

MINIS FORUM MS-A2

MINIS FORUM MS-A2 Mini PC User Manual

Model: MS-A2

1. PRODUCT OVERVIEW

The MINIS FORUM MS-A2 is a high-performance mini PC designed for demanding tasks, offering robust processing power, extensive connectivity, and flexible expansion options. This manual provides essential information for setting up, operating, maintaining, and troubleshooting your device.



Figure 1: MINIS FORUM MS-A2 Mini PC, a compact black desktop computer with ventilation grilles and front USB ports.

Key Features:

- **Powerful Processor:** Equipped with an AMD Ryzen 9 9955HX processor (16 cores, 32 threads, Zen5 architecture,

64MB L3 cache, up to 5.4 GHz), delivering excellent performance for multi-threaded computing and smooth HD graphics processing.

- **High-Speed Memory and Expandable Storage:** Features DDR5 SODIMM, supporting 5600 MT/s, up to 96 GB. Includes 3 M.2 NVMe SSD slots. Supports M.2 2280/22110/U.2 NVMe SSDs, U.2 HDDs up to 15 TB, with a maximum total capacity of 23 TB. PCIe 4.0 speeds up to 7000 MB/s. Supports RAID 0/1. *Note: A barebone system does not include memory, hard drive, or operating system.*
- **Efficient Cooling:** Designed with three pure copper heat pipes, phase-change thermal materials, and turbo fans, increasing airflow by 30%. The jet-type direct exhaust design effectively controls temperature for continuous 24/7 operation.
- **PCIe x16 Expansion:** Allows for expansion with high-performance network cards or professional graphics cards. Supports splitting into 2 PCIe x4 lanes, enabling professional half-height graphics cards or dual 10G network cards, suitable for AI inference and GPU-accelerated computing.
- **Triple Display and Ultra-Fast Network:** HDMI and dual USB-C ports support up to 8K@60Hz/4K@144Hz. Features dual 2.5Gb LAN, dual 10G SFP+ Ethernet ports for high data transfer rates, Wi-Fi 6E, and Bluetooth 5.2, providing impressive wired and wireless network speeds.

2. SETUP GUIDE

2.1 Package Contents

Before proceeding, ensure all components are present in the package:

- MINIS FORUM MS-A2 Mini PC
- Power Adapter
- User Manual (this document)
- Other accessories (e.g., SATA cables, screws for storage expansion, if applicable)

2.2 Connecting Peripherals

Connect your monitor, keyboard, and mouse to the appropriate ports on the mini PC.

Rich I/O Interfaces

Meet various needs

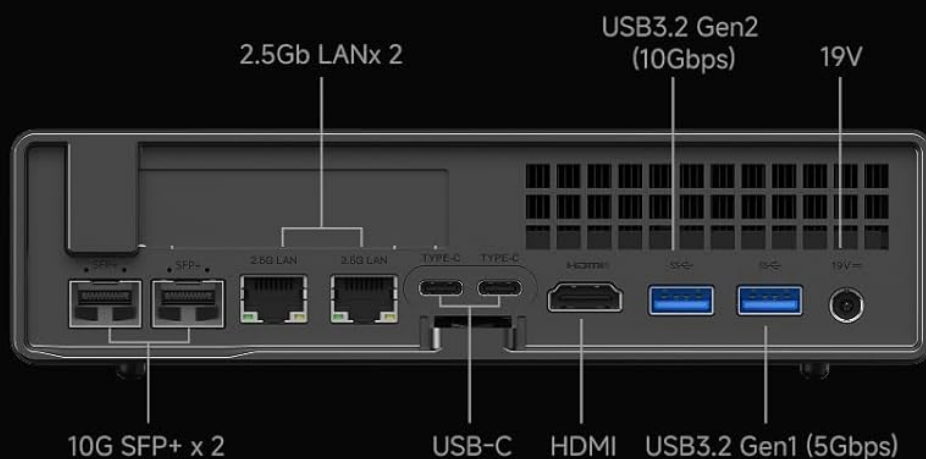


Figure 2: Diagram showing the front and rear I/O interfaces of the MS-A2 Mini PC, including USB 3.2 Gen1 (5Gbps), USB 2.0, 3.5mm Audio Jack, Power Button on the front, and 2.5Gb LAN x2, 10G SFP+ x2, USB-C, HDMI, USB 3.2 Gen2 (10Gbps), and power input on the rear.

