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› GIGABYTE B650M AORUS Elite AX ICE Motherboard User Manual

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This manual provides detailed instructions for the installation, operation, maintenance, and troubleshooting of the GIGABYTE B650M AORUS Elite AX ICE motherboard.

INTRODUCTION

The GIGABYTE B650M AORUS Elite AX ICE is an M-ATX motherboard designed for AMD AM5 processors, supporting Ryzen 7000 and 8000 series. It features DDR5 memory support, PCIe 5.0, multiple M.2 connectors, and advanced connectivity options including 2.5GbE LAN and Wi-Fi 6.

SETUP AND INSTALLATION

1. Unpacking and Inspection

Carefully unpack the motherboard and all included accessories. Inspect all components for any signs of physical damage before proceeding with installation.

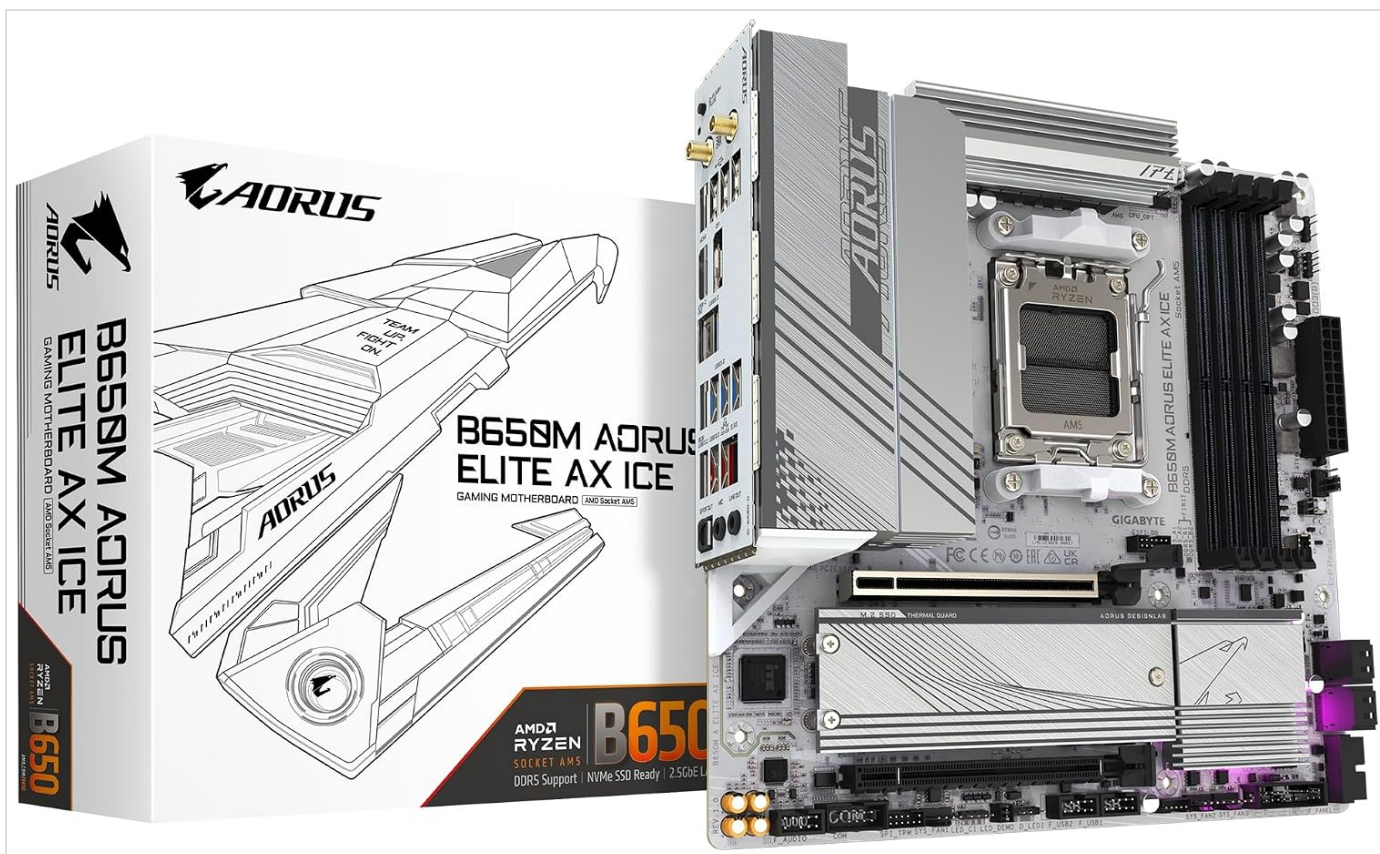
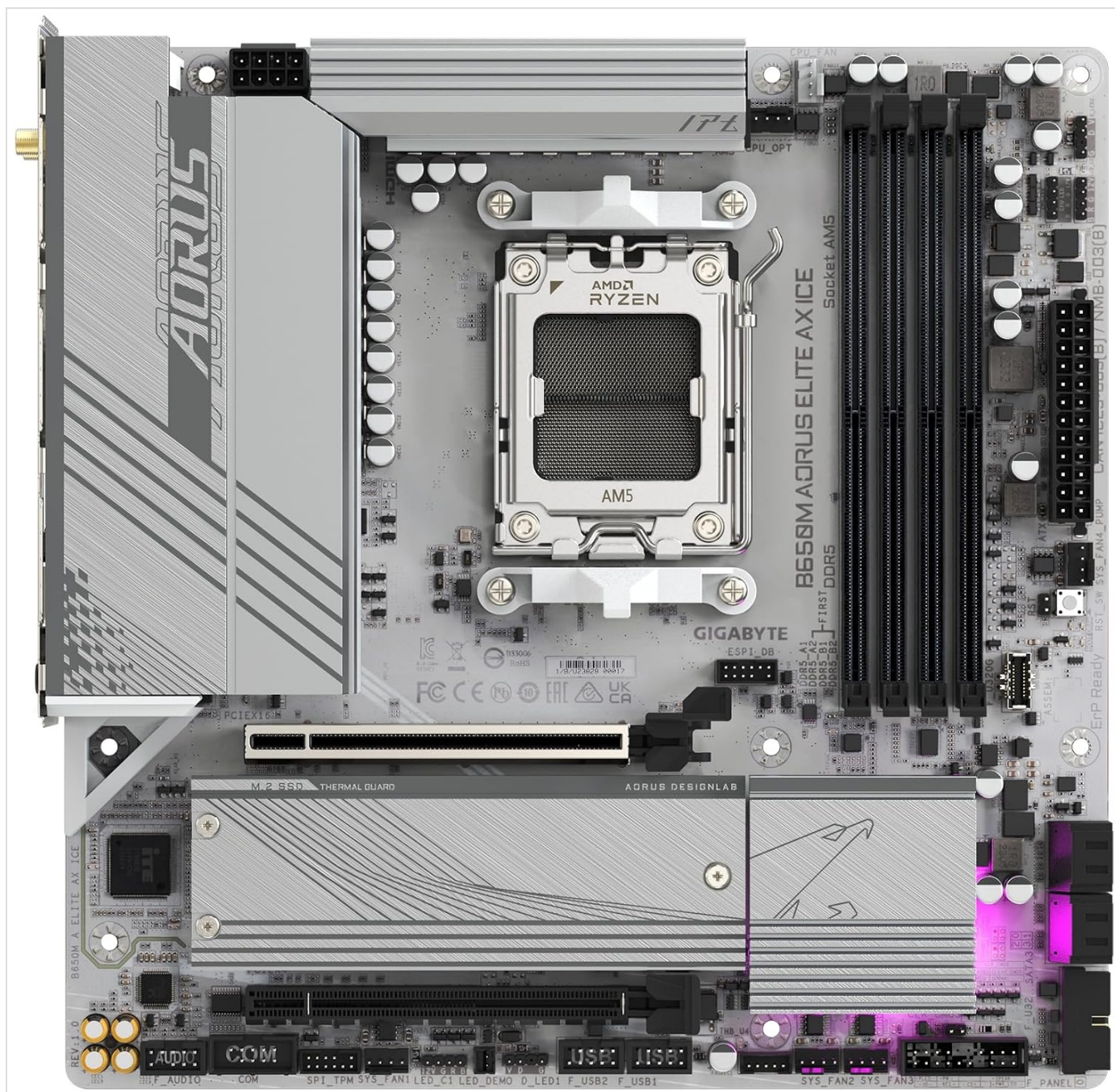


Image shows the GIGABYTE B650M AORUS Elite AX ICE motherboard alongside its retail packaging.

