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> GIGABYTE B850 Gaming X WIFI6E AMD AM5 ATX Motherboard Instruction Manual

## GIGABYTE B850 GAMING X WIFI6E

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Model: B850 GAMING X WIFI6E

## 1. PRODUCT OVERVIEW

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The GIGABYTE B850 Gaming X WIFI6E is an ATX motherboard designed to support AMD Ryzen 9000, 8000, and 7000 Series Processors on the AM5 socket. It features robust power delivery, advanced thermal solutions, and high-speed connectivity for an optimized computing experience. Key features include DDR5 memory support, PCIe 5.0, multiple M.2 slots, USB-C, WIFI6E, and 2.5GbE LAN.



Image 1: Top-down view of the GIGABYTE B850 Gaming X WiFi6E Motherboard, showcasing its layout and heatsinks.

Your browser does not support the video tag.

Video 1: An official overview of the GIGABYTE B850 Motherboards, highlighting various features and design aspects.

## 2. INSTALLATION GUIDE

### 2.1. CPU Installation

Carefully open the CPU socket lever and lift the cover. Align the golden arrow on your AMD Ryzen processor with the corresponding arrow on the motherboard's AM5 socket. Gently place the CPU into the socket without applying force. Once seated, close the socket cover and secure it with the lever. The protective plastic cover will automatically detach upon proper installation.



Image 2: Close-up view of the AMD AM5 CPU socket, indicating the alignment arrow for processor installation.

## 2.2. Memory (RAM) Installation

This motherboard supports DDR5 memory across four DIMM slots. For optimal performance, refer to the motherboard manual for recommended slot population when installing two or four memory modules. Ensure the memory modules are correctly oriented and firmly pressed into the slots until the clips on both ends lock into place.



Image 3: Illustrates key performance features including DDR5 memory support and M.2 Thermal Guard.

## 2.3. M.2 SSD Installation

The B850 Gaming X WIFI6E features three M.2 slots, with support for PCIe 5.0 on one slot for ultra-fast storage. To install an M.2 SSD, remove the M.2 thermal guard (if present), insert the SSD into the slot at an angle, and then gently push it down. Secure it with the provided screw or the EZ-Latch mechanism. Reattach the thermal guard for optimal cooling.



Image 4: Detailed diagram of the motherboard highlighting M.2 slots, PCIe 5.0, and various connectivity ports.

## 2.4. Motherboard Mounting

Align the motherboard with the standoffs in your PC case. Carefully lower the motherboard onto the standoffs, ensuring all screw holes align. Secure the motherboard using the appropriate screws. Ensure the I/O shield is properly seated against the case opening.

## 2.5. 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 power cables are securely seated.

## 2.6. EZ-Latch Features

This motherboard incorporates GIGABYTE's EZ-Latch design for convenient installation of M.2 SSDs and PCIe graphics cards. The EZ-Latch mechanisms allow for tool-less installation and removal, simplifying the building process.



Image 5: Demonstrates the EZ-Latch features for M.2 SSDs and PCIe slots, designed for hassle-free assembly.

# 3. OPERATING INSTRUCTIONS

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## 3.1. BIOS/UEFI Settings

Upon initial boot or after hardware changes, you may need to enter the BIOS/UEFI setup. Press the designated key (usually DEL or F2) during startup to access the BIOS. Here, you can configure system settings, boot order, and enable features like X3D Turbo Mode for compatible AMD Ryzen processors.

## 3.2. Connectivity

The motherboard offers extensive connectivity options including integrated WIFI6E for high-speed wireless networking and a 2.5GbE LAN port for reliable wired connections. It also provides multiple USB ports, including USB-C, for connecting peripherals and external devices. Display outputs include HDMI and DisplayPort.

