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Model: MPG B650I EDGE WIFI (7D73-001R)

1. PRODUCT OVERVIEW

The MSI MPG B650I EDGE WIFI is a Mini-ITX motherboard designed for AMD Ryzen 7000 and 8000 Series desktop processors, utilizing the AM5 socket. It features DDR5 memory support, PCIe 4.0 expansion, and integrated Wi-Fi 6E, making it suitable for compact, high-performance PC builds.



Figure 1: Top-down view of the MSI MPG B650I EDGE WIFI motherboard, highlighting the CPU socket, memory slots, and heatsinks.

2. PACKAGE CONTENTS

Verify that all items are present in the package before proceeding with installation:

- MSI MPG B650I EDGE WIFI Motherboard
- Wi-Fi Antenna (2x)
- SATA Cables (2x)
- Rainbow RGB LED Cable
- M.2 Screw Package
- User Manual (this document)
- Driver CD/USB (if included)



Wi-Fi Antenna



2 x SATA Cables



Rainbow RGB LED Cable



M.2 Screw Package

Figure 2: The motherboard alongside its included accessories, such as Wi-Fi antennas, SATA cables, and M.2 screws.

3. SETUP AND INSTALLATION

This section provides instructions for installing the motherboard and its components into your system.

3.1. CPU Installation

Carefully open the CPU socket lever. Align the triangular mark on your AMD AM5 processor with the corresponding mark on the socket. Gently place the CPU into the socket without applying force. Close the lever to secure the CPU.

3.2. Memory (RAM) Installation

The motherboard supports two DDR5 DIMM slots, with a maximum capacity of 64GB. For optimal performance, install memory modules in a dual-channel configuration. Ensure the memory modules are compatible with AMD EXPO technology for enhanced performance.

- Open the clips at both ends of the DIMM slot.
- Align the notch on the DDR5 memory module with the key in the DIMM slot.

- Press down firmly on both ends of the memory module until the clips snap into place.



Figure 3: An angled view of the motherboard, highlighting the two DDR5 memory slots and the M.2 cooling fan.

3.3. Storage Device Installation

The motherboard supports both M.2 NVMe SSDs and SATA 6G drives.

M.2 SSD Installation:

The motherboard features two M.2 slots (M.2_1 from CPU, M.2_2 from Chipset), both supporting PCIe 4.0 x4 for 2280/2260 devices. Remove the M.2 heatsink, insert the M.2 SSD into the slot, and secure it with the provided M.2 screw. Reattach the heatsink.

SATA Drive Installation:

Connect up to four SATA 6G devices using the provided SATA cables. Ensure proper power connections to your SATA drives from the power supply.

3.4. Expansion Card Installation

The motherboard includes one PCI-E x16 slot (PCI_E1) that supports PCIe 4.0 x16 from the CPU. This slot is primarily used for graphics cards. Insert your graphics card firmly into the slot until it clicks, then secure it with a case screw.

3.5. Connecting Peripherals and Power

Connect the 24-pin ATX power connector and the 8-pin CPU power connector from your power supply to the

motherboard. Connect front panel headers (USB, audio, power/reset buttons, LEDs) according to the motherboard manual's pinout diagram. Connect the Wi-Fi antennas to the rear I/O panel for wireless connectivity.

