

GIGABYTE B650 UD AX

GIGABYTE B650 UD AX Motherboard User Manual

Model: B650 UD AX (rev. 1.0)

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your GIGABYTE B650 UD AX motherboard. Designed for AMD Ryzen 7000, 8000, and 9000 Series Processors, this ATX motherboard features DDR5 memory support, PCIe 4.0 M.2 slots, USB 3.2 Gen2x2 Type-C connectivity, Wi-Fi 6, and GbE LAN. Please read this manual thoroughly before beginning installation to ensure proper setup and functionality.

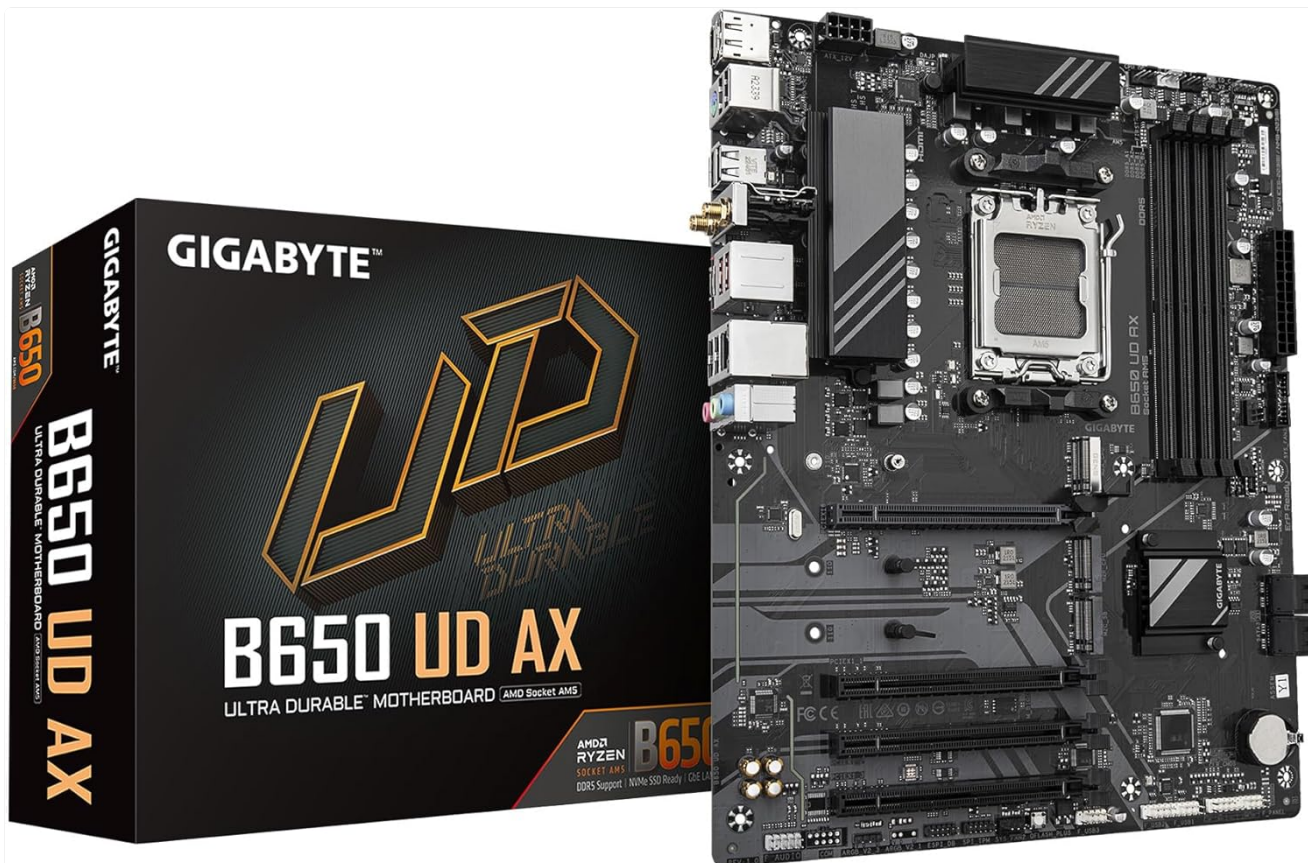


Figure 1: GIGABYTE B650 UD AX Motherboard and its retail packaging.

