

MSI X870 Gaming Plus WiFi

MSI X870 Gaming Plus WiFi Motherboard Instruction Manual

Model: X870 Gaming Plus WiFi

Brand: MSI

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your MSI X870 Gaming Plus WiFi Motherboard. Designed for optimal performance with AMD Ryzen 9000, 8000, and 7000 series processors, this ATX motherboard offers advanced features for a robust computing experience. Please read this manual thoroughly before proceeding with installation to ensure proper setup and to maximize the lifespan and performance of your system.

2. SAFETY INFORMATION

Always observe the following safety precautions during installation and handling:

- Disconnect the power cord from the wall outlet before touching any component.
- Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage to components.
- Handle components by their edges to avoid touching sensitive parts.
- Ensure proper ventilation within your PC case to prevent overheating.
- Refer to the safety guidelines provided with your other PC components.

3. PACKAGE CONTENTS

Verify that all items are present in your motherboard package:

- MSI X870 Gaming Plus WiFi Motherboard
- User Manual / Quick Installation Guide
- SATA Cables
- Wi-Fi Antenna
- M.2 Screw/Standoff Set
- Driver CD/USB Drive (if included)
- Other accessories (e.g., cable ties, case badge)

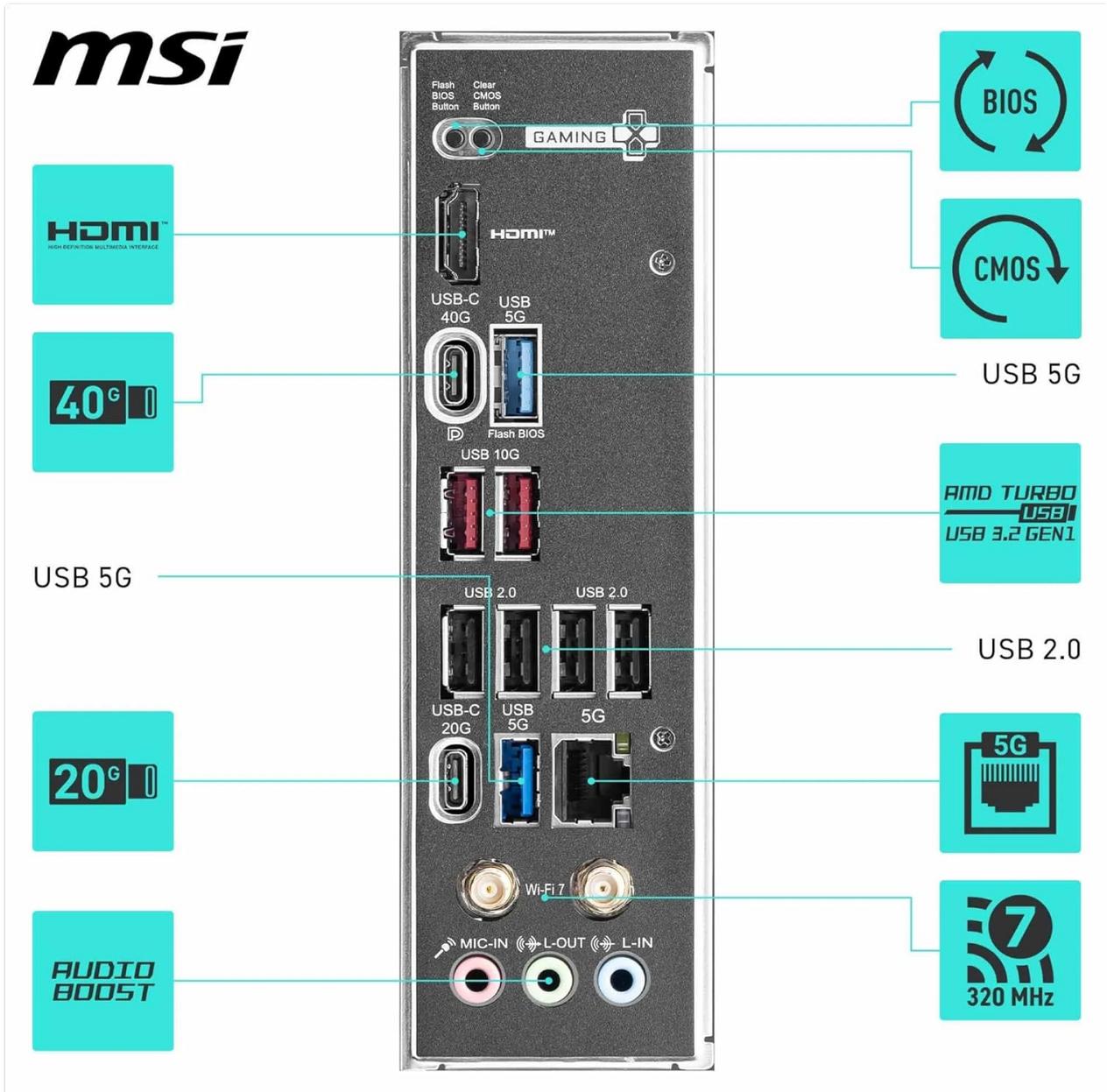


Image: MSI X870 Gaming Plus WiFi Motherboard with its retail box and various accessories including the Wi-Fi antenna, SATA cables, and M.2 screws.

4. MOTHERBOARD LAYOUT

Familiarize yourself with the key components and connectors on your motherboard.



Image: A top-down view of the MSI X870 Gaming Plus WiFi Motherboard, highlighting the CPU socket, DDR5 DIMM slots, PCIe slots, and M.2 slots.

Rear I/O Panel

The rear I/O panel provides various ports for connecting external devices.

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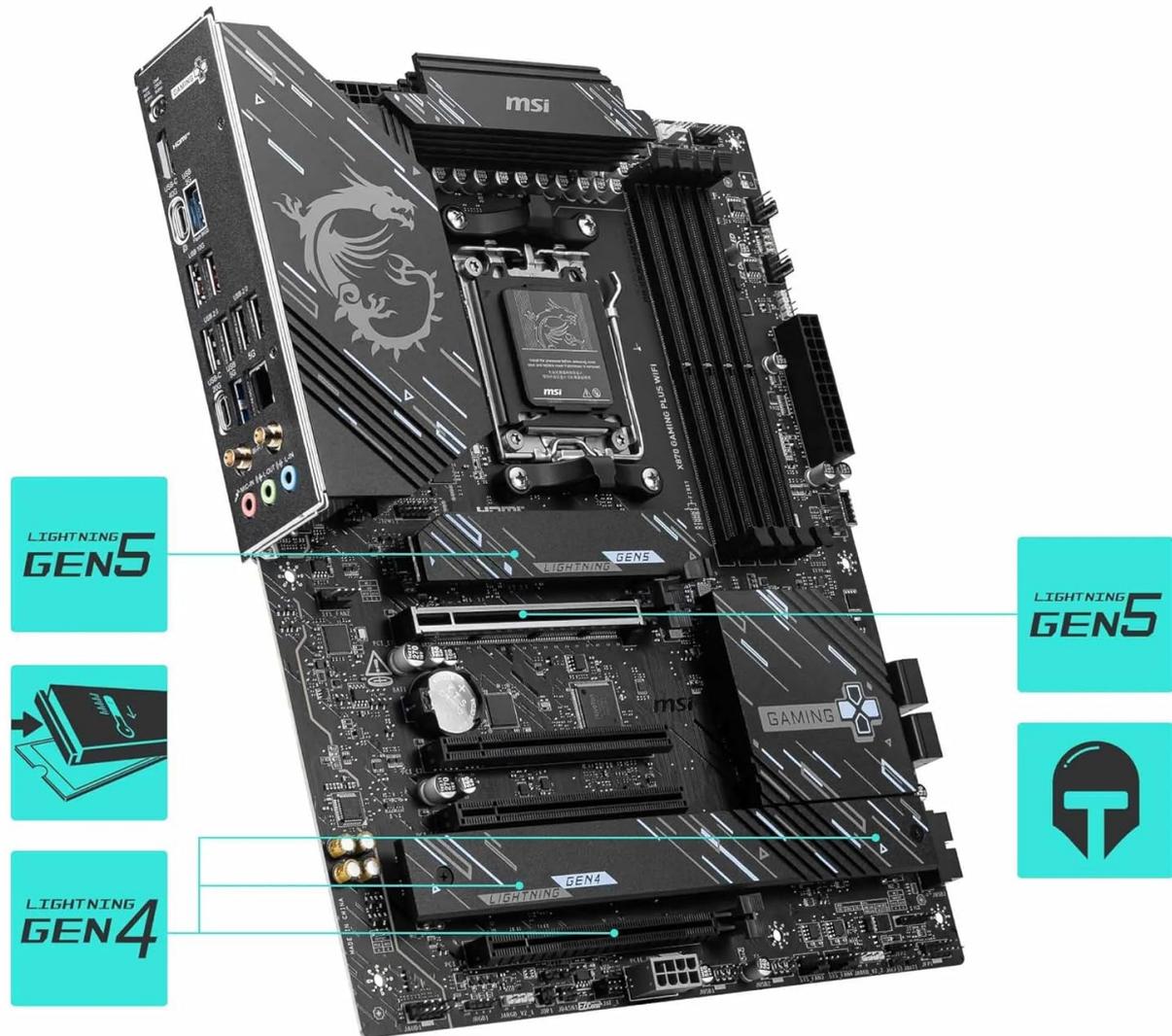


