

MINISFORUM BD775i SE

MINISFORUM BD775i SE Mini-ITX Motherboard User Manual

Model: **BD775i SE** | Brand: **MINISFORUM**

INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your MINISFORUM BD775i SE Mini-ITX Motherboard. Designed for high performance in a compact form factor, this motherboard integrates an AMD Ryzen 7 7745HX processor and supports advanced connectivity and expansion options.

Key Features:

- **Processor:** Integrated AMD Ryzen 7 7745HX (8 Cores/16 Threads, up to 5.1 GHz, 32MB L3 Cache) with AMD Radeon 610M integrated graphics.
- **Memory:** Dual-channel DDR5 SODIMM support, up to 96GB at 5200MT/s.
- **Storage:** Two M.2 2280 PCIe 4.0 SSD slots for high-speed storage.
- **Expansion:** One PCIe 5.0 x16 slot for dedicated graphics cards.
- **Display Output:** Triple display support via HDMI 2.1, DisplayPort 1.4, and USB-C (Alt DP), capable of up to 8K@60Hz or 4K@120Hz.
- **Connectivity:** 2.5 Gigabit Ethernet (RJ45), multiple USB 3.2 Gen2 Type-C, USB 3.2 Gen1 Type-A, and USB 2.0 Type-A ports.

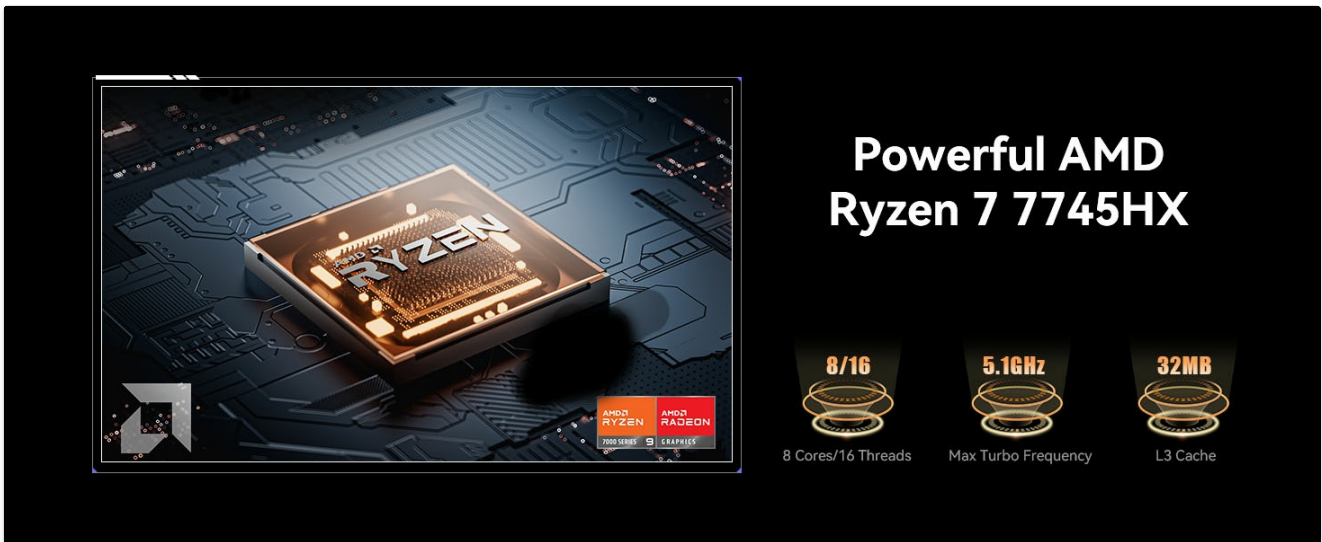


Image: AMD Ryzen 7 7745HX Processor on MINISFORUM BD775i SE Motherboard. This image visually represents the AMD Ryzen 7 7745HX processor, highlighting its key features: 8 Cores/16 Threads, 5.1GHz Max Turbo Frequency, and 32MB L3 Cache, integrated with AMD Radeon Graphics.

SETUP INSTRUCTIONS

Follow these steps to properly set up your MINISFORUM BD775i SE motherboard.

