MINISFORUM NPB6

MINISFORUM Venus Series NPB6 Mini PC Instruction Manual

Model: NPB6

1. INTRODUCTION

This manual provides detailed instructions for the setup, operation, maintenance, and troubleshooting of your MINISFORUM Venus Series NPB6 Mini PC. Please read this manual thoroughly before using the device to ensure proper functionality and longevity.

The MINISFORUM Venus Series NPB6 is a high-performance barebone mini PC equipped with a 13th Generation Intel Core i7-13620H processor. It features 10 cores, 16 threads, 24MB Intel Smart Cache, and a maximum turbo frequency of 4.9GHz, providing robust performance for various computing tasks. This model supports dual-channel DDR5 RAM and PCIe4.0 SSD, along with an additional 2.5-inch SATA HDD/SSD slot for flexible storage expansion.

Key features include dual 2.5G LAN ports for high-speed network connectivity, two USB4 ports offering 8K@60Hz display output and 40Gbps data transfer, and two HDMI ports, enabling a total of four simultaneous display outputs. The system also integrates WiFi 6E and Bluetooth 5.2 for wireless connectivity.

Image: Front view of the MINISFORUM Venus Series NPB6 Mini PC, showcasing its compact design and front ports.

2. PACKAGE CONTENTS

Verify that all items are present in the package:

- 1x NPB6 Mini PC
- 1x HDMI Cable
- 1x Mount Support (VESA mount)
- 1x US Power Adapter
- 1x User Manual

3. SETUP GUIDE

3.1 Installing RAM and Storage

The NPB6 is a barebone system, requiring the installation of RAM and an SSD/HDD. Follow these steps:

1. **Open the Chassis:** Gently press down on the top cover of the Mini PC to release the latch and lift the

cover.

Image: A hand pressing the top cover of the Mini PC to open it, revealing the internal components.

2. **Install DDR5 RAM:** Locate the two DDR5 SO-DIMM slots. Align the notch on the RAM module with the key in the slot, insert the module at a 45-degree angle, and push down until the clips on both sides snap into place.

Image: Illustrates the process of installing a DDR5 RAM module into the designated slot on the motherboard.

3. **Install M.2 PCIe4.0 SSD:** Locate the M.2 2280 slot. Insert the M.2 SSD into the slot at an angle, then gently push it down and secure it with the provided screw.

Image: Shows an M.2 SSD being installed into its slot on the Mini PC's motherboard.

4. **Install 2.5-inch SATA HDD/SSD (Optional):** If installing a 2.5-inch drive, connect it to the SATA data and power connectors and secure it in the designated bay.
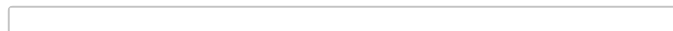
Image: Depicts a 2.5-inch SATA drive being placed into its bay within the Mini PC.

5. **Close the Chassis:** Replace the top cover, ensuring it clicks securely into place.

3.2 Connecting Peripherals

Connect your display, keyboard, mouse, and network cables to the appropriate ports on the Mini PC.

- **Display:** Connect your monitor(s) to the HDMI ports or USB4 ports using compatible cables. The NPB6 supports up to four displays simultaneously.
- **USB Devices:** Connect your keyboard, mouse, and other USB devices to the available USB 3.2 ports.
- **Network:** For wired internet, connect an Ethernet cable to one of the two 2.5G LAN ports. For wireless, ensure your WiFi antenna is connected (if external) or that the internal antenna is unobstructed.
- **Power:** Connect the power adapter to the DC 19V input port on the Mini PC, then plug the adapter into a power outlet.

VESA Mount Support

Image: A detailed diagram showing the front and rear port layout of the MINISFORUM NPB6 Mini PC, labeling each port type.

3.3 VESA Mount Installation (Optional)

The included VESA mount allows you to attach the Mini PC to the back of a compatible monitor or to a wall mount.

