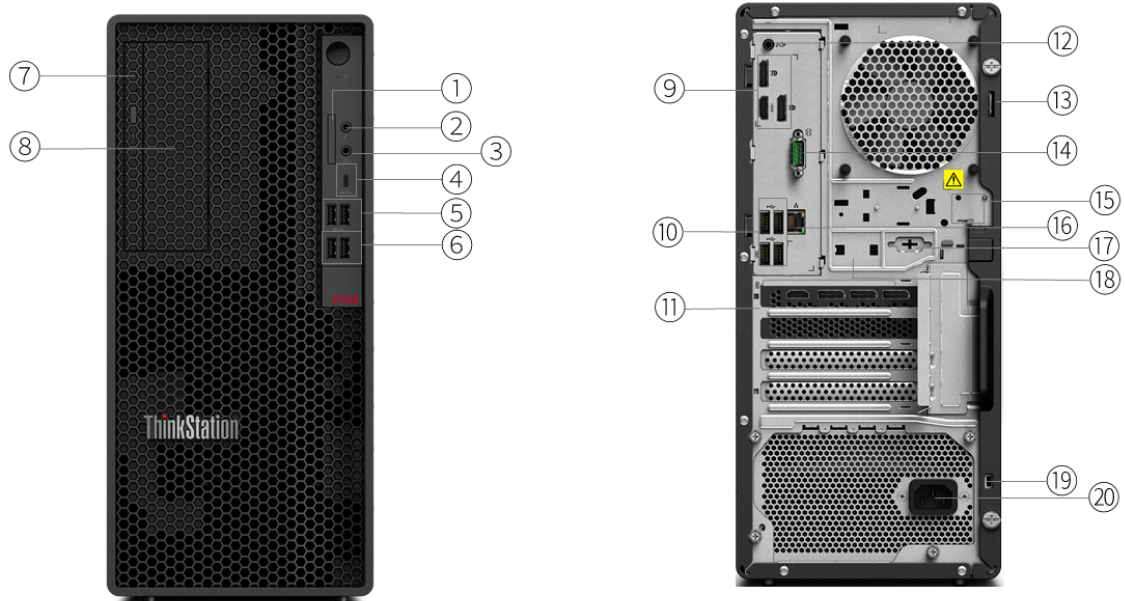


OVERVIEW



| | |
|--|---|
| 1. Card reader * | 11. Optional ports on expansion cards * |
| 2. Microphone (3.5mm) | 12. Audio line-out (3.5mm) |
| 3. Headphone / microphone combo jack (3.5mm) | 13. Padlock loop |
| 4. USB-C 3.2 Gen 1 | 14. Serial (9-pin) |
| 5. 2x USB 3.2 Gen 1 | 15. E-lock slot * |
| 6. 2x USB 3.2 Gen 2 | 16. Ethernet (RJ-45) |
| 7. Optical drive * | 17. Serial (9-pin) * |
| 8. Flex bay * | 18. Smart cable clip slots |
| 9. Video ports (2x DP, 1x HDMI) | 19. Kensington Security Slot |
| 10. 4x USB 2.0 (with Smart Power On feature) | 20. Power connector |

Notes:

- Ports with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Up to one 65W AMD Ryzen™ 9 Pro 5000 series processor

Processor**

| Processor Name | Cores | Threads | Base Frequency | Max Frequency | Cache | Memory Support | Processor Graphics |
|-----------------------|-------|---------|----------------|---------------|------------------|----------------|----------------------|
| AMD Ryzen 3 Pro 4350G | 4 | 8 | 3.8GHz | 4.0GHz | 2MB L2 / 4MB L3 | DDR4-3200 | AMD Radeon™ Graphics |
| AMD Ryzen 5 Pro 5645 | 6 | 12 | 3.7GHz | 4.6GHz | 3MB L2 / 32MB L3 | DDR4-3200 | None |
| AMD Ryzen 7 Pro 5845 | 8 | 16 | 3.4GHz | 4.6GHz | 4MB L2 / 32MB L3 | DDR4-3200 | None |
| AMD Ryzen 9 Pro 5945 | 12 | 24 | 3.0GHz | 4.7GHz | 6MB L2 / 64MB L3 | DDR4-3200 | None |

Processor Sockets

Socket AM4

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 8.7 (certified only, available in late 2022, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- No operating system

