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MSI MAG B560M MORTAR

MSI MAG B560M Mortar Gaming Motherboard User Manual

Model: MAG B560M MORTAR (7D17-002R)

Brand: MSI

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the MSI MAG B560M Mortar Gaming Motherboard. The MAG series is engineered for durability and stability, offering a user-friendly experience for PC builders and gamers.



Figure 1.1: MSI MAG B560M Mortar Motherboard with its retail packaging.

2. KEY FEATURES

- **Processor Support:** Supports 10th Gen and 11th Gen Intel Core, Pentium Gold, and Celeron processors for LGA 1200 socket.
- **Memory Support:** Supports DDR4 Memory, with overclocking capabilities up to 5066 MHz.
- **Storage Performance:** Features Lightning M.2, running at PCIe Gen4 x4, maximizing performance for NVMe based SSDs.
- **Network Solution:** Equipped with onboard 2.5G LAN plus Gigabit LAN and LAN Manager for optimal online experience without lag.
- **Thermal Design:** Incorporates an Extended Heatsink Design and M.2 Shield Frozr for efficient heat dissipation, ensuring stable performance under heavy loads.



Figure 2.1: Overview of key performance features including DDR4 Boost and PCIe Gen4 support.

3. PACKAGE CONTENTS

Verify that all items are present in the package before proceeding with installation:

- MSI MAG B560M Mortar Motherboard
- 2 x SATA Cables

- M.2 Screws
- User Manual (this document)
- Driver CD/USB (may vary by region)



Figure 3.1: Motherboard and standard accessories included in the package.

4. SETUP AND INSTALLATION

Before beginning installation, ensure your workspace is clean and static-free. It is recommended to wear an anti-static wrist strap.

4.1 Installing the CPU

1. Locate the LGA 1200 CPU socket on the motherboard.
2. Gently push down the load lever and pull it away from the socket to open the retention frame.

3. Align the triangular mark on the CPU with the mark on the socket. Carefully place the CPU into the socket without forcing it.
4. Close the retention frame and push the load lever back into its locked position.

4.2 Installing RAM Modules

1. Open the clips on both ends of the DIMM slots.
2. Align the notch on the DDR4 memory module with the key in the DIMM slot.
3. Press down firmly on both ends of the memory module until the clips snap into place.

4.3 Installing M.2 SSDs

1. Locate the M.2 slots on the motherboard. Some slots may have an M.2 Shield Frozr heatsink; remove it if present.
2. Insert the M.2 SSD into the slot at a slight angle.
3. Gently push down the SSD and secure it with the provided M.2 screw or standoff.
4. If applicable, reattach the M.2 Shield Frozr heatsink.

4.4 Connecting Power Supply

- Connect the 24-pin ATX main power connector from your power supply to the motherboard.
- Connect the 8-pin (or 4+4-pin) CPU power connector to the motherboard.

4.5 Installing in PC Case

1. Install the I/O shield into the rear opening of your PC case.
2. Align the motherboard with the standoffs in your PC case.
3. Secure the motherboard with screws.

