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GIGABYTE GA-H97-Gaming 3

GIGABYTE GA-H97-Gaming 3 Motherboard User Manual

Model: GA-H97-Gaming 3

Product Overview

The GIGABYTE GA-H97-Gaming 3 is an ATX form factor motherboard designed to support 4th and 5th Generation Intel Core processors. It features advanced audio capabilities with Creative SoundBlaster X-Fi MB3 and Realtek ALC1150 115dB SNR HD Audio, enhanced by Audio Noise Guard with LED path lighting. For networking, it incorporates the Killer E2200 gaming platform.

This motherboard offers extensive connectivity and expansion options, including SATA Express for 10 Gb/s data transfer, M.2 support for SSDs with up to 10 Gb/s data transfer, and extreme multi-graphics support for configurations like 2-Way AMD CrossFire technology. It is built with long-lifespan Durable Solid caps and features GIGABYTE UEFI Dual BIOS for reliable operation and easy system management.

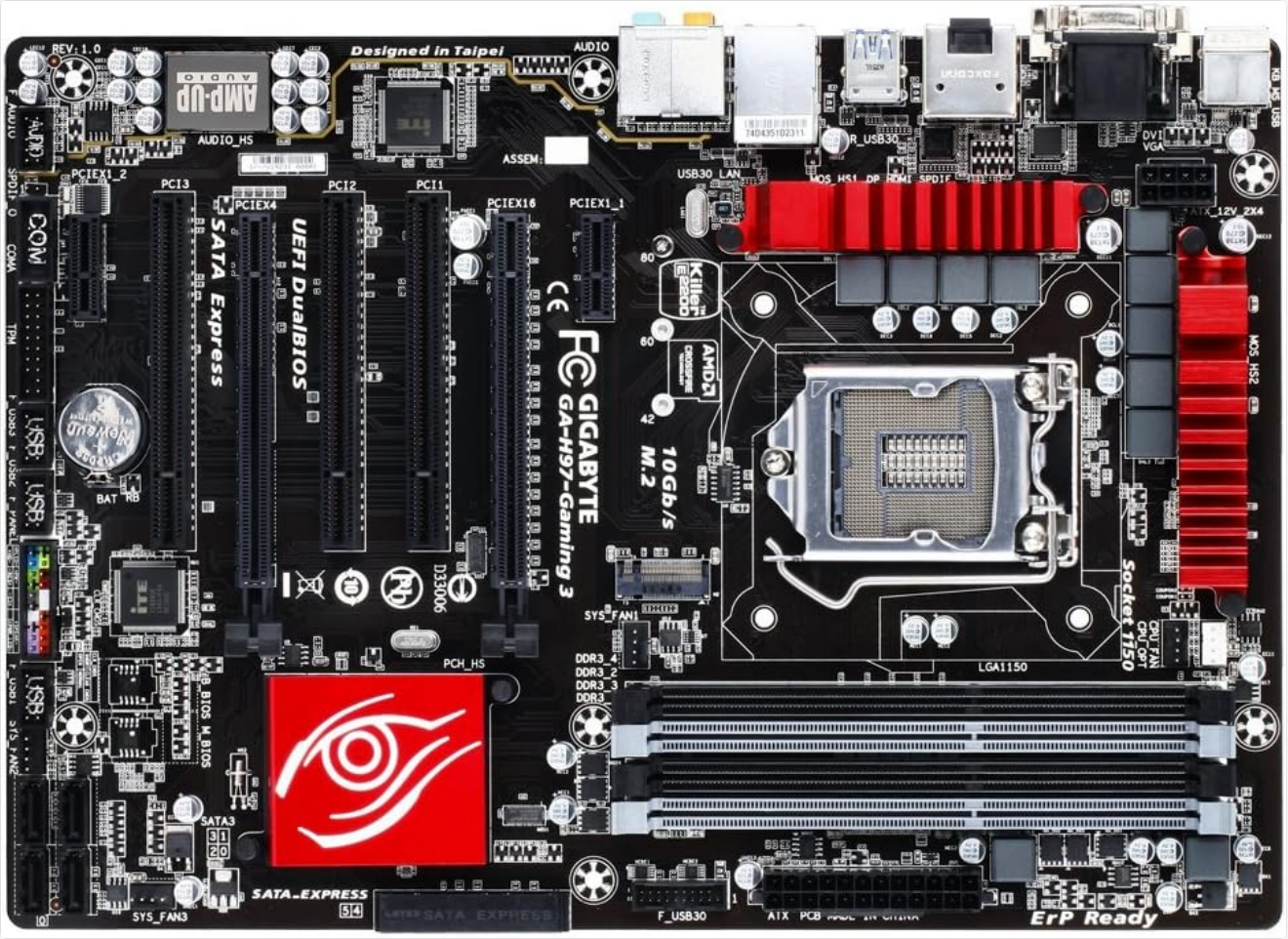


Figure 1: Top-down view of the GIGABYTE GA-H97-Gaming 3 motherboard, showcasing its layout and components.

