

ThinkCentre M90a Gen 6

For business professionals seeking a high-performance desktop, this system powered by the Intel® Core™ Ultra 9 Processor (Series 2) delivers the perfect blend of speed, responsiveness, and multitasking capability. These next-generation processors are designed to handle demanding workloads with ease, from data analysis to real-time collaboration and productivity software. Integrated Intel® GPU ensure smooth performance for everyday visual tasks, while the discrete NVIDIA® GeForce RTX™ 4050 GPU brings powerful acceleration for graphics-intensive workflows such as video rendering, 3D modeling, and AI-driven applications. Coupled with up to 64GB DDR5-5600 memory, the system offers rapid data processing, seamless multitasking, and the headroom to run multiple business applications without lag.



Empowering the modern workforce with a streamlined desktop experience

The ThinkCentre M Series AIOs offer seamless productivity with powerful processors, ample memory, and vibrant display. Space-saving design and versatile connectivity cater to the diverse needs of modern professionals.

The dual 3W Dolby Atmos® stereo speakers deliver crystal-clear audio ensuring every conference call, webinar, or multimedia presentation is heard with exceptional clarity. The optional 5.0-megapixel IR + RGB hybrid camera with ThinkShutter and Human Presence Detection enhances video call quality with sharp visuals and enables smarter interactions. Human Presence Detection allows the system to wake or lock automatically based on user proximity, improving both convenience and data security.

The Optional UltraFlex V stand offers a suite of productivity-enhancing benefits. Its broad -5° to +70° tilt range enables users to adjust screen angles effortlessly, reducing glare and supporting more comfortable viewing postures throughout the day.

This desktop featuring EPEAT® Gold, TCO 10.0, and ENERGY STAR® 9.0 certifications represents a commitment to environmental responsibility, energy efficiency, and ethical manufacturing. These certifications ensure that the device meets stringent global standards for reduced energy consumption, lower greenhouse gas emissions, and minimized use of harmful substances. Additionally, the use of 85% Post-Consumer Content (PCC) material in the chassis supports a circular economy, helping businesses reduce their carbon footprint while promoting responsible recycling practices.

Lenovo Services

Lenovo delivers tailored sustainability services, devices, and infrastructure solutions from our broad portfolio, working closely with you to support your target outcomes across the IT lifecycle..



Accessories

Lenovo Wireless VoIP Headset

- Versatile control buttons for seamless functionality
- Advanced microphone with noise cancellation technology
- Extended battery life for uninterrupted listening experience



PN: 4XD1M80020 (Lenovo Wireless VoIP Headset), 4XH1M80022 (Lenovo USB-A Bluetooth® Audio Receiver Gen 2), 4XD1M80021 (Lenovo Wireless VoIP Headset Earcup)



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Performance

Processor Intel Core Ultra 5 / 7 / 9 Processor (Series 2)
Operating System* Windows 11 Pro or Home
NPU* Integrated Intel AI Boost, up to 13 TOPS Discrete NPU card, up to 30 TOPS*
Graphics Intel Graphics (integrated) NVIDIA GeForce RTX 4050
Chipset Intel Q870 chipset
Memory^{1 1} Up to 64GB DDR5-5600, two SODIMM slots
Storage^{2 2 3} Up to three drives, 3x M.2 SSD M.2 SSD up to 2TB each RAID 0/1 support
Optical* DVD-ROM or DVD±RW, USB external

Audio* High Definition (HD) Audio Stereo speakers (3W x2), Dolby Atmos Dual-microphone array*
Camera*⁴ 5.0-megapixel RGB 5.0-megapixel RGB & IR hybrid 5.0-megapixel RGB & IR hybrid with Human Presence Detection
Power Supply*⁵ 180W 90% adapter, 80 PLUS Gold qualified 230W 92% adapter, 80 PLUS Platinum qualified
Design
Display⁴ 23.8" FHD (1920x1080) IPS display, Anti-glare, 16:9 - 250nits, 99% sRGB, hardware low blue light, flicker free, eyesafe 2.0, optional touch

⁴To comply with the regulation rules in each country, the camera with radar sensor is only selectable for the following countries / regions.

