Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

GIGABYTE H510M H V2

Gigabyte H510M H V2 Motherboard User Manual

Comprehensive guide for installation, operation, and maintenance.

Product Overview

The GIGABYTE H510M H V2 is a Micro-ATX motherboard designed for Intel LGA 1200 processors, supporting both 10th and 11th generation Intel Core, Pentium Gold, and Celeron CPUs. It features two DDR4 DIMM slots, HDMI and D-Sub video outputs, an M.2 slot for NVMe SSDs, and USB 3.2 Gen1 ports. This motherboard is an economical and efficient solution for building compact and reliable personal computer systems.



Image: The Gigabyte H510M H V2 motherboard displayed alongside its retail packaging. The motherboard features an LGA 1200 socket, two DDR4 DIMM slots, and various expansion ports. The box highlights "ULTRA DURABLE" and "H510M H V2" branding.

Key Features

- **LGA 1200 Socket:** Supports 10th and 11th Gen Intel Core Processors.
- **Dual Channel DDR4:** 2 DIMMs, supporting up to 64GB of system memory.
- **Integrated Graphics Support:** HDMI and D-Sub ports for display output.
- **NVMe PCIe Gen3 x4 M.2 Connector:** For high-speed SSDs.
- **USB 3.2 Gen1 Ports:** For fast data transfer.
- **GIGABYTE Exclusive 8118 Gaming LAN:** With Bandwidth Management.
- **Smart Fan 6:** Features multiple temperature sensors and hybrid fan headers with FAN STOP.

Setup and Installation

1. Preparing the Motherboard

Before installation, ensure you have all necessary components: CPU, CPU cooler, RAM, storage devices, power supply, and a compatible PC case. Handle the motherboard by its edges to avoid static discharge.

