# OVERVIEW

<table>
<thead>
<tr>
<th>Port Description</th>
<th>Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Headphone / microphone combo jack (3.5mm)</td>
<td>1, 2</td>
</tr>
<tr>
<td>2. USB 3.2 Gen 2 (Always On and fast charge)</td>
<td>3</td>
</tr>
<tr>
<td>3. USB-C 3.2 Gen 1</td>
<td>4</td>
</tr>
<tr>
<td>4. Power button</td>
<td>5</td>
</tr>
<tr>
<td>5. Kensington Security Slot</td>
<td>6</td>
</tr>
<tr>
<td>6. Power connector</td>
<td>7</td>
</tr>
<tr>
<td>7. DisplayPort</td>
<td>8</td>
</tr>
<tr>
<td>8. 2x USB 3.2 Gen 1</td>
<td>9</td>
</tr>
<tr>
<td>9. HDMI</td>
<td>10</td>
</tr>
<tr>
<td>10. 2x USB 3.2 Gen 2</td>
<td>11</td>
</tr>
<tr>
<td>11. Ethernet (RJ-45)</td>
<td>12</td>
</tr>
<tr>
<td>12. 4x MiniDP *</td>
<td></td>
</tr>
</tbody>
</table>

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

Processor Family
Up to one Intel® Core™ i9, i7, i5, or i3 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 i3-10100</td>
<td>4</td>
<td>8</td>
<td>3.6GHz</td>
<td>4.3GHz</td>
<td>6MB</td>
<td>DDR4-2666</td>
<td>Intel UHD Graphics 630</td>
</tr>
<tr>
<td>Core i3-10100T</td>
<td>4</td>
<td>8</td>
<td>3.0GHz</td>
<td>3.8GHz</td>
<td>6MB</td>
<td>DDR4-2666</td>
<td>Intel UHD Graphics 630</td>
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<tr>
<td>Core i3-10300</td>
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<td>8</td>
<td>3.7GHz</td>
<td>4.4GHz</td>
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<tr>
<td>Core i3-10300T</td>
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<td>3.9GHz</td>
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<tr>
<td>Core i3-10320</td>
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<td>4.6GHz</td>
<td>8MB</td>
<td>DDR4-2666</td>
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<tr>
<td>Core i5-10400</td>
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<td>12</td>
<td>2.9GHz</td>
<td>4.3GHz</td>
<td>12MB</td>
<td>DDR4-2666</td>
<td>Intel UHD Graphics 630</td>
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<tr>
<td>Core i5-10400T</td>
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<tr>
<td>Core i5-10500</td>
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<td>DDR4-2666</td>
<td>Intel UHD Graphics 630</td>
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<tr>
<td>Core i5-10500T</td>
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<td>12</td>
<td>2.3GHz</td>
<td>3.8GHz</td>
<td>12MB</td>
<td>DDR4-2666</td>
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<tr>
<td>Core i5-10600</td>
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<td>3.3GHz</td>
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<td>12MB</td>
<td>DDR4-2666</td>
<td>Intel UHD Graphics 630</td>
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<tr>
<td>Core i5-10600T</td>
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<td>12</td>
<td>2.4GHz</td>
<td>4.0GHz</td>
<td>12MB</td>
<td>DDR4-2666</td>
<td>Intel UHD Graphics 630</td>
</tr>
<tr>
<td>Core i7-10700</td>
<td>8</td>
<td>16</td>
<td>2.9GHz</td>
<td>4.8GHz</td>
<td>16MB</td>
<td>DDR4-2933</td>
<td>Intel UHD Graphics 630</td>
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<tr>
<td>Core i7-10700T</td>
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<td>16</td>
<td>2.0GHz</td>
<td>4.5GHz</td>
<td>16MB</td>
<td>DDR4-2933</td>
<td>Intel UHD Graphics 630</td>
</tr>
<tr>
<td>Core i9-10900</td>
<td>10</td>
<td>20</td>
<td>2.8GHz</td>
<td>5.2GHz</td>
<td>20MB</td>
<td>DDR4-2933</td>
<td>Intel UHD Graphics 630</td>
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<tr>
<td>Core i9-10900T</td>
<td>10</td>
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<td>1.9GHz</td>
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<td>20MB</td>
<td>DDR4-2933</td>
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</tr>
</tbody>
</table>

