

ThinkPad T590 20N50000GE

Product
ThinkPad T590

Region
WE

Country
Germany

Machine Type
20N5

TopSeller
No

Processor
Core i7-8565U (4C / 8T, 1.8 / 4.6GHz, 8MB)

Graphics
Integrated Intel UHD Graphics 620

Chipset
Intel SoC Platform

Memory
8GB Soldered + 8GB DIMM DDR4-2400

Display
15.6" HDR UHD (3840x2160) IPS 500nits Anti-glare

Multi-touch
None

Storage
1TB SSD M.2 2280 PCIe NVMe Opal2

Optical
None

WLAN + Bluetooth
Intel 9560 11ac, 2x2 + BT5.0

WWAN
Fibocom L850-GL

SIM Card
None

Smart Card Reader
Smart Card Reader

Monitor Cable
None

Bundled Accessories
None

Color
Black

Camera
720p + IR

Keyboard
Backlit

Fingerprint Reader
Fingerprint Reader

NFC
NFC

TPM
Discrete TPM 2.0

Battery
Integrated 57Wh

Power Adapter
65W USB-C

System Management
None

Operating System
Windows 10 Pro 64

Bundled Software
None

Base Warranty
3-year, Depot

Upsell Service Bundles
None

End of Support
2025-08-30

Announce Date
2019-07-30

Notes:

Battery life is an estimated maximum. Actual battery life may vary based on many factors, including screen brightness, active applications, features, power management settings, battery age and conditioning, and other customer preferences.



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ThinkPad T590 Platform Specifications

Product Specifications Reference (PSREF)

Processor	8th Generation Intel® Core™ i5 / i7 Processor										Dimensions Weight Case color Case material	WxDxH: 14.40" x 9.76" x 0.75"; 365.8mm x 248mm x 19.1mm FHD model: 3.87 lb / 1.75 kg; UHD model: 3.86 lb / 1.75 kg Black Display cover: PPS / 50% GF; Bottom: PA / 50% GF
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics				
	i5-8265U	4	8	1.6 GHz	3.9 GHz	6MB	DDR4-2400	Intel UHD Graphics 620				
	i5-8365U			1.6 GHz	4.1 GHz	6MB						
	i7-8565U			1.8 GHz	4.6 GHz	8MB						
i7-8665U	1.9 GHz			4.8 GHz	8MB							
Graphics	Intel UHD Graphics 620 in processor only or Intel UHD Graphics 620 in processor and NVIDIA® GeForce® MX250, 2GB GDDR5 memory; supports external digital monitor via HDMI or Thunderbolt; supports three independent displays; Max resolution: 4096x2304@60Hz (Thunderbolt); 4096x2160@24Hz (HDMI)										Smart card reader	Optional: Smart card reader
Chipset	Intel SoC (System on Chip) platform										Media reader	MicroSD card reader
Memory	48GB max / 2400MHz DDR4, dual-channel capable, 8GB or 16GB memory soldered to systemboard, one DDR4 SO-DIMM socket * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation										Ports	Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
Display	Size	Resolution	Type	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Monitor cable (optional)	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter (NOT available in EMEA) USB-C to DP: Lenovo USB-C to DisplayPort Adapter (NOT available in EMEA)	
	15.6"	FHD (1920x1080)	IPS	Anti-glare	250 nits	16:9	700:1	45%	170°	Bundled Accy	None	
	15.6"	UHD (3840x2160) HDR, Dolby Vision™	IPS	Anti-glare	500 nits	16:9	1200:1	100% Adobe	170°	Camera (optional)	One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus	
Multi-touch (opt)	On-cell touch, supports 10-finger gesture (FHD only)										Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array far-field microphone, headphone / microphone combo jack
Storage	• M.2 2280 SSD / SATA 6.0Gb/s • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 • Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4										Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight
Optical	None										UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville)										Security	Power-on password, hard disk password, supervisor password, security keyhole
WLAN (optional)	Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0										Security chip	Discrete TPM 2.0, TCG Certified
Bluetooth™	Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter										System Mgt (opt)	Intel vPro Technology
WWAN (optional)	One of the following, configurable by model: • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable										Fingerprint reader	Optional: Touch style match on chip fingerprint reader on the palm rest
SIM card	Nano-SIM card slot, optional Verizon LTE (US) SIM card										NFC (optional)	Near Field Communication
											Battery	Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
											Max battery life	MobileMark® 2014: 14.98 hr (9.5 hr for UHD model with discrete graphics) * Battery life varies significantly with settings, usage, & other factors
											AC adapter	45W or 65W USB Type-C AC adapter
											Preload	Windows® 10 Home 64 or Windows 10 Pro 64
											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 testing
											Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

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

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