2. KEY FEATURES

- **AMD Socket AM5:** Supports AMD Ryzen 7000, 8000, and 9000 Series Processors.
- **DDR5 Compatibility:** Features 4 SMD DIMM slots with support for AMD EXPO and Intel XMP memory modules.
- **Robust Power Design:** Equipped with a 6+2+2 Phases Digital VRM Solution for stable power delivery.
- **High-Speed Storage:** Includes 2 PCIe 4.0 x4 M.2 slots for fast storage solutions.
- **Advanced Connectivity:** Offers USB 3.2 Gen 2x2 Type-C for rapid data transfer.
- **Fast Networking:** Integrated GbE LAN and Wi-Fi 6 for reliable and high-speed network access.
- **User-Friendly Features:** Includes Smart Fan 6 for optimized cooling and Q-Flash for convenient BIOS updates.
- **EZ-Latch:** PCIe x16 slot with a quick-release design for easy graphics card removal.

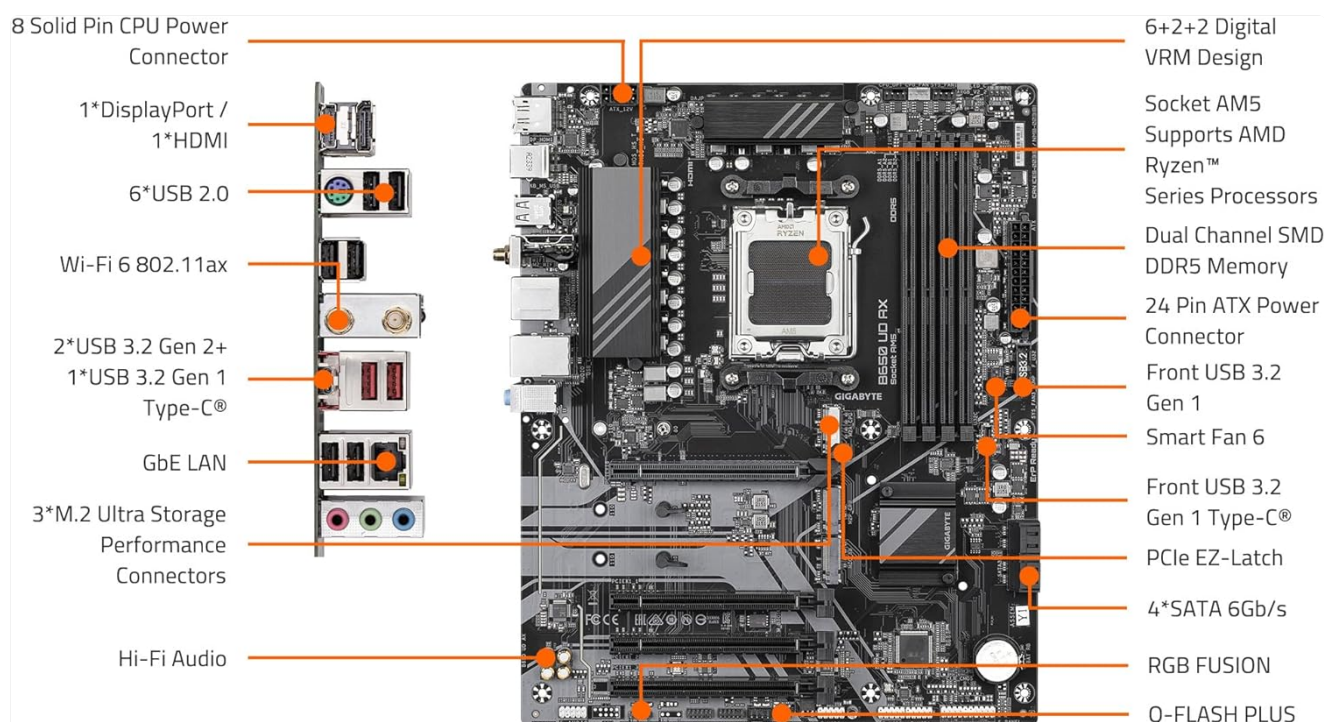


Figure 2: Overview of the GIGABYTE B650 UD AX motherboard with key components labeled.

