GIGABYTE GA-H110M-A

GIGABYTE GA-H110M-A Motherboard User Manual

Model: GA-H110M-A

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your GIGABYTE GA-H110M-A motherboard. Designed for 6th and 7th Generation Intel Core Processors, this Micro ATX board offers essential features for a reliable computing experience.

This image displays the GIGABYTE GA-H110M-A motherboard alongside its retail packaging, highlighting the 'Ultra Durable' branding.

2. SETUP AND INSTALLATION

2.1 Unpacking and Inspection

Carefully remove the motherboard from its packaging. Verify that all components are present and

undamaged. The package typically includes the motherboard, I/O shield, SATA cables, and a user manual (this document).

2.2 CPU Installation

1. Locate the LGA1151 CPU socket on the motherboard.
2. Open the CPU socket lever and lift the load plate.
3. Align the CPU with the socket, ensuring the golden triangle on the CPU matches the indicator on the socket. Gently place the CPU into the socket without force.
4. Close the load plate and secure it with the lever.

## 2.3 Memory (RAM) Installation

The GA-H110M-A supports DDR4 memory modules in two DIMM slots, allowing for dual-channel configuration. The maximum supported memory capacity is 32GB.

1. Open the clips at both ends of the DIMM slot.
2. Align the notch on the DDR4 memory module with the key in the DIMM slot.
3. Insert the module firmly until the clips snap into place.

2.4 Motherboard Installation into Chassis

This motherboard features a Micro ATX form factor (22.6cm x 17.4cm). Ensure your PC case supports this size.

1. Install the I/O shield into the rear opening of your chassis.
2. Carefully place the motherboard into the chassis, aligning the screw holes.
3. Secure the motherboard with screws, ensuring not to overtighten.
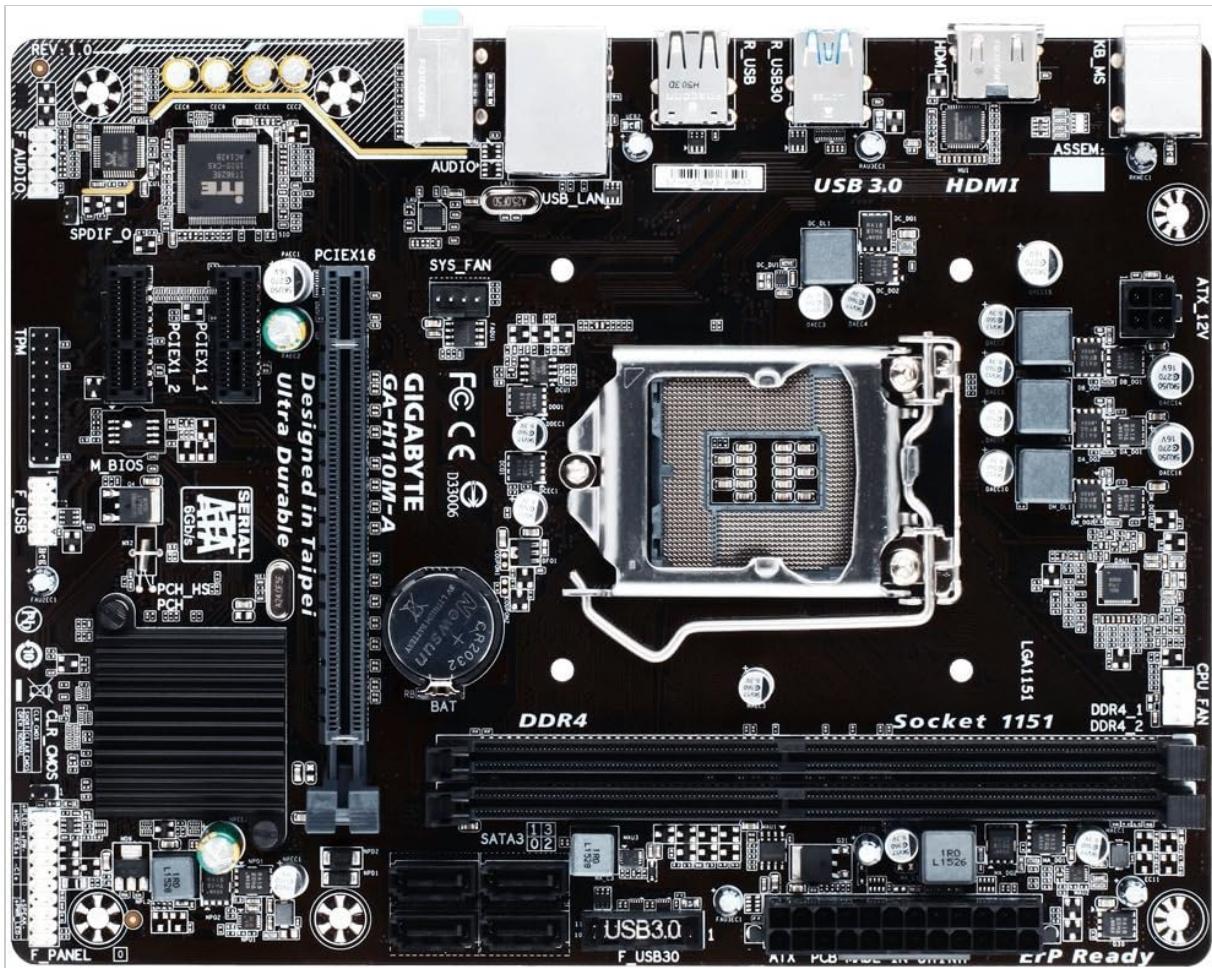
A detailed top-down view of the GIGABYTE GA-H110M-A motherboard, showing the LGA1151 CPU socket, DDR4 DIMM slots, PCIe slots, and various onboard connectors.