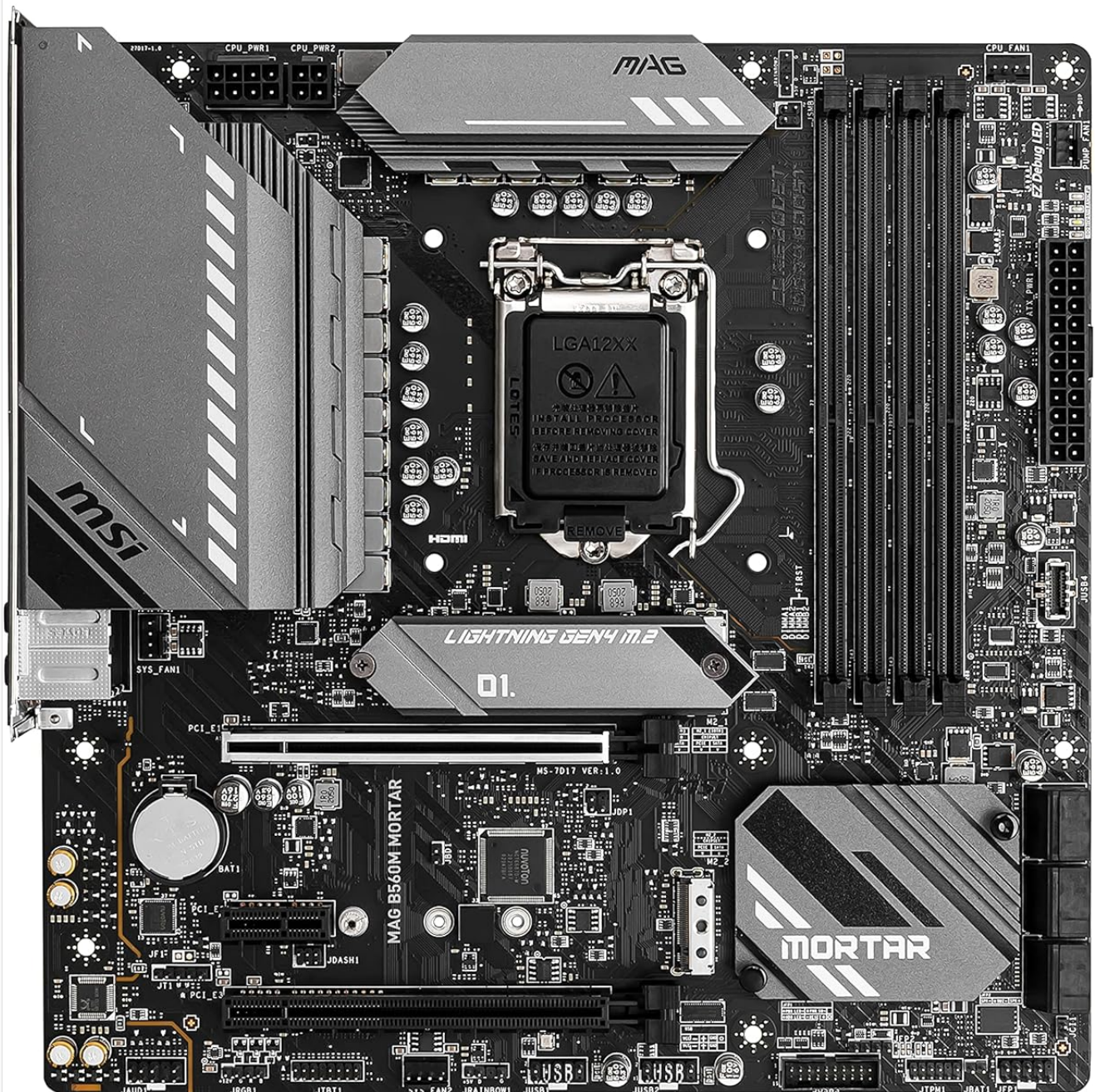


Figure 4.1: Layout of the motherboard, indicating CPU socket and memory slots for installation.

5. OPERATING INSTRUCTIONS

5.1 First Boot and BIOS Setup

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

3. In the BIOS, you can configure boot order, system time, fan speeds, and other hardware settings.
4. Save changes and exit BIOS to boot into your operating system installation media.

5.2 Driver Installation

After installing your operating system, install the necessary drivers for the motherboard components. These can typically be found on the included driver CD/USB or downloaded from the official MSI website.

- Chipset Drivers
- LAN Drivers (for 2.5G and Gigabit Ethernet)
- Audio Drivers
- Graphics Drivers (if using integrated graphics)
- USB Drivers

5.3 Software Utilities

MSI provides various software utilities to enhance your experience, such as MSI Center for system monitoring and Mystic Light for RGB control. Download these from the MSI website.

