

ThinkPad P50 Platform Specifications

Processor	6th Generation Intel® Core™ i7 Processor or Intel Xeon® Processor E3 v5 Family							
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics
	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		
	E3-1505M v5			2.8 GHz	3.7 GHz	8MB		Intel HD Graphics P530
	E3-1535M v5			2.9 GHz	3.8 GHz	8MB		
Graphics	Intel HD Graphics 530 or P530 in processor and NVIDIA Quadro® M1000M (2GB or 4GB 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)							
Chipset Memory	Mobile Intel CM236 Chipset (Intel GL82CM236 PCH) 64GB max ⁷ / 2133MHz DDR4, ECC or non-ECC (ECC function supported only on Xeon processor), dual-channel capable, four DDR4 SO-DIMM sockets							
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							
Multi-touch (opt) Pen (optional)	Capacitive-type multi-touch, supports 10-finger gesture, 220 nits ThinkPad Pen Pro, active pen for multi-touch display							
Storage	<i>Up to 3 drives (two M.2 SSD and one HDD)</i> • HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Shock Mounted Hard Drive, Active Protection System™ • M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2) • M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxGB SSD M.2 PCIe NVMe)							
Optical	None							
Ethernet	<i>Non-vPro model:</i> Intel Ethernet Connection I219-V (Jacksonville) <i>vPro model:</i> Intel Ethernet Connection I219-LM (Jacksonville)							
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							
WWAN (optional)	Wireless WAN, Sierra Wireless EM7455, Qualcomm® 4G LTE-Advanced/DC-HSPA+/HSPA+/UMTS/GNSS, M.2 card							
SIM card	Micro-SIM card slot							
Dimensions ³	<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							
Weight ²	<i>Models</i>	<i>4-cell</i>			<i>6-cell</i>			
	<i>Non-touch</i>	5.6 lb / 2.55kg			5.9 lb / 2.67kg			
	<i>Multi-touch</i>	6.2 lb / 2.82kg			6.4 lb / 2.90kg			
Case material	<i>Display cover:</i> Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Magnesium/Aluminum							

Smart card reader	<i>Optional: Smart card reader</i>		
ExpressCard	One slot (ExpressCard/34)		
Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card		
Ports	Four USB 3.0 (one Always On), USB Type-C / Thunderbolt 3, Mini DisplayPort, HDMI, Ethernet (RJ-45), Dock connector		
Camera (<i>optional</i>)	HD720p resolution, low light sensitive, fixed focus		
Audio support	HD Audio, Realtek® ALC3268 codec / stereo speakers, 1.5W x 2 / dual array microphone, combo audio/microphone jack		
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight		
UltraNav™	3-button TrackPoint® pointing device and 3-button crystal silk surface multi-touch touchpad		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Discrete TPM 1.2 TCG Certified and Firmware TPM 2.0 integrated in chipset		
ThinkEngine	Delivers improved thermal and power efficiency, up to 30 day standby, faster resume time, enhanced security, as well as anti-tampering measures		
vPro (<i>optional</i>)	Intel vPro Technology		
Fingerprint reader	Touch style fingerprint reader on the palm rest		
Color calibration	<i>Optional: Pantone® color calibrator by X-Rite® color calibration sensor in palm rest</i>		
Battery	Lithium Polymer 4-cell (66Wh) or 6-cell (90Wh)		
Max battery life ¹⁰	<i>Model</i>	<i>4-cell</i>	<i>6-cell</i>
(<i>MobileMark® 2014</i>)	<i>Discrete Graphics</i>	7.1 hr	9.7 hr
	<i>Hybrid Graphics</i>	9.6 hr	13.2 hr
AC adapter	170W slim tip AC adapter		
Preload	<i>Some: Genuine Windows® 7 Professional 64</i> <i>Some: Windows 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64</i>		Windows 10 Pro 64 <ul style="list-style-type: none"> • Lenovo Solution Center • Lenovo SHAREit • Lenovo Companion • Lenovo Setting • Microsoft Office preloaded; purchase a product key to activate • McAfee® LiveSafe™ (30-day trial)
	<ul style="list-style-type: none"> • 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) 		
	<i>For ISV certifications, please visit www.lenovo.com/support/ISV</i>		
Limited warranty ¹²	<i>One of the following, configurable by model:</i>		
	<ul style="list-style-type: none"> • 3-year/1-yr battery depot repair service • 3-year/1-yr battery limited onsite service²⁴ • 3-year/1-yr battery limited onsite service, OID (Onsite International Delivery) 		
Mil-Spec test	MIL-STD-810G military certification		
Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; GREENGUARD®; RoHS-compliant		