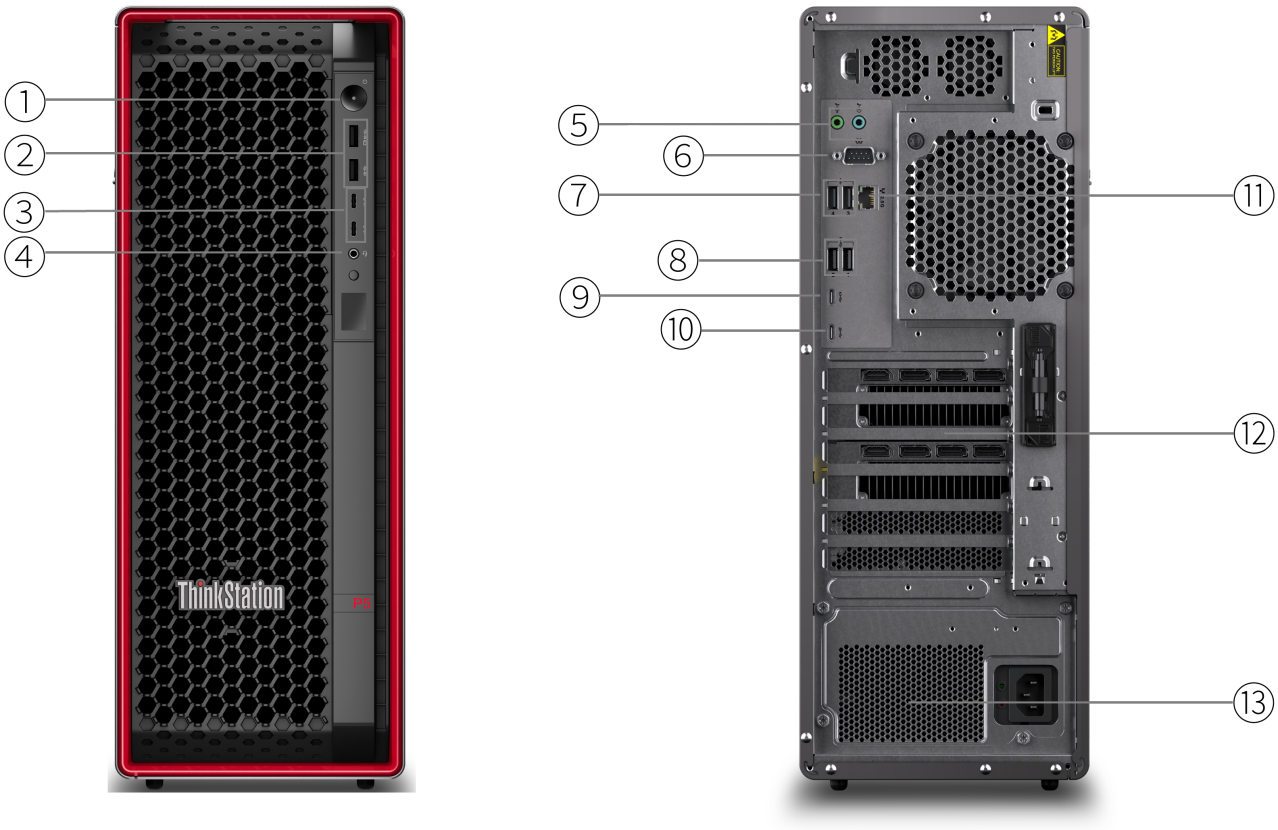
OVERVIEW



1. Power button	8. 2x USB-A (USB 10Gbps)
2. 2x USB-A (USB 10Gbps) *	9. USB-C (USB 10Gbps)
3. 2x USB-C (USB 10Gbps), data transfer only *	10. USB-C (USB 20Gbps / USB 3.2 Gen 2x2)
4. Headphone jack (3.5mm)	11. 2.5GbE Ethernet (RJ-45)
5. 2x Audio ports (line-out and line-in)	12. PCIe slots
6. Serial (9-pin) *	13. Power supply
7. 2x USB-A (Hi-Speed USB)	

