

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								
	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 530								
	E3-1505M v5			2.8 GHz	3.7 GHz	8MB				Intel HD Graphics P530								
E3-1535M v5	2.9 GHz			3.8 GHz	8MB	Intel HD Graphics P530												
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)							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 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							Security Security chip ThinkEngine	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 1.2 TCG Certified and Firmware TPM 2.0 integrated in chipset Delivers improved thermal and power efficiency, up to 30 day standby, faster resume time, enhanced security, as well as anti-tampering measures									
Display	Some: 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 Some: 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							vPro (optional) Fingerprint reader Color calibration	Intel vPro Technology Touch style fingerprint reader on the palm rest Optional: 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 Max battery life ¹⁰ (MobileMark® 2014)	Lithium Polymer 4-cell (66Wh) or 6-cell (90Wh)									
Storage	Up to 3 drives (two M.2 SSD and one HDD) Some: M.2 SSD / SATA 6.0Gb/s (e.g. xxxG SSD) Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxG SSD PCIe NVMe) Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Shock Mounted Hard Drive, Active Protection System™							AC adapter	170W AC adapter									
Optical	None							Preload	Some: Genuine Windows® 7 Professional 64 Some: 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) For ISV certifications, please visit www.lenovo.com/support/ISV									
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville)							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							WLAN (optional)	Wireless WAN, Sierra Wireless EM7455, Qualcomm® 4G LTE-Advanced/DC-HSPA+/HSPA/HSPA/UMTS/GNSS, M.2 card Micro-SIM card slot									
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							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)									
Weight ²	<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	Mil-Spec test	MIL-STD-810G military certification
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Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum							Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; GREENGUARD®; RoHS-compliant									