tbody> </table>						Models	3-cell only	6-cell only	3-cell + 3-cell	3-cell + 6-cell	Non-MultiTouch	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg	3.48 lb / 1.58kg	MultiTouch	-	-	3.29 lb / 1.49kg	3.64 lb / 1.65kg	Security chip		Trusted Platform Module, TCG 1.2-compliant																					
	Models	3-cell only	6-cell only	3-cell + 3-cell	3-cell + 6-cell																																								
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Case material	Glass-Fiber Reinforced Plastic						Fingerprint reader		Optional: Fingerprint reader on the keyboard bezel, swipe sensor																																				
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication						Preload		Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit																																				
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication								Win8 / 8.1 P64: Windows 8 / 8.1 64-bit																																				
Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Battery configuration</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell</th> <th>47.5Wh</th> <th>3-cell + 6-cell</th> <th>72Wh</th> </tr> </thead> <tbody> <tr> <td>Battery life</td> <td>8.7 hr</td> <td>13.1 hr</td> <td></td> <td>17.4 hr</td> <td></td> </tr> </tbody> </table>						Battery configuration	3-cell + 3-cell	3-cell + 6-cell	47.5Wh	3-cell + 6-cell	72Wh	Battery life	8.7 hr	13.1 hr		17.4 hr				Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit																								
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Battery life	8.7 hr	13.1 hr		17.4 hr																																									
AC adapter	45-watt AC adapter						Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite																																						

See footnotes for more detailed information

(WV1-6) © Lenovo

ThinkPad X240 20AM (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells(adapter (int+ext))	Power (watt)	Preload	Base warranty (year)	Glob-al	Ann date (m/y)
20AM009GUS	i5-4300U	vPro	HD 4400	8GBx1	12.5" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-onsite	Yes	20/14
20AM009HUS	i5-4300U	vPro	HD 4400	8GBx1	12.5" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-onsite	Yes	20/14
20AM009LUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-onsite	Yes	20/14
20AM009NUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" FHD IPS	MT	128G SSD	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-onsite	Yes	20/14
20AM009QUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" FHD IPS	MT	500G 7200	7260 ac+BT	Upp	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-onsite	Yes	20/14
20AM001AUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	MT	128G SSD	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM001HUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	128G SSD	7260 ac+BT	Upp	None	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 P64	3-onsite	Yes	20/13
20AM001SUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	MT	500G 7200	7260 ac+BT	Upp	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM001UUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	No	128G SSD	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM004PUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	180G SSD Opal	7260 ac+BT	Upp	None	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 P64	3-onsite	Yes	20/13
20AM004HUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	No	180G SSD Opal	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM004SUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 ac+BT	EM7355	Select	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM004UUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	128G SSD	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM004XUS	i5-4300U	vPro	HD 4400	8GBx1	12.5" HD IPS	No	180G SSD Opal	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM0050US	i5-4300U	vPro	HD 4400	8GBx1	12.5" HD IPS	No	180G SSD Opal	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM0055US	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	180G SSD Opal	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM0056US	i5-4300U	vPro	HD 4400	8GBx1	12.5" HD	No	180G SSD Opal	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM0058US	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 ac+BT	EM7355	Select	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 P64	3-onsite	Yes	20/13
20AM0064US	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	No	256G SSD eDrive	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	No	20/13
20AM0065US	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	256G SSD eDrive	7260 ac+BT	Upp	None	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 P64	3-onsite	No	20/13
20AM0067US	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	MT	256G SSD eDrive	7260 ac+BT	Upp	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	No	20/13

• For detailed platform specifications, please see [ThinkPad X240 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor					Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack					
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				
	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600	ThinkLight™	None				
	i5-4200U		1.6 GHz	2.6 GHz	3MB							
	i5-4300U		1.9 GHz	2.9 GHz	3MB							
	i7-4600U		2.1 GHz	3.3 GHz	4MB							
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket					Chipset	Intel SoC (System on Chip) platform					
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory					Smart card reader	Optional: Smart card reader					
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card					Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)					
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768), 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080), 400 nits, 700:1 contrast ratio, IPS					Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector					
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture					WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card					
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					WWAN (optional)	Upp: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS					
Graphics	Intel HD Graphics 4400 in processor					SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider					
Dimensions ³	12.5W" (WxDxH): 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm 12.5W" MultiTouch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm					Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					
Weight ²	Models	3-cell only	6-cell only	3-cell + 3-cell	3-cell + 6-cell	Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication					
	Non-MultiTouch	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg	3.48 lb / 1.58kg	NFC						
	MultiTouch	-	-	3.29 lb / 1.49kg	3.64 lb / 1.65kg	Security	Power-on password, hard disk password, supervisor password, security keyhole					
Case material	Glass-Fiber Reinforced Plastic					Security chip	Trusted Platform Module, TCG 1.2-compliant					
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication					vPro (optional)	Intel vPro Technology					
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication					Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor					
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell	47.5Wh	3-cell + 6-cell	72Wh	Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit				
AC adapter	45-watt AC adapter						Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite					

See footnotes for more detailed information

(WV1-7) © Lenovo

ThinkPad X240 20AM (Onsite) - Windows 8 - II

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit keyboard	Fingerprint reader	NFC	Battery cells(adapter (int+ext))	Power (watt)	Preload	Base warranty (year)	Glob-al	Ann date (m/y)
20AM006DUS	i5-4300U	vPro	HD 4400	8GBx1	12.5" HD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	No	20/13
20AM006EUS	i5-4300U	vPro	HD 4400	8GBx1	12.5" HD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	No	20/13
20AM009SUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" FHD IPS	MT	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-onsite	Yes	20/14
20AM009TUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-onsite	Yes	20/14
20AM009VUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" FHD IPS	MT	256G SSD eDrive	7260 ac+BT	EM7355 Select	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-onsite	Yes	20/14
20AM009WUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" FHD IPS	MT	180G SSD Opal	7260 ac+BT	EM7355 Select	None	None	720p	Backlit	Finger	None	3+3	45W	Win8.1 P64	3-onsite	Yes	20/14
20AM0011US	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD IPS	MT	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM0012US	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD IPS	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM0015US	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM001MUS	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD IPS	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM001PUS	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 P64	3-onsite	Yes	20/13
20AM004NUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" HD IPS	MT	256G SSD eDrive	7260 ac+BT	EM7355 Select	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM004WUS	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD IPS	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM0051US	i7-4600U	vPro	HD 4400	8GBx1	12.5" HD IPS	MT	180G SSD Opal	7260 ac+BT	EM7355 Select	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM005CUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" HD IPS	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	Yes	20/13
20AM0063US	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	No	20/13
20AM0068US	i7-4600U	vPro	HD 4400	4GBx1	12.5" HD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	No	20/13
20AM006BUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" HD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	No	20/13
20AM006CUS	i7-4600U	vPro	HD 4400	8GBx1	12.5" HD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite	No	20/13

• For detailed platform specifications, please see [ThinkPad X240 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor					Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack					
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				
	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600	ThinkLight™	None				
	i5-4200U		1.6 GHz	2.6 GHz	3MB							
	i5-4300U		1.9 GHz	2.9 GHz	3MB							
	i7-4600U		2.1 GHz	3.3 GHz	4MB							
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket					Chipset	Intel SoC (System on Chip) platform					
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory					Smart card reader	Optional: Smart card reader					
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card					Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)					
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768), 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080), 400 nits, 700:1 contrast ratio, IPS					Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector					
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture					WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card					
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS					
Graphics	Intel HD Graphics 4400 in processor					SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider					
Dimensions ³	12.5W" (WxDxH): 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm 12.5W" MultiTouch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm					Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					
Weight ²	Models	3-cell only	6-cell only	3-cell + 3-cell	3-cell + 6-cell	Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication					
	Non-MultiTouch	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg	3.48 lb / 1.58kg	NFC						
	MultiTouch	-	-	3.29 lb / 1.49kg	3.64 lb / 1.65kg	Security	Power-on password, hard disk password, supervisor password, security keyhole					
Case material	Glass-Fiber Reinforced Plastic					Security chip	Trusted Platform Module, TCG 1.2-compliant					
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication					vPro (optional)	Intel vPro Technology					
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication					Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor					
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell	47.5Wh	3-cell + 6-cell	72Wh	Preload					
	Battery life	8.7 hr	13.1 hr		17.4 hr	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit						
AC adapter	45-watt AC adapter					Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite						

See footnotes for more detailed information

(WV1-8) © Lenovo

ThinkPad X240 20AM (Onsite) - Windows 8 - III

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN / M.2 SSD	SIM card	Smart card reader / M.2 SSD	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20AM001NUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD IPS	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite IWS	Yes	20/13
20AM001RUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 ac+BT	Upg	None	16GB	720p	Backlit	Finger	None	3+3	45W	Win8 P64	3-onsite IWS	Yes	20/13
20AM001TUS	i5-4300U	vPro	HD 4400	4GBx1	12.5" HD	No	500G 7200	7260 ac+BT	Upg	None	None	720p	None	Finger	None	No+6(72wh)	45W	Win8 P64	3-onsite IWS	Yes	20/13

• For detailed platform specifications, please see [ThinkPad X240 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor						Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack					
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch					
	i3-4010U	2	1.7 GHz	-	3MB	DDR3L-1600	ThinkLight™	None					
	i5-4200U		1.6 GHz	2.6 GHz	3MB								
	i5-4300U		1.9 GHz	2.9 GHz	3MB								
i7-4600U	2.1 GHz		3.3 GHz	4MB									
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket						Chipset	Intel SoC (System on Chip) platform					
Optical Storage	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory						Smart card reader	Optional: Smart card reader					
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 card slot, exclusive with Smart card reader Some: Double-sided M.2 SSD, via M.2 card slot, exclusive with WWAN card						Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)					
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768) , 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768) , 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080) , 400 nits, 700:1 contrast ratio, IPS						Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector					
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture						WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card					
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus						WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS					
Graphics	Intel HD Graphics 4400 in processor						SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider					
Dimensions ³	12.5W" (WxDxH): 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm 12.5W" MultiTouch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm						Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					
Weight ²	Models	3-cell only	6-cell only	3-cell + 3-cell	3-cell + 6-cell		Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)					
	Non-MultiTouch	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg	3.48 lb / 1.58kg		NFC	Optional: Near Field Communication					
	MultiTouch	-	-	3.29 lb / 1.49kg	3.64 lb / 1.65kg		Security	Power-on password, hard disk password, supervisor password, security keyhole					
Case material	Glass-Fiber Reinforced Plastic						Security chip	Trusted Platform Module, TCG 1.2-compliant					
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication						vPro (optional)	Intel vPro Technology					
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication						Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor					
Max battery life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell	47.5Wh	3-cell + 6-cell	72Wh	Preload	Win8 / 8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit					
	Battery life	8.7 hr	13.1 hr		17.4 hr		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite					

See footnotes for more detailed information

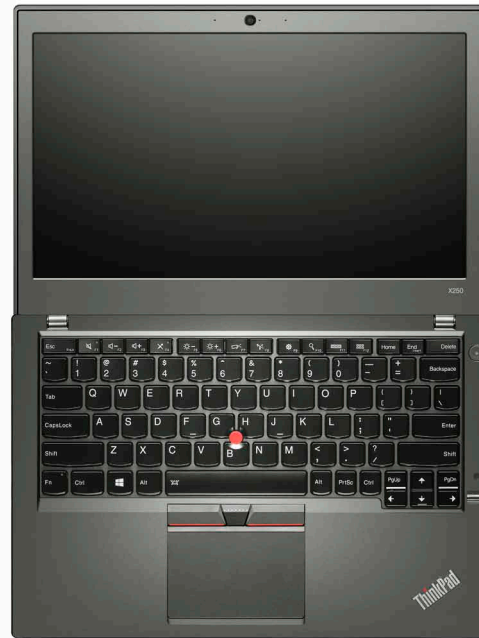
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Lenovo® ThinkPad X250



Lenovo ThinkPad X250



Lenovo ThinkPad X250



Lenovo ThinkPad X250



Lenovo ThinkPad X250

ThinkPad X250 Platform Specifications

Product Specifications Reference (PSREF)

Processor	5th Generation Intel® Core™ i3 / i5 / i7 Processor								Smart card reader <i>Optional</i> : Smart card reader																				
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																			
	i3-5010U	2	4	2.1 GHz	-	3MB	DDR3L-1600	Intel HD Graphics 5500	Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector																			
	i5-5200U			2.2 GHz	2.7 GHz	3MB			Camera (<i>optional</i>)	HD720p resolution, low light sensitive, fixed focus																			
	i5-5300U			2.3 GHz	2.9 GHz	3MB			Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1.5W x 2 / dual array microphone, combo audio/microphone jack																			
i7-5600U	2.6 GHz			3.2 GHz	4MB	Keyboard			6-row, spill-resistant, multimedia Fn keys, optional LED backlight																				
Graphics	Intel HD Graphics 5500 in processor, supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays; Max resolution: 3840x2160@30Hz (DP via mDP cable); 1920x1200@60Hz (VGA)								UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch																			
Chipset	Intel SoC (System on Chip) platform								Security	Power-on password, hard disk password, supervisor password, security keyhole																			
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket								Security chip	Trusted Platform Module, TCG 1.2-compliant																			
Display	<i>Some</i> : 12.5" (317.5mm) HD (1366x768), anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio								ThinkEngine	Delivers improved thermal and power efficiency, up to 30 day standby, faster resume time, enhanced security, as well as anti-tampering measures																			
	<i>Some</i> : 12.5" (317.5mm) HD (1366x768), anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS								vPro (<i>optional</i>)	Intel vPro Technology																			
	<i>Some</i> : 12.5" (317.5mm) FHD (1920x1080), anti-glare, LED backlight, 400 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS								Fingerprint reader	<i>Optional</i> : Fingerprint reader on the keyboard bezel, swipe sensor																			
Multi-touch (<i>opt</i>)	Capacitive-type multi-touch, supports 10-finger gesture, 270 or 360 nits								Internal battery	<i>Optional</i> : Integrated Li-Ion or Li-Polymer 3-cell (23Wh)																			
Storage	<i>Some</i> : SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable								External battery	Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)																			
	<i>Some</i> : HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™								Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Models</th> <th>No + 3-cell</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell 48Wh</th> <th>3-cell + 6-cell 72Wh</th> </tr> </thead> <tbody> <tr> <td>Battery life</td> <td>5.2 hr</td> <td>10.7 hr</td> <td>16.0 hr</td> <td>21.4 hr</td> </tr> </tbody> </table>					Models	No + 3-cell	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh	Battery life	5.2 hr	10.7 hr	16.0 hr	21.4 hr					
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M.2 SSD (<i>opt</i>)	M.2 Solid State Drive (SSD), via M.2 card slot								AC adapter	45W AC adapter																			
Optical	None								Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit <ul style="list-style-type: none"> Lenovo Solution Center Lenovo SHAREit Lenovo Companion ThinkVantage Product Recovery Rescue and Recovery™ ThinkVantage System Update PC Device Stage Adobe® Reader® Evernote® Skype™ Maxthon Cloud Browser Microsoft® Office preloaded; purchase a product key to activate Norton™ Internet Security (30 days of virus definitions) 																			
Ethernet	<i>Non-vPro model</i> : Intel Ethernet Connection I218-V (Clarkville)									<i>Some</i> : Windows 8.1 64-bit																			
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter									<i>Some</i> : Windows 8.1 Pro 64-bit																			
WLAN ⁴	<i>One of the following, configurable by model</i> : <ul style="list-style-type: none"> 11b/g/n, ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card 11b/g/n, Intel Wireless-N 7265, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card 11a/b/g/n, Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT adapter, M.2 card 11ac, Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT adapter, M.2 card 									<ul style="list-style-type: none"> Lenovo Solution Center Lenovo SHAREit Lenovo Companion ThinkVantage System Update PC Device Stage Weather Channel Evernote Maxthon Cloud Browser Bing Translator Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) 																			
WWAN (<i>optional</i>)	<i>One of the following, configurable by model</i> : <ul style="list-style-type: none"> Wireless WAN upgradable Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card 								Limited warranty ¹²	<i>One of the following, configurable by model</i> : <ul style="list-style-type: none"> 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service²⁴ 3-year/1-yr battery limited onsite service, IWS (International Warranty Service¹⁷) 																			
SIM card (<i>opt</i>)	AT&T® or Verizon® LTE (4G), contract required with service provider								Environment	EPEAT™ Gold (US) or EPEAT Silver (WE); ENERGY STAR® 6.1; GREENGUARD®; RoHS-compliant																			
Dimensions ³	12.5" (WxDxH): 12.0" x 8.21" x 0.80"; 305.5mm x 208.5mm x 20.3mm																												
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Case material	<i>Display cover</i> : Glass-Fiber Reinforced Plastic (non-touch model) or Carbon-Fiber Reinforced Plastic (multi-touch model); <i>Bottom</i> : Glass-Fiber Reinforced Plastic																												

ThinkPad X250 20CM (TopSeller)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit keyboard	Fingerprint reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20CM002XUS	i5-5200U	No	HD 5500	8GBx1	12.5" HD	No	500G 5400	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CM0036US	i5-5200U	No	HD 5500	4GBx1	12.5" HD	No	500G 5400	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CM002VUS	i5-5300U	vPro	HD 5500	4GBx1	12.5" HD	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	No+6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20CM002YUS	i5-5300U	vPro	HD 5500	8GBx1	12.5" HD	No	500G 5400	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CM0030US	i5-5300U	vPro	HD 5500	4GBx1	12.5" HD	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CM0031US	i5-5300U	vPro	HD 5500	4GBx1	12.5" HD	No	500G 5400	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CM0032US	i5-5300U	vPro	HD 5500	8GBx1	12.5" HD	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	No+6(48wh)	45W	Win8.1 DG Win7	3-depot	No	01/15
20CM0033US	i5-5300U	vPro	HD 5500	8GBx1	12.5" HD	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CM0034US	i5-5300U	vPro	HD 5500	4GBx1	12.5" HD	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CM0035US	i5-5300U	vPro	HD 5500	4GBx1	12.5" HD IPS	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20CM002WUS	i7-5600U	vPro	HD 5500	8GBx1	12.5" HD	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad X250 Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i3 / i5 / i7 Processor	Dimensions ³	12.5" (WxDxH): 12.0" x 8.21" x 0.80"; 305.5mm x 208.5mm x 20.3mm 12.5" Touch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm																																										
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Graphics	Intel HD Graphics 5500 in processor	Case material	Display cover: Glass-Fiber Reinforced Plastic (non-touch model) or Carbon-Fiber Reinforced Plastic (multi-touch model); Bottom: Glass-Fiber Reinforced Plastic																																										
Chipset	Intel SoC (System on Chip) platform	Smart card reader	Optional: Smart card reader																																										
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																										
Display	Some: 12.5" (317.5mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768), 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080), 400 nits, 700:1 contrast ratio, IPS	Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector																																										
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 270 or 360 nits	Camera (optional)	HD720p resolution, low light sensitive, fixed focus																																										
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory	Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1.5W x 2 / dual array microphone, combo audio/microphone jack																																										
M.2 SSD (opt)	M.2 Solid State Drive (SSD), via M.2 card slot	Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight																																										
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WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card	vPro (optional)	Intel vPro Technology																																										
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor																																										
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23Wh)																																										
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		Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																										

See footnotes for more detailed information

(WV2-1) © Lenovo

ThinkPad X250 20CL

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit keyboard	Fingerprint reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Glob- al	Ann date (m/y)	
20CL0019US	i5-5300U	vPro	HD 5500	4GBx1	12.5" HD IPS	No	500G 5400	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7	3-depot	No	01/15
20CL001AUS	i5-5300U	vPro	HD 5500	8GBx1	12.5" HD	No	500G 5400	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	No+6(48wh)	45W	Win8.1 DG	Win7	3-depot	No	01/15
20CL001HUS	i5-5300U	vPro	HD 5500	4GBx1	12.5" HD	No	500G 5400	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	No+6(48wh)	45W	Win8.1 DG	Win7	3-depot	No	01/15
20CL001KUS	i5-5300U	vPro	HD 5500	4GBx1	12.5" HD	No	500G 5400	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG	Win7	3-depot	No	01/15
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Chipset	Intel SoC (System on Chip) platform	Smart card reader	Optional: Smart card reader																																										
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																										
Display	Some: 12.5" (317.5mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768), 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080), 400 nits, 700:1 contrast ratio, IPS	Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector																																										
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 270 or 360 nits	Camera (optional)	HD720p resolution, low light sensitive, fixed focus																																										
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory	Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1.5W x 2 / dual array microphone, combo audio/microphone jack																																										
M.2 SSD (opt)	M.2 Solid State Drive (SSD), via M.2 card slot	Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight UltraNav™																																										
Optical	None	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch																																										
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)	Security	Power-on password, hard disk password, supervisor password, security keyhole																																										
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Security chip	Trusted Platform Module, TCG 1.2-compliant																																										
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card	vPro (optional)	Intel vPro Technology																																										
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor																																										
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23Wh)																																										
		External battery	Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)																																										
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		Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit																																										
		Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																										

ThinkPad X250 20CL (Onsite)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit keyboard	Fingerprint reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Glob- al	Ann date (m/y)
20CL001DUS	i5-5300U	vPro	HD 5500	8GBx1	12.5" HD IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20CL001FUS	i5-5300U	vPro	HD 5500	8GBx1	12.5" HD IPS	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20CL001GUS	i5-5300U	vPro	HD 5500	4GBx1	12.5" HD	No	500G 7200	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20CL001JUS	i5-5300U	vPro	HD 5500	8GBx1	12.5" HD	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20CL001NUS	i5-5300U	vPro	HD 5500	8GBx1	12.5" HD IPS	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20CL001BUS	i7-5600U	vPro	HD 5500	8GBx1	12.5" HD IPS	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite	Yes	01/15
20CL001LUS	i7-5600U	vPro	HD 5500	8GBx1	12.5" HD IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite	Yes	01/15

• For detailed platform specifications, please see [ThinkPad X250 Platform Specifications](#) sheet

Processor	5th Generation Intel® Core™ i3 / i5 / i7 Processor	Dimensions ³	12.5" (WxDxH): 12.0" x 8.21" x 0.80"; 305.5mm x 208.5mm x 20.3mm 12.5" Touch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm																																										
	<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr> <td>i3-5010U</td> <td rowspan="5">2</td> <td>2.1 GHz</td> <td>-</td> <td>3MB</td> <td rowspan="5">DDR3L-1600</td> </tr> <tr> <td>i5-5200U</td> <td>2.2 GHz</td> <td>2.7 GHz</td> <td>3MB</td> </tr> <tr> <td>i5-5300U</td> <td>2.3 GHz</td> <td>2.9 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-5600U</td> <td>2.6 GHz</td> <td>3.2 GHz</td> <td>4MB</td> </tr> </tbody> </table>	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	i3-5010U	2	2.1 GHz	-	3MB	DDR3L-1600	i5-5200U	2.2 GHz	2.7 GHz	3MB	i5-5300U	2.3 GHz	2.9 GHz	3MB	i7-5600U	2.6 GHz	3.2 GHz	4MB	Weight ²	<table border="1"> <thead> <tr> <th>Models</th> <th>No + 3-cell</th> <th>3-cell + 3-cell</th> <th>No + 6-cell</th> <th>3-cell + 6-cell</th> </tr> </thead> <tbody> <tr> <td>Non-touch</td> <td>2.88 lb / 1.31 kg</td> <td>3.13 lb / 1.42 kg</td> <td>3.23 lb / 1.47 kg</td> <td>3.48 lb / 1.58 kg</td> </tr> <tr> <td>Multi-touch</td> <td>-</td> <td>3.29 lb / 1.49 kg</td> <td>-</td> <td>3.64 lb / 1.65 kg</td> </tr> </tbody> </table>				Models	No + 3-cell	3-cell + 3-cell	No + 6-cell	3-cell + 6-cell	Non-touch	2.88 lb / 1.31 kg	3.13 lb / 1.42 kg	3.23 lb / 1.47 kg	3.48 lb / 1.58 kg	Multi-touch	-	3.29 lb / 1.49 kg	-	3.64 lb / 1.65 kg
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Multi-touch	-	3.29 lb / 1.49 kg	-	3.64 lb / 1.65 kg																																									
Graphics	Intel HD Graphics 5500 in processor	Case material	Display cover: Glass-Fiber Reinforced Plastic (non-touch model) or Carbon-Fiber Reinforced Plastic (multi-touch model); Bottom: Glass-Fiber Reinforced Plastic																																										
Chipset	Intel SoC (System on Chip) platform	Smart card reader	Optional: Smart card reader																																										
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket	Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																										
Display	Some: 12.5" (317.5mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768), 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080), 400 nits, 700:1 contrast ratio, IPS	Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector																																										
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 270 or 360 nits	Camera (optional)	HD720p resolution, low light sensitive, fixed focus																																										
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory	Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1.5W x 2 / dual array microphone, combo audio/microphone jack																																										
M.2 SSD (opt)	M.2 Solid State Drive (SSD), via M.2 card slot	Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight																																										
Optical	None	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch																																										
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)	Security	Power-on password, hard disk password, supervisor password, security keyhole																																										
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Security chip	Trusted Platform Module, TCG 1.2-compliant																																										
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card	vPro (optional)	Intel vPro Technology																																										
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor																																										
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23Wh)																																										
		External battery	Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)																																										
		Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Models</th> <th>No + 3-cell</th> <th>3-cell + 3-cell</th> <th>3-cell + 6-cell 48Wh</th> <th>3-cell + 6-cell 72Wh</th> </tr> </thead> <tbody> <tr> <td>Battery life</td> <td>5.2 hr</td> <td>10.7 hr</td> <td>16.0 hr</td> <td>21.4 hr</td> </tr> </tbody> </table>				Models	No + 3-cell	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh	Battery life	5.2 hr	10.7 hr	16.0 hr	21.4 hr																													
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		AC adapter	45W AC adapter																																										
		Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit																																										
		Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																										

See footnotes for more detailed information

(WV2-3) © Lenovo

ThinkPad X250 20CL (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Camera	Backlit keyboard	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20CL001CUS	i5-5300U	vPro	HD 5500	8GBx1	12.5" HD IPS	MT	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 P64	3-onsite	Yes	01/15
20CL001EUS	i7-5600U	vPro	HD 5500	8GBx1	12.5" HD IPS	MT	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 P64	3-onsite	Yes	01/15

• For detailed platform specifications, please see [ThinkPad X250 Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i3 / i5 / i7 Processor						Dimensions ³ 12.5" (WxDxH): 12.0" x 8.21" x 0.80"; 305.5mm x 208.5mm x 20.3mm 12.5" Touch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm	Weight ²					
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed			Models	No + 3-cell	3-cell + 3-cell	No + 6-cell	3-cell + 6-cell
	i3-5010U	2	2.1 GHz	-	3MB	DDR3L-1600			Non-touch	2.88 lb / 1.31 kg	3.13 lb / 1.42 kg	3.23 lb / 1.47 kg	3.48 lb / 1.58 kg
	i5-5200U		2.2 GHz	2.7 GHz	3MB				Multi-touch	-	3.29 lb / 1.49 kg	-	3.64 lb / 1.65 kg
i5-5300U	2.3 GHz		2.9 GHz	3MB									
i7-5600U	2.6 GHz		3.2 GHz	4MB									
Graphics	Intel HD Graphics 5500 in processor						Case material	Display cover: Glass-Fiber Reinforced Plastic (non-touch model) or Carbon-Fiber Reinforced Plastic (multi-touch model); Bottom: Glass-Fiber Reinforced Plastic					
Chipset	Intel SoC (System on Chip) platform						Smart card reader	Optional: Smart card reader					
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket						Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)					
Display	Some: 12.5" (317.5mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768), 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080), 400 nits, 700:1 contrast ratio, IPS						Ports	Two USB 3.0 (one Always On), VGA, MiniDP, Ethernet (RJ-45), Dock connector					
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 270 or 360 nits						Camera (optional)	HD720p resolution, low light sensitive, fixed focus					
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: SSHD with 8GB NAND flash memory						Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1.5W x 2 / dual array microphone, combo audio/microphone jack					
M.2 SSD (opt)	M.2 Solid State Drive (SSD), via M.2 card slot						Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight					
Optical	None						UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch					
Ethernet	Intel Ethernet Connection I218-V (Non-vPro model) or I218-LM (vPro model)						Security	Power-on password, hard disk password, supervisor password, security keyhole					
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter						Security chip	Trusted Platform Module, TCG 1.2-compliant					
WLAN ⁴	11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card 7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card						vPro (optional)	Intel vPro Technology					
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card						Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor					
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider						Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23Wh)					
							External battery	Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)					
							Max battery life ¹⁰	Models	No + 3-cell	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh	
								Battery life	5.2 hr	10.7 hr	16.0 hr	21.4 hr	
							AC adapter	45W AC adapter					
							Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit					
							Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS					

See footnotes for more detailed information

(WV2-4) © Lenovo



Lenovo® ThinkPad X1 Carbon (2nd Gen)



