

Asus Prime H510M-R

ASUS Prime H510M-R Motherboard User Manual

MODEL: PRIME H510M-R



Image: The ASUS Prime H510M-R motherboard is shown alongside its retail packaging. The motherboard features an LGA 1200 CPU socket, DDR4 RAM slots, PCIe slots, and various I/O ports. The box displays the "ASUS Prime H510M-R" branding.

Introduction

This manual provides essential information for the installation, operation, and maintenance of your ASUS Prime H510M-R motherboard. The ASUS Prime H510M-R is designed to support 10th and 11th Gen Intel Core processors, offering a stable foundation for your personal computer build.

Key features include:

- **Intel LGA 1200 socket:** Ready for 11th & 10th Gen Intel Core processors.
- **5X Protection III:** Multiple hardware safeguards for all-round protection.
- **Ultrafast connectivity:** PCIe 4.0, Realtek 1 Gb Ethernet, USB 3.2 Gen 1 Type-A.

Setup and Installation

Before beginning installation, ensure your system is powered off and disconnected from the power source. Handle the motherboard by its edges to avoid static discharge.

1. CPU Installation:

Carefully open the LGA 1200 socket lever. Align the triangular mark on your Intel processor with the mark on the socket. Gently place the CPU into the socket without forcing it. Close the lever to secure the CPU.

2. RAM Installation:

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

3. Motherboard Mounting:

Install standoffs in your PC case according to the motherboard's form factor. Carefully place the motherboard onto the standoffs, aligning the screw holes. Secure the motherboard with screws, ensuring it is firmly seated but not overtightened.

4. Power Connections:

Connect the 24-pin ATX power connector and the 8-pin ATX 12V power connector from your power supply unit (PSU) to the corresponding ports on the motherboard.

5. Storage Devices:

Connect SATA data cables from your storage drives (HDDs/SSDs) to the SATA 6Gb/s ports on the motherboard. Connect power cables from your PSU to the storage drives.

6. Expansion Cards:

Insert graphics cards or other PCIe expansion cards into the appropriate PCIe slots. Ensure they are fully seated and secured with the case's retention mechanism.

7. Front Panel Connectors:

Connect the front panel cables (power button, reset button, USB ports, audio jacks, LED indicators) from your PC case to the corresponding headers on the motherboard. Refer to the motherboard's silkscreen labels for correct pin alignment.

Operating Instructions

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

- **First Boot:** After connecting the power cord, press the power button on your PC case. The system should initiate the boot process.
- **BIOS/UEFI Access:** To enter the BIOS/UEFI setup utility, press the **Delete** or **F2** key repeatedly during the Power-On Self-Test (POST) phase. This allows you to configure system settings, boot order, and monitor hardware.
- **Operating System Installation:** Follow the instructions provided by your operating system's installation media to install the OS on your storage drive.
- **Driver Installation:** After OS installation, install the necessary drivers for the motherboard's chipset, audio, LAN, and other integrated components. These are typically available on the ASUS support website for your specific model.
- **Peripheral Connectivity:** Utilize the various USB ports (USB 2.0, USB 3.2 Gen 1 Type-A) for connecting peripherals such as keyboards, mice, and external storage. The integrated audio jacks support standard audio devices.

Maintenance

Proper maintenance ensures the longevity and stable operation of your motherboard.

- **Dust Removal:** Regularly clean dust from the motherboard and other internal components using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** Periodically check the ASUS support website for BIOS/UEFI updates. Updates can improve system stability, compatibility, and performance. Follow the provided instructions carefully when updating the BIOS.
- **Component Checks:** Ensure all cables are securely connected. Check for any loose components or signs of physical damage.

Troubleshooting

This section provides basic troubleshooting steps for common issues.

- **No Power/No Boot:**
 - Verify all power cables (24-pin ATX, 8-pin ATX 12V) are securely connected to the motherboard and PSU.
 - Ensure the PSU is switched on and the power outlet is functional.
 - Check front panel power button connection to the motherboard.
- **No Display:**
 - Ensure the monitor is connected to the correct video output (either integrated graphics on the motherboard or a dedicated graphics card).
 - Reseat the graphics card (if applicable) and RAM modules.
 - Test with a different monitor or video cable if possible.
- **System Instability/Crashes:**
 - Check CPU and GPU temperatures to ensure they are within safe operating limits.
 - Verify RAM modules are properly seated.
 - Ensure all drivers are up to date.
 - Run a memory diagnostic tool to check for RAM errors.
- **Peripheral Not Detected:**
 - Try connecting the peripheral to a different USB port.
 - Ensure the peripheral's drivers are installed.
 - Check BIOS/UEFI settings to ensure USB ports are enabled.

For more advanced troubleshooting or persistent issues, consult the ASUS support website or contact their technical support.

