MSI PRO B760M-A WIFI DDR4

MSI PRO B760M-A WiFi DDR4 mATX Motherboard User Manual

Model: PRO B760M-A WIFI DDR4

1. Introduction

This manual provides detailed instructions for the installation, configuration, and maintenance of your MSI PRO B760M-A WiFi DDR4 mATX Motherboard. Please read this manual thoroughly before attempting any installation or configuration to ensure proper operation and prevent damage to your components.

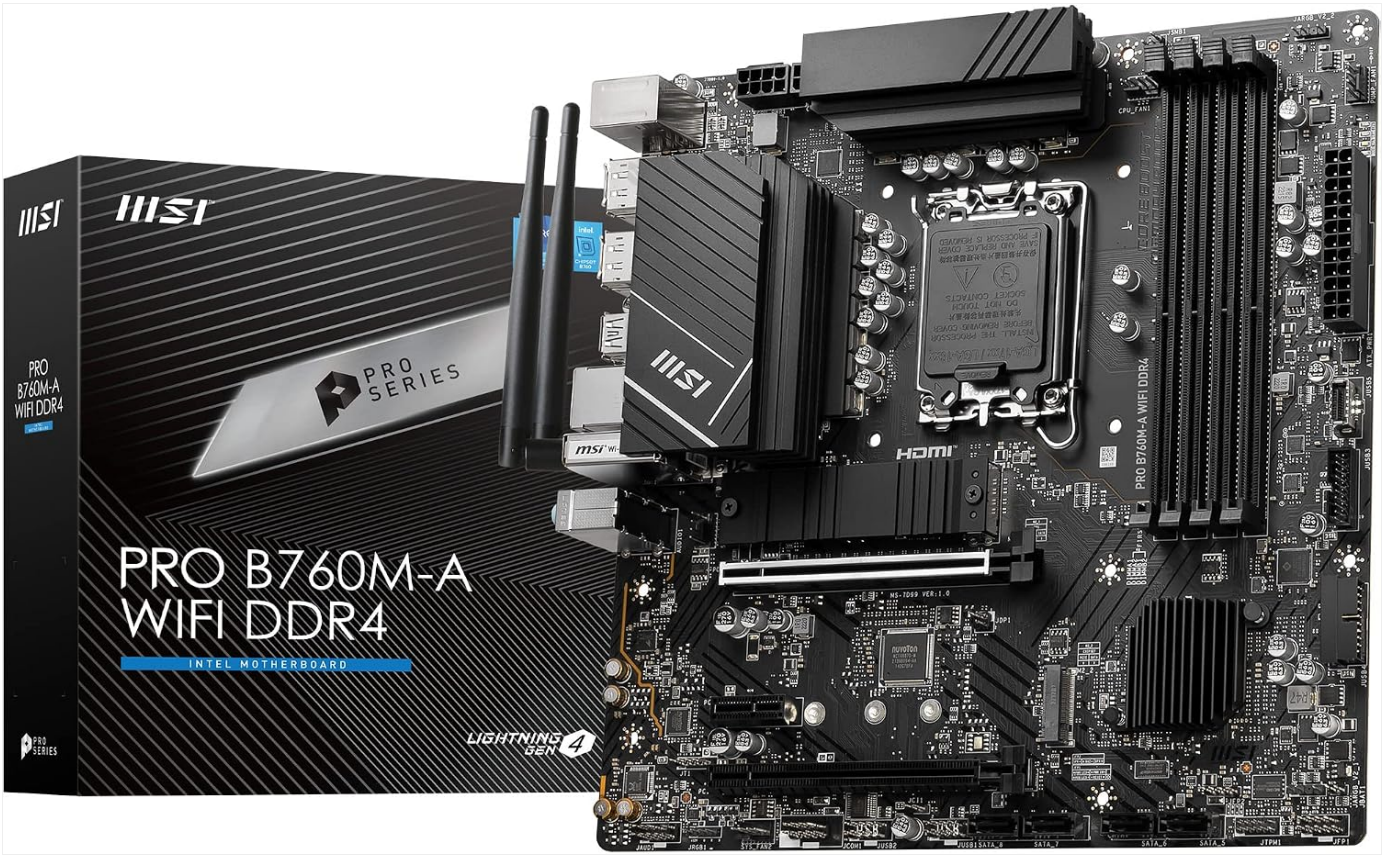


Figure 1.1: MSI PRO B760M-A WiFi DDR4 mATX Motherboard and packaging.