Lenovo ThinkPad X1 Carbon (2nd Gen)



Lenovo ThinkPad X1 Carbon (2nd Gen)



Lenovo ThinkPad X1 Carbon (2nd Gen)



Lenovo ThinkPad X1 Carbon (2nd Gen)

ThinkPad X1 Carbon (2nd Gen) Platform Specifications

Product Specifications Reference (PSREF)

Processor	4th Generation Intel® Core™ i5 / i7 Processor								Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array microphone, combo audio/microphone jack	
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	Processor Graphics	WLAN ⁴	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> Intel Wireless-N 7260, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card 	
	i5-4200U	2	4	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	Intel HD Graphics 4400	WWAN (optional)	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> Wireless WAN upgradable Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 card (US models) Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card (WE models) Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card (WE models) 	
	i5-4210U			1.7 GHz	2.7 GHz	3MB					
	i5-4300U			1.9 GHz	2.9 GHz	3MB					
	i7-4600U			2.1 GHz	3.3 GHz	4MB					
Memory	4GB or 8GB / DDR3L-1600MHz / soldered to systemboard, no sockets								SIM card (optional)	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> AT&T® or Verizon® LTE (4G), contract required with service provider (US models) Lenovo SIM, out-of-box service, pay-as-you-go via credit card, no contract required (WE models) User selectable, contract required with service provider 	
Optical Storage	None M.2 Solid State Drive (SSD)								Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	
Widescreen display	<i>Some:</i> 14.0" (355mm) HD+ (1600x900), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> 14.0" (355mm) WQHD (2560x1440), anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS , 170° viewing angle								Ethernet	Ethernet Extension cable	
Multi-touch	<i>Some:</i> Capacitive-type multi-touch, supports 10-finger gesture, 270 nits								NFC	<i>Optional:</i> Near Field Communication	
Camera	HD720p resolution, low light sensitive, face tracking, fixed focus, gesture input								Security	Power-on password, hard disk password, supervisor password, security keyhole, reset switch	
Light sensor	Ambient Light Sensor (Windows 8.1 64-bit only)								Security chip	Trusted Platform Module, TCG 1.2-compliant	
Graphics	Intel HD Graphics 4400 or 5000 in processor, external digital monitor support via Mini DisplayPort or HDMI™ (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable); supports three independent displays; <i>Max resolution:</i> 3840x2160 (Mini DisplayPort)@30Hz; 2880x1620 (HDMI)@60Hz								vPro (optional)	Intel vPro Technology	
Keyboard	Adaptive Keyboard with a dynamically changing row providing additional functionality based on the type of the application active / 5-row, spill-resistant (except Adaptive Keys), LED backlit								Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor	
UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch								Limited warranty ¹²	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service²⁴ 3-year/1-yr battery limited onsite service, IWS (International Warranty Service¹⁷) 	
ThinkLight™	None								Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit <ul style="list-style-type: none"> Lenovo Solution Center ThinkVantage Product Recovery Rescue and Recovery™ ThinkVantage System Update PC Device Stage Adobe® Reader® Nitro Pro Evernote® Microsoft® Office preloaded; purchase a product key to activate Norton™ Internet Security (30 days of virus definitions) 	
Dimensions ³	WQHD (WxDxH):		13.03" x 8.92" x 0.70";		331.0mm x 226.5mm x 17.72mm					<i>Some:</i> Windows 8.1 64-bit <i>Some:</i> Windows 8.1 Pro 64-bit <ul style="list-style-type: none"> Lenovo Solution Center Lenovo Support Lenovo Companion ThinkVantage System Update Hightail - Metro PC Device Stage AccuWeather Amazon Kindle Nitro Pro Rara Streaming Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) 	
	HD+ (WxDxH):		13.03" x 8.93" x 0.71";		331.0mm x 226.8mm x 18.16mm						
	WQHD Touch (WxDxH):		13.03" x 8.94" x 0.73";		331.0mm x 227.1mm x 18.46mm						
Weight ²	Models	WQHD		HD+		WQHD Touch					
	Weight	2.82 lb / 1.28kg		2.96 lb / 1.34kg		3.15 lb / 1.43kg					
Case material	Display cover: Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum										
Battery type	Integrated Lithium Polymer 8-cell (45Wh) RapidCharge battery										
Max battery life ¹⁰	Integrated battery: up to 9 hr										
AC Adapter	45W AC Adapter, 65W Slim AC Adapter, or 65W AC Adapter										
RapidCharge	AC Adapter	45W		65W Slim		65W					
	Charge to 80%	1.0hr		50min		50min					
	Charge to 100%	2.3hr		2.1hr		2.1hr					
Chipset	Intel SoC (System on Chip) platform								Environment	EPEAT™ Gold; ENERGY STAR® 6.0; RoHS-compliant	
Smart card reader	None										
Multicard reader	None										
Ports	Two USB 3.0 (one Always On), MiniDP, HDMI, Ethernet extension connector, Lenovo OneLink connector, Micro-SIM card tray (WWAN upg / WWAN model only)										
Monitor Cable	<i>Some:</i> Mini DisplayPort to VGA Monitor Cable										

ThinkPad X1 Carbon (2nd Gen) 20A7 (TopSeller)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered)	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN	SIM card	Monitor cable	Camera	Backlit keyboard	Fingerprint reader	NFC	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20A7002FUS	i5-4200U	No	HD 4400	4GBx1	14" HD+	No	128G SSD	7260 b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 DG Win7	3-depot	No	01/14
20A7002HUS	i5-4200U	No	HD 4400	4GBx1	14" HD+	No	256G SSD eDrive	7260 b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 DG Win7	3-depot	No	01/14
20A7007GUS	i5-4210U	No	HD 4400	4GBx1	14" HD+	No	128G SSD	7260 b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 DG Win7	3-depot	No	05/14
20A7002JUS	i5-4300U	vPro	HD 4400	4GBx1	14" HD+	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 DG Win7	3-depot	No	01/14
20A7002NUS	i5-4300U	vPro	HD 4400	4GBx1	14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 DG Win7	3-depot	No	01/14
20A7002YUS	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 DG Win7	3-depot	No	01/14
20A70031US	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 DG Win7	3-depot	No	01/14
20A7002LUS	i5-4300U	vPro	HD 4400	8GBx1	14" HD+	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 DG Win7	3-depot	No	01/14
20A70033US	i5-4300U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 DG Win7	3-depot	No	01/14
20A70094US	i5-4300U	vPro	HD 4400	8GBx1	14" HD+	No	512G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 DG Win7	3-depot	No	07/14
20A7002QUS	i7-4600U	vPro	HD 4400	8GBx1	14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 DG Win7	3-depot	No	01/14
20A7002SUS	i7-4600U	vPro	HD 4400	8GBx1	14" HD+	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 DG Win7	3-depot	No	01/14
20A7002UUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 DG Win7	3-depot	No	01/14
20A7002WUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 DG Win7	3-depot	No	01/14
20A70096US	i7-4600U	vPro	HD 4400	8GBx1	14" HD+	No	512G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 DG Win7	3-depot	No	07/14

• For detailed platform specifications, please see [ThinkPad X1 Carbon \(2nd Gen\) Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor					Keyboard	Adaptive Keyboard with a dynamically changing row providing additional functionality based on the type of the application active / 5-row, spill-resistant (except Adaptive Keys), LED backlit					
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch				
	i5-4200U	2	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	ThinkLight™	None				
	i5-4210U		1.7 GHz	2.7 GHz	3MB							
	i5-4300U		1.9 GHz	2.9 GHz	3MB							
	i7-4600U		2.1 GHz	3.3 GHz	4MB							
Memory	4GB or 8GB / DDR3L-1600MHz / soldered to systemboard, no sockets					Chipset	Intel SoC (System on Chip) platform					
Optical	None					Smart card reader	None					
Storage	M.2 Solid State Drive (SSD)					Multicard reader	None					
Widescreen display	<i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 contrast ratio					Ports	Two USB 3.0 (one Always On), MiniDP, HDMI, Ethernet extension connector, Lenovo OneLink connector, Micro-SIM card tray (WWAN upg / WWAN model only)					
Multi-touch	<i>Some:</i> 14.0" (355mm) WQHD (2560x1440) , 300 nits, 700:1 contrast ratio, IPS					Monitor Cable	<i>Some:</i> Mini DisplayPort to VGA Monitor Cable					
Camera	<i>Some:</i> Capacitive-type multi-touch, supports 10-finger gesture, 270 nits					WLAN ⁴	7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card					
Light sensor	HD720p resolution, low light sensitive, face tracking, fixed focus, gesture input					WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS					
Graphics	Intel HD Graphics 4400 or 5000					SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider					
Dimensions ³	WQHD (WxDxH):		13.03" x 8.92" x 0.70";		331.0mm x 226.5mm x 17.72mm		Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter				
	HD+ (WxDxH):		13.03" x 8.93" x 0.71";		331.0mm x 226.8mm x 18.16mm		Ethernet	Ethernet Extension cable				
	WQHD Touch (WxDxH):		13.03" x 8.94" x 0.73";		331.0mm x 227.1mm x 18.46mm		NFC	Optional: Near Field Communication				
Weight ²	Models	WQHD	HD+	WQHD Touch								
	Weight	2.82 lb / 1.28kg	2.96 lb / 1.34kg	3.15 lb / 1.43kg								
Case material	Display cover: Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum					Security	Power-on / hard disk / supervisor password, security keyhole, reset switch					
Battery type	Integrated Lithium Polymer 8-cell (45Wh) RapidCharge battery					Security chip	Trusted Platform Module, TCG 1.2-compliant					
Max battery life ¹⁰	Integrated battery: up to 9 hr					vPro (optional)	Intel vPro Technology					
AC Adapter	45W AC Adapter, 65W Slim AC Adapter, or 65W AC Adapter					Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor					
RapidCharge	AC Adapter	45W	65W Slim	65W								
	Charge to 80%	1.0hr	50min	50min								
	Charge to 100%	2.3hr	2.1hr	2.1hr								
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array microphone, combo audio/microphone jack					Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit					
						Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite					

See footnotes for more detailed information

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ThinkPad X1 Carbon (2nd Gen) 20A7 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (sol-dered)	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN	SIM card	Monitor cable	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20A7006DUS	i5-4200U	No	HD 4400	4GBx1	14" WQHD IPS	MT	128G SSD	7260 ac+BT	None	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	1-depot	No	02/14
20A7006TUS	i5-4200U	No	HD 4400	4GBx1	14" WQHD IPS	MT	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	1-depot	No	03/14
20A7007DUS	i5-4210U	No	HD 4400	4GBx1	14" WQHD IPS	MT	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	1-depot	No	05/14
20A7006RUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	1-depot	No	03/14
20A7003BUS	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	MT	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	No	01/14
20A7003DUS	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	MT	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	No	01/14
20A7003EUS	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	No	180G SSD Opal	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	No	01/14
20A7003GUS	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	No	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	No	01/14
20A70035US	i5-4300U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	No	01/14
20A7003JUS	i5-4300U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	No	01/14
20A70037US	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	No	01/14
20A70039US	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	No	01/14
20A7003LUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	No	01/14
20A7003PUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	180G SSD Opal	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	No	01/14
20A7006VUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	512G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	No	03/14
20A7006WUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	512G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	No	07/14

• For detailed platform specifications, please see [ThinkPad X1 Carbon \(2nd Gen\) Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor						Keyboard		Adaptive Keyboard with a dynamically changing row providing additional functionality based on the type of the application active / 5-row, spill-resistant (except Adaptive Keys), LED backlit												
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	UltraNav™		TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch												
	i5-4200U	2	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	ThinkLight™		None												
	i5-4210U		1.7 GHz	2.7 GHz	3MB		Chipset		Intel SoC (System on Chip) platform												
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Smart card reader		None												
	i7-4600U		2.1 GHz	3.3 GHz	4MB		Multicard reader		None												
Memory	4GB or 8GB / DDR3L-1600MHz / soldered to systemboard, no sockets						Ports		Two USB 3.0 (one Always On), MiniDP, HDMI, Ethernet extension connector, Lenovo OneLink connector, Micro-SIM card tray (WWAN upg / WWAN model only)												
Optical Storage	None M.2 Solid State Drive (SSD)						Monitor Cable		Some: Mini DisplayPort to VGA Monitor Cable												
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 contrast ratio						WLAN ⁴		7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card												
Multi-touch	Some: 14.0" (355mm) WQHD (2560x1440) , 300 nits, 700:1 contrast ratio, IPS						WWAN (optional)		Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS												
Camera	Some: Capacitive-type multi-touch, supports 10-finger gesture, 270 nits						SIM card (optional)		AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider												
Light sensor	HD720p resolution, low light sensitive, face tracking, fixed focus, gesture input						Bluetooth™		Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter												
Light sensor	Ambient Light Sensor (Windows 8.1 64-bit only)						Ethernet		Ethernet Extension cable												
Graphics	Intel HD Graphics 4400 or 5000						NFC		Optional: Near Field Communication												
Dimensions ³	WQHD (WxDxH):		13.03" x 8.92" x 0.70";		331.0mm x 226.5mm x 17.72mm		Security		Power-on / hard disk / supervisor password, security keyhole, reset switch												
	HD+ (WxDxH):		13.03" x 8.93" x 0.71";		331.0mm x 226.8mm x 18.16mm		Security chip		Trusted Platform Module, TCG 1.2-compliant												
	WQHD Touch (WxDxH):		13.03" x 8.94" x 0.73";		331.0mm x 227.1mm x 18.46mm		vPro (optional)		Intel vPro Technology												
Weight ²	Models	WQHD	HD+	WQHD Touch			Fingerprint reader		Fingerprint reader on the keyboard bezel, swipe sensor												
	Weight	2.82 lb / 1.28kg	2.96 lb / 1.34kg	3.15 lb / 1.43kg			Preload		Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 P64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit												
Case material	Display cover: Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum						Limited warranty ¹²		1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite												
Battery type	Integrated Lithium Polymer 8-cell (45Wh) RapidCharge battery																				
Max battery life ¹⁰	Integrated battery: up to 9 hr																				
AC Adapter	45W AC Adapter, 65W Slim AC Adapter, or 65W AC Adapter																				
RapidCharge	AC Adapter	45W	65W Slim	65W																	
	Charge to 80%	1.0hr	50min	50min																	
	Charge to 100%	2.3hr	2.1hr	2.1hr																	
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array microphone, combo audio/microphone jack																				

See footnotes for more detailed information

(MQ1-2) © Lenovo

ThinkPad X1 Carbon (2nd Gen) 20A8 (Windows 8)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered)	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN	SIM card	Monitorable	Camera	Backlit keyboard	Fingerprint reader	NFC	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20A8001CUS	i5-4300U	vPro	HD 4400	4GBx1 14" WQHD IPS	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-depot	Yes	01/14	
20A8001PUS	i5-4300U	vPro	HD 4400	4GBx1 14" WQHD IPS	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-depot	Yes	01/14	
20A8001RUS	i5-4300U	vPro	HD 4400	4GBx1 14" WQHD IPS	No	180G SSD Opal	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-depot	Yes	01/14	
20A8001TUS	i5-4300U	vPro	HD 4400	4GBx1 14" HD+	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-depot	Yes	01/14	
20A80021US	i5-4300U	vPro	HD 4400	4GBx1 14" HD+	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-depot	Yes	01/14	
20A80022US	i5-4300U	vPro	HD 4400	4GBx1 14" WQHD IPS	MT	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-depot	Yes	01/14	
20A80023US	i5-4300U	vPro	HD 4400	4GBx1 14" WQHD IPS	MT	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-depot	Yes	01/14	
20A80024US	i5-4300U	vPro	HD 4400	4GBx1 14" WQHD IPS	No	128G SSD	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-depot	Yes	01/14	
20A8002CUS	i5-4300U	vPro	HD 4400	4GBx1 14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14	
20A8002PUS	i5-4300U	vPro	HD 4400	4GBx1 14" WQHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14	
20A8002UUS	i5-4300U	vPro	HD 4400	4GBx1 14" HD+	No	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14	
20A80031US	i5-4300U	vPro	HD 4400	4GBx1 14" WQHD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14	
20A80036US	i5-4300U	vPro	HD 4400	4GBx1 14" WQHD IPS	No	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14	
20A80041US	i5-4300U	vPro	HD 4400	4GBx1 14" HD+	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14	
20A80047US	i5-4300U	vPro	HD 4400	4GBx1 14" WQHD IPS	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14	
20A8007XUS	i5-4300U	vPro	HD 4400	4GBx1 14" HD+	No	128G SSD	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	04/14	
20A80085US	i5-4300U	vPro	HD 4400	4GBx1 14" WQHD IPS	MT	180G SSD Opal	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	04/14	
20A80088US	i5-4300U	vPro	HD 4400	4GBx1 14" WQHD IPS	No	180G SSD Opal	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	04/14	
20A8002FUS	i5-4300U	vPro	HD 4400	8GBx1 14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14	
20A8002GUS	i5-4300U	vPro	HD 4400	8GBx1 14" WQHD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14	
20A8002KUS	i5-4300U	vPro	HD 4400	8GBx1 14" HD+	No	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14	
20A8002WUS	i5-4300U	vPro	HD 4400	8GBx1 14" WQHD IPS	No	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14	

* For detailed platform specifications, please see [ThinkPad X1 Carbon \(2nd Gen\) Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor						Keyboard	Adaptive Keyboard with a dynamically changing row providing additional functionality based on the type of the application active / 5-row, spill-resistant (except Adaptive Keys), LED backlit														
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch														
	i5-4200U	2	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	ThinkLight™	None														
	i5-4210U		1.7 GHz	2.7 GHz	3MB		Chipset	Intel SoC (System on Chip) platform														
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Smart card reader	None														
	i7-4600U		2.1 GHz	3.3 GHz	4MB		Multicard reader	None														
Memory	4GB or 8GB / DDR3L-1600MHz / soldered to systemboard, no sockets						Ports	Two USB 3.0 (one Always On), MiniDP, HDMI, Ethernet extension connector, Lenovo OneLink connector, Micro-SIM card tray (WWAN upg / WWAN model only)														
Optical Storage	None M.2 Solid State Drive (SSD)						Monitor Cable	Some: Mini DisplayPort to VGA Monitor Cable														
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 contrast ratio						WLAN ⁴	7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card														
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture, 270 nits						WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS														
Camera	HD720p resolution, low light sensitive, face tracking, fixed focus, gesture input						SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider														
Light sensor	Ambient Light Sensor (Windows 8.1 64-bit only)						Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter														
Graphics	Intel HD Graphics 4400 or 5000						Ethernet	Ethernet Extension cable Optional: Near Field Communication														
Dimensions ³	WQHD (WxDxH):		13.03" x 8.92" x 0.70";		331.0mm x 226.5mm x 17.72mm		Security	Power-on / hard disk / supervisor password, security keyhole, reset switch														
	HD+ (WxDxH):		13.03" x 8.93" x 0.71";		331.0mm x 226.8mm x 18.16mm		Security chip	Trusted Platform Module, TCG 1.2-compliant														
	WQHD Touch (WxDxH):		13.03" x 8.94" x 0.73";		331.0mm x 227.1mm x 18.46mm		vPro (optional)	Intel vPro Technology														
Weight ²	Models	WQHD		HD+		WQHD Touch		Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor													
	Weight	2.82 lb / 1.28kg		2.96 lb / 1.34kg		3.15 lb / 1.43kg		Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit													
Case material	Display cover: Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum						Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite														
Battery type	Integrated Lithium Polymer 8-cell (45Wh) RapidCharge battery																					
Max battery life ¹⁰	Integrated battery: up to 9 hr																					
AC Adapter	45W AC Adapter, 65W Slim AC Adapter, or 65W AC Adapter																					
RapidCharge	AC Adapter	45W		65W Slim		65W																
	Charge to 80%	1.0hr		50min		50min																
	Charge to 100%	2.3hr		2.1hr		2.1hr																
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array microphone, combo audio/microphone jack																					

See footnotes for more detailed information

(MQ1-3) © Lenovo

ThinkPad X1 Carbon (2nd Gen) 20A8 (Windows 8) - II

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered)	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN	SIM card	Monitor cable	Camera	Backlit key-board	Finger-print reader	NFC	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20A80032US	i5-4300U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14
20A80033US	i5-4300U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14
20A80049US	i5-4300U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14
20A8004BUS	i5-4300U	vPro	HD 4400	8GBx1	14" HD+	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14
20A8004EUS	i5-4300U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14
20A8001FUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	180G SSD Opal	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-depot	Yes	01/14
20A8001GUS	i7-4600U	vPro	HD 4400	8GBx1	14" HD+	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-depot	Yes	01/14
20A8001NUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	180G SSD Opal	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-depot	Yes	01/14
20A8001QUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-depot	Yes	01/14
20A8001SUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-depot	Yes	01/14
20A8002NUS	i7-4600U	vPro	HD 4400	8GBx1	14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14
20A8002RUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14
20A8002TUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14
20A80037US	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14
20A80045US	i7-4600U	vPro	HD 4400	8GBx1	14" HD+	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14
20A80048US	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14
20A8004AUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	01/14
20A80083US	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	256G SSD eDrive	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	04/14
20A80086US	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	256G SSD eDrive	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	04/14
20A80089US	i7-4600U	vPro	HD 4400	8GBx1	14" HD+	No	256G SSD eDrive	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-depot	Yes	04/14

• For detailed platform specifications, please see [ThinkPad X1 Carbon \(2nd Gen\) Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor					Keyboard	Adaptive Keyboard with a dynamically changing row providing additional functionality based on the type of the application active / 5-row, spill-resistant (except Adaptive Keys), LED backlit
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	UltraNav™
	i5-4200U	2	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch
	i5-4210U		1.7 GHz	2.7 GHz	3MB		
	i5-4300U		1.9 GHz	2.9 GHz	3MB		
	i7-4600U		2.1 GHz	3.3 GHz	4MB		
Memory	4GB or 8GB / DDR3L-1600MHz / soldered to systemboard, no sockets					ThinkLight™	None
Optical Storage	None M.2 Solid State Drive (SSD)					Chipset	Intel SoC (System on Chip) platform
Widescreen display	<i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 contrast ratio					Smart card reader	None
Multi-touch	<i>Some:</i> 14.0" (355mm) WQHD (2560x1440) , 300 nits, 700:1 contrast ratio, IPS					Multicard reader	None
Camera	<i>Some:</i> Capacitive-type multi-touch, supports 10-finger gesture, 270 nits					Ports	Two USB 3.0 (one Always On), MiniDP, HDMI, Ethernet extension connector, Lenovo OneLink connector, Micro-SIM card tray (WWAN upg / WWAN model only)
Light sensor	HD720p resolution, low light sensitive, face tracking, fixed focus, gesture input					Monitor Cable	<i>Some:</i> Mini DisplayPort to VGA Monitor Cable
Graphics	Intel HD Graphics 4400 or 5000					WLAN ⁴	<i>7260 b/g/n+BT:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 a/b/g/n+BT:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 ac+BT:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card
Dimensions ³	<i>WQHD (WxDxH):</i>		13.03" x 8.92" x 0.70";	331.0mm x 226.5mm x 17.72mm		WWAN (optional)	<i>Upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS
	<i>HD+ (WxDxH):</i>		13.03" x 8.93" x 0.71";	331.0mm x 226.8mm x 18.16mm		SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>Select:</i> User selectable, contract required with service provider
	<i>WQHD Touch (WxDxH):</i>		13.03" x 8.94" x 0.73";	331.0mm x 227.1mm x 18.46mm		Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
Weight ²	Models	WQHD	HD+	WQHD Touch		Ethernet	Ethernet Extension cable
	Weight	2.82 lb / 1.28kg	2.96 lb / 1.34kg	3.15 lb / 1.43kg		NFC	<i>Optional:</i> Near Field Communication
Case material	<i>Display cover:</i> Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Magnesium/Aluminum					Security	Power-on / hard disk / supervisor password, security keyhole, reset switch
Battery type	Integrated Lithium Polymer 8-cell (45Wh) RapidCharge battery					Security chip	Trusted Platform Module, TCG 1.2-compliant
Max battery life ¹⁰	<i>Integrated battery:</i> up to 9 hr					vPro (optional)	Intel vPro Technology
AC Adapter	45W AC Adapter, 65W Slim AC Adapter, or 65W AC Adapter					Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor
RapidCharge	AC Adapter	45W	65W Slim	65W		Preload	<i>Win8.1 DG Win7:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit <i>Win8.1 64:</i> Windows 8.1 64-bit <i>Win8.1 P64:</i> Windows 8.1 Pro 64-bit
	Charge to 80%	1.0hr	50min	50min		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite
	Charge to 100%	2.3hr	2.1hr	2.1hr			
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array microphone, combo audio/microphone jack						

See footnotes for more detailed information

(MQ1-4) © Lenovo

ThinkPad X1 Carbon (2nd Gen) 20A8 (Windows 8) - Onsite

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (sol-dered)	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN	SIM card	Monitor cable	Camera	Backlit keyboard	Fingerprint reader	NFC	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20A8001DUS	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-onsite	Yes	01/14
20A8001EUS	i5-4300U	vPro	HD 4400	4GBx1	14" HD+	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-onsite	Yes	01/14
20A8001HUS	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	No	128G SSD	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-onsite	Yes	01/14
20A8001KUS	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-onsite	Yes	01/14
20A8001VUS	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	MT	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-onsite	Yes	01/14
20A8001WUS	i5-4300U	vPro	HD 4400	4GBx1	14" HD+	No	128G SSD	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-onsite	Yes	01/14
20A8001XUS	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	MT	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-onsite	Yes	01/14
20A80020US	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	No	180G SSD Opal	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-onsite	Yes	01/14
20A8002DUS	i5-4300U	vPro	HD 4400	4GBx1	14" HD+	No	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A8002EUS	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	No	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A8002QUS	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A8002SUS	i5-4300U	vPro	HD 4400	4GBx1	14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A8002XUS	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A8004CUS	i5-4300U	vPro	HD 4400	4GBx1	14" HD+	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A8004DUS	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A8007YUS	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	MT	180G SSD Opal	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	04/14
20A80082US	i5-4300U	vPro	HD 4400	4GBx1	14" WQHD IPS	No	180G SSD Opal	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	04/14
20A80084US	i5-4300U	vPro	HD 4400	4GBx1	14" HD+	No	128G SSD	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	04/14
20A8002HUS	i5-4300U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A8002LUS	i5-4300U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A8002YUS	i5-4300U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A80030US	i5-4300U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14

* For detailed platform specifications, please see [ThinkPad X1 Carbon \(2nd Gen\) Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor						Keyboard	Adaptive Keyboard with a dynamically changing row providing additional functionality based on the type of the application active / 5-row, spill-resistant (except Adaptive Keys), LED backlit														
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch														
	i5-4200U	2	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	ThinkLight™	None														
	i5-4210U		1.7 GHz	2.7 GHz	3MB		Chipset	Intel SoC (System on Chip) platform														
	i5-4300U		1.9 GHz	2.9 GHz	3MB		Smart card reader	None														
	i7-4600U		2.1 GHz	3.3 GHz	4MB		Multicard reader	None														
Memory	4GB or 8GB / DDR3L-1600MHz / soldered to systemboard, no sockets						Ports	Two USB 3.0 (one Always On), MiniDP, HDMI, Ethernet extension connector, Lenovo OneLink connector, Micro-SIM card tray (WWAN upg / WWAN model only)														
Optical Storage	None M.2 Solid State Drive (SSD)						Monitor Cable	Some: Mini DisplayPort to VGA Monitor Cable														
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) WQHD (2560x1440) , 300 nits, 700:1 contrast ratio, IPS						WLAN ⁴	7260 b/g/n+BT: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 a/b/g/n+BT: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card 7260 ac+BT: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card														
Multi-touch	Some: Capacitive-type multi-touch, supports 10-finger gesture, 270 nits						WWAN (optional)	Upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS														
Camera	HD720p resolution, low light sensitive, face tracking, fixed focus, gesture input						SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider Select: User selectable, contract required with service provider														
Light sensor	Ambient Light Sensor (Windows 8.1 64-bit only)						Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter														
Graphics	Intel HD Graphics 4400 or 5000						Ethernet	Ethernet Extension cable Optional: Near Field Communication														
Dimensions ³	WQHD (WxDxH):		13.03" x 8.92" x 0.70";		331.0mm x 226.5mm x 17.72mm		Security	Power-on / hard disk / supervisor password, security keyhole, reset switch														
	HD+ (WxDxH):		13.03" x 8.93" x 0.71";		331.0mm x 226.8mm x 18.16mm		Security chip	Trusted Platform Module, TCG 1.2-compliant														
	WQHD Touch (WxDxH):		13.03" x 8.94" x 0.73";		331.0mm x 227.1mm x 18.46mm		vPro (optional)	Intel vPro Technology														
Weight ²	Models	WQHD		HD+		WQHD Touch		Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor													
	Weight	2.82 lb / 1.28kg		2.96 lb / 1.34kg		3.15 lb / 1.43kg		Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit													
Case material	Display cover: Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum						Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite														
Battery type	Integrated Lithium Polymer 8-cell (45Wh) RapidCharge battery																					
Max battery life ¹⁰	Integrated battery: up to 9 hr																					
AC Adapter	45W AC Adapter, 65W Slim AC Adapter, or 65W AC Adapter																					
RapidCharge	AC Adapter	45W		65W Slim		65W																
	Charge to 80%	1.0hr		50min		50min																
	Charge to 100%	2.3hr		2.1hr		2.1hr																
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array microphone, combo audio/microphone jack																					

