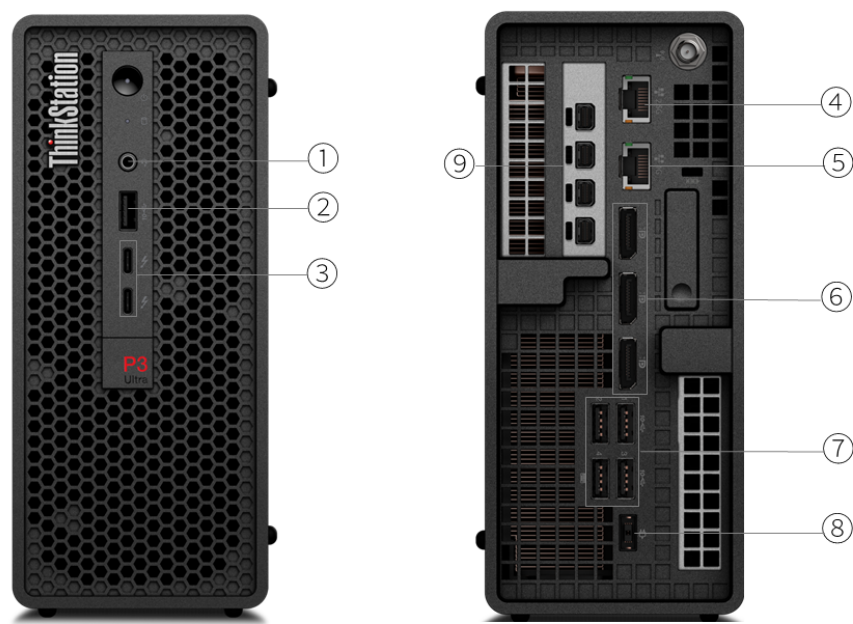


OVERVIEW



|                            |  |
|----------------------------|--|
| 1. Headphone (3.5mm)       | 6. 3x DisplayPort                      |
| 2. USB-A (USB 10Gbps)      | 7. 4x USB-A (USB 10Gbps)               |
| 3. 2x Thunderbolt 4        | 8. Power connector                     |
| 4. Ethernet (2.5GbE RJ-45) | 9. Optional ports on expansion cards * |
| 5. Ethernet (GbE RJ-45)    |  |

Notes:

- Items with \* are only available on selected models

PERFORMANCE

Processor

Processor Family

Up to one Intel® Core™ i5 / i7 / i9 (12th Gen) or Intel Core i3 / i5 / i7 / i9 (13th and 14th Gen) processor; supports up to 24 cores; up to 6GHz.

Processor\*\*[1]

