

## MSI B840GPW

# MSI B840 Gaming Plus WiFi Motherboard User Manual

Model: B840GPW

## 1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, maintenance, and troubleshooting of your MSI B840 Gaming Plus WiFi Motherboard. This motherboard is designed for efficient and stable performance with AMD Ryzen 9000, 8000, and 7000 series processors on the AM5 platform. It features advanced connectivity and cooling solutions for a robust computing experience.

### Key Features:

- **Ultra Power Design:** Supports the latest Ryzen 9000 processors with a Direct 7-phase CPU power delivery (P-PAK) and Core Boost architecture for high performance.
- **Advanced Cooling:** Features FROZR GUARD with 7W/mK MOSFET thermal pads, extra choke thermal pads, an Extended Heatsink, chipset heatsink, and EZ M.2 Shield Frozr II for optimal thermal management.
- **DDR5 Memory & PCIe 4.0:** Equipped with 4 DDR5 DIMM SMT slots supporting memory overclocking speeds up to 8000+ MT/s (OC), and a PCIe 4.0 x16 slot with Steel Armor for modern graphics cards.
- **High-Speed Storage:** Includes 2 M.2 Gen4 x4 64Gbps slots, with the primary slot featuring EZ M.2 Shield Frozr II to prevent thermal throttling of NVMe SSDs.
- **Comprehensive Connectivity:** Integrated Wi-Fi 7 module with Bluetooth 5.4, Realtek 2.5Gbps LAN, USB 10Gbps Type-C, 4K/60Hz display support, and 7.1 HD audio with Audio Boost.



Figure 1: MSI B840 Gaming Plus WiFi Motherboard, box, Wi-Fi antenna, and cables.

## 2. SETUP AND INSTALLATION

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This section outlines the general steps for installing your MSI B840 Gaming Plus WiFi Motherboard into your PC chassis and connecting essential components. For detailed, step-by-step instructions, please refer to the included Quick Installation Guide.

1. **Prepare the Chassis:** Ensure your PC case is ready for motherboard installation. Install the I/O shield (if not pre-attached) carefully, as edges can be sharp.
2. **Install the Motherboard:** Secure the motherboard into the chassis using appropriate standoffs and screws.
3. **CPU Installation:** Open the CPU socket lever, align your AMD Ryzen processor with the socket, and gently place it in. Close the lever to secure the CPU.
4. **CPU Cooler Installation:** Install your chosen CPU cooler according to its manufacturer's instructions.
5. **RAM Installation:** Insert DDR5 memory modules into the DIMM slots. Ensure they are fully seated by pressing down until the clips on both sides lock into place.
6. **M.2 SSD Installation:** Install M.2 solid-state drives into the M.2 slots. Utilize the EZ M.2 Shield Frozr II for the primary M.2 slot to enhance cooling.
7. **Graphics Card Installation:** Insert your graphics card into the PCIe 4.0 x16 slot.
8. **Power Connections:** Connect the 24-pin ATX main power connector and the 8-pin CPU power connector from your power supply to the motherboard.
9. **Peripheral Connections:** Connect front panel headers (power, reset, USB, audio), SATA devices, and any other necessary peripherals.
10. **Wi-Fi Antenna:** Attach the included Wi-Fi antenna to the designated connectors on the rear I/O panel for optimal wireless

performance.



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



### 3. OPERATING INSTRUCTIONS

- **BIOS/UEFI Configuration:** Access the BIOS/UEFI setup utility by pressing the designated key (usually DEL or F2) during startup. The BIOS interface is designed to be straightforward for system tweaks and settings adjustments.
- **Driver Installation:** After installing your operating system, install all necessary drivers for the motherboard components (chipset, audio, LAN, Wi-Fi, etc.) from the MSI support website or the included driver disk.
- **Operating System Compatibility:** For optimal performance and full functionality, particularly for the Wi-Fi 7 module, ensure your operating system is updated to Windows 11 or a compatible version.
- **RGB Lighting:** If you have connected RGB components to the motherboard's RGB headers, you can customize lighting effects using MSI's Mystic Light software.

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Figure 4: Included accessories such as the Wi-Fi antenna and various cables.

