PERFORMANCE

Processor

Processor Family
8th Generation Intel® Core™ i5 / i7 Processor

<table>
<thead>
<tr>
<th>Processor Name</th>
<th>Cores</th>
<th>Threads</th>
<th>Base Frequency</th>
<th>Max Frequency</th>
<th>Cache</th>
<th>Memory Support</th>
<th>Processor Graphics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core i5-8265U</td>
<td>4</td>
<td>8</td>
<td>1.6GHz</td>
<td>3.9GHz</td>
<td>6MB</td>
<td>DDR4-2400</td>
<td>Intel UHD Graphics</td>
</tr>
<tr>
<td>Core i5-8365U</td>
<td>4</td>
<td>8</td>
<td>1.6GHz</td>
<td>4.1GHz</td>
<td>6MB</td>
<td>DDR4-2400</td>
<td>Intel UHD Graphics</td>
</tr>
<tr>
<td>Core i7-8565U</td>
<td>4</td>
<td>8</td>
<td>1.8GHz</td>
<td>4.6GHz</td>
<td>8MB</td>
<td>DDR4-2400</td>
<td>Intel UHD Graphics</td>
</tr>
<tr>
<td>Core i7-8665U</td>
<td>4</td>
<td>8</td>
<td>1.9GHz</td>
<td>4.8GHz</td>
<td>8MB</td>
<td>DDR4-2400</td>
<td>Intel UHD Graphics</td>
</tr>
</tbody>
</table>

Operating System

Operating System
- Windows® 10 Pro 64
- Windows 10 Home 64
- Linux
- Ubuntu Linux
- No operating system

Graphics

<table>
<thead>
<tr>
<th>Graphics</th>
<th>Type</th>
<th>Memory</th>
<th>Key Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel UHD Graphics</td>
<td>Integrated</td>
<td>Shared</td>
<td>DirectX® 12</td>
</tr>
</tbody>
</table>

Monitor Support

Monitor Support
Supports up to 3 independent displays via native display and 2 external monitors; supports external monitors via HDMI® (up to 4096x2160@24Hz), Thunderbolt™ (up to 4096x2304@60Hz)

Chipset

Chipset
Intel SoC (System on Chip) platform

Memory

Max Memory[1]
- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable

Memory Slots
Memory soldered to systemboard, no slots

Memory Type[2]
DDR4-2400

Notes:
1. The max memory is based on the test results with current Lenovo® memory offerings. The system may support more memory as the technology develops.
2. Installed memory is actually 2666MHz but run at 2400MHz due to processor limitation.

Storage

Storage Support[3]
One drive, up to 128GB M.2 2242 SSD or 1TB M.2 2280 SSD, optional Intel Optane™ Memory integrated with SSD, M.2

Storage Type

<table>
<thead>
<tr>
<th>Disk Type</th>
<th>Interface</th>
<th>RPM</th>
<th>Security</th>
</tr>
</thead>
</table>

Notes:
1. The max memory is based on the test results with current Lenovo® memory offerings. The system may support more memory as the technology develops.
2. Installed memory is actually 2666MHz but run at 2400MHz due to processor limitation.
**Removable Storage**

**Optical**
None

**Card Reader**
MicroSD card reader

**Multi-Media**

**Audio Chip**
High Definition (HD) Audio, Realtek® ALC3287 codec

**Speakers**
Stereo speakers, 1W x2, Dolby® Audio™ Premium

**Microphone**
Dual array microphone, far-field

**Camera**
- HD 720p, with ThinkShutter, fixed focus
- IR & HD 720p hybrid, with ThinkShutter, fixed focus

**Sensor**

**Sensors**
- Accelerometer (G) sensor
- Gyroscope sensor
- Proximity (P) sensor (WWAN models)

**Battery**

**Battery**
Integrated Li-Polymer 50Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

**Max Battery Life**

MobileMark® 2014: 14.5 hr

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**Notes:**
1. The storage capacity supported is based on the test results with current Lenovo storage offerings. The system may support larger storage as the technology develops.