Image: A detailed view of the rear I/O panel, showing USB ports (including USB4 Type-C), 5G LAN port, Wi-Fi 7 antenna connectors, audio jacks, HDMI, and Flash BIOS Button.

5. SETUP

5.1. Installing the CPU

1. Locate the AM5 CPU socket on the motherboard.
2. Open the CPU socket lever and remove the protective cover.
3. Carefully align the CPU with the socket, ensuring the golden triangle on the CPU matches the triangle on the socket.
4. Gently place the CPU into the socket without applying force.
5. Close the CPU socket lever to secure the CPU.

5.2. Installing RAM (DDR5 Memory)

This motherboard supports DDR5 memory modules. For optimal performance, install memory modules in the

recommended DIMM slots as per your motherboard's specific configuration (refer to the detailed manual for slot priority).

1. Open the clips at both ends of the DIMM slot.
2. Align the notch on the DDR5 memory module with the key in the DIMM slot.
3. Press down firmly on both ends of the memory module until the clips snap into place.

5.3. Installing Storage (M.2 SSDs)

The motherboard features multiple M.2 connectors, including a Gen5 x4 128Gbps slot with EZ M.2 Shield Frozr II for thermal throttling prevention, and Gen4 x4 64Gbps and Gen4 x2 32Gbps slots.

1. Locate the M.2 slots and remove the EZ M.2 Shield Frozr II heatsink if present.
2. Insert the M.2 SSD into the slot at an angle.
3. Push down the M.2 SSD and secure it with the provided M.2 screw or EZ M.2 clip.
4. Reattach the EZ M.2 Shield Frozr II heatsink for optimal cooling.



Image: A close-up view of the motherboard's M.2 slots and the reinforced PCIe 5.0 x16 slot, highlighting the EZ M.2 Shield Frozr II.

5.4. Installing Graphics Card (PCIe)

The motherboard includes a PCIe 5.0 x16 SMT slot with Steel Armor for robust graphics card support.

1. Align your graphics card with the PCIe 5.0 x16 slot.
2. Press down firmly until the card is seated correctly and the retention clip locks.
3. Secure the graphics card to the chassis with screws.

5.5. Connecting Power

Connect the 24-pin ATX power connector and the dual 8-pin CPU power connectors from your power supply to the motherboard.