# TAILORED COMPUTING

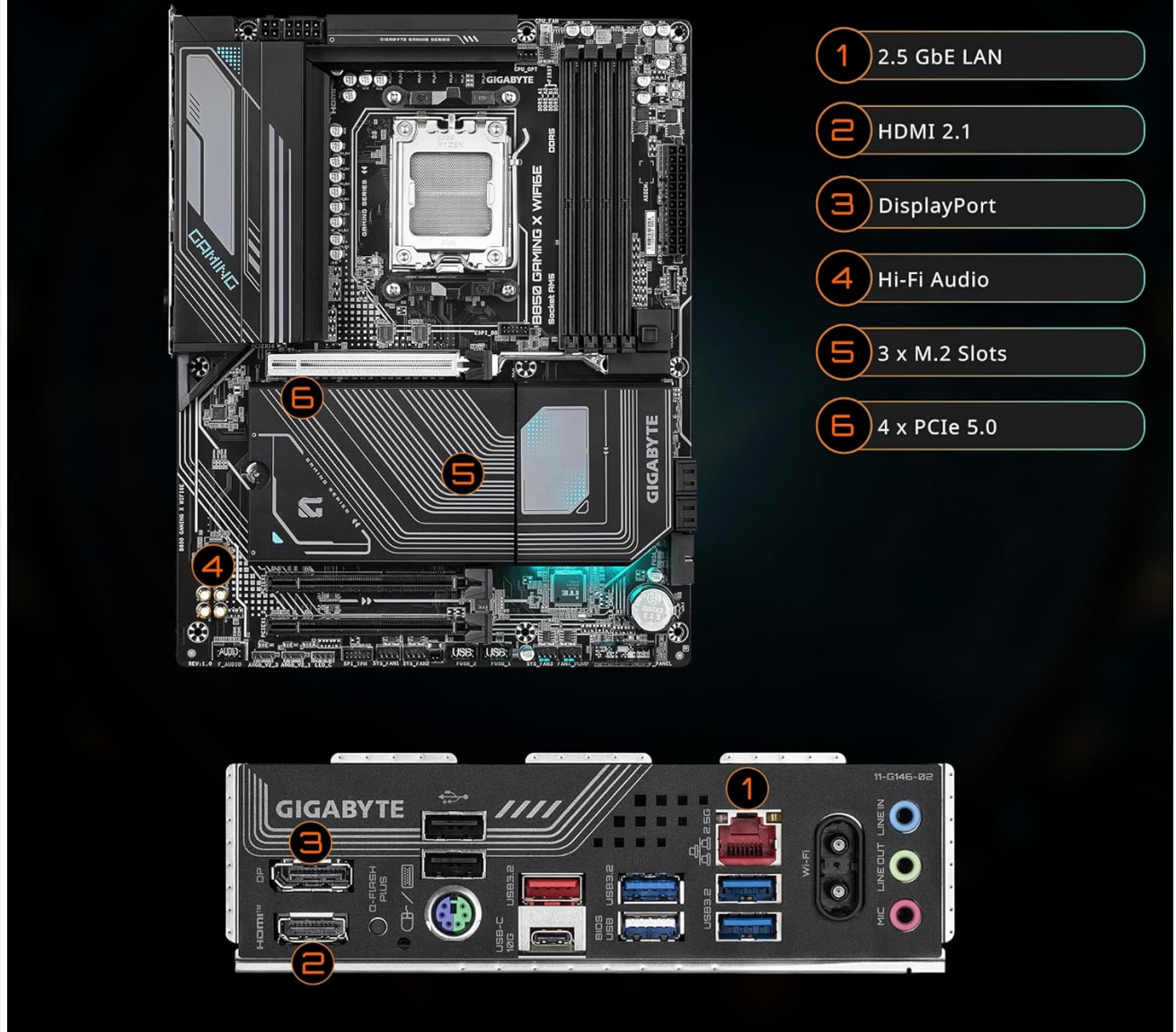


Image 6: The rear I/O panel, showing various USB ports, Ethernet, Wi-Fi antenna connectors, and audio jacks.

## 4. MAINTENANCE

- **Cleaning:** Regularly clean dust from the motherboard and components using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** Keep your BIOS updated to ensure compatibility with new hardware and to benefit from performance improvements and bug fixes. Use the Q-Flash Plus feature for convenient BIOS updates without needing a CPU or RAM installed.
- **Driver Updates:** Ensure all drivers for your motherboard components (chipset, LAN, Wi-Fi, audio) are up-to-date. Visit the GIGABYTE official website for the latest drivers.

## 5. TROUBLESHOOTING

- **No Display/Boot:** Double-check all power connections, CPU, RAM, and graphics card seating. Ensure your monitor is connected to the correct display output.

- **RAM Compatibility Issues:** If experiencing boot issues after installing new RAM, perform a BIOS update using Q-Flash Plus. Some users have reported improved RAM compatibility after updating the BIOS.
- **Network Connectivity Problems:** Verify LAN cable connection or Wi-Fi antenna installation. Ensure network drivers are installed and updated. Check router/modem status.
- **System Instability:** Ensure proper cooling for all components. Check for loose connections or improperly seated components. Consider running diagnostic tools for CPU, RAM, and storage.

## 6. TECHNICAL SPECIFICATIONS

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Feature	Specification
Brand	GIGABYTE
Model Name	B850 GAMING X WIFI6E
CPU Socket	Socket AM5
Compatible Processors	AMD Ryzen 7000, 8000, 9000 Series
Chipset Type	AMD B850
RAM Memory Technology	DDR5
Memory Clock Speed	5200 MHz (Supports higher OC speeds)
Memory Slots Available	4 DIMMs
Max RAM Memory Size	256 GB
Graphics Card Interface	PCI Express 5.0
Total PCIe Ports	3
M.2 Slots	3 (1x PCIe 5.0)
Total SATA Ports	4
Total USB Ports	8 (including USB-C)
Number of Ethernet Ports	1 (2.5GbE LAN)
Wireless Connectivity	WIFI6E
Total Number of HDMI Ports	1
Item Dimensions L x W x H	12"L x 9.6"W x 1"H
Item Weight	4.5 Pounds

## 7. WARRANTY AND SUPPORT

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### 7.1. Warranty Information

The GIGABYTE B850 Gaming X WIFI6E Motherboard comes with a **5-Year Manufacturer Warranty**. Please retain your proof of purchase for warranty claims. The warranty covers defects in materials and workmanship under normal use.

## 7.2. Technical Support

For technical assistance, driver downloads, or further product information, please visit the official GIGABYTE support website. You can find FAQs, troubleshooting guides, and contact information for customer service there.