Graphics

Integrated Graphics

- None
- Integrated AMD Radeon Graphics

Discrete Graphics Support

Supports up to one NVIDIA® GeForce RTX™ 3080 or NVIDIA RTX A2000

Discrete Graphics Offering

| Graphics | Memory | Power | Connector | SLI / NVlink |
|----------------------------|------------|-------|------------------------------|--------------|
| NVIDIA T400 4GB | 4GB GDDR6 | 40W | 3x miniDP 1.4 | None |
| NVIDIA T1000 8GB | 8GB GDDR6 | 50W | 4x miniDP 1.4 | None |
| NVIDIA RTX A2000 12GB | 12GB GDDR6 | 70W | 4x miniDP 1.4a | None |
| NVIDIA GeForce RTX 3060 | 12GB GDDR6 | 170W | 3x DP 1.4a, 1x HDMI® 2.1 FRL | - |
| NVIDIA GeForce RTX 3070 Ti | 8GB GDDR6 | 290W | 3x DP 1.4a, 1x HDMI 2.1 FRL | - |
| NVIDIA GeForce RTX 3080 | 10GB GDDR6 | 320W | 3x DP 1.4a, 1x HDMI 2.1 FRL | - |

Monitor Support

Monitor Support

- Models with Ryzen 3 Pro 4350G: no discrete graphic support. Onboard graphics supports up to 3 independent displays via onboard two DP, one HDMI:
 - DP supports up to 4096x2160@60Hz
 - HDMI supports up to 3840x2160@30Hz
- Models with Ryzen Pro 5000 processor: onboard video ports cannot work. Independent displays support depends on the discrete graphic card in use. Discrete graphics ports support:

- miniDP supports up to 5120x2880@60Hz
- HDMI supports up to 7680x4320@60Hz

Chipset

Chipset

AMD PRO 565 chipset

Memory

Max Memory^[1]

Up to 128GB DDR4-3200

Memory Type**

- DDR4-3200 UDIMM non-ECC
- DDR4-3200 UDIMM ECC

Memory Slots

Four DDR4 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.

Storage

Storage Support^[1]

Up to 2x 3.5" SATA HDD + 1x 2.5" SATA HDD / SSD + 1x M.2 SSD

- 3.5" HDD up to 4TB each
- M.2 SSD up to 2TB
- No pre-configured 2.5" HDD / SSD options

Storage Type^[2]

| 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 4.0 x4 Performance | - | 512GB / 1TB / 2TB | Opal2 |
| M.2 2280 SSD | PCIe NVMe, PCIe 4.0 x4 Value | - | 256GB | Opal2 |

Storage Controllers***

| Storage Controller | Type | Interface | RAID | 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. The system may support larger storage as the technology develops.
2. System comes with one M.2 PCIe Gen 3 slot for M.2 SSD.

Removable Storage

Optical Support

Optional one 9.0mm DVD-ROM

Card Reader

- SD card reader
- No card reader

Multi-Media

Audio Chip

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

Speakers

Single speaker, 2W x1

Power Supply

Power Supply**

| Power | Type | Efficiency | Key Features |
|-------|-------|------------|---|
| 300W | Fixed | 90% | Autosensing, 80 PLUS Gold qualified |
| 500W | Fixed | 92% | Autosensing, 80 PLUS Platinum qualified |
| 750W | Fixed | 92% | Autosensing, 80 PLUS Platinum qualified |

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

9.8 kg (21.6 lbs, maximum configuration)

Bays

- 1x 3.5" disk bay (standard)
- 1x 2.5" disk bay (optional)
- 1x 3.5" disk bay (optional)
- 1x slim ODD bay (optional)

M.2 Slots

- One M.2 slot (for WLAN)
- One M.2 PCIe Gen 3x4 slot (for SSD)

Expansion Slots

- One PCIe 3.0 x16
- One PCIe 3.0 x1

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111EPV, 1x GbE 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, Realtek RTL8168H, 1x RJ-45, PCIe x1

WLAN + Bluetooth[®]

- Mediatek Wi-Fi® 6 MT7921, 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^[1]

Front Ports

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

Rear Ports^[2]

- 4x USB 2.0 (one supports Smart Power On)
- 1x HDMI 2.1 TMDS
- 2x DisplayPort™ 1.4
- 1x serial (9-pin)
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports

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

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™ 3/4: 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
- UEFI Secure Boot
- Self-healing BIOS

MANAGEABILITY

System Management

System Management

AMD Pro Manageability

SERVICE

Warranty

Base Warranty**^[1]

- 1-year limited onsite service
- 2-year limited onsite service
- 3-year limited onsite service

- No base warranty

Notes:

1. More information 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

Green Certifications

- EPEAT™ Gold
- ENERGY STAR® 8.0
- ErP Lot 3
- TCO Certified 9.0
- RoHS compliant

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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