GIGABYTE B650 EAGLE AX

GIGABYTE B650 Eagle AX Motherboard

INSTRUCTION MANUAL

Introduction

The GIGABYTE B650 Eagle AX motherboard is designed to support AMD Ryzen 7000 Series Processors, offering unparalleled performance and advanced features for your computing needs. This manual provides essential information for setting up, operating, maintaining, and troubleshooting your motherboard.



Video 1: Product Overview of the GIGABYTE B650 Eagle AX Motherboard.

Key Features

- AMD AM5 Socket: Supports AMD Ryzen 7000 Series Processors
- DDR5 Compatible: 4*SMD DIMMs with AMD EXPO & Intel XMP Memory Module Support
- Unparalleled Performance: 12+2+2 Phases Digital VRM Solution
- Advanced Thermal Design & M.2 Thermal Guard: To Ensure VRM Power Stability & M.2 SSD Performance
- Stable Connectivity: 1*PCIe 5.0 + 2*PCIe 4.0 M.2, USB 3.2 Gen 2x2 Type-C

Setup Guide

Follow these steps for proper installation of your GIGABYTE B650 Eagle AX motherboard and its components.

1. Unboxing and Initial Inspection

Carefully remove the motherboard from its packaging. Inspect for any visible damage. It is recommended to handle the motherboard by its edges to avoid static discharge.



Figure 1: GIGABYTE B650 Eagle AX Motherboard and Retail Packaging.

2. CPU Installation

Ensure the CPU socket is clean and free of debris. Carefully open the CPU retention mechanism. Align the triangular marker on your AMD Ryzen processor with the corresponding marker on the motherboard socket. Gently place the CPU into the socket without forcing it. Close the retention mechanism to secure the CPU.