Notes:

- Items with * are only available on selected models
- Expansion cards are optional. More ports are available through the optional expansion cards

PERFORMANCE

Processor

Processor Family

Up to one 300W Intel® Xeon® 600 Series processor, supports up to 48 cores, up to 4.9GHz

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	TDP	Intel® vPro® Eligibility
Xeon 634	12	24	2.7GHz	4.6GHz	48MB	DDR5-6400	150W	Intel® vPro® Enterprise
Xeon 636	12	24	3.5GHz	4.7GHz	48MB	DDR5-6400	170W	Intel® vPro® Enterprise
Xeon 638	16	32	3.2GHz	4.8GHz	72MB	DDR5-6400	180W	Intel® vPro® Enterprise
Xeon 654	18	36	3.1GHz	4.8GHz	72MB	DDR5-6400	200W	Intel® vPro® Enterprise
Xeon 656	20	40	2.9GHz	4.8GHz	72MB	DDR5-6400	210W	Intel® vPro® Enterprise
Xeon 658X	24	48	3.0GHz	4.9GHz	144MB	DDR5-6400	250W	Intel® vPro® Enterprise
Xeon 674X	28	56	3.0GHz	4.9GHz	144MB	DDR5-6400	270W	Intel® vPro® Enterprise
Xeon 676X	32	64	2.8GHz	4.9GHz	144MB	DDR5-6400	275W	Intel® vPro® Enterprise
Xeon 678X	48	96	2.4GHz	4.9GHz	192MB	DDR5-6400	300W	Intel® vPro® Enterprise

Processor Sockets

1x FCLGA4710

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.

AI (Artificial Intelligence)

AI PC Category

AI-Ready Workstations

Operating System

Operating System

- Windows® 11 Pro for Workstations
- Ubuntu Linux LTS
- Red Hat Enterprise Linux 10.2 (certified only, for detailed and latest information, please visit Red Hat Certified Hardware)

Graphics

Discrete Graphics Support

Supports up to two NVIDIA® RTX PRO 6000 Blackwell Max-Q Workstation Edition (300W)

Discrete Graphics Offering***

Graphics	Memory	Power	Connector	Form Factor	SLI / NVLink
NVIDIA® RTX PRO 6000 Blackwell Max-Q Workstation Edition	96GB GDDR7 with ECC	300W	4x DP 2.1	Dual slot	-

NVIDIA® RTX PRO 5000 Blackwell 72GB GDDR7	72GB GDDR7 with ECC	300W	4x DP 2.1	Dual slot	-
NVIDIA® RTX PRO 5000 Blackwell 48GB GDDR7	48GB GDDR7 with ECC	300W	4x DP 2.1	Dual slot	-
NVIDIA® RTX PRO 4500 Blackwell	32GB GDDR7 with ECC	200W	4x DP 2.1	Dual slot	-
NVIDIA® RTX PRO 4000 Blackwell	24GB GDDR7 with ECC	140W	4x DP 2.1	Single slot	-
NVIDIA® RTX PRO 2000 Blackwell	16GB GDDR7 with ECC	70W	4x miniDP 2.1	Dual slot	-
NVIDIA® RTX A1000	8GB GDDR6	50W	4x miniDP 1.4a	Single slot	None
NVIDIA® RTX A400	4GB GDDR6	50W	4x miniDP 1.4a	Single slot	None

Monitor Support

Monitor Support

Supports multiple displays via discrete graphics, the number of maximum monitors supported depends on the graphic card in use

Chipset

Chipset

Intel® W890 chipset

Memory

Max Memory[1]

Up to 1TB (8x 128GB RDIMM)

Memory Type

DDR5-6400 RDIMM ECC, maximum transfer speeds of up to 6400 MT/s[2]

Memory Slots

8 DDR5 DIMM slots, 4 channels capable

Memory Protection

ECC

Notes:

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

[2] System comes with DDR5-6400 memory and some configurations will run at 5200 MT/s due to the memory support capability of processor.

