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› GIGABYTE GA-B150M-DS3H Motherboard User Manual

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GIGABYTE GA-B150M-DS3H Motherboard User Manual

Model: GA-B150M-DS3H

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your GIGABYTE GA-B150M-DS3H Micro ATX DDR4 Motherboard. Designed for 6th Generation Intel Core Processors, this motherboard offers a stable and feature-rich platform for your personal computer build. Please read this manual thoroughly before proceeding with installation to ensure proper setup and optimal performance.



Figure 1: GIGABYTE GA-B150M-DS3H Motherboard and Packaging

This image displays the GIGABYTE GA-B150M-DS3H motherboard alongside its retail packaging, highlighting the product's branding and model number.

2. KEY FEATURES

- LGA1151 Socket: Supports 6th Generation Intel Core Processors.
- Dual Channel DDR4: Features 4 DIMM slots for enhanced memory performance.
- PCIe Gen3 x4 M.2 Connector: Provides up to 32Gb/s data transfer for PCIe NVMe & SATA SSD support.
- 8-channel HD Audio: Equipped with high-quality audio capacitors for superior sound.
- Audio Noise Guard: Features LED Trace Path Lighting for improved audio signal integrity.
- Realtek Green GbE LAN: Includes cFosSpeed Internet Accelerator Software for optimized network performance.
- GIGABYTE UEFI Dual BIOS: Offers a robust and user-friendly BIOS interface with backup functionality.
- App Center: Access to utilities like Easy Tune and Cloud Station.
- Micro ATX Form Factor: Dimensions of 22.6cm x 19.3cm for compact system builds.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- GIGABYTE GA-B150M-DS3H Motherboard
- User Manual (this document)
- I/O Shield
- SATA Cables (quantity may vary)
- Driver CD/DVD (or download instructions)

4. SETUP AND INSTALLATION

Before beginning installation, ensure your workspace is clean, well-lit, and static-free. It is recommended to wear an anti-static wrist strap.

4.1 Motherboard Layout

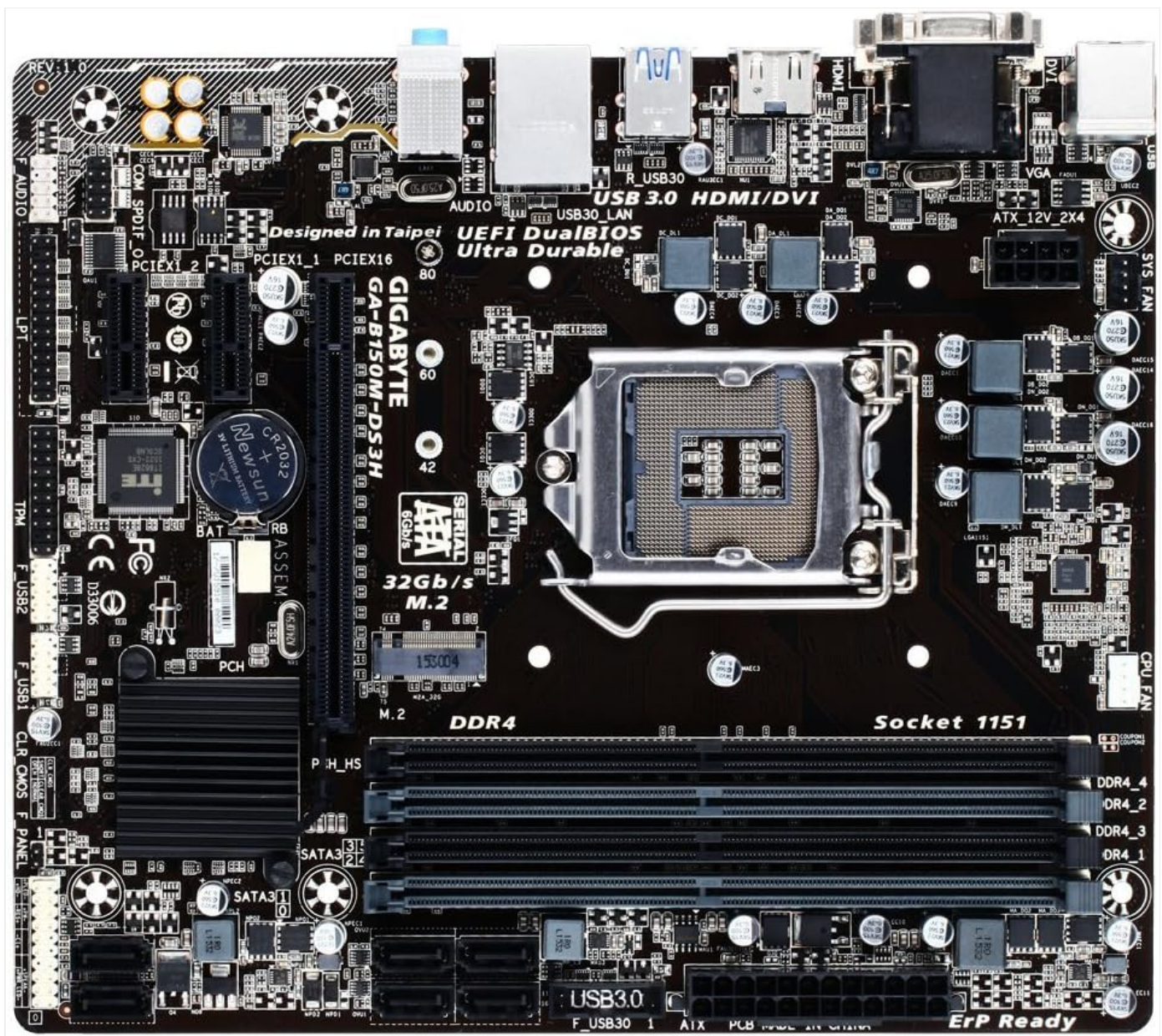


Figure 2: GIGABYTE GA-B150M-DS3H Motherboard Top View

This image provides a top-down view of the motherboard, illustrating the placement of the CPU socket, RAM slots, PCIe slots, M.2 slot, and various connectors.



