

GIGABYTE B860M AORUS Elite WIFI6E ICE

GIGABYTE B860M AORUS Elite WIFI6E ICE Motherboard User Manual

Model: B860M AORUS Elite WIFI6E ICE

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your GIGABYTE B860M AORUS Elite WIFI6E ICE Motherboard. Designed to support Intel Core Ultra Processors (Series 2), this motherboard features advanced power delivery, high-speed storage options, and robust connectivity for optimal performance.

2. PRODUCT OVERVIEW

The GIGABYTE B860M AORUS Elite WIFI6E ICE motherboard is a micro-ATX form factor board designed for high-performance computing. It features a white aesthetic and is equipped with various components to enhance system stability and speed.



Image 2.1: The GIGABYTE B860M AORUS Elite WIFI6E ICE Motherboard shown with its retail packaging and Wi-Fi antenna.

Key Features:

- Supports Intel Core Ultra Processors (Series 2) for advanced computing power.
- DDR5 Compatible: Features 4 DIMM slots for high-speed DDR5 memory.
- Robust Power Design: Equipped with a 12+1+2+1 phase, 60A DrMOS VRM for stable power delivery.
- Enhanced Thermals: Includes MOSFET Heatsinks and M.2 Thermal Guards to maintain optimal operating temperatures.
- Advanced Connectivity: Offers PCIe 5.0, three M.2 slots, USB-C, WIFI6E, and 2.5GbE LAN for versatile and high-speed connections.

3. SETUP AND INSTALLATION

Proper installation is crucial for the stable operation of your motherboard. Follow these steps carefully.

3.1 Preparing the Motherboard

Before installing any components, ensure you are working on a static-free surface. Unpack the motherboard and place it on an anti-static mat.



Image 3.1: Top-down view of the motherboard, highlighting the CPU socket, DIMM slots, and M.2 slots.

3.2 CPU Installation

1. Locate the LGA 1851 CPU socket on the motherboard.
2. Gently lift the load lever and open the CPU socket cover.
3. Align the notches on your Intel Core Ultra (Series 2) processor with the socket. Carefully place the CPU into the socket without forcing it.
4. Close the socket cover and push down the load lever until it locks into place.

Your browser does not support the video tag.

Video 3.2.1: Product Overview Video. This video demonstrates the physical features and installation process of a GIGABYTE motherboard, including CPU installation.

3.3 Memory (RAM) Installation

1. Open the clips at both ends of the DDR5 DIMM slots.
2. Align the notch on the DDR5 memory module with the key in the DIMM slot.
3. Insert the memory module firmly into the slot until the clips snap into place. Ensure both clips are closed.

3.4 Storage (M.2 SSD) Installation

1. Locate the M.2 slots on the motherboard. This board features three M.2 slots.
2. Remove the M.2 Thermal Guard if present.
3. Insert the M.2 SSD into the slot at a 30-degree angle.
4. Push the SSD down and secure it with the EZ-Latch mechanism or a screw.
5. Reattach the M.2 Thermal Guard for optimal cooling.