| Processor Name | Cores                     | Threads | Base Frequency                | Max Frequency  | Cache | Memory Support | Processor Graphics     |
|----------------|---------------------------|---------|-------------------------------|--|-------|----------------|------------------------|
| Core i5-12500  | 6 (6 P-core + 0 E-core)   | 12      | P-core 3.0GHz                 | P-core 4.6GHz  | 18MB  | DDR5-4800      | Intel UHD Graphics 770 |
| Core i7-12700  | 12 (8 P-core + 4 E-core)  | 20      | P-core 2.1GHz / E-core 1.6GHz | Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz | 25MB  | DDR5-4800      | Intel UHD Graphics 770 |
| Core i9-12900  | 16 (8 P-core + 8 E-core)  | 24      | P-core 2.4GHz / E-core 1.8GHz | Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz | 30MB  | DDR5-4800      | Intel UHD Graphics 770 |
| Core i3-13100  | 4 (4 P-core + 0 E-core)   | 8       | P-core 3.4GHz                 | P-core 4.5GHz  | 12MB  | DDR5-4800      | Intel UHD Graphics 730 |
| Core i5-13400T | 10 (6 P-core + 4 E-core)  | 16      | P-core 1.3GHz / E-core 1.0GHz | P-core 4.4GHz / E-core 3.0GHz                          | 20MB  | DDR5-4800      | Intel UHD Graphics 730 |
| Core i5-13600  | 14 (6 P-core + 8 E-core)  | 20      | P-core 2.7GHz / E-core 2.0GHz | P-core 5.0GHz / E-core 3.7GHz                          | 24MB  | DDR5-4800      | Intel UHD Graphics 770 |
| Core i5-13600K | 14 (6 P-core + 8 E-core)  | 20      | P-core 3.5GHz / E-core 2.6GHz | P-core 5.1GHz / E-core 3.9GHz                          | 24MB  | DDR5-5600      | Intel UHD Graphics 770 |
| Core i7-13700  | 16 (8 P-core + 8 E-core)  | 24      | P-core 2.1GHz / E-core 1.5GHz | Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 4.1GHz | 30MB  | DDR5-5600      | Intel UHD Graphics 770 |
| Core i7-13700K | 16 (8 P-core + 8 E-core)  | 24      | P-core 3.4GHz / E-core 2.5GHz | Max Turbo up to 5.4GHz / P-core 5.3GHz / E-core 4.2GHz | 30MB  | DDR5-5600      | Intel UHD Graphics 770 |
| Core i7-13700T | 16 (8 P-core + 8 E-core)  | 24      | P-core 1.4GHz / E-core 1.0GHz | Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz | 30MB  | DDR5-5600      | Intel UHD Graphics 770 |
| Core i9-13900  | 24 (8 P-core + 16 E-core) | 32      | P-core 2.0GHz / E-core 1.5GHz | Max Turbo up to 5.6GHz / P-core 5.2GHz / E-core 4.2GHz | 36MB  | DDR5-5600      | Intel UHD Graphics 770 |
| Core i9-13900K | 24 (8 P-core + 16 E-core) | 32      | P-core 3.0GHz / E-core 2.2GHz | Max Turbo up to 5.8GHz / P-core 5.4GHz / E-core 4.3GHz | 36MB  | DDR5-5600      | Intel UHD Graphics 770 |
| Core i9-13900T | 24 (8 P-core + 16 E-core) | 32      | P-core 1.1GHz / E-core 0.8GHz | Max Turbo up to 5.3GHz / P-core 5.1GHz / E-core 3.9GHz | 36MB  | DDR5-5600      | Intel UHD Graphics 770 |
| Core i3-14100  | 4 (4 P-core + 0 E-core)   | 8       | P-core 3.5GHz                 | P-core 4.7GHz  | 12MB  | DDR5-4800      | Intel UHD Graphics 730 |
| Core i5-14400T | 10 (6 P-core + 4 E-core)  | 16      | P-core 1.5GHz / E-core 1.1GHz | P-core 4.5GHz / E-core 3.2GHz                          | 20MB  | DDR5-4800      | Intel UHD Graphics 730 |
| Core i5-14600  | 14 (6 P-core + 8 E-core)  | 20      | P-core 2.7GHz / E-core 2.0GHz | P-core 5.2GHz / E-core 3.9GHz                          | 24MB  | DDR5-5600      | Intel UHD Graphics 770 |
| Core i5-14600K | 14 (6 P-core + 8 E-core)  | 20      | P-core 3.5GHz / E-core 2.6GHz | P-core 5.3GHz / E-core 4.0GHz                          | 24MB  | DDR5-5600      | Intel UHD Graphics 770 |
| Core i7-14700  | 20 (8 P-core + 12 E-core) | 28      | P-core 2.1GHz / E-core 1.5GHz | Max Turbo up to 5.4GHz / P-core 5.3GHz / E-core 4.2GHz | 33MB  | DDR5-5600      | Intel UHD Graphics 770 |
| Core i7-14700K | 20 (8 P-core + 12 E-core) | 28      | P-core 3.4GHz / E-core 2.5GHz | Max Turbo up to 5.6GHz / P-core 5.5GHz / E-core        | 33MB  | DDR5-5600      | Intel UHD Graphics 770 |