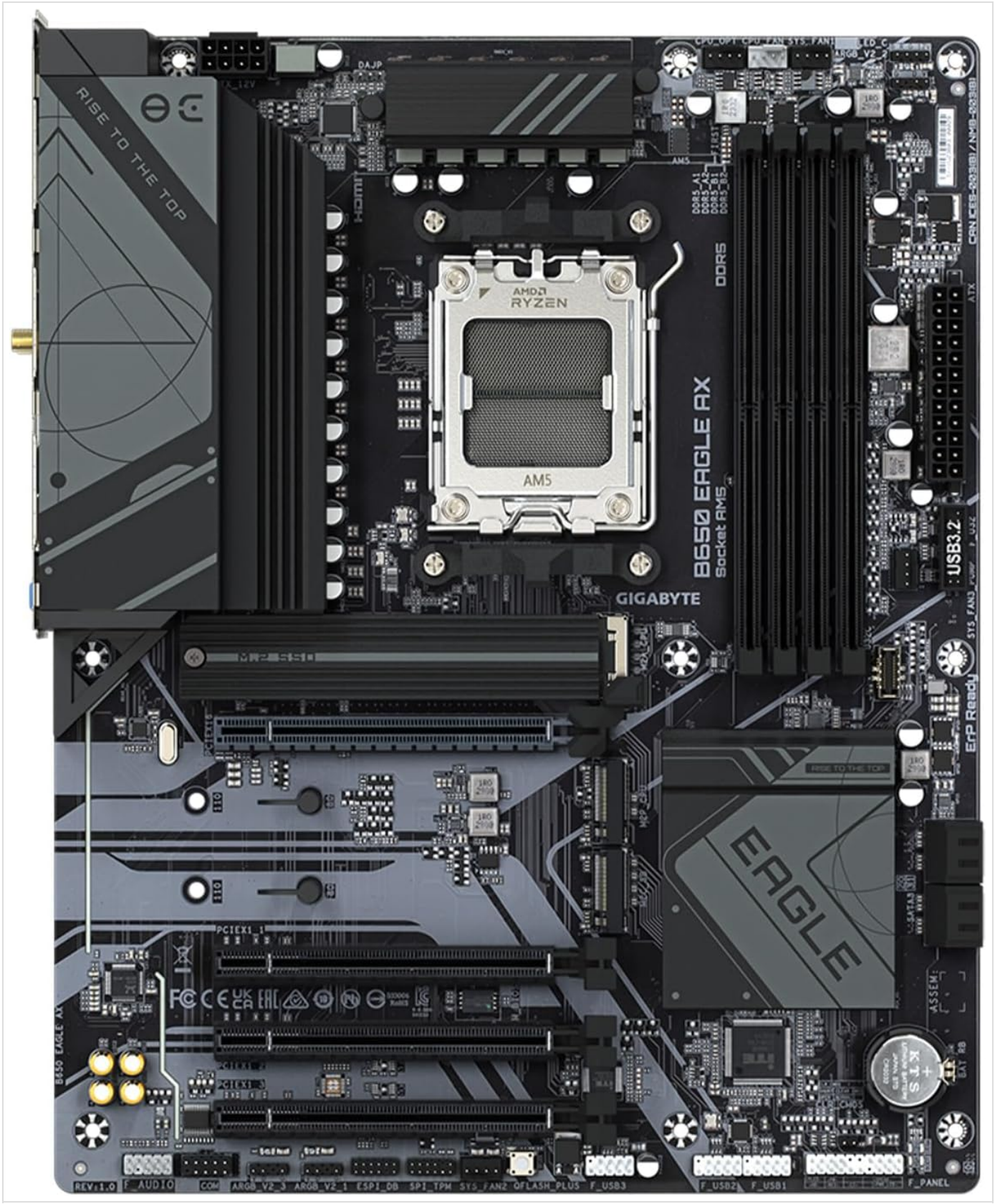


Figure 2: Top-down view of the motherboard, showing the CPU socket.

3. Memory (RAM) Installation

Locate the DDR5 DIMM slots. Open the clips on both ends of the slot. Align the notch on the RAM module with the key in the DIMM slot. Press down firmly on both ends of the RAM module until the clips snap into place. Refer to your motherboard manual for recommended dual-channel configurations.



Figure 3: Angled view of the motherboard, showing the CPU socket and DDR5 DIMM slots.

4. Storage (M.2 SSD) Installation

Identify the M.2 slots on your motherboard. The B650 Eagle AX features 1*PCIe 5.0 + 2*PCIe 4.0 M.2 slots, some with M.2 Thermal Guard. Remove the thermal guard if present. Insert the M.2 SSD into the slot at an angle. Secure it with the provided screw or EZ-Latch mechanism.



Figure 4: Angled view of the motherboard, showing the M.2 slots and heatsinks.

5. Power Connections

Connect the 24-pin ATX power connector and the 8-pin CPU power connector from your power supply unit (PSU) to the corresponding ports on the motherboard. Ensure all connections are firm.

