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GIGABYTE H310M H

GIGABYTE Intel H310 LGA 1151 Micro ATX DDR4-SDRAM Motherboard User Manual

Model: H310M H

Brand: GIGABYTE

1. Introduction

This manual provides comprehensive instructions for the installation, operation, and maintenance of your GIGABYTE H310M H Motherboard. Designed for Intel LGA 1151 processors, this Micro ATX motherboard offers reliable performance for personal computing needs. Please read this manual thoroughly before proceeding with installation to ensure proper setup and optimal performance.



Figure 1.1: GIGABYTE H310M H Motherboard and Packaging
This image displays the GIGABYTE H310M H Micro ATX motherboard alongside its retail packaging, highlighting the "Ultra Durable" branding.

2. Key Features

- **CPU Socket:** Supports Intel LGA 1151 processors (8th and 9th Generation Intel Core processors).
- **Chipset:** Intel H310 Express Chipset.
- **Memory:** Dual Channel DDR4-SDRAM support, up to 2666 MHz.
- **Expansion Slots:** 1 x PCI Express x16 slot, 2 x PCI Express x1 slots.
- **Storage:** 4 x SATA 6Gb/s connectors.
- **USB Connectivity:** USB 3.1 Gen1 ports, USB 2.0/1.1 ports.
- **Audio:** High Definition Audio CODEC.
- **LAN:** Gigabit Ethernet LAN.
- **Form Factor:** Micro ATX (8.9 in x 6.85 in).