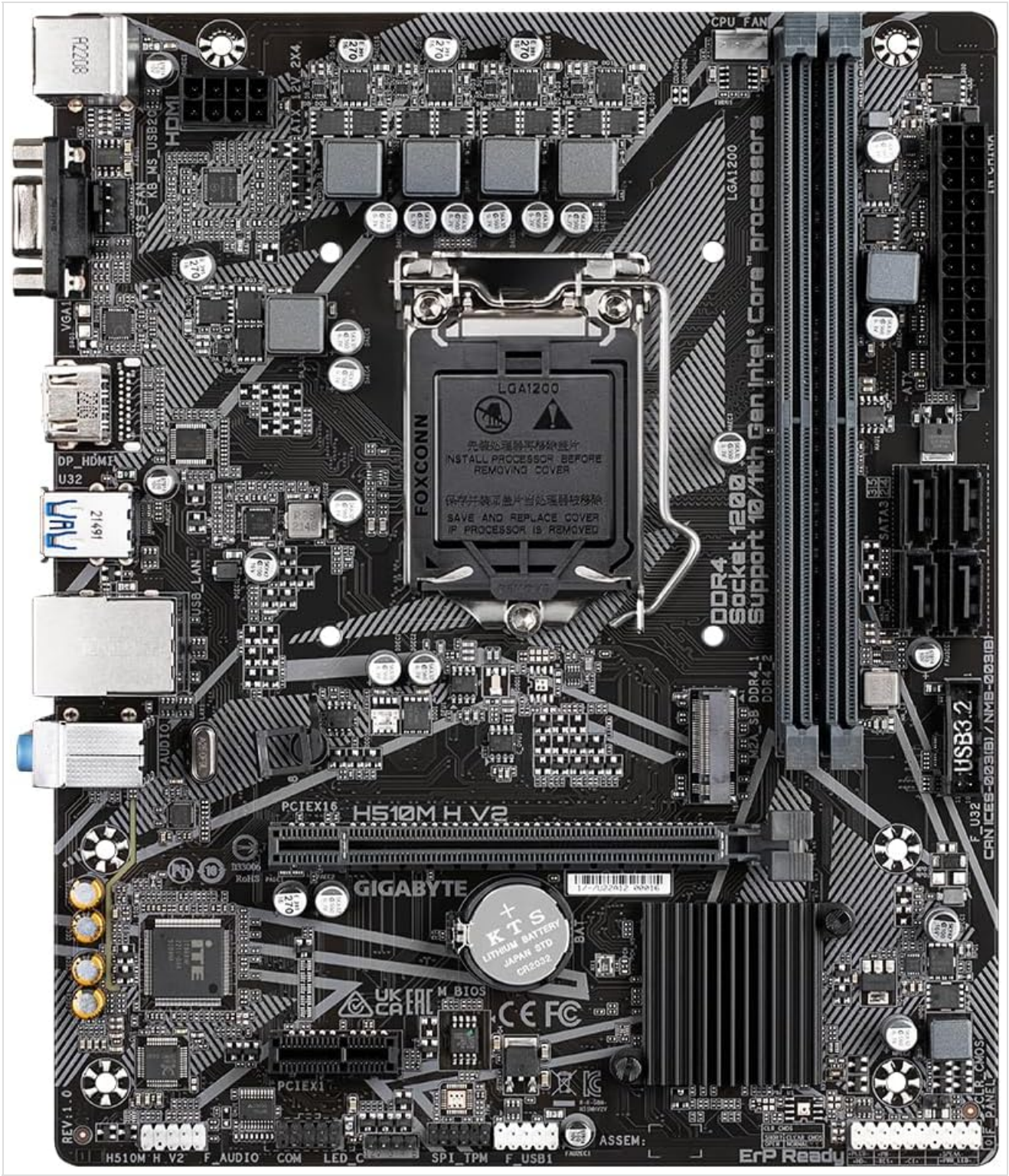


Image: A detailed top-down view of the Gigabyte H510M H V2 motherboard, highlighting the LGA 1200 CPU socket, DDR4 memory slots, PCIe x16 slot, and various headers. The CPU socket cover is visible, indicating it's ready for CPU installation.

2. CPU Installation

1. Locate the LGA 1200 socket on the motherboard.
2. Gently lift the load lever and open the CPU socket cover.
3. Align the triangular mark on the CPU with the mark on the socket. Carefully place the CPU into the socket without forcing it.
4. Close the socket cover and press down the load lever until it clicks into place.



Image: An angled view of the Gigabyte H510M H V2 motherboard, showcasing the CPU socket area, RAM slots, and the heatsink for the chipset. This perspective helps in identifying component placement during installation.

3. RAM Installation

1. Open the clips on both ends of the DDR4 DIMM slots.
2. Align the notch on the RAM module with the key in the DIMM slot.
3. Press down firmly on both ends of the RAM module until the clips snap into place.

4. Storage Device Installation (M.2 SSD)

1. Locate the M.2 slot on the motherboard.
2. Remove the M.2 screw and standoff.

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

5. Connecting Peripherals and Power

- Connect the 24-pin ATX power connector and the 8-pin CPU power connector from your power supply to the motherboard.
- Connect front panel headers (power button, reset button, USB, audio) according to the motherboard manual's pinout diagram.
- Connect SATA cables for 2.5-inch SSDs or HDDs if applicable.
- Install the I/O shield into your PC case, then mount the motherboard.

