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- › [GIGABYTE](#) /
- › [GIGABYTE X870 AORUS Stealth ICE AMD AM5 Motherboard User Manual](#)

## GIGABYTE X870 AORUS STEALTH ICE

# GIGABYTE X870 AORUS Stealth ICE AMD AM5 Motherboard User Manual

## 1. PRODUCT OVERVIEW

The GIGABYTE X870 AORUS Stealth ICE motherboard is designed to support AMD AM5 Processors, offering advanced performance and connectivity. This motherboard features an upgraded power design, high-grade storage standards, and comprehensive connectivity options to optimize system performance.



Image 1.1: The GIGABYTE X870 AORUS Stealth ICE Motherboard shown with its retail packaging.

### Key Features:

- **AMD Socket AM5:** Supports AMD Ryzen 9000 / Ryzen 8000 / Ryzen 7000 Series Processors.
- **DDR5 Compatible:** Features 4 DIMM slots for DDR5 memory.
- **Power Design:** Incorporates a 16+2+2 Twin Digital VRM Design for stable power delivery.

- **Thermals:** Equipped with VRM and M.2 Thermal Guards for efficient heat dissipation.
- **Connectivity:** Includes PCIe 5.0, 4 M.2 Slots, and USB-C ports.
- **DIY Friendly:** Features M.2 EZ-Latch, PCIe EZ-Latch, Wi-Fi EZ-Plug, and an EZ-Debug Zone for simplified installation and troubleshooting.
- **Networking:** Supports WIFI7 and 5GbE LAN for high-speed network connections.
- **Warranty:** Comes with a 5-Year Warranty.

## 2. INSTALLATION GUIDE

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### 2.1 Safety Precautions

- Always disconnect the power supply from the wall outlet before installing or removing any components.
- Wear an anti-static wrist strap or frequently touch a grounded metal object to prevent electrostatic discharge (ESD) damage.
- Handle components by their edges and avoid touching pins or connectors.
- Ensure proper ventilation in your workspace.

### 2.2 Component Identification

Familiarize yourself with the layout of the motherboard before installation.



Image 2.1: Top-down view of the GIGABYTE X870 AORUS Stealth ICE motherboard, highlighting the CPU socket, DDR5 RAM slots, and M.2 slots.

### 2.3 Motherboard Installation Steps

1. **Prepare the Case:** Install the I/O shield into the case's rear opening. Ensure standoffs are correctly aligned for the ATX form factor.
2. **Install the CPU:** Open the CPU socket lever. Carefully align the AMD AM5 processor with the socket, ensuring the triangular markers match. Gently place the CPU into the socket and close the lever to secure it.
3. **Install the CPU Cooler:** Follow the cooler manufacturer's instructions to install the CPU cooler onto the motherboard.

4. **Install RAM:** Open the clips on the DDR5 DIMM slots. Align the memory modules with the slots, ensuring the notch on the module matches the notch in the slot. Press down firmly on both ends until the clips snap into place. Refer to the motherboard manual for recommended slot population.
5. **Install M.2 SSDs:** Locate the M.2 slots. Remove the M.2 Thermal Guard if present. Insert the M.2 SSD into the slot at an angle and secure it with the M.2 EZ-Latch mechanism. Reattach the M.2 Thermal Guard.
6. **Mount Motherboard:** Carefully place the motherboard into the case, aligning the screw holes with the standoffs. Secure the motherboard with screws.
7. **Connect Power Supply:** 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 motherboard.
8. **Install Graphics Card (GPU):** Open the PCIe EZ-Latch on the primary PCIe 5.0 x16 slot. Insert the graphics card firmly until it clicks into place. Secure it with the case screw and connect PCIe power cables from the power supply.
9. **Connect Front Panel Cables:** Connect the power switch, reset switch, HDD LED, power LED, USB, and audio cables from the case front panel to the corresponding headers on the motherboard.
10. **Connect Peripherals:** Connect USB devices, display cables, and network cables to the rear I/O panel.