Storage

Max Storage Support[1][2]

Up to 8 drives (HDD maximum, 4x 3.5" HDD + 4x M.2 SSD);
or 11 drives (M.2 SSD maximum, 3x 3.5" HDD + 8x M.2 SSD)
• 3.5" HDD up to 12TB each
• M.2 SSD up to 4TB each

Storage Type***

Disk Type	Interface	RPM	Offering	Security
3.5" SATA HDD	SATA 6Gb/s	7.2K	2TB / 4TB / 10TB / 12TB	-
M.2 2280 SSD for Onboard / Front access M.2 / Quad M.2 to PCIe® adapter	PCIe® NVMe®, PCIe® 5.0 x4 Performance	-	512GB / 1TB / 2TB / 4TB	Opal 2.0

Storage Controllers

Storage Controller	Type	Interface	RAID	Cache

RAID 940-8i RAID Controller	Optional	SAS 12.0Gb/s, SATA 6.0Gb/s	0/1/5	4GB DDR4, SuperCap
Onboard Intel® RSTe SATA RAID	Standard	SATA 6.0Gb/s	0/1/10/5	None
Integrated NVMe® controller	Standard	PCIe® NVMe®	-	None
NVMe® Basic	Optional	PCIe® NVMe®	0/1/10	None
NVMe® Premium	Optional	PCIe® NVMe®	0/1/10/5	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

No optical support

Card Reader**

- 13-in-1 card reader
- 15-in-1 card reader
- No card reader

Multi-Media

Audio Chip

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

Speakers

Single speaker, 1.5W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
750W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
1000W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified

DESIGN

Mechanical

Form Factor

Tower (33L)

Dimensions (WxDxH)[1]

165 x 453.9 x 440 mm (6.5 x 17.9 x 17.3 inches, with feet)

Weight[2]

19 kg (41.9 lbs, maximum configuration)

Bays

Up to four internal disk bays:
• Bay 1 supports one 3.5" HDD, standard
• Bay 2 supports one 3.5" HDD, standard
• Bay 3 supports one 3.5" HDD, optional, by HDD bay or Dual Drive Internal Enclosure
• Bay 4 supports one 3.5" HDD optional, by Dual Drive Internal Enclosure
• Dual Drive Internal Enclosure requires two adjacent PCIe® slots (slots 4 and 5) for installation.

M.2 Slots

Up to 8x M.2 PCIe® 5.0 x4 SSD:
• 2x M.2 PCIe® 5.0 x4 via onboard slots
• 4x M.2 PCIe® 5.0 x4 via Quad M.2 to PCIe® Gen 5 adapter
• 2x M.2 PCIe® 5.0 x4 via front access M.2 bay

Expansion Slots

Supports 6 PCIe® slots with 3x PCIe® 5.0 slots and 3x PCIe® 4.0 slots.
• Slot 1: PCIe® 5.0 x16, full height, full length, 75W, double-width, by CPU
• Slot 2: PCIe® 4.0 x4, full height, full length, 25W, by PCH
• Slot 3: PCIe® 5.0 x16, full height, full length, 75W, double-width, by CPU
• Slot 4: PCIe® 4.0 x4, full height, full length, 25W, by CPU
• Slot 5: PCIe® 5.0 x8, full height, full length, 25W, by CPU
• Slot 6: PCIe® 4.0 x4, full height, full length, 25W, by PCH

EOU

Tool-less design for side cover, memory, 3.5" HDD, PCIe® card assembly / removal

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

WLAN + Bluetooth®[1]

- Intel® Wi-Fi® 7 BE200, 802.11be 2x2 Wi-Fi® + Bluetooth® 5.4, Intel® vPro® technology support
- No WLAN and Bluetooth®