1. Component Identification



Image: MINISFORUM BD775i SE Motherboard Component Diagram. An overhead view of the MINISFORUM BD775i SE motherboard with key components and headers numbered for easy identification during installation. Labels include Motherboard Power Connector, Chassis Fan Headers, System Control Panel Header, USB 3.2 Connector, PCIe 5.0 x16 Slot, CPU Fan Header, SSD Fan Header, M.2 PCIe 4.0 Slots, and CPU Power Connector.

2. Memory (RAM) Installation

The motherboard supports two DDR5 SODIMM modules, up to a maximum of 96GB (2x 48GB). Ensure the modules are correctly oriented and firmly seated in the memory slots until the clips lock into place.

3. Storage (M.2 SSD) Installation

Install your M.2 2280 PCIe 4.0 SSDs into the designated slots. Secure them with the provided screws or retention mechanisms. Note that this motherboard does not include an SSD heatsink, and adding a compatible heatsink is recommended for optimal performance and longevity.



Image: MINISFORUM BD775i SE PCIe and M.2 Slots Layout. A diagram illustrating the placement of the two PCIe 4.0 M.2 slots and the PCIe 5.0 x16 slot on the MINISFORUM BD775i SE motherboard, highlighting their specifications.

4. CPU Cooling System

The motherboard comes with a pre-installed custom heatsink (37mm thick) for the CPU. A cooling fan is **not included** and must be purchased separately. This motherboard supports a 12cm fan. Ensure proper installation of a compatible fan to maintain optimal CPU temperatures.

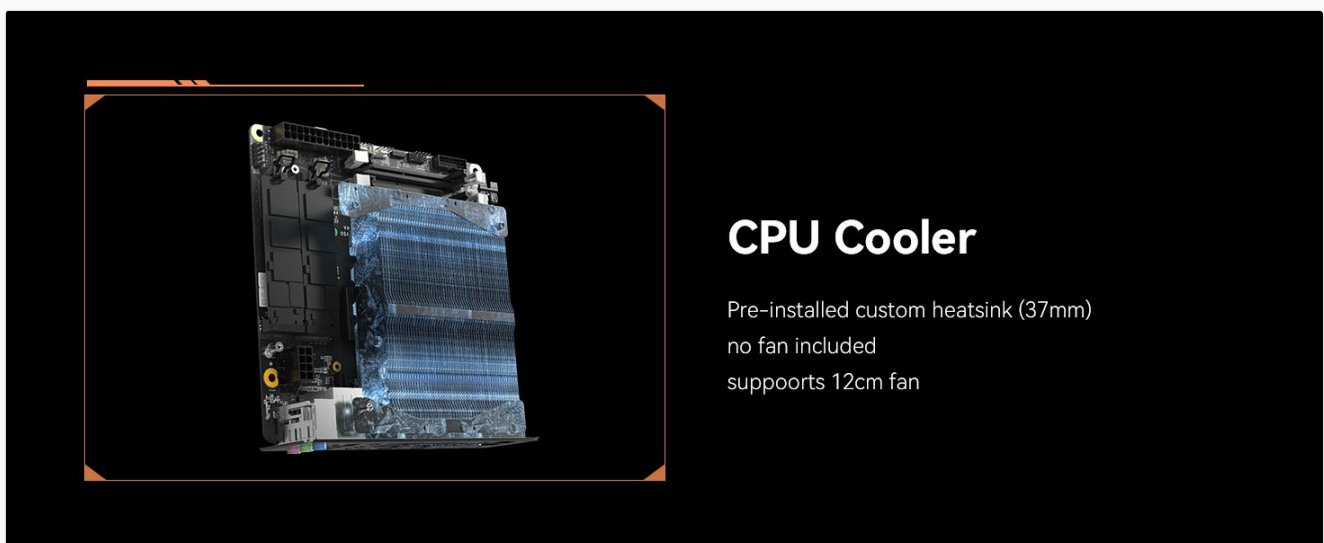


Image: MINISFORUM BD775i SE CPU Cooler Heatsink. An illustration of the pre-installed custom heatsink (37mm) for the CPU on the MINISFORUM BD775i SE motherboard, noting that no fan is included but supports a 12cm fan.

5. Power Connection

Connect the 24-pin main power connector from your power supply unit (PSU) to the corresponding header on the motherboard. Also, connect the CPU power connector (usually 8-pin or 4+4-pin) to the motherboard.

6. Peripheral Connections

Connect your display(s) to the HDMI 2.1, DisplayPort 1.4, or USB-C (Alt DP) ports. Connect your keyboard, mouse, and other USB devices to the available USB ports. For network access, connect an Ethernet cable to the 2.5G RJ45 LAN port.