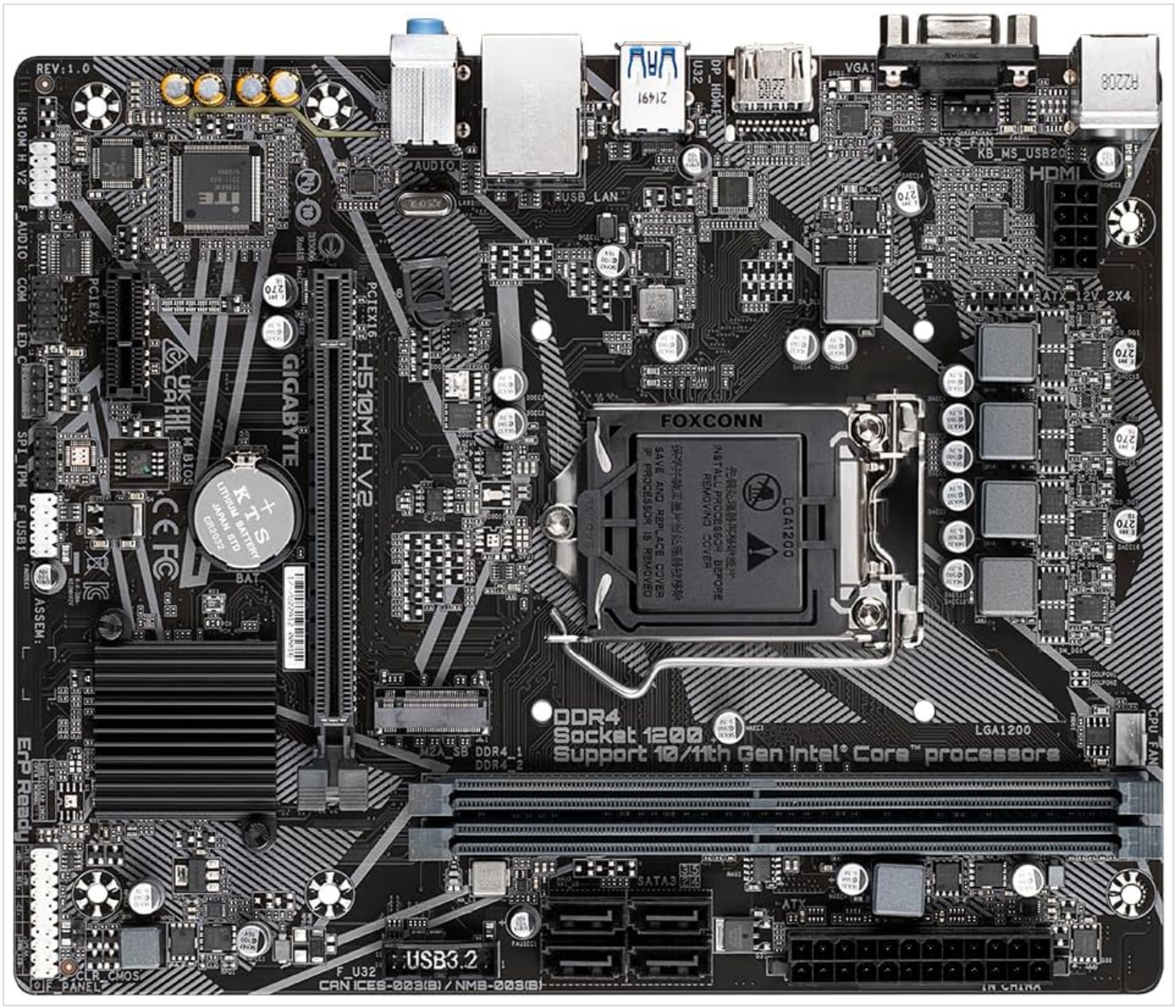


Image: A close-up view of the rear I/O panel of the Gigabyte H510M H V2 motherboard, showing various ports including USB, PS/2, D-Sub, HDMI, Ethernet, and audio jacks. This panel connects the system to external devices.

Operating Instructions

1. First Boot and BIOS Setup

After assembling your system, connect a monitor, keyboard, and mouse. Power on the system. Press the **DEL** key repeatedly during startup to enter the BIOS/UEFI setup utility. Here you can:

- Set boot order for your operating system installation media.
- Configure system time and date.
- Monitor system temperatures and fan speeds.
- Enable or disable specific features (e.g., virtualization).

2. Driver Installation

After installing your operating system, install the necessary drivers for the motherboard components. These typically include chipset drivers, LAN drivers, audio drivers, and graphics drivers (if using integrated graphics). Drivers can be found on the GIGABYTE official website for your specific model.

Maintenance

- **Dust Removal:** Regularly clean dust from inside your PC case, especially around the CPU cooler and chipset heatsink, using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** Periodically check the GIGABYTE website for BIOS updates. Updates can improve compatibility, stability, and performance. Follow the update instructions carefully to avoid system damage.
- **Cable Management:** Ensure cables inside the case are neatly routed to improve airflow and prevent obstruction.

Troubleshooting

No Display Output

- Ensure the monitor cable is securely connected to both the monitor and the motherboard (or discrete graphics card).
- Verify that RAM modules are properly seated in their slots. Try reseating them.
- Check if the CPU power connector (8-pin) and main ATX power connector (24-pin) are firmly connected.
- If using a discrete graphics card, ensure it is properly seated in the PCIe slot and has adequate power connected.

System Not Powering On

- Check the power supply unit (PSU) switch is in the 'ON' position.
- Ensure the power cable is securely plugged into the PSU and the wall outlet.
- Verify that the front panel power button header is correctly connected to the motherboard.
- Test the PSU with another system or a PSU tester if available.

Operating System Not Booting

- Check the boot order in BIOS to ensure your primary storage drive is selected.
- Verify that the SATA data and power cables for your storage drive are securely connected.
- If it's a new installation, ensure the operating system installation media is properly prepared and accessible.

Specifications

Feature	Detail
CPU Socket	LGA 1200
Chipset	Intel H510 Express Chipset

RAM Slots	2 x DDR4 DIMM sockets
Max RAM Capacity	Up to 64 GB
Memory Speed Support	DDR4 3200/3000/2933/2666/2400/2133 MHz
Video Output	1 x HDMI, 1 x D-Sub (VGA)
Expansion Slots	1 x PCI Express x16 slot, 1 x PCI Express x1 slot
Storage	1 x M.2 connector (Socket 3, M key, type 2260/2280 PCIe 3.0 x4/x2 SSD support), 4 x SATA 6Gb/s connectors
USB Ports	4 x USB 3.2 Gen 1 ports (2 rear, 2 internal), 6 x USB 2.0/1.1 ports (4 rear, 2 internal)
LAN	Realtek GbE LAN chip (1 Gbit/100 Mbit)
Audio	Realtek Audio CODEC, High Definition Audio, 2/4/5.1/7.1-channel
Form Factor	Micro ATX (22.6cm x 18.5cm)

Warranty and Support

GIGABYTE motherboards typically come with a limited manufacturer's warranty. Please refer to the official GIGABYTE website or your product's packaging for specific warranty terms and conditions applicable to your region.
For technical support, driver downloads, and BIOS updates, visit the official GIGABYTE support page:

GIGABYTE Official Support
When contacting support, please have your motherboard model number (**H510M H V2**) and serial number ready.

© 2023 GIGABYTE. All rights reserved.

Ask a question about this manual

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.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

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

Open the live page

https://manuals.plus/asin/B0C4ZJMGKS

More documents and user manuals: **https://manuals.plus/**