ThinkCentre M90s Gen 4 12HQ000EMX

PERFORMANCE

Processor^[1]

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

2x 16GB UDIMM DDR5-4400

Memory Slots Four DDR5 UDIMM slots, dual-channel capable

Max Memory^[2] Up to 128GB DDR5

Storage

1TB SSD M.2 2280 PCIe® 4.0x4 Performance NVMe® Opal 2.0

Storage Support^[3]

- 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

Audio Chip

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

Speakers

1Wx1

Power Supply 310W 92%

310 00 92%

DESIGN

Keyboard

USB Traditional Keyboard, Black, Nordic (DK/FI/NO/SV)

Mouse

USB Calliope Mouse, Black

Optional Bay

Optional 2.5" Bay

Expansion Slots

- One PCle[®] 4.0 x16 (x4 signal), low-profile, length ≤ 155mm, height ≤ 70mm
- One PCIe[®] 4.0 x16, low-profile, length \leq 155mm, height \leq 70mm
- One PCIe $^{\circ}$ 3.0 x1, low-profile, length \leq 155mm, height \leq 70mm
- Three M.2 slots (one for WLAN, two for SSD) Case Color

Black

Form Factor

SFF (8.2L) Dimensions (WxDxH)^[4]

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

Weight^[5]

Around 5.3 kg (11.7 lbs)

CONNECTIVITY

Ethernet

Integrated 100/1000M

WLAN + Bluetooth®[6]

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

Front Ports

- 1x USB-C[®] 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[®] Security Slot[™], 3 x 7 mm
- Padlock Loop

Lenovo

PSREF Product Specifications Reference

Chassis Intrusion Switch Chassis Intrusion Switch

MANAGEABILITY

System Management^{[7][8]} Intel[®] vPro[®] Enterprise

SERVICE

Base Warranty

3-year, Onsite

Included Upgrade

3Y Premier Support TC DT/AIO WHB (CPN), CO2 Offset 1 ton (2nd Generation Carbon Offset Projects)

CERTIFICATIONS

Green Certifications^[9]

- ENERGY STAR® 8.0
- EPEAT[™] 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)

SOFTWARE

Operating System

Windows® 11 Pro, Nordic (DK/FI/SV/NO/EN)

MODEL

limitations.

TopSeller	: Yes	Announce Date	: 2023-11-14
EAN / UPC / JAN	: 0197531427014	End of Support	: 2029-11-27

Note:

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

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

· Lenovo reserves the right to change specifications without notice.

the exact weight for each specific model.

To see more note information, please link to

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

https://psref.lenovo.com/Detail/2325?M=12HQ000EMX

[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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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 Soundbar

0A36190

The Lenovo USB Soundbar allows you to add stereo sound to your compatible Lenovo ThinkVision Monitor without having to sacrifice valuable desk space. The stylish Lenovo USB Soundbar is an excellent choice for adding ...

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	4Y Premier Support Plus upgrade from 3Y Premier Support (5WS1L39281)
BETTER	4Y Premier Support upgrade from 3Y Premier Support (5WSOW86713)
GOOD	3Y Premier Support Plus upgrade from 3Y Premier Support (5WS1L39061)



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