⁵230W PSU is for discrete graphics models only

Dimensions^{5 6} Models (with UltraFlex V stand, with camera): Starting at 539.6 x 333.45 x 224.10 mm (21.24 x 13.13 x 8.82 inches) Models (with tilt only stand, with camera): Starting at 539.6 x 213.14 x 442 mm (21.24 x 8.39 x 17.4 inches) Models (with full function monitor stand, with camera): Starting at 539.6 x 222.21 x 393.01 mm (21.24 x 8.75 x 15.47 inches)
Weight^{6 7} Models (with UltraFlex V stand): 7.16 kg (15.79 lbs, maximum configuration) Models (with tilt only stand): 7.12 kg (15.7 lbs, maximum configuration) Models (with full function monitor stand): 8.08 kg (17.81 lbs, maximum configuration)
Color Black
Bays No bays
Expansion Slots Four M.2 slots (one for WLAN, three for SSD / discrete NPU)
Ethernet* Gigabit onboard Ethernet

⁵The system dimensions may vary depending on configurations.

⁶The system dimensions may vary depending on configurations.

⁶The system weight is approximate and may vary depending on configurations

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WLAN + Bluetooth*⁸ 802.11be (Wi-Fi 7) or 802.11ax (Wi-Fi 6 / Wi-Fi 6E), Bluetooth 5.2, 5.3 or 5.4 Up to Realtek Wi-Fi 7 RTL8922AE, Bluetooth 5.4
WLAN + Bluetooth*⁸ 802.11be (Wi-Fi 7) or 802.11ax (Wi-Fi 6 / Wi-Fi 6E), Bluetooth 5.2, 5.3 or 5.4 Up to Realtek Wi-Fi 7 RTL8922AE, Bluetooth 5.4

⁸Wi-Fi 6E is only enabled on Windows 11 and operates a Wi-Fi 6 with Windows 10.

Rear ports
2x USB-A (USB 10Gbps / USB 3.2 Gen 2)
2x USB-A (USB 5Gbps / USB 3.2 Gen 1), one supports Smart Power On
1x HDMI (HDMI in 1.4 / HDMI out 2.1 TMDS combo port)
1x DisplayPort 1.4a (HBR2)
1x Ethernet (RJ-45)
1x serial*

Right ports
1x headphone / microphone combo jack (3.5mm)
1x USB-A (USB 10Gbps / USB 3.2 Gen 2)
1x USB-C (Thunderbolt 4 / USB4 40Gbps), with USB P 3.0 up to 65W output, DisplayPort 2.1, Always On
1x USB-C (USB 10Gbps / USB 3.2 Gen 2), support data transfer and 5V@3A charging
1x card reader*

Security & Privacy

Security
Discrete TPM 2.0, TCG certified, FIPS 140-2 certified
Kensington Security Slot, 3 x 7 mm
Chassis Intrusion Switch*
Smart Human Presence Detection (Camera with Rad Sensor)*
ThinkShutter camera cover (camera models)*

Manageability

System Management*⁹
Intel vPro Enterprise

⁹Intel vPro offers a superset of DASH's defined capabilities.

Items with * are optional and only available on selected models. Information presented here may represent the maximum possible configurations for this product, but it does not necessarily reflect what is available in your region. Please ask your rep or check the specifications for specific Part Numbers in your region. © 2026 Lenovo. Products are available while supplies last. Lenovo is not responsible for photographic or typographic errors. Lenovo, the Lenovo logo, ThinkPad, ThinkCentre, ThinkBook, ThinkStation and ThinkVision are trademarks or registered trademarks of Lenovo. 3rd party product and service names may be trademarks of others. Depending on factors such as the processing capability of peripheral devices, file attributes, system configuration and operating environments, the actual data transfer rate of USB connectors will vary and is typically slower than published standards.