

# 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;<br>Bottom: PC/ABS plastic   |  |
| i7-8565U          | 1.8 GHz  |            |              | 4.6 GHz        | 8MB                 |              |                |                        |                    |  |  |
| Graphics          | Intel UHD Graphics 620 in processor only or<br>Intel UHD Graphics 620 in processor and<br>AMD Radeon RX 550X Graphics, 2GB DDR5 memory;<br>supports external digital monitor via HDMI or USB Type-C;<br>supports dual independent display;<br>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<br><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),<br>one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort),<br>HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack,<br>microSD card reader, security keyhole<br><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 /<br>stereo speakers, 2W x 2, Dolby® Advanced Audio /<br>dual array microphone, headphone / microphone combo jack  |  |
| Storage           | Up to two drives (one M.2 SSD and one HDD)<br>• HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™<br>• M.2 2280 SSD / SATA 6.0Gb/s<br>• M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 2<br>• M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2  |            |              |                |                     |              |                |                        | Keyboard           | 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight   |  |
| Optane™ memory    | Optional: 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      | Integrated model: discrete TPM 2.0, TCG Certified<br>Discrete model: firmware TPM 2.0 integrated in chipset  |  |
| WLAN + Bluetooth™ | One of the following, configurable by model:<br>• Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card<br>• Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card   |            |              |                |                     |              |                |                        | System Mgt         | None   |  |
| WWAN              | None   |            |              |                |                     |              |                |                        | Fingerprint reader | Optional: 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)<br>with 65W USB Type-C AC adapter  |  |
|                   |  |            |              |                |                     |              |                |                        | Max battery life   | MobileMark® 2014: 11 hr<br><i>* Battery life varies significantly with settings, usage, &amp; other factors</i>  |  |
|                   |  |            |              |                |                     |              |                |                        | AC adapter         | 45W or 65W USB Type-C AC adapter   |  |
|                   |  |            |              |                |                     |              |                |                        | Operating system   | Optional: Windows® 10 Home 64 or Windows 10 Pro 64   |  |
|                   |  |            |              |                |                     |              |                |                        | Limited warranty   | One of the following, configurable by model:<br>• 1-year mail-in repair service<br>• 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  
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