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- › [GIGABYTE](#) /
- › [GIGABYTE B850 Eagle WIFI7 ICE AMD AM5 LGA 1718 Motherboard User Manual](#)

GIGABYTE B850 EAGLE WIFI7 ICE

GIGABYTE B850 Eagle WIFI7 ICE AMD AM5 LGA 1718 Motherboard User Manual

Model: B850 EAGLE WIFI7 ICE

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your GIGABYTE B850 Eagle WIFI7 ICE AMD AM5 LGA 1718 Motherboard. Designed for AMD Ryzen 9000, 8000, and 7000 Series Processors, this ATX motherboard offers unparalleled performance, high-grade storage standards, and outstanding connectivity.

Key features include DDR5 compatibility with 4 DIMM slots, an 8+2+2 power design, PCIe 5.0 support, three M.2 slots, USB-C connectivity, WIFI7, and 2.5GbE LAN. It also incorporates DIY-friendly features such as M.2 EZ-Latch, PCIe EZ-Latch, and Wi-Fi EZ-Plug for simplified assembly and upgrades.



Figure 1: GIGABYTE B850 Eagle WIFI7 ICE Motherboard and Retail Packaging. This image displays the motherboard alongside its retail box, highlighting the product's aesthetic and branding.

2. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance and system stability. Follow these steps carefully.

2.1. CPU Installation (AMD Socket AM5)

Ensure the CPU socket lever is open. Carefully align your AMD Ryzen processor with the socket, matching the triangular markers on both the CPU and the socket. Gently place the CPU into the socket without applying force. Close the lever to secure the CPU.

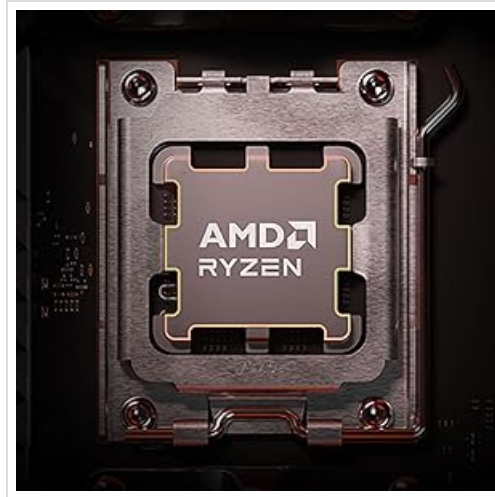


Figure 2: Close-up view of the AMD Ryzen CPU socket on the motherboard, ready for processor installation.

2.2. Memory (DDR5) Installation

This motherboard supports DDR5 memory modules across 4 DIMM slots. For dual-channel operation, refer to the motherboard manual for recommended slot configurations. Open the clips on both ends of the DIMM slot, align the memory module with the notch, and press firmly until the clips snap into place.



Figure 3: Illustration of DDR5 memory modules being installed into the motherboard's DIMM slots.

2.3. Storage (M.2 SSD) Installation

The motherboard features three M.2 slots with PCIe 5.0 support. Utilize the M.2 EZ-Latch system for tool-less installation. Simply open the latch, insert your M.2 SSD, and close the latch to secure it. Ensure thermal pads are correctly placed under the M.2 heatsinks for optimal cooling.



Figure 4: Demonstrates the easy installation of an M.2 SSD using the EZ-Latch mechanism, with a heatsink cover.

2.4. Graphics Card (PCIe) Installation

Insert your graphics card into the primary PCIe 5.0 x16 slot. The PCIe EZ-Latch simplifies removal. Ensure the card is fully seated and secured by the latch. Connect any necessary PCIe power cables from your power supply to the graphics card.

