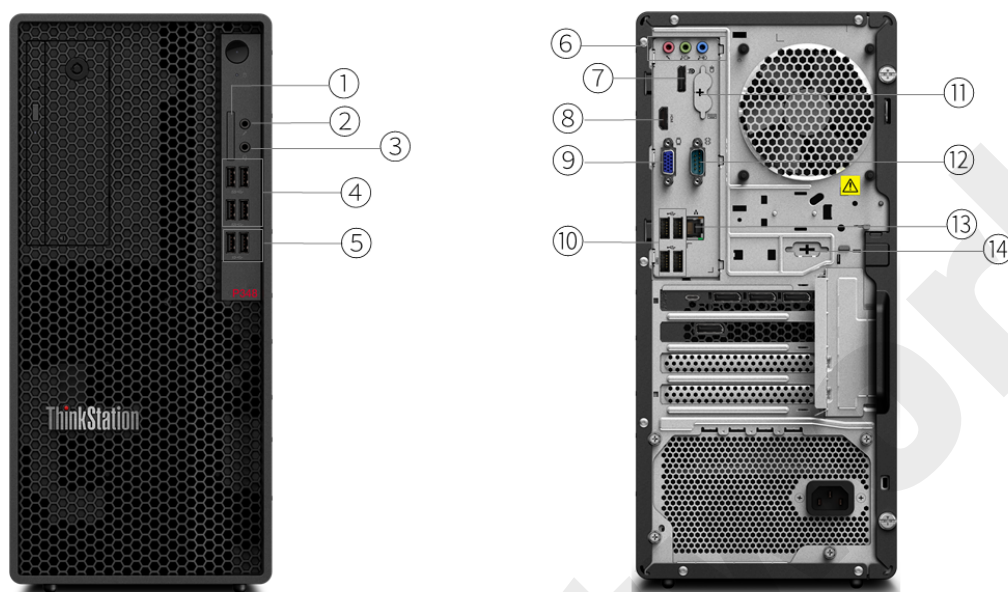


## ThinkStation P348 Tower

## OVERVIEW



|  |  |
|--|--|
| 1. SD card reader *                          | 8. HDMI                                |
| 2. Microphone (3.5mm)                        | 9. VGA                                 |
| 3. Headphone / microphone combo jack (3.5mm) | 10. 4x USB 2.0                         |
| 4. 4x USB 3.2 Gen 1                          | 11. 2x PS/2 ports (keyboard / mouse) * |
| 5. 2x USB 3.2 Gen 2                          | 12. Serial                             |
| 6. 3x Audio ports (3.5mm)                    | 13. Ethernet (RJ-45)                   |
| 7. DisplayPort                               | 14. Serial *                           |

## Notes:

- Items with \* are only available on selected models

## ThinkStation P348 Tower

## PERFORMANCE

## Processor

## Processor Family

11th Generation Intel® Core™ i5 / i7 / i9 Processor

Processor\*\*<sup>[1]</sup>

| Processor Name | Cores | Threads | Base Frequency | Max Frequency | Cache | Memory Support | Processor Graphics     |
|----------------|-------|---------|----------------|---------------|-------|----------------|------------------------|
| Core i5-11500  | 6     | 12      | 2.7GHz         | 4.6GHz        | 12MB  | DDR4-3200      | Intel UHD Graphics 750 |
| Core i5-11600  | 6     | 12      | 2.8GHz         | 4.8GHz        | 12MB  | DDR4-3200      | Intel UHD Graphics 750 |
| Core i7-11700  | 8     | 16      | 2.5GHz         | 4.9GHz        | 16MB  | DDR4-3200      | Intel UHD Graphics 750 |
| Core i9-11900  | 8     | 16      | 2.5GHz         | 5.2GHz        | 16MB  | DDR4-3200      | Intel UHD Graphics 750 |

## Processor Sockets

1x FCLGA1200

Notes:

<sup>[1]</sup> Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see

<http://www.intel.com/technology/turboboost/> for more information.

## Operating System

## Operating System\*\*

- Red Hat Enterprise Linux 8.6 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Windows® 10 Home 64
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

## Graphics

## Integrated Graphics\*\*

- Intel UHD Graphics 630
- Intel UHD Graphics 750

Discrete Graphics Support<sup>[1]</sup>

Supports up to one NVIDIA® GeForce RTX™ 3060, NVIDIA RTX A2000, or AMD Radeon™ Pro WX 3200

## Discrete Graphics Offering\*\*\*

| Graphics                | Memory     | Power | Connector                | Form Factor | SLI / NVLink |
|-------------------------|------------|-------|--------------------------|-------------|--------------|
| NVIDIA T400             | 2GB GDDR6  | 40W   | 3x miniDP 1.4            | Single slot | None         |
| NVIDIA T400 4GB         | 4GB GDDR6  | 40W   | 3x miniDP 1.4            | Single slot | None         |
| NVIDIA T600             | 4GB GDDR6  | 40W   | 4x miniDP 1.4            | Single slot | None         |
| NVIDIA T1000            | 4GB GDDR6  | 50W   | 4x miniDP 1.4            | Single slot | None         |
| NVIDIA T1000 8GB        | 8GB GDDR6  | 50W   | 4x miniDP 1.4            | Single slot | None         |
| NVIDIA RTX A2000 12GB   | 12GB GDDR6 | 70W   | 4x miniDP 1.4a           | Dual slot   | None         |
| NVIDIA GeForce RTX 3060 | 12GB GDDR6 | 170W  | 3x DP 1.4a, 1x HDMI® 2.1 | Dual slot   | -            |
| AMD Radeon Pro WX 3200  | 4GB GDDR5  | 50W   | 4x miniDP 1.4            | Single slot | -            |

Notes:

<sup>[1]</sup> Discrete graphics support may vary by configurations such as processor selection or power supply wattage.