|                |                           |    |                               |  |      |           |                        |
|----------------|---------------------------|----|-------------------------------|--|------|-----------|------------------------|
|                |                           |    |                               | 4.3GHz   |      |           |                        |
| Core i7-14700T | 20 (8 P-core + 12 E-core) | 28 | P-core 1.3GHz / E-core 0.9GHz | Max Turbo up to 5.2GHz / P-core 5.0GHz / E-core 3.7GHz | 33MB | DDR5-5600 | Intel UHD Graphics 770 |
| Core i9-14900  | 24 (8 P-core + 16 E-core) | 32 | P-core 2.0GHz / E-core 1.5GHz | Max Turbo up to 5.8GHz / P-core 5.4GHz / E-core 4.3GHz | 36MB | DDR5-5600 | Intel UHD Graphics 770 |
| Core i9-14900K | 24 (8 P-core + 16 E-core) | 32 | P-core 3.2GHz / E-core 2.4GHz | Max Turbo up to 6.0GHz / P-core 5.6GHz / E-core 4.4GHz | 36MB | DDR5-5600 | Intel UHD Graphics 770 |
| Core i9-14900T | 24 (8 P-core + 16 E-core) | 32 | P-core 1.1GHz / E-core 0.8GHz | Max Turbo up to 5.5GHz / P-core 5.1GHz / E-core 4.0GHz | 36MB | DDR5-5600 | Intel UHD Graphics 770 |

Processor Sockets

1x FCLGA1700

Notes:

[1] 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 9.2 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- 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 730
- Intel UHD Graphics 770

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

Supports up to one NVIDIA® RTX A5500 Laptop GPU

Discrete Graphics Offering

| Graphics                           | Memory              | Power | Connector      | Form Factor | SLI / NVLink |
|------------------------------------|---------------------|-------|----------------|-------------|--------------|
| NVIDIA T400 4GB                    | 4GB GDDR6           | 40W   | 3x 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 RTX A3000 Laptop GPU        | 12GB GDDR6          | 80W   | 4x miniDP 1.4a | MXM Card    | None         |
| NVIDIA RTX A5000 Laptop GPU        | 16GB GDDR6          | 115W  | 4x miniDP 1.4a | MXM Card    | None         |
| NVIDIA RTX A5500 Laptop GPU        | 16GB GDDR6 with ECC | 115W  | 4x miniDP 1.4a | MXM Card    | None         |
| NVIDIA RTX 4000 SFF Ada Generation | 20GB GDDR6 with ECC | 70W   | 4x miniDP 1.4a | Dual slot   | None         |

Notes:

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

Monitor Support

Monitor Support

Supports up to 8 independent displays, 4 via onboard ports (3x DP and 2x Thunderbolt™, simultaneously supports 4 display) and 4 via discrete graphics.

Onboard ports support (with max simultaneous displays):

- DP supports up to 4096x2160@60Hz
- Thunderbolt supports up to 5120x2880@60Hz

Discrete graphics ports support (with max simultaneous displays):

- miniDP supports up to 4096x2160@120Hz (RTX A2000)

Chipset

Chipset

Intel W680 chipset

Memory

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

Up to 128GB (4x 32GB DDR5 SO-DIMM)

Memory Type<sup>\*\*</sup>

- DDR5-4800 SO-DIMM ECC<sup>[2]</sup>
- DDR5-4800 SO-DIMM non-ECC<sup>[3]</sup>

Memory Slots

Four DDR5 SO-DIMM 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.

[2], [3] System comes with DDR5-4800 memory and will run at lower speed due to platform limitations:  
4x 32GB configuration runs at DDR5-3600;  
other configurations run at DDR5-4000.

Storage

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

Up to 1x 2.5" HDD or SSD + 2x M.2 SSD

- 2.5" HDD up to 1TB
- 2.5" SSD up to 7.68TB
- M.2 SSD up to 4TB each

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

| Disk Type                          | Interface                          | RPM  | Offering                        | Security |
|------------------------------------|------------------------------------|------|---------------------------------|----------|
| 2.5" SATA SSD                      | SATA 6Gb/s                         | -    | 3.84TB / 7.68TB                 | Opal     |
| 2.5" SATA HDD                      | SATA 6Gb/s                         | 7.2K | 1TB / 1TB FIPS                  | -        |
| M.2 2280 SSD for Onboard M.2 slots | PCIe® NVMe®, PCIe 4.0 x4           | -    | 256GB                           | Opal     |
| M.2 2280 SSD for Onboard M.2 slots | PCIe NVMe, PCIe 4.0 x4 Performance | -    | 256GB / 512GB / 1TB / 2TB / 4TB | Opal 2.0 |

