

# ThinkPad P51 20HH003J++

**Region**  
EMEA

**Machine Type**  
20HH

**TopSeller**  
TopSeller

**Processor**  
Xeon E3-1505M v6 (4C, 3.0 / 4.0GHz, 8MB)

**vPro**  
vPro

**Graphics**  
NVIDIA Quadro M2200 4GB

**Chipset**  
Intel CM238

**Memory**  
16GBx1 ECC

**Display**  
15.6" FHD (1920x1080) IPS

**Multi-touch**  
None

**Pen**  
None

**Storage**  
512GB SSD M.2 PCIe NVMe Opal2

**RAID**  
No

**Optical**  
None

**WLAN + Bluetooth**  
Intel 8265 ac, 2x2 + BT4.1

**WWAN**  
WWAN Upgradable

**SIM Card**  
None

**Smart Card Reader**  
Smart Card Reader

**Camera**  
720p

**Keyboard**  
Backlit

**Fingerprint Reader**  
Fingerprint Reader

**NFC**  
None

**Color Calibrator**  
X-Rite

**TPM**  
dTPM 2.0

**Battery**  
6-cell (90Wh)

**Power Adapter**  
170W Slim Tip

**Operating System**  
Windows 10 Pro 64

**Warranty**  
3-year, Onsite

**End of Support**  
Nov 28, 2022

**Ann Date (mm/yy)**  
11/17

## Note:

Country Code "US" is for United States, "++" is for EMEA countries (e.g. AD - Saudi, Arabia, AT - Austria, BM - Bulgaria, etc.), "xx" is for EAST countries (e.g. BM - Bulgaria, CX - Hungary, CY - Cyprus, etc.), and "\*\*\*" is for MEA countries (e.g. AD - Saudi, Arabia, ED - Egypt, EQ - Sweden, etc.). Please be aware that the EMEA/ EAST/MEA models listed above might not be available in all countries



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**ThinkPad P51 Platform Specifications**

*Product Specifications Reference (PSREF)*

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Processor	7th Generation Intel® Core™ i7 Processor or Intel Xeon® Processor E3 v6 Family								Dimensions <i>WxDxH:</i> 14.86" x 9.93" x 0.96-1.16"; 377.4mm x 252.3mm x 24.5-29.4mm <i>WxDxH(Touch):</i> 14.86" x 9.93" x 1.02-1.21"; 377.4mm x 252.3mm x 25.8-30.7mm									
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics										
	i7-7700HQ	4	8	2.8 GHz	3.8 GHz	6MB	DDR4-2400	Intel HD Graphics 630										
	i7-7820HQ			2.9 GHz	3.9 GHz	8MB		Intel HD Graphics P630										
	E3-1505M v6			3.0 GHz	4.0 GHz													
E3-1535M v6	3.1 GHz			4.2 GHz														
Graphics	Intel HD Graphics 630 or P630 in processor and NVIDIA Quadro® M1200 or M2200, 4GB memory; supports external digital monitor via HDMI, Mini DisplayPort, or Thunderbolt™; supports four independent displays; Max resolution: 3840x2160@60Hz (DisplayPort via Mini DisplayPort cable); 3840x2160@60Hz (Thunderbolt); 4096x2160@24Hz (HDMI)								Weight <i>Models</i> <i>Non-touch</i> <i>Multi-touch</i> <table><tr><td></td><td>4-cell</td><td>6-cell</td></tr><tr><td></td><td>5.6 lb / 2.55kg</td><td>5.9 lb / 2.67kg</td></tr><tr><td></td><td>6.2 lb / 2.82kg</td><td>6.4 lb / 2.90kg</td></tr></table>		4-cell	6-cell		5.6 lb / 2.55kg	5.9 lb / 2.67kg		6.2 lb / 2.82kg	6.4 lb / 2.90kg
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	5.6 lb / 2.55kg	5.9 lb / 2.67kg																
	6.2 lb / 2.82kg	6.4 lb / 2.90kg																
Chipset	Mobile Intel CM238 Chipset								Case color									
Memory	64GB max <sup>7</sup> / 2400MHz DDR4, ECC or non-ECC (ECC function supported only on Xeon processor), dual-channel capable, four DDR4 SO-DIMM sockets								Case material									
Display	<i>Some:</i> 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 160° viewing angle <i>Some:</i> 15.6" (396mm) 4K (3840x2160), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 100% gamut, 170° viewing angle								Smart card reader ExpressCard Media reader Ports									
Multi-touch (opt) Pen (optional)	Capacitive-type multi-touch, supports 10-finger gesture, 220 nits (FHD only) ThinkPad Pen Pro, active pen for multi-touch display								<i>Optional:</i> Smart card reader One slot (ExpressCard/34) 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Four USB 3.1 Gen 1 (USB 3.0, one Always On), USB Type-C / Thunderbolt 3, Mini DisplayPort 1.2a, HDMI 1.4b, Ethernet (RJ-45), Dock connector									
Storage	<i>Up to 3 drives (two M.2 SSD and one HDD)</i> <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>Some:</i> M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s								Camera (optional) Audio support									
Optical	None								HD720p resolution, fixed focus HD Audio, Realtek® ALC3268 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack									
Ethernet	<i>Non-vPro model:</i> Intel Ethernet Connection I219-V (Jacksonville) <i>vPro model:</i> Intel Ethernet Connection I219-LM (Jacksonville)								Keyboard UltraNav™									
WLAN	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1, M.2 card								6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight									
Bluetooth™	Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter <i>* Intel 8265ac card support BT4.2 but is limited to BT4.1 by Windows OS</i>								3-button TrackPoint® pointing device and 3-button Mylar surface multi-touch touchpad									
WWAN (optional)	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"><li>• Wireless WAN upgradable</li><li>• Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455), M.2 card</li></ul>								Security Security chip vPro (optional) Fingerprint reader									
SIM card (opt)	Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card								Touch style match on chip fingerprint reader on the palm rest <i>Optional:</i> Pantone® color calibrator by X-Rite® color calibration sensor in palm rest									
									Color calibration NFC									
									Battery									
									Lithium Polymer 4-cell (66Wh) or 6-cell (90Wh)									
									Max battery life <sup>10</sup> (MobileMark® 2014)									
									<table><tr><td>Model</td><td>4-cell</td><td>6-cell</td></tr><tr><td>Discrete Graphics</td><td>4.5 hr</td><td>6.1 hr</td></tr><tr><td>Hybrid Graphics</td><td>6.5 hr</td><td>8.9 hr</td></tr></table>	Model	4-cell	6-cell	Discrete Graphics	4.5 hr	6.1 hr	Hybrid Graphics	6.5 hr	8.9 hr
Model	4-cell	6-cell																
Discrete Graphics	4.5 hr	6.1 hr																
Hybrid Graphics	6.5 hr	8.9 hr																
									AC adapter									
									170W slim tip AC adapter									
									Preload									
									<i>Some:</i> Windows® 10 Home 64 <i>Some:</i> Windows 10 Pro 64 <ul style="list-style-type: none"><li>• Lenovo Companion</li><li>• Lenovo Setting</li><li>• Microsoft Office preloaded; purchase a product key to activate</li></ul>									
									Limited warranty									
									<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</li></ul>									
									Mil-Spec test									
									MIL-STD-810G military certification									
									Environment									
									EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant									

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