



Lenovo® ThinkPad T540p



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# ThinkPad T540p Platform Specifications

Product Specifications Reference (PSREF)

Positioning	<i>Premiere performance; two spindles</i>								Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor								Ethernet	Intel Ethernet Connection I217-LM (Clarkville)
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	NFC	<i>Optional: Near Field Communication</i>
	i3-4000M	2	4	2.4 GHz	-	3MB	DDR3L-1600	Intel HD Graphics 4600	Chipset	<b>Mobile Intel QM87 Express Chipset</b>
	i3-4100M			2.5 GHz	-	3MB			ExpressCard	One slot (ExpressCard/34)
	i5-4200M			2.5 GHz	3.1 GHz	3MB			Smart card reader	<i>Optional: Smart card reader</i>
	i5-4210M			2.6 GHz	3.2 GHz	3MB			Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
	i5-4300M			2.6 GHz	3.3 GHz	3MB			Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector
	i5-4330M	2.8 GHz	3.5 GHz	3MB						
	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 <sup>7</sup> / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets								WLAN <sup>4</sup>	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> <li>ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card</li> <li>Intel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card</li> <li>Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card</li> <li>Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 card</li> </ul>
Optical Ultrabay	DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high, bottom access								WWAN (optional)	<i>One of the following, configurable by model (mutually exclusive with M.2 SSD):</i> <ul style="list-style-type: none"> <li>Wireless WAN upgradable</li> <li>Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 card (US models)</li> <li>Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card (WE models)</li> <li>Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card (WE models)</li> </ul>
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™								SIM card (optional)	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> <li>AT&amp;T® or Verizon® LTE (4G), contract required with service provider (US models)</li> <li>Lenovo SIM, out-of-box service, pay-as-you-go via credit card, no contract required (WE models)</li> <li>User selectable, contract required with service provider</li> </ul>
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								Security	Power-on password, hard disk password, supervisor password, security keyhole
Widescreen display	<i>Some:</i> <b>15.6"</b> (396mm) <b>HD (1366x768)</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> <b>15.6"</b> (396mm) <b>FHD (1920x1080)</b> , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> <b>15.5"</b> (394mm) <b>3K (2880x1620)</b> , anti-glare, LED backlight, 350 nits, 16:9 aspect ratio, 1000:1 contrast ratio, <b>IPS</b>								vPro (optional)	Trusted Platform Module, TCG 1.2-compliant Intel vPro Technology
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus								Fingerprint reader	<i>Optional: Fingerprint reader on the palm rest, swipe sensor</i>
Graphics	<b>Intel HD Graphics 4600</b> in processor only, or <b>Intel HD Graphics 4600</b> in processor and <b>NVIDIA GeForce® GT 730M</b> , PCI Express® x8, <b>1GB</b> 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)								Limited warranty <sup>12</sup>	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> <li>1-year depot repair service</li> <li>3-year/1-yr battery depot repair service</li> <li>3-year/1-yr battery limited onsite service<sup>24</sup></li> <li>3-year/1-yr battery limited onsite service, OID (Onsite International Delivery)</li> </ul>
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								Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit or Windows 10 Pro 64 <ul style="list-style-type: none"> <li>Lenovo Solution Center</li> <li>ThinkVantage Product Recovery</li> <li>Rescue and Recovery™</li> <li>ThinkVantage System Update</li> <li>Lenovo Cloud Storage by SugarSync</li> <li>PC Device Stage</li> <li>Adobe® Reader®</li> <li>Microsoft® Office preloaded; purchase a product key to activate</li> <li>Norton™ Internet Security (30 days of virus definitions)</li> <li>Cyberlink PowerDVD (DVD±RW)</li> <li>Cyberlink Power2Go (DVD±RW)</li> <li>Cyberlink PowerProducer (DVD±RW)</li> </ul>
ThinkLight™	None									<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"> <li>Lenovo Solution Center</li> <li>Lenovo SHAREit</li> <li>Lenovo REACHit</li> <li>Lenovo Companion</li> <li>Microsoft Office preloaded; purchase a product key to activate</li> <li>Norton Internet Security (30 days of virus definitions, Win8 w/o i5/i7 model)</li> <li>McAfee® LiveSafe™ (30-day trial, Win8 i5/i7 and Win10 model)</li> </ul>
Dimensions <sup>3</sup>	<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 <sup>2</sup>	<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 <sup>10</sup>	<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								Mil-Spec test	MIL-STD-810G military certification
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; ENERGY STAR® 6.0; GREENGUARD®; RoHS-compliant