2. Safety Information

Always observe the following safety precautions when handling computer components:

- Disconnect the power cord from the wall outlet before touching any component.
- Wear an electrostatic discharge (ESD) wrist strap or frequently touch a grounded metal object to prevent static electricity damage.
- Handle components by their edges; avoid touching pins or circuitry.
- Ensure proper ventilation within your computer case to prevent overheating.
- Keep liquids away from computer components.

3. Package Contents

Verify that all items are present in your motherboard package:

- MSI PRO B760M-A WiFi DDR4 Motherboard
- I/O Shield
- SATA Cables
- M.2 Screws
- Wi-Fi Antenna
- Quick Installation Guide
- Driver CD/USB (may vary by region)



Figure 3.1: Motherboard and included accessories.

4. Motherboard Layout

Familiarize yourself with the various components and connectors on the motherboard.

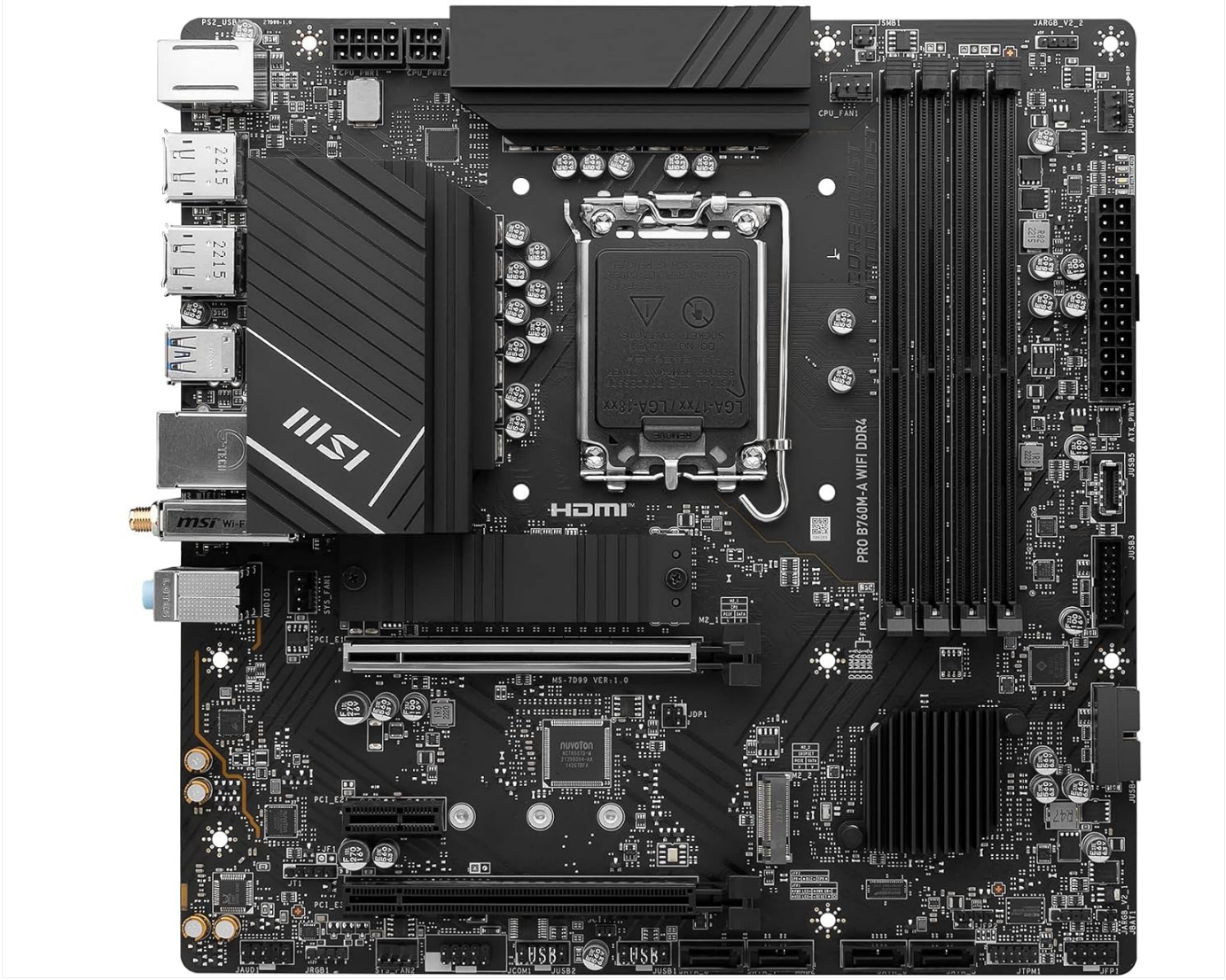


Figure 4.1: Overview of the motherboard components.

4.1 Key Components

- **CPU Socket (LGA 1700):** Supports 12th/13th Gen Intel Core Processors, Pentium Gold, and Celeron Processors.
- **DDR4 DIMM Slots:** Four slots supporting up to 128GB of DDR4 memory.
- **PCI-E x16 Slots:** Two slots for graphics cards or other expansion cards. PCI_E1 supports PCIe 4.0 x16 (from CPU), PCI_E3 supports PCIe 4.0 x4 (from Chipset).
- **PCI-E x1 Slot:** One slot for smaller expansion cards. PCI_E2 supports PCIe 3.0 x1 (from Chipset).
- **M.2 Slots:** Two slots for NVMe SSDs. M.2_1 supports PCIe 4.0 x4, M.2_2 supports PCIe 4.0 x4 / SATA mode.
- **SATA 6G Ports:** Four ports for SATA storage devices.
- **Rear I/O Panel:** Connectors for USB, display, network, and audio.



Figure 4.2: Motherboard features including Memory Boost and Lightning Gen4.

4.2 Rear I/O Panel

The rear I/O panel provides various ports for connecting external devices.