## 4. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your motherboard and PC system.

- **Dust Removal:** Periodically clean dust from inside your PC case, especially from heatsinks, fans, and ventilation areas. Dust accumulation can impede airflow and lead to overheating.
- **Firmware Updates:** Check the MSI support website regularly for BIOS/UEFI firmware updates. These updates can improve stability, compatibility, and performance.
- **Driver Updates:** Keep all motherboard drivers updated to the latest versions to ensure compatibility and optimal performance with your operating system and other hardware.
- **Connection Checks:** Occasionally verify that all cables and components are securely connected to the motherboard.
- **Thermal Management:** Ensure proper airflow within your PC case. The motherboard's FROZR GUARD and Extended Heatsink features are designed to manage heat effectively, but good case ventilation is crucial.

## 5. TROUBLESHOOTING

If you encounter issues with your motherboard, refer to the following common troubleshooting steps.

- **No Power/No Boot:**
  - Verify all power supply cables (24-pin ATX, 8-pin CPU) are securely connected to the motherboard.
  - Ensure the power button header is correctly connected to the motherboard's front panel pins.
  - Check if the power supply unit (PSU) is functioning correctly.
- **Display Issues:**
  - Ensure your monitor is connected to the graphics card (or motherboard if using integrated graphics) and powered on.
  - Reseat the graphics card in its PCIe slot.
  - If using integrated graphics, ensure your CPU supports it and the display cable is connected to the motherboard's video output.
- **RAM Not Detected/System Instability:**
  - Ensure DDR5 memory modules are fully seated in their DIMM slots. Improper seating is a common cause of boot issues.
  - Try booting with one RAM stick at a time to identify a faulty module.
  - Check the motherboard manual for recommended RAM slot configurations.
- **Missing Hardware/Components:**
  - Upon unboxing, carefully check all package contents against the product's packing list to ensure no accessories are missing. If an item like an M.2 EZ clip is missing, contact MSI support.
- **Wi-Fi/LAN Connectivity Issues:**
  - Ensure the Wi-Fi antenna is securely attached.
  - Verify that the latest Wi-Fi and LAN drivers are installed.
  - Confirm your operating system is updated, especially to Windows 11, as older versions might not fully support Wi-Fi 7.
- **General Component Compatibility:**
  - Always ensure that all components (CPU, RAM, GPU, PSU) are compatible with the MSI B840 Gaming Plus WiFi Motherboard. Refer to MSI's official compatibility lists.
  - If a component appears defective, test it in another compatible system if possible, or contact MSI support.

## 6. SPECIFICATIONS

| Feature               | Detail                                                      |
|-----------------------|-------------------------------------------------------------|
| Brand                 | MSI                                                         |
| Model Name            | MSI B840 Gaming Plus WiFi                                   |
| Item Model Number     | B840GPW                                                     |
| CPU Socket            | Socket AM5                                                  |
| Compatible Processors | Supports AMD Ryzen 9000/8000/7000 Series Desktop Processors |
| Chipset Type          | B840                                                        |

| Feature                 | Detail                                                                 |
|-------------------------|------------------------------------------------------------------------|
| RAM Memory Technology   | DDR5                                                                   |
| RAM Memory Maximum Size | 256 GB                                                                 |
| Memory Slots            | 4 x DDR5 DIMM SMT slots (8000+ MT/s OC)                                |
| PCIe Slots              | 1 x PCIe 4.0 x16 slot with Steel Armor                                 |
| M.2 Connectors          | 2 x M.2 Gen4 x4 64Gbps slots (primary with EZ M.2 Shield Frozr II)     |
| LAN                     | Realtek 2.5Gbps LAN                                                    |
| Wireless Connectivity   | Wi-Fi 7, Bluetooth 5.4                                                 |
| USB Ports (Rear)        | USB 10Gbps Type-C, USB 10Gbps Type-A, USB 5Gbps Type-A, USB 2.0 Type-A |
| Audio                   | 7.1 HD Audio with Audio Boost                                          |
| Display Support         | 4K/60Hz (via HDMI)                                                     |
| Form Factor             | ATX                                                                    |
| Operating System        | Windows 11 (Recommended)                                               |
| Item Weight             | 3.5 pounds                                                             |
| Package Dimensions      | 13.46 x 10.94 x 2.91 inches                                            |

