MSI B250M MORTAR

MSI B250M Mortar Micro-ATX Motherboard User Manual

Model: B250M MORTAR

1. Introduction

This manual provides detailed instructions for the installation, configuration, and maintenance of your MSI B250M Mortar Micro-ATX motherboard. Designed for Intel LGA 1151 processors, this motherboard supports DDR4 memory and offers a robust platform for various computing needs. Please read this manual thoroughly before beginning installation to ensure proper setup and operation.



Figure 1.1: The MSI B250M Mortar motherboard alongside its retail packaging. This image illustrates the product as it appears when unboxed, highlighting its design and the branding.

2. Package Contents

Verify that all items listed below are present in your motherboard package. If any item is missing or damaged, contact your retailer.

- MSI B250M Mortar Motherboard
- SATA Data Cables
- I/O Shield
- Quick Setup Guide
- Driver CD/DVD (may vary by region/package)
- M.2 Screws and Standoffs

3. Key Features

The MSI B250M Mortar motherboard incorporates several features designed for performance and reliability:

- Supports 7th/6th Gen Intel Core/Pentium/Celeron processors for LGA 1151 socket.
- Supports DDR4-2400 Memory.
- Virtual Reality Ready.
- Gaming LEDs for system status indication.
- Mystic Light Sync for customizable RGB lighting.
- Military Class 5 components for enhanced durability.

4. Hardware Installation

Before beginning installation, ensure your workspace is static-free. Wear an anti-static wrist strap or frequently touch a grounded metal object to discharge static electricity. Disconnect the power cord from the wall outlet before installing or removing any components.

4.1 Motherboard Layout

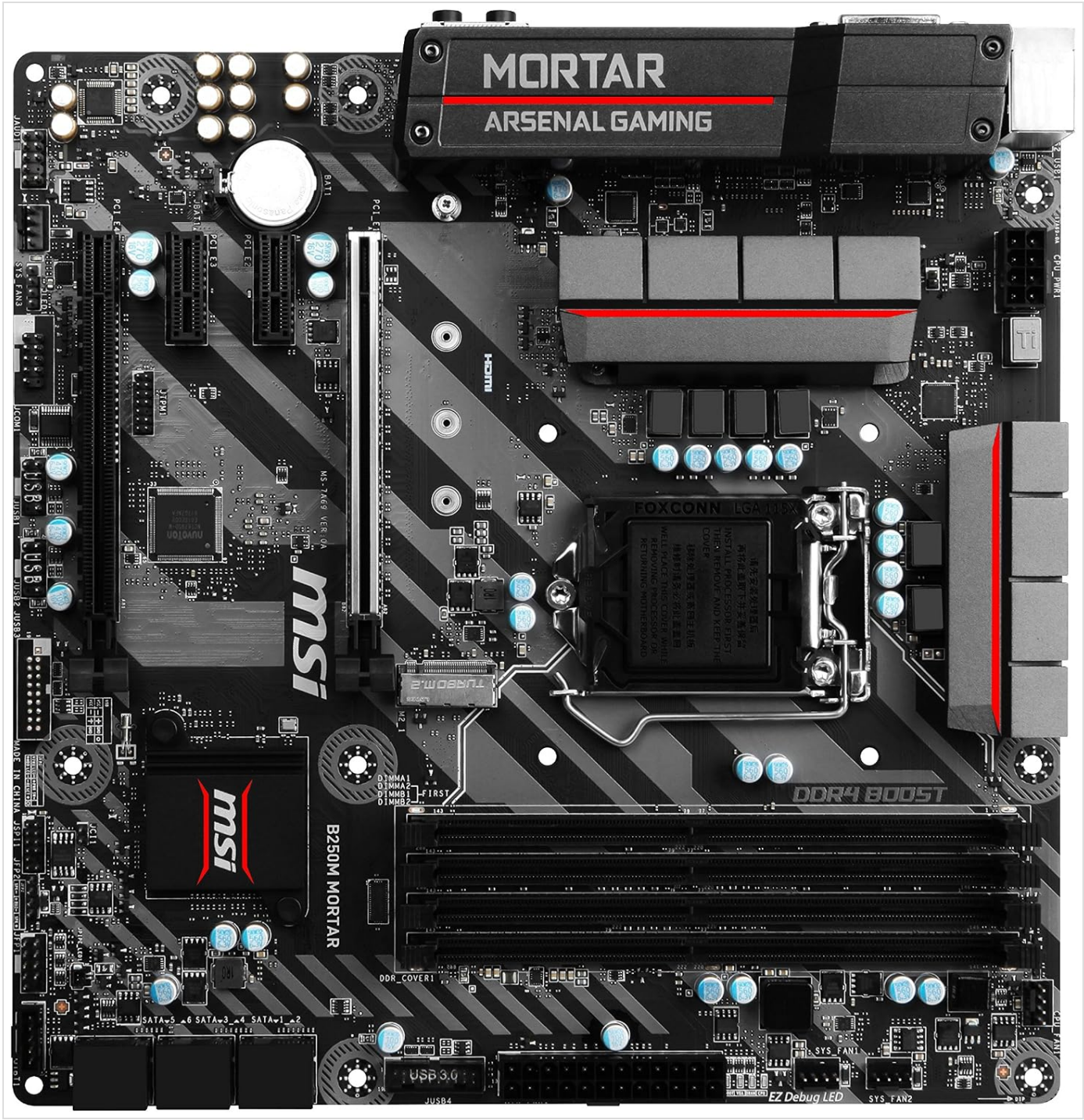


Figure 4.1: A top-down view of the MSI B250M Mortar motherboard, illustrating the placement of key components such as the CPU socket, RAM slots, PCIe slots, and various connectors.