See footnotes for more detailed information

(MQ1-5) © Lenovo

ThinkPad X1 Carbon (2nd Gen) 20A8 (Windows 8) - Onsite - II

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered)	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN	SIM card	Monitor cable	Camera	Backlit key-board	Fingerprint reader	NFC	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20A80035US	i5-4300U	vPro	HD 4400	8GBx1	14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A80043US	i5-4300U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A80044US	i5-4300U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A8004FUS	i5-4300U	vPro	HD 4400	8GBx1	14" HD+	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A8001JUS	i7-4600U	vPro	HD 4400	8GBx1	14" HD+	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-onsite	Yes	01/14
20A8001LUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	180G SSD Opal	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-onsite	Yes	01/14
20A8001MUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-onsite	Yes	01/14
20A8001UUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	180G SSD Opal	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-onsite	Yes	01/14
20A8001YUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	180G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 64	3-onsite	Yes	01/14
20A8002JUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A8002MUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A8002VUS	i7-4600U	vPro	HD 4400	8GBx1	14" HD+	No	256G SSD eDrive	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A80034US	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	256G SSD eDrive	7260 ac+BT	EM7355	Select	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A80042US	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A80046US	i7-4600U	vPro	HD 4400	8GBx1	14" HD+	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A8004GUS	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	240G SSD Opal	7260 ac+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	01/14
20A80080US	i7-4600U	vPro	HD 4400	8GBx1	14" HD+	No	256G SSD eDrive	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	04/14
20A80081US	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	MT	256G SSD eDrive	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	04/14
20A80087US	i7-4600U	vPro	HD 4400	8GBx1	14" WQHD IPS	No	256G SSD eDrive	7260 a/b/g/n+BT	Upg	None	None	720p	Backlit	Finger	None	8(45wh)	65W	Win8.1 P64	3-onsite	Yes	04/14

• For detailed platform specifications, please see [ThinkPad X1 Carbon \(2nd Gen\) Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor					Keyboard	Adaptive Keyboard with a dynamically changing row providing additional functionality based on the type of the application active / 5-row, spill-resistant (except Adaptive Keys), LED backlit
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	UltraNav™
	i5-4200U	2	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch
	i5-4210U		1.7 GHz	2.7 GHz	3MB		
	i5-4300U		1.9 GHz	2.9 GHz	3MB		
	i7-4600U		2.1 GHz	3.3 GHz	4MB		
Memory	4GB or 8GB / DDR3L-1600MHz / soldered to systemboard, no sockets					ThinkLight™	None
Optical Storage	None M.2 Solid State Drive (SSD)					Chipset	Intel SoC (System on Chip) platform
Widescreen display	<i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 contrast ratio					Smart card reader	None
Multi-touch	<i>Some:</i> 14.0" (355mm) WQHD (2560x1440) , 300 nits, 700:1 contrast ratio, IPS					Multicard reader	None
Camera	<i>Some:</i> Capacitive-type multi-touch, supports 10-finger gesture, 270 nits					Ports	Two USB 3.0 (one Always On), MiniDP, HDMI, Ethernet extension connector, Lenovo OneLink connector, Micro-SIM card tray (WWAN upg / WWAN model only)
Light sensor	HD720p resolution, low light sensitive, face tracking, fixed focus, gesture input					Monitor Cable	<i>Some:</i> Mini DisplayPort to VGA Monitor Cable
Graphics	Intel HD Graphics 4400 or 5000					WLAN ⁴	<i>7260 b/g/n+BT:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 a/b/g/n+BT:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <i>7260 ac+BT:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card
Dimensions ³	<i>WQHD (WxDxH):</i>		13.03" x 8.92" x 0.70";	331.0mm x 226.5mm x 17.72mm		WWAN (optional)	<i>Upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS
	<i>HD+ (WxDxH):</i>		13.03" x 8.93" x 0.71";	331.0mm x 226.8mm x 18.16mm		SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>Select:</i> User selectable, contract required with service provider
	<i>WQHD Touch (WxDxH):</i>		13.03" x 8.94" x 0.73";	331.0mm x 227.1mm x 18.46mm		Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
Weight ²	Models	WQHD	HD+	WQHD Touch		Ethernet	Ethernet Extension cable
	Weight	2.82 lb / 1.28kg	2.96 lb / 1.34kg	3.15 lb / 1.43kg		NFC	<i>Optional:</i> Near Field Communication
Case material	<i>Display cover:</i> Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Magnesium/Aluminum					Security	Power-on / hard disk / supervisor password, security keyhole, reset switch
Battery type	Integrated Lithium Polymer 8-cell (45Wh) RapidCharge battery					Security chip	Trusted Platform Module, TCG 1.2-compliant
Max battery life ¹⁰	<i>Integrated battery:</i> up to 9 hr					vPro (optional)	Intel vPro Technology
AC Adapter	45W AC Adapter, 65W Slim AC Adapter, or 65W AC Adapter					Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor
RapidCharge	AC Adapter	45W	65W Slim	65W		Preload	<i>Win8.1 DG Win7:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit <i>Win8.1 64:</i> Windows 8.1 64-bit <i>Win8.1 P64:</i> Windows 8.1 Pro 64-bit
	Charge to 80%	1.0hr	50min	50min		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite
	Charge to 100%	2.3hr	2.1hr	2.1hr			
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array microphone, combo audio/microphone jack						

See footnotes for more detailed information

(MQ1-6) © Lenovo



Lenovo® ThinkPad X1 Carbon (3rd Gen)



Lenovo ThinkPad X1 Carbon (3rd Gen)



Lenovo ThinkPad X1 Carbon (3rd Gen)



Lenovo ThinkPad X1 Carbon (3rd Gen)



Lenovo ThinkPad X1 Carbon (3rd Gen)

ThinkPad X1 Carbon (3rd Gen) Platform Specifications

Product Specifications Reference (PSREF)

Processor	5th Generation Intel® Core™ i5 / i7 Processor							Intel HD Graphics 5500	None	Two USB 3.0 (one Always On), Mini DisplayPort, HDMI, Ethernet extension connector, Lenovo OneLink connector <i>Optional:</i> Mini DisplayPort to VGA Monitor Cable									
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Speed				DDR3L-1600								
	i5-5200U	2	4	2.2 GHz	2.7 GHz	3MB	Intel HD Graphics 5500												
	i5-5300U			2.3 GHz	2.9 GHz	3MB													
	i7-5500U			2.4 GHz	3 GHz	4MB													
i7-5600U	2.6 GHz			3.2 GHz	4MB														
Processor Graphics																			
Graphics	Intel HD Graphics 5500 in processor, external digital monitor support via Mini DisplayPort or HDMI™ (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable); supports three independent displays; Max resolution: 3840x2160 (Mini DisplayPort) @60Hz; 4096x2304 (HDMI) @24Hz							Keyboard UltraNav™	6-row, LED backlit, spill-resistant, multimedia Fn keys TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch										
Chipset	Intel SoC (System on Chip) platform							Security	Power-on password, hard disk password, supervisor password, security keyhole, reset switch										
Memory	4GB or 8GB / PC3-12800 1600MHz DDR3L / soldered to systemboard, no sockets							Security chip ThinkEngine	Trusted Platform Module, TCG 1.2-compliant Delivers improved thermal and power efficiency, up to 30 day standby, faster resume time, enhanced security, as well as anti-tampering measures										
Display	<i>Some:</i> 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> 14.0" (355mm) WQHD (2560x1440), anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS, 170° viewing angle							vPro (optional)	Intel vPro Technology										
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 270 nits							Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor										
Storage	M.2 Solid State Drive (SSD), PCIe 2.0 x4 or SATA							Battery type	Integrated Lithium Polymer 8-cell (50Wh) RapidCharge battery										
Optical	None								Max battery life ¹⁰	<i>Models</i>	<i>FHD</i>	<i>WQHD</i>	<i>WQHD Touch</i>						
Ethernet	Gigabit Ethernet via Ethernet extension cable									AC adapter	<i>Battery life</i>	10.9 hr	9.9 hr	9.9 hr					
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter										RapidCharge	<i>AC adapter</i>	<i>45W</i>	<i>65W Slim</i>	<i>65W</i>				
WLAN ⁴	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> 11b/g/n, Intel Wireless-N 7265, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card 11a/b/g/n, Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT adapter, M.2 card 11ac, Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT adapter, M.2 card 							<i>Charge to 80%</i>				1.1hr	55min	55min					
WWAN (optional)	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> Wireless WAN upgradable Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card 							<i>Charge to 100%</i>	2.5hr			2.3hr	2.3hr						
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider							Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit	<i>Some:</i> Windows 8.1 64-bit		<i>Some:</i> Windows 8.1 Pro 64-bit							
Dimensions ³	<i>WQHD (WxDxH):</i> 13.03" x 8.92" x 0.70"; 331.0mm x 226.5mm x 17.72mm <i>FHD (WxDxH):</i> 13.03" x 8.93" x 0.71"; 331.0mm x 226.8mm x 18.16mm <i>WQHD Touch (WxDxH):</i> 13.03" x 8.94" x 0.73"; 331.0mm x 227.1mm x 18.46mm							<ul style="list-style-type: none"> Lenovo Solution Center Lenovo SHAREit ThinkVantage Product Recovery Rescue and Recovery™ ThinkVantage System Update PC Device Stage Adobe® Reader® Evernote® Skype™ Maxthon Cloud Browser Microsoft® Office preloaded; purchase a product key to activate Norton™ Internet Security (30 days of virus definitions) 	<ul style="list-style-type: none"> Lenovo Solution Center Lenovo SHAREit Lenovo Companion ThinkVantage System Update PC Device Stage Weather Channel Evernote Maxthon Cloud Browser Bing Translator Norton Studio Microsoft Office preloaded; purchase a product key to activate Norton Internet Security (30 days of virus definitions) 										
Weight ²	<table border="1"> <thead> <tr> <th><i>Models</i></th> <th><i>FHD</i></th> <th><i>WQHD</i></th> <th><i>WQHD Touch</i></th> </tr> </thead> <tbody> <tr> <td><i>Weight</i></td> <td>2.996 lb / 1.359 kg</td> <td>2.877 lb / 1.305 kg</td> <td>3.175 lb / 1.44 kg</td> </tr> </tbody> </table>							<i>Models</i>	<i>FHD</i>	<i>WQHD</i>	<i>WQHD Touch</i>	<i>Weight</i>	2.996 lb / 1.359 kg	2.877 lb / 1.305 kg	3.175 lb / 1.44 kg	Limited warranty ¹²	<i>One of the following, configurable by model:</i>		
<i>Models</i>	<i>FHD</i>	<i>WQHD</i>	<i>WQHD Touch</i>																
<i>Weight</i>	2.996 lb / 1.359 kg	2.877 lb / 1.305 kg	3.175 lb / 1.44 kg																
Case material	<i>Display cover:</i> Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Magnesium/Aluminum							<ul style="list-style-type: none"> 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service²⁴ 3-year/1-yr battery limited onsite service, IWS (International Warranty Service¹⁷) 											
Environment	EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant																		

ThinkPad X1 Carbon (3rd Gen) 20BS (TopSeller)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered)	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN	SIM card	Monitor cable	Camera	Backlit key-board	Finger-print reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BS002WUS	i5-5200U	No	HD 5500	4GBx1	14" FHD	No	128G SSD	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20BS0034US	i5-5300U	vPro	HD 5500	4GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20BS002VUS	i5-5200U	No	HD 5500	4GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20BS0037US	i5-5200U	No	HD 5500	4GBx1	14" FHD	No	180G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20BS003AUS	i5-5200U	No	HD 5500	4GBx1	14" FHD	No	128G SSD	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20BS0033US	i5-5300U	vPro	HD 5500	4GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20BS003CUS	i5-5300U	vPro	HD 5500	4GBx1	14" FHD	No	180G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20BS002YUS	i5-5300U	vPro	HD 5500	8GBx1	14" FHD	No	240G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20BS0032US	i5-5300U	vPro	HD 5500	8GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20BS0039US	i5-5300U	vPro	HD 5500	8GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	EM7345	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20BS002TUS	i7-5600U	vPro	HD 5500	8GBx1	14" FHD	No	360G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20BS002UUS	i7-5600U	vPro	HD 5500	8GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	EM7345	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20BS0031US	i7-5600U	vPro	HD 5500	8GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20BS003BUS	i7-5600U	vPro	HD 5500	8GBx1	14" FHD	No	512G SSD PCIe	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 DG Win7	3-depot	No	01/15
20BS003DUS	i7-5600U	vPro	HD 5500	8GBx1	14" FHD	No	240G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 DG Win7	3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad X1 Carbon \(3rd Gen\) Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i5 / i7 Processor					Dimensions ³ WQHD (WxDxH): 13.03" x 8.92" x 0.70"; 331.0mm x 226.5mm x 17.72mm FHD (WxDxH): 13.03" x 8.93" x 0.71"; 331.0mm x 226.8mm x 18.16mm WQHD Touch (WxDxH): 13.03" x 8.94" x 0.73"; 331.0mm x 227.1mm x 18.46mm				
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache		Memory Speed			
	i5-5200U	2	2.2 GHz	2.7 GHz	3MB		DDR3L-1600			
	i5-5300U		2.3 GHz	2.9 GHz	3MB					
	i7-5500U		2.4 GHz	3 GHz	4MB					
i7-5600U	2.6 GHz		3.2 GHz	4MB						
Weight ²	Models	FHD	WQHD	WQHD Touch	Weight	2.996 lb / 1.359 kg	2.877 lb / 1.305 kg	3.175 lb / 1.44 kg		
Case material	Display cover: Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum									
Graphics	Intel HD Graphics 5500					Camera	HD720p resolution, low light sensitive, fixed focus, gesture input			
Chipset	Intel SoC (System on Chip) platform					Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1 watt x 2 / dual array microphone, combo audio/microphone jack			
Memory	4GB or 8GB / PC3-12800 1600MHz DDR3L / soldered to systemboard, no sockets					Keyboard	6-row, LED backlit, spill-resistant, multimedia Fn keys			
Display	Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 400:1 contrast ratio Some: 14.0" (355mm) WQHD (2560x1440), 300 nits, 700:1 contrast ratio, IPS					UltraNav™	TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch			
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 270 nits					Security	Power-on / hard disk / supervisor password, security keyhole, reset switch			
Storage	M.2 Solid State Drive (SSD), PCIe 2.0 x4 or SATA					Security chip	Trusted Platform Module, TCG 1.2-compliant			
Optical	None					vPro (optional)	Intel vPro Technology			
Ethernet	Gigabit Ethernet via Ethernet extension cable					Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor			
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					Battery type	Integrated Lithium Polymer 8-cell (50Wh) RapidCharge battery			
WLAN ⁴	7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card					Max battery life ¹⁰	Models	FHD	WQHD	WQHD Touch
	7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card						Battery life	10.9 hr	9.9 hr	9.9 hr
	7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card						AC adapter	45W AC adapter, 65W Slim AC adapter, or 65W AC adapter		
WWAN (optional)	Upg: Wireless WAN upgradable					RapidCharge	AC adapter	45W	65W Slim	65W
	N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card						Charge to 80%	1.1hr	55min	55min
	EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card						Charge to 100%	2.5hr	2.3hr	2.3hr
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider					Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit			
Multicard reader	None					Win8.1 64:	Windows 8.1 64-bit			
Ports	Two USB 3.0 (one Always On), Mini DisplayPort, HDMI, Ethernet extension connector, Lenovo OneLink connector					Win8.1 P64:	Windows 8.1 Pro 64-bit			
Monitor cable	Optional: Mini DisplayPort to VGA Monitor Cable					Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS			

See footnotes for more detailed information

(MQ2-1) © Lenovo

ThinkPad X1 Carbon (3rd Gen) 20BS (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered)	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN	SIM card	Monitor cable	Camera	Backlit key-board	Finger-print reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BS002XUS	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	1-depot	No	01/15
20BS0030US	i5-5300U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	256G SSD Opal2	7265 ac+BT	EM7345	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BS0036US	i5-5300U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	240G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BS003FUS	i5-5300U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BS0035US	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	512G SSD PCIe	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BS0038US	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	256G SSD Opal2	7265 ac+BT	EM7345	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BS003EUS	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BS003GUS	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	240G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad X1 Carbon \(3rd Gen\) Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i5 / i7 Processor					Dimensions ³ WQHD (WxDxH): 13.03" x 8.92" x 0.70"; 331.0mm x 226.5mm x 17.72mm FHD (WxDxH): 13.03" x 8.93" x 0.71"; 331.0mm x 226.8mm x 18.16mm WQHD Touch (WxDxH): 13.03" x 8.94" x 0.73"; 331.0mm x 227.1mm x 18.46mm												
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache		Memory Speed											
	i5-5200U	2	2.2 GHz	2.7 GHz	3MB		DDR3L-1600											
	i5-5300U		2.3 GHz	2.9 GHz	3MB													
	i7-5500U		2.4 GHz	3 GHz	4MB													
i7-5600U	2.6 GHz		3.2 GHz	4MB														
Weight ²	Models	FHD	WQHD	WQHD Touch	Weight	2.996 lb / 1.359 kg	2.877 lb / 1.305 kg	3.175 lb / 1.44 kg										
Case material	Display cover: Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum																	
Graphics	Intel HD Graphics 5500					Camera	HD720p resolution, low light sensitive, fixed focus, gesture input											
Chipset	Intel SoC (System on Chip) platform					Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1 watt x 2 / dual array microphone, combo audio/microphone jack											
Memory	4GB or 8GB / PC3-12800 1600MHz DDR3L / soldered to systemboard, no sockets					Keyboard	6-row, LED backlit, spill-resistant, multimedia Fn keys											
Display	Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 400:1 contrast ratio Some: 14.0" (355mm) WQHD (2560x1440), 300 nits, 700:1 contrast ratio, IPS					UltraNav™	TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch											
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 270 nits					Security	Power-on / hard disk / supervisor password, security keyhole, reset switch											
Storage	M.2 Solid State Drive (SSD), PCIe 2.0 x4 or SATA					Security chip	Trusted Platform Module, TCG 1.2-compliant											
Optical	None					vPro (optional)	Intel vPro Technology											
Ethernet	Gigabit Ethernet via Ethernet extension cable					Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor											
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					Battery type	Integrated Lithium Polymer 8-cell (50Wh) RapidCharge battery											
WLAN ⁴	7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card					Max battery life ¹⁰	Models	FHD	WQHD	WQHD Touch	Battery life	10.9 hr	9.9 hr	9.9 hr				
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card					AC adapter	45W AC adapter, 65W Slim AC adapter, or 65W AC adapter											
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider					RapidCharge	AC adapter	45W	65W Slim	65W	Charge to 80%	1.1hr	55min	55min	Charge to 100%	2.5hr	2.3hr	2.3hr
Multicard reader	None					Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit											
Ports	Two USB 3.0 (one Always On), Mini DisplayPort, HDMI, Ethernet extension connector, Lenovo OneLink connector						Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit											
Monitor cable	Optional: Mini DisplayPort to VGA Monitor Cable					Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS											

See footnotes for more detailed information

(MQ2-2) © Lenovo

ThinkPad X1 Carbon (3rd Gen) 20BT (Windows 8)

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered)	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN	SIM card	Monitor cable	Camera	Backlit key-board	Fingerprint reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BT000AUS	i5-5300U	vPro	HD 5500	4GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	Yes	01/15
20BT000FUS	i5-5300U	vPro	HD 5500	4GBx1	14" FHD	No	180G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	Yes	01/15
20BT000HUS	i5-5300U	vPro	HD 5500	8GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	Yes	01/15
20BT000QUS	i5-5300U	vPro	HD 5500	8GBx1	14" FHD	No	240G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BT000UUS	i5-5300U	vPro	HD 5500	8GBx1	14" WQHD IPS	No	360G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BT000WUS	i5-5300U	vPro	HD 5500	8GBx1	14" WQHD IPS	No	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BT0017US	i5-5300U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BT0019US	i5-5300U	vPro	HD 5500	8GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	EM7345	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BT003EUS	i5-5300U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	256G SSD Opal2	7265 ac+BT	EM7345	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BT003JUS	i5-5300U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BT000CUS	i7-5600U	vPro	HD 5500	8GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	Yes	01/15
20BT000GUS	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	No	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	Yes	01/15
20BT000KUS	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	512G SSD PCIe	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BT000XUS	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	360G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BT0011US	i7-5600U	vPro	HD 5500	8GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	EM7345	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BT0012US	i7-5600U	vPro	HD 5500	8GBx1	14" FHD	No	240G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BT0014US	i7-5600U	vPro	HD 5500	8GBx1	14" FHD	No	512G SSD PCIe	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BT0016US	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	No	360G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15
20BT003MUS	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	Yes	01/15
20BT003QUS	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	256G SSD Opal2	7265 ac+BT	EM7345	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad X1 Carbon \(3rd Gen\) Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i5 / i7 Processor					Dimensions ³ WQHD (WxDxH): 13.03" x 8.92" x 0.70"; 331.0mm x 226.5mm x 17.72mm FHD (WxDxH): 13.03" x 8.93" x 0.71"; 331.0mm x 226.8mm x 18.16mm WQHD Touch (WxDxH): 13.03" x 8.94" x 0.73"; 331.0mm x 227.1mm x 18.46mm												
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache		Memory Speed											
	i5-5200U	2	2.2 GHz	2.7 GHz	3MB		DDR3L-1600											
	i5-5300U		2.3 GHz	2.9 GHz	3MB													
	i7-5500U		2.4 GHz	3 GHz	4MB													
i7-5600U	2.6 GHz		3.2 GHz	4MB														
Weight ²	Models	FHD	WQHD	WQHD Touch	Weight	2.996 lb / 1.359 kg	2.877 lb / 1.305 kg	3.175 lb / 1.44 kg										
Case material	Display cover: Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum																	
Graphics	Intel HD Graphics 5500					Camera	HD720p resolution, low light sensitive, fixed focus, gesture input											
Chipset	Intel SoC (System on Chip) platform					Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1 watt x 2 / dual array microphone, combo audio/microphone jack											
Memory	4GB or 8GB / PC3-12800 1600MHz DDR3L / soldered to systemboard, no sockets					Keyboard	6-row, LED backlit, spill-resistant, multimedia Fn keys											
Display	Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 400:1 contrast ratio Some: 14.0" (355mm) WQHD (2560x1440), 300 nits, 700:1 contrast ratio, IPS					UltraNav™	TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch											
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 270 nits					Security	Power-on / hard disk / supervisor password, security keyhole, reset switch											
Storage	M.2 Solid State Drive (SSD), PCIe 2.0 x4 or SATA					Security chip	Trusted Platform Module, TCG 1.2-compliant											
Optical	None					vPro (optional)	Intel vPro Technology											
Ethernet	Gigabit Ethernet via Ethernet extension cable					Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor											
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					Battery type	Integrated Lithium Polymer 8-cell (50Wh) RapidCharge battery											
WLAN ⁴	7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card					Max battery life ¹⁰	Models	FHD	WQHD	WQHD Touch	Battery life	10.9 hr	9.9 hr	9.9 hr				
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card					AC adapter	45W AC adapter, 65W Slim AC adapter, or 65W AC adapter											
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider					RapidCharge	AC adapter	45W	65W Slim	65W	Charge to 80%	1.1hr	55min	55min	Charge to 100%	2.5hr	2.3hr	2.3hr
Multicard reader	None					Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit											
Ports	Two USB 3.0 (one Always On), Mini DisplayPort, HDMI, Ethernet extension connector, Lenovo OneLink connector					Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS											
Monitor cable	Optional: Mini DisplayPort to VGA Monitor Cable																	

See footnotes for more detailed information

(MQ2-3) © Lenovo

ThinkPad X1 Carbon (3rd Gen) 20BT (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Model	Processor	vPro	Graphics	Memory (soldered)	Display	Multi-touch	Storage	WLAN & Bluetooth	WWAN	SIM card	Monitor cable	Camera	Backlit key-board	Finger-print reader	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BT000JUS	i5-5300U	vPro	HD 5500	4GBx1	14" FHD	No	180G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	Yes	01/15
20BT003XUS	i5-5300U	vPro	HD 5500	4GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	Yes	01/15
20BT000LUS	i5-5300U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	256G SSD Opal2	7265 ac+BT	EM7345	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	No	01/15
20BT000MUS	i5-5300U	vPro	HD 5500	8GBx1	14" FHD	No	240G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	No	01/15
20BT000NUS	i5-5300U	vPro	HD 5500	8GBx1	14" WQHD IPS	No	360G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	No	01/15
20BT000PUS	i5-5300U	vPro	HD 5500	8GBx1	14" WQHD IPS	No	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	No	01/15
20BT000SUS	i5-5300U	vPro	HD 5500	8GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	EM7345	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	No	01/15
20BT0010US	i5-5300U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	240G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	No	01/15
20BT0018US	i5-5300U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	No	01/15
20BT003VUS	i5-5300U	vPro	HD 5500	8GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	Yes	01/15
20BT000BUS	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	Yes	01/15
20BT000DUS	i7-5600U	vPro	HD 5500	8GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	Yes	01/15
20BT000EUS	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	No	256G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	Yes	01/15
20BT000RUS	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	256G SSD Opal2	7265 ac+BT	EM7345	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	No	01/15
20BT000TUS	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	360G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	No	01/15
20BT000VUS	i7-5600U	vPro	HD 5500	8GBx1	14" FHD	No	256G SSD Opal2	7265 ac+BT	EM7345	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	No	01/15
20BT000YUS	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	MT	512G SSD PCIe	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	No	01/15
20BT0013US	i7-5600U	vPro	HD 5500	8GBx1	14" FHD	No	512G SSD PCIe	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	No	01/15
20BT0015US	i7-5600U	vPro	HD 5500	8GBx1	14" WQHD IPS	No	360G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	No	01/15
20BT003WUS	i7-5600U	vPro	HD 5500	8GBx1	14" FHD	No	240G SSD Opal2	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	8(50wh)	65W	Win8.1 P64	3-onsite	No	01/15

