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MINISFORUM MS-A1

MINISFORUM MS-A1 Workstation Barebone Mini PC Instruction Manual

Model: MS-A1 | Brand: MINISFORUM

1. INTRODUCTION

This manual provides essential information for the setup, operation, maintenance, and troubleshooting of your MINISFORUM MS-A1 Workstation Barebone Mini PC. The MS-A1 is designed as a high-performance barebone system, offering flexibility for users to customize components such as the CPU, RAM, SSD, and operating system.



Image: The MINISFORUM MS-A1 Workstation Mini PC, showcasing its compact design and various ports from front and side perspectives.

2. SAFETY INFORMATION

- Always disconnect power before performing any installation or maintenance.
- Handle internal components with care to avoid electrostatic discharge. Use an anti-static wrist strap if available.
- Ensure proper ventilation around the device to prevent overheating.
- Do not expose the device to moisture or extreme temperatures.
- Use only the provided power adapter and cable.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

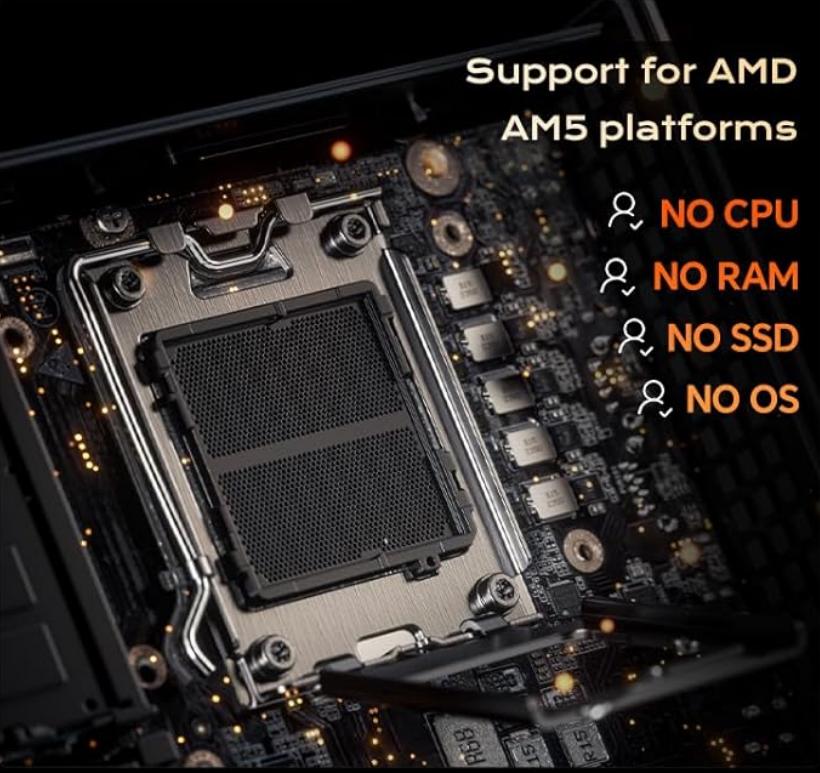
- 1x MS-A1 Mini Workstation
- 1x Power Adapter
- 1x Power Cord
- 1x HDMI Cable
- 1x Manual (this document)

4. SETUP & HARDWARE INSTALLATION

As a barebone system, the MS-A1 requires user installation of the CPU, RAM, SSD, and operating system. Follow these steps for initial setup and component installation:

4.1. Component Installation (DIY)

The MS-A1 supports AMD AM5 Socket CPUs. For memory, it features two DDR5-5200 slots, allowing for up to 96GB of RAM. Storage options include one M.2 2280 PCIe4.0 SSD slot (compatible with RAID0 and RAID1) and three additional M.2 NVMe SSD slots for extensive storage capacity.



Support for AMD AM5 platforms

- ✗ **NO CPU**
- ✗ **NO RAM**
- ✗ **NO SSD**
- ✗ **NO OS**

8K Triple Display

HDMI2.1 | DP2.0 | USB4



USB4 Interface

Up to 40Gbps



40G

Oculink Expansion

External discrete GPU



Cold Wave Cooling System

Dual fan, quad heat pipe



Ultra Storage

M.2 PCIe4.0
NVME SSD Slots*4



High Speed Network

Dual 2.5G RJ45 ports

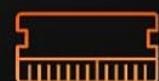


Image: Internal view of the MS-A1, highlighting the AMD AM5 CPU socket, DDR5 RAM slots, and M.2 SSD expansion slots.