# ThinkStation P348 Tower

## 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 B560 chipset

## Memory

### Max Memory<sup>[1]</sup>

Up to 128GB (4x 32GB DDR4 UDIMM)

### Memory Type

DDR4-3200 UDIMM non-ECC

### Memory Slots

Four DDR4 UDIMM slots, dual-channel capable

### Memory Protection

Non-ECC

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

## Storage

### Storage Support<sup>[1][2]</sup>

Up to three drives, 2x 3.5" SATA HDD + 1x M.2 SSD

- 3.5" HDD up to 4TB each
- M.2 SSD up to 1TB

### Storage Type<sup>\*\*\*</sup>

| Disk Type     | Interface                | RPM  | Offering            | Security |
|---------------|--------------------------|------|---------------------|----------|
| 3.5" SATA HDD | SATA 6Gb/s               | 7.2K | 1TB / 2TB / 4TB     | -        |
| M.2 2280 SSD  | PCIe® NVMe®, PCIe 3.0 x4 | -    | 256GB / 512GB / 1TB | Opal     |

### Storage Controllers

| Storage Controller         | Type     | Interface    | Cache |
|----------------------------|----------|--------------|-------|
| Integrated NVMe controller | Standard | PCIe NVMe    | None  |
| Integrated SATA controller | Standard | SATA 6.0Gb/s | None  |

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] For certain post-manufacturing storage upgrades, additional upgrade kits may be required.

## Removable Storage

### Optical Support

Optional one 9.0mm optical drive, DVD-ROM or DVD±RW

### Card Reader

- SD card reader
- No card reader

## Multi-Media

### Audio Chip

High Definition (HD) Audio, Realtek® ALC623-CG codec

## Power Supply

## ThinkStation P348 Tower

**Power Supply**

| Power | Type  | Efficiency | Key Features                            |
|-------|-------|------------|---|
| 500W  | Fixed | 92%        | Autosensing, 80 PLUS Platinum qualified |

**DESIGN****Mechanical****Form Factor**

Tower (17L)

**Dimensions (WxDxH)<sup>[1]</sup>**

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

**Weight<sup>[2]</sup>**

9.48 kg (20.9 lbs, maximum configuration)

**Bays**

- 1x 3.5" disk bay (standard)
- 1x 2.5" disk bay (optional by 2.5" HDD cage kit)
- 1x 3.5" disk bay (optional, comes with disk or 3.5" HDD cage kit in flex bay)

**Flex Bays**

1x Flex bay, supports 2nd 3.5" disk bay and 9.0mm optical

**M.2 Slots**

Up to 1x M.2 SSD via onboard slot

**Expansion Slots**

Supports three PCIe slots with one PCIe 4.0 x16 and two PCIe 3.0 x1.

- Slot 1: PCIe 4.0 x16, full height, full length, 75W
- Slot 2: PCIe 3.0 x1, full height, half length, 25W
- Slot 3: PCIe 3.0 x1, full height, half length, 25W

**Notes:**<sup>[1]</sup> The system dimensions may vary depending on configurations.<sup>[2]</sup> The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.**CONNECTIVITY****Network****Onboard Ethernet**

Gigabit Ethernet, Realtek RTL8111K, 1x RJ-45, supports Wake-on-LAN

**Optional Ethernet**

One additional Ethernet adapter support, up to one additional GbE port

- Gigabit Ethernet, Intel I210-T1, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Realtek RTL8168H, 1x RJ-45, PCIe x1

**WLAN + Bluetooth<sup>\*\*</sup>**

- MediaTek Wi-Fi® 6 MT7921, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.2 hardware ready)<sup>[1]</sup>
- No WLAN and Bluetooth

**Notes:**<sup>[1]</sup> Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.**Ports<sup>[1]</sup>****Front Ports**

# ThinkStation P348 Tower

- 2x USB 3.2 Gen 2
- 4x USB 3.2 Gen 1
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

## Optional Front Ports

None

## Rear Ports<sup>[2]</sup>

- 4x USB 2.0 (one supports Smart Power On)
- 1x HDMI
- 1x DisplayPort™
- 1x VGA
- 1x Ethernet (RJ-45)
- 1x line-in (3.5mm)
- 1x line-out (3.5mm)
- 1x microphone (3.5mm)
- 1x serial (9-pin)

## Optional Rear Ports<sup>\*\*\*</sup>

- 2x USB 3.2 Gen 1 (via 2-port USB expansion card)
- 2x USB 2.0
- 1x parallel
- 1x serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 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;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

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

## SECURITY & PRIVACY

### Security

#### Security Chip

Firmware TPM 2.0 integrated in processor

#### Physical Locks

- (Optional) Cable lock
- (Optional) E-lock
- (Optional) Smart Cable Clip
- 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<sup>[1]</sup>

# ThinkStation P348 Tower

Non-vPro®

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

## Diagnostic

### Diagnostic

Lenovo UEFI Bootable Diagnostics

## SERVICE

### Warranty<sup>[1]</sup>

#### Base Warranty\*\*

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

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

## 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<sup>[1]</sup>

#### Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered<sup>[2]</sup>
- (Optional) EPEAT Silver Registered<sup>[3]</sup>
- ErP Lot 3
- RoHS compliant
- TCO Certified 8.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

### ISV Certifications

#### ISV Certifications

Please visit [www.thinkworkstations.com/isv-certifications/](http://www.thinkworkstations.com/isv-certifications/)

## ThinkStation P348 Tower

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- 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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PSREF  
Product Specifications  
Reference