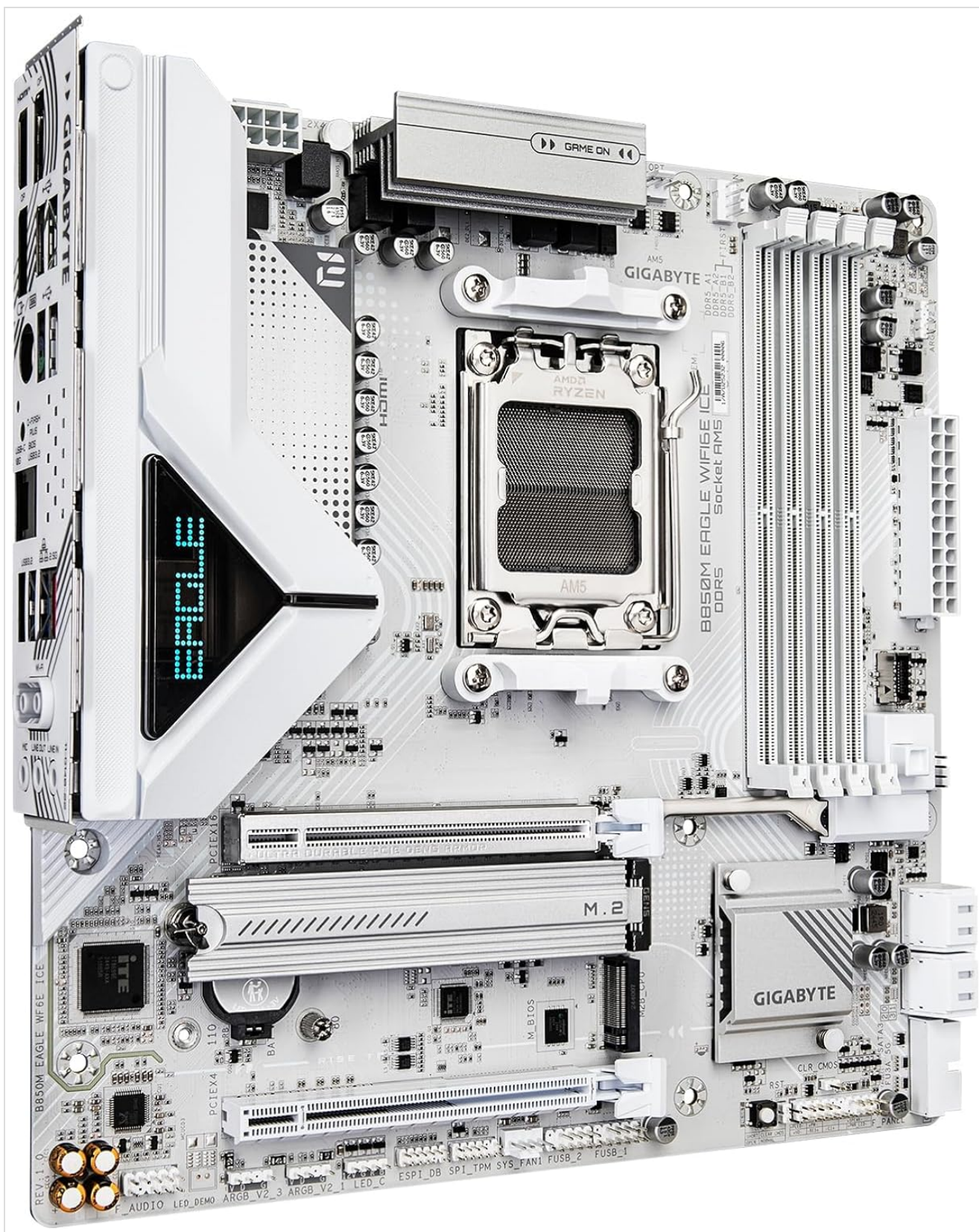


Figure 5: An angled view of the motherboard, highlighting the PCIe slots and M.2 slots with their respective heatsinks.

2.5. Rear I/O Panel Connections

Connect your peripherals to the appropriate ports on the rear I/O panel. This includes USB devices, display cables (HDMI/DisplayPort), and network cables (2.5GbE LAN). For wireless connectivity, attach the provided Wi-Fi antenna to the Wi-Fi EZ-Plug connectors.

