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ASRock B760M-H2/M.2

ASRock B760M-H2/M.2 Motherboard User Manual

Comprehensive Guide for Installation, Operation, and Maintenance

1. PRODUCT OVERVIEW

The ASRock B760M-H2/M.2 is a Micro ATX motherboard designed for Intel 12th, 13th, and 14th Gen Core Processors, utilizing the LGA1700 socket. It features DDR5 memory support, multiple M.2 slots for high-speed storage, and comprehensive connectivity options including 2.5G LAN and HDMI outputs. This manual provides detailed instructions for setting up, operating, and maintaining your motherboard.

1.1 What's in the Box

Your ASRock B760M-H2/M.2 package typically includes the following items:

- ASRock B760M-H2/M.2 Motherboard
- Quick Installation Guide / User Manual
- Driver CD / USB Drive
- SATA Data Cables
- M.2 Screw Package
- I/O Shield

2. SETUP AND INSTALLATION

Before beginning installation, ensure you have a clean, static-free workspace. It is recommended to wear an anti-static wrist strap to prevent damage to components.

2.1 Pre-Installation Checklist

- Compatible CPU (Intel 12th, 13th, or 14th Gen LGA1700)
- DDR5 RAM modules
- Power Supply Unit (PSU)
- Storage devices (SATA SSD/HDD, M.2 NVMe SSD)
- Graphics Card (if not using integrated graphics)
- Computer Case
- Screwdriver and other necessary tools