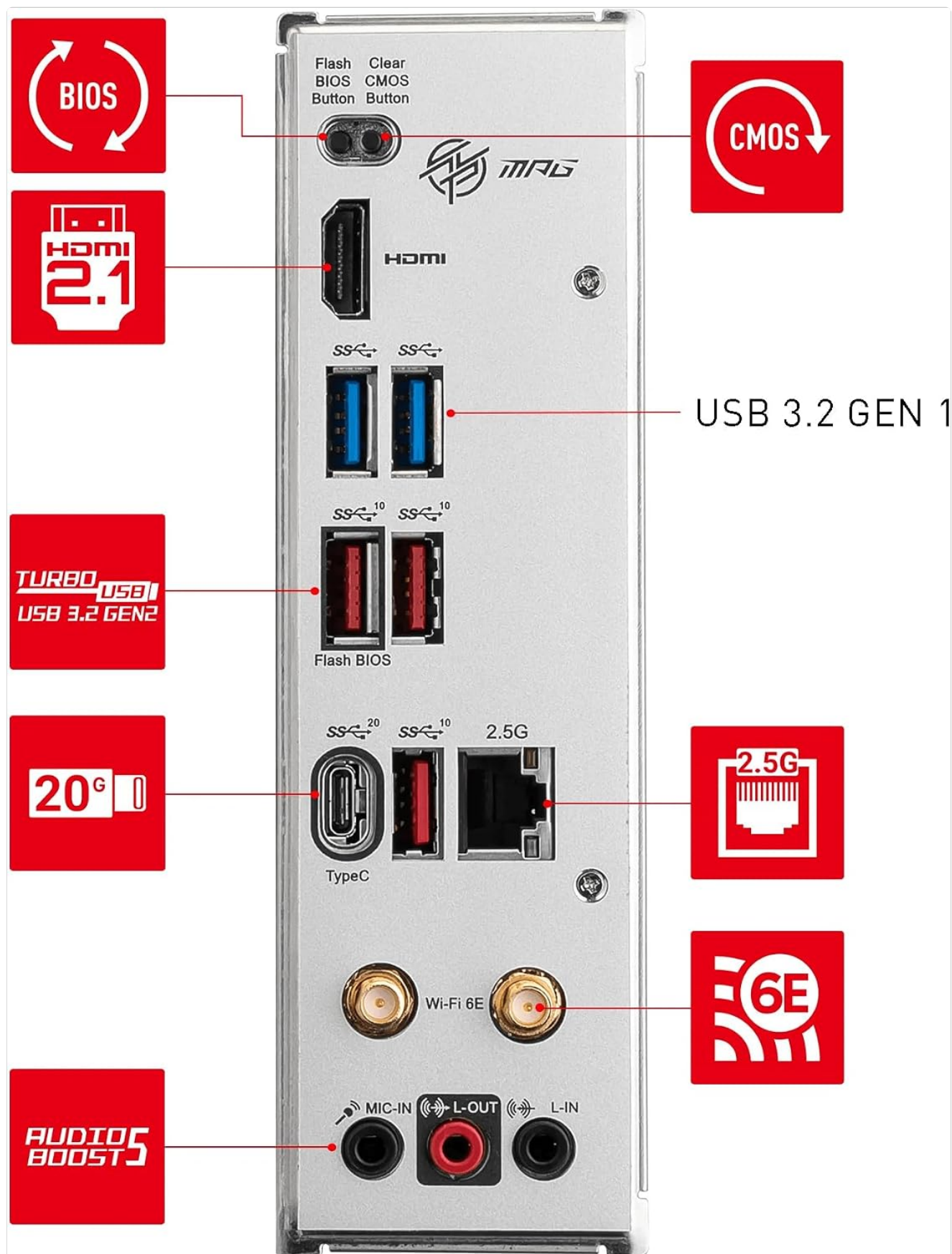


Figure 4: A detailed view of the rear I/O panel, showing USB ports, HDMI, LAN, and Wi-Fi antenna connectors.

Rear I/O Panel Connections:

- **USB Ports:** 2x USB 3.2 Gen1 Type A, 3x USB 3.2 Gen2 Type A, 1x USB 3.2 Gen2x2 Type C.

- **Video Output:** 1x HDMI 2.1 FRL (requires CPU with integrated graphics).
- **Network:** Realtek RTL8125BG 2.5Gbps LAN port.
- **Audio:** Audio Boost 5 ports (Mic-in, Line-out, Line-in).
- **Wireless:** Wi-Fi 6E antenna connectors.
- **BIOS Flash Button:** For convenient BIOS updates without a CPU or RAM installed.
- **Clear CMOS Button:** To reset BIOS settings to default.

4. OPERATING INSTRUCTIONS

After completing the hardware installation, you can power on your system and proceed with software setup.

4.1. Initial Boot and BIOS Setup

Upon first power-on, the system will typically enter the BIOS (Basic Input/Output System) or UEFI (Unified Extensible Firmware Interface) setup utility. Press the **Del** key during startup to access the BIOS. Here you can configure system settings, boot order, and enable features like AMD EXPO for memory overclocking. The MSI BIOS is designed to be user-friendly, offering a wide range of options for system customization and performance tuning.

