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› [MINISFORUM MS-01 Mini PC User Manual - Intel Core i9-12900H Barebone](#)

## MINISFORUM MS-01-S1290

# MINISFORUM MS-01 Mini PC User Manual

Model: MS-01-S1290-Barebone

Brand: MINISFORUM

## 1. INTRODUCTION

This manual provides detailed instructions for the setup, operation, and maintenance of your MINISFORUM MS-01 Mini PC. Please read this manual thoroughly before using the device to ensure proper functionality and to prevent damage.

The MINISFORUM MS-01 is a high-performance barebone mini PC designed for demanding tasks, featuring an Intel Core i9-12900H processor, extensive connectivity, and flexible storage expansion options.

## 2. SAFETY INFORMATION

- Always disconnect the power adapter before performing any maintenance or component installation.
- Avoid exposing the device to moisture, extreme temperatures, or direct sunlight.
- Do not open the chassis or attempt repairs unless specifically instructed in this manual. Refer to qualified service personnel for complex issues.
- Ensure proper ventilation around the device to prevent overheating.
- Use only the provided power adapter or a compatible replacement.

## 3. PACKAGE CONTENTS

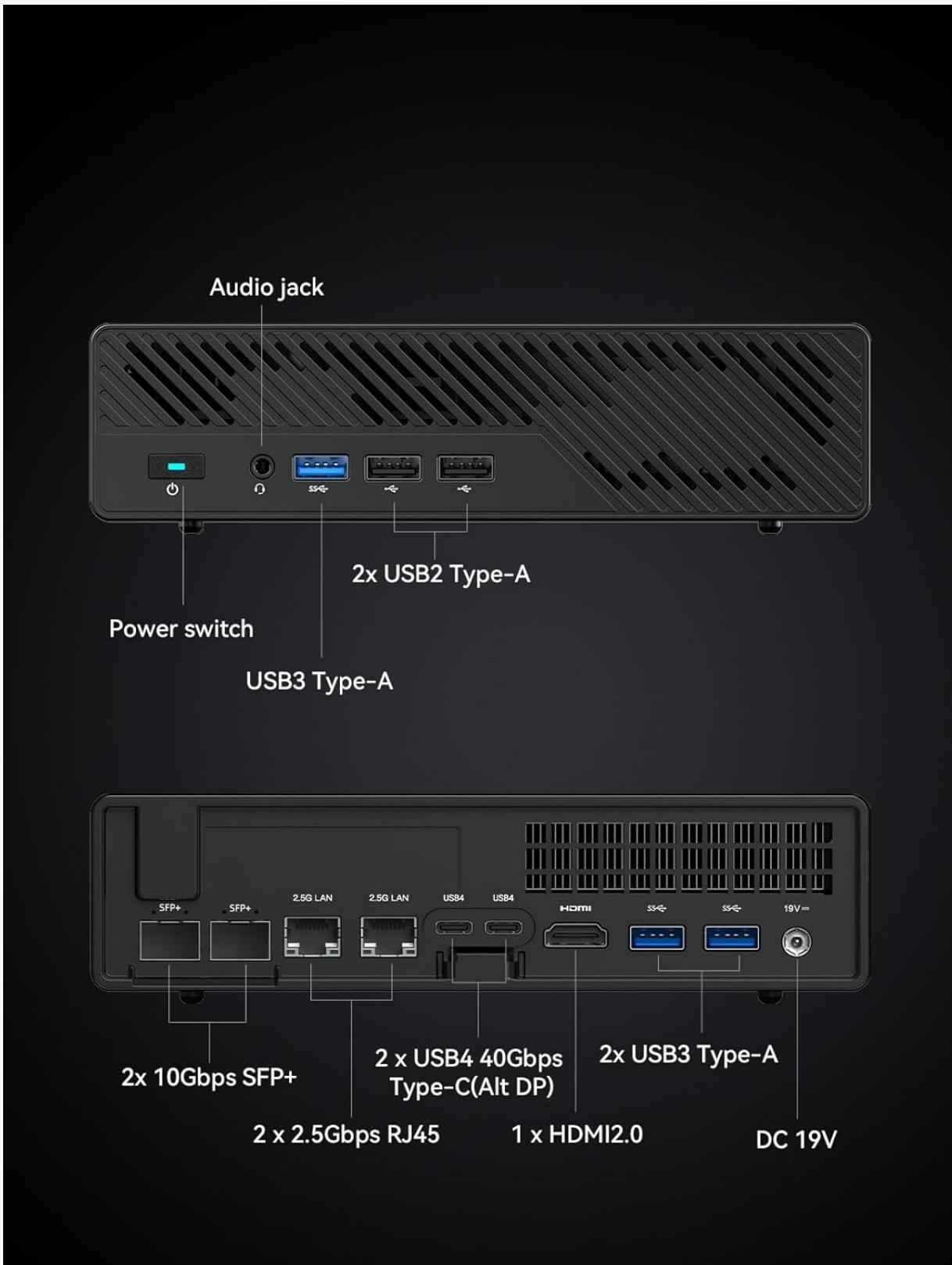
Verify that all items are present in your package:

- MINISFORUM MS-01 Mini PC (Barebone)
- Power Adapter
- Power Cable
- U.2 Conversion Plate
- SSD Heat Sink
- Mounting Screws
- HDMI Cable
- User's Manual

## 4. PRODUCT OVERVIEW

The MINISFORUM MS-01 is a compact and powerful mini PC. Below are key features and an overview of its physical layout.

### Front Panel



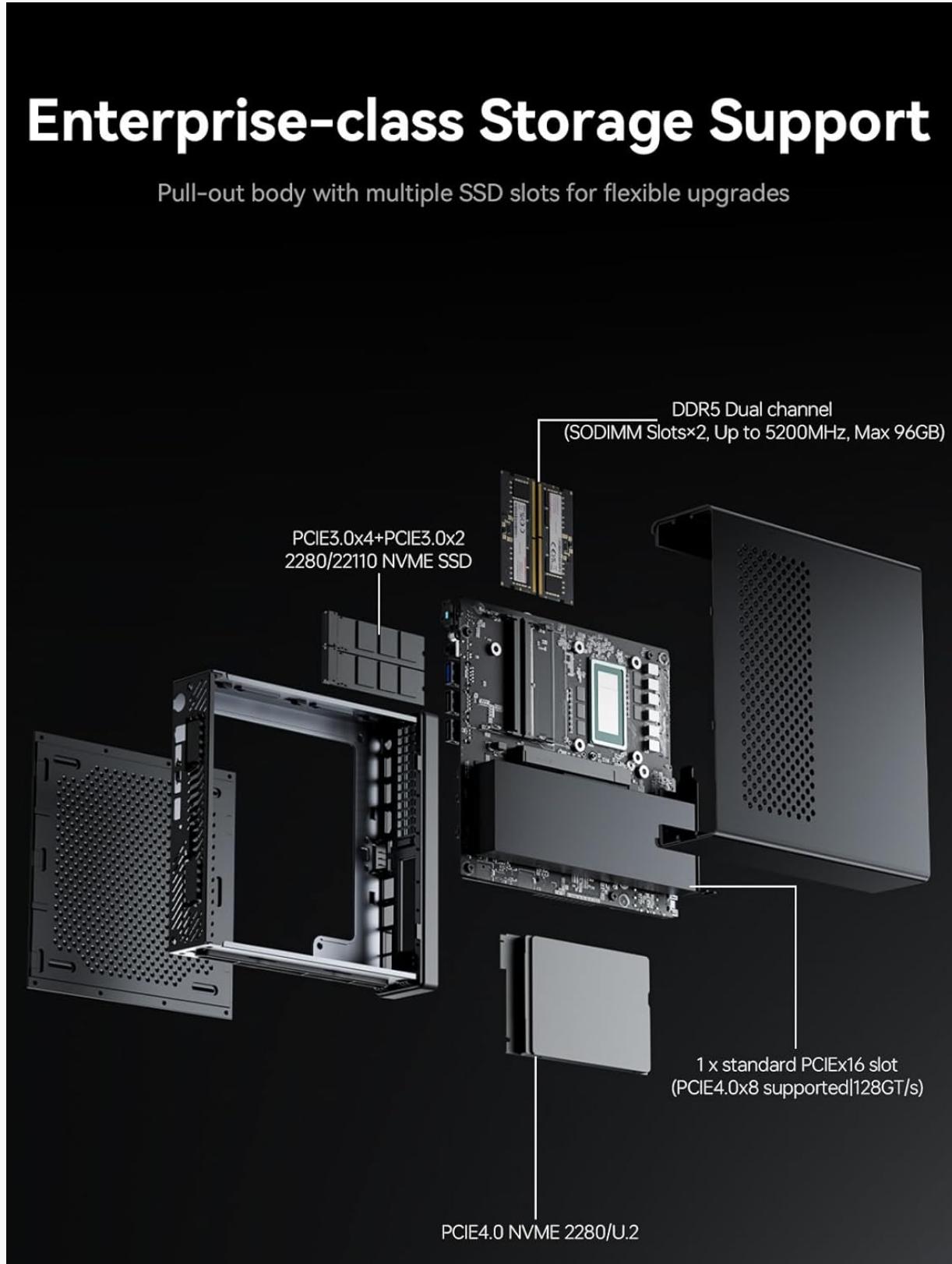
**Image:** Front and Rear Panel Layout. The front panel includes the power button, audio jack, 2x USB 2.0 Type-A ports, and 1x USB 3.0 Type-A port.