Support Triple Screen Display

①HDMI 2.1 (4K@120Hz) ② DP2.0(4K@144Hz) ③USB4(4K@144Hz)



Image: Detailed view of the MS-A1's storage capabilities, showing flexible expansion with multiple M.2 PCIe4.0 NVMe SSD slots.

4.2. External Connections

Connect your peripherals and displays to the available ports:

- **Display Outputs:** 1x HDMI (4K@60Hz), 1x DP (4K@144Hz), 1x USB-C (Alt DP, 4K@144Hz) for triple display support.
- **USB Ports:** Multiple USB 2.0 and USB 3.0 ports for connecting keyboards, mice, and other USB devices.
- **Network:** 2x 2.5G RJ45 LAN ports for high-speed wired network connections.
- **Audio:** 3.5mm Combo Jack for headphones/microphone.
- **Power:** Connect the provided power adapter to the DC-in port.

Extra Large Storage

Flexible Expansion
Dual channel
DDR5 5200Mhz

up to 96GB



4xM.2 PCIe4.0 NVME ports
Up to 7000MB/s
transmission speed



Max capacity 16TB
Supports RAID0/RAID1

Image: A diagram illustrating the layout of all front and rear ports on the MINISFORUM MS-A1 Workstation.

Cold Wave Pro Cooling System

Equipped with dual cooling fans + 4 heat pipes
Efficient and quiet performance release



Image: Close-up of the dual 2.5Gbps RJ45 Ethernet ports and a full-capacity USB4 Speed Port on the MS-A1.

For a visual overview of the workstation, refer to the following video:

Your browser does not support the video tag.

Video: A brief overview of the MINISFORUM MS-A1 Workstation, demonstrating its compact size and various connectivity options.

5. OPERATING YOUR MS-A1

5.1. Power On/Off

Press the power button located on the front panel to turn the device on or off. A short press will initiate power-on, while a longer press (typically 5 seconds) will force a shutdown.

5.2. Display Configuration

The MS-A1 supports up to three independent displays simultaneously, utilizing its HDMI, DisplayPort, and USB-C (Alt DP) outputs. This allows for an expanded workspace and improved multitasking capabilities.

Dual 2.5Gbps RJ45 Ethernet Ports

Support WAN and
LAN port aggregation



Full-capacity USB 4 Speed Port

Up to 40 Gbps

Image: The MS-A1 connected to three monitors, demonstrating its triple display output capability for an expansive visual experience.

5.3. Network Connectivity

Utilize the dual 2.5G RJ45 LAN ports for robust and high-speed wired network connections. The device also includes Dual Band WiFi and Bluetooth 5.2 for wireless connectivity to networks and peripherals.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your MS-A1 Workstation.

- **Dust Removal:** Periodically clean the ventilation grilles and internal components (if comfortable opening the chassis) to prevent dust buildup, which can hinder cooling performance.
- **Cooling System:** The workstation features an upgraded dual-fan 4-heat pipe cooling system. Ensure that the fans are not obstructed and are operating correctly.

