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## MSI PRO H510M-B II

# MSI PRO H510M-B II Motherboard User Manual

MODEL: PRO H510M-B II

## Introduction

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This manual provides comprehensive instructions for the installation, operation, and maintenance of your MSI PRO H510M-B II Micro-ATX Motherboard. Designed for Intel Core 10th Generation Processors with an LGA 1200 socket, this motherboard offers essential features for building a reliable personal computer system. Please read this manual thoroughly before proceeding with installation.



Figure 1: MSI PRO H510M-B II Motherboard and Retail Box.

This image displays the MSI PRO H510M-B II motherboard alongside its retail packaging, providing a visual overview of the product as it appears out of the box.

## 1. Setup and Installation

Follow these steps carefully to install your motherboard and its components.

### 1.1. Preparing the Chassis

Ensure your computer chassis is prepared for motherboard installation. Install standoffs in the chassis that align with the screw holes on the motherboard. Refer to your chassis manual for specific instructions.

### 1.2. CPU Installation

1. Locate the LGA 1200 CPU socket on the motherboard.
2. Open the CPU socket lever and lift the load plate.
3. Carefully align the notches on your Intel 10th Gen Core processor with the socket. Do not force the CPU into place.

4. Lower the load plate and secure it with the lever.
5. Install the CPU cooler according to its manufacturer's instructions.

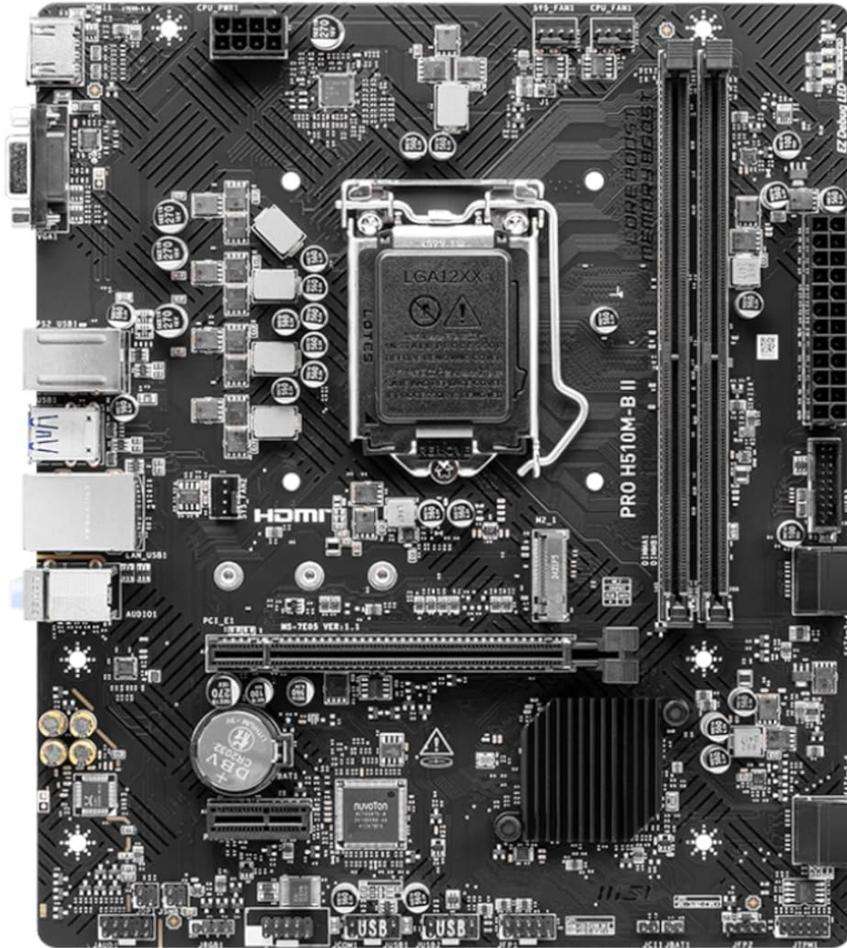


Figure 2: Top-down view of the motherboard, highlighting the LGA 1200 CPU socket.

