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GIGABYTE X570 AORUS ELITE

GIGABYTE X570 AORUS Elite Gaming Motherboard User Manual

Model: X570 AORUS ELITE

INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your GIGABYTE X570 AORUS Elite Gaming Motherboard. This motherboard is designed to support AMD 3rd Gen Ryzen and 2nd Gen Ryzen processors, featuring a robust 12+2 phases digital VRM, PCIe 4.0 support, dual NVMe M.2 slots with thermal guards, and advanced audio solutions. Please read this manual thoroughly before proceeding with installation.



Figure 1: GIGABYTE X570 AORUS Elite Motherboard and Retail Packaging.

Setup and Installation

Proper installation is crucial for optimal performance and stability. Ensure your system components are compatible with the X570 AORUS Elite motherboard.

1. Processor (CPU) Installation

This motherboard supports AMD Ryzen 3rd Gen and 2nd Gen processors with an AM4 socket. Carefully align the CPU with the socket triangle marker and gently place it into the socket. Do not force the CPU into the socket.



Figure 2: Top-down view of the motherboard, highlighting the CPU socket (AM4) and DDR4 DIMM slots.

2. Memory (RAM) Installation

The motherboard features four DDR4 DIMM slots, supporting dual-channel ECC/non-ECC unbuffered memory. Install memory modules into the corresponding slots, ensuring they are fully seated until the clips lock into place.

3. Storage (M.2 SSD) Installation

The X570 AORUS Elite includes dual ultra-fast NVMe PCIe 4.0/3.0 x4 M.2 connectors, each equipped with a thermal guard.

Remove the thermal guard, insert the M.2 SSD, and then reattach the thermal guard for optimal cooling.



Figure 3: Angled view of the motherboard, illustrating the M.2 slots with their integrated thermal guards.

4. Power Connections

Connect the 24-pin ATX power connector and the 8-pin CPU power connector from your power supply unit to the motherboard. Ensure all connections are secure.

5. Integrated I/O Shield and Rear Panel Connections

The motherboard features an integrated I/O shield for ease of installation. Connect your peripherals to the appropriate ports on the rear I/O panel, including USB 3.1 Gen2 Type-C, USB 3.0, USB 2.0, HDMI, Ethernet, and audio jacks.



Figure 4: Detailed view of the integrated rear I/O panel, showing various connectivity options.

Operating the Motherboard

Once all components are installed and connected, you can power on your system. The motherboard's BIOS (Basic Input/Output System) provides essential settings for system configuration.

BIOS Configuration

To enter the BIOS setup, press the **DEL** key during system startup. Here you can configure boot order, system clock, fan speeds, and other advanced settings. Refer to the full user manual for detailed BIOS options.

RGB Fusion 2.0

The X570 AORUS Elite features RGB Fusion 2.0, allowing customization of lighting effects. This can be controlled via GIGABYTE's software utility within your operating system. The motherboard includes addressable LED headers for additional RGB strips.

Network and Audio

The integrated Intel GbE LAN with cFosSpeed software provides a stable and optimized network connection. The Realtek ALC1200 audio codec with high-quality WIMA and Nichicon audio capacitors delivers an enhanced audio experience.

Maintenance

Regular maintenance helps ensure the longevity and performance of your motherboard.

- **Dust Removal:** Periodically clean dust from the motherboard and components using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **Thermal Management:** Ensure proper airflow within your PC case. The extended VRM heatsink and M.2 thermal guards are designed to dissipate heat effectively.
- **BIOS Updates:** Keep your BIOS updated to the latest version for improved compatibility and performance. Use the Q-Flash Plus feature for convenient updates without a CPU or RAM installed.

Troubleshooting

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

1. **No Power/No Boot:**
    - Verify all power cables (24-pin ATX, 8-pin CPU) are securely connected.
    - Check the power supply unit (PSU) and its connections.
    - Ensure the front panel power button connector is correctly installed on the motherboard.
2. **No Display:**
    - Ensure the monitor cable is connected to the graphics card (if dedicated) or the motherboard's HDMI port (if using integrated graphics, requires compatible CPU).
    - Reseat the graphics card and RAM modules.
    - Test with a single RAM stick in different slots.
3. **System Instability/Crashes:**
    - Check CPU and GPU temperatures.
    - Ensure all drivers are up to date.
    - Run memory diagnostic tools.
4. **BIOS Update Issues:**

    If a BIOS update fails or causes issues, utilize the **Q-Flash Plus** feature. This allows you to update the BIOS using a USB flash drive without needing a CPU, memory, or graphics card installed. Refer to the GIGABYTE website for detailed Q-Flash Plus instructions.