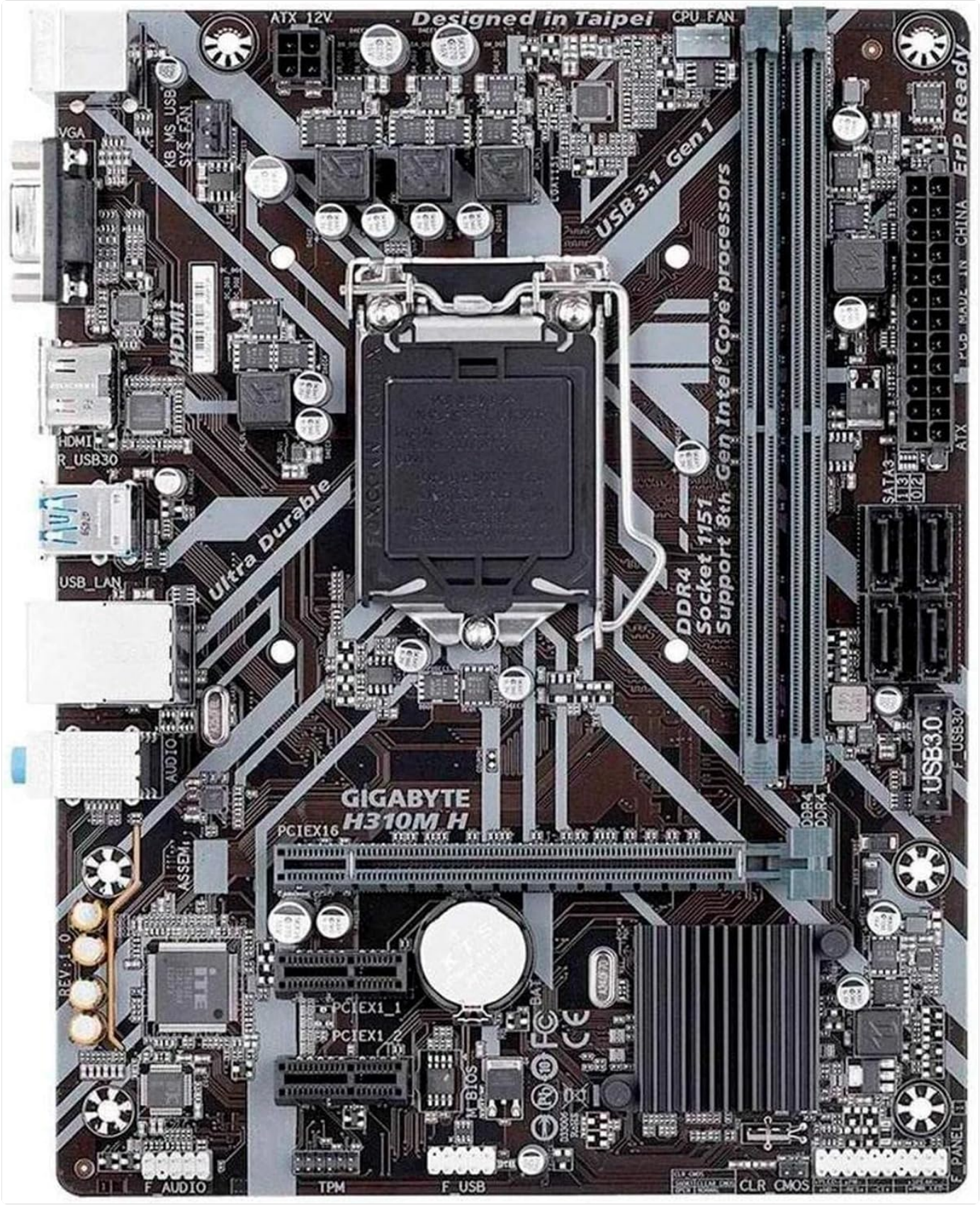


Figure 2.1: Motherboard Layout Overview

This image provides a top-down view of the GIGABYTE H310M H motherboard, clearly showing the CPU socket, RAM slots, PCIe slots, and various connectors.

3. Setup and Installation

3.1. Pre-Installation Checklist

- Ensure you have all necessary components: CPU, RAM, power supply, storage devices, and a compatible PC case.
- Prepare a static-free environment. Use an anti-static wrist strap or frequently touch a grounded metal object.
- Refer to your PC case manual for specific mounting instructions.

3.2. Motherboard Installation

1. **Install the CPU:** Carefully align the CPU with the socket's notch and gently place it. Close the load plate and secure the lever.
2. **Install the CPU Cooler:** Follow the cooler manufacturer's instructions for installation.
3. **Install Memory Modules:** Open the clips on the DDR4 slots. Align the RAM module with the slot's key and press down firmly until the clips snap into place.
4. **Mount Motherboard in Case:** Install the I/O shield into the case's rear opening. Align the motherboard with the standoffs in your PC case and secure it with screws.
5. **Connect Power Supply:** Connect the 24-pin ATX main power connector and the 8-pin ATX 12V power connector to the motherboard.
6. **Connect Storage Devices:** Connect SATA data cables from your storage drives (HDD/SSD) to the SATA ports on the motherboard. Connect power cables from the PSU to the drives.
7. **Install Expansion Cards:** Insert graphics cards or other PCIe expansion cards into the appropriate PCIe slots and secure them.
8. **Connect Front Panel Cables:** Connect the power button, reset button, HDD LED, power LED, and front USB/audio headers to the corresponding pins on the motherboard. Refer to the motherboard's silkscreen labels for correct orientation.


GIGABYTE
H310M H
HDMI
Durable
USB 3.1 Gen1
DDR4
Socket 1151
Support 8th
PCIEX16
PCIEX1_1
PCIEX1_2
M_BIOS
TPM
F_USB
F_AUDIO
CLR_CMOS
REV: 1.0

Figure 3.1: Motherboard with I/O Ports Visible
This angled view highlights the various input/output ports on the rear of the GIGABYTE H310M H motherboard, including USB, video outputs, and audio jacks.

4. Operating Instructions

4.1. First Boot and BIOS Setup

After completing the hardware installation, connect a monitor, keyboard, and mouse. Power on your system. Press the **DEL** key repeatedly during startup to enter the BIOS (Basic Input/Output System) setup utility. In the BIOS, you can configure boot order, system time, and various hardware settings.

- **Load Optimized Defaults:** It is recommended to load optimized defaults in the BIOS for stable operation.
- **Set Boot Order:** Configure the boot order to prioritize your operating system installation media (USB drive or DVD).
- **Save and Exit:** Save your changes and exit the BIOS. The system will restart.

4.2. Operating System Installation

Once the system restarts, follow the on-screen prompts to install your preferred operating system (e.g., Windows, Linux). Ensure you have the necessary installation media and product keys.

4.3. Driver Installation

After the operating system is installed, install the necessary drivers for the motherboard components (chipset, audio, LAN, graphics if integrated). Drivers are typically provided on a support CD/DVD or can be downloaded from the GIGABYTE official website. Keeping drivers updated ensures optimal performance and stability.