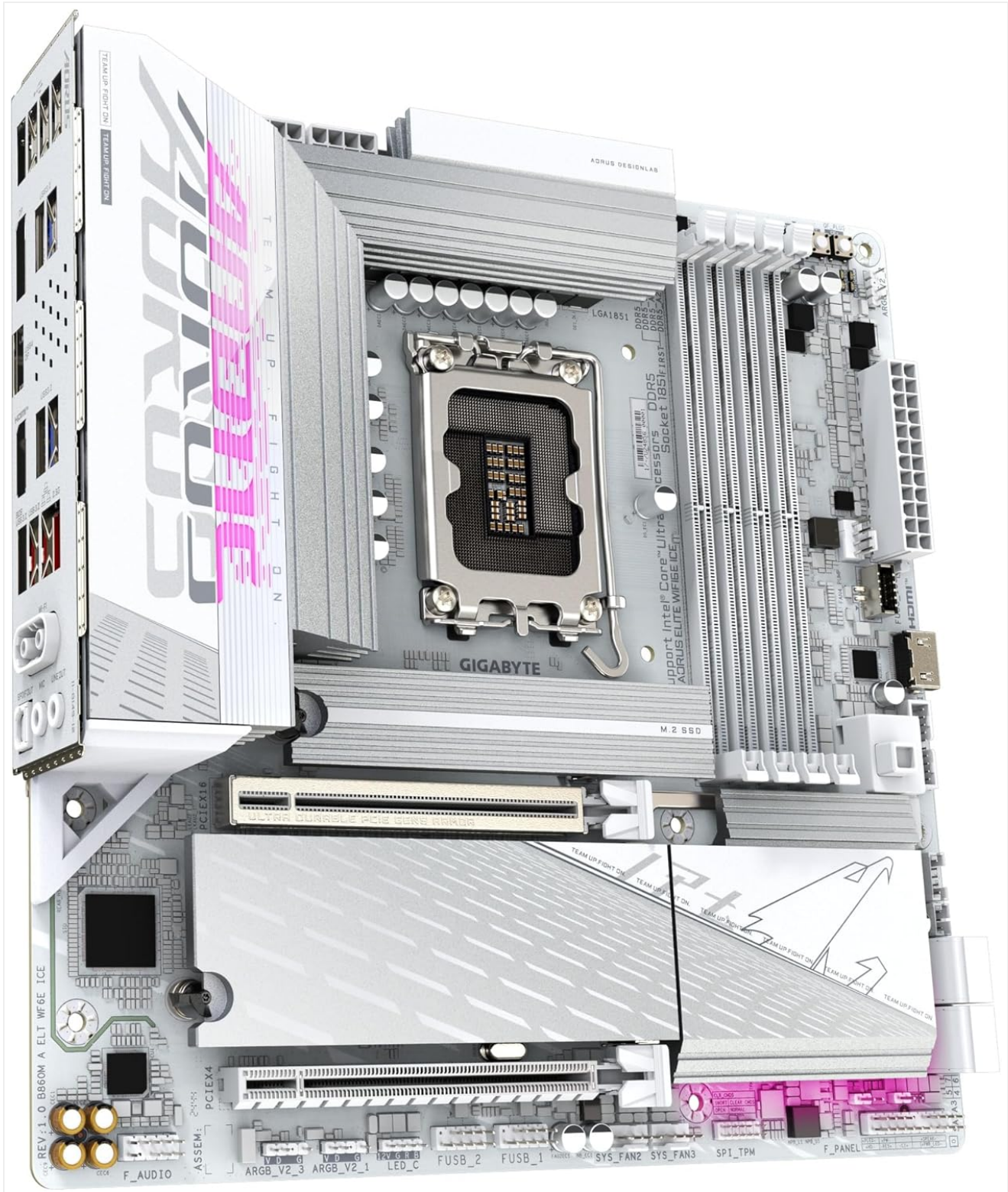


Image 3.4.1: Angled view of the motherboard, highlighting the M.2 slots and their thermal guards.

3.5 Connecting Peripherals and Power

- Connect the 24-pin ATX main power connector and the 8-pin CPU power connector from your power supply to the motherboard.
- Connect your graphics card to the PCIe 5.0 x16 slot.
- Attach front panel connectors (power button, reset button, USB ports, audio jacks) to their respective headers on the motherboard.
- Connect the Wi-Fi antenna to the rear I/O panel for wireless connectivity.



Image 3.5.1: Close-up of the rear I/O panel, showing various USB ports, Ethernet, Wi-Fi antenna connectors, and audio jacks.