# 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 key-board	Finger-print reader	NFC	Bat-tery 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
20BE00BTUS	i5-4210M	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	03/15
20BE00CVUS	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	Win10 DG Win7	3-depot	No	08/15
20BE00CTUS	i5-4210M	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	Win10 DG Win7	1-depot	No	08/15

• 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	<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 Types</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="6">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="3">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></td> <td>2.8 GHz</td> <td>3.8 GHz</td> <td>8MB</td> <td></td> </tr> </tbody> </table>	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Types	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™ ThinkLight™ Chipset ExpressCard Smart card reader Media reader Ports	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch None <b>Mobile Intel QM87 Express Chipset</b> 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
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Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	WLAN <sup>4</sup>	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)	<i>Upg:</i> Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS																																											
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	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		Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																																											
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	Ethernet	Intel Ethernet Connection I217-LM (Clarkville)																																											
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	NFC	<i>Optional:</i> Near Field Communication																																											
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M, 1GB memory (Optimus)	Security	Power-on password, hard disk password, supervisor password, security keyhole																																											
Dimensions <sup>3</sup>	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	Security chip	Trusted Platform Module, TCG 1.2-compliant																																											
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Case material	Glass-Fiber Reinforced Plastic	Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor																																											
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication	Preload	Win8 / 8.1 / 10 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit or Windows 10 Pro 64 Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit Win10 P64: Windows 10 Pro 64																																											
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AC adapter	65-watt, 90-watt, or 135-watt AC adapter																																													

See footnotes for more detailed information  
US model(s) withdrawn effective March 2015

(KM1-1) © Lenovo

# ThinkPad T540p 20BE (TopSeller) - Windows 10

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	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BE00DCUS	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	Win10 P64	3-depot	No	09/15
20BE00DFUS	i5-4210M	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	Win10 P64	1-depot	No	09/15

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i7-4700MQ	2.4 GHz		3.4 GHz	6MB																																																										
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i7-4900MQ	2.8 GHz		3.8 GHz	8MB																																																										
UltraNav™		TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch																																																												
ThinkLight™		None																																																												
Chipset		<b>Mobile Intel QM87 Express Chipset</b>																																																												
ExpressCard		One slot (ExpressCard/34)																																																												
Smart card reader		Optional: Smart card reader																																																												
Media 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 <sup>7</sup> / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						WLAN <sup>4</sup>		<b>11b/g/n+BT:</b> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card <b>7260 b/g/n+BT:</b> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <b>7260 a/b/g/n+BT:</b> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <b>7260 ac+BT:</b> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card																																																					
Optical	DVD burner, 9.5mm Ultrabay slim, removable						WWAN (optional)		<b>Upg:</b> Wireless WAN upgradable <b>EM7355:</b> 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)		<b>AT&amp;T / Verizon:</b> AT&T® / Verizon® LTE (4G), contract required with service provider <b>Select:</b> 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	Some: <b>15.6"</b> (396mm) <b>HD (1366x768)</b> , 220 nits, 400:1 contrast ratio Some: <b>15.6"</b> (396mm) <b>FHD (1920x1080)</b> , 300 nits, 500:1 contrast ratio Some: <b>15.5"</b> (394mm) <b>3K (2880x1620)</b> , 350 nits, 1000:1 contrast ratio, IPS						Ethernet		Intel Ethernet Connection I217-LM (Clarkville)																																																					
Widescreen display	Some: <b>15.6"</b> (396mm) <b>FHD (1920x1080)</b> , 300 nits, 500:1 contrast ratio Some: <b>15.5"</b> (394mm) <b>3K (2880x1620)</b> , 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	<b>Intel HD Graphics 4600</b> in processor, or <b>Intel HD Graphics 4600</b> and <b>NVIDIA GeForce® GT 730M</b> , 1GB memory (Optimus)						Security chip		Trusted Platform Module, TCG 1.2-compliant																																																					
Dimensions <sup>3</sup>	<b>HD (WxDxH):</b> 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm <b>FHD / 3K:</b> 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 <sup>2</sup>	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		<b>Win8 / 8.1 / 10 DG Win7:</b> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit or Windows 10 Pro 64 <b>Win8 / 8.1 64:</b> Windows 8 / 8.1 64-bit <b>Win8 / 8.1 P64:</b> Windows 8 / 8.1 Pro 64-bit <b>Win10 P64:</b> Windows 10 Pro 64																																																					
	Optimus		5.43 lb / 2.46kg		5.80 lb / 2.63kg		Limited warranty <sup>12</sup>		<b>1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite</b>																																																					
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 <sup>10</sup>	Models		6-cell		9-cell																																																									
	Integrated		7 hr		12.5 hr																																																									
	Optimus		6.2 hr		11 hr																																																									