• For detailed platform specifications, please see [ThinkPad X1 Carbon \(3rd Gen\) Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i5 / i7 Processor	Dimensions ³	WQHD (WxDxH): 13.03" x 8.92" x 0.70"; 331.0mm x 226.5mm x 17.72mm FHD (WxDxH): 13.03" x 8.93" x 0.71"; 331.0mm x 226.8mm x 18.16mm WQHD Touch (WxDxH): 13.03" x 8.94" x 0.73"; 331.0mm x 227.1mm x 18.46mm																																		
	<table border="1"> <thead> <tr> <th>Processor</th> <th># of Cores</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Speed</th> </tr> </thead> <tbody> <tr> <td>i5-5200U</td> <td rowspan="5">2</td> <td>2.2 GHz</td> <td>2.7 GHz</td> <td>3MB</td> <td rowspan="5">DDR3L-1600</td> </tr> <tr> <td>i5-5300U</td> <td>2.3 GHz</td> <td>2.9 GHz</td> <td>3MB</td> </tr> <tr> <td>i7-5500U</td> <td>2.4 GHz</td> <td>3 GHz</td> <td>4MB</td> </tr> <tr> <td>i7-5600U</td> <td>2.6 GHz</td> <td>3.2 GHz</td> <td>4MB</td> </tr> </tbody> </table>	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed	i5-5200U	2	2.2 GHz	2.7 GHz	3MB	DDR3L-1600	i5-5300U	2.3 GHz	2.9 GHz	3MB	i7-5500U	2.4 GHz	3 GHz	4MB	i7-5600U	2.6 GHz	3.2 GHz	4MB	Weight ²	<table border="1"> <thead> <tr> <th>Models</th> <th>FHD</th> <th>WQHD</th> <th>WQHD Touch</th> </tr> </thead> <tbody> <tr> <td>Weight</td> <td>2.996 lb / 1.359 kg</td> <td>2.877 lb / 1.305 kg</td> <td>3.175 lb / 1.44 kg</td> </tr> </tbody> </table>			Models	FHD	WQHD	WQHD Touch	Weight	2.996 lb / 1.359 kg	2.877 lb / 1.305 kg	3.175 lb / 1.44 kg
Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Speed																																
i5-5200U	2	2.2 GHz	2.7 GHz	3MB	DDR3L-1600																																
i5-5300U		2.3 GHz	2.9 GHz	3MB																																	
i7-5500U		2.4 GHz	3 GHz	4MB																																	
i7-5600U		2.6 GHz	3.2 GHz	4MB																																	
Models		FHD	WQHD	WQHD Touch																																	
Weight	2.996 lb / 1.359 kg	2.877 lb / 1.305 kg	3.175 lb / 1.44 kg																																		
Graphics	Intel HD Graphics 5500	Case material	Display cover: Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum																																		
Chipset	Intel SoC (System on Chip) platform	Camera	HD720p resolution, low light sensitive, fixed focus, gesture input																																		
Memory	4GB or 8GB / PC3-12800 1600MHz DDR3L / soldered to systemboard, no sockets	Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 1 watt x 2 / dual array microphone, combo audio/microphone jack																																		
Display	Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 400:1 contrast ratio Some: 14.0" (355mm) WQHD (2560x1440), 300 nits, 700:1 contrast ratio, IPS	Keyboard	6-row, LED backlit, spill-resistant, multimedia Fn keys UltraNav™																																		
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 270 nits	Security	Power-on / hard disk / supervisor password, security keyhole, reset switch																																		
Storage	M.2 Solid State Drive (SSD), PCIe 2.0 x4 or SATA	Security chip	Trusted Platform Module, TCG 1.2-compliant																																		
Optical	None	vPro (optional)	Intel vPro Technology																																		
Ethernet	Gigabit Ethernet via Ethernet extension cable	Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor																																		
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Battery type	Integrated Lithium Polymer 8-cell (50Wh) RapidCharge battery																																		
WLAN ⁴	7265 b/g/n+BT: Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 a/b/g/n+BT: Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card 7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card	Max battery life ¹⁰	<table border="1"> <thead> <tr> <th>Models</th> <th>FHD</th> <th>WQHD</th> <th>WQHD Touch</th> </tr> </thead> <tbody> <tr> <td>Battery life</td> <td>10.9 hr</td> <td>9.9 hr</td> <td>9.9 hr</td> </tr> </tbody> </table>			Models	FHD	WQHD	WQHD Touch	Battery life	10.9 hr	9.9 hr	9.9 hr																								
Models	FHD	WQHD	WQHD Touch																																		
Battery life	10.9 hr	9.9 hr	9.9 hr																																		
WWAN (optional)	Upg: Wireless WAN upgradable N5321: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card	AC adapter	45W AC adapter, 65W Slim AC adapter, or 65W AC adapter																																		
SIM card (opt)	AT&T® or Verizon® LTE (4G), contract required with service provider	RapidCharge	<table border="1"> <thead> <tr> <th>AC adapter</th> <th>45W</th> <th>65W Slim</th> <th>65W</th> </tr> </thead> <tbody> <tr> <td>Charge to 80%</td> <td>1.1hr</td> <td>55min</td> <td>55min</td> </tr> <tr> <td>Charge to 100%</td> <td>2.5hr</td> <td>2.3hr</td> <td>2.3hr</td> </tr> </tbody> </table>			AC adapter	45W	65W Slim	65W	Charge to 80%	1.1hr	55min	55min	Charge to 100%	2.5hr	2.3hr	2.3hr																				
AC adapter	45W	65W Slim	65W																																		
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Charge to 100%	2.5hr	2.3hr	2.3hr																																		
Multicard reader	None	Preload	Win8.1 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Win8.1 64: Windows 8.1 64-bit Win8.1 P64: Windows 8.1 Pro 64-bit																																		
Ports	Two USB 3.0 (one Always On), Mini DisplayPort, HDMI, Ethernet extension connector, Lenovo OneLink connector	Limited warranty ¹²	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, IWS																																		
Monitor cable	Optional: Mini DisplayPort to VGA Monitor Cable																																				

See footnotes for more detailed information

(MQ2-4) © Lenovo

ThinkPad Edge E431



Lenovo® ThinkPad Edge E431



Lenovo ThinkPad Edge E431



Lenovo ThinkPad Edge E431



Lenovo ThinkPad Edge E531



Lenovo ThinkPad Edge E531



Lenovo ThinkPad Edge E531
with Numeric Keypad

ThinkPad Edge E431 6277 (Intel) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Top color	Finger print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
6277-DGU	i5-3320M	4GBx1	14.0" HD	720p	320G 5400	Intel 2230 + BT	None	Black	None	6	48	Prem 64	01/14
6277-DFU	i3-3120M	4GBx1	14.0" HD	720p	320G 7200	TP 11a/b/g/n + BT	None	Black	None	6	48	Prem 64	01/14

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-3120M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Preloaded applications (only some listed) • Adobe® Reader® • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™	
M.2 SSD	None	
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator	
Graphics	Intel HD Graphics 3000 or Intel HD Graphics 4000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz</i>	
Keyboard	6-row, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³	
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch	
ThinkLight™	None	
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.04-1.15"; 344mm x 239mm x 26.3-29.3mm	
Weight ²	<i>6-cell:</i> from 4.70 lb (2.13kg)	
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type ³⁷	Lithium Ion 6-cell	
Battery - life ¹⁰	<i>6-cell (48Whr):</i> up to 6.3 hr <i>6-cell (62Whr):</i> up to 8.2 hr	
Chipset	Mobile Intel HM77 Express Chipset	
ExpressCard	None	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card	One PCI Express Half Mini Card slot	
PCIe WLAN ⁴	<i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + BT combo adapter	Supports ThinkVantage® technologies
M.2 Card	One M.2 Card slot for support of SSD	
M.2 WWAN	None	
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card	
Ethernet	Realtek® RTL8111F Gigabit Network Connection	
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	None	
Fingerprint reader	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor	65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 6.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	For Lenovo ²² service upgrade options, please go to QP-TA sheet

See footnotes for more detailed information
US model(s) announced January 7, 2014

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(LIN1-5) January 2014

ThinkPad Edge E431 6277 (Intel) - TopSeller (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Top color	Finger print reader	Battery cells	Battery /Wh	Preload	Ann date (mm/yy)
6277-58U	i3-3120M	4GBx1	14.0" HD	720p	320G 7200	Intel 2230 + BT	None	Black	None	6	48	Win7 Pro64	04/13
6277-59U	i3-3120M	4GBx1	14.0" HD	720p	320G 7200	Intel 2230 + BT	None	Black	None	6	48	Win8 Pro64	04/13
6277-5AU	i5-3230M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win7 Pro64	04/13
6277-5BU	i5-3230M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win8 Pro64	04/13
6277-5CU	i7-3632QM	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win7 Pro64	04/13
6277-5DU	i7-3632QM	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win8 Pro64	04/13
6277-5EU	i3-3120M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win8 Pro64	04/13
6277-5FU	i3-2348M	4GBx1	14.0" HD	720p	320G 5400	TP 11b/g/n + BT	None	Black	None	6	48	Win7 Pro64	04/13
6277-5GU	i3-2348M	2GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n + BT	None	Black	None	6	48	Win7 Pro64	04/13
6277-5HU	i5-3230M	4GBx1	14.0" HD	720p	128G SSD	Intel 2230 + BT	None	Black	Finger	6	48	Win7 Pro64	04/13
6277-5JU	i5-3230M	4GBx1	14.0" HD	720p	128G SSD	Intel 2230 + BT	None	Black	Finger	6	48	Win8 Pro64	04/13
6277-5KU	i5-3230M	4+2GB	14.0" HD	720p	1TB 5400	Intel 2230 + BT	None	Black	Finger	6	48	Win8 64	04/13
6277-74U	i3-3120M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win7 Pro64	04/13
6277-75U	i5-3230M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	24GB	Black	Finger	6	48	Win7 Pro64	04/13
6277-76U	i5-3230M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	24GB	Black	Finger	6	48	Win8 Pro64	04/13
6277-77U	i5-3230M	4+2GB	14.0" HD	720p	1TB 5400	Intel 2230 + BT	None	Black	Finger	6	48	Win8 Pro64	04/13
6277-78U	i5-3230M	4+2GB	14.0" HD	720p	1TB 5400	Intel 2230 + BT	None	Black	Finger	6	48	Win7 Pro64	04/13
6277-CBU	i3-3130M	4GBx1	14.0" HD	720p	500G 7200	TP 11b/g/n + BT	None	Black	None	6	48	Win7 Pro64	08/13

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-2348M processor (2 cores, 2.30GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-3120M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i3-3130M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-3632QM processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology	Preloaded operating system²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications (only some listed) - Windows 7 models • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Lenovo SimpleTap • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Skype™ • Microsoft Office preloaded; purchase a product key to activate
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™	
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot	
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator	
Graphics	Intel HD Graphics 3000 or Intel HD Graphics 4000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz</i>	
Keyboard	6-row, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³	
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch	
ThinkLight™	None	
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.04-1.15"; 344mm x 239mm x 26.3-29.3mm	
Weight ²	<i>6-cell:</i> from 4.70 lb (2.13kg)	
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type ³⁷	Lithium Ion 6-cell	
Battery - life ¹⁰	<i>6-cell (48Whr):</i> up to 6.3 hr <i>6-cell (62Whr):</i> up to 8.2 hr	
Chipset	Mobile Intel HM77 Express Chipset	
ExpressCard	None	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card	One PCI Express Half Mini Card slot	
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + BT combo adapter <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + BT combo adapter	
M.2 Card	One M.2 Card slot for support of SSD	
M.2 WWAN	None	
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card	
Ethernet	Realtek® RTL8111F Gigabit Network Connection	
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	None	
Fingerprint reader	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	Supports ThinkVantage® technologies 65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 6.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For Lenovo ²² service upgrade options, please go to QP-TA sheet

See footnotes for more detailed information
US model(s) announced April 30, or August 20, 2013

© Lenovo
(LIN1-1) August 2013

ThinkPad Edge E431 6277 (Intel) - TopSeller (Windows 8) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Top color	Finger print reader	Battery cells	Battery /Wh	Preload	Ann date (mm/yy)
6277-9QU	i7-3632QM	8GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win7 Pro64	06/13
6277-9RU	i7-3632QM	8GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win8 Pro64	06/13
6277-AUU	i3-3120M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	None	6	48	Win8 64	06/13
6277-AVU	i5-3230M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win8 64	06/13
6277-AWU	i3-2348M	4GBx1	14.0" HD	720p	320G 5400	TP 11b/g/n + BT	None	Black	None	6	48	Win8 Pro64	06/13
6277-AXU	i3-2348M	2GBx1	14.0" HD	720p	320G 5400	TP 11b/g/n + BT	None	Black	None	6	48	Win8 Pro64	06/13
6277-AYU	i7-3632QM	8GBx1	14.0" HD	720p	128G SSD	Intel 2230 + BT	None	Black	Finger	6	48	Win8 Pro64	06/13
6277-AZU	i7-3632QM	8GBx1	14.0" HD	720p	128G SSD	Intel 2230 + BT	None	Black	Finger	6	48	Win7 Pro64	06/13
6277-B2U	i3-3110M	4GBx1	14.0" HD	720p	320G 5400	TP 11b/g/n + BT	None	Black	None	6	48	Win7 Pro64	06/13
6277-B3U	i3-3110M	4GBx1	14.0" HD	720p	320G 5400	TP 11b/g/n + BT	None	Black	None	6	48	Win8 Pro64	06/13
6277-BTU	i3-3110M	2GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n + BT	None	Black	None	6	48	Win7 Pro64	07/13
6277-BUU	i3-3110M	2GBx1	14.0" HD	720p	500G 7200	TP 11b/g/n + BT	None	Black	None	6	48	Win7 Pro64	07/13
6277-BVU	i3-3110M	4GBx1	14.0" HD	720p	500G 7200	TP 11b/g/n + BT	None	Black	None	6	48	Win7 Pro64	07/13
6277-BWU	i7-3632QM	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	None	6	48	Win8 Pro64	07/13
6277-BXU	i3-3120M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	None	6	48	Win7 Pro64	07/13
6277-BYU	i5-3230M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	None	6	48	Win7 Pro64	07/13
6277-DEU	i3-3120M	4GBx1	14.0" HD	720p	320G 7200	TP 11a/b/g/n + BT	None	Black	None	6	48	Win8 64	01/14

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-2348M processor (2 cores, 2.30GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-3110M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i3-3120M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-3632QM processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology	Preloaded operating system²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications (only some listed) - Windows 7 models • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Lenovo SimpleTap • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Skype™ • Microsoft Office preloaded; purchase a product key to activate
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™	
M.2 SSD	None	
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator	
Graphics	Intel HD Graphics 3000 or Intel HD Graphics 4000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution:</i> 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz	
Keyboard TrackPoint®	6-row, spill-resistant, multimedia Fn keys TrackPoint pointing device, Internet Scroll Bar ¹³	
Touchpad ThinkLight™	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch None	
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.04-1.15"; 344mm x 239mm x 26.3-29.3mm	
Weight ²	6-cell: from 4.70 lb (2.13kg)	
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type ³⁷	Lithium Ion 6-cell	
Battery - life ¹⁰	6-cell (48Whr): up to 6.3 hr 6-cell (62Whr): up to 8.2 hr	
Chipset	Mobile Intel HM77 Express Chipset	
ExpressCard	None	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card	One PCI Express Half Mini Card slot	
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + BT combo adapter <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + BT combo adapter	
M.2 Card	One M.2 Card slot for support of SSD	
M.2 WWAN	None	
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card	
Ethernet	Realtek® RTL8111F Gigabit Network Connection	
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	None	
Fingerprint reader	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	Supports ThinkVantage® technologies 65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 6.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For Lenovo ²² service upgrade options, please go to QP-TA sheet

See footnotes for more detailed information

US model(s) announced June 11, June 25, or July 16, 2013 or January 7, 2014

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(LIN1-3) January 2014

ThinkPad Edge E431 6277 (Intel) - Optimus (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Camera	Disk SATA GB ⁶ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Top color	Finger print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
6277-CCU	i5-3230M	4GBx1	14.0" HD	710M	720p	500G 7200	Intel 2230 + BT	None	Black	None	6	48	Win7 Pro64	08/13

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications (only some listed) - Windows 7 models • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Lenovo SimpleTap • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Skype™ • Microsoft Office preloaded; purchase a product key to activate
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™										
M.2 SSD	None										
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio										
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator										
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA GeForce® 710M , PCI Express® x 8, 1GB memory, DirectX® 11.1, NVIDIA PureVideo® HD technology, External monitor support via analog VGA DB-15 connector / digital HDMI connector <i>Max external resolution:</i> 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz										
Keyboard	6-row, spill-resistant, multimedia Fn keys										
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³										
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch										
ThinkLight™	None										
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.04-1.15"; 344mm x 239mm x 26.3-29.3mm										
Weight ²	6-cell: from 4.70 lb (2.13kg)										
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom										
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic										
Battery - type ³⁷	Lithium Ion 6-cell										
Battery - life ¹⁰	6-cell (48Whr): up to 6.2 hr 6-cell (62Whr): up to 8.0 hr										
Chipset	Mobile Intel HM77 Express Chipset										
ExpressCard	None										
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)										
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (VGA DB-15, HDMI), ethernet (RJ-45)										
PCIe Mini Card	One PCI Express Half Mini Card slot										
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + BT combo adapter <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + BT combo adapter										
M.2 Card	One M.2 Card slot for support of SSD										
M.2 WWAN	None										
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card										
Ethernet	Realtek® RTL8111F Gigabit Network Connection										
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack										
Security	Power-on password, hard disk password, supervisor password, security keyhole										
Security chip	None										
Fingerprint reader	None										
Limited warranty ¹² 1-year - depot repair service / service upgrades ²² available											Supports ThinkVantage® technologies
											90-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 6.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
											For Lenovo ²² service upgrade options, please go to QP-TA sheet

See footnotes for more detailed information
US model(s) announced August 20, 2013

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(LIN1-4) August 2013

ThinkPad Edge E431 6886 (Intel) - TopSeller (Win 8) - MultiTouch

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Top color	Finger print reader	Battery cells	Battery /Wh	Preload	Ann date (mm/yy)
6886-2WU	i3-3120M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	04/13
6886-2XU	i5-3230M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	04/13
6886-2YU	i7-3632QM	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	04/13
6886-3XU	i3-3120M	4GBx1	14.0" HD Touch	720p	320G 7200	Intel 2230 + BT	None	black	None	6	48	Win8 Pro64	04/13
6886-44U	i3-2348M	4GBx1	14.0" HD Touch	720p	320G 5400	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	06/13
6886-45U	i3-2348M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	06/13
6886-46U	i5-3230M	4GBx1	14.0" HD Touch	720p	128G SSD	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	06/13
6886-47U	i7-3632QM	8GBx1	14.0" HD Touch	720p	128G SSD	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	06/13
6886-48U	i7-3632QM	8GBx1	14.0" HD Touch	720p	500G 7200	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	06/13
6886-4HU	i3-3110M	4GBx1	14.0" HD Touch	720p	320G 5400	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	08/13
6886-4JU	i3-3110M	4GBx1	14.0" HD Touch	720p	320G 5400	Intel 2230 + BT	None	black	None	6	48	Win8 Pro64	08/13
6886-4KU	i3-3110M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	08/13
6886-4LU	i3-3110M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 2230 + BT	None	black	None	6	48	Win8 Pro64	08/13
6886-4MU	i3-3120M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 2230 + BT	None	black	Finger	6	48	Win8 64	10/13
6886-4NU	i5-3230M	4GBx1	14.0" HD Touch	720p	128G SSD	Intel 2230 + BT	None	black	Finger	6	48	Win8 64	10/13
6886-4PU	i7-3632QM	8GBx1	14.0" HD Touch	720p	128G SSD	Intel 2230 + BT	None	black	Finger	6	48	Win8 64	10/13

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-2348M processor (2 cores, 2.30GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-3110M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i3-3120M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-3632QM processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology	Preloaded operating system²⁰ - Some: Windows 8 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications¹⁴ (only some listed) • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate • Skype™
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™	
M.2 SSD	None	
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, 10-point touch screen LED backlight, 180 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator	
Graphics	Intel HD Graphics 3000 or Intel HD Graphics 4000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz</i>	
Keyboard	6-row, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³	
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch	
ThinkLight™	None	
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.17-1.29"; 344mm x 239mm x 29.7-32.7mm	
Weight ²	<i>6-cell:</i> from 5.36 lb (2.43kg)	
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type ³⁷	Lithium Ion 6-cell	
Battery - life ¹⁰	<i>6-cell (48Whr):</i> up to 6.0 hr <i>6-cell (62Whr):</i> up to 7.6 hr	
Chipset	Mobile Intel HM77 Express Chipset	
ExpressCard	None	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card	One PCI Express Half Mini Card slot	
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + BT combo adapter	Supports ThinkVantage® technologies
M.2 Card	One M.2 Card slot for support of SSD	
M.2 WWAN	None	
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card	
Ethernet	Realtek® RTL8111F Gigabit Network Connection	
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack	65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 6.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	None	
Fingerprint reader	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor	For Lenovo ²² service upgrade options, please go to QP-TA sheet
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for more detailed information
US model(s) announced April 30, June 11, August 20, or October 15, 2013

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ThinkPad E440



Lenovo® ThinkPad E440
with MultiTouch Screen



Lenovo ThinkPad E440
with MultiTouch Screen



Lenovo ThinkPad E440



Lenovo ThinkPad E440



Lenovo ThinkPad E440



Lenovo ThinkPad E440

ThinkPad E440 20C5 (Intel) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	SIM card	Top color	Finger print reader	Battery cells	Battery /Wh	Preload	Ann date (mm/yy)
20C5005KUS	i5-4200M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 64	01/14
20C5005AUS	i5-4200M	4GBx1	14.0" HD	720p	128G SSD	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5004XUS	i3-4000M	4GBx1	14.0" HD	720p	320G 7200	Intel 7260 + BT	None	None	Black	None	6	48	Win7 Pro64	01/14
20C50059US	i5-4200M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C50051US	i5-4200M	4GBx1	14.0" HD	720p	128G SSD	Intel 7260 + BT	None	None	Black	Finger	6	48	Win7 Pro64	01/14
20C50058US	i3-4000M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5005BUS	i7-4702MQ	8GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5005JUS	i3-4000M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	None	6	48	Win8 64	01/14
20C50056US	i3-4000M	4GBx1	14.0" HD	720p	320G 7200	Intel 7260 + BT	None	None	Black	None	6	48	Win8 Pro64	01/14
20C50058US	i7-4702MQ	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C50055US	i7-4702MQ	8GBx1	14.0" HD	720p	128G SSD	Intel 7260 + BT	None	None	Black	Finger	6	48	Win7 Pro64	01/14
20C50057US	i7-4702MQ	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C50052US	i3-4000M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win7 Pro64	01/14
20C50053US	i5-4200M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	16GB	None	Black	Finger	6	48	Win7 Pro64	01/14
20C5005HUS	i5-4200M	4+2GB	14.0" HD	720p	1TB 5400	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 64	01/14
20C50054US	i5-4200M	4+2GB	14.0" HD	720p	1TB 5400	Intel 7260 + BT	None	None	Black	Finger	6	48	Win7 Pro64	01/14
20C5004YUS	i5-4200M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win7 Pro64	01/14
20C5008CUS	i3-4000M	2GBx1	14.0" HD	720p	320G 7200	Intel 7260 + BT	None	None	Black	None	6	48	Win7 Pro64	01/14
20C500BVUS	i5-4200M	4GBx1	14.0" HD	720p	128G SSD	Intel 7260 ac + BT	None	None	Black	Finger	6	48	Win7 Pro64	05/14
20C500BUUS	i5-4200M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 ac + BT	None	None	Black	Finger	6	48	Win7 Pro64	05/14

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-4000M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4600, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-4200M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4600, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i7-4702MQ processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4600, DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology	Preloaded operating system²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 64-bit - <i>Some:</i> Windows 8 Pro 64-bit
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Preloaded applications (only some listed, exclude No OS models) - Windows 7 models <ul style="list-style-type: none"> • Adobe® Reader® - Windows 8 models <ul style="list-style-type: none"> • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models <ul style="list-style-type: none"> • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™	
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot	
Widescreen display	14.0" (355mm) HD (1366x768) , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio	
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator	
Graphics	Intel HD Graphics 4600 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display	
Keyboard	6-row, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³	
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch	
ThinkLight™	None	
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.04-1.15"; 344 x 239mm x 26.3-29.3mm	
Weight ²	<i>6-cell:</i> from 4.69 lb (2.13kg)	
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type ³⁷	Lithium Ion 6-cell	
Battery - life ¹⁰	<i>6-cell (48Whr):</i> up to 6.3 hr <i>6-cell (62Whr):</i> up to 8.2 hr	
Chipset	Mobile Intel HM87 Express Chipset	
ExpressCard	None	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card	One PCI Express Half Mini Card slot	
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11ac, PCIe Half Mini Card, Intel Dual Band Wireless-AC 7260, Wi-Fi + Bluetooth combo adapter, 2x2	
M.2 Card	One M.2 Card slot for support of SSD	
M.2 WWAN	None	
SIM card	None	
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card	
Ethernet	Realtek® RTL8111GUS Gigabit Network Connection	
Audio support	High Definition (HD) Audio, Conexant CX20751-21Z codec / stereo speakers, Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	<i>Some:</i> Fingerprint reader on palm rest, swipe sensor	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	Supports ThinkVantage® technologies 65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 6.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²

See footnotes for more detailed information

ThinkPad E440 20C5 (Intel) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	SIM card	Top color	Finger print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
20C500AWUS	i3-4100M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win7 Pro64	05/14
20C500AYUS	i7-4712MQ	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win7 Pro64	05/14
20C500B3US	i3-4100M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	05/14
20C500B5US	i7-4712MQ	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	05/14
20C500B4US	i5-4210M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	05/14
20C500AXUS	i5-4210M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win7 Pro64	05/14

Positioning Processor	<p><i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-4100M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4600, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-4210M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4600, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-4712MQ processor (4 cores, 2.30GHz, 6MB cache), Intel HD Graphics 4600, DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology</p>										<p>Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit</p>			
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										<p>Preloaded applications (only some listed, exclude No OS models) - Windows 7 models</p> <ul style="list-style-type: none"> • Adobe® Reader® <p>- Windows 8 models</p> <ul style="list-style-type: none"> • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage <p>- All models</p> <ul style="list-style-type: none"> • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate 			
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™													
M.2 SSD	None													
Widescreen display Camera	<p>14.0" (355mm) HD (1366x768), anti-glare, LED backlight, 200 nits, 16:9 aspect ratio HD720p resolution, face track, low light sensitive, fixed focus, LED indicator</p>													
Graphics	<p>Intel HD Graphics 4600 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display</p>													
Keyboard TrackPoint® Touchpad ThinkLight™	<p>6-row, spill-resistant, multimedia Fn keys TrackPoint pointing device, Internet Scroll Bar¹³ UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch None</p>													
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.04-1.15"; 344 x 239mm x 26.3-29.3mm													
Weight ²	6-cell: from 4.69 lb (2.13kg)													
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom													
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic													
Battery - type ³⁷	Lithium Ion 6-cell													
Battery - life ¹⁰	6-cell (48Whr): up to 6.3 hr 6-cell (62Whr): up to 8.2 hr													
Chipset ExpressCard Multicard Reader Ports	<p>Mobile Intel HM87 Express Chipset None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, one USB 2.0 (powered), OneLink Docking port external monitor (VGA DB-15, HDMI), ethernet (RJ-45)</p>													
PCIe Mini Card PCIe WLAN ⁴	<p>One PCI Express Half Mini Card slot Some: 11b/g/n, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2 Some: 11ac, PCIe Half Mini Card, Intel Dual Band Wireless-AC 7260, Wi-Fi + Bluetooth combo adapter, 2x2</p>													
M.2 Card M.2 WWAN SIM card Bluetooth™ Ethernet Audio support	<p>One M.2 Card slot for support of SSD None None Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card Realtek® RTL8111GUS Gigabit Network Connection High Definition (HD) Audio, Conexant CX20751-21Z codec / stereo speakers, Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack</p>										<p>Supports ThinkVantage® technologies</p>			
Security Security chip Fingerpring reader	<p>Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Fingerprint reader on palm rest, swipe sensor</p>										<p>65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 6.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²</p>			
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available													

See footnotes for more detailed information

ThinkPad E440 20C5 (Intel) - TopSeller (MultiTouch)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	SIM card	Top color	Finger print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
20C5005GUS	i7-4702MQ	8GBx1	14.0" HD Touch	720p	128G SSD	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5005CUS	i3-4000M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5005DUS	i5-4200M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5005FUS	i5-4200M	4GBx1	14.0" HD Touch	720p	128G SSD	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5005EUS	i7-4702MQ	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5008AUS	i5-4200M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 Pro64	01/14
20C50088US	i7-4702MQ	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 Pro64	01/14
20C50089US	i7-4702MQ	8GBx1	14.0" HD Touch	720p	128G SSD	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 Pro64	01/14
20C5008BUS	i5-4200M	4GBx1	14.0" HD Touch	720p	128G SSD	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 Pro64	01/14
20C50087US	i3-4000M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 Pro64	01/14
20C5008UUS	i3-4000M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 64	03/14
20C5008VUS	i5-4200M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 64	03/14
20C500B2US	i7-4712QM	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 Pro64	05/14
20C500B1US	i5-4210M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 Pro64	05/14
20C500B0US	i3-4100M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 Pro64	05/14
20C500BSUS	i3-4100M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 64	05/14
20C500BTUS	i5-4210M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 64	05/14

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-4000M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4600, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i3-4100M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4600, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-4200M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4600, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i5-4210M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4600, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-4702MQ processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4600, DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-4712MQ processor (4 cores, 2.30GHz, 6MB cache), Intel HD Graphics 4600, DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system²⁰ - Some: Windows 8 Pro 64-bit - Some: Windows 8.1 64-bit - Some: Windows 8.1 Pro 64-bit Preloaded applications (only some listed) • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™	
M.2 SSD	None	
Widescreen display	14.0" (355mm) HD (1366x768) , anti-glare, 10-point touch screen LED backlight, 180 nits, 16:9 aspect ratio	
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator	
Graphics	Intel HD Graphics 4600 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display	
Keyboard	6-row, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³	
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch	
ThinkLight™	None	
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.17-1.27"; 344 x 239mm x 29.7-32.3mm	
Weight ²	<i>6-cell:</i> from 5.36 lb (2.43kg)	
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type ³⁷	Lithium Ion 6-cell	
Battery - life ¹⁰	<i>6-cell (48Whr):</i> up to 6.3 hr <i>6-cell (62Whr):</i> up to 8.2 hr	
Chipset	Mobile Intel HM87 Express Chipset	
ExpressCard	None	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card	One PCI Express Half Mini Card slot	
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2	
M.2 Card	One M.2 Card slot for support of SSD	
M.2 WWAN	None	
SIM card	None	
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card	
Ethernet	Realtek® RTL8111GUS Gigabit Network Connection	
Audio support	High Definition (HD) Audio, Conexant CX20751-21Z codec / stereo speakers, Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	Fingerprint reader on palm rest, swipe sensor	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	Supports ThinkVantage® technologies 65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 6.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²

See footnotes for more detailed information



Lenovo® ThinkPad E450



Lenovo ThinkPad E450



Lenovo ThinkPad E450

ThinkPad E450 Platform Specifications

Product Specifications Reference (PSREF)