3. SETUP AND INSTALLATION

Before installing any components, ensure your system is powered off and unplugged from the wall outlet. Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage to components.

3.1 CPU Installation

1. Locate the AM5 CPU socket on the motherboard.
2. Gently push down the load lever and pull it away from the socket to open the retention frame.
3. Align the triangular mark on the CPU with the corresponding mark on the socket. Carefully place the CPU into the socket without applying force.
4. Close the retention frame and push the load lever back into its locked position.

3.2 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, securing the module.
4. For dual-channel configuration, refer to the motherboard manual for recommended slot pairing.

3.3 M.2 SSD Installation

1. Locate the M.2 slots on the motherboard. Some slots may have heatsinks that need to be removed first.
2. Insert the M.2 SSD into the slot at a slight angle.
3. Gently push down the SSD and secure it with the provided M.2 screw or EZ-Latch mechanism.

3.4 PCIe Card Installation

1. Align your PCIe expansion card with the desired PCIe slot.
2. Press the card firmly into the slot until it is fully seated and the retention clip (EZ-Latch) locks into place.
3. Secure the card to your chassis with a screw.



Figure 3: The EZ-Latch mechanism simplifies PCIe card removal, and the Q-Flash Plus button allows BIOS updates without a CPU, memory, or graphics card.

3.5 Power Connections

- Connect the 24-pin ATX main power connector from your power supply to the motherboard.
- Connect the 8-pin (or 4+4-pin) CPU power connector to the motherboard.

3.6 Front Panel and Other Connectors

- Connect the front panel headers (power button, reset button, HDD LED, power LED) according to the labels on the motherboard and your chassis manual.
- Connect USB headers, audio headers, and SATA data cables as needed.



Figure 4: The rear I/O panel provides various ports including USB, Ethernet, Wi-Fi antenna connectors, and audio jacks.

4. OPERATING INSTRUCTIONS

4.1 Initial Boot-Up

After all components are installed and connected, power on your system. The motherboard will perform a Power-On Self-Test (POST). If successful, the system will proceed to boot from your installed operating system or prompt for BIOS setup.

4.2 Accessing BIOS/UEFI

To enter the BIOS/UEFI setup utility, press the **DEL** key repeatedly during the initial boot-up sequence. The BIOS allows you to configure system settings, boot order, and monitor hardware status.

4.3 Driver Installation

After installing your operating system, install the necessary drivers for the motherboard's components (chipset, audio, LAN, Wi-Fi, etc.). These drivers are typically available on the GIGABYTE support website for your specific motherboard model.

5. MAINTENANCE

- **Dust Removal:** Regularly clean dust from your computer case and motherboard components using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** Periodically check the GIGABYTE website for BIOS updates. BIOS updates can improve system stability, compatibility, and performance. Use the Q-Flash or Q-Flash Plus utility for safe BIOS updates.
- **Software Updates:** Keep your operating system and drivers updated to ensure optimal performance and security.

6. TROUBLESHOOTING

6.1 No Power / No Boot

- Verify all power cables (24-pin ATX, 8-pin CPU) are securely connected to the motherboard and power supply.
- Ensure the power supply switch is in the 'ON' position.
- Check front panel power button connection to the motherboard.
- Test with a different power supply if available.

6.2 No Display

- Ensure your monitor is connected to the graphics card (if installed) or the motherboard's integrated graphics

port (if your CPU has integrated graphics).

- Reseat the graphics card and memory modules.
- Check the monitor's input source setting.
- If using a dedicated graphics card, try removing it and using integrated graphics (if available) to isolate the issue.

6.3 System Instability / Crashes

- Verify all components are properly seated (CPU, RAM, graphics card).
- Check CPU and GPU temperatures using monitoring software. Ensure adequate cooling.
- Update BIOS and all drivers to the latest versions.
- Run memory diagnostic tools to check for RAM errors.

