GIGABYTE H370M D3H

GIGABYTE H370M D3H Motherboard User Manual

Model: H370M D3H

1. Introduction

This manual provides detailed instructions for the installation, configuration, and troubleshooting of your GIGABYTE H370M D3H motherboard. Designed for 8th Generation Intel Core Processors, this Micro ATX motherboard offers a robust platform for personal computing.

Figure 1.1: GIGABYTE H370M D3H Motherboard and Packaging. This image displays the motherboard alongside its retail packaging, highlighting the product's branding and model.

2. Key Features

The GIGABYTE H370M D3H motherboard incorporates several features to enhance system performance and connectivity:

- **CPU Socket:** LGA1151, supporting 8th Generation Intel Core Processors.
- **Memory:** Dual Channel Non-ECC Unbuffered DDR4, with 4 DIMM slots.
- **USB Connectivity:** USB 3.1 Gen 2 (USB3.1) Type-A ports for high-speed data transfer.
- **Graphics Support:** 2-Way Crossfire Multi-Graphics Support for enhanced visual performance.
- **Storage:** Dual Ultra-Fast M.2 slots with PCIe Gen3 x4 & SATA interface.
- **Audio:** High Quality Audio Capacitors and Realtek ALC892 for superior sound.
- **Networking:** Intel GbE LAN with cFosSpeed Internet Accelerator Software.
- **Cooling:** Smart Fan 5 features multiple temperature sensors and hybrid fan headers.
- **BIOS:** GIGABYTE UEFI Dual BIOS for reliable system management.
- **Form Factor:** Micro ATX (244mm x 230mm).

3. Package Contents

Verify that all items are present in your motherboard package:

- GIGABYTE H370M D3H Motherboard
- User Manual (this document)
- I/O Shield
- SATA Cables
- Driver CD/DVD (or download instructions)

4. Board Layout and Components

Familiarize yourself with the various components and connectors on your motherboard.