- **Display:** Connect your monitor(s) to the HDMI or USB-C ports. The MS-A2 supports up to three displays simultaneously.

- **Keyboard & Mouse:** Connect your USB keyboard and mouse to any available USB ports.
- **Network:** For wired network access, connect an Ethernet cable to one of the 2.5Gb LAN ports or a 10G SFP+ port. For wireless, ensure Wi-Fi 6E is enabled in your operating system.
- **Audio:** Connect speakers or headphones to the 3.5mm audio jack.

2.3 Power Connection

Connect the power adapter to the DC-in port on the mini PC, then plug the power cord into an electrical outlet.

2.4 Initial Boot-up and OS Installation

Press the power button on the front of the device. If you purchased a barebone system, you will need to install an operating system (e.g., Windows 11, Linux) and drivers. Refer to your chosen operating system's installation guide for detailed steps.

3. OPERATING INSTRUCTIONS

3.1 Power On/Off

- **Power On:** Press the power button once.
- **Power Off:** From the operating system, select 'Shut Down'. Alternatively, press and hold the power button for 5 seconds to force a shutdown (use only when necessary).

3.2 Display Configuration

The MS-A2 supports up to three independent displays. Connect your monitors to the HDMI and USB-C ports. Once connected, configure your display settings within your operating system to extend or duplicate your desktop.

Triple Screens Display


HDMI 2.1


USB-C


USB-C



Figure 3: An illustration of the MS-A2 Mini PC connected to three monitors, demonstrating its triple screen display capability via HDMI 2.1 and two USB-C ports.

3.3 Network Connectivity

- **Wired Network:** The dual 2.5Gb LAN ports and dual 10G SFP+ ports provide high-speed wired network options.

Connect to your router or switch using appropriate cables.

- **Wireless Network:** The integrated Wi-Fi 6E module offers fast and reliable wireless connectivity. Enable Wi-Fi in your operating system settings and connect to your preferred network.
- **Bluetooth:** Bluetooth 5.2 allows connection to various wireless peripherals such as headphones, keyboards, and mice.

4. MAINTENANCE AND EXPANSION

4.1 Storage Expansion

The MS-A2 offers flexible storage expansion with multiple M.2 NVMe SSD slots and support for U.2 drives.

Flexible Expansion

Drawer-type body, multiple SSD slots



3×M.2 NVME SSD slots
Supports consumer-grade SSDs
with capacities up to 12TB

7000MB/s
up to

12TB
up to

Two slots default to PCIe 3.0×4; configurable to
PCIe 4.0×4 via BIOS

Supports U.2 NVME/M.2 22110
enterprise storage
Single up to 15TB, total
capacity up to 23 TB.



U.2
Enterprise SSD

15TB
Max single disk

23TB
Max support

Figure 4: Internal view of the MS-A2 Mini PC showcasing its flexible expansion capabilities, including three M.2 NVMe SSD slots supporting up to 12TB and U.2 NVMe/M.2 22110 enterprise storage for up to 15TB single disk or 23TB total.

- **M.2 NVMe SSDs:** The device features three M.2 NVMe SSD slots (2280/22110). To install, carefully open the chassis, locate the M.2 slots, insert the SSD, and secure it with the provided screw.
- **U.2 Drives:** The MS-A2 supports U.2 NVMe/M.2 22110 enterprise storage, allowing for high-capacity and high-

performance storage solutions.

- **RAID Configuration:** RAID 0/1 is supported for enhanced performance or data redundancy. Refer to your operating system or BIOS settings for RAID setup.

