## OVERVIEW

1. Power button
2. Card reader *
3. Microphone (3.5mm)
4. Headphone / microphone combo jack (3.5mm)
5. 1x USB-C 3.2 Gen 1
6. 2x USB 3.2 Gen 1
7. 2x USB 3.2 Gen 2
8. Optical drive *
9. Headphone (3.5mm)
10. DisplayPort 1.4
11. HDMI 1.4b
12. Serial
13. VGA
14. Ethernet (RJ-45)
15. 3x USB 2.0
16. 1x USB 2.0 (with smart power-on feature)
17. Optional ports on expansion cards *
18. Power connector
19. 2x PS/2 ports (keyboard / mouse) *
20. serial *

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

Processor

Processor Family
Intel® Celeron®, Intel Pentium®, or 12th Generation Intel Core™ i3 / i5 / i7 / i9 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>Celeron G6900</td>
<td>2</td>
<td>2</td>
<td>3.4GHz</td>
<td>-</td>
<td>4MB</td>
<td>DDR4-3200</td>
<td>Intel UHD Graphics 710</td>
</tr>
<tr>
<td>Pentium Gold G7400</td>
<td>2</td>
<td>4</td>
<td>3.7GHz</td>
<td>-</td>
<td>6MB</td>
<td>DDR4-3200</td>
<td>Intel UHD Graphics 710</td>
</tr>
<tr>
<td>Core i3-12100</td>
<td>4 (4 P-core + 0 E-core)</td>
<td>8</td>
<td>P-core 3.3GHz</td>
<td>P-core 4.3GHz</td>
<td>12MB</td>
<td>DDR4-3200</td>
<td>Intel UHD Graphics 730</td>
</tr>
<tr>
<td>Core i5-12400</td>
<td>6 (6 P-core + 0 E-core)</td>
<td>12</td>
<td>P-core 2.5GHz</td>
<td>P-core 4.4GHz</td>
<td>18MB</td>
<td>DDR4-3200</td>
<td>Intel UHD Graphics 730</td>
</tr>
<tr>
<td>Core i5-12500F</td>
<td>6 (6 P-core + 0 E-core)</td>
<td>12</td>
<td>P-core 3.0GHz</td>
<td>P-core 4.6GHz</td>
<td>18MB</td>
<td>DDR4-3200</td>
<td>Intel UHD Graphics 770</td>
</tr>
<tr>
<td>Core i7-12700</td>
<td>12 (8 P-core + 4 E-core)</td>
<td>20</td>
<td>P-core 2.1GHz / E-core 1.6GHz</td>
<td>P-core 4.8GHz / E-core 3.6GHz</td>
<td>25MB</td>
<td>DDR4-3200</td>
<td>Intel UHD Graphics 770</td>
</tr>
<tr>
<td>Core i9-12900</td>
<td>16 (8 P-core + 8 E-core)</td>
<td>24</td>
<td>P-core 2.4GHz / E-core 1.8GHz</td>
<td>P-core 5.0GHz / E-core 3.8GHz</td>
<td>30MB</td>
<td>DDR4-3200</td>
<td>Intel UHD Graphics 770</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
- Ubuntu Linux
- No operating system

Graphics

<table>
<thead>
<tr>
<th>Graphics **[i]</th>
<th>Type</th>
<th>Memory</th>
<th>Connector</th>
<th>Max Resolution</th>
<th>Key Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel UHD graphics 710</td>
<td>Integrated</td>
<td>Shared</td>
<td>1x HDMI 1.4, 1x VGA, 1x DP</td>
<td>3840x2160@30Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP)</td>
<td>DirectX® 12</td>
</tr>
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<td>Intel UHD graphics 730</td>
<td>Integrated</td>
<td>Shared</td>
<td>1x HDMI 1.4, 1x VGA, 1x DP</td>
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<td>DirectX 12</td>
</tr>
<tr>
<td>AMD Radeon™ RX 6400</td>
<td>Discrete</td>
<td>4GB GDDR6</td>
<td>1x HDMI 2.1, 1x DP</td>
<td>7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)</td>
<td>DirectX 12, OpenGL 4.6</td>
</tr>
<tr>
<td>AMD Radeon RX 6500XT</td>
<td>Discrete</td>
<td>4GB GDDR6</td>
<td>1x HDMI 2.1, 1x DP</td>
<td>7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)</td>
<td>DirectX 12, OpenGL 4.6</td>
</tr>
<tr>
<td>NVIDIA® GeForce RTX™ 3050</td>
<td>Discrete</td>
<td>8GB GDDR6</td>
<td>1x HDMI 2.1, 3x DP</td>
<td>7680x4320@60Hz(HDMI), 7680x4320@120Hz(DP)</td>
<td>DirectX 12</td>
</tr>
</tbody>
</table>
Notes:
1. The information of integrated graphics are not applicable for the models without integrated graphics (for the details, please refer to processor section)

**Monitor Support**

Monitor Support
Supports up to 3 independent displays via (HDMI, DP and VGA), more displays support via discrete graphics

**Chipset**

Chipset
Intel B660 chipset

**Memory**

Max Memory
Up to 64GB DDR4-3200

Memory Slots
Two DDR4 UDIMM slots, dual-channel capable

Memory Type
DDR4-3200

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
Up to two drives, 1x 3.5" HDD + 1x M.2 SSD
- 3.5" HDD up to 2TB
- M.2 SSD up to 1TB