Setup and Installation

Before installing the motherboard, ensure your system case is compatible with the ATX form factor. Handle the motherboard by its edges to avoid static discharge. It is recommended to install the CPU, CPU cooler, and memory modules before mounting the motherboard into the case.

CPU Installation

This motherboard supports LGA 1150 socket processors. Carefully align the CPU with the socket's triangle marker and gently place it into the socket. Close the load plate and secure the retention lever.

Memory Installation

The GA-H97-Gaming 3 features four DDR3 DIMM slots, supporting up to 32GB of DDR3 1600/1333 MHz memory modules. For optimal performance, install memory modules in matched pairs into the designated dual-channel slots as indicated in the motherboard manual (typically slots 1 and 2, or 3 and 4).



Figure 2: Angled view of the motherboard, highlighting the CPU socket and DDR3 memory slots for component installation.

Motherboard Mounting

Once the CPU and memory are installed, carefully place the motherboard into your PC case, aligning it with the standoffs. Secure the motherboard with screws, ensuring not to overtighten. Connect the 24-pin ATX power connector and the 8-pin CPU power connector. Note that the far edge of the motherboard may be flexible when plugging in cables; support the edge to prevent damage.

Operating Your System

After physical installation, connect all necessary peripherals and power on your system. The GIGABYTE UEFI Dual BIOS provides a user-friendly interface for system configuration, boot order, and hardware monitoring.

Connectivity

The motherboard offers a variety of ports for external devices and internal components:

- **Storage:** Multiple SATA 6Gb/s ports, SATA Express, and an M.2 slot for high-speed storage drives.
- **USB:** USB 3.0 and USB 2.0 ports for peripheral connectivity.
- **Graphics:** Onboard graphics support with D-Sub, DVI-I, HDMI, and DisplayPort outputs, allowing for up to three displays simultaneously.
- **Audio:** Rear audio amplifier with 8-channel HD audio jacks.
- **Networking:** Killer E2200 gaming networking platform for optimized network performance.



Figure 3: Rear Input/Output (I/O) panel, showing various ports including USB, video outputs, and audio jacks.

