# ThinkCentre M90s Gen 4 12HQ0008PB

# PERFORMANCE

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

Intel® Core™ i7-13700, 16C (8P + 8E) / 24T, Max Turbo up to 5.2GHz, P-core 2.1 / 5.1GHz, E-core 1.5 / 4.1GHz, 30MB

#### Graphics

Integrated Intel UHD Graphics 770

#### Chipset

Intel Q670 Chipset

# Memory

1x 16GB UDIMM DDR5-4400

#### Memory Slots

Four DDR5 UDIMM slots, dual-channel capable

# Max Memory<sup>[2]</sup>

Up to 128GB DDR5

## Storage

512GB SSD M.2 2280 PCIe® 4.0x4 Performance NVMe® Opal 2.0

## Storage Support<sup>[3]</sup>

Up to four drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 2x M.2 SSD

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

#### Card Reader

3-in-1 Card Reader

#### Optical

**DVD±RW** 

#### Audio Chip

High Definition (HD) Audio, Realtek® ALC897Q-CG codec

Speakers

# 1Wx1

Power Supply 310W 92%

# DESIGN

#### Keyboard

USB Traditional Keyboard, Black, English (EU)

# Mouse

USB Calliope Mouse, Black

## **Optional Bay**

Optional 2.5" Bay

### **Expansion Slots**

- One PCIe 4.0 x16 (x4 signal), low-profile, length ≤ 155mm, height ≤ 70mm
- One PCIe 4.0 x16, low-profile, length ≤ 155mm, height ≤ 70mm
- One PCIe 3.0 x1, low-profile, length ≤ 155mm, height ≤ 70mm
- Three M.2 slots (one for WLAN, two for SSD)

# Case Color

Black Form Factor

SFF (8.2L)

## Dimensions (WxDxH)<sup>[4]</sup>

92.5 x 297.7 x 339.5 mm (3.6 x 11.7 x 13.4 inches)

#### Weight<sup>[5]</sup>

Around 5.3 kg (11.7 lbs)

# CONNECTIVITY

Ethernet Integrated 100/1000M

# WLAN + Bluetooth®<sup>[6]</sup>

Intel Wi-Fi<sup>®</sup> 6E AX211, 11ax 2x2 + BT5.1, vPro<sup>®</sup>

#### Front Ports

- 1x USB-C<sup>®</sup> 3.2 Gen 2 (support data transfer and 15W charging)
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

# **Optional Front Ports (configured)**

# 1x card reader

# Rear Ports

- 4x USB 3.2 Gen 1
- 1x HDMI® 2.1 TMDS
- 2x DisplayPort™ 1.4a (HBR2, DSC)
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

# **SECURITY & PRIVACY**

#### Security Chip

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

#### **Fingerprint Reader**

No fingerprint reader

#### Physical Locks

- Kensington<sup>®</sup> Security Slot<sup>™</sup>, 3 x 7 mm
- Padlock Loop

#### Chassis Intrusion Switch Chassis Intrusion Switch

# MANAGEABILITY

System Management<sup>[7][8]</sup> Intel<sup>®</sup> vPro<sup>®</sup> Enterprise

# SERVICE

# Base Warranty

3-year, Onsite

# Included Upgrade

1Y Premier Support from 3Y Onsite WHB (CPN)

Lenovo

# **CERTIFICATIONS**

### Green Certifications<sup>[9]</sup>

- ENERGY STAR® 8.0
- EPEAT<sup>™</sup> Silver Registered
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

### **Mil-Spec Test**

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

PSREF

Reference

Product Specifications

# SOFTWARE

#### **Operating System**

Windows® 11 Pro, Polish / English

current Lenovo storage offerings.

the exact weight for each specific model.

To see more note information, please link to https://psref.lenovo.com/Detail/2325?M=12HQ0008PB

# MODEL

TopSeller	: Yes	Announce Date	: 2023-06-19
EAN / UPC / JAN	: 0197528832005	End of Support	: 2029-11-27

Note:

limitations

[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.
[2] The max memory is based on the test results with current Lenovo memory offerings.
[3] The max capacity of each disk type is based on the test results with

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

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

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which varies depending on the source of component, variance of the

[5] The system weight is approximate and based on results in Lenovo lab.

distribution of each component, and manufacturing process. It may not be

[6] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS

# Premier Support - A direct 24x7x365 line to our most elite technicians.



Advanced technical support, 24x7x365, in more than 100 markets



Comprehensive hardware & OEM software support



Single point of contact for simplified end-to-end case management



Technical Account Managers for proactive relationship and escalation management

Priority on service delivery and repair parts



Lenovo Service Connect Portal for customized reporting and product support

# **Recommended Accessories**



# Lenovo USB-C to Ethernet Adapter

# 4X90S91831

The Lenovo USB-C to Ethernet Adapter is quick and easy way to connect your USB-C enabled notebook to Ethernet connections. It's ideal for imaging of systems or transferring large files quickly.

# Accidental Damage Protection - Protection of your PC from the unexpected.

Experience shows that a significant portion of devices may be damaged (and not covered under warranty) in the first three years. Lenovo's Accidental Damage Protection service covers accidents beyond the system warranty such as drops, spills, bumps and even electrical surges. Make sure your new device has maximum protection, avoid unplanned costs and get peace of mind.

# Base Warranty - Included with the systems you purchase, default 1- or 3-year coverage window.

# Warranty Extensions & Upgrades - Service and protection that's right for your circumstances.

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- Onsite Support

- Technician Installed Customer
- Replaceable Unit Service
- International Warranty Upgrade

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# **Recommended Services**

BEST	4Y Premier Support upgrade from 1Y Premier Support (5WS1F52294)
BETTER	3Y Premier Support upgrade from 1Y Premier Support (5WS1C83305)
GOOD	2Y Premier Support upgrade from 1Y Premier Support (5WS1C83297)