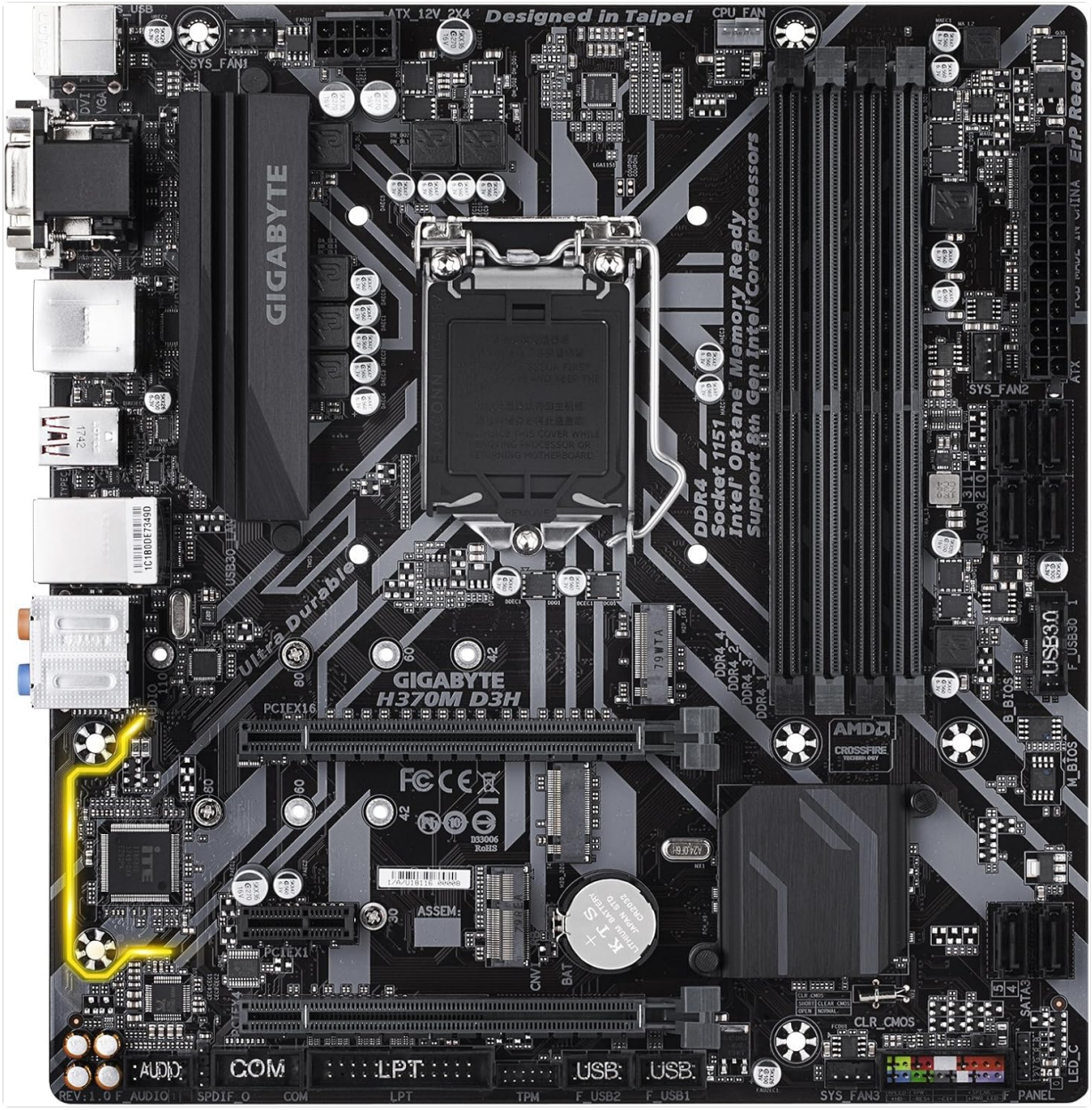

Figure 4.1: Top-down view of the GIGABYTE H370M D3H Motherboard. This image provides an overhead perspective, showing the CPU socket, DIMM slots, PCIe slots, and various headers.

4.1. CPU Socket (LGA 1151)

Located centrally, this socket is designed for 8th Generation Intel Core Processors. Ensure proper alignment and gentle placement of the CPU.

4.2. DIMM Slots

Four DDR4 DIMM slots support up to 64GB of system memory. For optimal performance, install memory modules in matched pairs for dual-channel operation.

4.3. PCIe Expansion Slots

The motherboard includes PCIe slots for graphics cards and other expansion cards. Refer to the manual for specific slot configurations and speeds.

Figure 4.2: Angled view of the GIGABYTE H370M D3H Motherboard. This perspective highlights the PCIe expansion slots and the general layout of the board's components.

4.4. Storage Connectors

Multiple SATA 6Gb/s ports are available for traditional hard drives and SSDs. Additionally, dual M.2 slots provide high-speed storage options for NVMe or SATA M.2 SSDs.

4.5. Rear I/O Panel

The rear panel provides various ports for connecting external devices.

Figure 4.3: Rear I/O Panel of the GIGABYTE H370M D3H Motherboard. This detailed image shows the various external ports, including USB, video outputs (VGA, DVI, HDMI), LAN, and audio jacks.

- **USB Ports:** Various USB 2.0, USB 3.1 Gen 1, and USB 3.1 Gen 2 Type-A ports.
- **Video Outputs:** VGA, DVI-D, and HDMI ports for integrated graphics.
- **LAN Port:** RJ-45 port for Gigabit Ethernet.
- **Audio Jacks:** Multiple jacks for audio input/output.
- **PS/2 Port:** Combo port for keyboard or mouse.

5. Installation Guide

Follow these steps carefully to install your motherboard and components.

5.1. Safety Precautions

- Always disconnect the power cord from the wall outlet before touching any components.
- Wear an anti-static wrist strap or frequently touch a grounded metal object to discharge static electricity.
- Handle components by their edges to avoid touching sensitive parts.

5.2. CPU Installation

1. Open the CPU socket lever.
2. Carefully align the CPU with the socket, ensuring the gold triangle on the CPU matches the mark on the socket.
3. Gently place the CPU into the socket without forcing it.
4. Close the socket lever to secure the CPU.

