## PERFORMANCE

### Processor

**Processor Family**
Intel® Celeron®, Intel Pentium®, 8th Generation Intel Core™ i3 / i5 / i7 Processor, or 9th Generation Intel Core i3 / i5 / i7 / i9 Processor

### 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 G4900T</td>
<td>2</td>
<td>2</td>
<td>2.9GHz</td>
<td>-</td>
<td>2MB</td>
<td>DDR4-2400</td>
<td>Intel UHD Graphics 610</td>
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<tr>
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<tr>
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<tr>
<td>Core i7-8700T</td>
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<td>Intel UHD Graphics 630</td>
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<tr>
<td>Core i7-9700T</td>
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<td>8</td>
<td>2.0GHz</td>
<td>4.3GHz</td>
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<td>Intel UHD Graphics 630</td>
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<tr>
<td>Core i9-9900T</td>
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<td>16</td>
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<td>4.4GHz</td>
<td>16MB</td>
<td>DDR4-2666</td>
<td>Intel UHD Graphics 630</td>
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</tbody>
</table>

### Operating System
- Windows® 10 Home 64
- Windows 10 Pro 64
- Windows 10 IoT Enterprise
- Ubuntu Linux
- No operating system

### Graphics
### Monitor Support
Supports up to 3 independent displays via onboard ports (DisplayPort™ + HDMI + 1x optional port [VGA / 2nd DP / 2nd HDMI / USB-C])

### Chipset
Intel B360 chipset

### Memory

<table>
<thead>
<tr>
<th>Memory Type</th>
<th>DDR4-2666</th>
</tr>
</thead>
</table>

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

#### Memory Protection
Non-ECC

#### Max Memory
Up to 32GB DDR4-2666

### Storage

#### Storage Support
Up to two drives, 1x 2.5" HDD/SSD + 1x M.2 2242/2280 SSD
- 2.5" HDD up to 1TB
- 2.5" SSD up to 256GB
- M.2 SSD up to 1TB
- Optional Intel Optane™ Memory, M.2

#### RAID
Not support

### Removable Storage

#### Optical
- DVD-ROM, slim (9.0mm), via USB external ODD box
- DVD burner (DVD±RW), slim (9.0mm), via USB external ODD box
- None

#### Card Reader

<table>
<thead>
<tr>
<th>Disk Type</th>
<th>Interface</th>
<th>RPM</th>
<th>Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel Optane Memory M10</td>
<td>PCIe NVMe, PCIe 3.0 x2</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
No card reader

**Multi-Media**

**Audio Chip**
High Definition (HD) Audio, Realtek® ALC233VB2 codec

**Speakers**
- Single speaker, 1.5W x1
- Single speaker, 2W x1
- No speakers

**Power Supply**

<table>
<thead>
<tr>
<th>Power</th>
<th>Type</th>
<th>Efficiency</th>
<th>Key Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>65W</td>
<td>Adapter</td>
<td>88%</td>
<td>Autosensing</td>
</tr>
<tr>
<td>90W</td>
<td>Adapter</td>
<td>88%</td>
<td>Autosensing</td>
</tr>
<tr>
<td>135W</td>
<td>Adapter</td>
<td>88%</td>
<td>Autosensing</td>
</tr>
<tr>
<td>No power supply</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**DESIGN**

**Input Device**

**Keyboard**
- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

**Mouse**
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Calliope Mouse (USB connector), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
- No mouse

**Mechanical**

**Form Factor**
Tiny (1L)

**Dimensions (WxDxH)**

<table>
<thead>
<tr>
<th>Models</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tiny only</td>
<td>179 x 183 x 34.5 / 37 mm with rubber feet (7.05 x 7.2 x 1.36 / 1.5 inches with rubber feet)</td>
</tr>
<tr>
<td>With VESA mount &amp; ODD box</td>
<td>188.4 x 185.38 x 63 mm (7.42 x 7.30 x 2.48 inches)</td>
</tr>
</tbody>
</table>

**Weight**

<table>
<thead>
<tr>
<th>Models</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tiny Only</td>
<td>1.32 kg (2.91 lbs)</td>
</tr>
<tr>
<td>With VESA mount &amp; ODD box</td>
<td>1.66 kg (3.66 lbs)</td>
</tr>
</tbody>
</table>

**Case Color**
Black

**Bays**
1x 2.5" disk bay

**Expansion Slots**
- One PCIe 3.0 x8, low-profile
- Two M.2 slots (one for WLAN, one for SSD)

Notes:
• 2.5” HDD/SSD and PCIe card are mutually exclusive

EOU
(Optional) Toolless chassis open (Toolless Chassis Screw required) and toolless M.2 SSD, HDD, memory assembly / removal

Stand
• Vertical stand
• No stand

Mounting
• VESA mount bracket kit, supports VESA 75mm and 100mm
• Not configured

Others
• (Optional) Dust Filter
• (Optional) power adapter cage

CONNECTIVITY

Network

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

Optional Ethernet
• Gigabit Ethernet, Intel Ethernet Server Adapter I350-T4, 4x RJ-45, PCIe x4
• No optional Ethernet

WLAN + Bluetooth™
• Realtek RTL8821CE, 802.11ac Dual Band 1x1 Wi-Fi + Bluetooth 4.2, M.2 card
• Realtek RTL8822BE, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 4.2, M.2 card
• Intel Dual Band Wireless-AC 3165, 802.11ac Dual Band 1x1 Wi-Fi + Bluetooth 4.2, M.2 Card
• Intel Dual Band Wireless-AC 8265, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 4.2, M.2 Card
• No WLAN and Bluetooth

Ports

Front Ports
• 1x USB 3.1 Gen 1 (Always On and fast charge)
• 1x USB-C 3.1 Gen 1
• 1x headphone / microphone combo jack (3.5mm)
• 1x microphone (3.5mm)

Notes:
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;

Optional Front Ports
None

Rear Ports
• 2x USB 3.1 Gen 1
• 2x USB 3.1 Gen 2
• 1x Ethernet (RJ-45)
• 1x HDMI
• 1x DisplayPort

Notes:
For video ports on discrete graphics, please see graphics section

Optional Rear Ports
- Optional Port 1 (VGA / 2nd DisplayPort / 2nd HDMI / serial / USB-C 3.1 Gen 1 with DisplayPort function, select one)
- Optional Port 2 (serial)
- 2x USB 3.1 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 1x parallel
- 2x PS/2 (USB to 2x PS/2 dongle)

Monitor Cable
No monitor cable

SECURITY & PRIVACY

Security

Security Chip
Discrete TPM 2.0, TCG certified

Physical Locks
Kensington® Security Slot

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

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

BIOS Security
- Power-on password
- Administrator password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management
None

SERVICE

Warranty

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

CERTIFICATIONS

Green Certifications
- EPEAT™ Silver
- ENERGY STAR® 8.0
- ErP Lot 3
• TCO
• RoHS compliant

Other Certifications

Other Certifications
• (Optional) TÜV Ultra Low Noise certified
• None

Mil-Spec Test

MIL-STD-810G military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)