4.2 PCIe x16 Slot

The built-in PCIe x16 slot (operating at PCIe 4.0 x8 bandwidth) allows for further expansion. This can be used for:

- Half-height professional graphics cards
- Dual 10G network cards
- Other PCIe-compatible expansion cards

High-speed Network

Improved high-speed transmission productivity



SFP+



WiFi 6E



2.5G LAN



Built-in PCIe x16 slot

Physical PCIe x16 slot (PCIe 4.0×8 bandwidth), splittable into 2×PCIe 4.0 x4, supports expandability for GPUs, NICs, and other devices

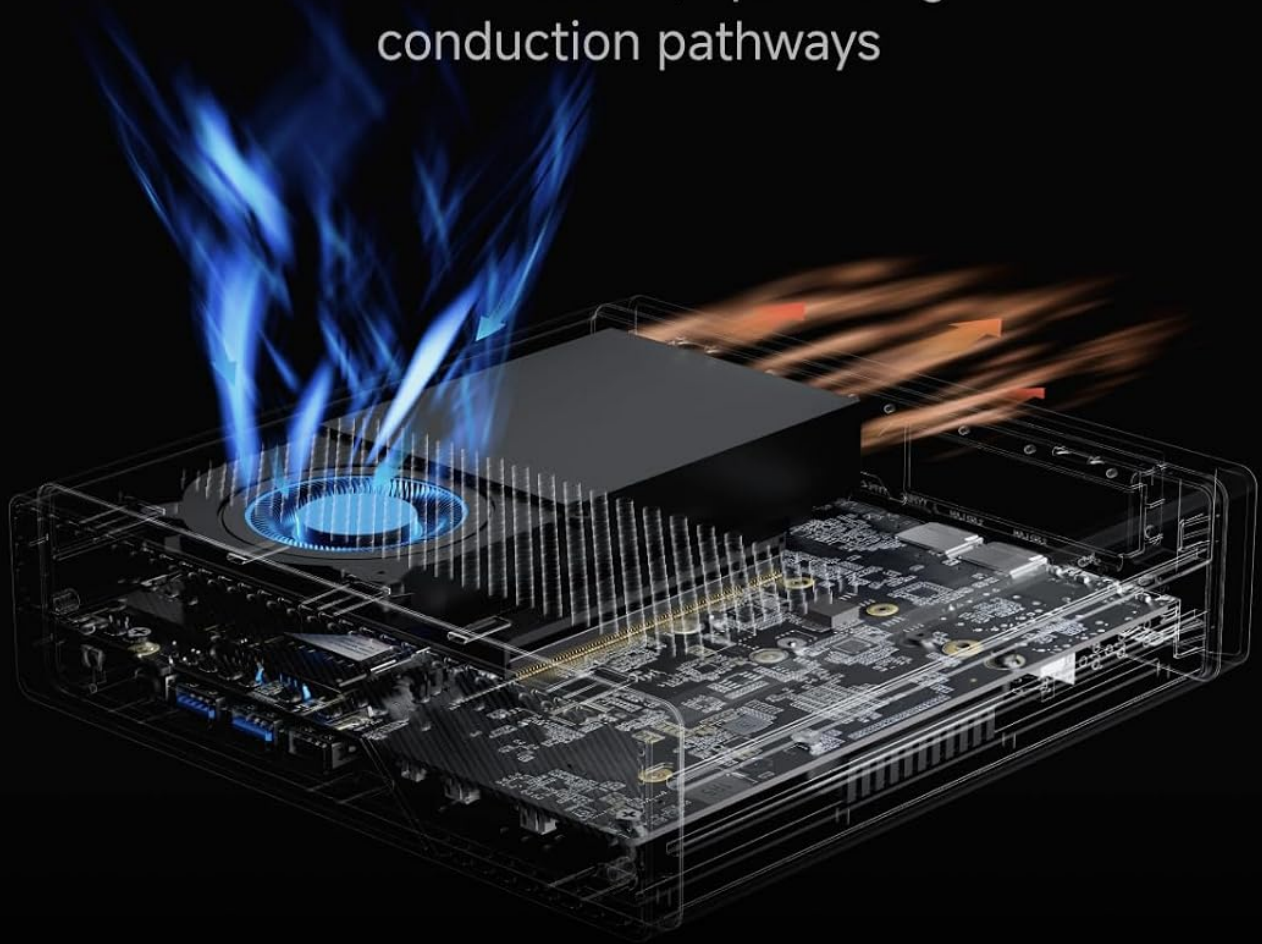
Figure 5: An illustration highlighting the high-speed network ports (SFP+, Wi-Fi 6E, 2.5G LAN) and the internal PCIe x16 slot of the MS-A2 Mini PC, emphasizing its expandability.

