OVERVIEW

1. Thunderbolt 4
2. Thunderbolt 4
3. USB 3.2 Gen 1
4. HDMI 2.0
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
11th 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 i5-1135G7</td>
<td>4</td>
<td>8</td>
<td>2.4GHz</td>
<td>4.2GHz</td>
<td>8MB</td>
<td>LPDDR4x-4266</td>
<td>Intel Iris® Xe Graphics</td>
</tr>
<tr>
<td>Core i5-1145G7</td>
<td>4</td>
<td>8</td>
<td>2.6GHz</td>
<td>4.4GHz</td>
<td>8MB</td>
<td>LPDDR4x-4266</td>
<td>Intel Iris Xe Graphics</td>
</tr>
<tr>
<td>Core i7-1165G7</td>
<td>4</td>
<td>8</td>
<td>2.8GHz</td>
<td>4.7GHz</td>
<td>12MB</td>
<td>LPDDR4x-4266</td>
<td>Intel Iris Xe Graphics</td>
</tr>
<tr>
<td>Core i7-1185G7</td>
<td>4</td>
<td>8</td>
<td>3.0GHz</td>
<td>4.8GHz</td>
<td>12MB</td>
<td>LPDDR4x-4266</td>
<td>Intel Iris Xe Graphics</td>
</tr>
</tbody>
</table>

Operating System

Operating System**
- Windows® 11 Pro 64
- Windows 11 Home 64
- Windows 11 Home 64 Single Language
- Windows 11 DG Windows 10 Pro 64
- Windows 10 Pro 64
- Windows 10 Home 64
- Windows 10 Home 64 Single Language
- Fedora Linux
- Linux
- Ubuntu Linux
- No operating system

Graphics

Graphics
- Intel Iris Xe Graphics
- Integrated
- Shared
- DirectX® 12.1

Monitor Support

Monitor Support**(1)
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**(1)
- 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
LPDDR4x-4266
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.

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>Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.2 2280 SSD</td>
<td>PCIe NVMe®, PCIe 4.0 x4 Performance</td>
<td>Opal2</td>
</tr>
<tr>
<td>M.2 2280 SSD</td>
<td>PCIe NVMe, PCIe x4</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.

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
• IR & HD 720p hybrid, with privacy shutter, fixed focus

Battery

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

Max Battery Life
MobileMark® 2014: 21.3 hr
MobileMark 2018: 16.7 hr
JEITA 2.0: 26.0 hr

Notes:
1. All battery life claims are approximate maximum and based on results using the MobileMark 2014, MobileMark 2018, JEITA 2.0, continuous 1080p video playback (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 and usage, software use, wireless functionality, power management settings, and screen brightness. The maximum capacity of the battery will decrease with time and use.

Power Adapter

Power Adapter
• 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
ThinkPad X1 Carbon Gen 9

- 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. No power adapter is for special bid only.

### DESIGN

#### 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>14.0&quot; WUXGA</td>
<td>(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, low blue light</td>
</tr>
<tr>
<td>14.0&quot; WUXGA</td>
<td>(1920x1200)</td>
<td>Multi-touch</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, low blue light</td>
</tr>
<tr>
<td>14.0&quot; WUXGA</td>
<td>(1920x1200)</td>
<td>Multi-touch</td>
<td>IPS</td>
<td>500 nits</td>
<td>Anti-glare</td>
<td>16:10</td>
<td>1000:1</td>
<td>100% sRGB</td>
<td>170°</td>
<td>Low power, ThinkPad® Privacy Guard</td>
</tr>
<tr>
<td>14.0&quot; WQUXGA</td>
<td>(3840x2400)</td>
<td>None</td>
<td>IPS</td>
<td>500 nits</td>
<td>Glossy</td>
<td>16:10</td>
<td>1500:1</td>
<td>100% DCI-P3</td>
<td>170°</td>
<td>Low blue light, DisplayHDR™ 400</td>
</tr>
</tbody>
</table>

**Touchscreen**
- Capacitive-type on-cell multi-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. In marketing terms, WUXGA is FHD+ and WQUXGA is UHD+.

#### Input Device

**Keyboard**
- 6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

**Keyboard Backlight**
- LED backlight

**UltraNav™**
- TrackPoint® pointing device and glass surface multi-touch touchpad

#### Mechanical

**Dimensions (WxDxH)**
- 315 x 221.6 x 14.9 mm (12.4 x 8.72 x 0.59 inches)

**Weight**
- Starting at 1.133 kg (2.49 lbs)

**Case Color**
- Black, paint
- Black, weave

**Case Material**
- Carbon fiber (top), magnesium alloy (bottom)

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

Network
Ethernet
No Ethernet
WLAN + Bluetooth®
Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2

WWAN*
• Wireless WAN upgradable to 4G (with antenna ready)
• Quectel EM12OR-GL, 4G LTE CAT12, M.2 card
• Quectel EM12OR-GL, 4G LTE CAT12, M.2 card, with embedded eSIM functionality
• Qualcomm® Snapdragon™ X55 5G Sub-6 GHz Modem-RF System, M.2 card, with embedded eSIM functionality
• 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 full features might be limited by country-level restrictions.

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 2.0
• 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 9

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

**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
- NVMe password
- Self-healing BIOS

**Other Security**
- Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- (Optional) Human Presence Detection

**MANAGEABILITY**

**System Management**

System Management
- Intel vPro
- Non-vPro

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

**SERVICE**

**Warranty**

Base Warranty
- 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
2. No base warranty is for special bid only.

**ENVIRONMENTAL**

**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
- TCO Certified
- RoHS compliant

Other Certifications

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

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

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