Specifications

Feature	Detail
Brand	Asus
Series	Prime H510M-R
Model Number	90MB18C0-M0ECY0
CPU Socket	LGA 1200

Feature	Detail
Compatible Processors	10th and 11th Gen Intel Core Processors (e.g., Intel Core i9-11900K, i7-11700K, i5-11600K, i9-10900K, i7-10700K, i5-10600K)
Chipset Type	Intel H510
RAM Memory Technology	DDR4
Memory Speed	2133 MHz (Max supported speed may vary by CPU and configuration)
Number of USB 2.0 Ports	2 (Rear I/O, plus internal headers for more)
Product Dimensions (L x W x H)	60 x 60 x 85 cm
Item Weight	580 g

Warranty and Support

This ASUS product comes with a manufacturer's warranty. For detailed warranty terms and conditions, please refer to the warranty card included with your product or visit the official ASUS support website. For technical support, driver downloads, BIOS updates, and frequently asked questions, please visit the official ASUS support website:

www.asus.com/support/

When contacting support, please have your product model (Prime H510M-R) and serial number ready.



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Documents - Asus – Prime H510M-R



ASUS PRIME H510M-R R2.0-SI LGA1200

Indeks: 354180 Producent: ASUS Kod producenta: PRIME H510M-R R2.0-SI

Cena: 266.27 zł

Opis

ASUS PRIME H510M-R R2.0-SI LGA1200

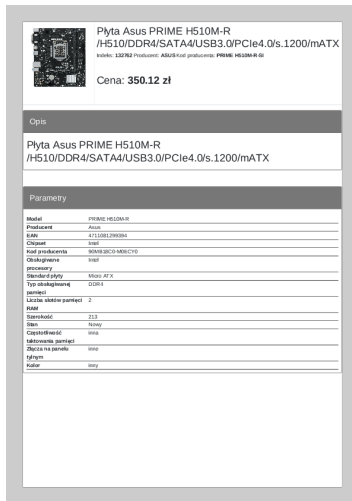
Producent: ASUS

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Płyta Asus **PRIME H510M-R** /H510/DDR4/SATA4/USB3.0/PCIe4.0/s.1200/mATX

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/H510/DDR4/SATA4/USB3.0/PCIe4.0/s.1200/mATX Parametry Model Producent

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PRIME H510M-R E18937 Revidirana izdaja V2 julij 2021 Avtorske pravice 2021

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Brand: ASUS
Zahtjev: Konekcijska ras

Matična ploča MBO 1200 AS PRIME **HAUSWARE.HR**

Konekcijska ploča

Držanje: ASUS

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Kratak opis

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Model: MBO 1200 AS, LGA 1200, Intel H100, DDR4, Brg. ulazna 2, 8x SATA 6, SATA 6, SATA 6, SATA 6

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Matična ploča MBO 1200 AS PRIME H510M R SI ponudba izdelka Hardware hr Brend ASUS Zaliha

Kontaktirajte nas Kratak opis Tehnical Description LGA Intel H510 DDR4 Broj utora 2 64 GB Takt 2133

3200 maticna ploca mbo as prime h510m r si hardware 1 |||

Datum: 26.06.2025 slika je simbolicka Brend: ASUS Zaliha: Kontaktirajte nas INFOS
PROMOTION d.o.o. Kninska 24, 31000 Osijek, Hrvatska OIB: HR13160244056
Telefon: 385 31 328 956 E-mail: info hardware.hr WWW: www.www.hardware.hr
Maticna ploca MBO 1200 AS **PRIME H510M-R-SI** Kategorija: Maticne ploce ...
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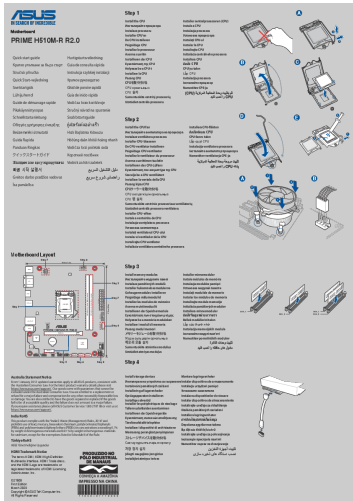
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Quick guide ASUS Prime H510M R 90MB18C0 M0ECY0 starting from £ 87 49 2022 Price Comparison
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[ASUS PRIME H510M-R Motherboard User Manual](#)

Comprehensive user manual for the ASUS PRIME H510M-R motherboard, detailing installation, specifications, BIOS setup, and safety guidelines. Learn about Intel H510 chipset, LGA1200 socket, and DDR4 memory support.

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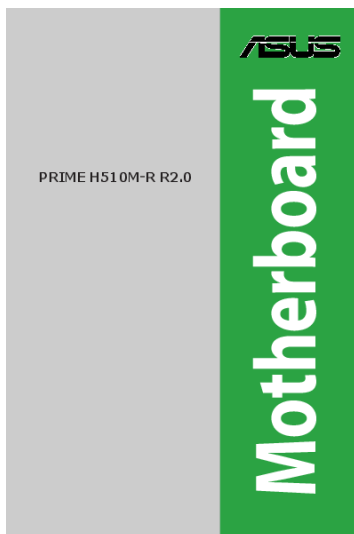
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ASUS Desktop Motherboard Linux Status Report

A comprehensive report detailing the Linux compatibility status of various ASUS desktop motherboards across different Linux distributions and versions, including Fedora, SUSE, Red Hat, and Ubuntu.

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