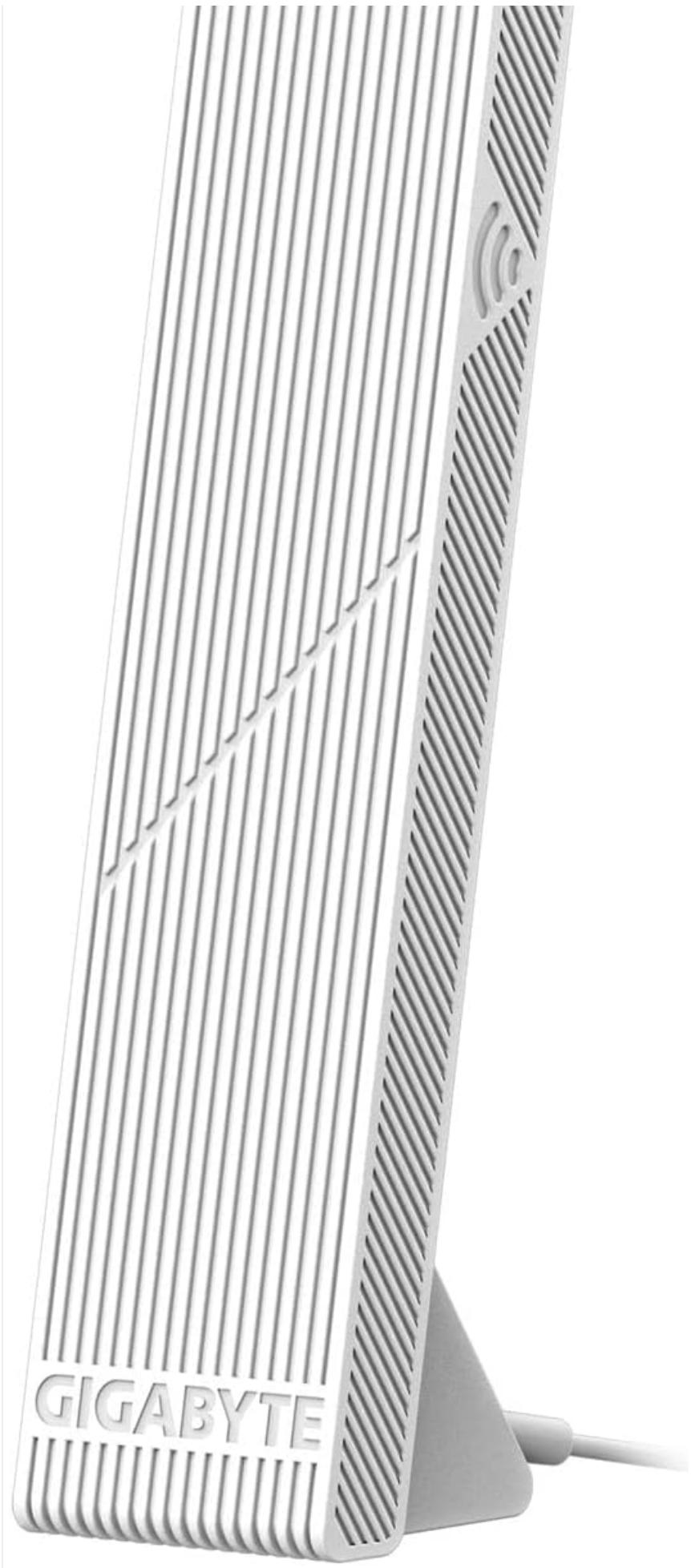


Image 3.5.2: The included GIGABYTE Wi-Fi antenna, designed for enhanced wireless signal reception.

4. OPERATING INSTRUCTIONS

4.1 First Boot and BIOS Setup

1. After assembling your system, connect a monitor, keyboard, and mouse.
2. Power on your system. Press the **DEL** key repeatedly during startup to enter the BIOS/UEFI setup.
3. In the BIOS, verify that all installed components (CPU, RAM, storage) are detected correctly.
4. Configure boot order to install your operating system from a USB drive or optical media.
5. Save changes and exit the BIOS.

4.2 Driver Installation

After installing your operating system, install the necessary drivers for the motherboard components. These can typically be found on the GIGABYTE support website for your specific model or on an included driver CD/USB drive.