2.5 Connecting Peripherals and Power

- **ATX Power Connectors:** Connect the 24-pin ATX main power connector and the 4-pin ATX 12V power connector from your power supply to the motherboard.

- **SATA Devices:** Connect your storage drives (HDDs/SSDs) to the SATA 6Gb/s ports.

- **Front Panel Connectors:** Connect the power button, reset button, HDD LED, and front panel USB/audio headers to their respective pins on the motherboard. Refer to the motherboard diagram for exact locations.

- **Expansion Cards:** Install graphics cards or other PCIe expansion cards into the available PCI Express slots.
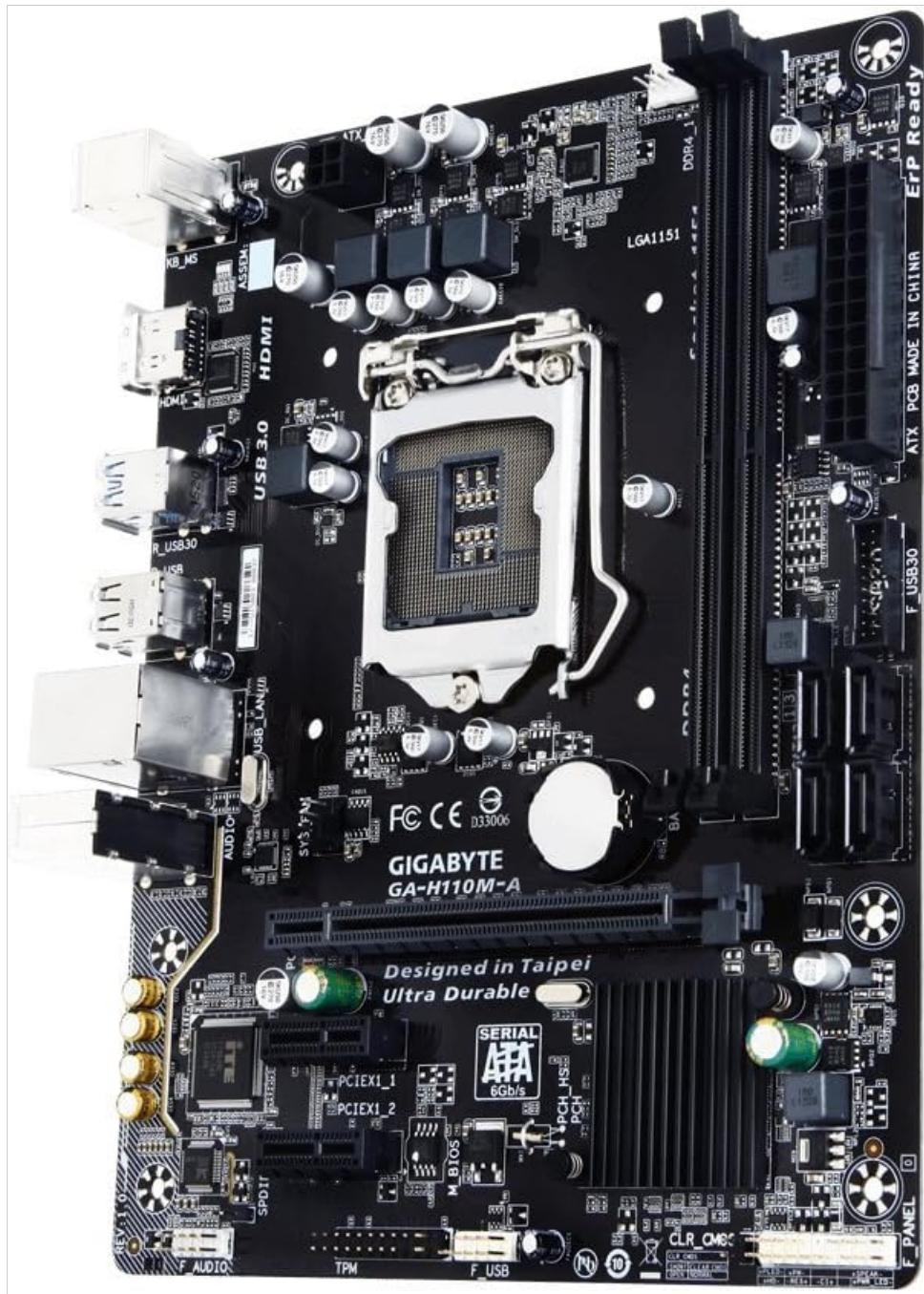
An angled perspective of the GIGABYTE GA-H110M-A motherboard, providing a clearer view of the I/O shield area and expansion slots.