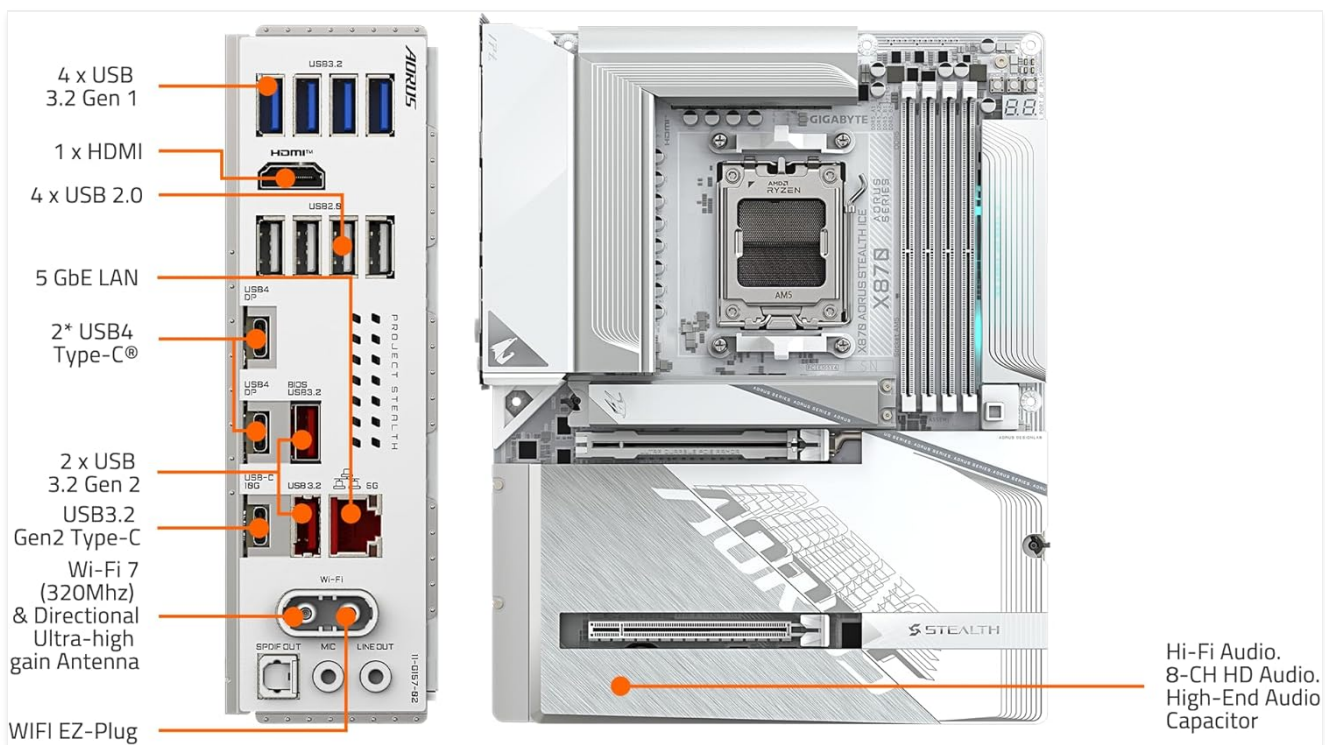


Image 2.2: Rear I/O panel of the GIGABYTE X870 AORUS Stealth ICE motherboard, showing USB 3.2, USB 2.0, HDMI, 5GbE LAN, Wi-Fi 7 antenna connectors, USB4 Type-C, and audio ports.

## 3. SYSTEM OPERATION

### 3.1 BIOS/UEFI Setup

To access the BIOS/UEFI setup utility, power on your computer and repeatedly press the **DEL** key during the initial boot sequence. The BIOS allows you to configure system settings, boot order, and hardware parameters. Save changes before exiting.

### 3.2 Driver Installation

After installing your operating system, install the necessary drivers for the motherboard's components. These typically include chipset drivers, LAN drivers, audio drivers, and Wi-Fi drivers. Drivers can be found on the GIGABYTE official website or on the included support DVD/USB drive.

### 3.3 Operating System Installation

Insert your operating system installation media (USB drive or DVD) and configure the BIOS boot order to prioritize the installation media. Follow the on-screen prompts to install your preferred operating system, such as Windows 11.

## 4. MAINTENANCE AND CARE

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### 4.1 Cleaning

Regularly clean your computer's interior to prevent dust buildup, which can lead to overheating. Use compressed air to remove dust from fans, heatsinks, and other components. Ensure the system is powered off and unplugged before cleaning.

### 4.2 BIOS Updates

Periodically check the GIGABYTE website for BIOS updates. BIOS updates can improve system stability, add support for new hardware, or fix known issues. Follow the instructions provided by GIGABYTE carefully when performing a BIOS update to avoid system damage.

## 5. TROUBLESHOOTING

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### 5.1 Common Issues and Solutions

- **No Power/No Boot:**
  - Check all power connections (24-pin ATX, 8-pin CPU, GPU PCIe power).
  - Ensure the power supply switch is ON.
  - Verify the front panel power switch cable is correctly connected to the motherboard header.
  - Utilize the **EZ-Debug Zone** on the motherboard to identify POST errors via LED indicators.
- **No Display:**
  - Ensure the monitor is connected to the graphics card (or integrated graphics if applicable) and powered on.
  - Reseat the graphics card and RAM modules.
  - Test with a different display cable or monitor.
- **System Instability/Crashes:**
  - Check CPU and GPU temperatures.
  - Ensure all drivers are up to date.
  - Run memory diagnostic tools to check RAM integrity.
  - Verify power supply wattage is sufficient for all components.
- **Peripheral Not Detected:**
  - Try connecting the peripheral to a different USB port.
  - Check device manager for driver issues.
  - Ensure the device is powered on if it requires external power.

## 6. TECHNICAL SPECIFICATIONS

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Feature	Specification
Brand	GIGABYTE
Series	X870 AORUS STEALTH ICE
Model Name	X870 AORUS STEALTH ICE
CPU Socket	Socket AM5
Compatible Processors	AMD Ryzen AM5 (9000 / 8000 / 7000 Series)
Chipset Type	AMD X870
RAM Memory Technology	DDR5
Memory Speed	5200 MHz (and higher via OC)
RAM Slots	4 DIMMs
PCIe Slots	PCIe 5.0 support
M.2 Slots	4x M.2 Slots
USB Connectivity	USB-C, 2x USB-4
Networking	WiFi7, 5GbE LAN
Power Design	16+2+2 Twin Digital VRM Design
Main Power Connector	24-Pin
Item Weight	9.59 pounds
Product Dimensions (LxWxH)	12.01 x 8.82 x 1 inches
Color	White
Platform	Windows 11

## 7. WARRANTY AND SUPPORT

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### 7.1 Product Warranty

The GIGABYTE X870 AORUS Stealth 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 warranty information provided with your product or visit the official GIGABYTE website.

### 7.2 Technical Support

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

