### OVERVIEW

<table>
<thead>
<tr>
<th>Port Number</th>
<th>Port Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Optical drive</td>
<td>*</td>
</tr>
<tr>
<td>2</td>
<td>Flex bay</td>
<td>*</td>
</tr>
<tr>
<td>3</td>
<td>Power button</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Card reader</td>
<td>*</td>
</tr>
<tr>
<td>5</td>
<td>Microphone (3.5mm)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Headphone / microphone combo jack (3.5mm)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>USB-C 3.2 Gen 2 (data transfer only)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>2x USB 3.2 Gen 1</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>2x USB 3.2 Gen 2</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Line-out (3.5mm)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Flex IO</td>
<td>*</td>
</tr>
<tr>
<td>12</td>
<td>HDMI</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>2x DisplayPort</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>3x USB 3.2 Gen 1</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>USB 3.2 Gen 1 (with Smart Power On feature)</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Padlock loop</td>
<td>*</td>
</tr>
<tr>
<td>17</td>
<td>PS/2 port (mouse)</td>
<td>*</td>
</tr>
<tr>
<td>18</td>
<td>PS/2 port (keyboard)</td>
<td>*</td>
</tr>
<tr>
<td>19</td>
<td>Ethernet (RJ-45)</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>E-lock slot</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Serial (9-pin)</td>
<td>*</td>
</tr>
<tr>
<td>22</td>
<td>Smart cable clip slots</td>
<td>*</td>
</tr>
<tr>
<td>23</td>
<td>Optional ports on expansion cards</td>
<td>*</td>
</tr>
<tr>
<td>24</td>
<td>Kensington Security Slot</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Power connector</td>
<td></td>
</tr>
</tbody>
</table>

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

**Processor**

Processor Family

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>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>DDR5-4800</td>
<td>Intel UHD Graphics 730</td>
</tr>
<tr>
<td>Core i3-12300</td>
<td>4 (4 P-core + 0 E-core)</td>
<td>8</td>
<td>P-core 3.5GHz</td>
<td>P-core 4.4GHz</td>
<td>12MB</td>
<td>DDR5-4800</td>
<td>Intel UHD Graphics 730</td>
</tr>
<tr>
<td>Core i5-12600</td>
<td>6 (6 P-core + 0 E-core)</td>
<td>12</td>
<td>P-core 3.3GHz</td>
<td>P-core 4.8GHz</td>
<td>18MB</td>
<td>DDR5-4800</td>
<td>Intel UHD Graphics 770</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>DDR5-4800</td>
<td>Intel UHD Graphics 730</td>
</tr>
<tr>
<td>Core i5-12500</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>DDR5-4800</td>
<td>Intel UHD Graphics 770</td>
</tr>
<tr>
<td>Core i5-12600K</td>
<td>10 (6 P-core + 4 E-core)</td>
<td>16</td>
<td>P-core 3.7GHz / E-core 2.8GHz</td>
<td>P-core 4.9GHz / E-core 3.6GHz</td>
<td>20MB</td>
<td>DDR5-4800</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>DDR5-4800</td>
<td>Intel UHD Graphics 770</td>
</tr>
<tr>
<td>Core i7-12700K</td>
<td>12 (8 P-core + 4 E-core)</td>
<td>20</td>
<td>P-core 3.6GHz / E-core 2.7GHz</td>
<td>P-core 4.9GHz / E-core 3.8GHz</td>
<td>25MB</td>
<td>DDR5-4800</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>DDR5-4800</td>
<td>Intel UHD Graphics 770</td>
</tr>
<tr>
<td>Core i9-12900K</td>
<td>16 (8 P-core + 8 E-core)</td>
<td>24</td>
<td>P-core 3.2GHz / E-core 2.4GHz</td>
<td>P-core 5.1GHz / E-core 3.9GHz</td>
<td>30MB</td>
<td>DDR5-4800</td>
<td>Intel UHD Graphics 770</td>
</tr>
</tbody>
</table>

**Processor Sockets**

1x FCLGA1700

**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 LTS
- Red Hat Enterprise Linux 8.6 (certified only, Red Hat Enterprise Linux 8.7 available in late 2022, for detailed and latest information, please visit [Red Hat Certified Hardware](https://www.redhat.com/en/certified-hardware))
- No operating system