2.2 Motherboard Layout

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

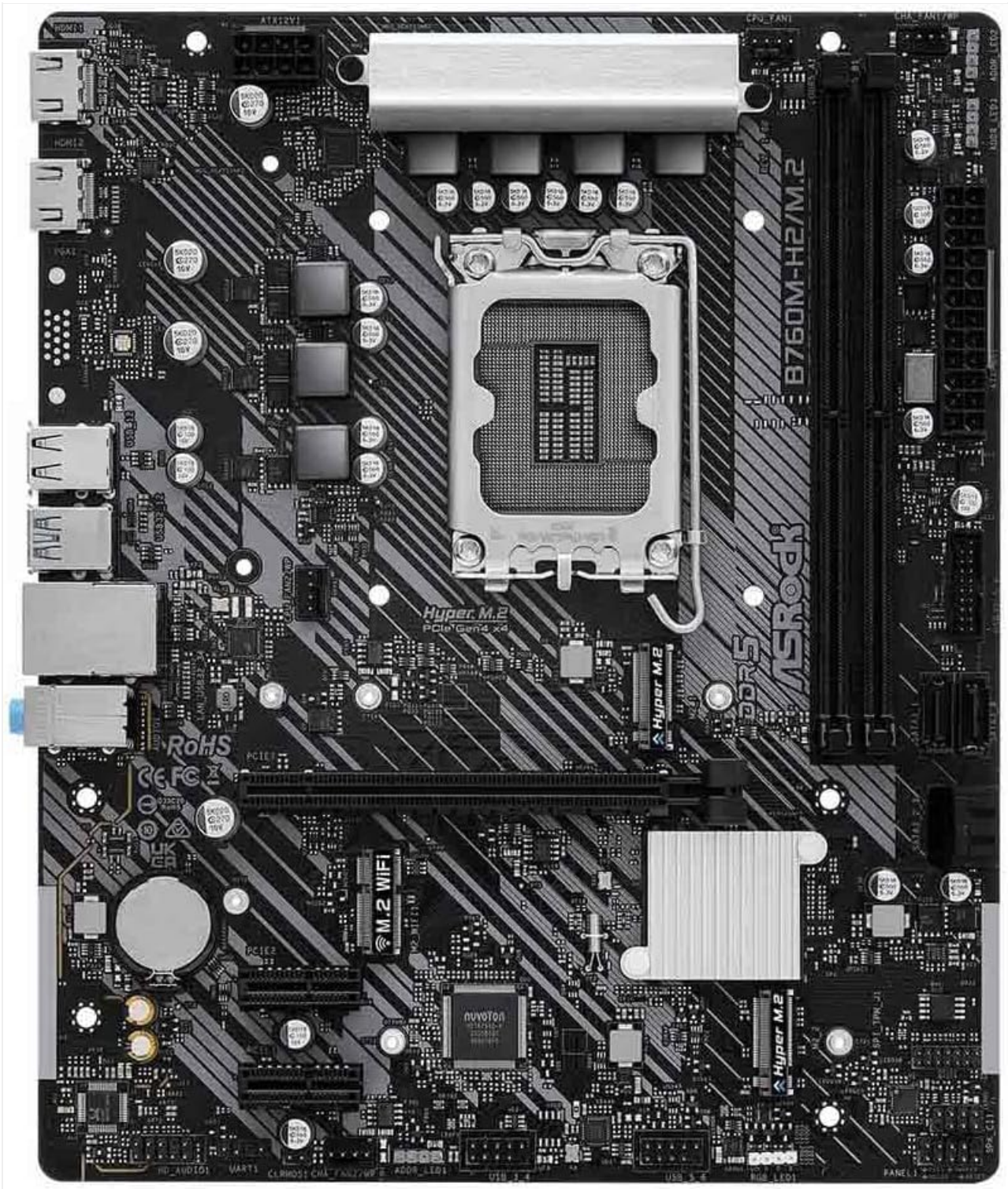


Figure 2.2.1: Top-down view of the ASRock B760M-H2/M.2 motherboard, highlighting the CPU socket, DDR5 DIMM slots, PCIe slots, and M.2 slots.



Figure 2.2.2: Rear I/O panel of the ASRock B760M-H2/M.2 motherboard, featuring HDMI ports, USB ports, LAN port, and audio jacks.

2.3 Component Installation

1. CPU Installation:

Carefully open the CPU socket lever. Align the triangular mark on the CPU with the mark on the socket. Gently place the CPU into the socket without forcing it. Close the lever to secure the CPU. Install the CPU cooler according to its manufacturer's instructions.

2. RAM Installation:

Open the clips on both ends of the DDR5 DIMM slots. Align the notch on the RAM module with the key in the slot. Press down firmly on both ends of the RAM module until the clips snap into place. For dual-channel operation, refer to the motherboard's silkscreen for recommended slot pairing (e.g., A2 and B2).

3. M.2 SSD Installation:

Locate the M.2 slots. Remove the M.2 screw/standoff. Insert the M.2 SSD into the slot at a slight angle. Gently push down the SSD and secure it with the M.2 screw. Note: If installing a GPU, consider installing the M.2 SSD in the bottom slot as per user feedback to avoid clearance issues.

4. Graphics Card (PCIe) Installation:

Open the latch on the PCIe 4.0 x16 slot. Align the graphics card with the slot and press down firmly until it is fully seated and the latch closes. Secure the card to the case with screws.

5. Power Supply Connections:

Connect the 24-pin ATX power connector and the 8-pin (or 4+4-pin) CPU power connector from your PSU to the corresponding ports on the motherboard. Connect SATA power cables to your storage devices.

6. Front Panel Connections:

Connect the case's front panel cables (Power SW, Reset SW, HDD LED, Power LED, USB, Audio) to the appropriate headers on the motherboard. Refer to the motherboard diagram or silkscreen for correct pin assignments.

3. OPERATING INSTRUCTIONS

3.1 First Boot and BIOS/UEFI Setup

After all components are installed and connected, power on your system. Press the **DEL** or **F2** key repeatedly during startup to enter the BIOS/UEFI setup utility.

- **Boot Order:** Configure the boot order to prioritize your operating system installation media (USB drive or DVD).
- **Date and Time:** Set the correct system date and time.
- **SATA Mode:** Ensure SATA mode is set to AHCI or RAID depending on your storage configuration. For NVMe SSDs, this setting typically does not apply directly.
- **XMP/EXPO Profile:** Enable the XMP (Extreme Memory Profile) or EXPO profile for your DDR5 RAM to run at its

advertised speeds.

- **Save and Exit:** Save your changes and exit the BIOS/UEFI. The system will restart.

