

ThinkPad P50 Platform Specifications

Product Specifications Reference (PSREF)

Processor	6th Generation Intel® Core™ i7 Processor or Intel Xeon® Processor E3 v5 Family								Smart card reader ExpressCard Media reader Ports	Optional: Smart card reader One slot (ExpressCard/34) 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Four USB 3.0 (one Always On), USB Type-C / Thunderbolt 3, Mini DisplayPort, HDMI, Ethernet (RJ-45), Dock connector											
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		Camera (optional) Audio support	HD720p resolution, low light sensitive, fixed focus HD Audio, Realtek® ALC3268 codec / stereo speakers, 1.5W x 2 / dual array microphone, combo audio/microphone jack										
	i7-6700HQ	4	8	2.6 GHz	3.5 GHz	6MB	DDR4-2133	Intel HD Graphics 530													
	i7-6820HQ			2.7 GHz	3.6 GHz	8MB		Intel HD Graphics P530													
	E3-1505M v5			2.8 GHz	3.7 GHz	8MB															
E3-1535M v5	2.9 GHz			3.8 GHz	8MB																
Graphics	Intel HD Graphics 530 or P530 in processor and NVIDIA Quadro® M1000M (2GB memory) or M2000M (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); 3840x2160@30Hz (HDMI)								Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight 3-button TrackPoint® pointing device and 3-button crystal silk surface multi-touch touchpad											
Chipset	Mobile Intel CM236 Chipset (Intel GL82CM236 PCH)								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											
Memory	64GB max ⁷ / 2133MHz DDR4, ECC or non-ECC (ECC function supported only on Xeon processor), dual-channel capable, four DDR4 SO-DIMM sockets								vPro (optional) Fingerprint reader	Intel vPro Technology Touch style fingerprint reader on the palm rest											
Display	<i>Some:</i> 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 600:1 contrast ratio, 45% gamut, 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, 178° viewing angle								Color calibration	<i>Optional:</i> Pantone® color calibrator by X-Rite® color calibration sensor in palm rest											
Multi-touch (opt) Pen (optional)	Capacitive-type multi-touch, supports 10-finger gesture, 220 nits ThinkPad Pen Pro, active pen for multi-touch display								Battery	Lithium Polymer 4-cell (66Wh) or 6-cell (90Wh)											
Storage	Up to 3 drives (two M.2 SSD and one HDD) <i>Some:</i> M.2 SSD / SATA 6.0Gb/s <i>Some:</i> M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Shock Mounted Hard Drive, Active Protection System™								Max battery life ¹⁰ (MobileMark® 2014)	<table><tr><td>Model</td><td>4-cell</td><td>6-cell</td></tr><tr><td>Discrete Graphics</td><td>7.1 hr</td><td>9.7 hr</td></tr><tr><td>Hybrid Graphics</td><td>9.6 hr</td><td>13.2 hr</td></tr></table>			Model	4-cell	6-cell	Discrete Graphics	7.1 hr	9.7 hr	Hybrid Graphics	9.6 hr	13.2 hr
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Optical	None								AC adapter	170W AC adapter											
Ethernet	<i>Non-vPro model:</i> Intel Ethernet Connection I219-V (Jacksonville) <i>vPro model:</i> Intel Ethernet Connection I219-LM (Jacksonville)								Preload	<i>Some:</i> Genuine Windows® 7 Professional 64 <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64 • Lenovo Solution Center • Lenovo SHAREit • ThinkVantage Product Recovery • Rescue and Recovery™ • ThinkVantage System Update • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • McAfee® LiveSafe™ (30-day trial) Windows 10 Pro 64 • Lenovo Solution Center • Lenovo SHAREit • Lenovo Companion • Lenovo Setting • Microsoft Office preloaded; purchase a product key to activate • McAfee® LiveSafe™ (30-day trial)											
WLAN ⁴ Bluetooth™	11ac+BT, Intel Dual Band Wireless-AC 8260, 2x2, M.2 card Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter								For ISV certifications, please visit www.lenovo.com/support/ISV												
WWAN (optional)	Wireless WAN, Sierra Wireless EM7455, Qualcomm® 4G LTE-Advanced/DC-HSPA+/HSPA+/HSPA/UMTS/GNSS, M.2 card Micro-SIM card slot								Limited warranty ¹² One of the following, configurable by model: • 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, OID (Onsite International Delivery)												
SIM card																					
Dimensions ³	WxDxH: 14.86" x 9.93" x 0.96-1.16"; 377.4mm x 252.3mm x 24.5-29.4mm WxDxH(Touch): 14.86" x 9.93" x 1.02-1.21"; 377.4mm x 252.3mm x 25.8-30.7mm																				
Weight ²	<table><tr><td>Models</td><td>4-cell</td><td>6-cell</td></tr><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></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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Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum								Mil-Spec test	MIL-STD-810G military certification											
									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; GREENGUARD®; RoHS-compliant											