Figure 4.2: An angled perspective of the MSI B250M Mortar motherboard, showcasing its heatsinks and overall design, providing a clearer view of component height and spacing.

4.2 Installing the CPU

1. Locate the LGA 1151 CPU socket on the motherboard.
2. Open the CPU socket lever and lift the load plate.
3. Carefully align the CPU with the socket, ensuring the golden triangle on the CPU matches the triangle on the socket. Do not force the CPU into the socket.
4. Lower the load plate and secure it by pushing down the lever until it clicks into place.
5. Install the CPU cooler according to its manufacturer's instructions.

4.3 Installing DDR4 Memory

1. Open the clips at both ends of the DIMM slots.
2. Align the memory module with the slot, ensuring the notch on the module matches the key in the slot.
3. Press down firmly on both ends of the memory module until the clips snap into place.
4. For dual-channel performance, refer to the motherboard manual for recommended slot configurations (typically slots 2 and 4).

4.4 Installing Storage Devices

4.4.1 M.2 SSD Installation

1. Locate the M.2 slot on the motherboard.
2. Remove the M.2 standoff screw.
3. Insert the M.2 SSD into the slot at a 30-degree angle.
4. Push the SSD down and secure it with the standoff screw.

4.4.2 SATA Drive Installation

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

4.5 Installing Expansion Cards (e.g., Graphics Card)

1. Locate the appropriate PCIe slot (e.g., PCIe x16 for a graphics card).
2. Remove the corresponding expansion slot cover from your PC case.
3. Align the expansion card with the slot and press down firmly until it is seated correctly.
4. Secure the card to the case with a screw or retention clip.
5. If installing a graphics card, connect any required PCIe power cables from your power supply.

4.6 Connecting Power Supply

1. Connect the 24-pin ATX power connector from your power supply to the main power socket on the motherboard.
2. Connect the 8-pin (or 4-pin) CPU power connector from your power supply to the CPU power socket near the CPU.

4.7 Connecting Front Panel and Rear I/O

Connect the various cables from your PC case to the corresponding headers on the motherboard. Refer to the motherboard manual for exact pin layouts.

- **Front Panel Connectors:** Power button, reset button, power LED, HDD activity LED.
- **USB Headers:** Connect front panel USB 2.0 and USB 3.0 ports.
- **Audio Header:** Connect front panel audio jacks.



Figure 4.3: A detailed view of the rear input/output (I/O) panel of the MSI B250M Mortar motherboard, showing ports for USB, Ethernet, audio, and video outputs (HDMI, DVI, VGA).