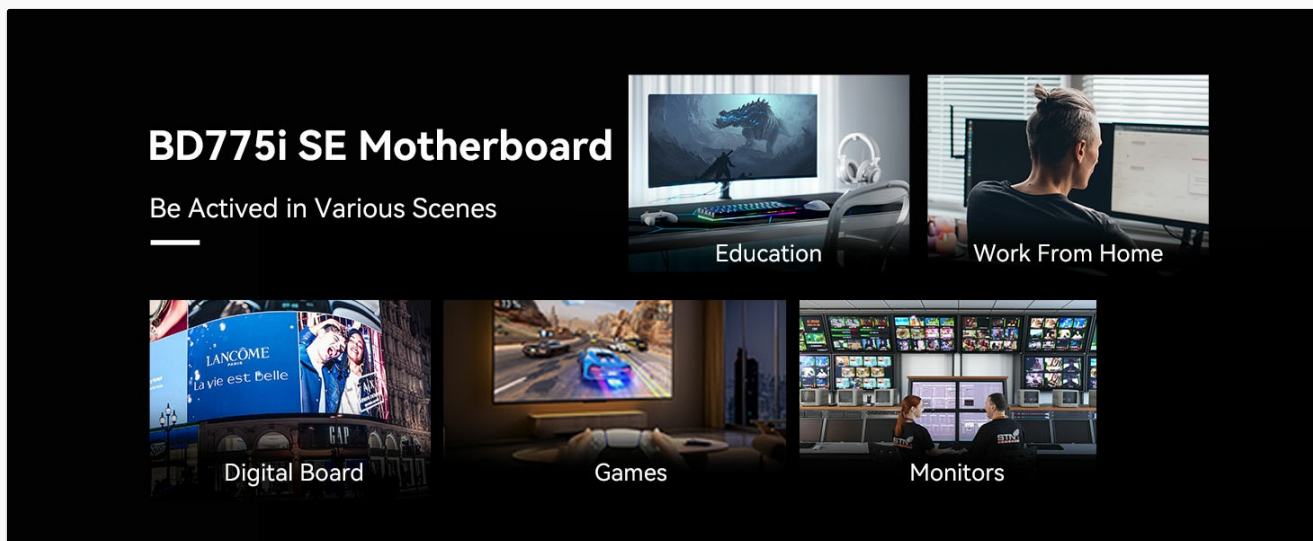


Image: MINISFORUM BD775i SE Motherboard Rear I/O Ports. An image showcasing the rear input/output ports of the MINISFORUM BD775i SE motherboard, including HDMI, DisplayPort, USB-C, USB-A, 2.5G RJ45 LAN, and audio jacks.

7. Graphics Card Installation (Optional)

If you are using a dedicated graphics card, install it into the PCIe 5.0 x16 slot and secure it. Connect any necessary PCIe power cables from your PSU to the graphics card.

OPERATING INSTRUCTIONS

1. Initial Power On

After all components are installed and connected, power on your system. The system should boot to the BIOS/UEFI interface or your installed operating system.

2. BIOS/UEFI Configuration

Access the BIOS/UEFI setup by pressing the designated key during startup (commonly Del or F2). Here you can configure various settings:

- **Fan Speed Control:** Adjust CPU and system fan speeds to optimize cooling and noise levels.
- **Memory Settings:** Manually adjust memory timings if necessary for specific DDR5 SODIMM modules.
- **Performance Boost Overdrive (PBO):** For advanced users, PBO settings can be configured to optimize CPU performance. Be cautious with these settings as improper configuration can affect system stability and thermals.
- **Boot Order:** Set the boot priority for your storage devices.

3. Operating System Installation

Install your preferred operating system. For Windows 11, ensure you update to the latest version for optimal compatibility and driver support.

4. Triple Display Setup

The motherboard supports up to three simultaneous displays. Connect your monitors to the HDMI, DisplayPort, and USB-C (Alt DP) outputs. Configure display settings within your operating system to extend or duplicate your desktop.



Image: MINISFORUM BD775i SE Triple Display Output. An image depicting a user enjoying a visual experience on a large screen, illustrating the motherboard's capability for triple display output via HDMI 2.1, DisplayPort 1.4, and USB-C, supporting up to 8K@60Hz or 4K@120Hz.