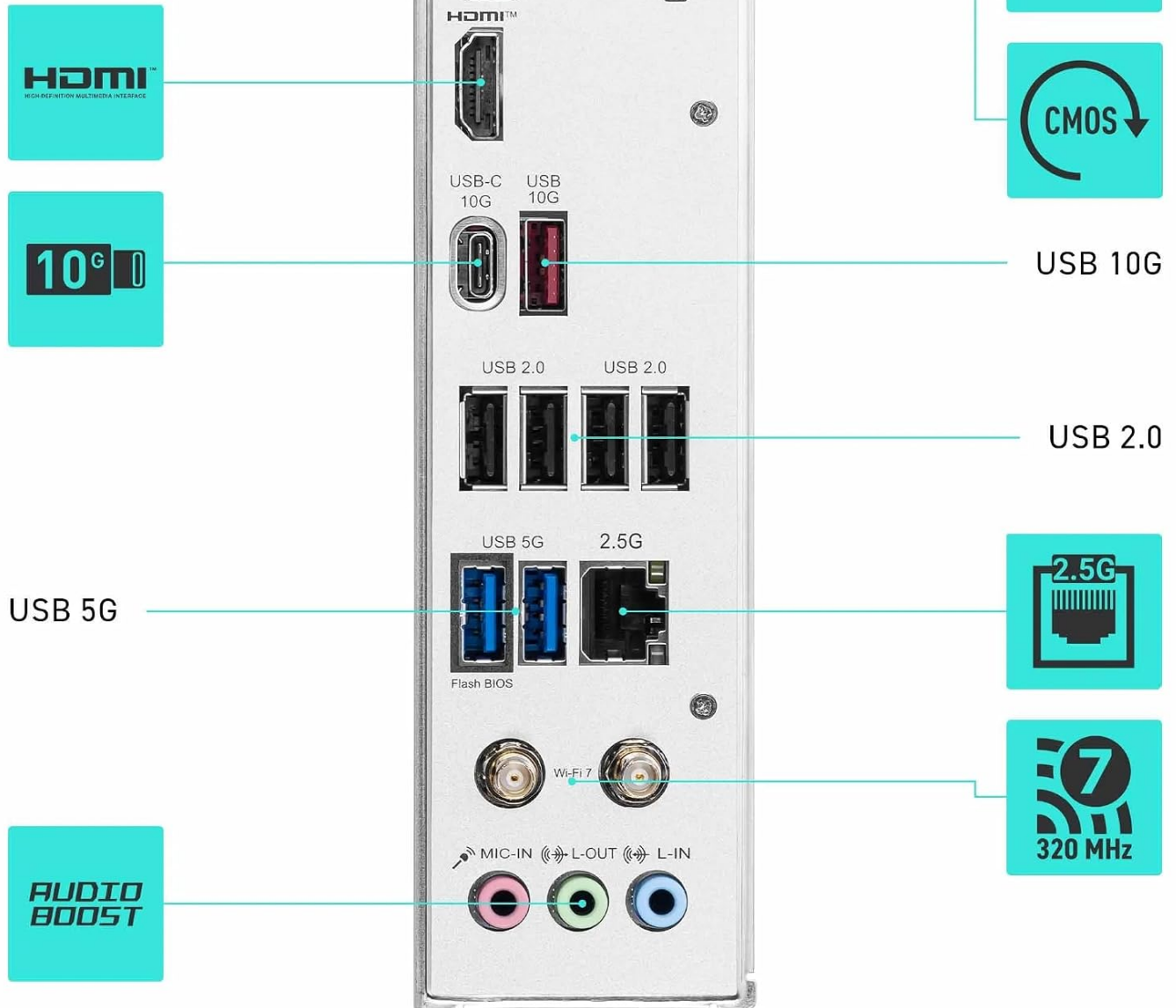


Figure 5: Rear I/O panel with labeled ports for connectivity.

## 7. WARRANTY AND SUPPORT

For warranty information, technical support, and driver downloads, please visit the official MSI website.

- **Official MSI Support:** [www.msi.com/support](http://www.msi.com/support)
- **Protection Plans:** Extended protection plans may be available for purchase separately. Refer to your retailer for details on 3-Year, 4-Year, or Complete Protect plans.

## ASK A QUESTION ABOUT THIS MANUAL

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

## Answered questions about this manual

### How do I connect the digital temperature display of the Gamdias Aura GC5 Elite case to the MSI B840 Gaming Plus Wi-Fi motherboard?

To connect the digital temperature display of your Gamdias Aura GC5 Elite case to the MSI B840 Gaming Plus WiFi motherboard, you generally need to address two types of connections: power and data. Power Connection:...

[Read full answer](#)