3.2 Operating System Installation

Follow the on-screen prompts to install your preferred operating system (e.g., Windows, Linux). Ensure your installation media is bootable.

3.3 Driver Installation

After OS installation, install the necessary drivers for your motherboard components. These typically include:

- Chipset Drivers
- LAN Driver (for 2.5G Ethernet)
- Audio Driver
- Graphics Driver (if using integrated graphics or a dedicated GPU)
- USB Drivers
- M.2 NVMe Drivers (if applicable)

Drivers can be found on the included driver CD/USB or downloaded from the official ASRock website for your specific motherboard model.

4. MAINTENANCE

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

- **Dust Removal:** Periodically clean dust from inside your computer case, especially from fans, heatsinks, and motherboard surfaces, using compressed air or a soft brush. Ensure the system is powered off and unplugged before cleaning.
- **BIOS/UEFI Updates:** Check the ASRock website for the latest BIOS/UEFI updates. Updates can improve compatibility, stability, and performance. Follow the update instructions carefully to avoid system damage.
- **Driver Updates:** Keep your drivers updated to ensure compatibility with new software and to benefit from performance improvements and bug fixes.
- **Cable Management:** Ensure cables are neatly routed to improve airflow and prevent obstruction of components.

5. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

5.1 Common Issues and Solutions

- **No Power / System Does Not Turn On:**
 - Check if the PSU is properly connected to the motherboard (24-pin ATX and 8-pin CPU power).
 - Ensure the power switch on the PSU is in the 'ON' position.
 - Verify front panel power switch connection to the motherboard.
 - Test the PSU with another system or a PSU tester.
- **No Display / Black Screen:**
 - Ensure the monitor is connected to the correct display output (motherboard HDMI or dedicated graphics card).

- Reseat the graphics card and RAM modules.
- If using integrated graphics, ensure your CPU supports it.
- Try booting with only one RAM stick.
- Clear CMOS (refer to motherboard manual for jumper/button location).

- **System Restarts Randomly / Blue Screens:**

- Check CPU and GPU temperatures. Overheating can cause instability.
- Run memory diagnostic tools to check for faulty RAM.
- Ensure all drivers are correctly installed and updated.
- Verify PSU stability and wattage.

- **Storage Device Not Detected:**

- Check SATA data and power cable connections.
- Ensure M.2 SSD is properly seated and secured.
- Check BIOS/UEFI settings to ensure SATA ports are enabled and M.2 slots are configured correctly.

6. SPECIFICATIONS

Detailed technical specifications for the ASRock B760M-H2/M.2 motherboard.

Feature	Specification
Brand	ASRock
Model Name	B760M-H2/M.2
CPU Socket	LGA 1700
Compatible Processors	Intel Core 12th, 13th, 14th Gen
Chipset Type	Intel B760
RAM Memory Technology	DDR5
Memory Speed	Up to 7200 MHz (OC)
Memory Slots	2 x DDR5 DIMMs
Max Memory Capacity	96 GB
Graphics Output	2 x HDMI
PCIe Slots	1 x PCIe 4.0 x16, 2 x PCIe 3.0 x1
M.2 Slots	2 x M.2 (storage), 1 x M.2 Key E (WiFi)
LAN	2.5G LAN
Power Phase	5+1+1
Form Factor	Micro ATX

Feature	Specification
Dimensions (LxWxH)	9.84 x 11.02 x 2.36 inches
Item Weight	1.76 pounds

7. WARRANTY AND SUPPORT

7.1 Warranty Information

ASRock provides a limited warranty for its motherboards. The duration and terms of the warranty may vary by region and retailer. Please retain your proof of purchase for warranty claims. For detailed warranty information, please refer to the official ASRock website or the warranty card included with your product.

7.2 Technical Support

If you encounter issues that cannot be resolved using the troubleshooting steps in this manual, please contact ASRock technical support. Before contacting support, have your motherboard model number (B760M-H2/M.2) and serial number ready. You can find support resources, FAQs, and contact information on the official ASRock website:

[ASRock Official Support Website](#)

