

## GIGABYTE B760 AORUS ELITE AX

# GIGABYTE B760 AORUS Elite AX Motherboard User Manual

## 1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your GIGABYTE B760 AORUS Elite AX Motherboard. Designed for optimal performance with 13th and 12th Gen Intel Core Processors, this motherboard offers advanced features for computing enthusiasts.



Figure 1: GIGABYTE B760 AORUS Elite AX Motherboard and retail packaging.

## 2. KEY FEATURES

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- **Intel LGA 1700 Socket:** Supports 13th and 12th Generation Intel Core Series Processors, ensuring compatibility with the latest CPU technologies.
- **DDR5 Compatibility:** Features Dual Channel DDR5 memory support across 4 DIMM slots, allowing for high-speed memory configurations.
- **Commanding Power Design:** Equipped with a 12+1+1 Twin Hybrid Phases Digital Power Design with 60A DrMOS for stable power delivery to critical components.
- **Cutting-Edge Thermal Design:** Includes M.2 Thermal Guard, fully covered MOSFET Heatsinks, and a 6-Layer & 2X Copper PCB to maintain optimal temperatures under load.
- **Next-Gen Connectivity:** Provides PCIe 4.0 for high-speed expansion cards and USB 3.2 Gen 2x2 Type-C for rapid data transfer.
- **EZ-Latch:** Features PCIe 4.0 EZ-Latch with PCIe Ultra Durable Armor for convenient and secure installation of graphics cards.
- **Fast Networking:** Integrated 2.5GbE LAN and WiFi 6E for high-speed wired and wireless network connections.
- **Dynamic Audio:** Offers 8-channel HD Audio with Audio Noise Guard and High-End Audio Capacitors for an immersive audio experience.
- **Fine Tuning Features:** Supports RGB FUSION 2.0 for customizable lighting, Addressable LED & RGB LED Strips, Smart Fan 6 for intelligent cooling control, and Q-Flash Plus for BIOS updates without CPU, memory, or GPU installation.

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Video 1: Official GIGABYTE B760 Series Trailer, showcasing key features and design elements of the motherboard.

## 3. SETUP AND INSTALLATION

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### 3.1. CPU Installation

Carefully open the CPU socket lever and align your Intel LGA 1700 processor with the socket. Ensure the triangular mark on the CPU aligns with the mark on the socket. Gently place the CPU into the socket without forcing it, then close the lever to secure it.



Figure 2: CPU socket (LGA 1700) and DDR5 DIMM slots on the motherboard.

### 3.2. Memory (RAM) Installation

Locate the four DDR5 DIMM slots. Open the clips on both ends of the slot. Align your DDR5 memory module with the slot, ensuring the notch on the module matches the key in the slot. Press down firmly on both ends of the memory module until the clips snap into place.

### 3.3. Storage (M.2 SSD) Installation

The motherboard features multiple M.2 slots with Thermal Guards. To install an M.2 SSD, unscrew the M.2 Thermal Guard and remove it. Insert the M.2 SSD into the slot at an angle, then gently push it down. Secure it with the EZ-Latch mechanism or a screw, and reattach the Thermal Guard.



Figure 3: M.2 slots with integrated Thermal Guards for SSDs.

### 3.4. Graphics Card Installation

Locate the PCIe 4.0 x16 slot. Open the retention clip at the end of the slot. Align your graphics card with the slot and press down firmly until it is fully seated and the retention clip locks into place. Secure the card to your chassis with screws.

### 3.5. Power Connections

Connect the 24-pin ATX main power connector and the 8-pin (or 4+4-pin) CPU power connector from your power supply to the corresponding ports on the motherboard. Ensure all connections are secure.

### 3.6. Rear I/O Panel Connections

Connect your peripherals to the appropriate ports on the rear I/O panel, including USB devices, display cables (HDMI/DisplayPort), Ethernet cable, and audio jacks. Install the included WiFi antenna for wireless connectivity.



Figure 4: Rear I/O panel with various connectivity options.

## 4. OPERATING INSTRUCTIONS

### 4.1. BIOS/UEFI Setup

Upon initial boot, press the 'Del' key to enter the BIOS/UEFI setup utility. Here you can configure system settings, boot order, and monitor hardware status. Refer to the comprehensive GIGABYTE BIOS manual for detailed options.

### 4.2. Q-Flash Plus for BIOS Update

The Q-Flash Plus feature allows you to update the BIOS without installing the CPU, memory, or graphics card. Download the latest BIOS file from the GIGABYTE website, rename it to GIGABYTE.bin, and save it to a USB flash drive. Insert the USB drive into the designated Q-Flash Plus USB port on the rear I/O panel and press the Q-Flash Plus button. The system will automatically update the BIOS.

### 4.3. GIGABYTE Control Center (GCC)

Install the GIGABYTE Control Center software from the official GIGABYTE website. This utility provides a centralized interface for monitoring system performance, managing RGB FUSION 2.0 lighting, configuring Smart Fan 6 settings, and updating drivers and utilities.

## 5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your motherboard. This includes:

- **Dust Cleaning:** Periodically clean dust from the motherboard, heatsinks, and fan blades using compressed air. Ensure the system is powered off and unplugged before cleaning.

- **BIOS Updates:** Keep your BIOS updated to the latest version to benefit from performance improvements, bug fixes, and compatibility enhancements. Use the Q-Flash Plus feature or update directly from within the BIOS.
- **Driver Updates:** Regularly update your device drivers (chipset, audio, LAN, WiFi, graphics) from the GIGABYTE website or through the GIGABYTE Control Center.

## 6. TROUBLESHOOTING

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

- **No Power/No Boot:** Double-check all power connections (24-pin ATX, 8-pin CPU, GPU PCIe power). Ensure the power supply is switched on. Try reseating RAM modules.
- **No Display:** Verify that your monitor is connected to the graphics card (or integrated graphics if applicable) and is powered on. Reseat the graphics card and check its power connections.
- **System Instability/Crashes:** This can often be related to memory issues. Ensure RAM is correctly seated and compatible. Test memory modules individually if possible. Check CPU and GPU temperatures.
- **Peripheral Not Detected:** Ensure USB devices are properly connected. Try different USB ports. Update chipset drivers.

For more complex issues, consult the detailed troubleshooting section in the full user manual available on the GIGABYTE support website or contact GIGABYTE technical support.

## 7. SPECIFICATIONS

Feature	Specification
Brand	GIGABYTE
Model Name	B760 AORUS ELITE AX
CPU Socket	LGA 1700
Compatible Processors	13th and 12th Gen Intel Core Series Processors
Chipset Type	Intel B760
RAM Memory Technology	DDR5
Memory Speed	4400 MHz (up to 7600MHz+ OC)
Max Memory Storage Capacity	64 GB
Wireless Type	802.11ax (WiFi 6E)
LAN	2.5GbE LAN
PCIe Slots	PCIe 4.0
USB Ports	USB 3.2 Gen 2x2 Type-C, USB 3.2 Gen 2, USB 3.2 Gen 1, USB 2.0
Item Weight	3.3 pounds
Product Dimensions	13.18 x 10.62 x 3.14 inches

## 8. WARRANTY AND SUPPORT

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GIGABYTE products are covered by a limited warranty. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official GIGABYTE website. For technical assistance, driver downloads, and further support, please visit the [GIGABYTE Support Page](#).