See footnotes for more detailed information

(KM1-9) © Lenovo



# 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
20BE00BSUS	i7-4710MQ	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	03/15
20BE00CWUS	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	Win10 DG Win7	3-depot	No	08/15
20BE00CXUS	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	Win10 DG Win7	3-depot	No	08/15

• 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	<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 Types</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 Types	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	<table border="1"> <tr> <td>Keyboard</td> <td>6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight</td> </tr> <tr> <td>UltraNav™</td> <td>TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch</td> </tr> <tr> <td>ThinkLight™</td> <td>None</td> </tr> <tr> <td>Chipset</td> <td><b>Mobile Intel QM87 Express Chipset</b></td> </tr> <tr> <td>ExpressCard</td> <td>One slot (ExpressCard/34)</td> </tr> <tr> <td>Smart card reader</td> <td>Optional: Smart card reader</td> </tr> <tr> <td>Media reader</td> <td>4-in-1 reader (MMC, SD, SDHC, SDXC)</td> </tr> <tr> <td>Ports</td> <td>Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector</td> </tr> </table>	Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight	UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch	ThinkLight™	None	Chipset	<b>Mobile Intel QM87 Express Chipset</b>	ExpressCard	One slot (ExpressCard/34)	Smart card reader	Optional: Smart card reader	Media 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
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Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	WLAN <sup>4</sup>	<table border="1"> <tr> <td>11b/g/n+BT:</td> <td>ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card</td> </tr> <tr> <td>7260 b/g/n+BT:</td> <td>Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card</td> </tr> <tr> <td>7260 a/b/g/n+BT:</td> <td>Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card</td> </tr> <tr> <td>7260 ac+BT:</td> <td>Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card</td> </tr> </table>	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																																																
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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																																																								
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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																																																								
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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 <sup>3</sup>	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																																																								
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Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication	Limited warranty <sup>12</sup>	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite																																																								
Max battery life <sup>10</sup>	<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																																																	
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AC adapter	65-watt, 90-watt, or 135-watt AC adapter																																																										

See footnotes for more detailed information  
US model(s) withdrawn effective March 2015

(KM1-2) © Lenovo

# ThinkPad T540p 20BE (Optimus) - TopSeller (Windows 10)

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	Battery cells	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BE00DDUS	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	Win10 P64	3-depot	No	09/15
20BE00DEUS	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	Win10 P64	3-depot	No	09/15

• 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 Types		
	i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600	Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight
	i5-4200M		2.5 GHz	3.1 GHz	3MB		UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch
	i5-4300M		2.6 GHz	3.3 GHz	3MB		ThinkLight™	None
	i5-4330M		2.8 GHz	3.5 GHz	3MB		Chipset	<b>Mobile Intel QM87 Express Chipset</b>
	i7-4600M		2.9 GHz	3.6 GHz	4MB		ExpressCard	One slot (ExpressCard/34)
	i7-4700MQ	4	2.4 GHz	3.4 GHz	6MB		Smart card reader	<i>Optional:</i> Smart card reader
	i7-4800MQ		2.7 GHz	3.7 GHz	6MB		Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
	i7-4900MQ		2.8 GHz	3.8 GHz	8MB		Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						WLAN <sup>4</sup>	<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
Optical	DVD burner, 9.5mm Ultrabay slim, removable					WWAN (optional)	<i>Upg:</i> Wireless WAN upgradable	
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high						<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					SIM card (optional)	<i>AT&amp;T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider	
M.2 SSD	<i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS						<i>Select:</i> User selectable, contract required with service provider	
	<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	
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768), 220 nits, 400:1 contrast ratio					Ethernet	Intel Ethernet Connection I217-LM (Clarkville)	
	<i>Some:</i> 15.6" (396mm) FHD (1920x1080), 300 nits, 500:1 contrast ratio					NFC	<i>Optional:</i> Near Field Communication	
	<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	
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 <sup>3</sup>	<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					Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor	
Weight <sup>2</sup>	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 / 10 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit or Windows 10 Pro 64	
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication						Win8 / 8.1 64: Windows 8 / 8.1 64-bit	
Max battery life <sup>10</sup>	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						Win10 P64: Windows 8 / 8.1 Pro 64-bit	
							Windows 10 Pro 64	
							Limited warranty <sup>12</sup> 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