Processor	4th or 5th Generation Intel® Core™ i3 / i5 / i7 Processor								Multicard Reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC)	
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory speed	Processor Graphics		Two USB 3.0, one USB 2.0 (Always On), Ethernet (RJ-45), external monitor (HDMI), Lenovo OneLink connector	
	i3-4005U	2	4	1.7 GHz	-	3MB	DDR3L-1600	HD4400		None	
	i3-5005U	2	4	2.0 GHz	-	3MB		HD5500		Camera	
	i5-5200U	2	4	2.2 GHz	2.7 GHz	3MB		HD5500		HD720p resolution, fixed focus	
i7-5500U	2	4	2.4 GHz	3.0 GHz	4MB	HD5500		Audio support			
										HD Audio, Conexant® CX20751 codec, Dolby® Advanced Audio™ v4 / stereo speakers, 2W x 2 / dual array microphone, combo audio / microphone jack	
Graphics	Intel HD Graphics in processor only, or AMD Radeon R5 M240 Graphics, 1GB DDR3 memory, AMD Radeon R7 M260 Graphics, 2GB DDR3 memory, digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display Max resolution: 1920x1080 (HDMI) @60Hz								Keyboard	6-row, spill-resistant, multimedia Fn keys	
									UltraNav™	TrackPoint® pointing device and multi-touch with 3+2 buttons click pad	
Chipset	Intel SoC (System on Chip) platform 16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets								ThinkLight™	None	
									Security chip	Power-on password, hard disk password, supervisor password, security keyhole	
Memory									vPro	None	
									Fingerprint reader	Some: Fingerprint reader on the keyboard bezel, swipe sensor	
Display	Some: 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio Some: 14.0" (355mm) FHD (1920x1080) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio								NFC	None	
									Battery type	Li-Ion 6-cell (47Wh)	
Multi-touch	Some: supports 10-finger gesture								Battery life	6-cell (47Wh): up to 9.0 hr	
									AC adapter	Some: 45-watt AC adapter (Integrated Graphics) Some: 65-watt AC adapter (Discrete Graphics)	
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: HDD / SATA 6.0Gb/s, 2.5" wide, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ Some: Hybrid drive with 8GB NAND flash memory								Preload	Some: No operating system	
										Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit	
Optical	None None								Some: Windows 8.1 64-bit		
									Some: Windows 8.1 Pro 64-bit		
Ethernet	Intel WGI218V Gigabit Ethernet Connection Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter								Some: Windows 8.1 Pro 64-bit		
									Some: Windows 8.1 Pro 64-bit		
Bluetooth™									Some: Windows 8.1 Pro 64-bit		
									Some: Windows 8.1 Pro 64-bit		
WLAN	One of the following, configurable by model: • Intel Wireless-AC 3160, 1x1, Wi-Fi + Bluetooth combo adapter, M.2 Card • Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT combo adapter, M.2 Card • RTL8723BE, Realtek 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter, M.2 Card • BCM43162, Broadcom 11-AC, 1x1, Wi-Fi + BT combo adapter, M.2 Card								Some: Windows 8.1 Pro 64-bit		
									Some: Windows 8.1 Pro 64-bit		
WWAN	None								Some: Windows 8.1 Pro 64-bit		
									Some: Windows 8.1 Pro 64-bit		
SIM card	None								Some: Windows 8.1 Pro 64-bit		
									Some: Windows 8.1 Pro 64-bit		
Smart Card Read	None								Some: Windows 8.1 Pro 64-bit		
									Some: Windows 8.1 Pro 64-bit		
ExpressCard	None								Some: Windows 8.1 Pro 64-bit		
									Some: Windows 8.1 Pro 64-bit		
Dimensions	None Touch(WxDxH): 13.35" x 9.41" x 0.94"; 339mm x 239mm x 24mm								Some: Windows 8.1 Pro 64-bit		
									Some: Windows 8.1 Pro 64-bit		
Weight	6-cell None Touch: from 4.00 lb (1.81kg)								Some: Windows 8.1 Pro 64-bit		
									Some: Windows 8.1 Pro 64-bit		
Case color	Graphite Black								Some: Windows 8.1 Pro 64-bit		
									Some: Windows 8.1 Pro 64-bit		
Case Material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic								Some: Windows 8.1 Pro 64-bit		
									Some: Windows 8.1 Pro 64-bit		
									Limited warranty	1-year - depot repair service / service upgrades available	
									Environment	EPEAT™ Gold; ENERGY STAR®; RoHS-compliant	

See footnotes for more detailed information

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ThinkPad E450 20DC - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	Optical	WLAN & Bluetooth	WWAN/SSD	SIM card	Camera	Keyboard	TPM	Finger print reader	Battery cells(wh)	Power adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20DC003FUS	I3-4005U	No	HD 4400	4GBx1	14.0" HD	None	500GB 7200	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	No	6 (47wh)	45W	Win8.1 64	1-depot	No	01/15
20DC003JUS	I3-4005U	No	HD 4400	4GBx1	14.0" HD	None	500GB 7200	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	No	6 (47wh)	45W	Win8.1 P64	1-depot	No	01/15
20DC003KUS	I3-4005U	No	HD 4400	8GBx1	14.0" HD	None	500GB 7200	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 P64	1-depot	No	01/15
20DC003LUS	I3-4005U	No	HD 4400	8GBx1	14.0" HD	None	1TB 5400	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 P64	1-depot	No	01/15
20DC003SUS	I5-5200U	No	HD 5500	4GBx1	14.0" HD	None	500GB 7200	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 P64	1-depot	No	01/15
20DC003TUS	I5-5200U	No	HD 5500	4GBx1	14.0" HD	None	1TB 5400	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 P64	1-depot	No	01/15
20DC003UUS	I5-5200U	No	HD 5500	8GBx1	14.0" HD	None	500GB 7200	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 P64	1-depot	No	01/15
20DC003VUS	I5-5200U	No	HD 5500	8GBx1	14.0" HD	None	1TB 5400	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 P64	1-depot	No	01/15
20DC003PUS	I3-5005U	No	HD 5500	4GBx1	14.0" HD	None	1TB 5400	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 P64	1-depot	No	01/15
20DC003NUS	I3-5005U	No	HD 5500	4GBx1	14.0" HD	None	500GB 7200	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 P64	1-depot	No	01/15
20DC003MUS	I3-5005U	No	HD 5500	4GBx1	14.0" HD	None	500GB 7200	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 64	1-depot	No	01/15
20DC003QUS	I3-5005U	No	HD 5500	8GBx1	14.0" HD	None	500GB 7200	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 P64	1-depot	No	01/15
20DC003RUS	I3-5005U	No	HD 5500	8GBx1	14.0" HD	None	1TB 5400	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 P64	1-depot	No	01/15
20DC004CUS	I5-5200U	No	HD 5500	4GBx1	14.0" HD	None	500GB 7200	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC004HUS	I5-5200U	No	HD 5500	4GBx1	14.0" HD	None	1TB 5400	None	7265 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC004TUS	I5-5200U	No	HD 5500	8GBx1	14.0" FHD	None	1TB 5400	None	7265 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC003WUS	I3-4005U	No	HD 4400	4GBx1	14.0" HD	None	500GB 7200	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC0049US	I3-5005U	No	HD 5500	8GBx1	14.0" HD	None	1TB 5400	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC004NUS	I5-5200U	No	HD 5500	8GBx1	14.0" HD	None	128GB SSD	None	7265 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC004EUS	I5-5200U	No	HD 5500	4GBx1	14.0" FHD	None	500GB 7200	None	7265 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad E450 Platform Specifications sheet](#)

Processor	4th or 5th Generation Intel® Core™ i3 / i5 / i7 Processor	Dimensions Weight	<i>None Touch(WxDxH):</i> 13.35" x 9.41" x 0.94"; 339mm x 239mm x 24mm																														
	<table border="1"> <thead> <tr> <th>Processor Number</th> <th># of Cores</th> <th># of Threads</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory speed</th> <th>Processor Graphics</th> </tr> </thead> <tbody> <tr> <td>i3-4005U</td> <td>2</td> <td>4</td> <td>1.7 GHz</td> <td>-</td> <td>3MB</td> <td rowspan="3">DDR3L-1600</td> <td>HD4400</td> </tr> <tr> <td>i3-5005U</td> <td>2</td> <td>4</td> <td>2.0 GHz</td> <td>-</td> <td>3MB</td> <td>HD5500</td> </tr> <tr> <td>i5-5200U</td> <td>2</td> <td>4</td> <td>2.2 GHz</td> <td>2.7 GHz</td> <td>3MB</td> <td>HD5500</td> </tr> </tbody> </table>	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory speed	Processor Graphics	i3-4005U	2	4	1.7 GHz	-	3MB	DDR3L-1600	HD4400	i3-5005U	2	4	2.0 GHz	-	3MB	HD5500	i5-5200U	2	4	2.2 GHz	2.7 GHz	3MB	HD5500	Case color	6-cell <i>None Touch:</i> from 4.00 lb (1.81kg)
Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory speed	Processor Graphics																										
i3-4005U	2	4	1.7 GHz	-	3MB	DDR3L-1600	HD4400																										
i3-5005U	2	4	2.0 GHz	-	3MB		HD5500																										
i5-5200U	2	4	2.2 GHz	2.7 GHz	3MB		HD5500																										
		Case Matera	Graphite Black PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic																														
Graphics	Intel HD Graphics in processor only, or digital monitor support via HDMI™ (supporting HDCP to output protected content)	Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																														
Chipset	Intel SoC (System on Chip) platform	Ports	Two USB 3.0, one USB 2.0 (Always On), Ethernet (RJ-45), external monitor (HDMI), Lenovo OneLink connector																														
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Monitor cable	None																														
Display	Some: 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio Some: 14.0" (355mm) FHD (1920x1080) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio	Camera	HD720p resolution, fixed focus																														
Multi-touch	Some: supports 10-finger gesture	Audio support	HD Audio, Conexant® CX20751 codec, Dolby® Advanced Audio™ v4 / stereo speakers, 2W x 2 / dual array microphone, combo audio / microphone jack																														
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: HDD / SATA 6.0Gb/s, 2.5" wide, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™	Keyboard	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and multi-touch with 3+2 buttons click pad ThinkLight™																														
Optical	None None None	Security	Power-on password, hard disk password, supervisor password, security keyhole																														
Ethernet	Intel WGI218V Gigabit Ethernet Connection	Security chip	Some: Trusted Platform Module, TCG 1.2-compliant																														
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	vPro	None																														
WLAN	One of the following, configurable by model: • Intel Wireless-AC 3160, 1x1, Wi-Fi + Bluetooth combo adapter, M.2 Card • Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT combo adapter, M.2 Card	Fingerprint reader	Some: Fingerprint reader on the keyboard bezel, swipe sensor																														
WWAN	None	NFC	None																														
SIM card	None	Battery type	Li-Ion 6-cell (47Wh)																														
		Battery life	6-cell (47Wh): up to 9.0 hr																														
		AC adapter	45-watt AC adapter (Integrated Graphics)																														
		Preload	Some: No operating system Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit	Some: Windows 8.1 64-bit Some: Windows 8.1 Pro 64-bit																													
		Limited warranty	1-year - depot repair service / service upgrades available																														
		Environment	EPEAT™ Gold; ENERGY STAR®; RoHS-compliant																														

See footnotes for more detailed information

ThinkPad E450 20DC - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	Optical	WLAN & Bluetooth	WWAN/SSD	SIM card	Camera	Keyboard	TPM	Finger print reader	Battery cells(wh)	Power adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20DC003XUS	I5-5200U	No	HD 5500	4GBx1	14.0" HD	None	128GB SSD	None	7265 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC004QUS	I5-5200U	No	HD 5500	8GBx1	14.0" HD	None	1TB 5400	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC004FUS	I5-5200U	No	HD 5500	4GBx1	14.0" FHD	None	128GB SSD	None	7265 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC004PUS	I5-5200U	No	HD 5500	8GBx1	14.0" FHD	None	128GB SSD	None	7265 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC0046US	I3-5005U	No	HD 5500	4GBx1	14.0" HD	None	1TB 5400	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC0048US	I3-5005U	No	HD 5500	8GBx1	14.0" HD	None	500GB 7200	None	7265 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC0043US	I3-4005U	No	HD 4400	8GBx1	14.0" HD	None	1TB 5400	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC004DUS	I5-5200U	No	HD 5500	4GBx1	14.0" HD	None	500GB 7200	None	7265 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC004KUS	I5-5200U	No	HD 5500	8GBx1	14.0" HD	None	500GB 7200	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC0042US	I3-4005U	No	HD 4400	8GBx1	14.0" HD	None	500GB 7200	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC0045US	I3-5005U	No	HD 5500	4GBx1	14.0" HD	None	500GB 7200	None	7265 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC004SUS	I5-5200U	No	HD 5500	8GBx1	14.0" HD	None	1TB 5400	None	7265 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC004GUS	I5-5200U	No	HD 5500	4GBx1	14.0" HD	None	1TB 5400	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC0047US	I3-5005U	No	HD 5500	8GBx1	14.0" HD	None	500GB 7200	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC004MUS	I5-5200U	No	HD 5500	8GBx1	14.0" FHD	None	500GB 7200	None	7265 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC0041US	I3-4005U	No	HD 4400	4GBx1	14.0" HD	None	1TB 5400	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC004LUS	I5-5200U	No	HD 5500	8GBx1	14.0" HD	None	500GB 7200	None	7265 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC0044US	I3-5005U	No	HD 5500	4GBx1	14.0" HD	None	500GB 7200	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC004JUS	I5-5200U	No	HD 5500	4GBx1	14.0" FHD	None	1TB 5400	None	7265 ac+BT4.0	None	None	720p	Keyboard	TPM	Finger	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DC0040US	I3-4005U	No	HD 4400	4GBx1	14.0" HD	None	500GB 7200	None	3160 ac+BT4.0	None	None	720p	Keyboard	TPM	No	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad E450 Platform Specifications sheet](#)

Processor	4th or 5th Generation Intel® Core™ i3 / i5 / i7 Processor	Dimensions Weight	None Touch(WxDxH): 13.35" x 9.41" x 0.94"; 339mm x 239mm x 24mm 6-cell None Touch: from 4.00 lb (1.81kg)																																
	<table border="1"> <thead> <tr> <th>Processor Number</th> <th># of Cores</th> <th># of Threads</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory speed</th> <th>Processor Graphics</th> </tr> </thead> <tbody> <tr> <td>i3-4005U</td> <td>2</td> <td>4</td> <td>1.7 GHz</td> <td>-</td> <td>3MB</td> <td></td> <td>HD4400</td> </tr> <tr> <td>i3-5005U</td> <td>2</td> <td>4</td> <td>2.0 GHz</td> <td>-</td> <td>3MB</td> <td>DDR3L-1600</td> <td>HD5500</td> </tr> <tr> <td>i5-5200U</td> <td>2</td> <td>4</td> <td>2.2 GHz</td> <td>2.7 GHz</td> <td>3MB</td> <td></td> <td>HD5500</td> </tr> </tbody> </table>	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory speed	Processor Graphics	i3-4005U	2	4	1.7 GHz	-	3MB		HD4400	i3-5005U	2	4	2.0 GHz	-	3MB	DDR3L-1600	HD5500	i5-5200U	2	4	2.2 GHz	2.7 GHz	3MB		HD5500	Case color	Graphite Black
Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory speed	Processor Graphics																												
i3-4005U	2	4	1.7 GHz	-	3MB		HD4400																												
i3-5005U	2	4	2.0 GHz	-	3MB	DDR3L-1600	HD5500																												
i5-5200U	2	4	2.2 GHz	2.7 GHz	3MB		HD5500																												
		Case Matera	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic																																
Graphics	Intel HD Graphics in processor only, or digital monitor support via HDMI™ (supporting HDCP to output protected content)	Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																																
Chipset	Intel SoC (System on Chip) platform	Ports	Two USB 3.0, one USB 2.0 (Always On), Ethernet (RJ-45), external monitor (HDMI), Lenovo OneLink connector																																
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Monitor cable	None																																
Display	Some: 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio Some: 14.0" (355mm) FHD (1920x1080) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio	Camera	HD720p resolution, fixed focus																																
Multi-touch	Some: supports 10-finger gesture	Audio support	HD Audio, Conexant® CX20751 codec, Dolby® Advanced Audio™ v4 / stereo speakers, 2W x 2 / dual array microphone, combo audio / microphone jack																																
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: HDD / SATA 6.0Gb/s, 2.5" wide, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™	Keyboard	6-row, spill-resistant, multimedia Fn keys																																
Optical	None	UltraNav™	TrackPoint® pointing device and multi-touch with 3+2 buttons click pad																																
M.2 SSD	None	ThinkLight™	None																																
Ethernet	Intel WGI218V Gigabit Ethernet Connection	Security	Power-on password, hard disk password, supervisor password, security keyhole																																
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Security chip	Some: Trusted Platform Module, TCG 1.2-compliant																																
WLAN	One of the following, configurable by model: • Intel Wireless-AC 3160, 1x1, Wi-Fi + Bluetooth combo adapter, M.2 Card • Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT combo adapter, M.2 Card	vPro	None																																
		Fingerprint reader	Some: Fingerprint reader on the keyboard bezel, swipe sensor																																
WWAN	None	NFC	None																																
SIM card	None	Battery type	Li-Ion 6-cell (47Wh)																																
		Battery life	6-cell (47Wh): up to 9.0 hr																																
		AC adapter	45-watt AC adapter (Integrated Graphics)																																
		Preload	Some: No operating system	Some: Windows 8.1 64-bit																															
			Some: Windows® 7 Professional 64	Some: Windows 8.1 Pro 64-bit																															
			reinstalled through downgrade rights in Windows 8.1 Pro 64-bit																																
		Limited warranty	1-year - depot repair service / service upgrades available																																
		Environment	EPEAT™ Gold; ENERGY STAR®; RoHS-compliant																																

See footnotes for more detailed information

ThinkPad E450 20DC (Radeon) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	Optical	WLAN & Bluetooth	WWAN/SSD	SIM card	Camera	Keyboard	TPM	Finger print reader	Battery cells(wh)	Power adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20DC0099US	I7-5500U	No	R7 M260	4GBx1	14.0" HD	None	500GB 7200	None	7265 ac+BT4.0	None	None	720p	Keyboard	No	Finger	6 (47wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DC0050US	I7-5500U	No	R7 M260	8GBx1	14.0" FHD	None	128GB SSD	None	7265 ac+BT4.0	None	None	720p	Keyboard	No	Finger	6 (47wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DC004YUS	I7-5500U	No	R7 M260	8GBx1	14.0" HD	None	500GB 7200	None	7265 ac+BT4.0	None	None	720p	Keyboard	No	Finger	6 (47wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DC004VUS	I7-5500U	No	R7 M260	4GBx1	14.0" FHD	None	128GB SSD	None	7265 ac+BT4.0	None	None	720p	Keyboard	No	Finger	6 (47wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DC003YUS	I7-5500U	No	R7 M260	8GBx1	14.0" HD	None	128GB SSD	None	7265 ac+BT4.0	None	None	720p	Keyboard	No	Finger	6 (47wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DC004WUS	I7-5500U	No	R7 M260	4GBx1	14.0" HD	None	1TB 5400	None	7265 ac+BT4.0	None	None	720p	Keyboard	No	Finger	6 (47wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DC004XUS	I7-5500U	No	R7 M260	4GBx1	14.0" FHD	None	1TB 5400	None	7265 ac+BT4.0	None	None	720p	Keyboard	No	Finger	6 (47wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DC0051US	I7-5500U	No	R7 M260	8GBx1	14.0" FHD	None	1TB 5400	None	7265 ac+BT4.0	None	None	720p	Keyboard	No	Finger	6 (47wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DC004UUS	I7-5500U	No	R7 M260	4GBx1	14.0" FHD	None	500GB 7200	None	7265 ac+BT4.0	None	None	720p	Keyboard	No	Finger	6 (47wh)	65W	Win8.1 DG Win7	1-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad E450 Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i5 / i7 Processor								Dimensions Weight Case color Case Matera	None Touch(WxDxH): 13.35" x 9.41" x 0.94"; 339mm x 239mm x 24mm 6-cell None Touch: from 4.00 lb (1.81kg) Graphite Black PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory speed	Processor Graphics		
	i5-5200U	2	4	2.2 GHz	2.7 GHz	3MB	DDR3L-1600	HD5500	Multicard Reader Ports Monitor cable Camera Audio support	
	i7-5500U	2	4	2.4 GHz	3.0 GHz	4MB		HD5500		
Graphics	AMD Radeon R7 M260 Graphics, 2GB DDR3 memory, digital monitor support via HDMI™ (supporting HDCP to output protected content)								Two USB 3.0, one USB 2.0 (Always On), Ethernet (RJ-45), external monitor (HDMI), Lenovo OneLink connector	
Chipset Memory	Intel SoC (System on Chip) platform 16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets									
Display	Some: 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio Some: 14.0" (355mm) FHD (1920x1080) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio								Keyboard UltraNav™ TrackPoint® pointing device and multi-touch with 3+2 buttons click pad ThinkLight™	
Multi-touch	Some: supports 10-finger gesture									
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: HDD / SATA 6.0Gb/s, 2.5" wide, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ Some: Hybrid drive with 8GB NAND flash memory								Security Security chip vPro Fingerprint reader NFC	
Optical M.2 SSD	None None									
Ethernet Bluetooth™	Intel WGI218V Gigabit Ethernet Connection Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter								Li-Ion 6-cell (47Wh) 6-cell (47Wh): up to 9.0 hr 65-watt AC adapter (Discrete Graphics)	
WLAN	One of the following, configurable by model: • Intel Wireless-AC 3160, 1x1, Wi-Fi + Bluetooth combo adapter, M.2 Card • Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT combo adapter, M.2 Card									
WWAN	None								Preload	
SIM card	None									
									Limited warranty	1-year - depot repair service / service upgrades available
									Environment	EPEAT™ Gold; ENERGY STAR®; RoHS-compliant

See footnotes for more detailed information



Lenovo® ThinkPad E455



Lenovo ThinkPad E455



Lenovo ThinkPad E455

ThinkPad E455 Platform Specifications

Product Specifications Reference (PSREF)

Processor	AMD Accelerated Processor A6, A8, or A10 APU								Multicard Reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC)	
	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	Graphics		Two USB 3.0, one USB 2.0 (Always On), Ethernet (RJ-45), HDMI, Lenovo OneLink connector, combo audio / microphone jack	
	A6-7000	2	2	2.2 GHz	3.0 GHz	1MB	DDR3L-1600	R4 HD		None	
	A8-7100	4	4	1.8 GHz	3.0 GHz	4MB		R5 M240		Camera	
A10-7300	4	4	1.9 GHz	3.2 GHz	4MB	R7 M260DX (R6+R5 M240)		HD720p resolution, fixed focus Audio support HD Audio, Conexant® CX20751 codec, Dolby® Advanced Audio™ v4 / stereo speakers, 2W x 2 / dual array microphone, combo audio / microphone jack			
Graphics	AMD Radeon™ R4 HD Graphics in processor only, AMD Radeon R5 M240 Graphics, 2GB DDR3 memory, or Dual Graphics support for A10 APU digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display Max resolution: 1920x1080 (HDMI) @60Hz								Keyboard	6-row, spill-resistant, multimedia Fn keys	
Chipset	AMD A76M FCH Chipset								UltraNav™	TrackPoint® pointing device and multi-touch with 3+2 buttons click pad	
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets								ThinkLight™	None	
Display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio <i>Some:</i> 14.0" (355mm) FHD (1920x1080) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio								Security chip	Power-on password, hard disk password, supervisor password, security keyhole	
Multi-touch	None								vPro	None	
Storage	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ <i>Some:</i> Hybrid drive with 8GB NAND flash memory								Fingerprint reader	None	
Optical M.2 SSD	None								NFC	None	
Ethernet	Realtek® RTL8111GUS Gigabit Ethernet Connection								Battery type	Li-Ion 6-cell (47Wh)	
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter								Battery life	Up to 6.5 hr	
WLAN	<i>One of the following, configurable by model:</i> • RTL8723BE, Realtek 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter, M.2 Card • BCM43162, Broadcom 11-AC, 1x1, Wi-Fi + BT combo adapter, M.2 Card								AC adapter	<i>Some:</i> 45-watt AC adapter (Integrated Graphics) <i>Some:</i> 65-watt AC adapter (Discrete Graphics)	
WWAN	None								Preload	<i>Some:</i> No operating system	
SIM card	None									<i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit	
Smart Card Read ExpressCard	None									• Lenovo Solution Center	
Dimensions	<i>None Touch(WxDxH):</i> 13.34" x 9.40" x 0.94" (339mm x 239mm x 24mm)									• Lenovo SHAREit	
Weight	From 4.00 lb (1.81kg)									• ThinkVantage Product Recovery	
Case color	Graphite black									• Rescue and Recovery™	
Case Material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic									• ThinkVantage System Update	
										• PC Device Stage	
										• Evernote	
										• Maxthon Cloud Browser	
									• Norton Studio		
									• Microsoft Office preloaded; purchase a product key to activate		
									• Norton Internet Security (30 days of virus definitions)		
									Limited warranty		
									1-year - depot repair service / service upgrades available		
									Environment		
									EPEAT™ Gold; ENERGY STAR®; RoHS-compliant		

See footnotes for more detailed information

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ThinkPad E455 20DE (Integrated) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	Optical	WLAN & Bluetooth	WWAN/SSD	SIM card	Camera	Keyboard	TPM	Finger print reader	Battery cells(wh)	Power adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20DE001PUS	A6-7000	No	R4 HD	4GBx1	14.0" HD	None	500GB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DE001DUS	A6-7000	No	R4 HD	4GBx1	14.0" HD	None	1TB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DE001CUS	A6-7000	No	R4 HD	8GBx1	14.0" HD	None	500GB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DE001KUS	A6-7000	No	R4 HD	8GBx1	14.0" HD	None	1TB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DE001BUS	A6-7000	No	R4 HD	4GBx1	14.0" HD	None	500GB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	45W	Win8.1 P64	1-depot	No	01/15
20DE0017US	A6-7000	No	R4 HD	4GBx1	14.0" HD	None	1TB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	45W	Win8.1 P64	1-depot	No	01/15
20DE001AUS	A6-7000	No	R4 HD	8GBx1	14.0" HD	None	500GB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	45W	Win8.1 P64	1-depot	No	01/15
20DE001GUS	A6-7000	No	R4 HD	8GBx1	14.0" HD	None	1TB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	45W	Win8.1 P64	1-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad E455 Platform Specifications sheet](#)

Processor	AMD Accelerated Processor A6 APU	Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																
	<table border="1"> <thead> <tr> <th>Processor Number</th> <th># of Cores</th> <th># of Threads</th> <th>Clock Speed</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory speed</th> <th>Graphics</th> </tr> </thead> <tbody> <tr> <td>A6-7000</td> <td>2</td> <td>2</td> <td>2.2 GHz</td> <td>3.0 GHz</td> <td>1MB</td> <td>DDR3L-1600</td> <td>R4 HD</td> </tr> </tbody> </table>	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	Graphics	A6-7000	2	2	2.2 GHz	3.0 GHz	1MB	DDR3L-1600	R4 HD	Ports	Two USB 3.0, one USB 2.0 (Always On), Ethernet (RJ-45), HDMI, Lenovo OneLink connector, combo audio / microphone jack
Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	Graphics												
A6-7000	2	2	2.2 GHz	3.0 GHz	1MB	DDR3L-1600	R4 HD												
Graphics	AMD Radeon™ R4 HD Graphics in processor only	Monitor cable	None																
Chipset	AMD A76M FCH Chipset	Camera	HD720p resolution, fixed focus																
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Audio support	HD Audio, Conexant® CX20751 codec, Dolby® Advanced Audio™ v4 / stereo speakers, 2W x 2 / dual array microphone, combo audio / microphone jack																
Display	14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio	Keyboard	6-row, spill-resistant, multimedia Fn keys																
Multi-touch	None	UltraNav™	TrackPoint® pointing device and multi-touch with 3+2 buttons click pad																
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: HDD / SATA 6.0Gb/s, 2.5" wide, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ Some: Hybrid drive with 8GB NAND flash memory	ThinkLight™	None																
Optical	None	Security	Power-on password, hard disk password, supervisor password, security keyhole																
M.2 SSD	None	Security chip	None																
Ethernet	Realtek® RTL8111GUS Gigabit Ethernet Connection	vPro	None																
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Fingerprint reader	None																
WLAN	One of the following, configurable by model: • RTL8723BE, Realtek 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter, M.2 Card • BCM43162, Broadcom 11-AC, 1x1, Wi-Fi + BT combo adapter, M.2 Card	NFC	None																
Dimensions	None Touch(WxDxH): 13.34" x 9.40" x 0.94" (339mm x 239mm x 24mm)	Battery type	Li-Ion 6-cell (47Wh)																
Weight	From 4.00 lb (1.81kg)	Battery life	Up to 6.5 hr																
Case color	Graphite black	AC adapter	45-watt AC adapter (Integrated Graphics)																
Case Material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	Preload	Some: No operating system Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Some: Windows 8.1 64-bit Some: Windows 8.1 Pro 64-bit																
		Limited warranty	1-year - depot repair service / service upgrades available																
		Environment	EPEAT™ Gold; ENERGY STAR®; RoHS-compliant																