5.6. Connecting Peripherals

Connect your keyboard, mouse, monitor, and other peripherals to the appropriate ports on the rear I/O panel.

6. OPERATING

6.1. First Boot

After assembling your system, power it on. The system should display the BIOS/UEFI screen. If not, check all connections.

6.2. BIOS/UEFI Configuration

Access the BIOS/UEFI by pressing the designated key (usually DEL or F2) during startup. Here you can configure various settings:

- **DDR5 Memory Boost:** Enable XMP/EXPO profiles for optimal DDR5 memory speeds (up to 8200+ MT/s OC).
- **Boot Order:** Set your primary boot device (e.g., M.2 SSD with OS).
- **Fan Control:** Adjust fan curves for optimal cooling and noise levels.
- **Integrated Peripherals:** Configure Wi-Fi 7, 5G LAN, and USB settings.

6.3. Driver Installation

After installing your operating system, install the latest drivers for your motherboard components (chipset, LAN, Wi-Fi, audio, etc.) from the MSI website or the provided driver media.

6.4. Software Utilities

MSI provides various software utilities to enhance your experience. These can be downloaded from the official MSI website and include tools for system monitoring, RGB lighting control, and performance tuning.

7. MAINTENANCE

7.1. Cleaning

Regularly clean your PC components to prevent dust buildup, which can lead to overheating. Use compressed

air to remove dust from fans, heatsinks, and vents. Ensure the system is powered off and unplugged before cleaning.

7.2. BIOS Updates

Periodically check the MSI website for BIOS/UEFI updates. Updates can improve system stability, add support for new hardware, or enhance performance. Follow the instructions provided by MSI carefully when updating the BIOS.

8. TROUBLESHOOTING

- **No Display:** Check monitor connections, ensure graphics card is seated correctly, and verify power connections.
- **System Instability:** Ensure all components are properly installed. Check RAM compatibility and seating. Update BIOS and drivers.
- **Overheating:** Verify fan operation, clean dust from heatsinks, and ensure adequate airflow in the chassis.
- **No Internet Connection:** Check LAN cable or Wi-Fi antenna connection. Install or update network drivers. Verify router functionality.
- **BIOS Flashback:** If the system fails to boot after a BIOS update, use the Flash BIOS Button on the rear I/O panel with a USB drive containing the BIOS file (refer to MSI's specific instructions for this feature).

9. SPECIFICATIONS

Feature	Specification
Brand	MSI
Model Name	X870 Gaming Plus WiFi
CPU Socket	Socket AM5
Compatible Processors	AMD Ryzen 9000/ 8000/ 7000 Series Desktop Processors
Chipset Type	AMD X870
RAM Memory Technology	DDR5
Memory Speed	8200 MHz (OC)
PCIe Slots	1 x PCIe 5.0 x16 (Steel Armor), 1 x PCIe 4.0 x16
M.2 Connectors	1 x M.2 Gen5 x4 128Gbps (with EZ M.2 Shield Frozr II), 1 x M.2 Gen4 x4 64Gbps, 1 x M.2 Gen4 x2 32Gbps

LAN	Realtek 5G LAN
Wireless Connectivity	Wi-Fi 7, Bluetooth 5.4
USB Ports	USB4 Type-C (40Gbps) with 4K/60Hz display support, various USB 3.2 Gen2/Gen1 and USB 2.0 ports
Audio	7.1 HD Audio with Audio Boost
VRM	14 Duet Rail Power System (60A, SPS)
Dimensions	12 x 9.6 x 2.5 inches (ATX)

10. OFFICIAL PRODUCT VIDEO

Your browser does not support the video tag.

Video: An official product overview video from MSI, showcasing the key features and design of the X870 Gaming Plus WiFi Motherboard.

11. WARRANTY AND SUPPORT

For warranty information, please refer to the warranty card included in your product packaging or visit the official MSI website. Technical support and driver downloads are available on the MSI support page.

For further assistance, please contact MSI customer service through their official channels.