4.3 Cooling System

The MS-A2 features an advanced cooling system to maintain optimal performance and stability.

Efficient **Cooling** System

Features a triple-heatpipe pure copper thermal architecture, optimizing heat conduction pathways



New Upgrade
Three pure copper heat pipes



PCM Cooling Material
Temperature control, easy maintenance



Quiet Turbo Fan
30% increase in airflow



Jet-type Air Outlet
Efficiently heat dissipation

Figure 6: A cutaway diagram illustrating the efficient cooling system of the MS-A2 Mini PC, featuring three pure copper heat pipes, PCM cooling material, a quiet turbo fan, and a jet-type air outlet for effective heat dissipation.

To ensure continued efficient cooling:

- Keep the ventilation grilles clear of obstructions.

- Regularly clean dust from the vents using compressed air.
- Operate the device in a well-ventilated area.

5. TROUBLESHOOTING

5.1 No Power

- Check if the power adapter is securely connected to both the mini PC and the electrical outlet.
- Ensure the power outlet is functional by testing it with another device.
- Verify the power adapter is the correct one supplied with the device.

5.2 No Display Output

- Ensure the monitor is powered on and the correct input source is selected.
- Check that the HDMI or USB-C cables are securely connected to both the mini PC and the monitor.
- Try connecting to a different display or using a different cable to rule out faulty components.
- If using a barebone system, ensure an operating system and graphics drivers are installed.