MAINTENANCE

Regular maintenance helps ensure the longevity and stable performance of your motherboard.

1. Cooling System Maintenance

Periodically inspect and clean the CPU heatsink and any installed fans to prevent dust buildup, which can impede airflow and lead to overheating. Ensure that any additional fans (e.g., 12cm chassis fans) are functioning correctly.

2. BIOS Updates

Check the MINISFORUM official website for the latest BIOS/UEFI updates. Updating the BIOS can improve system stability, compatibility, and performance. Follow the provided instructions carefully when performing a BIOS update.

3. Connection Checks

Occasionally, verify that all cables (power, data, display) are securely connected to the motherboard and peripherals.

TROUBLESHOOTING

If you encounter issues with your MINISFORUM BD775i SE motherboard, refer to the following common problems and solutions.

System Does Not Boot

- **Check Power Connections:** Ensure the 24-pin main power and CPU power connectors are firmly seated.
- **Verify RAM Installation:** Re-seat the DDR5 SODIMM modules. Try booting with one module at a time to identify a faulty stick or slot.
- **Clear CMOS:** If the system fails to POST after configuration changes, clear the CMOS by removing the CMOS battery for a few minutes or using the designated CMOS clear jumper/button (refer to your chassis manual for location).
- **CPU Cooler:** Ensure the CPU cooler is properly installed and making good contact with the CPU.

High CPU Temperatures

- **Fan Installation:** Confirm that a 12cm fan is correctly installed on the CPU heatsink and connected to the CPU Fan header.
- **Thermal Paste:** Ensure adequate thermal paste application between the CPU and heatsink.
- **BIOS Settings:** Adjust fan curves in the BIOS. For advanced users, consider adjusting Precision Boost Overdrive (PBO) settings, including TDC Limit, EDC Limit, and PPT Limit, to manage power consumption and heat output. Setting a Platform Thermal Throttle limit can also help maintain temperatures.
- **Airflow:** Ensure good airflow within your PC case.

Memory Incompatibility or Instability

- While the board supports up to 96GB DDR5, some specific 5600MHz modules might require manual timing adjustments in the BIOS or may not be fully compatible. If experiencing issues, try 64GB at 5200MHz, which has shown stable performance.

No SATA Ports

- This motherboard is designed primarily for M.2 NVMe SSDs and does not feature traditional SATA ports for 2.5-inch or 3.5-inch drives. Plan your storage solution accordingly.

SPECIFICATIONS

Below are the detailed technical specifications for the MINISFORUM BD775i SE Mini-ITX Motherboard.



Image: MINISFORUM BD775i SE Motherboard Specifications Table. A detailed table outlining the technical specifications of the MINISFORUM BD775i SE motherboard, including CPU, GPU, memory, storage, expansion slots, and I/O ports.

Feature	Specification
CPU	AMD Ryzen 7 7745HX (8 Cores/16 Threads, up to 5.1 GHz)
GPU	AMD Radeon 610M (Integrated)
Memory	DDR5 Dual Channels (2x SODIMM slots, up to 5200MT/s, Max 96GB)
Storage	2x M.2 2280 PCIe 4.0 SSD Slots
Expansion Slot	1x PCIe 5.0 x16 slot
Ethernet	RJ45 2.5G LAN Port
Video Output	1x HDMI 2.1, 1x DisplayPort 1.4, 1x USB-C (Alt DP)
Audio Output	1x HDMI, 1x Line Out
USB Ports	1x USB 3.2 Gen2 Type-C (Alt DP), 2x USB 3.2 Gen1 Type-A, 2x USB 2.0 Type-A

I/O Headers	1x 4-pin CPU Fan, 2x 4-pin System Fan, 1x USB 3.2 Gen 1, 1x Front Panel Audio, 1x System Panel
Form Factor	Mini-ITX (170x170mm)
TDP	100W
Motherboard Thickness (without fan)	37mm

WARRANTY INFORMATION

According to the product specifications, there is **No Warranty** explicitly stated for this product. Please refer to your retailer's return policy or contact MINISFORUM directly for any warranty-related inquiries.

SUPPORT

For further assistance, technical support, or driver downloads, please visit the official MINISFORUM website. You may also contact their customer service for specific product inquiries.

- **MINISFORUM Official Website:** www.minisforum.com (This is a placeholder, please verify the actual support URL)