**Graphics**

Integrated Graphics **

- Intel UHD Graphics 730
- Intel UHD Graphics 770

Discrete Graphics Support

Supports up to one NVIDIA® RTX A5000 or two NVIDIA T1000

**Discrete Graphics Offering**

<table>
<thead>
<tr>
<th>Graphics</th>
<th>Memory</th>
<th>Power</th>
<th>Connector</th>
<th>SLI / NVLink</th>
</tr>
</thead>
<tbody>
<tr>
<td>NVIDIA T400</td>
<td>2GB GDDR6</td>
<td>40W</td>
<td>3x miniDP 1.4</td>
<td>None</td>
</tr>
<tr>
<td>Graphics Card</td>
<td>GPU Type</td>
<td>Memory Type</td>
<td>Memory Size</td>
<td>Power</td>
</tr>
<tr>
<td>--------------------</td>
<td>----------------</td>
<td>-------------</td>
<td>-------------</td>
<td>-------</td>
</tr>
<tr>
<td>NVIDIA T400 4GB</td>
<td>4GB GDDR6</td>
<td>4GB GDDR6</td>
<td>40W</td>
<td>3x miniDP 1.4</td>
</tr>
<tr>
<td>NVIDIA T600</td>
<td>4GB GDDR6</td>
<td>4GB GDDR6</td>
<td>40W</td>
<td>4x miniDP 1.4</td>
</tr>
<tr>
<td>NVIDIA T1000</td>
<td>4GB GDDR6</td>
<td>4GB GDDR6</td>
<td>50W</td>
<td>4x miniDP 1.4</td>
</tr>
<tr>
<td>NVIDIA T1000 8GB</td>
<td>8GB GDDR6</td>
<td>8GB GDDR6</td>
<td>50W</td>
<td>4x miniDP 1.4</td>
</tr>
<tr>
<td>NVIDIA RTX A2000</td>
<td>6GB GDDR6</td>
<td>6GB GDDR6</td>
<td>70W</td>
<td>4x miniDP 1.4a</td>
</tr>
<tr>
<td>NVIDIA RTX A2000 12GB</td>
<td>12GB GDDR6</td>
<td>12GB GDDR6</td>
<td>70W</td>
<td>4x miniDP 1.4a</td>
</tr>
<tr>
<td>NVIDIA RTX A4000</td>
<td>16GB GDDR6 with ECC</td>
<td>16GB GDDR6 with ECC</td>
<td>140W</td>
<td>4x DP 1.4a</td>
</tr>
<tr>
<td>NVIDIA RTX A4500</td>
<td>20GB GDDR6 with ECC</td>
<td>20GB GDDR6 with ECC</td>
<td>200W</td>
<td>4x DP 1.4</td>
</tr>
<tr>
<td>NVIDIA RTX A5000</td>
<td>24GB GDDR6 with ECC</td>
<td>24GB GDDR6 with ECC</td>
<td>230W</td>
<td>4x DP 1.4a</td>
</tr>
</tbody>
</table>

Notes:
1. NVIDIA RTX A4500 will be available from April 2022.

Monitor Support

Monitor Support
Onboard graphics supports up to 4 independent displays via onboard two DP, one HDMI® and one optional USB-C®; the number of maximum monitors also depends on the discrete graphic card in use

Chipset

Chipset
Intel W680 chipset

Memory

Max Memory
Up to 128GB DDR5-3600

Memory Type
- DDR5-3600 ECC
- DDR5-3600 non-ECC
- DDR5-4000 ECC
- DDR5-4000 non-ECC
- DDR5-4400 ECC
- DDR5-4400 non-ECC

Memory Slots
Four DDR5 UDIMM slots, dual-channel capable

Memory Protection
ECC on models with ECC DIMMs and ECC capable processor

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. ThinkStation® P360 Tower comes with DDR5-4800 memory and will run at DDR5-4400, DDR5-4000, and DDR5-3600 due to platform limitation:
   - 1x 8GB / 2x 8GB / 1x 16GB / 2x 16GB / 2x 32GB configurations run at DDR5-4400;
   - 4x 8GB / 4x 16GB configurations run at DDR5-4000;
   - 4x 32GB configuration runs at DDR5-3600

Storage

Storage Support
Up to 2x 3.5” SATA HDD or 4x 2.5” SATA HDD; also supports up to 3x M.2 SSD (2 by onboard, 1 by M.2 to PCIe® adapter)
- 3.5” HDD up to 4TB each
- 2.5” HDD up to 1TB each
- Onboard M.2 SSD up to 4TB each
- M.2 SSD by M.2 to PCIe adapter up to 2TB

