

# ThinkPad P52 Platform Specifications

Product Specifications Reference (PSREF)

Processor	8th Generation Intel® Core™ i7 Processor or Intel Xeon® E Processor								Dimensions  Weight  Case color Case material	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 Non-touch model: starting at 5.65 lb (2.57kg); Multi-touch model: starting at 6.4 lb (2.9kg)																					
	<table border="1"> <thead> <tr> <th>Processor Number</th><th># of Cores</th><th># of Threads</th><th>Base Frequency</th><th>Max Turbo Frequency</th><th>Cache</th><th>Memory Types</th><th>Processor Graphics</th></tr> </thead> <tbody> <tr> <td>i7-8750H</td><td rowspan="3">6</td><td rowspan="16">12</td><td>2.2 GHz</td><td>4.1 GHz</td><td>9MB</td><td rowspan="16">DDR4-2400</td><td rowspan="16">Intel UHD Graphics 630</td></tr> <tr> <td>i7-8850H</td><td>2.6 GHz</td><td>4.3 GHz</td><td>9MB</td></tr> <tr> <td>E-2176M</td><td>2.7 GHz</td><td>4.4 GHz</td><td>12MB</td></tr> </tbody> </table>								Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	i7-8750H	6	12	2.2 GHz	4.1 GHz	9MB	DDR4-2400	Intel UHD Graphics 630	i7-8850H	2.6 GHz	4.3 GHz	9MB	E-2176M	2.7 GHz	4.4 GHz
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Intel UHD Graphics 630 in processor and NVIDIA Quadro® P1000 (4GB memory), P2000 (4GB memory), or P3200 (6GB memory, VR ready); supports external digital monitor via HDMI, Mini DisplayPort, or Thunderbolt™; supports four independent displays; Max resolution: 3840X2160@60Hz (DisplayPort via Mini DisplayPort cable); 5120X2880@30Hz (Thunderbolt); 4096x2160@60Hz (HDMI)									Smart card reader ExpressCard Media reader Ports	Optional: Smart card reader None 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Three USB 3.1 Gen 1 (one Always On), two USB Type-C / Thunderbolt 3, Mini DisplayPort 1.4, HDMI 2.0, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), side docking connector, security keyhole																					
Graphics										Camera (optional)	One of the following, configurable by model: <ul style="list-style-type: none"><li>• HD720p camera with ThinkShutter camera privacy, fixed focus</li><li>• IR camera and HD720p camera, fixed focus</li></ul>																				
Chipset Memory	Mobile Intel CM246 Chipset 64GB max / 2400MHz DDR4, ECC or non-ECC (ECC function supported only on Xeon processor), dual-channel capable, four DDR4 SO-DIMM sockets * Installed DIMMs are actually 2666MHz but run at 2400MHz due to Intel limitation									Audio support	HD Audio, Realtek® ALC3286 codec, stereo speakers, 2W x 2, Dolby® Audio™ Premium, headphone / microphone combo jack, Dolby Atmos® headphone, dual array microphone																				
Display	<p>Some: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 160° viewing angle</p> <p>Some: 15.6" (396mm) 4K (3840x2160), anti-glare, LED backlight, IPS, 400 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 100% gamut, 170° viewing angle, multi-touch</p>									Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight 3-button TrackPoint® pointing device and 3-button Mylar surface multi-touch touchpad																				
Multi-touch (opt) Pen	Capacitive-type multi-touch, supports 10-finger gesture (4K only) None									Security Security chip vPro (optional)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology																				
Storage	<p>Up to 3 drives (two M.2 SSD and one HDD)</p> <p>Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™</p> <p>Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s</p> <p>Some: 16GB Intel Optane™ memory, PCIe NVMe, PCIe 3.0 x 2, 16Gb/s</p>									Fingerprint reader Color calibration NFC (optional)	Touch style match on chip fingerprint reader on the palm rest None Near Field Communication																				
Optical	None									Battery	Li-Ion 90Wh battery																				
Ethernet	<p>Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville)</p> <p>vPro model: Intel Ethernet Connection I219-LM (Jacksonville)</p>									Max battery life (MobileMark® 2014)	Discrete mode: 6.1 hr Hybrid mode: 8.9 hr																				
WLAN Bluetooth™	Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter									AC adapter	170W slim tip AC adapter																				
WWAN (optional)	Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card									Preload	One of the following, configurable by model: <ul style="list-style-type: none"><li>• Windows® 10 Home 64</li><li>• Windows 10 Pro 64</li><li>• Windows 10 Pro 64 for Workstations</li></ul>																				
SIM card (opt)	Nano-SIM card slot, optional Verizon LTE (US) SIM card									Limited warranty	One of the following, configurable by model: <ul style="list-style-type: none"><li>• 1-year depot repair service</li><li>• 3-year/1-yr battery depot repair service</li><li>• 3-year/1-yr battery limited onsite service</li></ul>																				
										Mil-Spec test	MIL-STD-810G military certification																				
										Environment	EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant																				