See footnotes for more detailed information

ThinkPad E455 20DE (Discrete) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	Optical	WLAN & Bluetooth	WWAN/SSD	SIM card	Camera	Keyboard	TPM	Finger print reader	Battery cells(wh)	Power adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/ly)
20DE001HUS	A8-7100	No	R5 M240	4GBx1	14.0" HD	None	500GB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DE001QUS	A8-7100	No	R5 M240	4GBx1	14.0" HD	None	1TB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DE001MUS	A8-7100	No	R5 M240	8GBx1	14.0" HD	None	1TB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DE001FUS	A10-7300	No	R7 M260DX	4GBx1	14.0" HD	None	500GB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DE0019US	A10-7300	No	R7 M260DX	4GBx1	14.0" HD	None	1TB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DE001EUS	A10-7300	No	R7 M260DX	8GBx1	14.0" HD	None	1TB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DE0016US	A10-7300	No	R7 M260DX	4GBx1	14.0" HD	None	500GB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	65W	Win8.1 P64	1-depot	No	01/15
20DE001JUS	A10-7300	No	R7 M260DX	8GBx1	14.0" HD	None	1TB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	65W	Win8.1 P64	1-depot	No	01/15
20DE0018US	A8-7100	No	R5 M240	4GBx1	14.0" HD	None	500GB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	65W	Win8.1 P64	1-depot	No	01/15
20DE001LUS	A8-7100	No	R5 M240	4GBx1	14.0" HD	None	1TB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	65W	Win8.1 P64	1-depot	No	01/15
20DE001NUS	A8-7100	No	R5 M240	8GBx1	14.0" HD	None	1TB 5400	None	RTL bgn+BT4.0	None	None	720p	Keyboard	No	No	6 (47wh)	65W	Win8.1 P64	1-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad E455 Platform Specifications sheet](#)

Processor	AMD Accelerated Processor A8, or A10 APU	Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																							
	<table border="1"> <thead> <tr> <th>Processor Number</th> <th># of Cores</th> <th># of Threads</th> <th>Clock Speed</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory speed</th> <th>Graphics</th> </tr> </thead> <tbody> <tr> <td>A8-7100</td> <td>4</td> <td>4</td> <td>1.8 GHz</td> <td>3.0 GHz</td> <td>4MB</td> <td rowspan="2">DDR3L-1600</td> <td>R5 M240</td> </tr> <tr> <td>A10-7300</td> <td>4</td> <td>4</td> <td>1.9 GHz</td> <td>3.2 GHz</td> <td>4MB</td> <td>R7 M260DX (R6+R5 M240)</td> </tr> </tbody> </table>	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	Graphics	A8-7100	4	4	1.8 GHz	3.0 GHz	4MB	DDR3L-1600	R5 M240	A10-7300	4	4	1.9 GHz	3.2 GHz	4MB	R7 M260DX (R6+R5 M240)	Ports	Two USB 3.0, one USB 2.0 (Always On), Ethernet (RJ-45), HDMI, Lenovo OneLink connector, combo audio / microphone jack
Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	Graphics																			
A8-7100	4	4	1.8 GHz	3.0 GHz	4MB	DDR3L-1600	R5 M240																			
A10-7300	4	4	1.9 GHz	3.2 GHz	4MB		R7 M260DX (R6+R5 M240)																			
Graphics	AMD Radeon R5 M240 Graphics, 2GB DDR3 memory, or Dual Graphics support for A10 APU	Monitor cable	None																							
Chipset	AMD A76M FCH Chipset	Camera	HD720p resolution, fixed focus																							
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Audio support	HD Audio, Conexant [®] CX20751 codec, Dolby [®] Advanced Audio™ v4 / stereo speakers, 2W x 2 / dual array microphone, combo audio / microphone jack																							
Display	14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio	Keyboard	6-row, spill-resistant, multimedia Fn keys																							
Multi-touch	None	UltraNav™	TrackPoint [®] pointing device and multi-touch with 3+2 buttons click pad																							
Storage	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ <i>Some:</i> Hybrid drive with 8GB NAND flash memory	ThinkLight™	None																							
Optical	None	Security	Power-on password, hard disk password, supervisor password, security keyhole																							
M.2 SSD	None	Security chip	None																							
Ethernet	Realtek [®] RTL8111GUS Gigabit Ethernet Connection	vPro	None																							
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Fingerprint reader	None																							
WLAN	<i>One of the following, configurable by model:</i> • RTL8723BE, Realtek 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter, M.2 Card • BCM43162, Broadcom 11-AC, 1x1, Wi-Fi + BT combo adapter, M.2 Card	NFC	None																							
Dimensions	<i>None Touch (WxDxH):</i> 13.34" x 9.40" x 0.94" (339mm x 239mm x 24mm)	Battery type	Li-Ion 6-cell (47Wh)																							
Weight	From 4.00 lb (1.81kg)	Battery life	Up to 6.5 hr																							
Case color	Graphite black	AC adapter	65-watt AC adapter (Discrete Graphics)																							
Case Material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	Preload	<i>Some:</i> No operating system <i>Some:</i> Windows [®] 7 Professional 64-bit <i>Some:</i> Windows 8.1 64-bit Pro 64-bit <i>Some:</i> Windows 8.1 Pro 64-bit																							
		Limited warranty	1-year - depot repair service / service upgrades available																							
		Environment	EPEAT™ Gold; ENERGY STAR [®] ; RoHS-compliant																							

See footnotes for more detailed information

ThinkPad Edge E531 6885 (Intel) - TopSeller (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Numeric Keypad	Top color	Finger-print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
6885-28U	i7-3632QM	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win7 Pro64	04/13
6885-2BU	i5-3230M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win7 Pro64	04/13
6885-5DU	i3-3120M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win7 Pro64	04/13
6885-5TU	i3-3120M	4GBx1	15.6" HD	720p	320G 7200	Intel 2230 + BT	None	Numpad	Black	None	6	48	Win7 Pro64	04/13
6885-5UU	i3-3120M	4GBx1	15.6" HD	720p	320G 7200	Intel 2230 + BT	None	Numpad	Black	None	6	48	Win8 Pro64	04/13
6885-5VU	i5-3230M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 Pro64	04/13
6885-5WU	i7-3632QM	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 Pro64	04/13
6885-5ZU	i3-3120M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 Pro64	04/13
6885-62U	i5-3230M	4GBx1	15.6" HD	720p	128G SSD	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win7 Pro64	04/13
6885-63U	i5-3230M	4GBx1	15.6" HD	720p	128G SSD	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 Pro64	04/13
6885-64U	i5-3230M	4+2GB	15.6" HD	720p	1TB 5400	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 64	04/13
6885-65U	i5-3230M	4+2GB	15.6" HD	720p	1TB 5400	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win7 Pro64	04/13
6885-66U	i5-3230M	4+2GB	15.6" HD	720p	1TB 5400	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 Pro64	04/13
6885-84U	i5-3230M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	24GB	Numpad	Black	Finger	6	48	Win8 Pro64	04/13
6885-88U	i5-3230M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	24GB	Numpad	Black	Finger	6	48	Win7 Pro64	04/13
6885-9ZU	i7-3632QM	8GBx1	15.6" FHD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 Pro64	06/13
6885-A2U	i7-3632QM	8GBx1	15.6" FHD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win7 Pro64	06/13
6885-A3U	i7-3632QM	8GBx1	15.6" FHD	720p	128G SSD	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win7 Pro64	06/13
6885-A4U	i7-3632QM	8GBx1	15.6" FHD	720p	128G SSD	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 Pro64	06/13
6885-BGU	i3-3120M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	None	6	48	Win8 64	06/13
6885-BHU	i5-3230M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 64	06/13

Positioning Processor	<p><i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-3120M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-3632QM processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology</p>										<p>Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 64-bit - Some: Windows 8 Pro 64-bit</p>
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										<p>Preloaded applications (only some listed) - Windows 7 models • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Lenovo Simple Tap • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Skype™ • Microsoft Office preloaded; purchase a product key to activate</p>
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™										
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 Card slot										
Widescreen display	Some: 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080) color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio										
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator										
Graphics	Intel HD Graphics 4000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz										
Keyboard TrackPoint®	6-row, spill-resistant, multimedia Fn keys, numeric keypad										
Touchpad ThinkLight™	TrackPoint pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch None										
Dimensions ³	15.6W" (WxDxH): 14.84" x 9.84" x 1.05-1.17"; 377 x 250mm x 26.6-29.6mm										
Weight ²	6-cell: from 5.4 lb (2.46kg)										
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom										
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic										
Battery - type ³⁷	Lithium Ion 6-cell										
Battery - life ¹⁰	6-cell (48Whr): up to 6.2 hr 6-cell (62Whr): up to 8.1 hr										
Chipset	Mobile Intel HM77 Express Chipset										
ExpressCard	None										
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)										
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (VGA DB-15, HDMI), ethernet (RJ-45)										
PCIe Mini Card	One PCI Express Half Mini Card slot										Supports ThinkVantage® technologies
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2										
M.2 Card	One M.2 Card slot for support of SSD										65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 6.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
M.2 WWAN	None										
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card										
Ethernet	Realtek® RTL8111F Gigabit Network Connection										
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack										
Security	Power-on password, hard disk password, supervisor password, security keyhole										
Security chip	None										
Fingerprint reader	Some: UPEK Fingerprint reader on palm rest, swipe sensor										
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available										For Lenovo ²² service upgrade options, please go to QP-TA sheet

See footnotes for more detailed information
 US model(s) announced April 30 or June 11, 2013

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 (GAT1-1) August 2013

ThinkPad Edge E531 6885 (Intel) - TopSeller (Windows 8) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Numeric Keypad	Top color	Finger-print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
6885-5XU	i3-2348M	4GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win7 Pro64	04/13
6885-5YU	i3-2348M	2GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win7 Pro64	04/13
6885-BJU	i3-2348M	4GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win8 Pro64	06/13
6885-BKU	i3-2348M	2GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win8 Pro64	06/13
6885-BMU	i3-3110M	4GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win7 Pro64	06/13
6885-BNU	i3-3110M	4GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win8 Pro64	06/13
6885-CCU	i3-3110M	2GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win7 Pro64	07/13
6885-CDU	i3-3110M	2GBx1	15.6" HD	720p	500G 7200	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win7 Pro64	07/13
6885-CEU	i3-3110M	4GBx1	15.6" HD	720p	500G 7200	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win7 Pro64	07/13
6885-CFU	i7-3632QM	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	None	6	48	Win7 Pro64	07/13
6885-CGU	i3-3120M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	None	6	48	Win7 Pro64	07/13
6885-CHU	i5-3230M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	None	6	48	Win7 Pro64	07/13
6885-D8U	i3-3110M	2GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win8 Pro64	08/13
6885-DAU	i3-3130M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	None	6	48	Win7 Pro64	08/13

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-2348M processor (2 cores, 2.30GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-3110M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i3-3120M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i3-3130M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-3632QM processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology	Preloaded operating system²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications (only some listed) - Windows 7 models • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Lenovo SimpleTap • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Skype™ • Microsoft Office preloaded; purchase a product key to activate
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™	
M.2 SSD	None	
Widescreen display	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator	
Graphics	Intel HD Graphics 3000 or Intel HD Graphics 4000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz</i>	
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad	
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³	
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch	
ThinkLight™	None	
Dimensions ³	15.6W" (WxDxH): 14.84" x 9.84" x 1.05-1.17"; 377 x 250mm x 26.6-29.6mm	
Weight ²	<i>6-cell:</i> from 5.4 lb (2.46kg)	
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type ³⁷	Lithium Ion 6-cell	
Battery - life ¹⁰	<i>6-cell (48Whr):</i> up to 6.2 hr <i>6-cell (62Whr):</i> up to 8.1 hr	
Chipset	Mobile Intel HM77 Express Chipset	
ExpressCard	None	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card	One PCI Express Half Mini Card slot	
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + BT combo adapter <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + BT combo adapter	
M.2 Card	One M.2 Card slot for support of SSD	Supports ThinkVantage® technologies
M.2 WWAN	None	
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card	65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 6.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Ethernet	Realtek® RTL8111F Gigabit Network Connection	
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	None	
Fingerprint reader	None	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	For Lenovo ²² service upgrade options, please go to QP-TA sheet

See footnotes for more detailed information

US model(s) announced April 30, June 11, June 25, July 16, or August 20, 2013

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ThinkPad Edge E531 6885 (Intel) - Optimus (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Numeric Keypad	Top color	Finger print reader	Bat-tery cells	Bat-tery Wh	Preload	Ann date (mm/yy)
6885-D9U	i5-3230M	4GBx1	15.6" HD	710M	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	None	6	48	Win7 Pro64	08/13

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										Preloaded operating system²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 64-bit Preloaded applications (only some listed) - Windows 7 models • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Lenovo SimpleTap • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Skype™ • Microsoft Office preloaded; purchase a product key to activate
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™										
M.2 SSD	None										
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080) color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio										
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator										
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA GeForce® 710M , PCI Express® x 8, 1GB memory, DirectX® 11.1, or NVIDIA GeForce® GT740M , PCI Express® x 8, 2GB memory, DirectX® 11.1, NVIDIA PureVideo® HD technology, External monitor support via analog VGA DB-15 connector / digital HDMI connector <i>Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz</i>										
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, spill-resistant, multimedia Fn keys, numeric keypad TrackPoint pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch None										
Dimensions ³	15.6W" (WxDxH): 14.84" x 9.84" x 1.05-1.17"; 377 x 250mm x 26.6-29.6mm <i>6-cell:</i> from 5.5 lb (2.49kg)										
Weight ²	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom										
Case color	Acrylonitrile-Butadiene-Styrene (ABS) plastic										
Case material	Lithium Ion 6-cell										
Battery - type ³⁷	<i>6-cell (48Whr):</i> up to 6.2 hr										
Battery - life ¹⁰	<i>6-cell (62Whr):</i> up to 8.0 hr										
Chipset	Mobile Intel HM77 Express Chipset										
ExpressCard	None										
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)										
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port external monitor (VGA DB-15, HDMI), ethernet (RJ-45)										
PCIe Mini Card	One PCI Express Mini Card slot										Supports ThinkVantage® technologies
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2										
M.2 Card	One M.2 Card slot for support of SSD										
M.2 WWAN	None										
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card										
Ethernet	Realtek® RTL8111F Gigabit Network Connection										
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack										
Security	Power-on password, hard disk password, supervisor password, security keyhole										
Security chip	None										
Fingerprint reader	None										
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available										90-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 6.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
See footnotes for more detailed information											For Lenovo ²² service upgrade options, please go to QP-TA sheet
US model(s) announced August 20, 2013											

See footnotes for more detailed information
US model(s) announced August 20, 2013

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Lenovo® ThinkPad E540



Lenovo ThinkPad E540



Lenovo ThinkPad E540
with Numeric Keypad



Lenovo ThinkPad E540
with Touch Screen



Lenovo ThinkPad E540
with Touch Screen



Lenovo ThinkPad E540
with Touch Screen

ThinkPad E540 20C6 (Intel) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	SIM card	Numeric Keypad	Top color	Finger-print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
20C6008TUS	i5-4200M	4+2GB	15.6" HD	720p	1TB 5400	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C60096US	i7-4702MQ	8GBx1	15.6" HD	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6008VUS	i3-4000M	2GBx1	15.6" HD	720p	320G 7200	Intel 7260 + BT	None	None	Numpad	Black	None	6	48	Win7 Pro64	01/14
20C60097US	i5-4200M	4+2GB	15.6" HD	720p	1TB 5400	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6008UUS	i5-4200M	4GBx1	15.6" HD	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C6008RUS	i5-4200M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	16GB	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C60092US	i5-4200M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	16GB	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6008YUS	i3-4000M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	None	6	48	Win8 Pro64	01/14
20C60093US	i7-4702MQ	8GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6008RUS	i5-4200M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C6008QUS	i7-4702MQ	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C6008XUS	i7-4702MQ	8GBx1	15.6" HD	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C60091US	i5-4200M	4GBx1	15.6" HD	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C60090US	i5-4200M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C6008WUS	i3-4000M	4GBx1	15.6" HD	720p	320G 7200	Intel 7260 + BT	None	None	Numpad	Black	None	6	48	Win7 Pro64	01/14
20C6008SUS	i5-4200M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C60095US	i3-4000M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C60094US	i7-4702MQ	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C600AAUS	i3-4000M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	02/14

Positioning Processor	<p><i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-4000M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4600, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-4200M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4600, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i7-4702MQ processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4600, DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology</p>											<p>Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit</p>
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets											<p>Preloaded applications (only some listed) - Windows 7 models • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate</p>
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™											
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 Card slot											
Widescreen display	15.6" (396mm) HD (1366x768) , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio											
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator											
Graphics	Intel HD Graphics 4600 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display											
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad											
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³											
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch											
ThinkLight™	None											
Dimensions ³	15.6W" (WxDxH): 14.84" x 9.84" x 1.05-1.17"; 377 x 250mm x 26.6-29.6mm											
Weight ²	6-cell: from 5.4 lb (2.46kg)											
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom											
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic											
Battery - type ³⁷	Lithium Ion 6-cell											
Battery - life ¹⁰	6-cell (48Whr): up to 6.2 hr 6-cell (62Whr): up to 7.4 hr											
Chipset	Mobile Intel HM87 Express Chipset											
ExpressCard	None											
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)											
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port external monitor (VGA DB-15, HDMI), ethernet (RJ-45)											
PCIe Mini Card	One PCI Express Half Mini Card slot											
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2											
M.2 Card	One M.2 Card slot for support of SSD											
M.2 WWAN	None											
SIM card	None											
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card											
Ethernet	Realtek® RTL8111GUS Gigabit Network Connection											
Audio support	High Definition (HD) Audio, Conexant CX20751-21Z codec / stereo speakers, Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack											
Security	Power-on password, hard disk password, supervisor password, security keyhole											
Security chip	Trusted Platform Module, TCG 1.2-compliant											
Fingerprint reader	Some: Fingerprint reader on palm rest, swipe sensor											
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available											<p>Supports ThinkVantage® technologies</p> <p>65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 6.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²</p>

See footnotes for more detailed information

US model(s) announced January 21, or February 18, 2014

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ThinkPad E540 20C6 (Intel) - TopSeller - III

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	SIM card	Numeric Keypad	Top color	Finger print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
20C600C9US	i7-4712MQ	8GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	05/14
20C600C4US	i3-4100M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	05/14
20C600C5US	i5-4210M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	05/14
20C600C8US	i5-4210M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	05/14
20C600C7US	i3-4100M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	05/14
20C600C6US	i7-4712MQ	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	05/14

Positioning Processor	<p><i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-4100M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4600, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-4210M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4600, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-4712MQ processor (4 cores, 2.30GHz, 6MB cache), Intel HD Graphics 4600, DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology</p>											<p>Preloaded operating system²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 Pro 64-bit</p>
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets											<p>Preloaded applications (only some listed) - Windows 7 models • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate</p>
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™											
M.2 SSD	None											
Widescreen display	15.6" (396mm) HD (1366x768) , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio Camera HD720p resolution, face track, low light sensitive, fixed focus, LED indicator											
Graphics	Intel HD Graphics 4600 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display											
Keyboard TrackPoint®	6-row, spill-resistant, multimedia Fn keys, numeric keypad											
Touchpad ThinkLight™	TrackPoint pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch None											
Dimensions ³	15.6W" (WxDxH): 14.84" x 9.84" x 1.05-1.17"; 377 x 250mm x 26.6-29.6mm											
Weight ²	6-cell: from 5.4 lb (2.46kg)											
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom											
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic											
Battery - type ³⁷	Lithium Ion 6-cell											
Battery - life ¹⁰	6-cell (48Whr): up to 6.2 hr 6-cell (62Whr): up to 7.4 hr											
Chipset	Mobile Intel HM87 Express Chipset											
ExpressCard	None											
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)											
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port external monitor (VGA DB-15, HDMI), ethernet (RJ-45)											
PCIe Mini Card	One PCI Express Half Mini Card slot											
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2											
M.2 Card	One M.2 Card slot for support of SSD											
M.2 WWAN	None											
SIM card	None											
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card											
Ethernet	Realtek® RTL8111GUS Gigabit Network Connection											
Audio support	High Definition (HD) Audio, Conexant CX20751-21Z codec / stereo speakers, Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack											
Security	Power-on password, hard disk password, supervisor password, security keyhole											
Security chip	Trusted Platform Module, TCG 1.2-compliant											
Fingerprint reader	Fingerprint reader on palm rest, swipe sensor											
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available											Supports ThinkVantage® technologies 65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 6.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²

See footnotes for more detailed information

ThinkPad E540 20C6 (Intel) - TopSeller (MultiTouch)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	SIM card	Numeric Keypad	Top color	Finger reader	Bat-tery cells	Bat-tery Wh	Preload	Ann date (mm/yy)
20C6005KUS	i5-4200M	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6005PUS	i7-4702MQ	8GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6005LUS	i7-4702MQ	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6005MUS	i5-4200M	4GBx1	15.6" HD Touch	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6005NUS	i7-4702MQ	8GBx1	15.6" HD Touch	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6008NUS	i5-4200M	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 Pro64	01/14
20C6008MUS	i5-4200M	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 Pro64	01/14
20C6008LUS	i7-4702MQ	8GBx1	15.6" HD Touch	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 Pro64	01/14
20C6008JUS	i3-4000M	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 Pro64	01/14
20C6008KUS	i7-4702MQ	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 Pro64	01/14
20C600BAUS	i5-4200M	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 64	03/14
20C600B9US	i3-4000M	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 64	03/14
20C600CBUS	i5-4210M	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 Pro64	05/14
20C600CCUS	i3-4100M	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 Pro64	05/14
20C600CAUS	i7-4712MQ	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 Pro64	05/14
20C600DTUS	i5-4210M	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 64	05/14
20C600DSUS	i3-4100M	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 64	05/14
Positioning Processor	<p><i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-4000M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4600, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i3-4100M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4600, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-4200M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4600, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i5-4210M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4600, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-4702MQ processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4600, DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-4712MQ processor (4 cores, 2.30GHz, 6MB cache), Intel HD Graphics 4600, DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology</p>										<p>Preloaded operating system²⁰ - Some: Windows 8 Pro 64-bit - Some: Windows 8.1 64-bit - Some: Windows 8.1 Pro 64-bit</p> <p>Preloaded applications (only some listed) • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate</p>				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets														
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™														
M.2 SSD	None														
Widescreen display	15.6" (396mm) HD (1366x768) , anti-glare, 10-point touch screen LED backlight, 200 nits, 16:9 aspect ratio														
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator														
Graphics	Intel HD Graphics 4600 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display														
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad														
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³														
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch														
ThinkLight™	None														
Dimensions ³	15.6W" (WxDxH): 14.84" x 9.84" x 1.05-1.17"; 377 x 250mm x 26.6-29.6mm														
Weight ²	<i>6-cell</i> : from 5.4 lb (2.46kg)														
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom														
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic														
Battery - type ³⁷	Lithium Ion 6-cell														
Battery - life ¹⁰	<i>6-cell (48Whr)</i> : up to 6.2 hr <i>6-cell (62Whr)</i> : up to 7.4 hr														
Chipset	Mobile Intel HM87 Express Chipset														
ExpressCard	None														
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)														
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port external monitor (VGA DB-15, HDMI), ethernet (RJ-45)														
PCIe Mini Card	One PCI Express Half Mini Card slot														
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2														
M.2 Card	One M.2 Card slot for support of SSD														
M.2 WWAN	None														
SIM card	None														
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card														
Ethernet	Realtek® RTL8111GUS Gigabit Network Connection														
Audio support	High Definition (HD) Audio, Conexant CX20751-21Z codec / stereo speakers, Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack														
Security	Power-on password, hard disk password, supervisor password, security keyhole														
Security chip	Trusted Platform Module, TCG 1.2-compliant														
Fingerprint reader	Fingerprint reader on palm rest, swipe sensor														
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available														

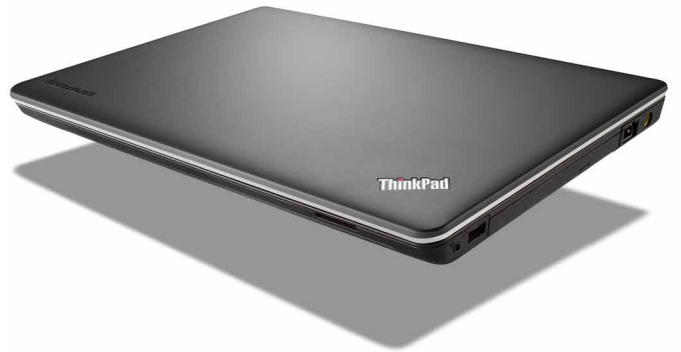
See footnotes for more detailed information

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ThinkPad Edge E545



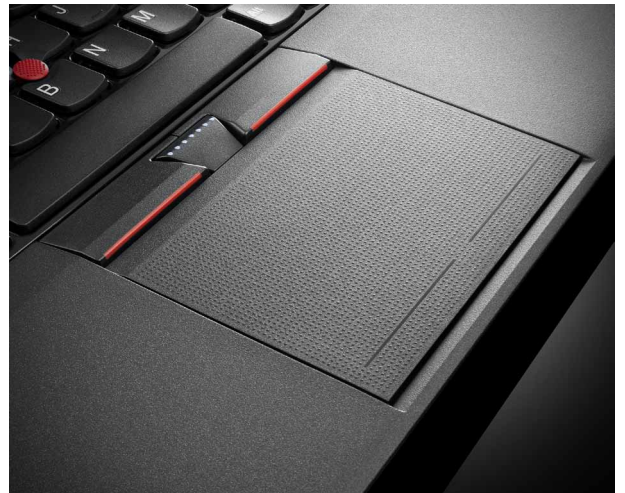
Lenovo® ThinkPad Edge E545



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ThinkPad Edge E545 20B2 (AMD) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	PCIe Mini Card WWAN /mSATA	Card Numeric Keypad	Top color	Micro-phone	Finger print reader	Battery cells	Preload	Ann date (mm/yy)
20B2001CUS	A6-5350M	4GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6	Prem 64	01/14
20B2001DUS	A6-5350M	2GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6	Prem 64	01/14

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> AMD Accelerated Processor A6-5350M (dual-core, 2.90GHz, 1MB L2 cache), integrated AMD Radeon HD 8450G Graphics, AMD Turbo Core technology (up to 3.50GHz), integrated DDR3 memory controller (up to 1600MHz)										Preloaded operating system²⁰ - Genuine Windows [®] 7 Home Premium 64			
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Preloaded applications (only some listed) • Adobe [®] Reader [®] • Norton [™] Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate			
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System [™]													
mSATA [™] SSD	None													
Widescreen display	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio													
Camera	HD720p resolution, low light sensitive, fixed focus, LED indicator													
Graphics	AMD Radeon HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI [™] (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 1920x1200 (HDMI) @60Hz</i>													
Keyboard	<i>Matte black (top):</i> 6-row, spill-resistant, multimedia Fn keys, numeric keypad													
TrackPoint [®]	TrackPoint pointing device, Internet Scroll Bar ¹³													
Touchpad	UltraNav [™] , wide touchpad below keyboard, Tap Zones, multi-touch													
ThinkLight [™]	None													
Dimensions ³	<i>Matte black or Matte red (top):</i> 15.6W" (WxDxH): 14.84" x 9.65" x 1.12-1.35"; 377 x 245mm x 28.5-34.3mm													
Weight ²	6-cell: from 5.2 lb (2.37kg)													
Case color	Matte black (top), trimmed with a thin silver band (side); black bottom													
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic													
Battery - type ³⁷	Lithium Ion 6-cell													
Battery - life ¹⁰	6-cell (48Whr): up to 6.2 hr													
Chipset	AMD A76M FCH													
ExpressCard	None													
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)													
Ports	Three USB 3.0, one USB 2.0 (powered), external monitor (VGA DB-15, HDMI), ethernet (RJ-45)													
PCIe Mini Card	One PCI Express Mini Card slot													
WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1													
WWAN	None													
Modem	None													
Bluetooth [™]	None										Supports ThinkVantage [®] technologies			
Ethernet	Realtek [®] RTL8111F Gigabit Network Connection										65-watt AC adapter EPEAT [™] Gold rating ENERGY STAR [®] 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²			
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2/ Stereo digital microphone or Mono digital microphone, combo audio/mic jack													
Security	Power-on password, hard disk password, supervisor password, security keyhole													
Security chip	None													
Fingerprint reader	None													
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available													

See footnotes for more detailed information
US model(s) announced January 7, 2014