Storage Type

<table>
<thead>
<tr>
<th>Disk Type</th>
<th>Interface</th>
<th>RPM</th>
<th>Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5&quot; SATA HDD</td>
<td>SATA 6Gb/s</td>
<td>7.2K</td>
<td>-</td>
</tr>
<tr>
<td>M.2 2242 SSD</td>
<td>PCIe® NVMe®, PCIe 3.0 x4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>M.2 2280 SSD</td>
<td>PCIe® NVMe, PCIe 3.0 x4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>M.2 2280 SSD</td>
<td>PCIe® NVMe, PCIe 3.0 x4</td>
<td>-</td>
<td>Opal2</td>
</tr>
<tr>
<td>M.2 2280 SSD</td>
<td>PCIe® NVMe, PCIe 4.0 x4</td>
<td>-</td>
<td>Opal2</td>
</tr>
</tbody>
</table>

RAID
No support

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
- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader
- 3-in-1 card reader (SD, SDHC, SDXC)
Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC222-CG codec

Speakers
• Single speaker, 2W x1
• No speakers

Power Supply

<table>
<thead>
<tr>
<th>Power</th>
<th>Type</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>180W</td>
<td>Fixed</td>
<td>85%</td>
</tr>
<tr>
<td>260W</td>
<td>Fixed</td>
<td>90%</td>
</tr>
<tr>
<td>310W</td>
<td>Fixed</td>
<td>92%</td>
</tr>
<tr>
<td>380W</td>
<td>Fixed</td>
<td>92%</td>
</tr>
</tbody>
</table>

DESIGN

Input Device

Keyboard**
• Euterpe Wireless Keyboard, grey
• Lenovo Calliope Keyboard (USB connector), black
• Lenovo Traditional Keyboard (USB connector), black
• No keyboard folio

Mouse**
• Lenovo Calliope Mouse (USB connector), black
• Lenovo Fingerprint Mouse (USB connector), black
• Euterpe Wireless Mouse, grey
• No mouse

Mechanical

Form Factor
Tower (13.6L)

Dimensions (WxDxH)
145 x 294 x 340 mm (5.71 x 11.57 x 13.39 inches)

Packaging Dimensions (WxDxH)
245 x 395 x 530 mm (9.65 x 15.55 x 20.87 inches)

Weight
Around 5.5 kg (12.1 lbs)

Packaging Weight
Around 7.5 kg (16.53 lbs)

Case Color
Black (chassis), grey (bezel)

Bays
• 1x 3.5" disk bay
• 1x slim ODD bay

Expansion Slots
• One PCIe 4.0 x16, full-height, half-length
• Two PCIe 3.0 x1, full-height, half-length
• Two M.2 slots (one for WLAN, one for SSD)

EOU
No support
Stand
No stand

Cooling System (Fan & Cooler)***
- (Optional) 1x rear system fan
- (Optional) 1x front system fan, 1x rear system fan
- (Optional) 1x front system fan

CONNECTIVITY

Network
Optional Ethernet
No optional Ethernet

WLAN + Bluetooth®**(1)
- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, M.2 card
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- No WLAN and Bluetooth

Notes:
1. Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitation

Ports**(1)
Front Ports
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x USB-C® 3.2 Gen 1 (support data transfer and 5V@3A charging)
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports
1x card reader

Rear Ports**(2)
- 4x USB 2.0
- 1x VGA
- 1x HDMI 1.4b
- 1x DisplayPort™ 1.4
- 1x serial (9-pin)
- 1x Ethernet (RJ-45)
- 1x headphone (3.5mm)

Optional Rear Ports***
- 1x serial
- 1x parallel
- 2x PS/2

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
2. For video ports on discrete graphics, please see graphics section

Monitor Cable
Monitor Cable***
- USB-A to USB-C cable
SECURITY & PRIVACY

Security

Security Chip
Discrete TPM 2.0, TCG certified

Physical Locks
• (Optional) Smart Cable Clip
• Kensington® Security Slot™, 3 x 7 mm
• Padlock Loop

Chassis Intrusion Switch
• Chassis intrusion switch
• No chassis intrusion switch

Fingerprint Reader
• Touch style fingerprint reader on mouse
• No fingerprint reader

BIOS Security
• Administrator password
• Power-on password
• Hard disk password
• Cover presence switch
• Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
• Individual USB port disablement

MANAGEABILITY

System Management
Non-vPro

SERVICE

Warranty

Base Warranty**[1]
• 1-year depot service
• 1-year limited onsite service

Notes:

ENVIRONMENTAL

Operating Environment

Temperature
• Operating: 5°C (41°F) to 35°C (95°F)
• Storage: -40°C (-40°F) to 60°C (140°F)

Humidity
• Operating: 20% to 80%
• Storage: 10% to 90%

Altitude
• Operating: 0 m (0 ft) to 3048 m (10,000 ft)
• Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications

• (Optional) EPEAT™ Gold
• (Optional) EPEAT Silver
• (Optional) ENERGY STAR® 8.0
• TCO Certified 9.0
• RoHS compliant
• REACH
• WEEE

Other Certifications

• TÜV Rheinland® Ultra Low Noise

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

• Feature with *** means that one or more offerings listed under the feature could be configured on selected models.

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