Figure 3: GIGABYTE GA-B150M-DS3H Motherboard Angled View

An angled perspective of the motherboard, showing the various ports and components from a side view, including the rear I/O area and expansion slots.

4.2 Component Installation Steps

1. **Install the CPU:** 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. Do not force the CPU into the socket.
2. **Install the CPU Cooler:** Apply thermal paste (if not pre-applied) and mount the CPU cooler according to its specific instructions. Ensure it is securely fastened.
3. **Install Memory (RAM):** Open the clips on the DDR4 DIMM slots. Align the notch on the RAM module with the key in the slot. Press down firmly on both ends of the module until the clips snap into place. Refer to the motherboard manual for recommended dual-channel configurations.
4. **Mount the Motherboard:** Install the I/O shield into your computer case. Align the motherboard with the standoffs in the case and secure it with screws. Ensure the screw mounting holes are aligned properly.
5. **Connect Power Supply:** Connect the 24-pin ATX main power connector and the 8-pin ATX 12V power connector from your power supply to the motherboard. Ensure both are fully seated.
6. **Install Storage Devices:** Connect SATA data cables from your storage drives (HDDs/SSDs) to the SATA ports on

the motherboard. Connect power cables from the power supply to the drives. If using an M.2 SSD, install it into the M.2 slot and secure it with the provided screw.

7. **Install Expansion Cards:** Insert your graphics card into the primary PCIe x16 slot. Secure it with the case screw. Install any other expansion cards (e.g., Wi-Fi card) into the appropriate PCIe slots.
8. **Connect Front Panel Cables:** Connect the power button, reset button, HDD LED, power LED, and USB/audio headers from your case to the corresponding pins on the motherboard. Refer to the motherboard's detailed manual for pin assignments.
9. **Connect Peripherals:** Connect your monitor, keyboard, mouse, and other peripherals to the rear I/O panel.



Figure 4: GIGABYTE GA-B150M-DS3H Rear I/O Panel

This image details the rear input/output panel of the motherboard, showing ports for USB, Ethernet, audio, and video (VGA, DVI, HDMI).

5. OPERATING INSTRUCTIONS

5.1 First Boot and BIOS/UEFI Setup

After assembling your system, connect the power cable and turn on the power supply. Press the power button on your case. During the boot process, repeatedly press the **DEL** key to enter the BIOS/UEFI setup utility. Here you can configure boot order, system time, and other advanced settings.

5.2 Driver Installation

Once your operating system is installed, install the necessary drivers for the motherboard components. These can typically be found on the included driver CD/DVD or downloaded from the official GIGABYTE website. Essential drivers include chipset, audio, LAN, and any other integrated device drivers.

5.3 GIGABYTE App Center

The GIGABYTE App Center provides a suite of utilities to enhance your system's performance and functionality. This includes Easy Tune for system optimization and Cloud Station for remote control and data sharing. Install the App Center from the GIGABYTE website or driver disc to access these features.

6. MAINTENANCE

- **Keep it Clean:** Regularly clean your computer case and components to prevent dust buildup, which can lead to overheating and reduced performance. Use compressed air to remove dust from fans and heatsinks.
- **BIOS Updates:** Periodically check the GIGABYTE website for BIOS/UEFI updates. Updates can improve stability, add support for new hardware, or fix bugs. Follow the update instructions carefully to avoid system damage.
- **Driver Updates:** Keep your drivers updated to ensure optimal performance and compatibility with new software and hardware.

7. TROUBLESHOOTING

If you encounter issues, consider the following common troubleshooting steps:

- **No Display:**
 - Ensure the monitor is connected to the graphics card (or integrated graphics port) and powered on.
 - Check if the graphics card is properly seated in its PCIe slot and has adequate power.
 - Verify RAM modules are correctly installed in their slots. Try reseating them or testing with one module at a time.
 - Confirm the 24-pin and 8-pin power connectors are fully seated on the motherboard.
- **System Fails to Boot:**
 - Check all power connections to the motherboard, CPU, and graphics card.
 - Ensure the CPU is correctly installed and the cooler is properly mounted.
 - Disconnect all non-essential peripherals and storage devices to isolate the issue.
 - Try clearing the CMOS (BIOS settings) by removing the CMOS battery for a few minutes or using the CLR_CMOS jumper (refer to the detailed manual for location).
- **Unstable System/Crashes:**
 - Ensure all drivers are up to date.
 - Check CPU and GPU temperatures to rule out overheating.
 - Run memory diagnostic tools to check for faulty RAM.
 - Verify power supply stability and wattage.

8. TECHNICAL SPECIFICATIONS

Feature	Specification
Brand	GIGABYTE
Model Name	GA-B150M-DS3H
CPU Socket	LGA 1151
Compatible Processors	6th Generation Intel Core
Chipset Type	Intel B150
RAM Memory Technology	DDR4
Memory Clock Speed	2666 MHz
Number of USB 2.0 Ports	2 (rear)
Item Weight	1.65 pounds
Product Dimensions (LxWxH)	11 x 11 x 3 inches
Form Factor	Micro ATX (22.6cm x 19.3cm)
Date First Available	November 30, 2015
Batteries	1 CR2 battery required (included)

9. WARRANTY AND SUPPORT

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

GIGABYTE Official Website: www.gigabyte.com

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

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