MSI B250M PRO-VD

MSI B250M PRO-VD micro-ATX Motherboard User Manual

Model: B250M PRO-VD

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the MSI B250M PRO-VD micro-ATX motherboard. This motherboard is designed to support Intel 7th and 6th generation Core, Pentium, and Celeron processors for the LGA 1151 socket, offering a stable and reliable platform for various computing needs.



Image 1.1: The MSI B250M PRO-VD motherboard alongside its retail packaging.

2. Key Features

The MSI B250M PRO-VD motherboard incorporates several features designed for performance and durability:

- **Processor Support:** Compatible with 7th and 6th Generation Intel Core, Pentium, and Celeron processors for the LGA 1151 socket.
- **Memory Support:** Supports DDR4-2400 memory modules.
- **Storage:** Features Turbo M.2 slot for high-speed storage and is Intel Optane Memory Ready.
- **Diagnostics:** Equipped with Easy Debug LED indicators for quick system status checks.
- **Protection:** Includes Double ESD Protection for enhanced durability against electrostatic discharge.

3. Package Contents

Verify that all items are present in the package:

- MSI B250M PRO-VD Motherboard
- SATA Cables and other necessary connectors
- Quick Setup Guide

If any items are missing or damaged, contact your retailer.

4. Setup and Installation

Before beginning installation, ensure your system is powered off and unplugged from the wall outlet. Wear an anti-static wrist strap to prevent electrostatic discharge damage to components.

4.1 Installing the CPU

1. Locate the LGA 1151 CPU socket on the motherboard.
2. Open the CPU socket lever and lift the metal load plate.
3. Carefully align the CPU with the socket, ensuring the golden triangle on the CPU matches the triangle on the socket.
4. Gently place the CPU into the socket without forcing it.
5. Close the load plate and secure it with the lever.



Image 4.1: Top-down view of the motherboard, highlighting the CPU socket area.

4.2 Installing Memory (RAM)

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.

4.3 Installing Storage Devices (SATA/M.2)

- **SATA Drives:** Connect SATA data cables from your storage devices (HDDs/SSDs) to the SATA ports on the motherboard. Connect power cables from your power supply to the drives.
- **M.2 SSD:** Locate the M.2 slot. Insert the M.2 SSD at an angle and then gently push it down. Secure it with the provided screw.