This image provides an overhead perspective of the MSI PRO H510M-B II motherboard, clearly showing the central LGA 1200 CPU socket and surrounding components.

### 1.3. Memory (RAM) Installation

The motherboard supports DDR4 memory modules. It features two DIMM slots.

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

### 1.4. Graphics Card Installation

The motherboard includes one PCIe 3.0 x16 slot for a graphics card.

1. Locate the PCIe 3.0 x16 slot.
2. Remove the corresponding expansion slot cover from your chassis.
3. Align your graphics card with the slot and press down firmly until it is seated.
4. Secure the graphics card to the chassis with a screw.

### **1.5. M.2 SSD Installation**

The motherboard has one M.2 Gen3 x4 32Gb/s slot for NVMe SSDs.

1. Locate the M.2 slot.
2. Insert the M.2 SSD into the slot at a 30-degree angle.
3. Gently push the SSD down and secure it with the provided screw.

### **1.6. Power Connections**

Connect the 24-pin ATX main power connector and the 8-pin CPU power connector from your power supply unit (PSU) to the motherboard.

### **1.7. Front Panel Connectors**

Connect the chassis front panel cables (power button, reset button, HDD LED, power LED, USB ports, audio jacks) to their respective headers on the motherboard. Refer to the motherboard layout diagram in the full manual for exact locations.