### Rear Panel

The rear panel offers extensive connectivity:

- 2x 10Gbps SFP+ ports
- 2x 2.5Gbps RJ45 Ethernet ports
- 2x USB4 40Gbps Type-C ports (with Alt DP support)
- 1x HDMI 2.0 port
- 2x USB 3.0 Type-A ports
- DC 19V power input

## Internal Components & Expansion



**Image:** Exploded view of the MS-01, illustrating the internal layout including RAM slots, M.2 NVMe SSD slots, and the PCIe x16 slot.

The MS-01 supports:

- Dual-channel DDR5 SODIMM memory, up to 96GB.
- Up to three M.2 NVMe SSDs (one PCIe 4.0 compatible, two 2280/22110).
- One standard PCIe 4.0 x16 slot (x8 supported) for expansion cards like GPUs (up to RTX A2000 Mobile), network cards, or storage controllers.
- Enterprise-class storage with support for one U.2 NVMe SSD and two 22110 M.2 NVMe SSDs, totaling up to 24TB.

## 5. SETUP & COMPONENT INSTALLATION

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This section guides you through the initial setup and installation of components.

### 5.1 Opening the Chassis

To access the internal components, gently slide open the chassis. The MS-01 features a tool-less design for easy access.

### 5.2 Installing Memory (DDR5 SODIMM)

The MS-01 supports dual-channel DDR5 SODIMM modules. Align the notch on the memory module with the slot and press down firmly until the clips secure it.

### 5.3 Installing M.2 NVMe SSDs

Insert the M.2 NVMe SSD into the designated slot at an angle, then gently push down and secure it with the provided screw. Ensure the SSD heatsink is properly attached for optimal thermal performance.

### 5.4 Installing a PCIe Graphics Card (Optional)

If installing a low-profile PCIe graphics card, carefully insert it into the PCIe x16 slot and secure it with the retaining mechanism and screw.

### 5.5 Installing U.2 NVMe SSD (Optional)

Utilize the provided U.2 conversion plate to install a U.2 NVMe SSD. Connect the U.2 SSD to the conversion plate and then install the assembly into the chassis, securing it with screws.

### 5.6 Closing the Chassis

Once all components are installed, carefully slide the chassis cover back into place until it clicks securely.

### Installation Tutorial Video

**Video:** This tutorial demonstrates how to open the MINISFORUM MS-01 chassis, install memory modules (DDR5), install a graphics card in the PCIe slot, and install M.2 NVMe SSDs and a U.2 NVMe SSD. It provides a visual guide for component upgrades.

## 6. OPERATING INSTRUCTIONS

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### 6.1 Powering On/Off

- **Power On:** Connect the power adapter and press the power button on the front panel.
- **Power Off:** Shut down the operating system normally. Alternatively, press and hold the power button for 5 seconds to force a shutdown.

### 6.2 Connecting Peripherals

Connect your monitor(s), keyboard, mouse, and other USB devices to the appropriate ports on the front

and rear panels.

### 6.3 Multi-Screen Display Setup



**Image:** The MS-01 connected to three monitors, demonstrating its triple screen display capability. The MS-01 supports triple screen display via:

- 1x HDMI 2.0 (4K@60Hz)
- 2x USB4 (8K@30Hz) via Type-C ports

Connect your monitors to these ports. The operating system will automatically detect and configure the displays. You can adjust display settings (resolution, orientation, extension) within your operating system's

display settings.

## 7. MAINTENANCE

### 7.1 Cleaning

Regularly clean the exterior of the mini PC with a soft, dry cloth. Use compressed air to clear dust from the ventilation grilles to maintain optimal airflow and cooling performance.

### 7.2 Thermal Management



**Image:** Internal view highlighting the cooling system, including the memory cooling fan and SSD heat sink, designed for

efficient heat dissipation.

The MS-01 features an excellent cooling system with a memory cooling fan and SSD heat sink. Ensure the vents are unobstructed for efficient and quiet performance.