Storage Type

<table>
<thead>
<tr>
<th>Disk Type</th>
<th>Interface</th>
<th>RPM</th>
<th>Offering</th>
<th>Security</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Storage Controllers

<table>
<thead>
<tr>
<th>Storage Controller</th>
<th>Type</th>
<th>Interface</th>
<th>RAID</th>
<th>Cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated NVMe controller</td>
<td>Standard</td>
<td>PCIe NVMe</td>
<td>0/1</td>
<td>None</td>
</tr>
<tr>
<td>Integrated SATA controller</td>
<td>Standard</td>
<td>SATA 6.0Gb/s</td>
<td>0/1/10/5</td>
<td>None</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. When using M.2 to PCIe adapter, M.2 SSD works at PCIe Gen 3. 4TB M.2 SSD is pending availability.
3. NVMe RAID is supported on onboard M.2 slots. SATA RAID 5 and 10 are supported on 2.5” HDD.

---

### Removable Storage

#### Optical Support

Optional one 9.0mm optical drive, DVD-ROM, DVD±RW, and Blu-ray

#### Card Reader

- SD card reader
- No card reader

#### Multi-Media

#### Audio Chip

High Definition (HD) Audio, Realtek® ALC897Q-CG codec

#### Speakers

Single speaker

### Power Supply

#### Power Supply

<table>
<thead>
<tr>
<th>Power</th>
<th>Type</th>
<th>Efficiency</th>
<th>Key Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>500W</td>
<td>Fixed</td>
<td>92%</td>
<td>Autosensing, 80 PLUS Platinum qualified</td>
</tr>
<tr>
<td>750W</td>
<td>Fixed</td>
<td>92%</td>
<td>Autosensing, 80 PLUS Platinum qualified</td>
</tr>
</tbody>
</table>

### DESIGN

#### Mechanical

**Form Factor**

Tower (17L)

**Dimensions (WxDxH)**

170 x 315.4 x 376 mm (6.7 x 12.4 x 14.8 inches)

**Weight**

9.67 kg (21.32 lbs, maximum configuration)

**Bays**

- 1x 3.5” disk bay (standard)
- 2x 2.5” disk bay (optional)
- 1x 3.5” disk bay (optional)

**M.2 Slots**

- Up to 3x M.2 SSD:
  - 2 via onboard M.2 PCIe Gen 4 slots

---

**ThinkStation P360 Tower - September 20 2022**
 Expansion Slots
- One PCIe 4.0 x16
- One PCIe 4.0 x16 (x4 lanes)
- Two PCIe 3.0 x1 (open ended)

CONNECTIVITY

Network

Onboard Ethernet
Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet
Two additional Ethernet adapters support, up to eight additional GbE ports
- Gigabit Ethernet, Intel I210-T1, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel I350-T2, 2x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5719, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5720, 2x RJ-45, PCIe x1
- Gigabit Ethernet, Realtek RTL8168H, 1x RJ-45, PCIe x1

WLAN + Bluetooth®
- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- Intel Wi-Fi 6E AX211, 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

Front Ports
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x USB-C 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Rear Ports
- 4x USB 3.2 Gen 1 (one supports Smart Power On)
- 1x HDMI 2.1 TMDS
- 2x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports
- 1x HDMI 2.1 TMDS (Flex IO)
- 1x VGA (Flex IO)
- 1x USB-C 3.2 Gen 1 with DisplayPort function (Flex IO)
- 1x DP 1.2 (Flex IO)
- 1x USB-C 3.2 Gen 2x2 (support data transfer, via USB-C expansion card, PCIe x4)
- 2x USB 3.2 Gen 1
- 1x Thunderbolt™ 4
- 1x serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 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
SECURITY & PRIVACY

Security

Security Chip
Discrete TPM 2.0, TCG certified

Physical Locks
- (Optional) Cable lock
- (Optional) E-lock
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch
- Chassis intrusion switch
- No chassis intrusion switch

BIOS Security
- Administrator password
- Power-on password

MANAGEABILITY

System Management

System Management
- Intel vPro Enterprise with Intel AMT 16.0
- Standard Manageability

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

SERVICE

Warranty

Base Warranty
- 1-year limited onsite service
- 2-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

ENVIRONMENTAL

Operating Environment

Temperature
- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

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

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

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 in progress

ISV Certifications
ISV Certifications
Please visit ISV certifications for Lenovo Workstations

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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