1. Attach the VESA bracket to the back of your monitor or desired mounting surface using appropriate screws.
2. Slide the Mini PC onto the VESA bracket until it locks securely into place.
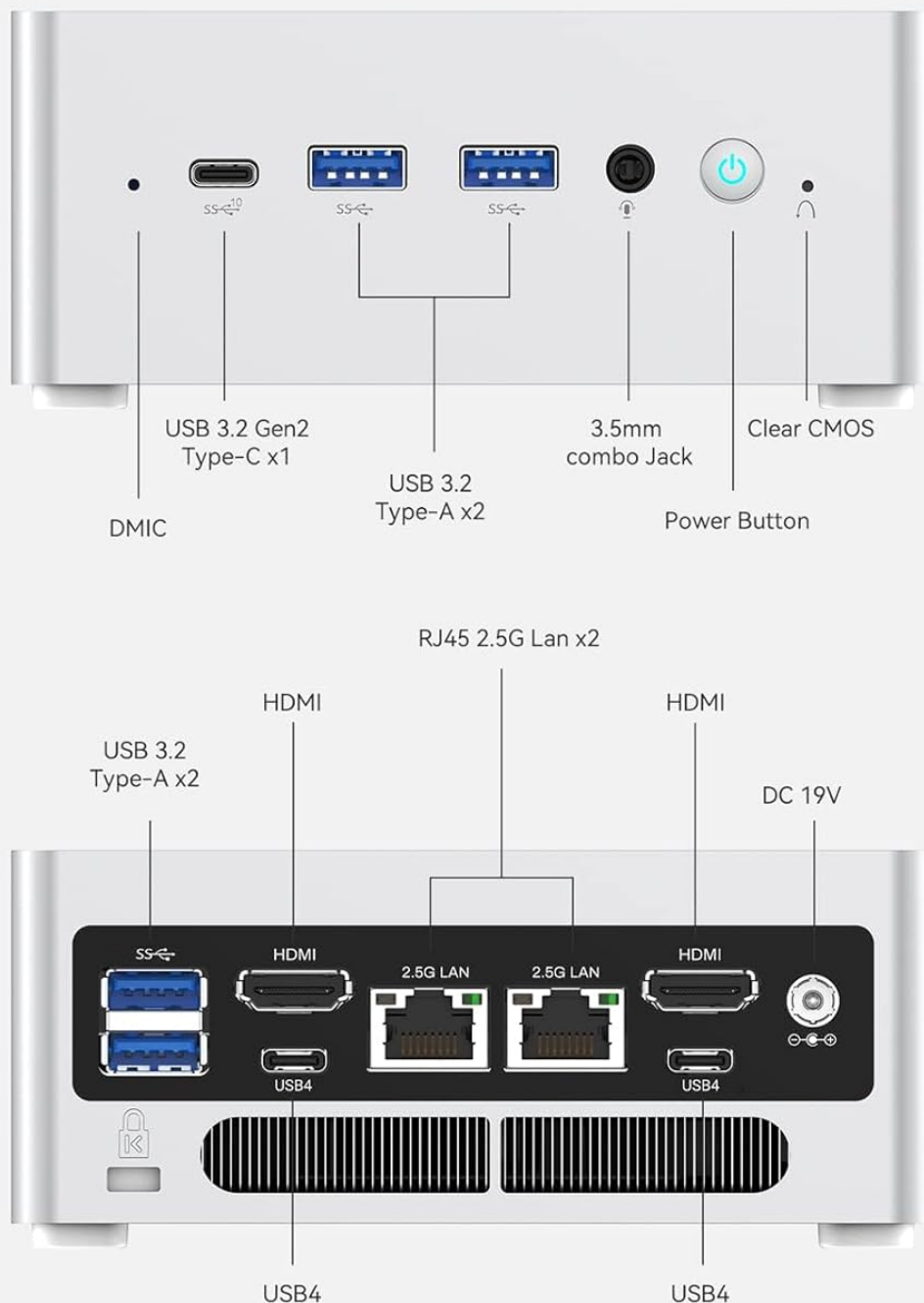
Image: The MINISFORUM NPB6 Mini PC is shown mounted on the back of a computer monitor using a VESA bracket, demonstrating its space-saving capability.

4. OPERATING INSTRUCTIONS

4.1 Powering On/Off

- **Power On:** Press the power button located on the front of the Mini PC. The power indicator light will illuminate.

- **Power Off:** For a clean shutdown, use the operating system's shutdown function. Alternatively, press and hold the power button for 5-7 seconds to force a shutdown (use only when necessary to prevent data loss).

4.2 Multi-Display Setup

The NPB6 supports up to four independent displays. Connect your monitors to the available HDMI and USB4 ports. Configure display settings within your operating system (e.g., Windows Display Settings) to extend or duplicate your desktop.

Image: The MINISFORUM NPB6 Mini PC is shown connected to four monitors, demonstrating its quad-screen output capability for enhanced productivity.