## 8. TROUBLESHOOTING

- **No Power:** Check if the power adapter is securely connected to both the device and a working power outlet.
- **No Display:** Ensure the monitor is properly connected and powered on. Verify the correct input source is selected on the monitor. Try connecting to a different display port or monitor.
- **Device Not Booting:** Check if RAM and SSDs are correctly installed and seated. If recently installed new components, try removing them to isolate the issue.
- **Overheating:** Ensure all ventilation openings are clear of obstructions. Clean any dust buildup from the fans and heatsinks.
- **Peripheral Not Detected:** Try connecting the peripheral to a different USB port. Ensure drivers are installed for the peripheral if required.

## 9. SPECIFICATIONS

Feature	Specification
Processor	Intel Core i9-12900H (14 Cores/20 Threads, up to 5.0GHz)
Graphics	Integrated Intel Iris Xe Graphics
Memory	Dual Channel DDR5, up to 96GB
Storage	3x M.2 NVMe SSD slots (1x PCIe 4.0, 2x 2280/22110), 1x U.2 NVMe SSD support (via conversion plate)
Connectivity	2x 10Gbps SFP+, 2x 2.5Gbps RJ45, 2x USB4 (40Gbps, Alt DP), 1x HDMI 2.0, 3x USB 3.0, 2x USB 2.0, Audio Jack
Wireless	802.11ax (Wi-Fi 6E), Bluetooth 5.2
Operating System	No OS (Barebone)
Dimensions	9.17 x 9.09 x 4.69 inches (Package)
Weight	3.12 pounds

## 10. WARRANTY AND SUPPORT

MINISFORUM products typically come with a standard manufacturer's warranty. Please refer to the warranty card included in your package or visit the official MINISFORUM website for detailed warranty terms and conditions.

For technical support, driver downloads, or further assistance, please visit the MINISFORUM support page or contact their customer service directly.

 <p>MINISFORUM https://www.minisforum.com/mini-pc/mini-pc-760.html Description: Mini PC UM760</p>	<p><a href="#">Minisforum UM760 Mini PC User Manual</a></p> <p>User manual for the Minisforum UM760 Mini PC, detailing package contents, hardware overview, interface specifications, setup guide, DIY installation of RAM and SSD, and mounting instructions.</p>
 <p>MINISFORUM New Gen Mini Workstation Series https://www.minisforum.com/mini-workstation/ms-a1.html Description: Mini Workstation MS-A1</p>	<p><a href="#">MINISFORUM MS-A1 New Gen Mini Workstation Series User Manual</a></p> <p>User manual and installation guide for the MINISFORUM MS-A1 New Gen Mini Workstation Series. Covers setup, safety, interface, and component installation.</p>
 <p>MINISFORUM https://www.minisforum.com/mini-pc/mini-pc.html Description: Mini PC</p>	<p><a href="#">Minisforum Mini PC User Manual and Installation Guide</a></p> <p>User manual for Minisforum Mini PCs, detailing setup, port functions (USB4, HDMI, DisplayPort, OCulink), installation of DDR and SSD, and operational guides. Includes FCC compliance information.</p>
 <p>MINISFORUM New Gen Venus Series https://www.minisforum.com/mini-pc/venus.html Description: Mini PC Venus</p>	<p><a href="#">MINISFORUM New Gen Venus Series Mini PC User Manual</a></p> <p>Comprehensive user manual for the MINISFORUM New Gen Venus Series Mini PC. Get detailed information on package contents, system overview, ports, interfaces, and safety guidelines for your MINISFORUM mini computer.</p>
 <p>MINISFORUM MKB i83 https://www.minisforum.com/mechanical-keyboard/mkb-i83.html Description: Mechanical Keyboard MKB i83</p>	<p><a href="#">MINISFORUM MKB i83 Three-Mode Mechanical Keyboard Quick Start Guide</a></p> <p>Concise guide for the MINISFORUM MKB i83 mechanical keyboard, covering setup, connectivity (Bluetooth, 2.4G, Wired), function keys, backlighting, and specifications.</p>
 <p>Minisforum MGP01 https://www.minisforum.com/wireless-controller/mgp01.html Description: Wireless Controller MGP01</p>	<p><a href="#">Minisforum MGP01 Switch Wireless Controller User Manual and Specifications</a></p> <p>Comprehensive guide to the Minisforum MGP01 wireless controller, detailing its features, connectivity options for Switch, PC, Android, and iOS, macro programming, Turbo function, vibration settings, and technical specifications.</p>