2. Motherboard Layout Overview

Familiarize yourself with the key components and connectors on the motherboard to ensure correct installation of other hardware.



This image provides a top-down view of the GIGABYTE B650M AORUS Elite AX ICE motherboard, highlighting the CPU socket, DIMM slots, PCIe slots, and M.2 slots.

3. CPU Installation (AMD AM5 Socket)

1. Open the CPU socket retention lever.
2. Align the AMD AM5 processor with the socket, ensuring the triangular mark on the CPU matches the mark on the socket.
3. Gently place the CPU into the socket without applying force.
4. Close the retention lever to secure the CPU.

4. Memory (DDR5) Installation

This motherboard supports Dual Channel DDR5 memory across 4 DIMM slots. Refer to the motherboard manual for recommended slot population for optimal performance.

1. Open the clips on both ends of the DIMM slot.
2. Align the memory module with the slot, ensuring the notch on the module matches the key in the slot.
3. Press down firmly on both ends of the memory module until the clips snap into place.

the latest BIOS from the GIGABYTE website, rename it according to instructions, and place it on a USB drive. Insert the USB drive into the designated Q-Flash Plus port and press the Q-Flash Plus button.

3. Driver Installation

Install the latest chipset drivers from AMD's official website and other motherboard drivers (audio, LAN, Wi-Fi, Bluetooth) from the GIGABYTE support page for optimal performance and stability.

4. Network Connectivity

The motherboard supports 2.5GbE LAN and Wi-Fi 6 for high-speed network connections. Ensure Wi-Fi antennas are securely connected for wireless functionality.

MAINTENANCE

1. BIOS Updates

Regularly check the GIGABYTE website for BIOS updates. Updates can improve system stability, compatibility, and performance. Utilize the Q-Flash Plus utility for safe and convenient updates.

2. Driver Updates

Keep all system drivers, especially chipset and graphics drivers, updated to ensure system stability and optimal performance.

3. Cleaning

Periodically clean dust from the motherboard and components using compressed air. Ensure the system is powered off and unplugged from the wall outlet before performing any cleaning.

TROUBLESHOOTING

1. System Not Booting

- Verify all power connections (24-pin ATX, 8-pin CPU) are securely seated.
- Check that the CPU, RAM, and graphics card are correctly installed and seated.
- Listen for beep codes or observe debug LEDs (if present) for diagnostic information.

2. Memory Issues (XMP/EXPO)

If experiencing instability with XMP/EXPO profiles, ensure your BIOS is updated to the latest version. Sometimes, manual memory timings may be required if issues persist.

3. USB Device Instability

Update AMD chipset drivers directly from AMD's official website to resolve potential USB stability issues.

4. No Display Output

- Ensure the monitor cable is connected to the graphics card (if dedicated) or the motherboard's integrated graphics port (if the CPU supports it).
- Reseat the graphics card and memory modules.

SPECIFICATIONS

Feature	Detail
Brand	GIGABYTE
Model Name	B650M AORUS ELITE AX ICE
CPU Socket	AM5 LGA 1718
Compatible Processors	AMD Ryzen 7000 / Ryzen 8000 Series
Chipset Type	B650
RAM Memory Technology	DDR5
Memory Speed	5200 MHz (Base), supports higher via EXPO/XMP
Memory Storage Capacity (Max)	192 GB
M.2 Connectors	1x PCIe 5.0 x4, 1x PCIe 4.0 x4
PCIe Slots	PCIe 5.0 support
LAN	2.5GbE LAN
Wireless Type	Wi-Fi 6, Bluetooth
USB Ports	USB 3.2 Gen2X2 Type-C, USB 3.2, USB 2.0 (4 ports)
Form Factor	M-ATX
Dimensions (LxWxH)	11 x 11 x 3 inches
Weight	3.72 pounds
Platform	Windows 11

WARRANTY AND SUPPORT

1. Warranty Information

The GIGABYTE B650M AORUS Elite AX ICE motherboard comes with a**5-Year Warranty**. Please retain your proof of purchase for warranty claims. For detailed terms and conditions, refer to the official GIGABYTE warranty policy on their website.

2. Technical Support

For further assistance, driver downloads, or BIOS updates, visit the official GIGABYTE support website. You can also contact GIGABYTE customer service for technical inquiries.

[GIGABYTE Support Website](#)

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

Anonymous

Email

you@example.com

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

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