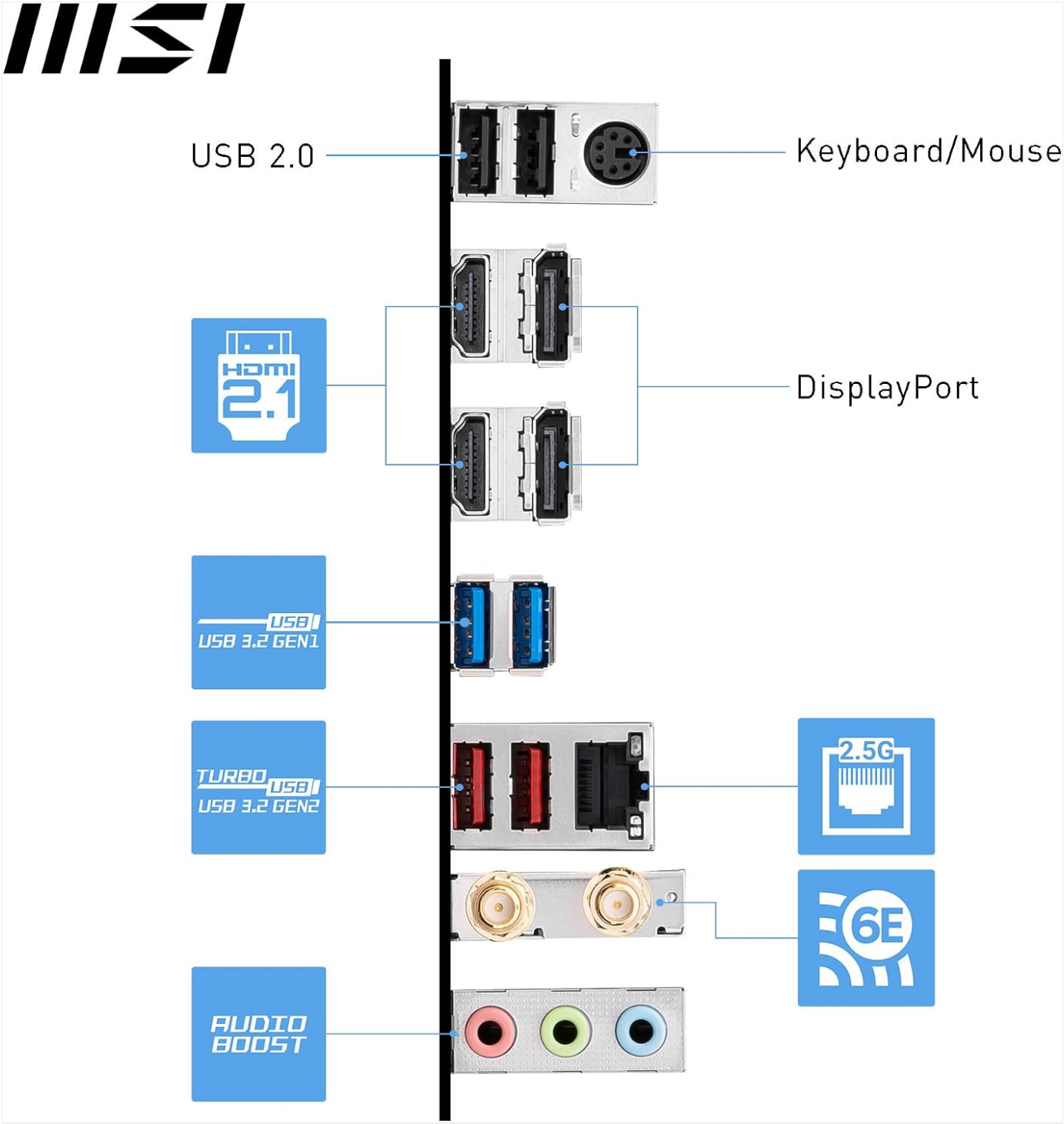


Figure 4.3: Rear I/O Panel Connectors.

- **USB 2.0 Ports:** For connecting peripherals like keyboards and mice.
- **Keyboard/Mouse Port:** PS/2 combo port.
- **HDMI 2.1 Ports:** Two ports supporting up to 4K 60Hz resolution.
- **DisplayPort 1.4:** Two ports supporting up to 4K 60Hz resolution.
- **USB 3.2 Gen1 Type-A Ports:** Two ports for high-speed USB devices.
- **USB 3.2 Gen2 Type-A Ports:** Two ports for even higher-speed USB devices.
- **2.5G LAN Port:** For high-speed wired network connection.
- **Wi-Fi 6E Antenna Connectors:** For wireless network connectivity.
- **Audio Jacks:** For connecting speakers, headphones, and microphones.

5. Setup

5.1 CPU Installation

1. Open the CPU socket lever and lift the load plate.
2. Carefully align the CPU with the socket, ensuring the triangular mark on the CPU matches the mark on the socket. Do not force the CPU into the socket.
3. Lower the load plate and press down the lever until it locks into place.
4. Install the CPU cooler according to its manufacturer's instructions.

5.2 Memory (RAM) Installation

1. Open the clips at both ends of the DIMM slots.
2. Align the notch on the DDR4 memory module with the key in the DIMM slot.
3. Insert the memory module firmly into the slot until the clips snap into place. For dual-channel configuration, refer to the motherboard manual for recommended slot pairing.

