## OVERVIEW

1. Thunderbolt 4
2. Thunderbolt 4
3. USB 3.2 Gen 1
4. HDMI
5. Headphone / microphone combo jack (3.5mm)
6. Nano-SIM card slot *
7. USB 3.2 Gen 1 (Always On)
8. Kensington Nano Security Slot

Notes:
- Ports with * are only available on selected models
PERFORMANCE

Processor

Processor Family
12th Generation Intel® Core™ i5 / i7 Processor

Processor**[1]

<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 i5-1235U</td>
<td>10 (2 P-core + 8 E-core)</td>
<td>12</td>
<td>P-core 1.3GHz / E-core 0.9GHz</td>
<td>P-core 4.4GHz / E-core 3.3GHz</td>
<td>12MB</td>
<td>LPDDR5-5200</td>
<td>Intel Iris Xe Graphics</td>
</tr>
<tr>
<td>Core i5-1245U</td>
<td>10 (2 P-core + 8 E-core)</td>
<td>12</td>
<td>P-core 1.6GHz / E-core 1.2GHz</td>
<td>P-core 4.4GHz / E-core 3.3GHz</td>
<td>12MB</td>
<td>LPDDR5-5200</td>
<td>Intel Iris Xe Graphics</td>
</tr>
<tr>
<td>Core i7-1255U</td>
<td>10 (2 P-core + 8 E-core)</td>
<td>12</td>
<td>P-core 1.7GHz / E-core 1.2GHz</td>
<td>P-core 4.7GHz / E-core 3.5GHz</td>
<td>12MB</td>
<td>LPDDR5-5200</td>
<td>Intel Iris Xe Graphics</td>
</tr>
<tr>
<td>Core i7-1265U</td>
<td>10 (2 P-core + 8 E-core)</td>
<td>12</td>
<td>P-core 1.8GHz / E-core 1.3GHz</td>
<td>P-core 4.8GHz / E-core 3.6GHz</td>
<td>12MB</td>
<td>LPDDR5-5200</td>
<td>Intel Iris Xe Graphics</td>
</tr>
<tr>
<td>Core i5-1240P</td>
<td>12 (4 P-core + 8 E-core)</td>
<td>16</td>
<td>P-core 1.7GHz / E-core 1.2GHz</td>
<td>P-core 4.4GHz / E-core 3.3GHz</td>
<td>12MB</td>
<td>LPDDR5-5200</td>
<td>Intel Iris Xe Graphics</td>
</tr>
<tr>
<td>Core i5-1250P</td>
<td>12 (4 P-core + 8 E-core)</td>
<td>16</td>
<td>P-core 1.7GHz / E-core 1.2GHz</td>
<td>P-core 4.4GHz / E-core 3.3GHz</td>
<td>12MB</td>
<td>LPDDR5-5200</td>
<td>Intel Iris Xe Graphics</td>
</tr>
<tr>
<td>Core i7-1260P</td>
<td>12 (4 P-core + 8 E-core)</td>
<td>16</td>
<td>P-core 2.1GHz / E-core 1.5GHz</td>
<td>P-core 4.7GHz / E-core 3.4GHz</td>
<td>18MB</td>
<td>LPDDR5-5200</td>
<td>Intel Iris Xe Graphics</td>
</tr>
<tr>
<td>Core i7-1270P</td>
<td>12 (4 P-core + 8 E-core)</td>
<td>16</td>
<td>P-core 2.2GHz / E-core 1.6GHz</td>
<td>P-core 4.8GHz / E-core 3.5GHz</td>
<td>18MB</td>
<td>LPDDR5-5200</td>
<td>Intel Iris Xe Graphics</td>
</tr>
<tr>
<td>Core i7-1280P</td>
<td>14 (6 P-core + 8 E-core)</td>
<td>20</td>
<td>P-core 1.8GHz / E-core 1.3GHz</td>
<td>P-core 4.8GHz / E-core 3.6GHz</td>
<td>24MB</td>
<td>LPDDR5-5200</td>
<td>Intel Iris Xe Graphics</td>
</tr>
</tbody>
</table>

Notes:
1. i7-1280P is NOT available in EMEA.

Operating System

Operating System**

- Windows® 11 Pro 64
- Windows 11 Home 64
- Windows 11 DG Windows 10 Pro 64
- Fedora Linux
- Linux
- Ubuntu Linux
- No operating system

Graphics

Graphics

<table>
<thead>
<tr>
<th>Graphics Type</th>
<th>Memory</th>
<th>TGP</th>
<th>Key Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel Iris Xe Graphics</td>
<td>Integrated</td>
<td>Shared</td>
<td>Share CPU TDP</td>
</tr>
</tbody>
</table>

Monitor Support

Monitor Support[3]

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and HDMI®)

- Thunderbolt supports up to 5K@60Hz
- HDMI supports up to 4K@60Hz

Notes:
1. Refresh rates >60hz also supported, however max resolution will be limited.