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ThinkPad Edge E545 20B2 (AMD) - TopSeller (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	Pc Mini Card WLAN / BT	Pc Mini Card WWAN /mSATA	Mini Card Numeric Keypad	Top color	Micro-phone	Finger print reader	Bat-tery Preload	Ann date (mm/yy)
20B2000SUS	A10-5750M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6 Win8 64	08/13
20B20010US	A8-4500M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6 Win7 Pro64	08/13
20B2000VUS	A6-5350M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6 Win8 64	08/13
20B20011US	A6-5350M	4GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6 Win7 Pro64	08/13
20B2000KUS	A8-5550M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6 Win7 Pro64	08/13
20B2000XUS	A10-5750M	8GBx1	15.6" HD	720p	1TB 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6 Win7 Pro64	08/13
20B20012US	A6-5350M	4GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6 Win8 64	08/13
20B2000WUS	A8-5550M	8GBx1	15.6" HD	720p	1TB 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6 Win7 Pro64	08/13
20B2000YUS	A10-5750M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6 Win7 Pro64	08/13
20B2000RUS	A10-5750M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6 Win8 Pro64	08/13
20B2000UUS	A6-5350M	4GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6 Win8 64	08/13
20B2000TUS	A8-4500M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6 Win8 64	08/13
20B2000QUS	A8-5550M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6 Win8 Pro64	08/13
20B2001BUS	A6-5350M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6 Win8 64	10/13
20B2001AUS	A6-5350M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6 Win8 Pro64	10/13
20B20019US	A6-5350M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6 Win7 Pro64	10/13
20B2001FUS	A8-5550M	4GBx1	15.6" HD	720p	1TB 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6 Win7 Pro64	03/14
20B2001EUS	A8-5550M	8GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6 Win7 Pro64	03/14

Positioning Processor	<p><i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> AMD Accelerated Processor A6-5350M (dual-core, 2.90GHz, 1MB L2 cache), integrated AMD Radeon HD 8450G Graphics, AMD Turbo Core technology (up to 3.50GHz), integrated DDR3 memory controller (up to 1600MHz) AMD Accelerated Processor A8-4500M (quad-core, 1.90GHz, 4MB L2 cache), integrated AMD Radeon HD 7640G Graphics, AMD Turbo Core technology (up to 2.80GHz), integrated DDR3 memory controller (up to 1600MHz) AMD Accelerated Processor A8-5550M (quad-core, 2.10GHz, 4MB L2 cache), integrated AMD Radeon HD 8550G Graphics, AMD Turbo Core technology (up to 3.10GHz), integrated DDR3 memory controller (up to 1600MHz) AMD Accelerated Processor A10-5750M (quad-core, 2.50GHz, 4MB L2 cache), integrated AMD Radeon HD 8650G Graphics, AMD Turbo Core technology (up to 3.50GHz), integrated DDR3 memory controller (up to 1600MHz)</p>										<p>Preloaded operating system²⁰ - <i>Some:</i> Windows[®] 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 64-bit - <i>Some:</i> Windows 8 Pro 64-bit</p> <p>Preloaded applications (only some listed) - Windows 7 models • Adobe[®] Reader[®]</p> <p>- Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage</p> <p>- All models (exclude DOS and No OS models) • ThinkVantage System Update • Norton[™] Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate</p>
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										-
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System [™]										-
mSATA [™] SSD	None										-
Widescreen display	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio										-
Camera	HD720p resolution, low light sensitive, fixed focus, LED indicator										-
Graphics	<p>AMD Radeon HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI[™] (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 1920x1200 (HDMI) @60Hz</i></p>										-
Keyboard	<i>Matte black (top):</i> 6-row, spill-resistant, multimedia Fn keys, numeric keypad										-
TrackPoint [®]	TrackPoint pointing device, Internet Scroll Bar ¹³										-
Touchpad	UltraNav [™] , wide touchpad below keyboard, Tap Zones, multi-touch										-
ThinkLight [™]	None										-
Dimensions ³	<i>Matte black or Matte red (top):</i> 15.6W" (WxDxH): 14.84" x 9.65" x 1.12-1.35"; 377 x 245mm x 28.5-34.3mm										-
Weight ²	<i>6-cell:</i> from 5.2 lb (2.37kg)										-
Case color	Matte black (top), trimmed with a thin silver band (side); black bottom										-
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic										-
Battery - type ³⁷	Lithium Ion 6-cell										-
Battery - life ¹⁰	<i>6-cell (48Whr):</i> up to 6.2 hr										-
Chipset	AMD A76M FCH										-
ExpressCard	None										-
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)										-
Ports	Three USB 3.0, one USB 2.0 (powered), external monitor (VGA DB-15, HDMI), ethernet (RJ-45)										-
PCIe Mini Card WLAN ⁴	One PCI Express Mini Card slot <i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 <i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, Wi-Fi + Bluetooth combo adapter, 1x1										-
WWAN	None										-
Modem	None										-
Bluetooth [™]	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card										Supports ThinkVantage [®] technologies
Ethernet	Realtek [®] RTL8111F Gigabit Network Connection										-
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2/ Stereo digital microphone or Mono digital microphone, combo audio/mic jack										65-watt AC adapter EPEAT [™] Gold rating ENERGY STAR [®] 5.0-compliant RoHS-compliant
Security	Power-on password, hard disk password, supervisor password, security keyhole										International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Security chip	None										-
Fingerprint reader	None										-
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available										-

See footnotes for more detailed information
 US model(s) announced August 20, or October 15, 2013; or March 11, 2014

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 (GLN11-3) March 2014



Lenovo® ThinkPad E550



Lenovo ThinkPad E550



Lenovo ThinkPad E550

ThinkPad E550 Platform Specifications

Product Specifications Reference (PSREF)

Processor	4th or 5th Generation Intel® Core™ i3 / i5 / i7 Processor								Multicard Reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC)					
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory speed	Processor Graphics		Two USB 3.0 (one Always On), one USB 2.0, Ethernet (RJ-45), external monitor (VGA DB-15, HDMI), Lenovo OneLink connector					
	i3-4005U	2	4	1.7 GHz	-	3MB	DDR3L-1600	HD4400		None					
	i3-5005U	2	4	2.0 GHz	-	3MB		HD5500		Camera					
	i5-5200U	2	4	2.2 GHz	2.7 GHz	3MB		HD5500		<i>Some:</i> HD720p resolution, fixed focus					
i7-5500U	2	4	2.4 GHz	3.0 GHz	4MB	HD5500		<i>Some:</i> 3D camera, Intel RealSense™ 3D Camera with MIC							
Graphics	Intel HD Graphics in processor only, or AMD Radeon R7 M260 Graphics, 2GB DDR3 memory, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display Max resolution: 1920x1080 (HDMI) @60Hz								Keyboard UltraNav™ ThinkLight™	6-row, spill-resistant, multimedia Fn keys, numeric keypad TrackPoint® pointing device and multi-touch with 3+2 buttons click pad None					
	Chipset Memory	Intel SoC (System on Chip) platform 16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets								Security Security chip vPro Fingerprint reader NFC	Power-on password, hard disk password, supervisor password, security keyhole <i>Some:</i> Trusted Platform Module, TCG 1.2-compliant None <i>Some:</i> Fingerprint reader on the keyboard bezel, swipe sensor None				
		Display	Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio Some: 15.6" (396mm) FHD (1920x1080) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio								Battery type Battery life AC adapter	Li-Ion 6-cell (48Wh) 6-cell (48Wh): up to 9.0 hr <i>Some:</i> 45-watt AC adapter (Integrated Graphics) <i>Some:</i> 65-watt AC adapter (Discrete Graphics)			
			Multi-touch	<i>Some:</i> supports 10-finger gesture								Preload	<i>Some:</i> No operating system <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit • Lenovo Solution Center • Lenovo SHAREit • Lenovo Companion • ThinkVantage System Update • PC Device Stage • Rescue and Recovery™ • ThinkVantage System Update • PC Device Stage • Adobe® Reader® • Evernote® • Skype™ • Maxthon Cloud Browser • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions)		
		Storage	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ <i>Some:</i> Hybrid drive with 8GB NAND flash memory <i>Some:</i> DVD burner, 9.0mm high, removable <i>Some:</i> Blank Bezel								M.2 SSD		None		
Optical	None								Ethernet Bluetooth™	Intel WGI218V Gigabit Ethernet Connection Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					
WLAN	<i>One of the following, configurable by model:</i> • Intel Wireless-AC 3160, 1x1, Wi-Fi + Bluetooth combo adapter, M.2 Card • Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT combo adapter, M.2 Card • RTL8723BE, Realtek 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter, M.2 Card • BCM43162, Broadcom 11-AC, 1x1, Wi-Fi + BT combo adapter, M.2 Card									Limited warranty		1-year - depot repair service / service upgrades available			
WWAN	None										Environment	EPEAT™ Gold; ENERGY STAR®; RoHS-compliant			
SIM card	None								Dimensions Weight Case color Case Material			None None			
Smart Card Read ExpressCard	None None									None None					
None Touch(WxDxH): 14.84" x 10.08" x 1.06"; 377mm x 256mm x 27mm 6-cell None Touch: from 5.21 lb (2.35kg) Graphite Black PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic															

See footnotes for more detailed information

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ThinkPad E550 20DF - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	Optical	WLAN & Bluetooth	WWAN/SSD	SIM card	Camera	Keyboard	TPM	Finger print reader	Battery cells(wh)	Power adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20DF0033US	I3-4005U	No	HD 4400	4GBx1	15.6" HD	None	500GB 7200	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	No	6 (48wh)	45W	Win8.1 64	1-depot	No	01/15
20DF0043US	I3-4005U	No	HD 4400	4GBx1	15.6" HD	None	500GB 7200	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	No	6 (48wh)	45W	Win8.1 P64	1-depot	No	01/15
20DF0044US	I3-4005U	No	HD 4400	8GBx1	15.6" HD	None	500GB 7200	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	No	6 (48wh)	45W	Win8.1 P64	1-depot	No	01/15
20DF0045US	I3-4005U	No	HD 4400	8GBx1	15.6" HD	None	1TB 5400	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 P64	1-depot	No	01/15
20DF0046US	I3-4005U	No	HD 4400	8GBx1	15.6" HD	None	500GB 7200	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 P64	1-depot	No	01/15
20DF004BUS	I5-5200U	No	HD 5500	4GBx1	15.6" HD	None	500GB 7200	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 P64	1-depot	No	01/15
20DF004CUS	I5-5200U	No	HD 5500	4GBx1	15.6" HD	None	1TB 5400	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 P64	1-depot	No	01/15
20DF004DUS	I5-5200U	No	HD 5500	8GBx1	15.6" HD	None	500GB 7200	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 P64	1-depot	No	01/15
20DF004EUS	I5-5200U	No	HD 5500	8GBx1	15.6" HD	None	1TB 5400	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 P64	1-depot	No	01/15
20DF002WUS	I3-5005U	No	HD 5500	4GBx1	15.6" HD	None	500GB 7200	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 64	1-depot	No	01/15
20DF0049US	I3-5005U	No	HD 5500	8GBx1	15.6" HD	None	500GB 7200	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 P64	1-depot	No	01/15
20DF004AUS	I3-5005U	No	HD 5500	8GBx1	15.6" HD	None	1TB 5400	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 P64	1-depot	No	01/15
20DF0048US	I3-5005U	No	HD 5500	4GBx1	15.6" HD	None	1TB 5400	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 P64	1-depot	No	01/15
20DF0047US	I3-5005U	No	HD 5500	4GBx1	15.6" HD	None	500GB 7200	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 P64	1-depot	No	01/15
20DF003EUS	I3-5005U	No	HD 5500	8GBx1	15.6" HD	None	1TB 5400	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003AUS	I3-5005U	No	HD 5500	4GBx1	15.6" HD	None	1TB 5400	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF0035US	I3-4005U	No	HD 4400	4GBx1	15.6" HD	None	1TB 5400	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF0034US	I3-4005U	No	HD 4400	4GBx1	15.6" HD	None	500GB 7200	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	No	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003BUS	I3-5005U	No	HD 5500	4GBx1	15.6" HD	None	1TB 5400	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003HUS	I5-5200U	No	HD 5500	4GBx1	15.6" HD	None	128GB SSD	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003LUS	I5-5200U	No	HD 5500	4GBx1	15.6" HD	None	1TB 5400	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad E550 Platform Specifications sheet](#)

Processor	4th or 5th Generation Intel® Core™ i3 / i5 / i7 Processor	Dimensions Weight Case color Case Matera	<i>None Touch(WxDxH):</i> 14.84" x 10.08" x 1.06"; 377mm x 256mm x 27mm <i>6-cell None Touch:</i> from 5.21 lb (2.35kg) Graphite Black PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic																														
	<table border="1"> <thead> <tr> <th>Processor Number</th> <th># of Cores</th> <th># of Threads</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory speed</th> <th>Processor Graphics</th> </tr> </thead> <tbody> <tr> <td>i3-4005U</td> <td>2</td> <td>4</td> <td>1.7 GHz</td> <td>-</td> <td>3MB</td> <td rowspan="3">DDR3L-1600</td> <td>HD4400</td> </tr> <tr> <td>i3-5005U</td> <td>2</td> <td>4</td> <td>2.0 GHz</td> <td>-</td> <td>3MB</td> <td>HD5500</td> </tr> <tr> <td>i5-5200U</td> <td>2</td> <td>4</td> <td>2.2 GHz</td> <td>2.7 GHz</td> <td>3MB</td> <td>HD5500</td> </tr> </tbody> </table>	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory speed	Processor Graphics	i3-4005U	2	4	1.7 GHz	-	3MB	DDR3L-1600	HD4400	i3-5005U	2	4	2.0 GHz	-	3MB	HD5500	i5-5200U	2	4	2.2 GHz	2.7 GHz	3MB	HD5500	Multicard Reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0 (one Always On), one USB 2.0, Ethernet (RJ-45), external monitor (VGA DB-15, HDMI), Lenovo OneLink connector
Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory speed	Processor Graphics																										
i3-4005U	2	4	1.7 GHz	-	3MB	DDR3L-1600	HD4400																										
i3-5005U	2	4	2.0 GHz	-	3MB		HD5500																										
i5-5200U	2	4	2.2 GHz	2.7 GHz	3MB		HD5500																										
Graphics	Intel HD Graphics in processor only, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content)	Monitor cable	None																														
Chipset	Intel SoC (System on Chip) platform	Camera	HD720p resolution, fixed focus																														
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Audio support	HD Audio, Conexant® CX20751 codec, Dolby® Advanced Audio™ v4 / JBL speakers, 2W x 2 / dual array microphone, combo audio / microphone jack																														
Display	Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio Some: 15.6" (396mm) FHD (1920x1080) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio	Keyboard UltraNav™ ThinkLight™	6-row, spill-resistant, multimedia Fn keys, numeric keypad TrackPoint® pointing device and multi-touch with 3+2 buttons click pad None																														
Multi-touch	Some: supports 10-finger gesture	Security Security chip vPro Fingerprint reader NFC	Power-on password, hard disk password, supervisor password, security keyhole Some: Trusted Platform Module, TCG 1.2-compliant None Some: Fingerprint reader on the keyboard bezel, swipe sensor None																														
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: HDD / SATA 6.0Gb/s, 2.5" wide, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ Some: Hybrid drive with 8GB NAND flash memory	Battery type Battery life AC adapter	Li-Ion 6-cell (48Wh) 6-cell (48Wh): up to 9.0 hr 45-watt AC adapter (Integrated Graphics)																														
Optical	DVD burner, 9.0mm high, removable None	Preload	Some: No operating system Some: Windows® 7 Professional 64 Some: Windows 8.1 64-bit Some: Windows 8.1 Pro 64-bit																														
Ethernet	Intel WGI218V Gigabit Ethernet Connection	Limited warranty	1-year - depot repair service / service upgrades available																														
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Environment	EEPEAT™ Gold; ENERGY STAR®; RoHS-compliant																														
WLAN	One of the following, configurable by model: • Intel Wireless-AC 3160, 1x1, Wi-Fi + Bluetooth combo adapter, M.2 Card • Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT combo adapter, M.2 Card																																
WWAN	None																																
SIM card	None																																

See footnotes for more detailed information

ThinkPad E550 20DF - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	Optical	WLAN & Bluetooth	WWAN/SSD	SIM card	Camera	Keyboard	TPM	Finger print reader	Battery cells(wh)	Power adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20DF003SUS	I5-5200U	No	HD 5500	8GBx1	15.6" FHD	None	128GB SSD	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF0036US	I3-4005U	No	HD 4400	8GBx1	15.6" HD	None	500GB 7200	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003MUS	I5-5200U	No	HD 5500	4GBx1	15.6" FHD	None	1TB 5400	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003JUS	I5-5200U	No	HD 5500	4GBx1	15.6" FHD	None	128GB SSD	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003TUS	I5-5200U	No	HD 5500	8GBx1	15.6" HD	None	1TB 5400	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003UUS	I5-5200U	No	HD 5500	8GBx1	15.6" HD	None	1TB 5400	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003CUS	I3-5005U	No	HD 5500	8GBx1	15.6" HD	None	500GB 7200	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003DUS	I3-5005U	No	HD 5500	8GBx1	15.6" HD	None	500GB 7200	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003RUS	I5-5200U	No	HD 5500	8GBx1	15.6" HD	None	128GB SSD	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003PUS	I5-5200U	No	HD 5500	8GBx1	15.6" HD	None	500GB 7200	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003FUS	I5-5200U	No	HD 5500	4GBx1	15.6" HD	None	500GB 7200	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003KUS	I5-5200U	No	HD 5500	4GBx1	15.6" HD	None	1TB 5400	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003VUS	I5-5200U	No	HD 5500	8GBx1	15.6" FHD	None	1TB 5400	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF0038US	I3-5005U	No	HD 5500	4GBx1	15.6" HD	None	500GB 7200	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF0037US	I3-4005U	No	HD 4400	8GBx1	15.6" HD	None	1TB 5400	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF002YUS	I3-4005U	No	HD 4400	4GBx1	15.6" HD	None	500GB 7200	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003QUS	I5-5200U	No	HD 5500	8GBx1	15.6" FHD	None	500GB 7200	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003NUS	I5-5200U	No	HD 5500	8GBx1	15.6" HD	None	500GB 7200	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF0039US	I3-5005U	No	HD 5500	4GBx1	15.6" HD	None	500GB 7200	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF0030US	I5-5200U	No	HD 5500	4GBx1	15.6" HD	None	500GB 7200	DVD±RW	3160 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15
20DF003GUS	I5-5200U	No	HD 5500	4GBx1	15.6" FHD	None	500GB 7200	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	TPM	Finger	6 (48wh)	45W	Win8.1 DG Win7	1-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad E550 Platform Specifications sheet](#)

Processor	4th or 5th Generation Intel® Core™ i3 / i5 / i7 Processor	Dimensions Weight Case color Case Matera	<i>None Touch(WxDxH):</i> 14.84" x 10.08" x 1.06"; 377mm x 256mm x 27mm <i>6-cell None Touch:</i> from 5.21 lb (2.35kg) Graphite Black PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic																														
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Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory speed	Processor Graphics																										
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i3-5005U	2	4	2.0 GHz	-	3MB		HD5500																										
i5-5200U	2	4	2.2 GHz	2.7 GHz	3MB		HD5500																										
Graphics	Intel HD Graphics in processor only, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content)	Monitor cable Camera Audio support	None HD720p resolution, fixed focus HD Audio, Conexant® CX20751 codec, Dolby® Advanced Audio™ v4 / JBL speakers, 2W x 2 / dual array microphone, combo audio / microphone jack																														
Chipset Memory	Intel SoC (System on Chip) platform 16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Keyboard UltraNav™ ThinkLight™	6-row, spill-resistant, multimedia Fn keys, numeric keypad TrackPoint® pointing device and multi-touch with 3+2 buttons click pad None																														
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Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: HDD / SATA 6.0Gb/s, 2.5" wide, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ Some: Hybrid drive with 8GB NAND flash memory	Battery type Battery life AC adapter	Li-Ion 6-cell (48Wh) 6-cell (48Wh): up to 9.0 hr 45-watt AC adapter (Integrated Graphics)																														
Optical M.2 SSD	DVD burner, 9.0mm high, removable None	Preload	Some: No operating system Some: Windows® 7 Professional 64 Some: Windows 8.1 Pro 64-bit																														
Ethernet Bluetooth™	Intel WGI218V Gigabit Ethernet Connection Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Limited warranty	preinstalled through downgrade rights in Windows 8.1 Pro 64-bit 1-year - depot repair service / service upgrades available																														
WLAN	One of the following, configurable by model: • Intel Wireless-AC 3160, 1x1, Wi-Fi + Bluetooth combo adapter, M.2 Card • Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT combo adapter, M.2 Card	Environment	EPPEAT™ Gold; ENERGY STAR®; RoHS-compliant																														
WWAN	None																																
SIM card	None																																

See footnotes for more detailed information

ThinkPad E550 20DF (Radeon) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	vPro	Graphics	Memory	Display	Multi-touch	Storage	Optical	WLAN & Bluetooth	WWAN/SSD	SIM card	Camera	Keyboard	TPM	Finger print reader	Battery cells(wh)	Power adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20DF002XUS	I7-5500U	No	R7 M260	8GBx1	15.6" HD	None	128GB SSD	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	None	Finger	6 (48wh)	65W	Win8.1 P64	1-depot	No	01/15
20DF0042US	I7-5500U	No	R7 M260	8GBx1	15.6" FHD	None	1TB 5400	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	None	Finger	6 (48wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DF003XUS	I7-5500U	No	R7 M260	4GBx1	15.6" FHD	None	128GB SSD	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	None	Finger	6 (48wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DF0041US	I7-5500U	No	R7 M260	8GBx1	15.6" FHD	None	128GB SSD	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	None	Finger	6 (48wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DF0040US	I7-5500U	No	R7 M260	8GBx1	15.6" FHD	None	500GB 7200	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	None	Finger	6 (48wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DF003YUS	I7-5500U	No	R7 M260	4GBx1	15.6" FHD	None	1TB 5400	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	None	Finger	6 (48wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DF0031US	I7-5500U	No	R7 M260	4GBx1	15.6" HD	None	500GB 7200	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	None	Finger	6 (48wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DF0032US	I7-5500U	No	R7 M260	8GBx1	15.6" HD	None	128GB SSD	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	None	Finger	6 (48wh)	65W	Win8.1 DG Win7	1-depot	No	01/15
20DF003WUS	I7-5500U	No	R7 M260	4GBx1	15.6" FHD	None	500GB 7200	DVD±RW	7265 ac+BT4.0	None	None	720p	Numpad	None	Finger	6 (48wh)	65W	Win8.1 DG Win7	1-depot	No	01/15

• For detailed platform specifications, please see [ThinkPad E550 Platform Specifications sheet](#)

Processor	5th Generation Intel® Core™ i3 / i5 / i7 Processor								Dimensions	<i>None Touch(WxDxH):</i> 14.84" x 10.08" x 1.06"; 377mm x 256mm x 27mm		
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory speed	Processor Graphics	Weight	<i>6-cell None Touch:</i> from 5.21 lb (2.35kg)		
	i5-5200U	2	4	2.2 GHz	2.7 GHz	3MB	DDR3L-1600	HD5500	Case color	Graphite Black		
	i7-5500U	2	4	2.4 GHz	3.0 GHz	4MB		HD5500	Case Matera	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Graphics	AMD Radeon R7 M260 Graphics, 2GB DDR3 memory, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content)								Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
									Ports	Two USB 3.0 (one Always On), one USB 2.0, Ethernet (RJ-45), external monitor (VGA DB-15, HDMI), Lenovo OneLink connector		
Chipset	Intel SoC (System on Chip) platform								Monitor cable	None		
									Camera	HD720p resolution, fixed focus		
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets								Audio support	HD Audio, Conexant® CX20751 codec, Dolby® Advanced Audio™ v4 / JBL speakers, 2W x 2 / dual array microphone, combo audio / microphone jack		
Display	Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio Some: 15.6" (396mm) FHD (1920x1080) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio								Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad		
									UltraNav™ ThinkLight™	TrackPoint® pointing device and multi-touch with 3+2 buttons click pad None		
Multi-touch	Some: supports 10-finger gesture								Security	Power-on password, hard disk password, supervisor password, security keyhole		
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: HDD / SATA 6.0Gb/s, 2.5" wide, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ Some: Hybrid drive with 8GB NAND flash memory								vPro	None		
									Fingerprint reader	Some: Fingerprint reader on the keyboard bezel, swipe sensor		
Optical	DVD burner, 9.0mm high, removable None								NFC	None		
									Battery type	Li-Ion 6-cell (48Wh)		
Ethernet	Intel WGI218V Gigabit Ethernet Connection Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter								Battery life	6-cell (48Wh): up to 9.0 hr		
									AC adapter	65-watt AC adapter (Discrete Graphics)		
Bluetooth™									Preload	Some: No operating system		Some: Windows 8.1 64-bit
									Some: Windows® 7 Professional 64		Some: Windows 8.1 Pro 64-bit	
WLAN	One of the following, configurable by model: • Intel Wireless-AC 3160, 1x1, Wi-Fi + Bluetooth combo adapter, M.2 Card • Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT combo adapter, M.2 Card								preinstalled through downgrade rights in Windows 8.1 Pro 64-bit			
									Limited warranty	1-year - depot repair service / service upgrades available		
WWAN	None								Environment	EPEAT™ Gold; ENERGY STAR®; RoHS-compliant		
SIM card	None											

See footnotes for more detailed information



Lenovo® ThinkPad E555



Lenovo ThinkPad E555



Lenovo ThinkPad E555

ThinkPad E555 Platform Specifications

Product Specifications Reference (PSREF)

Processor	AMD Accelerated Processor A6, A8, A10, or FX APU							Graphics	Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed		Ports	Two USB 3.0 (one Always On), one USB 2.0, VGA DB-15, HDMI, Ethernet (RJ-45), Lenovo OneLink connector, combo audio/microphone jack	
	A6-7000	2	2	2.2 GHz	3.0 GHz	1MB	DDR3L-1600		Monitor cable	None	
	A6-7000	2	2	2.2 GHz	3.0 GHz	1MB			Camera	HD720p resolution, fixed focus	
	A8-7100	4	4	1.8 GHz	3.0 GHz	4MB			Audio support	HD Audio, Conexant® CX20751 codec, Dolby® Advanced Audio™ v4 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack	
	A8-7100	4	4	1.8 GHz	3.0 GHz	4MB			Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad	
	A10-7300	4	4	1.9 GHz	3.2 GHz	4MB			UltraNav™	TrackPoint® pointing device and multi-touch with 3+2 buttons click pad	
FX-7500	4	4	2.1 GHz	3.3 GHz	4MB	ThinkLight™		None			
							Security chip	Power-on password, hard disk password, supervisor password, security keyhole			
Graphics	AMD Radeon™ R4 or R5 HD Graphics in processor only, AMD Radeon R5 M240 Graphics, 2GB DDR3 memory, or Dual Graphics support for A10 and FX APU external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display							Security chip	None		
								vPro	None		
Chipset	AMD A76M FCH Chipset							Fingerprint reader	None		
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets							NFC	None		
Display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio							Battery type	Li-Ion 6-cell (48Wh)		
Multi-touch								None			
Storage	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ <i>Some:</i> Hybrid drive with 8GB NAND flash memory							AC adapter	<i>Some:</i> 45-watt AC adapter (Integrated Graphics) <i>Some:</i> 65-watt AC adapter (Discrete Graphics)		
Optical								<i>Some:</i> DVD burner, 9.0mm high, fixed <i>Some:</i> Blank Bezel			
M.2 SSD	None								<ul style="list-style-type: none"> • Lenovo Solution Center • Lenovo Support • Lenovo Companion • ThinkVantage System Update • Lenovo Reach (Window 8.1 model) • Hightail - Metro (Window 8.1 model) • PC Device Stage • AccuWeather • Amazon Kindle • Nitro Pro • Evernote • Skype™ • Microsoft® Office preloaded; purchase a product key to activate • Cyberlink PowerDVD • Cyberlink Power2Go • Cyberlink PowerProducer 		
Ethernet	Realtek® RTL8111GUS Gigabit Network Connection								<ul style="list-style-type: none"> • Rara Streaming • Norton Studio • Microsoft Office preloaded; purchase a product key to activate • Norton Internet Security (30 days of virus definitions) • Cyberlink PowerDVD • Cyberlink Power2Go • Cyberlink PowerProducer 		
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter										
WLAN	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> • RTL8723BE, Realtek 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter, M.2 Card • BCM943162, Broadcom 11-AC, 1x1, Wi-Fi + BT combo adapter, M.2 Card 							Limited warranty	1-year - depot repair service / service upgrades available		
WWAN	None							Environment	EPEAT™ Gold; ENERGY STAR®; RoHS-compliant		
SIM card	None										
Smart Card Read	None										
ExpressCard	None										
Dimensions	<i>All (WxDxH):</i> 14.84" x 10.04" x 1.07" (377mm x 255mm x 27.1mm)										
Weight	From 5.20 lb (2.36kg)										
Case color	Graphite black										
Case Material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic										