5.3 Storage Device Installation

M.2 SSD Installation

1. Locate the M.2 slot(s) on the motherboard.
2. Remove the M.2 standoff screw.
3. Insert the M.2 SSD into the slot at an angle.
4. Gently push down the SSD and secure it with the M.2 screw.

SATA Drive Installation

1. Connect one end of a SATA data cable to a SATA 6G port on the motherboard.
2. Connect the other end of the SATA data cable to your SATA hard drive or SSD.
3. Connect a SATA power cable from your power supply to the SATA drive.

5.4 Expansion Card Installation

1. Align your PCI-E expansion card (e.g., graphics card) with the desired PCI-E slot.
2. Press the card firmly into the slot until it is fully seated.
3. Secure the card to the chassis with a screw.
4. If installing a graphics card, connect any required PCI-E power cables from your power supply.

5.5 Power Supply Connection

1. Connect the 24-pin ATX power connector from your power supply to the ATX_PWR header on the motherboard.
2. Connect the 8-pin (or 4+4-pin) CPU power connector(s) from your power supply to the CPU_PWR header(s).

5.6 Front Panel Connections

Connect the cables from your computer case's front panel to the corresponding headers on the motherboard (JFP1, JAUD1, JUSB1, JUSB2, JUSB3, JUSB4, JCOM1, JARGB_V2, JRGB1, JCI1, JTPM1).

