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GIGABYTE GA-H77N-WIFI

GIGABYTE GA-H77N-WIFI Mini ITX Motherboard User Manual

Model: GA-H77N-WIFI

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your GIGABYTE GA-H77N-WIFI Mini ITX Motherboard. This motherboard supports 3rd and 2nd generation Intel Core processors with an LGA1155 socket, features Intel H77 chipset, integrated Wi-Fi and Bluetooth 4.0, dual Gigabit LAN, and multiple display outputs including HDMI and DVI.

2. SETUP AND INSTALLATION

2.1 Motherboard Layout



Figure 1: Top-down view of the GA-H77N-WIFI motherboard, showing CPU socket, DIMM slots, and various connectors.

Familiarize yourself with the layout of the motherboard before proceeding with installation. Refer to Figure 1 for a general overview of component placement.

2.2 CPU Installation

1. Locate the LGA1155 CPU socket on the motherboard.
2. Gently lift the load lever and open the CPU socket cover.
3. Align the triangular mark on the CPU with the corresponding mark on the socket. Carefully place the CPU into the socket without forcing it.
4. Close the socket cover and press down the load lever until it locks into place.
5. Install the CPU cooler according to its manufacturer's instructions.

2.3 Memory (RAM) Installation

1. Locate the two DDR3 DIMM sockets.
2. Open the clips at both ends of the DIMM socket.
3. Align the notch on the DDR3 memory module with the key in the DIMM socket.
4. Insert the memory module firmly into the socket until the clips snap into place. Ensure both clips are closed.

2.4 Storage Device Installation

Connect your SATA 6Gb/s storage devices (HDDs, SSDs) to the SATA ports on the motherboard using SATA data cables. Ensure the power cables from your power supply are also connected to the storage devices.

2.5 Power Connections

1. Connect the 24-pin ATX main power connector from your power supply to the corresponding socket on the motherboard.
2. Connect the 4-pin ATX 12V power connector to its socket, typically located near the CPU.

2.6 Front Panel and Peripheral Connections



Figure 2: Angled view of the GA-H77N-WIFI motherboard, showing various onboard headers and rear I/O ports.

Connect the front panel headers (power switch, reset switch, HDD LED, power LED, front audio, front USB) from your computer case to the corresponding pins on the motherboard. Refer to the motherboard's printed labels for correct orientation.

2.7 Rear I/O Panel Connections



Figure 3: Rear I/O panel of the GA-H77N-WIFI motherboard, showing connectivity options.

Connect your peripherals to the rear I/O panel (Figure 3):

- **USB Ports:** Connect USB devices such as keyboard, mouse, and external drives.
- **Video Outputs:** Connect your monitor(s) to the HDMI or DVI ports.
- **LAN Ports:** Connect Ethernet cables for network access.
- **Audio Jacks:** Connect speakers, headphones, or microphones.
- **Wireless Antennas:** Screw in the included Wi-Fi antennas to the connectors.

3. OPERATING INSTRUCTIONS

3.1 BIOS/UEFI Configuration

Upon initial power-on, press the **DEL** key during the POST (Power-On Self-Test) to enter the BIOS Setup Utility. The GIGABYTE 3D BIOS (Dual UEFI) provides an intuitive interface for configuring system settings, boot order, and hardware parameters.

3.2 Operating System Installation

Insert your operating system installation media (USB drive or DVD) and set the boot priority in the BIOS to boot from the installation media. Follow the on-screen instructions to install your preferred operating system.

3.3 Driver Installation

After installing the operating system, install the necessary drivers for the motherboard components. These typically include chipset drivers, graphics drivers (if using integrated graphics), audio drivers, LAN drivers, and Wi-Fi/Bluetooth drivers. Drivers are usually provided on a support CD or can be downloaded from the GIGABYTE website.

3.4 Network Configuration

The motherboard features dual Realtek Gigabit Ethernet LAN for wired network connections and an Intel Wi-Fi module for wireless connectivity. Configure your network settings within your operating system. For Wi-Fi, ensure the antennas are connected and select your network from the available options.

3.5 GIGABYTE On/Off Charge

The GIGABYTE On/Off Charge feature allows for faster charging of USB devices, even when the PC is turned off or in standby mode. Ensure the necessary drivers/utilities are installed for this feature to function.

4. MAINTENANCE

4.1 Cleaning

Regularly clean the interior of your computer case to prevent dust buildup, which can lead to overheating. Use compressed air to remove dust from components, especially heatsinks and fans. Ensure the system is powered off and unplugged before cleaning.

4.2 BIOS and Driver Updates

Periodically check the GIGABYTE website for updated BIOS versions and drivers. Updating these can improve system stability, performance, and compatibility. Follow the instructions provided by GIGABYTE carefully when performing updates.

5. TROUBLESHOOTING

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

- **No Power:** Check all power connections from the power supply to the motherboard and components. Ensure the power supply switch is on.
- **No Display:** Verify that the monitor is connected correctly to the motherboard's video output (HDMI/DVI) and is powered on. Try reseating the memory modules.
- **System Instability:** Ensure all components are properly seated. Check for overheating by monitoring CPU and system temperatures. Update BIOS and drivers.
- **Network Issues:** Verify Ethernet cables are securely connected. Check Wi-Fi antenna connections. Ensure network drivers are installed and configured correctly.
- **Peripheral Not Detected:** Ensure USB devices are connected to functional ports. Check device manager for driver issues.

For more advanced troubleshooting or persistent issues, refer to the GIGABYTE support website or contact their technical support.

6. SPECIFICATIONS

Component	Specification
CPU Socket	LGA 1155
Compatible Processors	Intel Core i7/i5/i3/Pentium/Celeron (3rd and 2nd Gen)
Chipset	Intel H77 Express
Memory Slots	2 x DDR3 DIMM sockets
Max Memory Capacity	16 GB

Memory Type	DDR3 1600/1333/1066/800 MHz
LAN	2 x Realtek GbE LAN (10/100/1000 Mbit)
Wireless	Intel Wi-Fi module, Bluetooth 4.0
SATA Ports	SATA 6Gb/s
USB Ports	USB 3.0, USB 2.0
Video Outputs	HDMI, DVI
Expansion Slots	PCI Express Gen 3.0
Form Factor	Mini ITX
Dimensions	17 x 16 x 10 inches (Product Dimensions)
Weight	1.6 pounds

7. WARRANTY AND SUPPORT

For information regarding product warranty, please refer to the warranty card included with your motherboard or visit the official GIGABYTE website. For technical support, driver downloads, and BIOS updates, please visit the GIGABYTE support portal:

[GIGABYTE Official Support](#)