Onboard Ethernet

2.5 Gigabit Ethernet, Intel® Ethernet Connection I226-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

Two additional Ethernet adapters support, up to four additional 25 GbE ports:
• Gigabit Ethernet, Intel® I210-T1, 1x RJ-45, PCIe® x1
• Gigabit Ethernet, Intel® I350-T4, 4x RJ-45, PCIe® x4
• 2.5 Gigabit Ethernet, Realtek® RTL8125BGS, 1x RJ-45, PCIe® x1
• 10 Gigabit Ethernet, Intel® E610-XT4, 4x 10GbE RJ-45, PCIe® x8, up to one
• 25 Gigabit Ethernet, Intel® E810-XXVDA2, 2x SFP28, PCIe® x8

Notes:

[1] Wi-Fi® operation (including Wi-Fi® 6, Wi-Fi® 6E, Wi-Fi® 7, etc.) is subject to the regulatory requirements of each country. Bluetooth® may operate at a lower version than hardware design depending on the factors such as operating system, driver, etc.

Ports[1]

Front Ports

1x headphone / microphone combo jack (3.5mm)

Optional Front Ports

- 2x USB-C® (USB 10Gbps / USB 3.2 Gen 2)
- 2x USB-A (USB 10Gbps / USB 3.2 Gen 2), one Always On
- 1x card reader

Rear Ports

- 1x USB-C® (USB 10Gbps / USB 3.2 Gen 2)
- 1x USB-C® (USB 20Gbps / USB 3.2 Gen 2x2)
- 2x USB-A (Hi-Speed USB / USB 2.0)
- 2x USB-A (USB 10Gbps / USB 3.2 Gen 2)
- 1x Ethernet (2.5GbE RJ-45)
- 1x line-in (3.5mm)
- 1x line-out (3.5mm)

Optional Rear Ports

- 1x serial (via cable)
- 4x serial (via 4-port serial expansion card, PCIe® x1)
- 2x PS/2 (via PCIe® adapter, PCIe® 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® 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.
Thunderbolt™ 5: 80 Gbit/s (bidirectional), up to 120 Gbit/s in bandwidth boost mode for video-intensive applications.

SECURITY & PRIVACY

Security

Security Chip

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

Physical Locks

- (Optional) Access panel lock kit with common key
- (Optional) Access panel lock kit with unique key
- Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- UEFI Secure Boot
- Power-on password
- Self-healing BIOS
- More BIOS security features, please visit BIOS Simulator

MANAGEABILITY

System Management

System Management[1]

- (Optional) Aspeed AST2600 graphics / management processor, IPMI 2.0-compliant baseboard management controller (BMC)
- Intel® vPro® Enterprise with Intel® AMT 16

Notes:

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

Diagnostic

Diagnostic

Front diagnostic panel with QR code

SERVICE

Warranty[1]

Base Warranty**

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

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://support.lenovo.com/warrantylookup/warrantypolicy.

OPERATING REQUIREMENTS

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%

ENVIRONMENTAL

Sustainability

Material[1]

• 65% PCC ABS bezel
• 95% PCC ABS wired USB keyboard/mouse top/bottom cover
• 90% PIC recycled plastic EPE cushion
• 30% OBP used in bag
• FSC certified paper in packaging

Notes:

[1] PCC: Post Consumer Content, recycled materials from customers.
PIC: Post Industry Content, recycled materials from internal factories.
EPE: Expanded Polyethylene.
OBP: Ocean Bound Plastic, reducing plastic spill into the sea.
FSC: Forest Stewardship Council.

CERTIFICATIONS

Green Certifications[1]

Green Certifications

- (Optional) EPEAT 2.0 Gold Registered[2]
- RoHS compliant

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration. For ESG & regulatory compliance documents, please visit https://compliance.lenovo.com.
[2] EPEAT 2.0 Gold applies to configurations without HDD.

ISV Certifications

ISV Certifications

Please visit ISV certifications for Lenovo® Workstations

- Feature with ** means that only one option listed under the feature can be configured on selected models. Please refer to the model configuration for specific information.
- Feature with *** means that one or more options listed under the feature can be configured on selected models. Please refer to the model configuration for specific information.
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