Chipset
Chipset
Intel SoC (System on Chip) platform

Memory
Max Memory:
- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots
Memory soldered to systemboard, no slots, 8-channel

Memory Type
LPDDR5-5200

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. 8GB memory is NOT available in EMEA.
3. Installed memory is actually 6400MHz but run at 5200MHz due to processor limitation

Storage
Storage Support
One drive, up to 2TB M.2 2280 SSD

Storage Slot
One M.2 2280 PCIe® Gen 4x4 slot, supports M.2 2280 SSD

Storage Type

<table>
<thead>
<tr>
<th>Disk Type</th>
<th>Interface</th>
<th>Offering</th>
<th>Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.2 2280 SSD</td>
<td>PCIe NVMe®, PCIe 4.0 x4 Performance</td>
<td>512GB / 1TB / 2TB</td>
<td>Opal2</td>
</tr>
<tr>
<td>M.2 2280 SSD</td>
<td>PCIe NVMe, PCIe x4</td>
<td>256GB / 512GB / 1TB</td>
<td>Opal2</td>
</tr>
</tbody>
</table>

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.
2. PCIe x4 SSD may be PCIe 3.0x4 or PCIe 4.0x4 as substitution.
3. 512GB and 1TB M.2 2280 PCIe 4x4 SSD are NOT available in EMEA.

Removable Storage
Optical
None

Card Reader
No card reader

Multi-Media
Audio Chip
High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers
Stereo speakers, 2W x2 woofers and 0.8W x2 tweeters, Dolby® Atmos®

Microphone
Four microphones, quad-array, 360° far-field, Dolby Voice

Camera
- HD 720p, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- IR & FHD 1080p hybrid, with privacy shutter, fixed focus
- IR & FHD 1080p discrete, with privacy shutter, MIPI, fixed focus, Computer Vision

Notes:
1. 720p camera is NOT available in EMEA.

**Battery**

Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

**Battery Life**[^1]

<table>
<thead>
<tr>
<th>Configuration 1 (max battery life)</th>
<th>MobileMark® 2018: up to 15.0 hr with 838 performance score @200nits</th>
<th>MobileMark 25: up to 13.1 hr with 663 performance score @250nits</th>
<th>JEITA 2.0: up to 24.9 hr @150nits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local video playback: up to 19.9 hr @150nits</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Alternate configuration 2

<table>
<thead>
<tr>
<th>MobileMark® 2018: up to 14.3 hr with 840 performance score @200nits</th>
<th>MobileMark 25: up to 11.3 hr with 623 performance score @250nits</th>
<th>JEITA 2.0: up to 24.9 hr @150nits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local video playback: up to 19.9 hr @150nits</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Alternate configuration 3

<table>
<thead>
<tr>
<th>MobileMark® 2018: up to 14.2 hr with 809 performance score @200nits</th>
<th>MobileMark 25: up to 11.1 hr with 600 performance score @250nits</th>
<th>JEITA 2.0: up to 21.7 hr @150nits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local video playback: up to 19.7 hr @150nits</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

1. Configuration 1 (max battery life): WUXGA (non-touch), Intel i5-1235U, 8GB LPDDR5, Win 11, 57Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA (non-touch), Intel i5-1240P, 16GB LPDDR5, Win 11, 57Wh battery, best power efficiency power mode

Alternate configuration 3: WUXGA (non-touch), Intel i7-1260P, 16GB LPDDR5, Win 11, 57Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using MobileMark 2018, MobileMark 25, JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary and depends on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to Microsoft® link for more information about the Windows Performance power slider.

**Power Adapter**

**Power Adapter**[^1][^2]

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter

**Notes:**

1. AC adapter offerings depend on the country.
2. In EMEA only 65W USB-C slim AC adapters are available.

**DISPLAY**

**Display**[^1][^2][^3][^4][^5]

<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>14.0&quot;</td>
<td>WUXGA (1920x1200)</td>
<td>None</td>
<td>IPS</td>
<td>400 nits</td>
<td>Anti-glare</td>
<td>16:10</td>
<td>1000:1</td>
<td>100% sRGB</td>
<td>170°</td>
<td>Low power, Eyesafe® Certified</td>
</tr>
</tbody>
</table>

[^1]: MobileMark® 2018
[^2]: MobileMark 25
[^3]: JEITA 2.0
[^4]: Local video playback
[^5]: 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level)
### Touchscreen**
- Add-on Film Touch, supports 10-point touch
- On-cell touch, supports 10-point touch
- Non-touch

**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
2. 2.2K display and Add on Film Touch display are NOT available in EMEA.