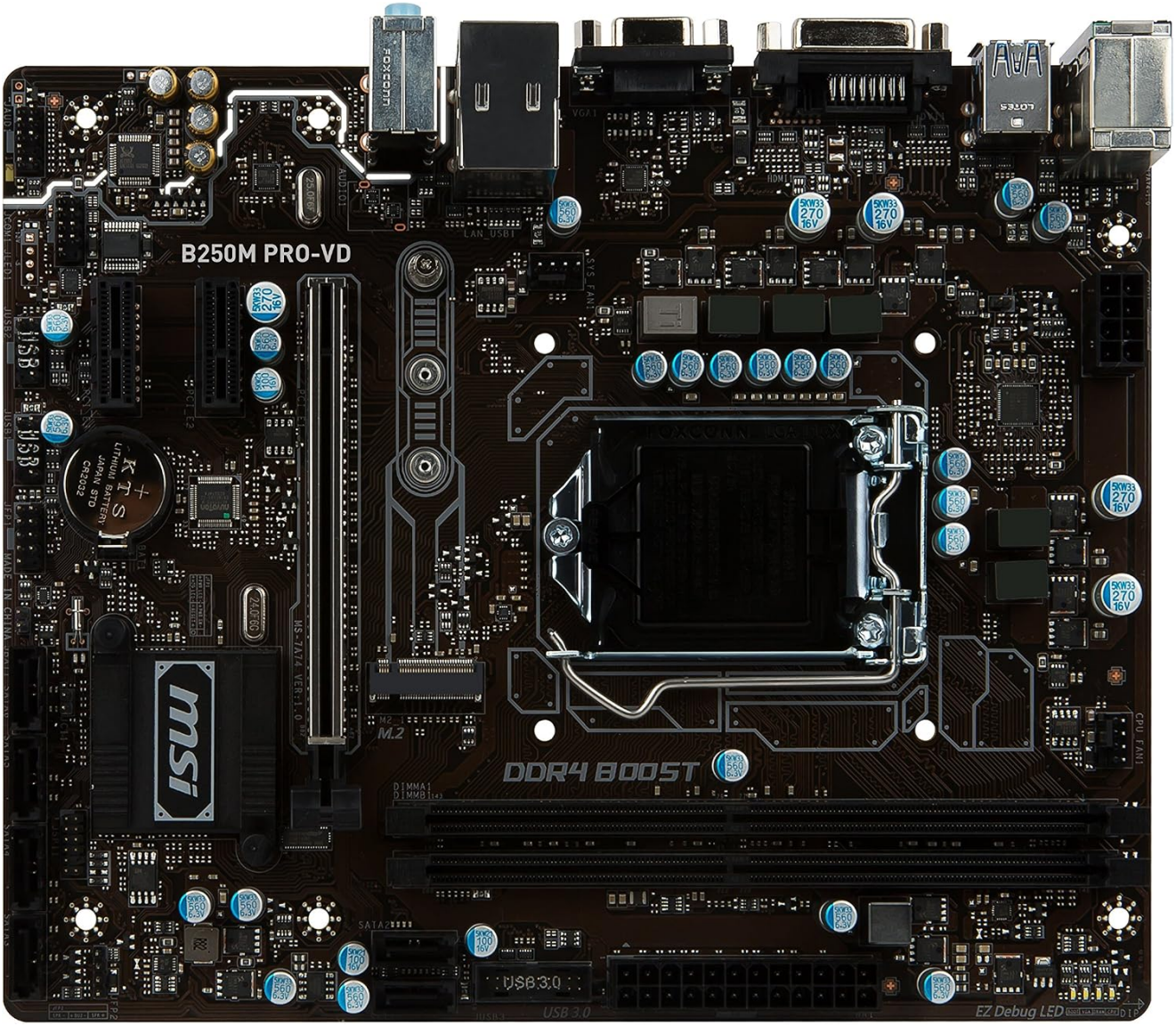


Image 4.2: Angled view of the motherboard, illustrating the location of SATA ports and the M.2 slot.

4.4 Connecting Power Supply

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

4.5 Connecting Front Panel and Peripherals

- Connect the front panel headers (power switch, reset switch, HDD LED, power LED) to the JFP1 header according to the motherboard manual.
- Connect USB 2.0 and USB 3.1 Gen1 (USB 3.0) front panel connectors.
- Connect audio front panel connector.
- Install the motherboard into your PC case, securing it with screws.



Image 4.3: The motherboard with various connectors visible, ready for integration into a PC case.

5. Operating Instructions

5.1 Initial Boot

After completing all hardware installations, connect your monitor, keyboard, and mouse. Power on your system. The system should display the MSI logo and enter the BIOS or begin the operating system installation process.

5.2 BIOS Setup

To enter the BIOS/UEFI setup utility, press the `Del` key during the boot process. The BIOS allows you to configure system settings such as boot order, date/time, and hardware parameters. Refer to the full motherboard manual for detailed BIOS settings.

6. Maintenance

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

- **Cleaning:** Periodically clean dust from the motherboard and components using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** Check the MSI website for the latest BIOS updates. Updating the BIOS can improve system stability, compatibility, and performance. Follow the instructions provided by MSI carefully when performing a BIOS update.
- **Driver Updates:** Keep your device drivers updated by downloading the latest versions from the MSI support

website.

7. Troubleshooting

This section addresses common issues you might encounter.

- **No Power:**
  - Ensure the power supply is connected correctly to the motherboard (24-pin and 8-pin/4-pin CPU power).
  - Verify the power supply switch is in the ON position.
  - Check front panel power switch connection to the motherboard.
- **No Display:**
  - Confirm the monitor is connected to the correct video output (motherboard or discrete graphics card).
  - Reseat the graphics card and memory modules.
  - Check the Easy Debug LED for diagnostic codes.
- **System Instability/Crashes:**
  - Ensure all components are properly seated.
  - Check CPU and GPU temperatures.
  - Update BIOS and drivers.
  - Test memory modules individually.



Image 7.1: The rear input/output panel of the motherboard, showing various ports for troubleshooting connectivity.

8. Specifications

Feature	Detail
Brand	MSI
Model Name	B250M PRO-VD
CPU Socket	LGA 1151
Compatible Processors	Intel 7th/6th Gen Core, Pentium, Celeron
Chipset Type	Intel B250
RAM Memory Technology	SDRAM (DDR4)
Memory Speed	2400 MHz
Number of USB 2.0 Ports	6 (via headers and rear I/O)

Feature	Detail
Product Dimensions (LxWxH)	10.24 x 10.12 x 2.17 inches
Item Weight	1.45 pounds
Platform	Windows 10

9. Warranty and Support

For detailed warranty information, please refer to the warranty card included with your product or visit the official MSI website. MSI provides technical support and resources for their products.

- **Online Support:** Visit the MSI official website for driver downloads, BIOS updates, FAQs, and technical support.
- **Contact Information:** Refer to the MSI website for regional contact details for customer service and technical assistance.