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	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																																								
	<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 Types</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 Types	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
Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Types																																						
i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600																																						
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i7-4600M	4	2.9 GHz	3.6 GHz	4MB																																							
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i7-4800MQ		2.7 GHz	3.7 GHz	6MB																																							
i7-4900MQ		2.8 GHz	3.8 GHz	8MB																																							
		ThinkLight™	None																																								
		Chipset	<b>Mobile Intel QM87 Express Chipset</b>																																								
		ExpressCard	One slot (ExpressCard/34)																																								
		Smart card reader	Optional: Smart card reader																																								
		Media 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 <sup>7</sup> / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	WLAN <sup>4</sup>	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 <sup>3</sup>	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																																								
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Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication	Preload	Win8 / 8.1 / 10 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit or Windows 10 Pro 64 Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit Win10 P64: Windows 10 Pro 64																																								
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Models	6-cell	9-cell																																									
Integrated	7 hr	12.5 hr																																									
Optimus	6.2 hr	11 hr																																									
Case material	Glass-Fiber Reinforced Plastic																																										
AC adapter	65-watt, 90-watt, or 135-watt AC adapter																																										

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 key-board	Finger-print reader	NFC	Bat-tery 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					
	Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Types	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	<b>Mobile Intel QM87 Express Chipset</b>				
	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		Media 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 <sup>4</sup>	<b>11b/g/n+BT:</b> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card <b>7260 b/g/n+BT:</b> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <b>7260 a/b/g/n+BT:</b> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <b>7260 ac+BT:</b> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card				
Memory	16GB max <sup>7</sup> / 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					Ethernet	Intel Ethernet Connection I217-LM (Clarkville)					
	Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS					NFC	Optional: Near Field Communication					
M.2 SSD	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					
Widescreen display	Some: <b>15.6"</b> (396mm) <b>HD (1366x768)</b> , 220 nits, 400:1 contrast ratio					Security chip	Trusted Platform Module, TCG 1.2-compliant					
	Some: <b>15.6"</b> (396mm) <b>FHD (1920x1080)</b> , 300 nits, 500:1 contrast ratio					vPro (optional)	Intel vPro Technology					
	Some: <b>15.5"</b> (394mm) <b>3K (2880x1620)</b> , 350 nits, 1000:1 contrast ratio, IPS					Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor					
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					Preload	Win8 / 8.1 / 10 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit or Windows 10 Pro 64 Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit Win10 P64: Windows 10 Pro 64					
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M, 1GB memory (Optimus)					Limited warranty <sup>12</sup>	<b>1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite</b>					
Dimensions <sup>3</sup>	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											
Weight <sup>2</sup>	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											
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication											
Max battery life <sup>10</sup>	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