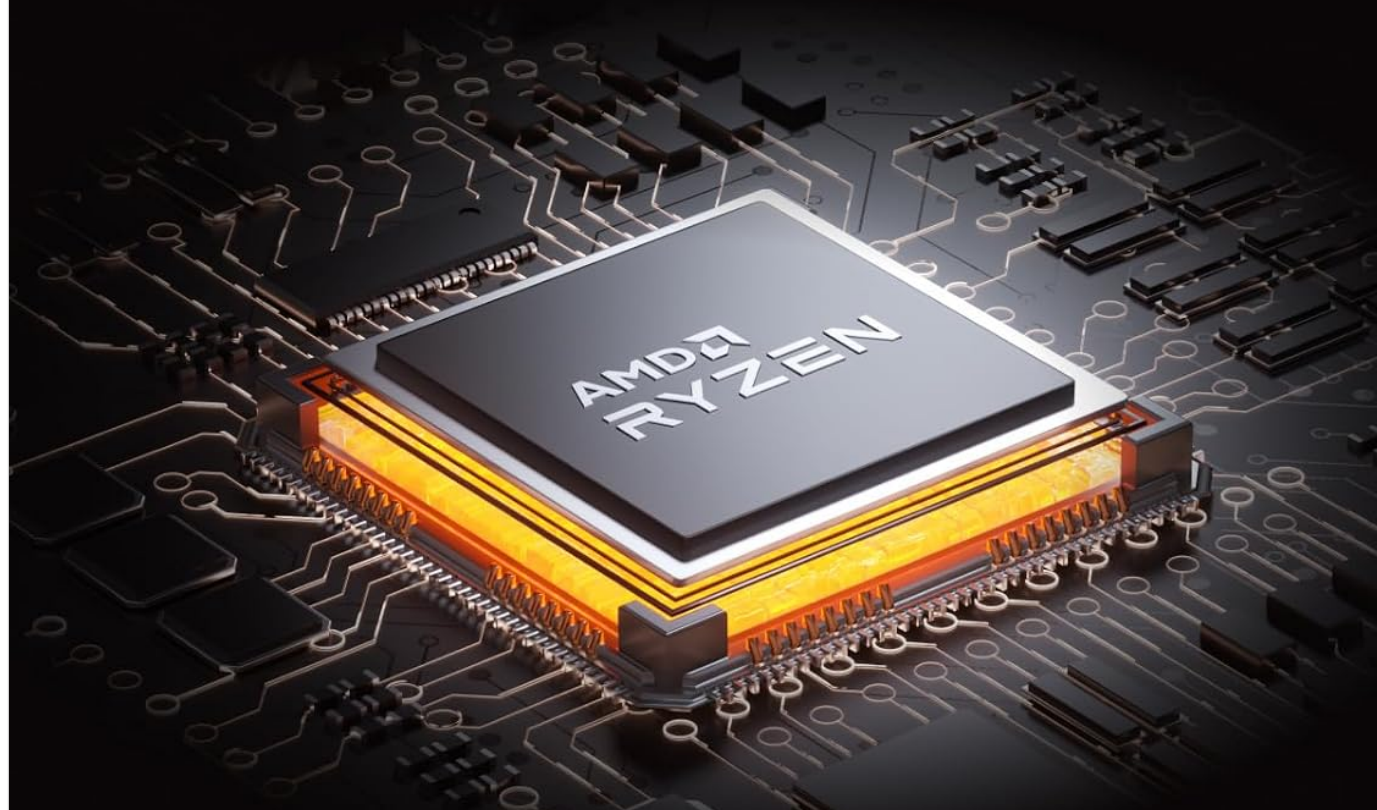
5.3 Network Connectivity Issues

- **Wired:** Check the Ethernet cable connection. Verify your router/switch is working correctly.
- **Wireless:** Ensure Wi-Fi is enabled in your operating system. Check if the correct Wi-Fi network is selected and the password is entered correctly. Restart your router.

6. SPECIFICATIONS

Excellent Performance

Equipped with AMD **Ryzen 9 9955HX** processor



Zen5

Architecture

16/32

Cores/Threads

64MB

Cache

5.4GHz

Max Frequency

100W

TDP

Cinebench R23 Multi-core

Low Latency

AMD Ryzen™ 9 9955HX 35000

AMD Ryzen™ 9 7945HX 31000

Cinebench R23 Single-core

High Speed

AMD Ryzen™ 9 9955HX 2144

AMD Ryzen™ 9 7945HX 1927

Figure 7: An illustration detailing the excellent performance of the MS-A2 Mini PC, highlighting the AMD Ryzen 9 9955HX processor's Zen5 architecture, 16 cores/32 threads, 64MB cache, 5.4GHz max frequency, and 100W TDP, along with Cinebench R23 multi-core and single-core scores.

Feature	Description
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Brand	MINIS FORUM
Model Number	MS-A2
Operating System	Linux, Windows 11 (Barebone system requires OS installation)
CPU Model	AMD Ryzen 9 9955HX
CPU Speed	5.4 GHz
Number of CPU Cores	16
L3 Cache Size	64 MB
Graphics Coprocessor	Integrated Graphics (AMD)
Graphics Card Interface	PCI Express
RAM Technology	DDR5 SODIMM
Max RAM Size	96 GB
Memory Speed	5600 MT/s
Memory Slots	2
Storage Capacity	Up to 15 TB (single U.2 HDD), up to 23 TB (total max)
Hard Drive Technology	NVMe SSD (up to 15 TB) + 2 x NVMe/SATA SSD (up to 4 TB)
Hard Drive Interface	Serial ATA 600
Video Output Interface	HDMI, USB-C (DisplayPort 2.0 alternative mode)
Max Display Resolution	7680x4320 (8K@60Hz)
Connectivity Technology	Wi-Fi 6E (802.11ax), Bluetooth 5.2, 2x 2.5G LAN, 2x 10G SFP+
Total USB Ports	5
Total HDMI Ports	1
Cooling Method	Air (Triple heat pipe, turbo fan)
Weight	3 Kilograms
Color	Black
Year of Model	2025

7. WARRANTY AND SUPPORT

7.1 Warranty Information

The MINIS FORUM MS-A2 Mini PC comes with a 2-year warranty. Please retain your proof of purchase for warranty

claims. The warranty covers manufacturing defects and hardware malfunctions under normal use conditions.

7.2 Technical Support

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact MINIS FORUM customer support through their official website or the retailer where you purchased the product. Have your model number and purchase details ready when contacting support.

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ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question