5.3. CPU Cooler Installation

Install the CPU cooler according to its manufacturer's instructions. Ensure proper thermal paste application and secure mounting for effective heat dissipation.

5.4. Memory (RAM) Installation

1. Open the clips at both ends of the DIMM slot.
2. Align the memory module with the slot, ensuring the notch on the module matches the key in the slot.
3. Press down firmly on both ends of the memory module until the clips snap into place.
4. For dual-channel mode, refer to the motherboard manual for recommended slot pairings.

5.5. Storage Device Installation

- **M.2 SSD:** Insert the M.2 SSD into the appropriate slot and secure it with the provided screw.

- **SATA Drives:** Connect SATA data cables from the motherboard to your SATA hard drives or SSDs. Connect power cables from your power supply to the drives.

5.6. Expansion Card Installation

Install your graphics card or other PCIe expansion cards into the appropriate PCIe slots. Ensure they are seated firmly and secured with a screw to the chassis.

5.7. Connecting Power Supply

- Connect the 24-pin ATX main power connector from your power supply to the motherboard.
- Connect the 8-pin (or 4-pin) ATX 12V CPU power connector to the motherboard.

5.8. Connecting Front Panel and Peripherals

Connect the front panel headers (power button, reset button, HDD LED, power LED, front USB, front audio) to their respective pins on the motherboard. Refer to the motherboard's detailed diagram for correct pin assignments.

5.9. Mounting the Motherboard

Carefully place the motherboard into your PC case, aligning the screw holes with the standoffs. Secure the motherboard with screws, ensuring it is firmly mounted but not overtightened.

6. Operating Your System

6.1. BIOS/UEFI Setup

The BIOS (Basic Input/Output System) or UEFI (Unified Extensible Firmware Interface) is firmware that initializes hardware during the booting process. To access the BIOS setup utility, press the **DEL** key during system startup. Here you can configure boot order, system time, and various hardware settings.

6.2. Driver Installation

After installing your operating system, install the necessary drivers for your motherboard components. These include chipset drivers, LAN drivers, audio drivers, and any other peripheral drivers. Drivers can typically be found on the GIGABYTE official website for your specific motherboard model.

7. Maintenance

- **Keep it Clean:** Regularly clean dust from your PC case and motherboard components using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** Periodically check the GIGABYTE website for BIOS updates. BIOS updates can improve system stability, add support for new hardware, or fix bugs. Follow the update instructions carefully to avoid system damage.
- **Cable Management:** Ensure cables are neatly routed to improve airflow and prevent interference.

8. Troubleshooting

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

- **No Power:** Ensure all power cables (24-pin ATX, 8-pin CPU) are securely connected. Check the power supply unit (PSU) and wall outlet.

- **No Display:** Verify that the monitor is connected to the correct video output (either motherboard or graphics card). Reseat the graphics card and memory modules.
- **System Not Booting:** Check for any diagnostic LEDs or beep codes on the motherboard, which can indicate specific hardware issues (e.g., CPU, RAM, GPU). Ensure all essential components are correctly installed.
- **Peripheral Not Detected:** Ensure the peripheral is properly connected and its drivers are installed. Try a different port or device to isolate the issue.
- **Intermittent Issues:** Check for overheating by monitoring temperatures. Ensure all components are securely seated and cables are properly connected.

9. Specifications

Feature	Specification
Brand	GIGABYTE
Series	H370M D3H
Item Model Number	H370M D3H
CPU Socket	LGA 1151
Compatible Processors	8th Generation Intel Core
Chipset Type	Intel H370
RAM Memory Technology	DDR4
Memory Speed	2133 MHz
Number of USB 2.0 Ports	2
Wireless Type	Bluetooth (Note: This specification might refer to an optional add-on or integrated feature not standard on all models. Verify with product documentation.)
Platform	Windows 10
Item Weight	1 pounds
Product Dimensions (LxWxH)	22.7 x 11.1 x 11.3 inches
Date First Available	April 3, 2018

10. Warranty and Support

For warranty information, technical support, and driver downloads, please visit the official GIGABYTE website. You can find detailed support resources, FAQs, and contact information for customer service.

GIGABYTE Official Website: www.gigabyte.com