# ThinkCentre M90s Gen 4 12HQ0008GE

# 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, German

# 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, German

the exact weight for each specific model.

To see more note information, please link to https://psref.lenovo.com/Detail/2325?M=12HQ0008GE

# MODEL

TopSeller	: Yes	Announce Date	: 2023-06-19
EAN / UPC / JAN	: 0197528831534	End of Support	: 2029-11-27

Note:

limitations

 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 current Lenovo storage offerings.[4] The system dimensions may vary depending on configurations.

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

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

· Lenovo reserves the right to change specifications without notice.

[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

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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.

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

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# **Recommended Services**

BEST	5Y Lenovo Support (Premier Support + KYD + International Upg) (5PS1J31179)	
BETTER	4Y Lenovo Support (Premier Support + KYD + International Upg) (5PS1J31175)	
GOOD	3Y Premier Support upgrade from 1Y Premier Support (5WS1C83305)	

For a full list of accessories and services, please visit: https://smartfind.Lenovo.com