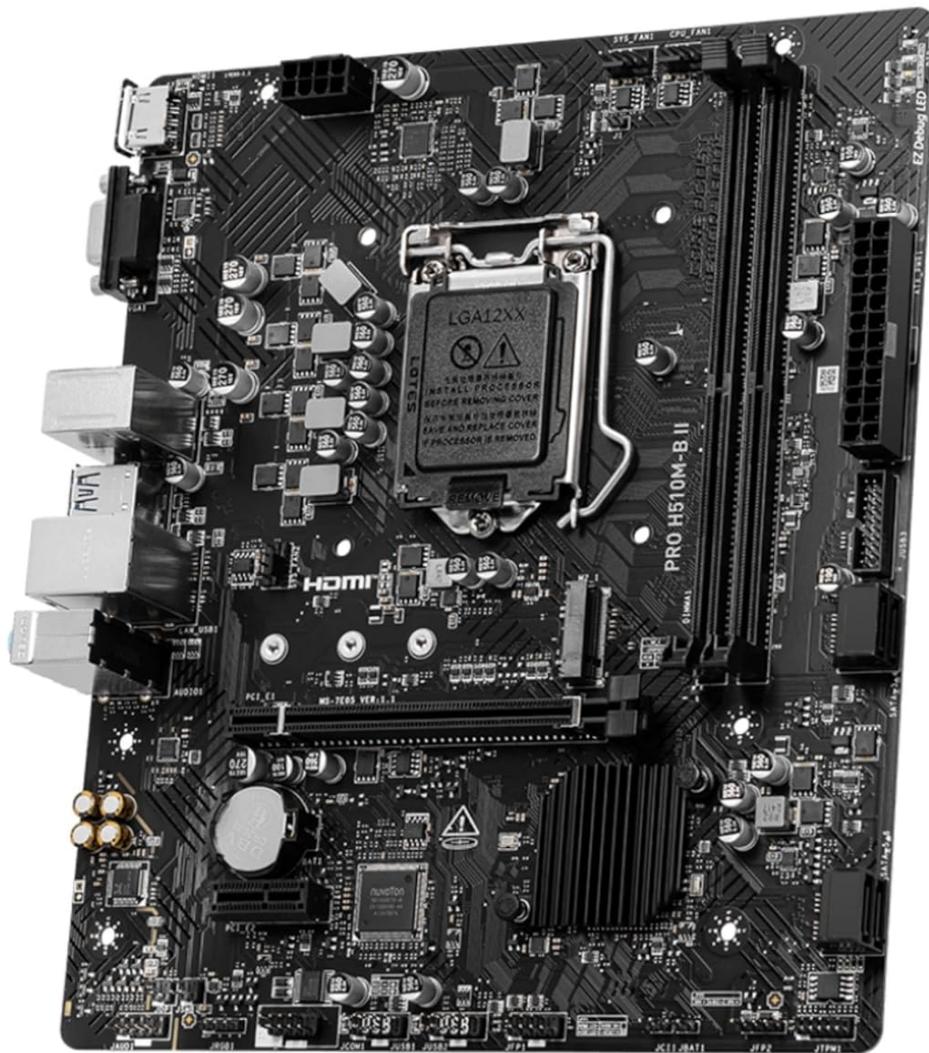


Figure 3: Angled view of the motherboard, illustrating various headers and slots.

This image presents an angled perspective of the MSI PRO H510M-B II motherboard, detailing the placement of expansion slots, memory DIMMs, and various internal connectors.

## 2. Operating Instructions

Once all components are installed and connected, you can power on your system.

### 2.1. Initial Boot-Up

Press the power button on your chassis. The system should power on, and you should see a display on your monitor. If not, refer to the Troubleshooting section.

### 2.2. BIOS/UEFI Access

To enter the BIOS/UEFI setup utility, press the **DEL** key repeatedly during the initial boot sequence. The BIOS allows you to configure system settings, boot order, and monitor hardware status.

### 2.3. Driver Installation

After installing your operating system, install the necessary drivers for the motherboard components (chipset, LAN, audio, etc.). These drivers are typically provided on a support DVD or can be downloaded from the official MSI website.

## 2.4. Cooling System

The motherboard features a chipset heatsink for passive cooling. Additionally, MSI's Smart Fan Control automatically adjusts system fan settings based on CPU and GPU temperatures to maintain optimal thermal performance and acoustics.

## 2.5. Connectivity

The rear I/O panel provides various connectivity options:

- **USB Ports:** Multiple USB 3.2 Gen 1 Type-A (5Gbps) and USB 2.0 ports.
- **Video Output:** HDMI 1.4 for display connectivity.
- **Network:** 1Gbps LAN controller for wired internet access.
- **Audio:** 7.1 HD Audio with Audio Boost for high-quality sound.
- **Legacy Ports:** PS/2 port for older keyboards/mice, VGA port.



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

- **No Power:**

- Check all power connections (24-pin ATX, 8-pin CPU, GPU power).
- Ensure the PSU is switched on.
- Verify the front panel power button connection.

- **No Display:**

- Ensure the monitor is connected to the graphics card (or motherboard if using integrated graphics) and powered on.
- Reseat the graphics card and RAM modules.
- Test with a different monitor or cable if possible.

- **System Instability/Crashes:**

- Check CPU and GPU temperatures.
- Verify RAM modules are properly seated.
- Run memory diagnostic tools.
- Ensure all drivers are up to date.

- **Component Not Detected:**

- Reseat the component (e.g., M.2 SSD, SATA drive).
- Check power and data cables.
- Verify BIOS settings for component detection.

- **Fan Error:**

- Ensure all fans (CPU, chassis) are properly connected to the motherboard headers.
- Check fan rotation and clear any obstructions.
- Adjust fan speed settings in BIOS if necessary.

For further assistance, consult the full MSI user manual or contact MSI technical support.

