GIGABYTE GA-H87-D3H

GIGABYTE GA-H87-D3H Motherboard

Instruction Manual

Product Overview

The GIGABYTE GA-H87-D3H is an ATX motherboard designed for Intel LGA 1150 processors. It supports CrossFireX multi-GPU configurations and features DVI and HDMI output ports for integrated graphics. This motherboard is built with GIGABYTE's Ultra Durable technology, ensuring stability and longevity.



Image: Top-down view of the GIGABYTE GA-H87-D3H motherboard, showcasing the CPU socket, RAM slots, PCIe slots, and various connectors.

Key Features

- Intel H87 Chipset with LGA 1150 Socket
- Supports Intel 4th Generation Core Processors
- CrossFireX Multi-GPU Support
- Integrated DVI, HDMI, and RGB (VGA) Output Ports
- GIGABYTE Ultra Durable Technology

Setup Guide

Package Contents

Before beginning installation, ensure all components are present:

- GIGABYTE GA-H87-D3H Motherboard
- User Manual / Quick Installation Guide
- Driver CD/DVD
- SATA Data Cables (typically 2-4)
- I/O Shield



Image: The GIGABYTE GA-H87-D3H motherboard displayed alongside its retail packaging, indicating typical product presentation.

Hardware Installation

Follow these steps for proper hardware installation:

1. **CPU Installation:** Carefully open the CPU socket lever. Align the triangular mark on the CPU with the mark on the socket and gently place the CPU into the socket. Close the lever to secure the CPU.
2. **CPU Cooler Installation:** Install the CPU cooler according to its manufacturer's instructions, ensuring proper thermal paste application and secure mounting.
3. **Memory (RAM) Installation:** Open the clips on the DDR3 DIMM slots. Align the notch on the memory module with the key in the slot and press firmly on both ends until the clips snap into place.
4. **Motherboard Installation into Chassis:** Install the I/O shield into the chassis opening. Align the motherboard with the standoffs in your PC case and secure it with screws.
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 SATA drives to the SATA ports. Install any expansion cards (e.g., graphics card) into the appropriate PCIe slots. Connect front panel headers (USB, audio, power/reset buttons, LEDs) according to the motherboard manual.



Image: Close-up view of the rear I/O panel of the GIGABYTE GA-H87-D3H motherboard, showing various ports including USB, DVI, HDMI, Ethernet, and audio jacks.

Operating Instructions

First Boot and BIOS Setup

After assembling your system, power it on. Press the `DEL` key during startup to enter the BIOS (Basic Input/Output System) setup. In the BIOS, you can configure boot order, system time, and various hardware settings. Save changes and exit to proceed.

Driver Installation

Once the operating system is installed, install the necessary drivers for the motherboard components. Use the provided driver CD/DVD or download the latest drivers from the official GIGABYTE website. Essential drivers include chipset, LAN, audio, and integrated graphics drivers.

Operating System Installation

Insert your operating system installation media (USB drive or DVD) and boot from it. Follow the on-screen prompts to install your preferred operating system (e.g., Windows, Linux).

Maintenance

Cleaning

Regularly clean your computer's interior to prevent dust buildup, which can lead to overheating and component failure. Use compressed air to remove dust from fans, heatsinks, and other components. 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 instructions provided by GIGABYTE carefully when performing a BIOS update to avoid system damage.

Driver Updates

Keep your drivers updated to ensure optimal performance and compatibility. Visit the GIGABYTE support page for your motherboard model to download the latest chipset, graphics, audio, and LAN drivers.

Troubleshooting

This section provides solutions to common issues you might encounter.

Problem	Possible Cause	Solution
System does not power on.	Loose power connections, faulty power supply, incorrect front panel wiring.	Check all power cables (24-pin ATX, 8-pin CPU). Verify front panel power switch connection. Test power supply.
No display on monitor.	Monitor not connected, incorrect video output, faulty RAM, no discrete GPU installed if required.	Ensure monitor cable is securely connected to the correct port (motherboard or graphics card). Reseat RAM modules. If using a discrete GPU, ensure it is properly seated and powered.
Operating system fails to boot.	Incorrect boot order, corrupted OS installation, faulty storage drive.	Check BIOS boot order. Attempt OS repair or reinstallation. Test storage drive.
System crashes or freezes.	Overheating, unstable overclock, faulty components (RAM, CPU), outdated drivers.	Monitor temperatures. Reset BIOS to default settings. Test RAM with diagnostic tools. Update drivers.

Technical Specifications

Feature	Specification
Brand	GIGABYTE
Model Name	GA-H87-D3H
CPU Socket	LGA 1150 (Intel 4th Gen Core)
Chipset Type	Intel H87
RAM Memory Technology	DDR3

Feature	Specification
Memory Clock Speed	1600 MHz
Maximum RAM Supported	32 GB
Product Dimensions (LxWxH)	11 x 11 x 3 inches
Item Weight	3 pounds
Number of USB 2.0 Ports	4 (rear) + internal headers
Compatible Devices	Personal Computer
Compatible Processors	Intel Core i3-4xxx, Intel Core i5-4xxx, Intel Core i7-4xxx

Warranty and Support

Warranty Information

GIGABYTE motherboards typically come with a manufacturer's warranty. Please refer to the warranty card included with your product or visit the official GIGABYTE website for detailed warranty terms and conditions, including duration and coverage.

Technical Support

For technical assistance, driver downloads, BIOS updates, or troubleshooting beyond this manual, please visit the official GIGABYTE support website. You can find product-specific support pages by searching for your model number (GA-H87-D3H).

Official GIGABYTE Support: https://www.gigabyte.com/support

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