- Chipset Drivers
- LAN Drivers (for 2.5GbE Ethernet)
- Wi-Fi Drivers (for WIFI6E)
- Audio Drivers
- USB Drivers

5. MAINTENANCE

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

- **Keep it Clean:** Periodically clean dust from the motherboard and components using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** Check the GIGABYTE website for BIOS/UEFI updates. Updates can improve compatibility, stability, and performance. Follow the instructions provided by GIGABYTE carefully when updating the BIOS.
- **Driver Updates:** Keep all drivers updated to ensure compatibility and optimal performance with your operating system and hardware.
- **Thermal Management:** Ensure proper airflow within your PC case. Regularly check that fans are functioning correctly and heatsinks are free of dust.

6. TROUBLESHOOTING

This section addresses common issues you might encounter.

- **No Power/No Boot:**
 - Check all power connections (24-pin ATX, 8-pin CPU, graphics card).
 - Ensure the power supply is switched on.
 - Reseat RAM modules. Try booting with only one RAM stick.
 - Clear CMOS (refer to motherboard manual for specific jumper/button location).
- **No Display:**
 - Ensure monitor cables are securely connected to the graphics card (or motherboard if using integrated graphics).
 - Reseat the graphics card.

- Test with a different monitor or cable if possible.
- **Operating System Not Loading:**
 - Check boot order in BIOS/UEFI.
 - Verify that the storage drive containing the OS is properly connected and detected.
 - Run a diagnostic check on the storage drive.
- **Wi-Fi/LAN Connectivity Issues:**
 - Ensure Wi-Fi antenna is securely attached.
 - Install or update Wi-Fi and LAN drivers.
 - Check network cable connections for LAN.
 - Verify network settings in your operating system.

7. SPECIFICATIONS





Feature	Specification
Brand	GIGABYTE
Model Name	B860M AORUS ELITE WIFI6E ICE
CPU Socket	Intel LGA 1851
Compatible Processors	Intel Ultra Core Series 2
Chipset Type	Intel B860
RAM Memory Technology	DDR5
Memory Speed	5600 MHz
DIMM Slots	4
Power Design	12+1+2+1, 60A DrMOS VRM
PCIe Slots	PCIe 5.0 x16 (1), PCIe 3.0 x1 (2)
M.2 Slots	3
USB Ports	USB-C, USB 3.2, USB 2.0
LAN	2.5GbE LAN
Wireless	WIFI6E
Form Factor	mATX
Product Dimensions	9.6 x 9.6 x 1 inches
Item Weight	3.65 pounds



8. WARRANTY AND SUPPORT

GIGABYTE provides comprehensive support for its products. For detailed warranty information and technical assistance, please refer to the official GIGABYTE website or contact their customer support.

- **Product Registration:** Register your product on the GIGABYTE website to activate your warranty and receive product updates.
- **Technical Support:** Visit the GIGABYTE support page for FAQs, driver downloads, and contact information for technical assistance.
- **Protection Plans:** Extended protection plans may be available for purchase. Check with your retailer or GIGABYTE for details.

Related Documents - B860M AORUS Elite WIFI6E ICE

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<div><div><div>B850 AORUS ELITE WIFI7 ICE (B850 A ELITE WF7 ICE) B850 AORUS ELITE WIFI7 (B850 A ELITE WF7)</div><div>ユーザーズマニュアル No. 100</div><div><small>GIGABYTE is a registered trademark of GIGABYTE Technology Co., Ltd. All rights reserved. GIGABYTE is a registered trademark of GIGABYTE Technology Co., Ltd. All rights reserved. GIGABYTE is a registered trademark of GIGABYTE Technology Co., Ltd. All rights reserved. GIGABYTE is a registered trademark of GIGABYTE Technology Co., Ltd. All rights reserved.</small></div></div></div>	<div><div><div>GIGABYTE B850 AORUS ELITE WIFI7 Motherboard Installation and User Guide</div><div>Comprehensive guide for the GIGABYTE B850 AORUS ELITE WIFI7 motherboard, covering installation, component connections, BIOS setup, and features. Includes technical specifications and regulatory information.</div></div></div>
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