## 5. Specifications

Key technical specifications for the MSI PRO H510M-B II Motherboard:

Feature	Specification
Brand	MSI
Model	PRO H510M-B II
Form Factor	Micro-ATX
CPU Socket	LGA 1200
Compatible Processors	Intel Core 10th Gen Processors
Chipset	Intel H510
Memory Type	DDR4
Memory Slots	2 x DIMM

<b>Max Memory Capacity</b>	64 GB
<b>Memory Clock Speed</b>	Up to 2933 MHz
<b>PCIe x16 Slot</b>	1 x PCIe 3.0 x16 (with Steel Slot)
<b>M.2 Slot</b>	1 x M.2 Gen3 x4 32Gb/s
<b>LAN</b>	1Gbps LAN Controller
<b>Video Output</b>	HDMI 1.4, VGA
<b>USB Ports (Rear)</b>	USB 3.2 Gen 1 Type-A (5Gbps), USB 2.0
<b>Audio</b>	7.1 HD Audio with Audio Boost
<b>Dimensions (LxWxH)</b>	23.6 x 20.2 x 5 cm
<b>Item Weight</b>	660 g

## 6. Warranty and Support

For detailed warranty information, please refer to the warranty card included with your product or visit the official MSI website. Warranty terms and conditions may vary by region.

For technical support, driver downloads, BIOS updates, and additional resources, please visit the official MSI support page:

[MSI Official Support Website](#)

When contacting support, please have your motherboard model (PRO H510M-B II) and serial number ready.



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## Related Documents - PRO H510M-B II

 <p><b>PRO B660-A DDR4</b> Motherboard</p> <p>USER GUIDE 使用說明書 Manual / 說明書 Documentation / 說明書 Parental Control / 家長控制 BIOS / 說明書 BIOS / 說明書</p>	<p><a href="#">MSI PRO B660-A DDR4 Motherboard User Guide</a></p> <p>Comprehensive user guide for the MSI PRO B660-A DDR4 motherboard, detailing specifications, component layout, safety information, installation instructions, BIOS setup, and software usage.</p>
 <p><b>PRO B760M-E DDR4</b> Motherboard</p> <p>USER GUIDE 使用說明書 Manual / 說明書 Documentation / 說明書 Parental Control / 家長控制 BIOS / 說明書 BIOS / 說明書</p>	<p><a href="#">MSI PRO B760M-E DDR4 Motherboard User Guide</a></p> <p>Comprehensive user guide for the MSI PRO B760M-E DDR4 motherboard, detailing installation, components, BIOS setup, and safety information.</p>



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## [MSI MAG B560M MORTAR WIFI & MAG B560M MORTAR Motherboard User Guide](#)

Comprehensive user guide for MSI MAG B560M MORTAR WIFI and MAG B560M MORTAR motherboards, detailing installation of CPU, RAM, graphics cards, storage, system setup, and features like Wi-Fi 6E.

Thank you for purchasing the MSI PRO Z690-P DDR4 Motherboard. This user guide provides information about board layout, component overview, BIOS setup and software installation.

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## [MSI PRO Z690-P DDR4 Motherboard User Guide | Setup, Specs, and Installation](#)

Comprehensive user guide for the MSI PRO Z690-P DDR4 motherboard, detailing specifications, component overview, BIOS setup, and software installation for optimal PC performance.

Thank you for purchasing the MSI H510M PRO-E Motherboard. This user guide provides information about board layout, component overview, BIOS setup and software installation.

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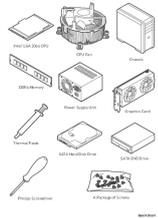
## [MSI H510M PRO-E Motherboard User Guide](#)

Comprehensive user guide for the MSI H510M PRO-E motherboard, covering board layout, component overview, BIOS setup, software installation, and safety information. Supports Intel 10th and 11th Gen Core processors.

### Quick Start

Thank you for purchasing the MSI Creator X299 Motherboard. This user guide provides information about board layout, component overview, BIOS setup and software installation.

### Preparing Tools and Components



## [MSI Creator X299 Motherboard: Quick Start and User Guide](#)

Comprehensive guide for the MSI Creator X299 motherboard, covering installation, specifications, BIOS setup, and troubleshooting for PC builders and enthusiasts.