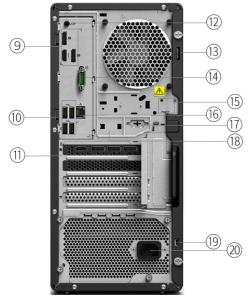
# Product Specifications Reference

# **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:

• Items with \* are only available on selected models

# ThinkStation P358 Tower

# 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 / 4M L3		2MB L2 / 4MB L3	DDR4-3200	AMD Radeon™ Graphics
AMD Ryzen™ 5 PRO 4650G	6	12	3.7GHz	4.2GHz 3MB L2 / 8MB DDR4-3200 AMD Rade Graphics		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 4750G	8	16	3.6GHz	44(-H7)		AMD Radeon™ Graphics	
AMD Ryzen™ 7 PRO 5845	8	16	3.4GHz	4.6GHz	4MB L2 / 32MB L3 DDR4-3200 None		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
- Windows® 11 Home
- Windows<sup>®</sup> 11 Home Single Language
- Windows® 11 DG Windows® 10 Pro 64
- Red Hat Enterprise Linux 8.6 (certified only, for detailed and latest information, please visit
   <u>Red Hat Certified Hardware</u>)
- Ubuntu Linux LTS
- No preload operating system

## Graphics

### Integrated Graphics

- None
- Integrated AMD Radeon<sup>™</sup> Graphics

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

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

#### 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	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 <sup>®</sup> GeForce RTX <sup>™</sup> 3060	12GB GDDR6	170W	3x DP 1.4a, 1x HDMI® 2.1 FRL	Dual slot	None
NVIDIA <sup>®</sup> GeForce RTX <sup>™</sup> 3070 Ti	8GB GDDR6	290W	3x DP 1.4a, 1x HDMI® 2.1 FRL	Triple slot	None
NVIDIA® GeForce RTX™ 3080	10GB GDDR6	320W	3x DP 1.4a, 1x HDMI® 2.1 FRL	Triple slot	None

Notes:

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

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# **Monitor Support**

### **Monitor Support**

- Models with Ryzen<sup>™</sup> 3 Pro 4350G: no discrete graphic support. Onboard graphics supports up to 3 independent displays via onboard two DP, one HDMI<sup>®</sup>:
  - DP supports up to 4096x2160@60Hz
  - HDMI<sup>®</sup> supports up to 3840x2160@30Hz
- Models with Ryzen<sup>™</sup> 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  $^{\scriptscriptstyle @}$  supports up to 7680x4320@60Hz

## Chipset

#### Chipset

AMD PRO 565 chipset

# Memory

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

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

#### Memory Type\*\*

- DDR4-3200 UDIMM ECC
- DDR4-3200 UDIMM non-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<sup>®</sup> memory offerings.

# Storage

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

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<sup>[3]</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® 4.0 x4	-	256GB	Opal 2.0
M.2 2280 SSD	PCIe® NVMe®, PCIe® 4.0 x4 Performance	-	512GB / 1TB / 2TB	Opal 2.0

#### Storage Controllers\*\*\*[4]

Storage Controller	Туре	Interface	RAID	Cache
Integrated SATA controller	Standard	SATA 6.0Gb/s	0/1	None
Integrated NVMe® controller	Standard	PCIe <sup>®</sup> NVMe <sup>®</sup>	-	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<sup>®</sup> products, please visit <u>ThinkStation<sup>®</sup> Storage Upgrade Guide</u>

[3] System comes with one M.2 PCIe<sup>®</sup> Gen 3 slot for M.2 SSD.

[4] RAID requires that BIOS version is equal or newer than SOHKT12A.

RAID is only available on models with AMD Ryzen<sup>™</sup> 3 Pro 4350G.

Pre-configuration with RAID cannot be suppoted.

# **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	Туре	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)<sup>[1]</sup>

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

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

9.8 kg (21.6 lbs, maximum configuration)

### Bays

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

### M.2 Slots

- One M.2 slot (for WLAN)
- One M.2 PCIe<sup>®</sup> Gen 3x4 slot (for SSD)

### **Expansion Slots**

Supports two PCIe® slots with one PCIe® 3.0 x16 and one PCIe® 3.0 x1.

- Slot 1: PCIe® 3.0 x16, full height, full length, 75W, double-width
- Slot 2: PCIe® 3.0 x1, full height, half length, 25W

#### Notes:

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

[2] The system weight is approximate and based on results in Lenovo<sup>®</sup> 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** 

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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<sup>®</sup> 6 MT7921, 802.11ax 2x2 Wi-Fi<sup>®</sup> + Bluetooth<sup>®</sup> 5.1
- No WLAN and Bluetooth®

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

#### Front Ports

- 1x USB-C<sup>®</sup> 3.2 Gen 1 (support data transfer)
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

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

- 4x USB 2.0 (one supports Smart Power On)
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)
- 1x serial (9-pin)

#### Optional Rear Ports

- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe<sup>®</sup> x1)
- 2x USB 2.0
- 1x HDMI<sup>®</sup> 2.1 TMDS (onboard, for AMD Ryzen<sup>™</sup> 3 Pro 4350G models)
- 2x DisplayPort<sup>™</sup> 1.4 (onboard, for AMD Ryzen<sup>™</sup> 3 Pro 4350G models)
- 1x parallel
- 1x serial
- 4x serial (via 4-port serial expansion card, PCle® x1)

#### 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<sup>®</sup> 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4<sup>®</sup> 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt<sup>™</sup> 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) E-lock
- (Optional) Smart Cable Clip
- Kensington<sup>®</sup> Security Slot<sup>™</sup>, 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**<sup>III</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 <u>https://smartfind.lenovo.com/</u>. To learn more details of warranty policy, please access <u>https://pcsupport.lenovo.com/warranty</u>.

# **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)

#### **Relative Humidity**

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

# CERTIFICATIONS

## **Green Certifications**<sup>III</sup>

#### **Green Certifications**

- (Optional) ENERGY STAR<sup>®</sup> 8.0
- (Optional) EPEAT<sup>™</sup> Gold Registered<sup>[2]</sup>
- ErP Lot 3
- 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 selfdeclaration.

[2] EPEAT<sup>™</sup> is registered where applicable, please see epeat.net for registration status by country.

## **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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