- **JFP1:** Power button, reset button, power LED, HDD activity LED.
- **JAUD1:** Front panel audio.
- **JUSB1/JUSB2/JUSB3/JUSB4:** Front panel USB 2.0 and USB 3.2 Gen1 Type-A headers.
- **JCOM1:** Serial port connector.
- **JARGB_V2/JRGB1:** Addressable RGB and RGB LED connectors.

6. Operating

6.1 First Boot and BIOS/UEFI Access

1. After assembling your system, connect a monitor, keyboard, and mouse.
2. Power on your computer.
3. During startup, repeatedly press the **DEL** key to enter the BIOS/UEFI setup utility.

6.2 BIOS/UEFI Configuration

The BIOS/UEFI interface allows you to configure system settings such as boot order, memory profiles (XMP), fan speeds, and more. Refer to the full MSI motherboard manual (available on the MSI website) for detailed BIOS/UEFI settings.

6.3 Driver Installation

After installing your operating system, install the necessary drivers for your motherboard components (chipset, audio, LAN, Wi-Fi, etc.).

- Drivers can be found on the included driver CD/USB or downloaded from the official MSI website: MSI Support Page.
- Install chipset drivers first, followed by graphics, audio, LAN, and Wi-Fi drivers.

6.4 Operating System Installation

This motherboard supports Windows 11 64-bit and Windows 10 64-bit. Follow the standard installation procedures for your chosen operating system.

7. Maintenance

7.1 Cleaning

Regularly clean your computer to prevent dust buildup, which can lead to overheating and component failure.

- Use compressed air to remove dust from fans, heatsinks, and other components.
- Ensure the system is powered off and unplugged before cleaning.

7.2 BIOS/UEFI Updates

Periodically check the MSI website for BIOS/UEFI updates. Updates can improve system stability, add support for new CPUs, or fix bugs. Follow the instructions provided by MSI carefully when performing a BIOS/UEFI update.

7.3 Driver Updates

Keep your drivers updated to ensure optimal performance and compatibility. Download the latest drivers from the official MSI website.

8. Troubleshooting

If you encounter issues, consider the following common troubleshooting steps:

- **No Power:** Check all power connections (24-pin ATX, 8-pin CPU, GPU power). Ensure the power supply switch is on.
- **No Display:** Ensure the monitor is connected to the graphics card (or motherboard if using integrated graphics) and powered on. Reseat the graphics card and RAM modules.
- **System Instability/Crashes:** Check RAM seating, run memory diagnostic tools, ensure CPU cooler is properly installed, and check for overheating. Update drivers and BIOS/UEFI.

- **POST Code Errors:** Refer to the motherboard's debug LED or speaker codes (if applicable) and consult the full manual for their meanings.
- **Peripheral Not Detected:** Ensure the device is properly connected. Try a different port. Install or update relevant drivers.

9. Specifications

Detailed technical specifications for the MSI PRO B760M-A WiFi DDR4 mATX Motherboard:

Feature	Specification
CPU Support	12th/13th Gen Intel Core Processors, Pentium Gold, Celeron (LGA 1700)
Chipset	Intel B760
Memory	4x DDR4 DIMM slots, Max. 128GB, up to 5333(OC) MHz
Onboard Graphics	2x HDMI 2.1 (4K 60Hz), 2x DisplayPort 1.4 (4K 60Hz)
Expansion Slots	2x PCI-E x16 (PCIe 4.0), 1x PCI-E x1 (PCIe 3.0)
Storage	2x M.2 slots (PCIe 4.0 x4, one supports SATA), 4x SATA 6G ports
USB (Rear)	2x USB 2.0, 2x USB 3.2 Gen1 Type-A, 2x USB 3.2 Gen2 Type-A
USB (Front)	4x USB 2.0, 4x USB 3.2 Gen1 Type-A, 1x USB 3.2 Gen1 Type-C
LAN	2.5G LAN
Wireless	Wi-Fi 6E
Audio	HD Audio
Form Factor	mATX (243.84mm x 243.84mm)
Operating System	Windows 11 64-bit, Windows 10 64-bit

10. Warranty and Support

For warranty information, technical support, and driver downloads, please visit the official MSI website:
MSI Global Support
You can also find product-specific support for your motherboard here:MSI PRO B760M-A WIFI DDR4 Support Page

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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.

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