4.2. Operating System Installation

The motherboard is compatible with Windows 11. Insert your Windows installation media (USB drive or DVD) and follow the on-screen prompts to install the operating system. Ensure all necessary drivers are installed after OS installation, which can typically be found on the MSI website.

4.3. BIOS Updates

The motherboard features a BIOS Flash Button on the rear I/O panel, allowing for convenient BIOS updates even without a CPU or RAM installed. Refer to the MSI website for detailed instructions on using this feature and for the latest BIOS versions.

5. MAINTENANCE

Proper maintenance ensures the longevity and stable operation of your motherboard.

- **Dust Removal:** Regularly clean dust from the motherboard and components using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **M.2 Fan:** The integrated M.2 fan helps cool NVMe SSDs. Monitor its operation. If excessive noise occurs, ensure it is free from obstructions. In some cases, users may choose to disconnect the fan if noise is a concern and SSD temperatures remain within acceptable limits.
- **BIOS Updates:** Keep your BIOS updated to the latest version from the MSI website to benefit from performance improvements, bug fixes, and compatibility enhancements.

6. TROUBLESHOOTING

This section addresses common issues you might encounter.

- **No Display/Boot:**
 - Verify all power cables (24-pin ATX, 8-pin CPU) are securely connected.
 - Ensure RAM modules are correctly seated in their slots.

- Check if the graphics card is properly installed and connected to the monitor.
- Utilize the **EZ Debug LED** indicators on the motherboard to identify the component causing the boot failure (CPU, DRAM, VGA, BOOT).
- **Long Boot Times:**

Initial boot times, especially after a new build or BIOS update, can sometimes be longer (e.g., 3-5 minutes) as the system trains memory. This is often normal and should decrease with subsequent boots.
- **M.2 Fan Noise:**

If the M.2 fan produces excessive noise, ensure it is not obstructed. While BIOS settings for this specific fan may be limited, you can consider disconnecting it if SSD temperatures are acceptable and noise is a significant concern.
- **System Instability/Crashes:**
 - Ensure all drivers are up to date.
 - Check for proper cooling of CPU and GPU.
 - If overclocking, revert to default settings to test stability.
 - Use the **Clear CMOS Button** on the rear I/O panel to reset BIOS settings to factory defaults if configuration issues are suspected.

7. SPECIFICATIONS

Feature	Specification
Brand	MSI
Model Name	MPG B650I EDGE WIFI
Model Number	7D73-001R
CPU Socket	Socket AM5
Compatible Processors	AMD Ryzen 7000 Series Desktop Processors, AMD Ryzen 8000 Series
Chipset Type	AMD B650
RAM Memory Technology	DDR5
Memory Slots	2x DIMM
Max RAM Capacity	64GB
Memory Speed Support	DDR5 6600+(OC)/.../4800(JEDEC) MHz, Supports AMD EXPO
Expansion Slots	1x PCI-E x16 slot (PCIe 4.0 x16 from CPU)
M.2 Slots	2x M.2 slots (PCIe 4.0 x4, 2280/2260 devices)
SATA Ports	4x SATA 6G ports
RAID Support	RAID 0, 1, 10 for SATA; RAID 0, 1 for M.2 NVMe
USB Ports (Front)	2x USB 2.0, 2x USB 3.2 Gen1 Type A, 1x USB 3.2 Gen2 Type C
USB Ports (Rear)	2x USB 3.2 Gen1 Type A, 3x USB 3.2 Gen2 Type A, 1x USB 3.2 Gen2x2 Type C
LAN	Realtek RTL8125BG 2.5Gbps LAN

Wireless	Wi-Fi 6E
Onboard Graphics	1x HDMI 2.1 FRL (4K 120Hz, CPU dependent)
Audio	Audio Boost 5 (Optical S/PDIF out)
Form Factor	Mini-ITX (170mm x 170mm)
Platform	Windows 11
Item Weight	0.85 Kilograms

8. WARRANTY AND SUPPORT

For warranty information, technical support, driver downloads, and the latest BIOS updates, please visit the official MSI website:

www.msi.com

You can also find additional resources and community support through the MSI brand store on Amazon [MSI Store on Amazon](#)

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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.

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