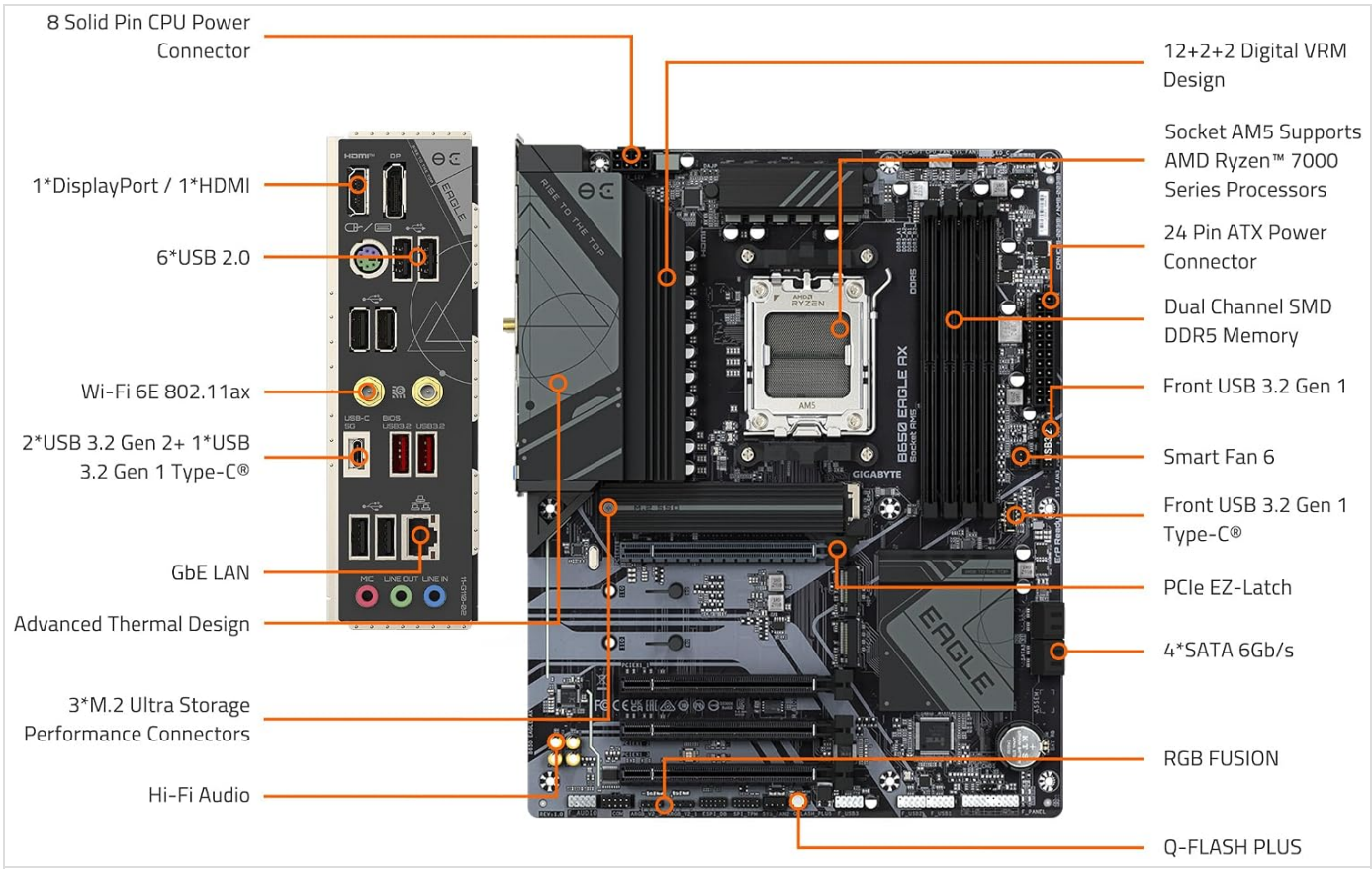


Figure 5: Component layout of the GIGABYTE B650 Eagle AX, indicating power connectors.

6. Peripheral Connections

Connect your display (monitor) to the HDMI or DisplayPort on the motherboard's rear I/O panel if using an APU. Connect USB devices, Ethernet cable, and audio devices to the appropriate ports.