### Input Device
**Keyboard**
6-row, spill-resistant, air intake design, multimedia Fn keys with Unified Communications controls

**Keyboard Backlight**
LED backlight

**UltraNav™**
TrackPoint® pointing device and glass surface multi-touch touchpad, 56 x 110 mm (2.20 x 4.33 inches)

### Mechanical
**Dimensions (WxHxD)**

<table>
<thead>
<tr>
<th>Models</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model with 720p camera</td>
<td>315.6 x 222.5 x 14.95 mm (12.43 x 8.76 x 0.59 inches)</td>
</tr>
<tr>
<td>Model with other camera</td>
<td>315.6 x 222.5 x 15.36 mm (12.43 x 8.76 x 0.60 inches)</td>
</tr>
</tbody>
</table>

**Weight**
Starting at 1.12 kg (2.48 lbs)

**Case Color**
- Deep black, paint
- Deep black, weave

**Case Material**
Carbon fiber (top), aluminium (bottom)

**Notes:**
1. The system dimensions and weight vary depending on configurations.
CONNECTIVITY

Network
Onboard Ethernet
No Ethernet

WLAN + Bluetooth®
• Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2
• Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2

WWAN*
• Wireless WAN upgradable to 4G (with antenna ready)
• Fibocom FM350-GL 5G NR module with embedded eSIM functionality, M.2 Card
• Fibocom LB60-GL-16, 4G LTE CAT16, MIMO 4x4, M.2 card
• No support

SIM Card
• Gemalto eSIM
• No SIM card inbox

NFC
• Near Field Communication
• No support

Notes:
1. Ethernet support via optional Lenovo USB-C to Ethernet Adapter
2. Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitation
3. Wi-Fi 6 and Wi-Fi 6E full features might be limited by country level restrictions.
   Wi-Fi 6E only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.
   6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports
Standard Ports
• 1x USB 3.2 Gen 1
• 1x USB 3.2 Gen 1 (Always On)
• 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)
• 1x HDMI, up to 4K/60Hz
• 1x Headphone / microphone combo jack (3.5mm)

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

Notes:
1. The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.
   USB 2.0: 480 Mbit/s;
   USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;
   USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;
   USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
   Thunderbolt 3/4: 40 Gbit/s

Docking
Docking
Various docking solutions supported via Thunderbolt / USB-C.
For more compatible docking solutions, please visit Docking for ThinkPad X1 Carbon Gen 10

Monitor Cable
Monitor Cable
• Lenovo HDMI to VGA Monitor Adapter
• No monitor cable

SECURITY & PRIVACY
Security

Security Chip
Discrete TPM 2.0, TCG certified

Physical Locks
Kensington® Nano Security Slot, 2.5 x 6 mm

Smart Card Reader
No smart card reader

Fingerprint Reader
Touch style fingerprint reader on power button, match-on-chip

BIOS Security
- Power-on password
- Supervisor password
- System management password
- NVMe password
- USB FIDO (Fast Identity Online) device integration
- Certificate based BIOS authentication
- Firmware Resiliency 3.0

Other Security
- Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- (Optional) Computer Vision-based User Presence Sensing including lock on leave
- Mirametrix Glance
- Tile ready

MANAGEABILITY

System Management

System Management**[1]
- Intel vPro Enterprise
- Intel vPro Essentials
- Non-vPro

Notes:
1. Intel vPro offers a superset of DASH’s defined capabilities.

SERVICE

Warranty

Base Warranty**[1]
- 1-year depot service
- 1-year depot with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) depot service
- 3-year (1-yr battery) limited onsite service
- No base warranty

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

ENVIRONMENTAL

Sustainability

Material
95% PCC recycled plastic used in speaker enclosure
25-30% PCC recycled plastic used in the 57Wh battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature
- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity
- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude
- Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:
1. When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories
- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications

Green Certifications
- EPEAT™ Gold
- ENERGY STAR® 8.0
- ErP Lot 3
- TCO Certified 9.0
- RoHS compliant

Other Certifications

Mil-Spec Test
- MIL-STD-810H military test passed

Other Certifications
- (Optional) Eyesafe Certified
- (Optional) Intel Evo™ Platform
- TÜV Rheinland® Dynamic Privacy Filter (DPF) Certification (Privacy Guard models)
- (Optional) TÜV Rheinland Low Blue Light Method 2

Feature with ** means that only one offering listed under the feature is configured on selected models.
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