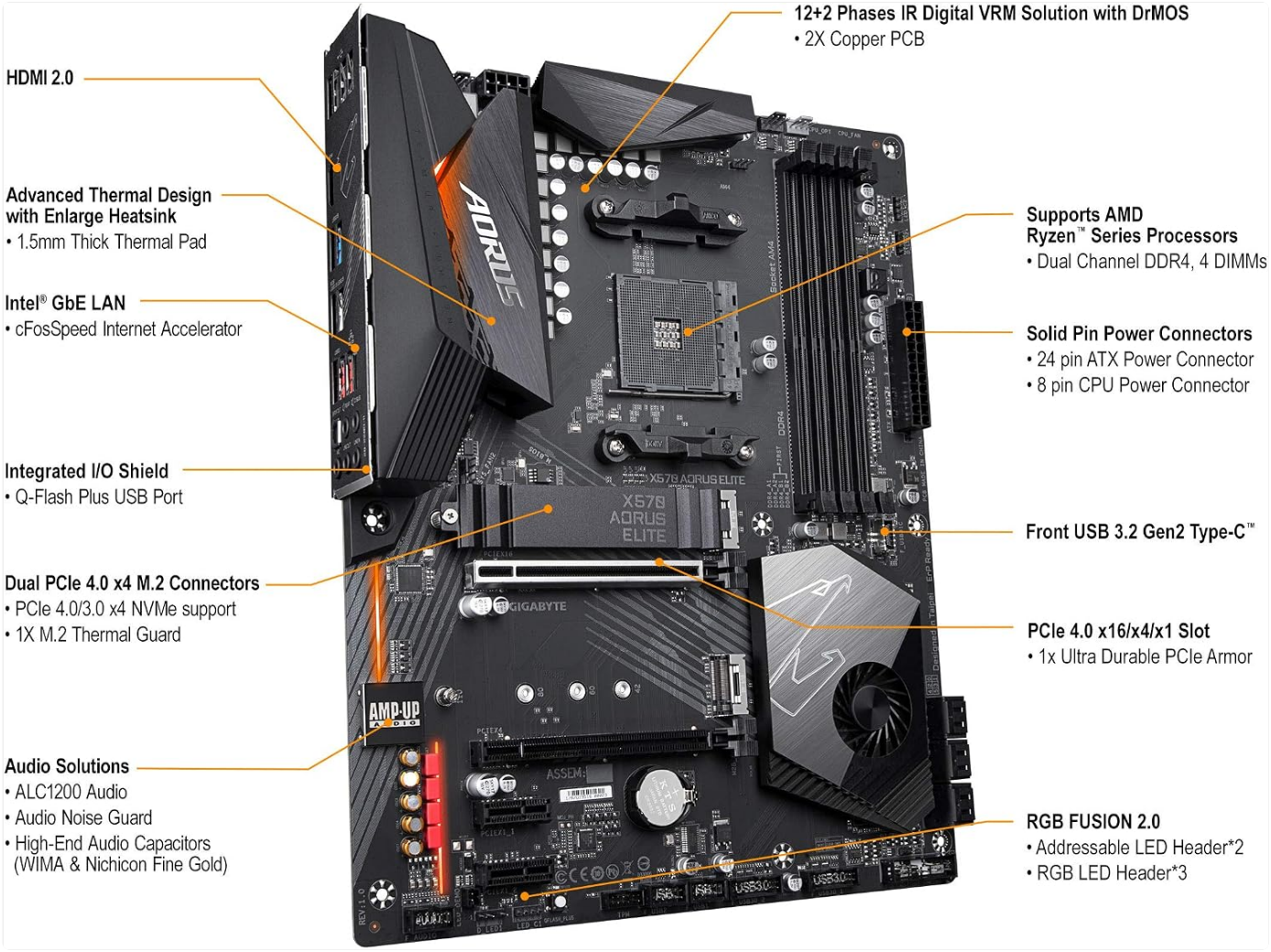


Figure 5: Annotated diagram of the motherboard, detailing key components and features for reference.

Specifications

Feature	Detail
Brand	GIGABYTE
Model Name	X570 AORUS ELITE
CPU Socket	Socket AM4
Compatible Processors	AMD 2nd Generation Ryzen, AMD 3rd Generation Ryzen
Chipset Type	AMD 570X
RAM Memory Technology	DDR4
Memory Clock Speed	2133 MHz (up to 4000+ MHz OC)
Memory Storage Capacity (Max)	128 GB
Number of USB 2.0 Ports	2 (rear)
Product Dimensions	13.18 x 10.62 x 3.14 inches (ATX Form Factor)
Item Weight	3 pounds
Wireless Type	Bluetooth
Operating System Support	Windows 10 64-bit, Windows 11 64-bit

Warranty and Support

For warranty information and technical support, please refer to the official GIGABYTE website or contact their customer service. Keep your proof of purchase for warranty claims.
An official User Manual in PDF format is available for more detailed information:
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