

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	Optional: Smart card reader								
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	ExpressCard	One slot (ExpressCard/34)							
	i7-6700HQ	4	8	2.6 GHz	3.5 GHz	6MB	DDR4-2133	Intel HD Graphics 530	Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card							
	i7-6820HQ			2.7 GHz	3.6 GHz	8MB			Ports	Four USB 3.0 (one Always On), USB Type-C / Thunderbolt 3, Mini DisplayPort, HDMI, Ethernet (RJ-45), Dock connector							
	E3-1505M v5			2.8 GHz	3.7 GHz	8MB			Camera (optional)	HD720p resolution, low light sensitive, fixed focus							
E3-1535M v5	2.9 GHz			3.8 GHz	8MB	Audio support			HD Audio, Realtek® ALC3268 codec / stereo speakers, 1.5W x 2 / dual array microphone, combo audio/microphone jack								
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	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight								
Chipset	Mobile Intel CM236 Chipset (Intel GL82CM236 PCH)							UltraNav™	3-button TrackPoint® pointing device and 3-button crystal silk surface multi-touch touchpad								
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							Security	Power-on password, hard disk password, supervisor password, security keyhole								
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							Security chip	Discrete TPM 1.2 TCG Certified and Firmware TPM 2.0 integrated in chipset								
	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							ThinkEngine	Delivers improved thermal and power efficiency, up to 30 day standby, faster resume time, enhanced security, as well as anti-tampering measures								
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 220 nits							vPro (optional)	Intel vPro Technology								
Pen (optional)	ThinkPad Pen Pro, active pen for multi-touch display							Fingerprint reader	Touch style fingerprint reader on the palm rest								
Storage	Up to 3 drives (two M.2 SSD and one HDD)							Color calibration	Optional: Pantone® color calibrator by X-Rite® color calibration sensor in palm rest								
	<ul style="list-style-type: none"> 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) 							Battery	Lithium Polymer 4-cell (66Wh) or 6-cell (90Wh)								
Optical	None							Max battery life ¹⁰	(MobileMark® 2014)								
	None							<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>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> </tbody> </table>		Model	4-cell	6-cell	Discrete Graphics	7.1 hr	9.7 hr	Hybrid Graphics	9.6 hr
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Discrete Graphics	7.1 hr	9.7 hr															
Hybrid Graphics	9.6 hr	13.2 hr															
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville)							AC adapter	170W AC adapter								
WLAN ⁴	11ac+BT, Intel Dual Band Wireless-AC 8260, 2x2, M.2 card							Preload	<ul style="list-style-type: none"> Some: Genuine Windows® 7 Professional 64 Some: Windows 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64 								
Bluetooth™	Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter							<ul style="list-style-type: none"> 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) 									
WWAN (optional)	Wireless WAN, Sierra Wireless EM7455, Qualcomm® 4G LTE-Advanced/DC-HSPA+/HSPA/HSPA/UMTS/GNSS, M.2 card							<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) 									
SIM card	Micro-SIM card slot							<ul style="list-style-type: none"> McAfee® LiveSafe™ (30-day trial) 									
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: <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) 									
Weight ²	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												
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								