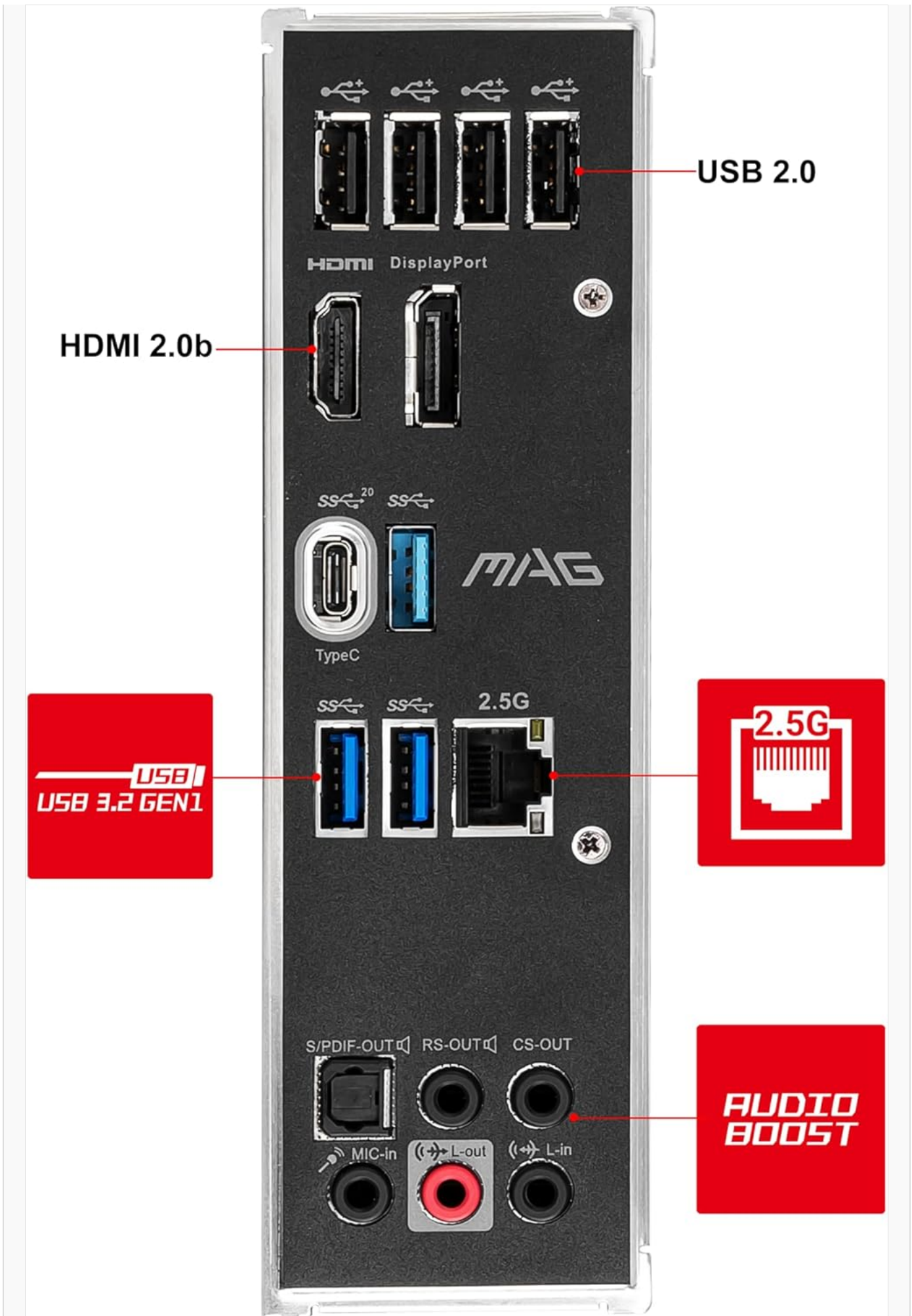


Figure 5.1: Rear I/O panel showing various connectivity options including USB, HDMI, DisplayPort, and LAN ports.

6. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your motherboard.

- **Dust Removal:** Regularly clean dust from the motherboard and components using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** Periodically check the MSI website for BIOS updates. BIOS updates can improve compatibility, stability, and performance. Follow MSI's instructions carefully when updating BIOS.
- **Driver Updates:** Keep your drivers updated to ensure compatibility with new software and to benefit from performance improvements and bug fixes.
- **Temperature Monitoring:** Use system monitoring software to keep an eye on CPU and motherboard temperatures to prevent overheating.

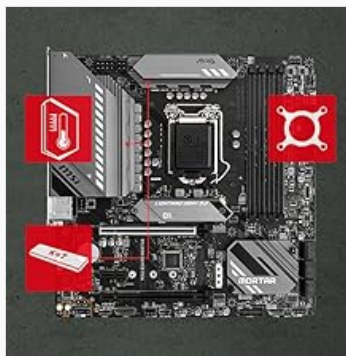


Figure 6.1: Illustration of the motherboard's thermal solution, including heatsinks for VRM and M.2 slots.

7. TROUBLESHOOTING

This section addresses common issues you might encounter.

7.1 No Display Output

- Check if the monitor cable is securely connected to both the graphics card (or motherboard if using integrated graphics) and the monitor.
- Ensure the graphics card is properly seated in its PCIe slot and its power connectors are attached.
- Try reseating the RAM modules. Incorrectly seated RAM is a common cause of no display.
- Clear CMOS by removing the CMOS battery for a few minutes or using the clear CMOS jumper (refer to the motherboard diagram).

7.2 System Instability or Crashes

- Check for overheating. Ensure CPU cooler is properly installed and fans are spinning.
- Verify RAM compatibility and stability. Run a memory diagnostic tool.
- Ensure all power connections are secure.
- Update drivers and BIOS to the latest versions.

7.3 Network Connectivity Issues

- Ensure the Ethernet cable is securely connected to the LAN port and your router/modem.
- Install or update the LAN drivers from the MSI website.
- Check network settings in your operating system.

8. SPECIFICATIONS

Feature	Specification
Brand	MSI
Series	MAG B560M MORTAR
Item Model Number	7D17-002R
CPU Socket	LGA 1200
Compatible Processors	10th/11th Gen Intel Core, Pentium Gold, Celeron
Chipset Type	Intel B560
RAM Memory Technology	DDR4
Memory Speed	Up to 5066 MHz (OC)
Product Dimensions	9.6 x 9.6 x 2.5 inches (mATX Form Factor)
Item Weight	2.2 pounds
USB 2.0 Ports	4 (Rear I/O)
Platform	Windows 10
First Available Date	May 24, 2022

9. WARRANTY AND SUPPORT

MSI products typically come with a limited warranty. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official MSI website.

9.1 Technical Support

For technical assistance, driver downloads, BIOS updates, and FAQs, please visit the official MSI support website:

<https://www.msi.com/support>

When contacting support, please have your motherboard model (MAG B560M MORTAR) and serial number ready.