**Power Adapter**

**Power Adapter**

- 45W USB-C® (2-pin) AC adapter
- 45W USB-C (3-pin) AC adapter
- 65W USB-C slim (2-pin) AC adapter
- 65W USB-C (2-pin) AC adapter
- 65W USB-C (3-pin) AC adapter

---

**Notes:**
1. AC adapter offerings depend on the country.
Display

<table>
<thead>
<tr>
<th>Size</th>
<th>Resolution</th>
<th>Touch</th>
<th>Type</th>
<th>Brightness</th>
<th>Surface</th>
<th>Aspect Ratio</th>
<th>Contrast Ratio</th>
<th>Color Gamut</th>
<th>Viewing Angle</th>
<th>Key Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.3&quot;</td>
<td>FHD (1920x1080)</td>
<td>Multi-touch</td>
<td>IPS</td>
<td>300 nits</td>
<td>Anti-reflection, Anti-smudge</td>
<td>16:9</td>
<td>800:1</td>
<td>72% NTSC</td>
<td>170°</td>
<td>-</td>
</tr>
</tbody>
</table>

Touchscreen

Capacitive-type multi-touch, supports 10-point touch, could reduce the brightness by up to 10%

Notes:
1. California Electronic Waste Recycling Fee
   In California, per state law, Lenovo charges an electronic waste recycling fee on this covered device at the time of sale of the product. For more information, go to https://www.calrecycle.ca.gov/Electronics/Consumer

Multi-mode

Multi-mode

Laptop, tent, stand, and tablet modes supported by 360° hinge

Input Device

Pen

ThinkPad® Pen Pro, on-board garaged and rechargeable

Keyboard

6-row, spill-resistant, multimedia Fn keys

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad

Mechanical

Dimensions (WxDxH)

310.4 x 219 x 15.95 mm (12.22 x 8.62 x 0.63 inches)

Weight

1.29 kg (2.85 lbs)

Case Color

- Black
- Silver

Case Material

Carbon fiber hybrid PA + 50% GF (top), carbon fiber hybrid PA + 50% GF (bottom)

Notes:
1. The system dimensions and weight vary depending on configurations.
2. Silver case is NOT available in EMEA.

CONNECTIVITY

Network

Ethernet

- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro models), RJ45 via optional ThinkPad Ethernet Extension Adapter Gen 2
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), RJ45 via optional ThinkPad Ethernet Extension Adapter Gen 2

WLAN + Bluetooth®

- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.1
ThinkPad X390 Yoga

- Intel Wi-Fi 6 AX200, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1
- No WLAN and Bluetooth

**WWAN**[3]
- Fibocom L850-GL, 4G LTE CAT9, M.2 card
- Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card
- No support

**SIM Card**[4]
- Gemalto eSIM
- No SIM card inbox

**NFC**
- Near Field Communication
- No support

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**Notes:**
1. Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitation
2. Wi-Fi 6 full features might be limited by country-level restrictions.
3. Fibocom L830-EB is only available in EMEA.
   - For non-WWAN model, it means the model is NOT WWAN upgradable.
4. Verizon LTE is for special bid only.

**Ports**[1]

**Standard Ports**
- 1x USB 3.1 Gen 1
- 1x USB 3.1 Gen 1 (Always On)
- 1x USB-C 3.1 Gen 2 / Thunderbolt 3 (support data transfer, Power Delivery and DisplayPort™ 1.2)
- 1x USB-C 3.1 Gen 1 (support data transfer, Power Delivery and DisplayPort 1.2)
- 1x HDMI 1.4b
- 1x microSD card reader
- 1x Ethernet extension connector
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Side docking connector

**Optional Ports**
- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

---

**Monitor Cable**

**Monitor Cable**
- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- No monitor cable

**SECURITY & PRIVACY**

**Security**

**Security Chip**
- Discrete TPM 2.0, TCG certified

**Physical Locks**
- Kensington® Security Slot™

**Smart Card Reader**
- Smart card reader
No smart card reader

**Fingerprint Reader**
Touch style fingerprint reader on palm rest, match-on-chip

**BIOS Security**
- Power-on password
- Supervisor password
- Hard disk password
- Self-healing BIOS

**Other Security**
- ThinkShutter camera cover
- (Optional) IR camera for Windows Hello

**MANAGEABILITY**

**System Management**

**Intel vPro**
- None

**SERVICE**

**Warranty**

**Base Warranty**[1]
- 1-year depot service
- 1-year courier with 2-year system board service (Korea only)
- 3-year (1-yr battery) depot service
- 3-year (1-yr battery) limited onsite service
- 3-year (3-yr battery) depot service
- 3-year (3-yr battery) limited onsite service

**Notes:**
1. More information of warranty policy, please access https://pcsupport.lenovo.com/warranty

**ACCESSORIES**

**Bundled Accessories**

**ThinkPad Ethernet Extension Adapter Gen 2**
- None

**CERTIFICATIONS**

**Green Certifications**

**EPEAT™ Gold**
- ENERGY STAR® 8.0
- TCO Certified
- RoHS compliant

**Other Certifications**

**Mil-Spec Test**
MIL-STD-810G military test passed
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