

# ThinkPad P51 Platform Specifications

Product Specifications Reference (PSREF)

Processor	6th or 7th Generation Intel® Core™ i7 Processor or Intel Xeon® Processor E3 v5 or 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	Weight	<table border="1"> <thead> <tr> <th>Models</th> <th>4-cell</th> <th>6-cell</th> </tr> </thead> <tbody> <tr> <td>Non-touch</td> <td>5.6 lb / 2.55kg</td> <td>5.9 lb / 2.67kg</td> </tr> <tr> <td>Multi-touch</td> <td>6.2 lb / 2.82kg</td> <td>6.4 lb / 2.90kg</td> </tr> </tbody> </table>			Models	4-cell	6-cell	Non-touch	5.6 lb / 2.55kg	5.9 lb / 2.67kg	Multi-touch	6.2 lb / 2.82kg	6.4 lb / 2.90kg
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	i7-6820HQ	4	8	2.7 GHz	3.6 GHz	8MB	DDR4-2133	Intel HD Graphics 530	Case color	Black											
	E3-1505M v5			2.8 GHz	3.7 GHz			Intel HD Graphics P530	Case material	<i>Display cover:</i> Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Magnesium/Aluminum											
	i7-7700HQ			2.8 GHz	3.8 GHz	6MB	DDR4-2400	Intel HD Graphics 630	Smart card reader	Optional: Smart card reader											
i7-7820HQ	2.9 GHz			3.9 GHz	Intel HD Graphics P630			ExpressCard	One slot (ExpressCard/34)												
E3-1505M v6	3.0 GHz			4.0 GHz	8MB	DDR4-2400	Intel HD Graphics P630	Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card												
E3-1535M v6	3.1 GHz			4.2 GHz			Ports	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 <i>* Depending on many factors, actual data transfer speed may be lower than theoretical speed</i>													
Graphics								Camera (optional)	HD720p resolution, fixed focus												
Intel HD Graphics 530, 630, P530, or P630 in processor and NVIDIA Quadro® M1200 or M2200, 4GB memory; supports external digital monitor via HDMI, Mini DisplayPort, or Thunderbolt™; Up to 4 displays with 3 external monitors plus system LCD screen. Max resolution: 3840x2160@60Hz (DisplayPort via Mini DisplayPort cable); 3840x2160@60Hz (Thunderbolt); 4096x2160@24Hz (HDMI)								Audio support	HD Audio, Realtek® ALC3268 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack												
Chipset	Mobile Intel CM238 Chipset							Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight												
Memory	64GB max / 2400MHz DDR4, ECC or non-ECC (ECC function supported only on Xeon processor), dual-channel capable, four DDR4 SO-DIMM sockets <i>* System clocks down for processors with lower memory controller</i>							UltraNav™	3-button TrackPoint® pointing device and 3-button Mylar surface multi-touch touchpad												
Display	<i>Some:</i> 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, WVA, 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, WVA, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 100% gamut, 170° viewing angle							Security	Power-on password, hard disk password, supervisor password, security keyhole												
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 220 nits (FHD only)							vPro (optional)	Discrete TPM 2.0, TCG Certified												
Pen (optional)	ThinkPad Pen Pro, active pen for multi-touch display							Fingerprint reader	Touch style match on chip fingerprint reader on the palm rest												
Storage	<i>Up to 3 drives (two M.2 SSD and one HDD), supports single sided M.2 2280 drives only</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							Color calibration	Optional: Pantone® color calibrator by X-Rite® color calibration sensor in palm rest												
RAID (optional)	RAID 0/1 support							NFC	None												
Optical	None							Battery	Lithium Polymer 4-cell (66Wh) or 6-cell (90Wh)												
Ethernet	<i>Non-vPro model:</i> Intel Ethernet Connection I219-V (Jacksonville) <i>vPro model:</i> Intel Ethernet Connection I219-LM (Jacksonville)							Max battery life <sup>10</sup>	<table border="1"> <thead> <tr> <th>Model</th> <th>4-cell</th> <th>6-cell</th> </tr> </thead> <tbody> <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> </tbody> </table>			Model	4-cell	6-cell	Discrete Graphics	4.5 hr	6.1 hr	Hybrid Graphics	6.5 hr	8.9 hr	
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WLAN	<i>One of the following, configurable by model:</i> • Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1, M.2 card • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1, M.2 card							(MobileMark® 2014)	<i>* Battery life varies significantly with hardware configurations, settings, usage, &amp; other factors</i>												
Bluetooth™	Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter <i>* Intel 8260ac / 8265ac card support BT4.2 but is limited to BT4.1 by Windows OS</i>							AC adapter	170W slim tip AC adapter												
WWAN (optional)	<i>One of the following, configurable by model:</i> • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455), M.2 card							Operating system	<i>One of the following, configurable by model:</i> • Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64 • Windows® 10 Home 64 • Windows 10 Pro 64 • Windows 10 Pro 64 for Workstations												
SIM card (opt)	Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card							Limited warranty	<i>One of the following, configurable by model:</i> • 1-year depot repair service • 3-year/1-yr battery depot repair service • 3-year/1-yr battery limited onsite service												
SIM card (opt)								Mil-Spec test	MIL-STD-810G military testing												
SIM card (opt)								Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant												

Note: The specifications above may not be available in all regions.

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