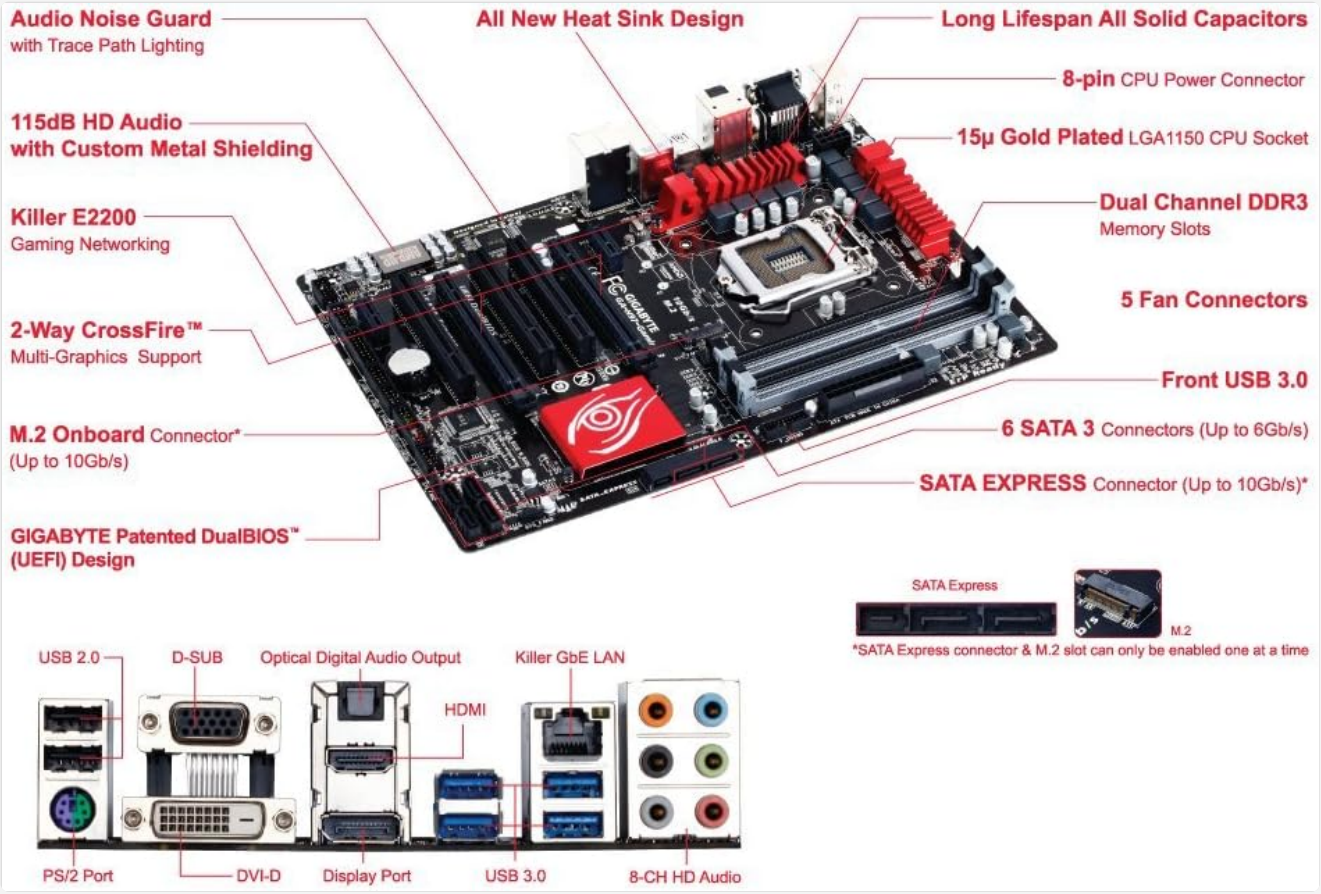


Figure 4: Detailed diagram labeling various components and features on the motherboard, including power connectors, expansion slots, and I/O ports.

Maintenance

To ensure the longevity and optimal performance of your GIGABYTE GA-H97-Gaming 3 motherboard, regular maintenance is recommended. Keep the interior of your PC case clean and free of dust, as dust accumulation can lead to overheating and component degradation. Ensure proper airflow within the case by managing cables and maintaining functional case fans.

The motherboard is built with Long lifespan Durable Solid caps, contributing to its reliability. However, periodic checks for loose connections or signs of wear are advisable. Always power down and unplug your system before performing any internal cleaning or component adjustments.

Troubleshooting

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

- **No Power:** Verify that the 24-pin ATX power connector and the 8-pin CPU power connector are securely

seated. Check the power supply unit (PSU) and its connections.

- **No Display:** Ensure your monitor is connected to the correct video output on the motherboard or discrete graphics card. Reseat memory modules and graphics cards.
- **System Instability:** Check for proper seating of all components (CPU, RAM, expansion cards). Ensure adequate cooling for the CPU and other components. Update BIOS to the latest version if stability issues persist.
- **Peripheral Detection Issues:** Verify USB and SATA cable connections. Ensure drivers for new peripherals are correctly installed.

For more complex issues, consult the comprehensive user manual provided by GIGABYTE or visit their official support website.

Specifications

Feature	Specification
Brand	GIGABYTE
Model Name	GA-H97-Gaming 3
CPU Socket	LGA 1150
Compatible Processors	Intel Core 4th Gen, Intel Core 5th Gen
Chipset Type	Intel H97
RAM Memory Technology	DDR3
Memory Speed	1333 MHz
Max Memory Support	32GB (4 x DDR3 DIMM)
Onboard Graphics Ports	1x D-Sub, 1x DVI-I, 1x HDMI, 1x DisplayPort
USB 2.0 Ports	2 (rear)
SATA Ports	6 x SATA 6Gb/s
SATA Express	Yes (10 Gb/s)
M.2 Connector	Yes (10 Gb/s)
Multi-Graphics Support	2-Way AMD CrossFire Technology
Audio	Realtek ALC1150 115dB SNR HD Audio, Creative SoundBlaster X-Fi MB3
LAN	Killer E2200 Gaming Network
Item Weight	3.4 pounds
Product Dimensions	13 x 3 x 11 inches

Warranty and Support

For detailed warranty information and technical support, please refer to the official GIGABYTE website or the documentation included with your product. GIGABYTE provides resources for driver downloads, BIOS updates, and troubleshooting guides.
You can visit the official GIGABYTE store for additional product information and support resources:GIGABYTE Store

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