(KM1-4) © Lenovo



# 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 Types	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		<b>Mobile Intel QM87 Express Chipset</b>												
	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		Media 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 <sup>4</sup>		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 <sup>7</sup> / 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 <sup>3</sup>	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 <sup>2</sup>	Models	6-cell		9-cell		Preload		Win8 / 8.1 / 10 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit or Windows 10 Pro 64 Win8 / 8.1 P64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit Win10 P64: Windows 10 Pro 64													
	Integrated	5.31 lb / 2.41kg		5.65 lb / 2.56kg		Limited warranty <sup>12</sup>		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 <sup>10</sup>	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 (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	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-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 Types	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	<b>Mobile Intel QM87 Express Chipset</b>														
	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		Media 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 <sup>4</sup>	<b>11b/g/n+BT:</b> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card <b>7260 b/g/n+BT:</b> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <b>7260 a/b/g/n+BT:</b> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <b>7260 ac+BT:</b> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card														
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets						WWAN (optional)	<b>Upg:</b> Wireless WAN upgradable <b>EM7355:</b> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS														
Optical	DVD burner, 9.5mm Ultrabay slim, removable						SIM card (optional)	<b>AT&amp;T / Verizon:</b> AT&T® / Verizon® LTE (4G), contract required with service provider <b>Select:</b> 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: <b>15.6"</b> (396mm) <b>HD (1366x768)</b> , 220 nits, 400:1 contrast ratio Some: <b>15.6"</b> (396mm) <b>FHD (1920x1080)</b> , 300 nits, 500:1 contrast ratio Some: <b>15.5"</b> (394mm) <b>3K (2880x1620)</b> , 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	<b>Intel HD Graphics 4600</b> in processor, or <b>Intel HD Graphics 4600</b> and <b>NVIDIA GeForce® GT 730M</b> , 1GB memory (Optimus)						vPro (optional)	Intel vPro Technology														
Dimensions <sup>3</sup>	<b>HD (WxDxH):</b> 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm <b>FHD / 3K:</b> 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 <sup>2</sup>	Models	6-cell		9-cell			Preload	<b>Win8 / 8.1 / 10 DG Win7:</b> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit or Windows 10 Pro 64 <b>Win8 / 8.1 64:</b> Windows 8 / 8.1 64-bit <b>Win8 / 8.1 P64:</b> Windows 8 / 8.1 Pro 64-bit <b>Win10 P64:</b> Windows 10 Pro 64														
Case material	Glass-Fiber Reinforced Plastic						Limited warranty <sup>12</sup> <b>1-year - depot / 3-years</b> (1-yr battery) - depot / <b>3-years</b> (1-year battery) <b>onsite</b>															
Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication																					
Max battery life <sup>10</sup>	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 (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	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 Types</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 Types	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 Types																																						
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																																							
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Chipset	<b>Mobile Intel QM87 Express Chipset</b>																																								
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	Media 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: <b>15.6"</b> (396mm) <b>HD (1366x768)</b> , 220 nits, 400:1 contrast ratio Some: <b>15.6"</b> (396mm) <b>FHD (1920x1080)</b> , 300 nits, 500:1 contrast ratio Some: <b>15.5"</b> (394mm) <b>3K (2880x1620)</b> , 350 nits, 1000:1 contrast ratio, IPS	WLAN <sup>4</sup>	<b>11b/g/n+BT:</b> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card <b>7260 b/g/n+BT:</b> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <b>7260 a/b/g/n+BT:</b> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <b>7260 ac+BT:</b> 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	<b>Intel HD Graphics 4600</b> in processor, or <b>Intel HD Graphics 4600</b> and <b>NVIDIA GeForce® GT 730M</b> , 1GB memory (Optimus)	SIM card (optional)	<b>AT&amp;T / Verizon:</b> AT&T® / Verizon® LTE (4G), contract required with service provider <b>Select:</b> User selectable, contract required with service provider																																								
Dimensions <sup>3</sup>	<b>HD (WxDxH):</b> 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm <b>FHD / 3K:</b> 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																																								
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		Limited warranty <sup>12</sup>	<b>1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite</b>																																								

See footnotes for more detailed information

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# 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 key-board	Finger-print reader	NFC	Bat-tery 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 Types</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 Types	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
Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Types																																							
i3-4000M	2	2.4 GHz	-	3MB	DDR3L-1600																																							
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		ThinkLight™	None																																									
		Chipset	<b>Mobile Intel QM87 Express Chipset</b>																																									
		ExpressCard	One slot (ExpressCard/34)																																									
		Smart card reader	Optional: Smart card reader																																									
		Media 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 <sup>7</sup> / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	WLAN <sup>4</sup>	<b>11b/g/n+BT:</b> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card <b>7260 b/g/n+BT:</b> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <b>7260 a/b/g/n+BT:</b> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 card <b>7260 ac+BT:</b> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 card																																									
Optical	DVD burner, 9.5mm Ultrabay slim, removable	WWAN (optional)	<b>Upg:</b> Wireless WAN upgradable <b>EM7355:</b> 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)	<b>AT&amp;T / Verizon:</b> AT&T® / Verizon® LTE (4G), contract required with service provider <b>Select:</b> 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: <b>15.6"</b> (396mm) <b>HD (1366x768)</b> , 220 nits, 400:1 contrast ratio Some: <b>15.6"</b> (396mm) <b>FHD (1920x1080)</b> , 300 nits, 500:1 contrast ratio Some: <b>15.5"</b> (394mm) <b>3K (2880x1620)</b> , 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	<b>Intel HD Graphics 4600</b> in processor, or <b>Intel HD Graphics 4600</b> and <b>NVIDIA GeForce® GT 730M</b> , 1GB memory (Optimus)	Security chip	Trusted Platform Module, TCG 1.2-compliant																																									
Dimensions <sup>3</sup>	<b>HD (WxDxH):</b> 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm <b>FHD / 3K:</b> 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																																									
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Battery type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication	Limited warranty <sup>12</sup>	<b>1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite</b>																																									
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