## ThinkPad P52s Platform Specifications

Processor	8th Generation Intel® Core™ i5 / i7 Processor								Dimensions	<i>WxDxH</i> : 14.40" x 9.95" x 0.79-0.80"; 365.8mm x 252.8mm x 19.95-20.2mm
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Weight	starting at 4.39 lb / 1.99 kg Black
	i5-8350U			1.7 GHz	3.6 GHz	6MB	7,	Intel UHD Graphics	Case color Case material	Display cover: Glass-Fiber Reinforced Plastic (PPS); Bottom: Glass-Fiber Reinforced Plastic
	i7-8550U i7-8650U	4	8	1.8 GHz 1.9 GHz	4.0 GHz 4.2 GHz	8MB 8MB	DDR4-2400	620		rOptional: Smart card reader
						BIVIB			Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Graphics	Intel UHD Graphics 620 in processor and NVIDIA Quadro® P500, 2GB GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)							30Hz (HDMI)	Ports Two USB 3.1 Gen 1 (one Always On), USB 3.1 Type-C Gen 1, USB 3.1 Type-C Gen 2 / Thunderbolt 3, HDMI 1.4b, 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  Monitor cable (optional)  WSB-C to DP: Lenovo USB-C to DisplayPort Adapter	
Chipset	Intel SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets							O DIMM applicate		
Memory		32GB max / 24סטואוד בישרא, dual-channel capable, two בישרא 50-שואואו sock System clocks down for processors with lower memory controller							Camera (optional)	One of the following, configurable by model:
Display	Some: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle Some: 15.6" (396mm) UHD (3840x2160), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 72% gamut, 170° viewing angle							ing angle jht, IPS, 300 nits,	Audio support	<ul> <li>HD720p camera with ThinkShutter camera privacy, fixed focus</li> <li>IR camera and HD720p camera, fixed focus</li> <li>HD Audio, Realtek® ALC3287 codec, Dolby® Audio™ Premium / stereo speakers, 2W x 2 / dual array microphone, headphone / microphone combo jack</li> </ul>
Multi-touch (opt)	On-cell touch, supports 10-finger gesture (FHD only)							viewing angle	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Storage	System has one HDD slot or one M.2 2280 slot exclusively for storage  Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™  Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high (e.g. xxxGB SSD)  Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x4, 32Gb/s  Some: 128GB M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s,  in WWAN slot as 2nd Storage, mutually exclusive with WWAN							SD)		Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the palm rest anti-spoofing technology
Optical	None								NFC (optional)	Near Field Communication
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville)							e)	Battery	Optional integrated Li-Ion 32Wh battery and external Li-Ion 24Wh, 48Wh, or 72Wh battery
WLAN + Bluetooth™	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card * Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS								Max battery life ( <i>MobileMark</i> ® 2014)	Max battery life   12.2   11   18.5   11   20.1   11   20.3   11
WWAN (optional)	NWAN (optional) One of the following, configurable by model:								AC adapter	65W USB Type-C AC adapter
	<ul> <li>Wireless WAN upgradable</li> <li>Integrated Mobile Broadband 4G LTE,</li> </ul>								Preload	Windows® 10 Home 64 or Windows 10 Pro 64
SIM card (opt)	Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card								Limited warranty	One of the following, configurable by model:  1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
( ) /									Mil-Spec test	MIL-STD-810G military certification
									Environment	EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant

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