7. SPECIFICATIONS

Feature	Specification
Brand	GIGABYTE
Model Name	B650 UD AX
CPU Socket	Socket AM5 (LGA 1718)
Compatible Processors	AMD Ryzen™ 7000/ 8000/ 9000 Series
Chipset Type	AMD B650
RAM Memory Technology	DDR5
Memory Speed	5200 MHz (Supports higher via EXPO/XMP)
Product Dimensions	13 x 11 x 3 inches (ATX Form Factor)
Item Weight	2.84 pounds
Networking	GbE LAN, Wi-Fi 6
USB Ports	USB 3.2 Gen 2x2 Type-C, USB 3.2 Gen 2, USB 2.0
Storage Interfaces	2*PCIe 4.0 x4 M.2, SATA 6Gb/s

8. OFFICIAL PRODUCT OVERVIEW

Your browser does not support the video tag.

Video 1: An overview of GIGABYTE B650 Motherboards, highlighting key features and design principles.

9. WARRANTY AND SUPPORT

GIGABYTE products are covered by a limited warranty. For detailed warranty information, technical support, driver downloads, and BIOS updates, please visit the official GIGABYTE website or their Amazon brand store.

For further assistance, you can visit the [GIGABYTE Brand Store on Amazon](#).

Related Documents - B650 UD AX

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A620M H A620M S2H 사용자 설명서 Rev. 102 이 설명서에는 Gigabyte A620M H 및 A620M S2H 메인보드의 사용에 필요한 정보가 포함되어 있습니다. 이 설명서를 사용하여 메인보드를 설치하고, BIOS를 설정하며, 소프트웨어를 설치하고, 그리고 기타 관련 정보를 얻을 수 있습니다. 이 설명서는 Gigabyte의 웹사이트에서 최신 버전으로 제공됩니다. © 2025 Gigabyte Technology Co., Ltd. All rights reserved.	GIGABYTE A620M H / A620M S2H Motherboard User Manual Detailed user manual for GIGABYTE A620M H and A620M S2H motherboards, covering specifications, installation, BIOS, software, and regulatory compliance.
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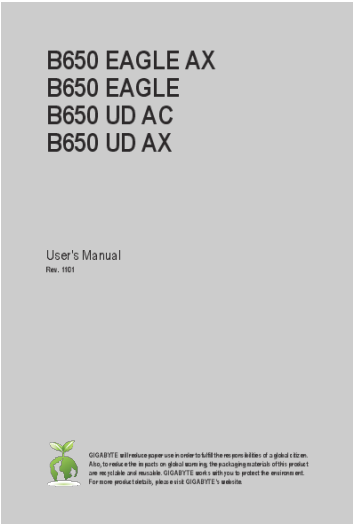
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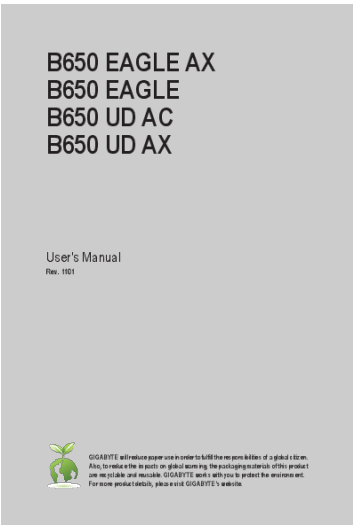
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[GIGABYTE B650 Motherboard Quick Start Guide: AX, UD AC, UD AX Models](#)

Comprehensive quick start guide for GIGABYTE B650 EAGLE AX, B650 EAGLE, B650 UD AC, and B650 UD AX motherboards. Covers installation, specifications, BIOS, connectors, and regulatory information.

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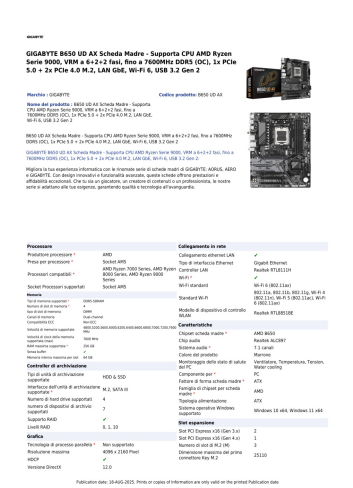
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