See footnotes for more detailed information

ThinkPad E555 20DH (AMD) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Graphics	Memory	Display	Storage	Optical	WLAN & Bluetooth	WWAN/SSD	SIM card	Camera	Keyboard	Finger print reader	Battery cells(wh)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20DH0028US	A6-7000	R4 HD	4GBx1	15.6" HD	1TB 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 P64	1-Depot	No	01/15
20DH002EUS	A6-7000	R4 HD	8GBx1	15.6" HD	1TB 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 DG Win7	1-Depot	No	01/15
20DH002GUS	A8-7100	R5 HD	8GBx1	15.6" HD	1TB 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 P64	1-Depot	No	01/15
20DH002FUS	A8-7100	R5 HD	4GBx1	15.6" HD	500G 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 DG Win7	1-Depot	No	01/15
20DH002BUS	A8-7100	R5 HD	8GBx1	15.6" HD	500G 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 DG Win7	1-Depot	No	01/15
20DH002LUS	A6-7000	R4 HD	8GBx1	15.6" HD	500G 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 DG Win7	1-Depot	No	01/15
20DH002RUS	A6-7000	R4 HD	8GBx1	15.6" HD	500G 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 P64	1-Depot	No	01/15
20DH002HUS	A8-7100	R5 HD	8GBx1	15.6" HD	1TB 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 DG Win7	1-Depot	No	01/15
20DH002MUS	A8-7100	R5 HD	4GBx1	15.6" HD	1TB 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 P64	1-Depot	No	01/15
20DH002DUS	A6-7000	R4 HD	4GBx1	15.6" HD	500G 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 P64	1-Depot	No	01/15
20DH002QUS	A6-7000	R4 HD	4GBx1	15.6" HD	500G 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 DG Win7	1-Depot	No	01/15
20DH002SUS	A8-7100	R5 HD	4GBx1	15.6" HD	1TB 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 DG Win7	1-Depot	No	01/15
20DH002JUS	A6-7000	R4 HD	8GBx1	15.6" HD	1TB 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 P64	1-Depot	No	01/15
20DH002AUS	A6-7000	R4 HD	4GBx1	15.6" HD	1TB 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 DG Win7	1-Depot	No	01/15
20DH002UUS	A8-7100	R5 HD	4GBx1	15.6" HD	500G 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 P64	1-Depot	No	01/15
20DH002KUS	A8-7100	R5 HD	8GBx1	15.6" HD	500G 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 P64	1-Depot	No	01/15

• For detailed platform specifications, please see [ThinkPad E555 Platform Specifications sheet](#)

Processor	AMD Accelerated Processor A6, A8 APU								Multicard Reader Ports 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0 (one Always On), one USB 2.0, VGA DB-15, HDMI, Ethernet (RJ-45), Lenovo OneLink connector, combo audio/microphone jack
	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	Graphics	
	A6-7000	2	2	2.2 GHz	3.0 GHz	1MB	DDR3L-1600	R4 HD	
A8-7100	4	4	1.8 GHz	3.0 GHz	4MB	R5 HD			
Graphics	AMD Radeon™ R4 or R5 HD Graphics in processor only								Monitor cable None
Chipset	AMD A76M FCH Chipset								Camera HD720p resolution, fixed focus
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets								
Display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color, anti-glare, 200 nits <i>Some:</i> 15.6" (396mm) FHD (1920x1080) color, anti-glare, 220 nits								Keyboard 6-row, spill-resistant, multimedia Fn keys, numeric keypad
Storage	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, removable, Active Protection System™ <i>Some:</i> Hybrid drive with 8GB NAND flash memory								UltraNav™ TrackPoint® pointing device and multi-touch with 3+2 buttons click pad
Optical	<i>Some:</i> DVD burner, 9.0mm high, fixed <i>Some:</i> Blank Bezel								ThinkLight™ None
M.2 SSD	None								Security Power-on password, hard disk password, supervisor password, security keyhole
Ethernet	Realtek® RTL8111GUS Gigabit Network Connection								Security chip None
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter								vPro None
WLAN	RTL8723BE, Realtek 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter, M.2 Card								Fingerprint reader None
WWAN	None								NFC None
SIM card	None								Battery type Li-Ion 6-cell (48Wh)
Dimensions	<i>All (WxDxH):</i> 14.84" x 10.04" x 1.07" (377mm x 255mm x 27.1mm)								Battery life Up to 6.3 hr
Weight	From 5.20 lb (2.36kg)								AC adapter 45-watt AC adapter (Integrated Graphics)
Case color	Graphite black								Preload <i>Some:</i> No operating system <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit
Case Material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic								<i>Some:</i> Windows 8.1 64-bit <i>Some:</i> Windows 8.1 Pro 64-bit
Limited warranty									1-year - depot repair service / service upgrades available
Environment									EPEAT™ Gold; ENERGY STAR®; RoHS-compliant

See footnotes for more detailed information

ThinkPad E555 20DH (AMD) - Discrete (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Graphics	Memory	Display	Storage	Optical	WLAN & Bluetooth	WWAN/SSD	SIM card	Camera	Keyboard	Finger print reader	Battery cells(wh)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20DH002PUS	A10-7300	R7 M260DX	4GBx1	15.6" HD	1TB 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 DG Win7	1-Depot	No	01/15
20DH002CUS	A10-7300	R7 M260DX	8GBx1	15.6" HD	1TB 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 DG Win7	1-Depot	No	01/15
20DH0029US	A10-7300	R7 M260DX	8GBx1	15.6" HD	1TB 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 P64	1-Depot	No	01/15
20DH002NUS	A10-7300	R7 M260DX	4GBx1	15.6" HD	500GB 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 P64	1-Depot	No	01/15
20DH002TUS	A10-7300	R7 M260DX	4GBx1	15.6" HD	500GB 5400	DVD±RW	RTL bgn+BT	No	No	720p	Numpad	No	6(48wh)	Win8.1 DG Win7	1-Depot	No	01/15

• For detailed platform specifications, please see [ThinkPad E555 Platform Specifications sheet](#)

Processor	AMD Accelerated Processor A6, A8, A10, or FX APU								Dimensions	All (WxDxH): 14.84" x 10.04" x 1.07" (377mm x 255mm x 27.1mm)		
	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	Graphics	Weight	From 5.20 lb (2.36kg)		
	A6-7000	2	2	2.2 GHz	3.0 GHz	1MB	DDR3L-1600	R5 M240	Case color	Graphite black		
	A8-7100	4	4	1.8 GHz	3.0 GHz	4MB		R5 M240	Case Material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
	A10-7300	4	4	1.9 GHz	3.2 GHz	4MB		R7 M260DX (R6+R5 M240)	Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
FX-7500	4	4	2.1 GHz	3.3 GHz	4MB	R7 M265DX (R7+R5 M240)		Ports	Two USB 3.0 (one Always On), one USB 2.0, VGA DB-15, HDMI, Ethernet (RJ-45), Lenovo OneLink connector, combo audio/microphone jack			
								Monitor cable	None			
Graphics	AMD Radeon R5 M240 Graphics, 2GB DDR3 memory, or Dual Graphics support for A10 and FX APU								Camera	HD720p resolution, fixed focus		
Chipset	AMD A76M FCH Chipset								Audio support	HD Audio, Conexant® CX20751 codec, Dolby® Advanced Audio™ v4 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack		
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets								Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad		
Display	Some: 15.6" (396mm) HD (1366x768) color, anti-glare, 200 nits Some: 15.6" (396mm) FHD (1920x1080) color, anti-glare, 220 nits								UltraNav™	TrackPoint® pointing device and multi-touch with 3+2 buttons click pad		
Storage	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: HDD / SATA 6.0Gb/s, 2.5" wide, removable, Active Protection System™ Some: Hybrid drive with 8GB NAND flash memory								ThinkLight™	None		
Optical	Some: DVD burner, 9.0mm high, fixed Some: Blank Bezel								Security	Power-on password, hard disk password, supervisor password, security keyhole		
M.2 SSD	None								Security chip	None		
Ethernet	Realtek® RTL8111GUS Gigabit Network Connection								vPro	None		
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter								Fingerprint reader	None		
WLAN	RTL8723BE, Realtek 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter, M.2 Card								NFC	None		
WWAN	None								Battery type	Li-Ion 6-cell (48Wh)		
SIM card	None								Battery life	Up to 6.3 hr		
									AC adapter	65-watt AC adapter (Discrete Graphics)		
									Preload	Some: No operating system Some: Windows® 7 Professional 64 Some: Windows 8.1 Pro 64-bit preinstalled through downgrade rights in Windows 8.1 Pro 64-bit		
									Limited warranty	1-year - depot repair service / service upgrades available		
									Environment	EPEAT™ Gold; ENERGY STAR®; RoHS-compliant		

See footnotes for more detailed information

ThinkPad S431



Lenovo® ThinkPad S431



Lenovo® ThinkPad S431



Lenovo® ThinkPad S431



Lenovo® ThinkPad S431



Lenovo® ThinkPad S431



Lenovo® ThinkPad S431

ThinkPad S431 20AX (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Top color	Finger-print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
20AX0000US	i3-3227U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win7 Pro64	06/13
20AX0001US	i5-3337U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win7 Pro64	06/13
20AX000MUS	i7-3687U	8GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win7 Pro64	06/13
20AX000NUS	i3-3227U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win8 Pro64	06/13
20AX000PUS	i5-3337U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win8 Pro64	06/13
20AX000QUS	i7-3687U	8GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win8 Pro64	06/13
20AX000RUS	i3-3227U	4GBx1	14.0" HD	720p	320G 7200	TP 11a/b/g/n + BT	None	Black	Finger	4	46	Win7 Pro64	06/13
20AX000SUS	i3-3227U	4GBx1	14.0" HD	720p	320G 7200	TP 11a/b/g/n + BT	None	Black	Finger	4	46	Win8 Pro64	06/13
20AX004KUS	i5-3437U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win7 Pro64	11/13

Positioning Processor	<p><i>Sophisticated design with quality, durability and reliability for SMB customers; one spindles</i> Intel® Core™ i3-3227U processor (2 cores, 1.90GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology Intel Core i5-3437U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology</p>										<p>Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit</p> <p>Preloaded applications (only some listed) - Windows 7 models • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Adobe® Reader®</p> - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Skype™ • Microsoft Office preloaded; purchase a product key to activate
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket										
Optical SATA disk	None Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Active Protection System™										
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 Card slot										
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio										
Camera	HD720p resolution, low light sensitive, fixed focus, LED indicator										
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via HDMI™ (supporting HDCP to output protected content); Max external resolution: 1920x1200 (HDMI)@60Hz										
Keyboard	6-row, spill-resistant, multimedia Fn keys, LED backlight										
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³										
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch										
ThinkLight™	None										
Dimensions ³	14.0W" (WxDxH): 13.11" x 8.86" x 0.81"; 332.8mm x 224.8mm x 20.3mm										
Weight ²	4-cell: from 3.92 lb (1.78kg)										
Case color	Black or silver (top); black bottom										
Case material	Sand Blast Aluminum										
Battery - type ³⁷	Li-Polymer 4-cell (46Whr)										
Battery - life ¹⁰	MobileMark 2007: Windows 7: up to 9.1 hr MobileMark 2012: Windows 8: up to 5.9 hr										
Chipset	Mobile Intel HM76 Express Chipset										
ExpressCard	None										
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)										
Ports	One USB 3.0, one USB 3.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (HDMI), ethernet (RJ-45)										
PCIe Mini Card	One PCI Express Mini Card slot										
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, Wi-Fi + Bluetooth combo adapter, 2x2										
M.2 Card	One M.2 Card slot for support of WWAN card or SSD										
M.2 WWAN	None										
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card										
Ethernet	Realtek® RTL8111F Gigabit Network Connection										
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1.5 watt x 2 / Dolby® Home Theater® v4 / dual array microphone, combo audio/mic jack										
Security	Power-on password, hard disk password, supervisor password, security keyhole										
Security chip	Trusted Platform Module, TCG 1.2-compliant										
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor										
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available										Supports ThinkVantage® technologies 65-watt AC adapter ENERGY STAR® compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For Lenovo ²² service upgrade options, please go to QP-TA sheet

See footnotes for more detailed information
 US model(s) announced June 4, or November 19, 2013

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ThinkPad S431 20AX (AMD HD) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Top color	Finger-print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
20AX003WUS	i3-3217U	4GBx1	14.0" HD+	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win7 Pro64	07/13

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; one spindles Intel® Core™ i3-3217U processor (2 cores, 1.80GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology</i>										Preloaded operating system²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications (only some listed) - Windows 7 models • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Skype™ • Microsoft Office preloaded; purchase a product key to activate
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket										
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Active Protection System™										
M.2 SSD	M.2 Solid State Drive (SSD), via M.2 Card slot										
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio										
Camera	HD720p resolution, low light sensitive, fixed focus, LED indicator										
Graphics	AMD Radeon™ HD 8670M Graphics, 1GB memory external digital monitor support via HDMI™; <i>Max external resolution: 1920x1200 (HDMI)@60Hz</i>										
Keyboard TrackPoint®	6-row, spill-resistant, multimedia Fn keys, LED backlight										
Touchpad ThinkLight™	TrackPoint pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch None										
Dimensions ³	14.0W" (WxDxH): 13.11" x 8.86" x 0.81"; 332.8mm x 224.8mm x 20.3mm										
Weight ²	4-cell: from 3.92 lb (1.78kg)										
Case color	Black or silver (top); black bottom										
Case material	Sand Blast Aluminum										
Battery - type ³⁷	Li-Polymer 4-cell (46Whr)										
Battery - life ¹⁰	<i>MobileMark 2007:</i> Windows 7: up to 7.2 hr <i>MobileMark 2012:</i> Windows 8: up to 5.2 hr										
Chipset	Mobile Intel HM76 Express Chipset										
ExpressCard	None										
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)										
Ports	One USB 3.0, one USB 3.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (HDMI), ethernet (RJ-45)										
PCIe Mini Card	One PCI Express Mini Card slot										
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, Wi-Fi + Bluetooth combo adapter, 2x2										
M.2 Card	One M.2 Card slot for support of WWAN card or SSD										
M.2 WWAN	None										
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card										
Ethernet	Realtek® RTL8111F Gigabit Network Connection										
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1.5 watt x 2 / Dolby® Home Theater® v4 / dual array microphone, combo audio/mic jack										
Security	Power-on password, hard disk password, supervisor password, security keyhole										
Security chip	Trusted Platform Module, TCG 1.2-compliant										
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor										
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available										
											Supports ThinkVantage® technologies
											65-watt AC adapter ENERGY STAR® compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
											For Lenovo ²² service upgrade options, please go to QP-TA sheet

See footnotes for more detailed information
US model(s) announced July 2, 2013

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ThinkPad S431 20BA

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Top color	Finger print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
20BA0000US	i5-3437U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win8 Pro64	06/13
20BA0001US	i7-3687U	8GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win8 Pro64	06/13

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; one spindles</i> Intel® Core™ i5-3437U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology										Preloaded operating system ²⁰ - Windows 8 Pro 64-bit Preloaded applications (only some listed) <ul style="list-style-type: none"> • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Skype™ • Microsoft Office preloaded; purchase a product key to activate
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket										
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Active Protection System™										
M.2 SSD	M.2 Solid State Drive (SSD), via M.2 Card slot										
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio										
Camera	HD720p resolution, low light sensitive, fixed focus, LED indicator										
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via HDMI™ (supporting HDCP to output protected content); <i>Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz</i>										
Keyboard	6-row, spill-resistant, multimedia Fn keys, LED backlight										
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³										
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch										
ThinkLight™	None										
Dimensions ³	14.0W" (WxDxH): 13.11" x 8.86" x 0.81"; 332.8mm x 224.8mm x 20.3mm										
Weight ²	4-cell: from 3.92 lb (1.78kg)										
Case color	Black or silver (top); black bottom										
Case material	Sand Blast Aluminum										
Battery - type ³⁷	Li-Polymer 4-cell (46Whr)										
Battery - life ¹⁰	<i>MobileMark 2007:</i> Windows 7: up to 9.1 hr <i>MobileMark 2012:</i> Windows 8: up to 5.9 hr										
Chipset	Mobile Intel HM76 Express Chipset										
ExpressCard	None										
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)										
Ports	One USB 3.0, one USB 3.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (HDMI), ethernet (RJ-45)										
PCIe Mini Card	One PCI Express Mini Card slot										
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, Wi-Fi + Bluetooth combo adapter, 2x2										Supports ThinkVantage® technologies
M.2 Card	One M.2 Card slot for support of WWAN card or SSD										
M.2 WWAN	None										
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card										65-watt AC adapter
Ethernet	Realtek® RTL8111F Gigabit Network Connection										ENERGY STAR® compliant
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1.5 watt x 2 / Dolby® Home Theater® v4 / dual array microphone, combo audio/mic jack										RoHS-compliant
Security	Power-on password, hard disk password, supervisor password, security keyhole										International Warranty Service ¹⁷
Security chip	Trusted Platform Module, TCG 1.2-compliant										24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor										For Lenovo ²² service upgrade options, please go to QP-TA sheet
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available										

See footnotes for more detailed information
US model(s) announced June 4, 2013

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ThinkPad S431 20AX (TopSeller) - MultiTouch

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD Top color	Finger print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
20AX000VUS	i7-3687U	8GBx1	14.0" HD+ Touch	720p	500G 7200	TP 11a/b/g/n + BT	24G Black	Finger	4	46	Win8 Pro64	08/13
20AX000TUS	i3-3227U	4GBx1	14.0" HD+ Touch	720p	500G 7200	TP 11a/b/g/n + BT	24G Black	Finger	4	46	Win8 Pro64	08/13
20AX000UUS	i5-3337U	4GBx1	14.0" HD+ Touch	720p	500G 7200	TP 11a/b/g/n + BT	24G Black	Finger	4	46	Win8 Pro64	08/13

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; one spindles</i> Intel® Core™ i3-3227U processor (2 cores, 1.90GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology										Preloaded operating system²⁰ - Windows 8 Pro 64-bit Preloaded applications (only some listed) • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Skype™ • Microsoft Office preloaded; purchase a product key to activate
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket										
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Active Protection System™										
M.2 SSD	M.2 Solid State Drive (SSD), via M.2 Card slot										
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color, anti-glare, 10-point touch screen LED backlight, 220 nits, 16:9 aspect ratio										
Camera	HD720p resolution, low light sensitive, fixed focus, LED indicator										
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via HDMI™ (supporting HDCP to output protected content); <i>Max external resolution:</i> 1920x1200 (HDMI)@60Hz										
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch None										
Dimensions ³ Weight ² Case color Case material Battery - type ³⁷ Battery - life ¹⁰	14.0W" (WxDxH): 13.10" x 8.85" x 0.87"; 332.8mm x 224.8mm x 22.1mm 4-cell: from 4.10 lb (1.86kg) Black or silver (top); black bottom Sand Blast Aluminum Li-Polymer 4-cell (46Whr) <i>MobileMark 2007:</i> Windows 7: up to 6.7 hr <i>MobileMark 2012:</i> Windows 8: up to 4.9 hr										
Chipset ExpressCard Multicard Reader Ports	Mobile Intel HM76 Express Chipset None 4-in-1 reader (MMC, SD, SDHC, SDXC) One USB 3.0, one USB 3.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (HDMI), ethernet (RJ-45)										
PCIe Mini Card PCIe WLAN ⁴ M.2 Card M.2 WWAN Bluetooth™ Ethernet Audio support	One PCI Express Mini Card slot 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, Wi-Fi + Bluetooth combo adapter, 2x2 One M.2 Card slot for support of WWAN card or SSD None Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card Realtek® RTL8111F Gigabit Network Connection High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1.5 watt x 2 / Dolby® Home Theater® v4 / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole										Supports ThinkVantage® technologies 65-watt AC adapter ENERGY STAR® compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant Fingerprint reader on palm rest, swipe sensor										For Lenovo ²² service upgrade options, please go to QP-TA sheet
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available										

See footnotes for more detailed information
US model(s) announced August 13, 2013

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ThinkPad S431 20BA (MultiTouch)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁶ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD Top color	Finger print reader	Bat-tery cells /Wh	Bat-tery /Wh	Preload	Ann date (mm/yy)
20BA0002US	i5-3437U	4GBx1	14.0" HD+ Touch	720p	500G 7200	TP 11a/b/g/n + BT	24G Black	Finger	4	46	Win8 Pro64	08/13
20BA0003US	i7-3687U	8GBx1	14.0" HD+ Touch	720p	500G 7200	TP 11a/b/g/n + BT	24G Black	Finger	4	46	Win8 Pro64	08/13

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; one spindles</i> Intel® Core™ i5-3437U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology										Preloaded operating system ²⁰ - Windows 8 Pro 64-bit Preloaded applications (only some listed) <ul style="list-style-type: none"> • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Skype™ • Microsoft Office preloaded; purchase a product key to activate
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket										
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Active Protection System™										
M.2 SSD	M.2 Solid State Drive (SSD), via M.2 Card slot										
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, 10-point touch screen LED backlight, 220 nits, 16:9 aspect ratio										
Camera	HD720p resolution, low light sensitive, fixed focus, LED indicator										
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via HDMI™ (supporting HDCP to output protected content); <i>Max external resolution: 2048x1536 (VGA) @75Hz; 1920x1200 (HDMI) @60Hz</i>										
Keyboard	6-row, spill-resistant, multimedia Fn keys, LED backlight										
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³										
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch										
ThinkLight™	None										
Dimensions ³	14.0W" (WxDxH): 13.10" x 8.85" x 0.87"; 332.8mm x 224.8mm x 22.1mm										
Weight ²	4-cell: from 4.10 lb (1.86kg)										
Case color	Black or silver (top); black bottom										
Case material	Sand Blast Aluminum										
Battery - type ³⁷	Li-Polymer 4-cell (46Whr)										
Battery - life ¹⁰	<i>MobileMark 2007:</i> Windows 7: up to 6.7 hr <i>MobileMark 2012:</i> Windows 8: up to 4.9 hr										
Chipset	Mobile Intel HM76 Express Chipset										
ExpressCard	None										
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)										
Ports	One USB 3.0, one USB 3.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (HDMI), ethernet (RJ-45)										
PCIe Mini Card	One PCI Express Mini Card slot										
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, Wi-Fi + Bluetooth combo adapter, 2x2										
M.2 Card	One M.2 Card slot for support of WWAN card or SSD										Supports ThinkVantage® technologies
M.2 WWAN	None										
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card										65-watt AC adapter ENERGY STAR® compliant RoHS-compliant
Ethernet	Realtek® RTL8111F Gigabit Network Connection										International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1.5 watt x 2 / Dolby® Home Theater® v4 / dual array microphone, combo audio/mic jack										
Security	Power-on password, hard disk password, supervisor password, security keyhole										
Security chip	Trusted Platform Module, TCG 1.2-compliant										
Fingerprint reader	Fingerprint reader on palm rest, swipe sensor										For Lenovo ²² service upgrade options, please go to QP-TA sheet
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available										

See footnotes for more detailed information
US model(s) announced August 13, 2013

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Lenovo Quick Pick (<http://www.lenovoquickpick.com>) is an options and services configurator for Lenovo systems.

For the options and services information on ThinkPad Laptops, please see below:

<p>ThinkPad L440 http://www.lenovoquickpick.com/usa/system/thinkpad/l-series/l440</p> <p>ThinkPad L540 http://www.lenovoquickpick.com/usa/system/thinkpad/l-series/l540</p>	<p>ThinkPad L450 http://www.lenovoquickpick.com/usa/system/thinkpad/l-series/l450</p>
<p>ThinkPad T440 http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t440</p> <p>ThinkPad T440p http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t440p</p> <p>ThinkPad T440s http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t440s</p>	<p>ThinkPad T450 http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t450</p> <p>ThinkPad T450s http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t450s</p>
<p>ThinkPad T540p http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t540p</p> <p>ThinkPad W540 http://www.lenovoquickpick.com/usa/system/thinkpad/w-series/w540</p>	<p>ThinkPad T550 http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t550</p> <p>ThinkPad W541 http://www.lenovoquickpick.com/usa/system/thinkpad/w-series/w541</p> <p>ThinkPad W550s http://www.lenovoquickpick.com/usa/system/thinkpad/w-series/w550s</p>
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<p>ThinkPad E440 http://www.lenovoquickpick.com/usa/system/thinkpad/e-series/edge-e440</p> <p>ThinkPad E540 http://www.lenovoquickpick.com/usa/system/thinkpad/e-series/edge-e540</p> <p>ThinkPad E545 http://www.lenovoquickpick.com/usa/system/thinkpad/e-series/edge-e545</p>	
<p>ThinkPad S431 http://www.lenovoquickpick.com/usa/system/thinkpad/s-series/s431</p>	

Disclaimer

Lenovo provides the information in the Product Specifications Reference (PSREF) withdrawn product books on an "AS-IS" basis. Because the actual products have been withdrawn from marketing, the information in these withdrawn product books is no longer maintained or updated. The referenced footnote numbering may not correspond with the listed footnotes.

PSREF books for the withdrawn systems:

http://www.lenovo.com/psref/psrefs_withdrawn.html

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, go to http://support.lenovo.com/en_US/product-service/warranty-status/WarrantyPolicies.page. Lenovo makes no representation or warranty regarding third party products or services.

Footnotes:

- ¹ Power management, including Intel® SpeedStep® Technology, reduces processor speed when in battery mode.
- ² **Weight** includes battery and standard optical drive; weight may vary due to vendor components, manufacturing process and options.
- ³ **Thinness** may vary at certain points on the system.
- ⁴ **Wireless capability:** Requires compatible wireless-enabled options sold separately.
- ⁵ **TAA:** ThinkPad notebook is compliant with the U.S. Federal Government's country-of-origin requirements prescribed in 48 C.F.R. Subpart 25.4; Trade Act Agreement (TAA) model.
- ⁶ **Public network download modem speeds** are limited to 53Kbps. Upload speeds are limited to 48Kbps for V.92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V.92 functions and speeds require compatible phone line and server equipment. Check with your telephone and ISP service providers for availability.
- ⁷ **Maximum memory capacity** may require the replacement of standard component with largest supported component available. On ThinkPad systems, even though it is possible to physically install 4GB of memory, the actual amount of memory addressable by a 32-bit operating system will be limited to 3GB. This limitation does not exist with 64-bit operating systems.
- ⁸ **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.
- ¹⁰ **Battery:** These model numbers achieved the battery life based on MobileMark® 2012 during testing. Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.
- ¹¹ **External monitor:** This system supports a maximum of two external monitors. The integrated display(s) must be disabled to support two external monitors.
- ¹² **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.
- ¹⁴ **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.
- ¹⁶ **Activating Verizon Wireless Service:** Lenovo customers will be contacted after purchase to activate service; requires separate agreement with Verizon Wireless and is subject to the Customer Agreement, Calling Plan, and credit approval. Service, airtime, and early termination charges may apply. Verizon Wireless, not Lenovo, is solely responsible for service. Service not available in all areas; purchaser is responsible for verifying that service is available for the intended location before purchasing a computer equipped with WAN card. Network details, coverage limitations, and maps at www.verizonwireless.com.
- ¹⁷ **International Warranty Service (IWS)** is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.
- ¹⁹ **Depot repair service:** The customer may be asked certain diagnostic questions before a courier is sent. Your ThinkPad purchase includes this depot repair service, available in the U.S. during the limited warranty period.
- ²⁰ **Operating System:** Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/pc/support and enter your machine type and model number for more information.
- ²² **Lenovo Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. For ThinkPad notebooks requiring LCD or other component replacement, Lenovo may choose to perform service at the depot repair center. Calls must be received by 5 pm local time in order to qualify for Next Business Day service. P&L means parts and labor. P/U means pick-up. See Lenovo Warranty Services terms and conditions for complete details and restrictions.
- ²³ **Activating AT&T Wireless Service:** Requires separate agreement with AT&T, subject to service agreement, rate plan and coverage maps. AT&T, not Lenovo, is solely responsible for service. Coverage not available in all areas; AT&T BroadbandConnect available in select metropolitan markets. Special credit and tenure restrictions and additional charges may apply to international roaming. A network connection, third-party software, additional hardware, and/or subscription to a third-party service may be required for certain solutions/applications. Additional restrictions apply, including early termination fee; see www.wireless.att.com for details. To activate call Lenovo Wireless Activation Hot Line at 1-877-299-4710.
- ²⁶ **Full-size keyboard:** As defined by ISO/IEC 15412.
- ³⁰ **Measures only maximum** data transfer rate, not application performance. Many factors affect application performance.

²⁴ **Limited onsite service systems** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. Support unrelated to a warranty issue may be subject to additional charges. Lenovo onsite repair (LOR), 8 am to 5 pm, Monday through Friday coverage excluding holidays, next business day (NBD) response time.

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