4.3 Network Connectivity

- **Wired Network:** Connect an Ethernet cable to either of the two 2.5G LAN ports for high-speed wired internet access.
- **Wireless Network:** The Mini PC supports WiFi 6E. Ensure your operating system's wireless settings are configured to connect to your desired network.

Image: A close-up of the rear of the MINISFORUM NPB6, highlighting the two 2.5Gbps LAN ports with Ethernet cables connected, indicating high-speed network transfer.

4.4 USB4 Port Functionality

The dual USB4 ports provide versatile connectivity:

- **High-Speed Data Transfer:** Supports up to 40Gbps for external storage devices.
- **Video Output:** Supports 8K@60Hz display output.
- **Power Delivery:** One USB4 port can simultaneously power a 15W portable touchscreen.

4×USB-A+1×USB-C (Data Only)

2×2.5 Gigabit Ethernet Port

USB4 port ×2 Does not support power supply

USB4
High-speed connection

40Gbps
MAX

Image: The MINISFORUM NPB6 Mini PC with multiple USB devices, including a USB-C cable and USB-A flash drives, connected to its front ports, demonstrating its connectivity options.

5. MAINTENANCE

5.1 Cleaning

Regular cleaning helps maintain optimal performance and extends the life of your Mini PC.

- Use a soft, dry cloth to wipe the exterior of the device.

- For dust accumulation in vents, use compressed air. Ensure the device is powered off and unplugged before cleaning.
- Do not use liquid cleaners directly on the device.

5.2 Software Updates

Keep your operating system and drivers updated to ensure system stability, security, and performance. Check the MINISFORUM official website for the latest driver updates for your NPB6 model.

5.3 Heat Dissipation

The NPB6 features an efficient heat dissipation system with two heat pipes, two air outlets, and an active SSD heatsink. To ensure optimal cooling:

- Place the Mini PC in a well-ventilated area.
- Avoid blocking the side cooling vents.
- Ensure the ambient temperature is within the recommended operating range.

6. TROUBLESHOOTING

If you encounter issues with your Mini PC, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No Power	Power adapter not connected, faulty outlet, power button issue.	Check power cable connections. Try a different power outlet. Ensure the power adapter is functioning.
No Display Output	Incorrect cable connection, wrong monitor input, display driver issue.	Verify HDMI/USB4 cable connections. Select the correct input source on your monitor. Try a different display cable or monitor.
Network Connectivity Issues	Loose Ethernet cable, incorrect WiFi settings, driver issues.	Check Ethernet cable connection. Reconfigure WiFi settings. Update network drivers.
System Slowdown/Overheating	Excessive dust, blocked vents, heavy background processes.	Clean vents with compressed air. Ensure proper ventilation. Close unnecessary applications.
BIOS/CMOS Reset	Incorrect BIOS settings, system instability.	Locate the 'Clear CMOS' button (often a small pinhole) on the front panel and press it with a paperclip for a few seconds while the PC is off.

7. SPECIFICATIONS

Detailed technical specifications for the MINISFORUM Venus Series NPB6 Mini PC:

- **Processor:** Intel Core i7-13620H (10 Cores, 16 Threads, up to 4.9GHz, 24MB Cache)
- **Graphics:** Intel UHD Graphics (Integrated, Graphics Frequency 1.5GHz)
- **Memory (RAM):** Dual-channel DDR5 SO-DIMM slots (up to 32GB, 4800MHz)

- **Storage:** 1x M.2 2280 PCIe4.0 SSD slot, 1x 2.5-inch SATA HDD/SSD bay

- **Video Output:** 2x HDMI (4K@60Hz), 2x USB4 (8K@60Hz) - Supports four displays simultaneously

- **Networking:** 2x 2.5G LAN (RJ45), WiFi 6E (802.11ax), Bluetooth 5.2

- **USB Ports:** 2x USB4 (40Gbps, 15W PD on one port), 1x USB 3.2 Gen2 Type-C (Data Only), 4x USB 3.2 Type-A

- **Audio:** 3.5mm Combo Jack

- **Operating System Support:** Windows (Barebone system, OS not included)

- **Dimensions:** Approximately 7.09 x 6.22 x 4.61 inches (Package)

- **Weight:** Approximately 3.1 pounds

- **Color:** Black

8. WARRANTY AND SUPPORT

MINISFORUM provides customer support for its products. For warranty information, technical assistance, or service requests, please visit the official MINISFORUM website or contact their customer service directly. Keep your purchase receipt for warranty validation.

MINISFORUM Official Website: www.minisforum.com