Storage Controllers

| Storage Controller         | Type     | Interface    | RAID | Cache |
|----------------------------|----------|--------------|------|-------|
| Integrated NVMe controller | Standard | PCIe NVMe    | 0/1  | 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 detailed storage bays infomation and how to upgrade optional drives for ThinkStation® products, please visit [ThinkStation Storage Upgrade Guide](#)

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC897-Q codec

Speakers

Single speaker

Power Supply

Power Supply\*\*

| Power | Type    | Efficiency | Key Features |
|-------|---------|------------|--------------|
| 170W  | Adapter | 90%        | 100V - 240V  |
| 230W  | Adapter | 90%        | 100V - 240V  |
| 300W  | Adapter | 90%        | 100V - 240V  |

DESIGN

Mechanical

Form Factor

Mini-tower (3.9L)

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

87 x 223 x 202 mm (3.43 x 8.78 x 7.95 inches)

Weight<sup>[2]</sup>

3.6 kg (7.94 lbs, maximum configuration)

Bays

1x 2.5" disk bay (optional, comes with disk)

M.2 Slots

- Two M.2 PCIe Gen 4x4 slots (for SSD)
- One M.2 slot (for WLAN)

Expansion Slots

- Two PCIe slots with one PCIe 4.0 x16 and one PCIe 3.0 x8.
- Slot 1: PCIe 4.0 x16 (via MXM to PCIe riser card), low profile, 75W, double-width
  - Slot 2: PCIe 3.0 x8 (x4 lanes), low profile, 25W

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] 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

Two Ethernet, 2.5GbE + GbE, Intel Ethernet Connection I225-LM and I210-AT, 2x RJ-45, supports Wake-on-LAN

Optional Ethernet

- One additional Ethernet adapter support, up to four additional GbE ports
- 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

WLAN + Bluetooth®

- Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready), Intel vPro® technology support<sup>[1]</sup>
- No WLAN and Bluetooth

Notes:

- [1] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations. Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

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

### Front Ports

- 2x Thunderbolt 4
- 1x USB-A (USB 10Gbps / USB 3.2 Gen 2)
- 1x headphone / microphone combo jack (3.5mm)

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

- 3x DisplayPort™ 1.2
- 1x Ethernet (2.5GbE RJ-45)
- 1x Ethernet (GbE RJ-45)
- 4x USB-A (USB 10Gbps / USB 3.2 Gen 2)

### Optional Rear Ports

- 1x USB-C® (USB 20Gbps / USB 3.2 Gen 2x2), support data transfer, via USB-C PCIe x4 card
- 2x USB-C (USB 10Gbps / USB 3.2 Gen 2), support data transfer, via additional PCIe adapter
- 2x USB-A (USB 5Gbps / USB 3.2 Gen 1), via additional PCIe adapter
- 4x serial (via 4-port serial expansion card, PCIe x1)

#### Notes:

[1] The transfer speed of the 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 the theoretical speed.

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

## SECURITY & PRIVACY

### Security

#### Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

#### Physical Locks

Kensington® Security Slot™, 3 x 7 mm

#### Chassis Intrusion Switch

Chassis intrusion switch

#### BIOS Security

- Administrator password
- Power-on password
- UEFI Secure Boot
- Self-healing BIOS

## MANAGEABILITY

### System Management

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

- Intel vPro Enterprise with Intel AMT 16
- Non-vPro

#### Notes:

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

## 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>
- RoHS compliant
- TCO Certified 9.0

**Notes:**

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

[2] EPEAT is registered where applicable, please see [epeat.net](http://epeat.net) for registration status by country.

### Other Certifications

**Mil-Spec Test**

MIL-STD-810H military test passed

### 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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