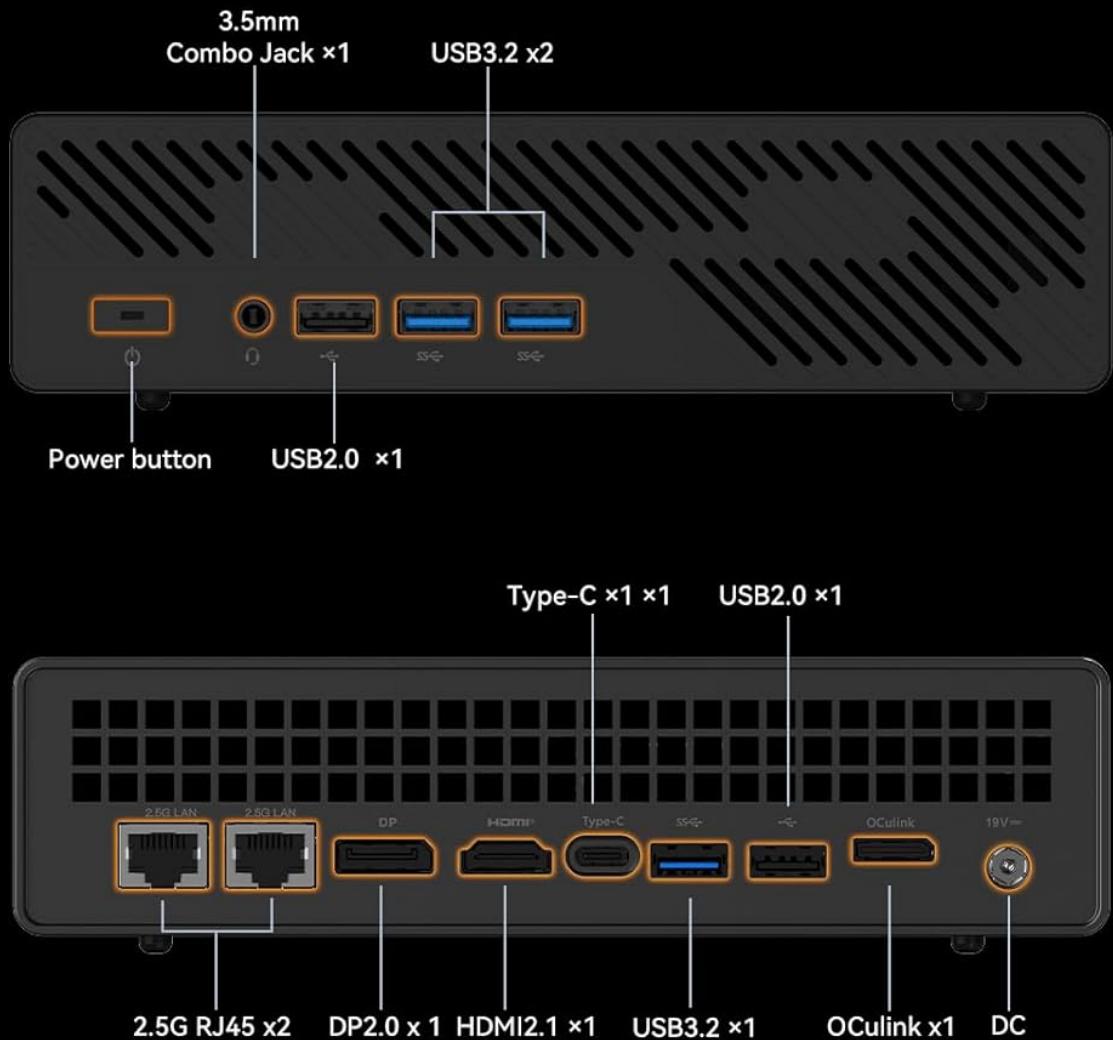


Image: A diagram illustrating the internal components of the MS-A1's Cold Wave Pro Cooling System, featuring dual fans and four heat pipes.

7. TROUBLESHOOTING

If you encounter issues with your MS-A1, consider the following common solutions:

- **No Power:** Ensure the power adapter is securely connected to both the device and a working power outlet. Verify the power cord is properly seated.
- **No Display:** Check all display cable connections (HDMI, DP, USB-C). Ensure your monitor is set to the correct input source.
- **Driver Issues:** After installing an operating system, ensure all necessary drivers are installed. MINISFORUM typically provides drivers on their official website.
- **SSD Speed:** If experiencing slower-than-expected SSD performance, check the BIOS settings under "Advanced" -> "AMD PBS" to ensure M.2 NVMe SSD slots are configured for Gen4 speed if your SSD supports it. Note that setting Gen4 mode may increase heat.
- **Overheating/Noise:** Ensure the device has adequate airflow. Consider adjusting fan settings in the BIOS (e.g., "Quiet" or "Balance" mode) or disabling CPU boost if sustained high loads cause excessive heat or noise.

8. SPECIFICATIONS

Feature	Detail
Brand	MINISFORUM
Model Name	DeskMini (MS-A1)
CPU Socket	AMD AM5 Socket (CPU not included)
Memory Type	DDR5 RAM (2x SODIMM slots, up to 96GB, 5200 MHz)
Storage	1x M.2 2280 PCIe4.0 SSD slot (RAID0/RAID1), 3x additional M.2 NVMe SSD slots (Max 16TB)
Graphics Output	1x HDMI (4K@60Hz), 1x DP (4K@144Hz), 1x USB-C (Alt DP, 4K@144Hz)
Network	2x 2.5G RJ45 LAN Ports, Dual Band WiFi, Bluetooth 5.2
USB Ports	2x USB 2.0, 3x USB 3.0, 1x USB-C (USB4, 40Gbps)
Cooling System	Dual-fan 4-heat pipe cooling (noise levels as low as 37 dB)
Dimensions	9.92 x 9.92 x 7.64 inches (Package)
Weight	7.98 pounds (Item)
Color	Black

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official MINISFORUM website or contact their customer service directly. Keep your purchase receipt for warranty claims.

MINISFORUM is committed to providing innovative products and customer satisfaction. For driver downloads or further assistance, visit the official MINISFORUM support page.