3. OPERATING INSTRUCTIONS

3.1 Initial Boot and BIOS/UEFI Setup

After connecting all components, power on your system. Press the **Delete** key repeatedly during startup to enter the BIOS/UEFI setup utility. The GIGABYTE GA-H110M-A features a licensed AMI UEFI BIOS with a user-friendly interface.

- **System Information:** View CPU, memory, and storage details.
- **Boot Options:** Configure boot order for your operating system.
- **Peripherals:** Enable or disable integrated devices.
- **Smart Fan Control:** Adjust fan speeds for optimal cooling and noise levels.

3.2 Driver Installation

After installing your operating system, install the necessary drivers for optimal performance. Drivers can be found on the GIGABYTE official website for your specific motherboard model. Key drivers include:

- Chipset Drivers
- Audio Drivers (Realtek ALC887)
- LAN Drivers (Realtek GbE LAN)
- Intel HD Graphics Drivers (if using integrated graphics)

3.3 GIGABYTE App Center

The GIGABYTE App Center provides access to various utilities, including Easy Tune for system optimization and Cloud Station for cloud-based functionalities. Install these applications from the GIGABYTE website to enhance your user experience.

4. MAINTENANCE

4.1 BIOS Updates

Regularly checking for BIOS updates on the GIGABYTE website is recommended. BIOS updates can improve system stability, add support for new hardware, and fix bugs.

- **7th Generation Intel Core Processor Support:** If you are using a 7th Generation Intel Core processor, ensure your motherboard's BIOS is updated to version F20 or later. Older BIOS versions may require a 6th Generation Intel Core processor to perform the update.
- Follow the instructions provided by GIGABYTE for the Q-Flash utility to safely update the BIOS.

4.2 Cleaning

To ensure optimal performance and longevity, periodically clean your computer's interior to remove dust accumulation. Use compressed air to clear dust from heatsinks, fans, and motherboard components. Ensure the system is powered off and unplugged before cleaning.

5. TROUBLESHOOTING

This section addresses common issues you might encounter.

- **System Does Not Power On:**
  - Verify all power cables (24-pin ATX, 4-pin ATX 12V) are securely connected to the motherboard and power supply.
  - Ensure the power supply switch is in the 'ON' position.
  - Check front panel power button connections.

- **No Display/System Fails to Boot:**
  - Reseat the CPU and memory modules. Ensure they are correctly installed.
  - Check that the graphics card (if dedicated) is properly seated and has power.
  - If using integrated graphics, ensure your monitor is connected to the motherboard's video output (HDMI).
  - A common symptom of a CPU or RAM issue is the CPU fan spinning briefly and then stopping. Recheck CPU and RAM installation.

- **BIOS Update Issues:**

- If a BIOS update fails or causes instability, refer to the GIGABYTE website for recovery procedures or contact technical support.
- Ensure you are using the correct BIOS file for your specific motherboard model.

- **SATA Port Issues:**

- Ensure SATA cables are securely connected to both the motherboard and the storage device.
- Test with different SATA cables or ports if a drive is not detected.

6. SPECIFICATIONS

Key technical specifications for the GIGABYTE GA-H110M-A motherboard:

Feature	Specification
CPU Socket	LGA 1151
Compatible Processors	6th and 7th Generation Intel Core Processors
Chipset	Intel H110
Memory	2 x DDR4 DIMM sockets, up to 32 GB, 2133 MHz
Form Factor	Micro ATX (22.6cm x 17.4cm)
Audio	Realtek ALC887 codec, Audio Noise Guard
LAN	Realtek GbE LAN
Video Output	HDMI 1.4 (Integrated Graphics Processor - Intel HD Graphics support)
USB Ports	USB 3.0, USB 2.0
Storage	SATA 6Gb/s ports
BIOS	Licensed AMI UEFI BIOS
Dimensions	11 x 10 x 2 inches (Product)
Item Weight	2.08 ounces

Close-up of the rear input/output (I/O) panel of the GIGABYTE GA-H110M-A motherboard, featuring PS/2 ports, HDMI, USB 3.0, USB 2.0, Ethernet, and audio jacks.

7. WARRANTY AND SUPPORT

For warranty information, technical support, and further assistance, please visit the official GIGABYTE

website. You can find drivers, BIOS updates, and detailed product documentation there.

GIGABYTE Official Website: www.gigabyte.com