ThinkPad T590  20N40033GE

Product  
ThinkPad T590  

Region  
WE  

Country  
Germany  

Machine Type  
20N4  

TopSeller  
TopSeller  

Processor  
Core i5-8265U (4C / 8T, 1.6 / 3.9GHz, 6MB)  

Graphics  
Integrated Intel UHD Graphics 620  

Chipset  
Intel SoC Platform  

Memory  
8GB Soldered DDR4-2400  

Display  
15.6” FHD (1920x1080) IPS 250nits Anti-glare  

Multi-touch  
None  

Storage  
256GB SSD M.2 2280 PCIe NVMe Opal2  

Optical  
None  

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

WWAN  
None  

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  
None  

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  
2025-05-30  

Announce Date  
2019-04-30  

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.
### ThinkPad T590 Platform Specifications

**Processor**

<table>
<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>i5-8265U</td>
<td>4</td>
<td>8</td>
<td>1.6 GHz</td>
<td>3.9 GHz</td>
<td>8MB</td>
<td>DDR4-2400</td>
<td>Intel UHD Graphics 620</td>
</tr>
<tr>
<td>i5-8365U</td>
<td>4</td>
<td>8</td>
<td>1.8 GHz</td>
<td>4.6 GHz</td>
<td>8MB</td>
<td>DDR4-2400</td>
<td>Intel UHD Graphics 620</td>
</tr>
<tr>
<td>i7-8565U</td>
<td>4</td>
<td>8</td>
<td>1.9 GHz</td>
<td>4.8 GHz</td>
<td>8MB</td>
<td>DDR4-2400</td>
<td>Intel UHD Graphics 620</td>
</tr>
<tr>
<td>i7-8665U</td>
<td>4</td>
<td>8</td>
<td>1.9 GHz</td>
<td>4.8 GHz</td>
<td>8MB</td>
<td>DDR4-2400</td>
<td>Intel UHD Graphics 620</td>
</tr>
</tbody>
</table>

**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)

**Chipset**
- Intel SoC (System on Chip) platform
- 8GB max / 2400MHz DDR4, dual-channel capable, 8GB or 16GB memory soldered to systemboard, one DDR4 SO-DIMM socket

**Display**

<table>
<thead>
<tr>
<th>Size</th>
<th>Resolution</th>
<th>Type</th>
<th>Surface</th>
<th>Brightness</th>
<th>Aspect Ratio</th>
<th>Contrast Ratio</th>
<th>Color Gamut</th>
<th>Viewing Angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.6&quot;</td>
<td>FHD (1920x1080)</td>
<td>IPS</td>
<td>Anti-glare</td>
<td>250 nits</td>
<td>16:9</td>
<td>700:1</td>
<td>45%</td>
<td>170°</td>
</tr>
<tr>
<td>15.6&quot;</td>
<td>UHD (3840x2160)</td>
<td>IPS</td>
<td>Anti-glare</td>
<td>500 nits</td>
<td>16:9</td>
<td>1200:1</td>
<td>100%</td>
<td>170°</td>
</tr>
</tbody>
</table>

**Multi-touch (opt)**
- On-cell touch, supports 10-finger gesture (FHD only)

**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

**Optical**
- None

**Ethernet**
- Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville)
- vPro model: Intel Ethernet Connection I219-LM (Jacksonville)

**WLAN (optional)**
- Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0
- Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter

**WWAN (optional)**
- Wireless WAN upgradable
- Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EAMEA only)
- Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card

**SIM card**
- Nano-SIM card slot, optional Verizon LTE (US) SIM card

**Simultaneous dual-band 802.11ac Wi-Fi® and Bluetooth® support**

**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

**Audio support**
- HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array far-field microphone, headphone / microphone combo jack

**Keyboard**
- UltraNav™ TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
- 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole
- Security chip
- System Mgt (opt)
- Intel vPro Technology
- Fingerprint reader
- Optional: Touch style match on chip fingerprint reader on the palm rest 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)
  - 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-year battery depot repair service
  - 3-year/1-year battery limited onsite service

**Environment**
- EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

**Dimensions**
- WxDxH: 14.40" x 9.76" x 0.75"; 365.8mm x 248mm x 19.1mm

**Weight**
- FHD model: 3.87 lb / 1.75 kg
- UHD model: 3.36 lb / 1.75 kg

**Smart card reader**
- Optional: Smart card reader

**Media reader**
- MicroSD card reader

**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

**Monitor cable**
- One of the following, configurable by model:
  - 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)

**Bundled Accy**
- None

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