5. Maintenance

- **Dust Removal:** Regularly clean dust from inside your PC case, especially from fans and heatsinks, to prevent overheating. Use compressed air for this purpose.
- **BIOS Updates:** Periodically check the GIGABYTE website for BIOS updates. BIOS updates can improve compatibility, stability, and performance. Follow the instructions provided by GIGABYTE carefully when updating the BIOS.
- **Driver Updates:** Keep your system drivers updated to ensure compatibility and optimal performance with new software and hardware.
- **CMOS Battery:** The motherboard uses a CR2032 lithium battery to power the CMOS memory, which stores BIOS settings. If your system consistently loses time or BIOS settings, the battery may need replacement.

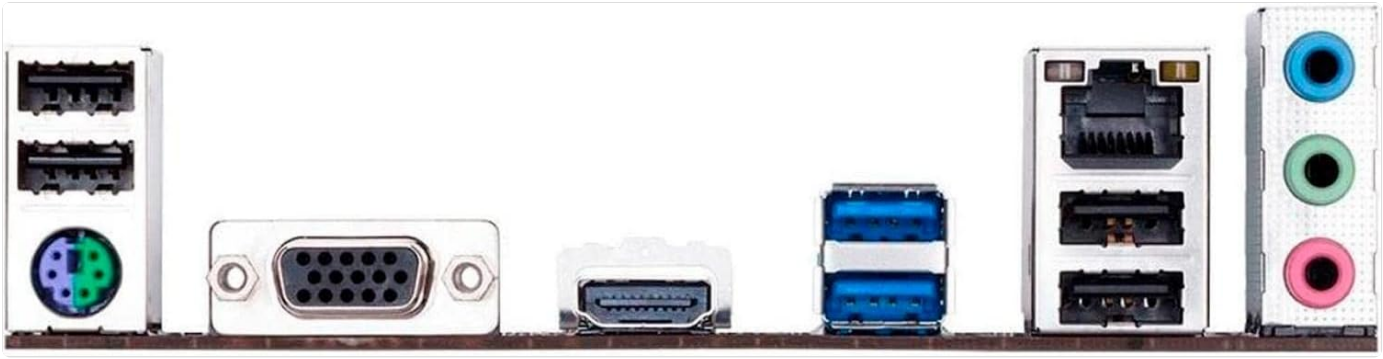


Figure 5.1: Rear I/O Panel
This image shows a close-up of the rear input/output panel of the GIGABYTE H310M H motherboard, detailing the various ports available for external device connections.

6. Troubleshooting

Common Issues and Solutions

Problem	Possible Cause	Solution
System does not power on.	Loose power connections, faulty power supply, incorrect front panel wiring.	Check 24-pin and 8-pin power connectors. Verify front panel power switch connection. Test power supply.
No display on monitor.	Incorrect monitor connection, faulty graphics card/integrated graphics, RAM not seated correctly.	Ensure monitor cable is securely connected. Reseat RAM modules. Test with a known good graphics card if applicable.
System reboots unexpectedly.	Overheating, unstable power supply, faulty RAM, driver issues.	Check CPU/GPU temperatures. Ensure proper ventilation. Test RAM with diagnostic tools. Update drivers.
Operating system not found.	Incorrect boot order, unformatted drive, faulty storage device.	Check BIOS boot order. Ensure storage drive is properly connected and formatted.

7. Specifications

Feature	Detail
Model Name	H310M H
CPU Socket	LGA 1151
Chipset Type	Intel H310
RAM Memory Technology	DDR4

Feature	Detail
Memory Clock Speed	2666 MHz
Compatible Devices	Personal Computer
Product Dimensions	8.9 x 6.85 x 1.18 inches
Item Weight	13.8 ounces
Manufacturer	Gigabyte
Date First Available	April 17, 2018

8. Warranty and Support

GIGABYTE products typically come with a limited warranty. Please refer to the warranty card included with your product or visit the official GIGABYTE website for detailed warranty terms and conditions specific to your region.
For technical support, driver downloads, BIOS updates, and further product information, please visit the official GIGABYTE support website:

GIGABYTE Official Support

You may also find helpful resources and FAQs on the GIGABYTE product page for the H310M H model.

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Question

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Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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