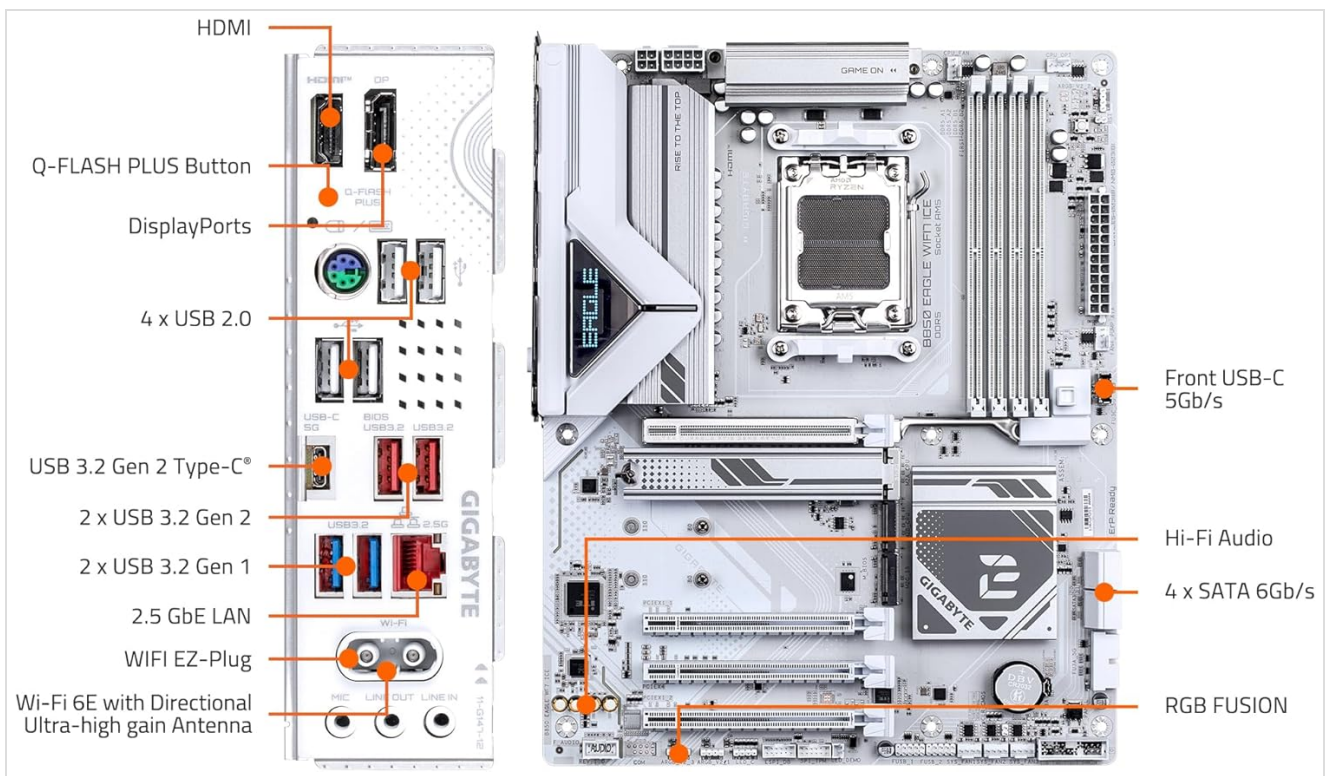


Figure 6: Detailed diagram of the motherboard's rear I/O panel, labeling all available ports including USB, HDMI, DisplayPort, LAN, and Wi-Fi antenna connectors.

2.6. Power Connections

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

3. OPERATING THE MOTHERBOARD

Once your system is assembled, power it on and enter the BIOS/UEFI setup to configure settings, enable XMP/EXPO profiles for memory, and set boot priorities. Refer to the GIGABYTE website for the latest BIOS updates and utility software.

3.1. BIOS/UEFI Configuration

Access the BIOS by pressing the designated key (usually DEL or F2) during system startup. Here you can adjust various system parameters, including CPU settings, memory profiles (XMP/EXPO), fan curves, and boot device order. It is recommended to update the BIOS to the latest stable version for optimal compatibility and performance.

3.2. Software and Drivers

Install the necessary drivers for your motherboard's chipset, audio, LAN, and Wi-Fi from the GIGABYTE support website. Additionally, install GIGABYTE's utility software for features like RGB Fusion (for lighting control) and system monitoring.

4. MAINTENANCE

Regular maintenance helps prolong the lifespan of your motherboard and ensures stable operation.

- **Dust Removal:** Periodically clean dust from the motherboard and components using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **Cable Management:** Ensure cables are neatly routed to prevent obstruction of airflow and accidental

disconnections.

- **Software Updates:** Keep your BIOS, drivers, and operating system updated to benefit from performance improvements and security patches.

5. TROUBLESHOOTING

If you encounter issues, consult 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.
- **No Display:** Verify that your monitor is connected to the graphics card (or integrated graphics if applicable) and that the display cable is secure. Reseat the graphics card and RAM modules.
- **System Instability/Crashes:** This can often be related to memory. Try running memory diagnostic tools or testing RAM modules individually. Ensure CPU and GPU temperatures are within normal operating ranges.
- **BIOS Issues:** If you experience issues after a BIOS update or configuration change, use the Clear CMOS button on the rear I/O panel to reset BIOS settings to default.

6. SPECIFICATIONS

Feature	Specification
Brand	GIGABYTE
Model Name	B850 EAGLE WIFI7 ICE
CPU Socket	Socket AM5
Compatible Processors	AMD Ryzen 9000 / Ryzen 8000 / Ryzen 7000 Series Processors
Chipset Type	AMD B850
RAM Memory Technology	DDR5
Memory Speed	5200 MHz (Supports higher via EXPO/XMP)
Memory DIMMs	4*DIMMs
Power Design	8+2+2 Phase Digital VRM
PCIe Slots	1x PCIe 5.0 x16 Slot
M.2 Slots	3x M.2 Slots (PCIe 5.0 support)
LAN	2.5GbE LAN
Wireless Connectivity	WIFI7
USB Ports	USB-C, USB 3.2 Gen 2, USB 3.2 Gen 1, USB 2.0
Form Factor	ATX
Product Dimensions	12.01 x 8.82 x 1 inches
Item Weight	3.63 pounds

7. OFFICIAL PRODUCT VIDEOS

7.1. Product Overview

Video 1: A concise overview of the GIGABYTE B850 Eagle WIFI7 ICE Motherboard, showcasing its design and key features from the manufacturer.




7.2. GIGABYTE B850 Motherboards Overview





Video 2: An overview presented by Gigabyte, detailing the features and capabilities across the B850 motherboard series, including the Eagle WIFI7 ICE model.

8. WARRANTY AND SUPPORT

For warranty information, please refer to the official GIGABYTE website or the documentation included with your product. Technical support and driver downloads are available through the GIGABYTE support portal. GIGABYTE is committed to providing reliable products and support. Should you require assistance, please visit the official GIGABYTE support page for your specific motherboard model.

Related Documents - B850 EAGLE WIFI7 ICE

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