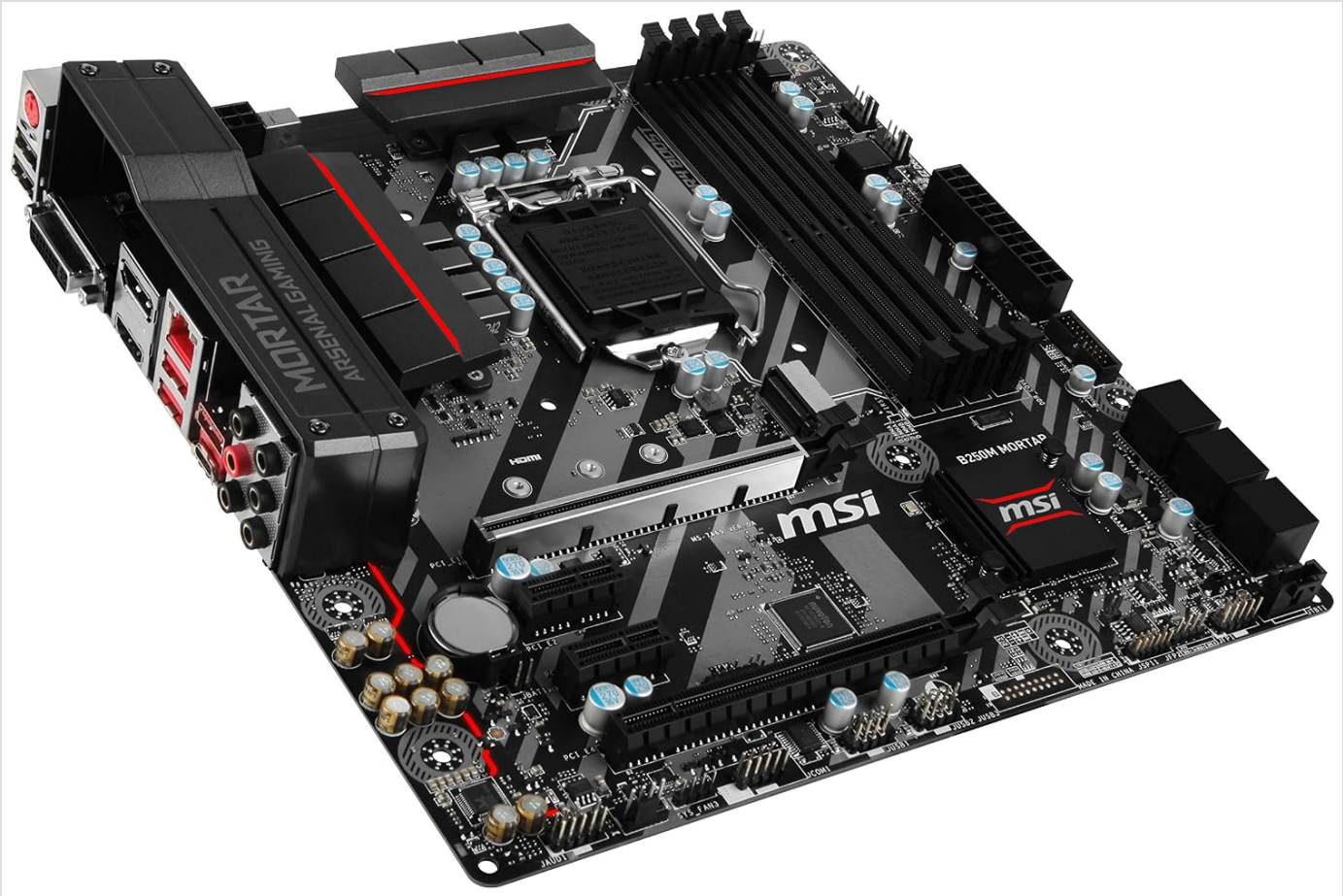


Figure 4.4: An angled rear view of the MSI B250M Mortar motherboard, providing a perspective on the integrated I/O shield and the arrangement of the rear ports.

5. Operating Instructions

5.1 First Boot and BIOS/UEFI Setup

1. After assembling all components, connect your monitor, keyboard, and mouse.
2. Connect the power cord to the power supply and turn on the system.
3. Press the **DEL** key repeatedly during startup to enter the BIOS/UEFI setup utility.
4. In the BIOS/UEFI, you can configure boot order, enable XMP for memory, set system time, and monitor hardware status. Save changes and exit to proceed with operating system installation.

5.2 Driver Installation

After installing your operating system, install the necessary drivers for optimal performance. Drivers can be found on the included driver CD/DVD or downloaded from the official MSI website.

- Chipset Drivers
- Audio Drivers
- LAN (Ethernet) Drivers
- Graphics Drivers (for integrated graphics or discrete GPU)
- USB Drivers

6. Maintenance

6.1 Cleaning

Regularly clean your computer's interior to prevent dust buildup, which can lead to overheating and reduced performance. Use

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

6.2 BIOS/UEFI Updates

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

7. Troubleshooting

If you encounter issues, refer to the following common troubleshooting steps:

- **No Power:** Ensure all power cables (24-pin ATX, 8-pin CPU, GPU PCIe) are securely connected. Check the power supply switch and wall outlet.
- **No Display:** Verify that the monitor is connected to the correct video output (either motherboard I/O or discrete graphics card). Reseat the graphics card and RAM modules.
- **System Fails to Boot (No POST):** Listen for beep codes (if a speaker is connected) or check the EZ Debug LEDs on the motherboard. These LEDs indicate issues with CPU, DRAM, VGA, or BOOT devices.
- **Operating System Not Found:** Check boot order in BIOS/UEFI. Ensure storage drives are properly connected and detected.
- **System Instability/Crashes:** Ensure all drivers are up to date. Check CPU and GPU temperatures. Test memory modules individually.

For further assistance, consult the comprehensive user manual available on the MSI support website or contact MSI technical support.

8. Specifications

Feature	Detail
Brand	MSI
Model Name	B250M MORTAR
CPU Socket	LGA 1151
Compatible Processors	7th/6th Gen Intel Core/Pentium/Celeron
Chipset Type	Intel B250
RAM Memory Technology	DDR4
Memory Speed	Supports up to DDR4-2400 MHz
Compatible Devices	Personal Computer
Product Dimensions (LxWxH)	11.02 x 10.71 x 2.56 inches
Item Weight	2.7 pounds
Platform	Windows 10

9. Warranty and Support

MSI provides a limited warranty for its products. For detailed warranty terms and conditions, please refer to the warranty card included with your product or visit the official MSI website. Technical support, driver downloads, and additional resources are

available through the MSI support portal.
MSI Support Website: www.msi.com/support

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Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Question

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.

Submit question