

# ThinkPad E590 Platform Specifications

Product Specifications Reference (PSREF)

Processor	8th Generation Intel® Core™ i3 / i5 / i7 Processor								Dimensions	WxDxH: 14.53" x 9.94" x 0.78"; 369mm x 252.5mm x 19.9mm	
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Weight	Starting at 4.68 lb / 2.12 kg	
	i3-8145U	2	4	2.1 GHz	3.9 GHz	4MB	DDR4-2400	Intel UHD Graphics 620	Case color	Black or silver	
	i5-8265U	4	8	1.6 GHz	3.9 GHz	6MB			Case material	Display cover: Aluminum; Bottom: PC/ABS plastic	
i7-8565U	1.8 GHz			4.6 GHz	8MB						
Graphics	Intel UHD Graphics 620 in processor only or Intel UHD Graphics 620 in processor and AMD Radeon RX 550X Graphics, 2GB GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; supports dual independent display; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@24Hz (HDMI)								Smart card reader	None	
Chipset	Intel SoC (System on Chip) platform								Media reader	MicroSD card reader	
Memory	32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets <i>* Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation</i>								Ports	One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole <i>* Depending on many factors, actual data transfer speed may be lower than theoretical speed</i>	
Display	Size / Resolution		Surface	Type	Brightness	Aspect Ratio	Contrast Ratio	Viewing Angle	Monitor cable	None	
	15.6" HD (1366x768)		Anti-glare	TN	220 nits	16:9	400:1	90°	Bundled Accy	None	
	15.6" FHD (1920x1080)		Anti-glare	IPS	250 nits	16:9	600:1	170°	Camera	HD720p camera, fixed focus	
Multi-touch	None								Audio support	HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack	
Storage	<i>Up to two drives (one M.2 SSD and one HDD)</i> • HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ • M.2 2280 SSD / SATA 6.0Gb/s • M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 <i>* Installed M.2 2280 SSD is PCIe 3x4 but run at PCIe 3x2 due to M.2 SSD adapter limitation</i>								Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight	
Optane™ memory	<i>Optional:</i> Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2								UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad	
Optical	None								Security	Power-on password, hard disk password, supervisor password, security keyhole	
Ethernet	Gigabit Ethernet Connection, Realtek R8111GUS								Security chip	<i>Integrated model:</i> discrete TPM 2.0, TCG Certified <i>Discrete model:</i> firmware TPM 2.0 integrated in chipset	
	One of the following, configurable by model: • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card • Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card								System Mgt	None	
WWAN	None								Fingerprint reader	<i>Optional:</i> Touch style fingerprint reader on the palm rest	
SIM card	None								NFC	None	
									Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter	
									Max battery life	<i>MobileMark® 2014:</i> 11 hr <i>* Battery life varies significantly with settings, usage, &amp; other factors</i>	
									AC adapter	45W or 65W USB Type-C AC adapter	
									Operating system	<i>Optional:</i> Windows® 10 Home 64 or Windows 10 Pro 64	
									Limited warranty	<i>One of the following, configurable by model:</i> • 1-year mail-in repair service • 1-year depot repair service	
									Mil-Spec test	MIL-STD-810G military testing	
									Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant	

Note: The specifications above may not be available in all regions.

Lenovo  
August 2019