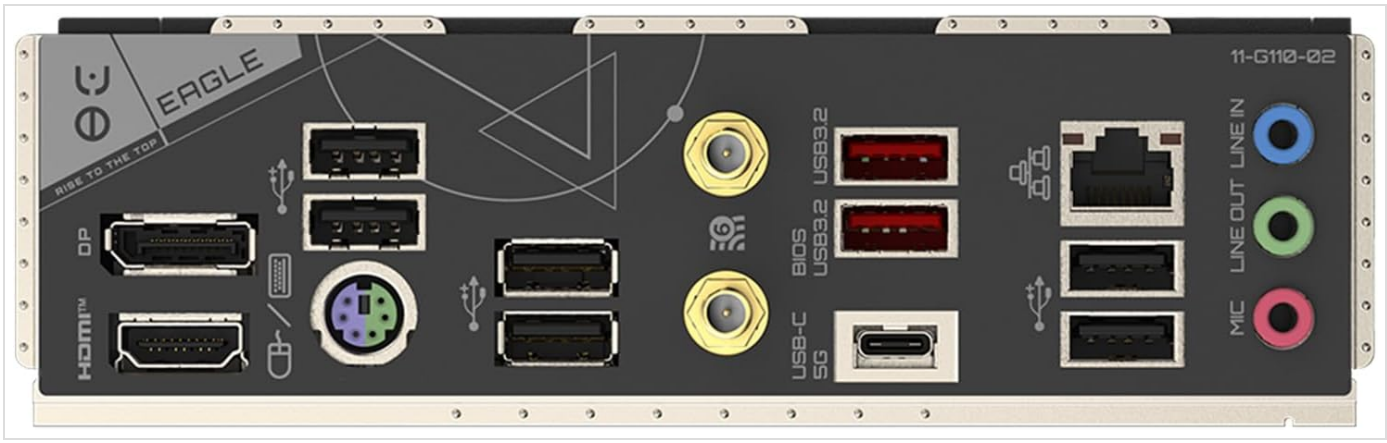


Figure 6: Rear I/O panel with USB, HDMI, DisplayPort, Ethernet, and audio jacks.

Operating Instructions

BIOS/UEFI Setup

Upon first boot, press the designated key (usually DEL or F2) to enter the BIOS/UEFI setup. Here you can configure boot order, system time, and other advanced settings. The B650 Eagle AX supports Q-Flash Plus, allowing BIOS updates without a CPU, memory, or graphics card installed.

Driver Installation

After installing your operating system, install the latest drivers for the chipset, LAN, Wi-Fi, Bluetooth, and audio from the GIGABYTE official website to ensure optimal performance and stability.

Maintenance

- **Keep it Clean:** Regularly clean dust from your PC case and motherboard components using compressed air. Ensure fans are free of obstructions.
- **BIOS Updates:** Periodically check the GIGABYTE website for BIOS/UEFI updates. These can improve stability, compatibility, and performance.
- **Driver Updates:** Keep all system drivers updated to their latest versions for best performance and security.
- **Cable Management:** Ensure cables are neatly managed to improve airflow and prevent interference.

Troubleshooting

Common Issues and Solutions:

- **No Display/Boot Loop:**

  Check all power connections (24-pin ATX, 8-pin CPU). Reseat RAM modules. Verify CPU installation and check for bent pins in the socket. Utilize the Q-Flash Plus feature to re-flash the BIOS if a corrupted BIOS is suspected.
- **No Wi-Fi/Bluetooth:**

  Ensure Wi-Fi antennas are securely connected to the rear I/O panel. Install or update the latest Wi-Fi and Bluetooth drivers from the GIGABYTE website.
- **System Instability/Crashes:**

  Check CPU and GPU temperatures. Ensure adequate cooling. Verify RAM stability using memory diagnostic tools. Update all drivers and BIOS to the latest versions.

Specifications

Feature	Detail
RAM	DDR5
Memory Speed	5200
Number of USB 2.0 Ports	4
Brand	GIGABYTE
Series	B650 EAGLE AX
Item model number	B650 EAGLE AX
Item Weight	3.85 pounds
Product Dimensions	3.23 x 10.75 x 13.43 inches
Item Dimensions LxWxH	3.23 x 10.75 x 13.43 inches
Color	Black
Manufacturer	GIGABYTE

Feature	Detail
ASIN	B083TZ68H1
Country of Origin	China
Date First Available	February 2, 2024
Customer Reviews	4.3 4.3 out of 5 stars 499 ratings 4.3 out of 5 stars
Best Sellers Rank	#13 in Computer Motherboards
Brand	GIGABYTE
CPU Socket	Socket AM5
Compatible Devices	Personal Computer
RAM Memory Technology	DDR5
Compatible Processors	AMD Ryzen Series
Chipset Type	B650
Memory Clock Speed	5200
Platform	Windows
Model Name	B650 EAGLE AX
Memory Storage Capacity	128 GB

Warranty and Support

For warranty information, technical support, and driver downloads, please visit the official GIGABYTE website. Keep your purchase receipt as proof of purchase for warranty claims.
GIGABYTE Official Website: www.gigabyte.com

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Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question