MSI B450M MORTAR TITANIUM

MSI B450M Mortar Titanium AM4 AMD B450 Micro ATX DDR4-SDRAM Motherboard User Manual

Model: B450M MORTAR TITANIUM

INTRODUCTION

This manual provides comprehensive instructions for the MSI B450M Mortar Titanium AM4 AMD B450 Micro ATX DDR4-SDRAM Motherboard. It covers essential information for proper installation, operation, maintenance, and troubleshooting to ensure optimal performance and longevity of your system. The MSI B450M Mortar Titanium is designed to support AMD Ryzen 1st and 2nd Generation processors, including those with Radeon Vega Graphics, offering robust performance for various computing needs.

1. SETUP AND INSTALLATION

Follow these steps for the correct installation of your motherboard and its components.

1.1. Motherboard Overview

Figure 1: Top-down view of the MSI B450M Mortar Titanium motherboard, showcasing the CPU socket, RAM slots, PCIe slots, and M.2 slots. Note the distinctive titanium-colored heatsinks.

1.2. CPU Installation

Carefully align your AMD AM4 processor with the socket on the motherboard. Ensure the golden triangle on the CPU matches the triangle on the socket. Gently lower the CPU into the socket without applying force. Once seated, lower the retention lever to secure the CPU.

1.3. RAM Installation

This motherboard supports DDR4-SDRAM. Open the clips on both ends of the DIMM slots. Align the memory module with the slot, ensuring the notch on the module matches the key in the slot. Press down firmly on both ends of the memory module until the clips snap into place. For dual-channel performance, refer to your motherboard's specific manual for recommended slot population.

1.4. Motherboard Mounting

Install the necessary standoffs in your PC case. Carefully place the motherboard onto the standoffs, aligning the screw holes. Secure the motherboard with screws, ensuring not to overtighten them.

1.5. Connecting Peripherals

Connect the 24-pin ATX power connector and the 8-pin CPU power connector from your power supply to the motherboard. Connect SATA drives to the SATA ports. Connect front panel headers (power button, reset button, USB, audio) according to the labels on the motherboard and your case manual.

Figure 2: Rear I/O panel of the MSI B450M Mortar Titanium, showing various ports including USB 2.0, USB 3.0, USB 3.1 Type-A, USB 3.1 Type-C, LAN (RJ-45), PS/2, HDMI, and DisplayPort.

The rear I/O panel includes: 2 x USB 2.0, 2 x USB 3.0, 1 x USB 3.1 Type-A, 1 x USB 3.1 Type-C, 1 x LAN (RJ-45), 1 x PS/2, 1 x HDMI, and 1 x DisplayPort. Ensure all necessary external devices are connected to the appropriate ports.

2. OPERATING INSTRUCTIONS

Once all components are installed and connected, you can proceed with system operation.

2.1. Initial Boot and BIOS/UEFI Setup

Power on your system. Press the **DEL** key during startup to enter the BIOS/UEFI setup utility. Here you can configure boot order, system time, and other advanced settings. Save and exit to continue booting into your operating system installation media.

2.2. Driver Installation

After installing your operating system, install the necessary drivers for the motherboard chipset, audio, LAN, and any other integrated components. Drivers can be found on the MSI support website for your specific motherboard model. It is recommended to download the latest drivers directly from the official MSI website rather than using outdated drivers from an included CD.

2.3. Software Utilities

MSI provides various software utilities to enhance your experience, such as MSI Dragon Center for system monitoring and Mystic Light for RGB control. These tools can be downloaded from the MSI website.

3. MAINTENANCE

Regular maintenance helps ensure the stability and longevity of your motherboard.

3.1. BIOS Updates

Periodically check the MSI website for BIOS updates. BIOS updates can improve compatibility, stability, and performance. This motherboard features **BIOS Flashback+**, allowing you to update the BIOS using a USB flash drive without a CPU or RAM installed. Refer to the MSI website for detailed instructions on using BIOS Flashback+.

3.2. Cleaning

Keep the motherboard and surrounding components free of dust. Use compressed air to gently remove dust from heatsinks, fans, and other areas. Ensure the system is powered off and unplugged before cleaning.

3.3. Driver and Software Updates

Regularly update your system drivers and MSI utilities to benefit from the latest features, performance improvements, and security patches.

4. TROUBLESHOOTING

This section addresses common issues you might encounter.

4.1. No Power / No Boot

- Ensure all power cables (24-pin ATX, 8-pin CPU) are securely connected to the motherboard and power supply.
- Verify the power supply is switched on and connected to a working power outlet.
- Check front panel connections, especially the power button header.
- Try booting with minimal components (CPU, one RAM stick, GPU if no integrated graphics) to isolate the issue.

4.2. POST Code Errors / Beep Codes

If your system emits a series of beeps or displays a POST code, consult the MSI motherboard manual for the specific meaning of these codes. Common issues include RAM, CPU, or GPU detection failures.

4.3. BIOS Reset (Clear CMOS)

If you encounter issues after changing BIOS settings, you can clear the CMOS to revert to default settings. Power off the system, unplug it, and either remove the CMOS battery for a few minutes or use the Clear CMOS jumper/button on the motherboard (refer to the full manual for location).

5. SPECIFICATIONS

Key technical specifications for the MSI B450M Mortar Titanium motherboard.

Feature	Detail
Brand	MSI
Series	B450M Mortar Titanium
Model Number	B450M MORTAR TITANIUM
CPU Socket	Socket AM4
Compatible Processors	AMD Ryzen 1st and 2nd Gen, Ryzen with Radeon Vega Graphics
Chipset Type	AMD B450
Form Factor	Micro ATX
RAM Memory Technology	DDR4 SDRAM
Memory Speed	Up to 3466 MHz (OC)
Max Memory	32GB Dual DDR4-SDRAM
USB Ports	2 x USB 2.0, 2 x USB 3.0, 1 x USB 3.1 Type-A, 1 x USB 3.1 Type-C (Rear I/O)
Video Output	HDMI, DisplayPort
LAN	1 x RJ-45
Product Dimensions	9.61 x 9.61 x 1.18 inches
Item Weight	2.07 pounds

6. Warranty and Support

For warranty information, please refer to the warranty card included with your product or visit the official MSI website. For technical support, driver downloads, and further documentation, please visit the MSI support page at www.msi.com/support. Always provide your motherboard model number (B450M MORTAR TITANIUM) when seeking support.