Processor Sockets
1x FCLGA1200

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

Graphics
Integrated Graphics
Intel UHD Graphics 630

Discrete Graphics Support
Supports one optional discrete graphics card

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>Quadro® P620</td>
<td>2GB GDDR5</td>
<td>40W</td>
<td>4x miniDP</td>
<td>None</td>
</tr>
<tr>
<td>Quadro P1000</td>
<td>4GB GDDR5</td>
<td>50W</td>
<td>4x miniDP</td>
<td>None</td>
</tr>
</tbody>
</table>

Monitor Support
Monitor Support
Supports multiple displays via onboard video ports and discrete graphics, the number of maximum monitors supported depends on the graphic card in use

Chipset
Chipset
Intel Q470 chipset

**Memory**

Max Memory
- Up to 64GB

Memory Type
- DDR4-2933 non-ECC

Memory Slots
- Two DDR4 SO-DIMM slots, dual-channel capable

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 2x M.2 SSD
  - M.2 SSD up to 2TB each

Storage Type

<table>
<thead>
<tr>
<th>Disk Type</th>
<th>Interface</th>
<th>RPM</th>
<th>Offering</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.2 PCIe SSD</td>
<td>PCIe NVMe</td>
<td>-</td>
<td>256GB / 512GB / 1TB / 2TB</td>
</tr>
</tbody>
</table>

**Removable Storage**

Optical Support
- Optional one 9.0mm optical drive via optical drive kit, DVD-ROM or DVD±RW

**Multi-Media**

Audio Chip
- High Definition (HD) Audio, Realtek® ALC233 codec

**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>170W</td>
<td>Adapter</td>
<td>89%</td>
<td>100V - 240V</td>
</tr>
<tr>
<td>230W</td>
<td>Adapter</td>
<td>89%</td>
<td>100V - 240V</td>
</tr>
</tbody>
</table>

**DESIGN**

**Mechanical**

Form Factor
- Tiny (1L)

Dimensions (WxDxH)
- 37 x 182.9 x 179 mm (1.5 x 7.2 x 7.0 inches)

Weight
- 1.4 kg (3 lbs, maximum configuration)

Bays
- No bays

M.2 Slots
- Up to 2x M.2 SSD via onboard slots

Expansion Slots
- One PCIe 3.0 x16 or x4 slot, low-profile, via riser card

Expansion Slots Offering
One PCIe slot via specific riser card:
- PCIe 3.0 x16 (negotiable link width x8) and low profile for discrete graphics card
- PCIe 3.0 x4 and low profile for ethernet adapter and Thunderbolt™ adapter

**CONNECTIVITY**

**Network**

**Onboard Ethernet**
Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ45, supports Wake-on-LAN

**Optional Ethernet**
Additional Ethernet options via PCIe adapter

**WLAN + Bluetooth™**
- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2
- No WLAN and Bluetooth

**Ports**

**Front Ports**
- 1x USB 3.2 Gen 2 (Always On and fast charge)
- 1x USB-C 3.2 Gen 1
- 1x headphone / microphone combo jack (3.5mm)

**Rear Ports**
- 2x USB 3.2 Gen 1 (one supports Smart Power On)
- 2x USB 3.2 Gen 2
- 1x Ethernet (RJ-45)
- 1x HDMI®
- 1x DisplayPort™

**Optional Rear Ports**
- 2x USB-A 3.2 Gen 1
- 1x Thunderbolt
- Optional Port 1 (One of VGA / 2nd DisplayPort / 2nd HDMI / serial / USB-C 3.2 Gen 1 with DisplayPort function)
- Optional Port 2 (serial)

**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: 40 Gbit/s;
   - FireWire 400: 400 Mbit/s;
   - FireWire 800: 800 Mbit/s
2. For video ports on discrete graphics, please see graphics section

**SECURITY & PRIVACY**

**Security**

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

**Physical Locks**
Kensington® Security Slot

**BIOS Security**
- Administrator password
- Power-on password

**MANAGEABILITY**
System Management

- Intel vPro with Intel AMT 14.0 (vPro-enable processor and WiFi needed)
- Standard Manageability

SERVICE

Warranty

Base Warranty
3-year limited onsite service with 9x5 NBD (for most models)

ENVIRONMENTAL

Operating Environment

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

Altitude
- Operating: -15.2 m (-50 ft) to 3048 m (10,000 ft)
- Storage: -15.2 m (-50 ft) to 12192 m (40,000 ft)

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

CERTIFICATIONS

Green Certifications

- EPEAT™ Silver
- ENERGY STAR® 8.0
- RoHS compliant

Other Certifications

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

ISV Certifications

Please visit www.thinkworkstations.com/isv-certifications/