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**MSI Z790 EDGE WIFI DDR4**

# MSI MPG Z790 Edge WiFi DDR4 Gaming Motherboard User Manual

Model: Z790 EDGE WIFI DDR4

## 1. Introduction

This manual provides comprehensive instructions for the installation, operation, and maintenance of the MSI MPG Z790 Edge WiFi DDR4 Gaming Motherboard. This motherboard is designed to support 12th and 13th Generation Intel processors, offering robust performance and advanced features for gaming and high-performance computing environments.
Please read this manual thoroughly before proceeding with installation to ensure proper setup and to maximize the benefits of your new motherboard.

## 2. Safety Information

- Always disconnect the power supply from your computer before installing or removing any components.
- Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage to the motherboard and other components.
- Handle the motherboard by its edges to avoid touching sensitive components.
- Ensure proper ventilation within your computer case to prevent overheating.
- Do not expose the motherboard to moisture or extreme temperatures.
- Refer to the CPU and cooler manufacturer's instructions for proper installation and thermal paste application.

## 3. Package Contents

Verify that all items listed below are present in your motherboard package:

- MSI MPG Z790 Edge WiFi DDR4 Motherboard
- Wi-Fi Antenna
- 3 x EZ M.2 Clip Packages
- 2 x SATA Cables

- USB Drive (containing drivers and utilities)
- Quick Installation Guide
- European Union Regulatory Notice
- Cable Sticker

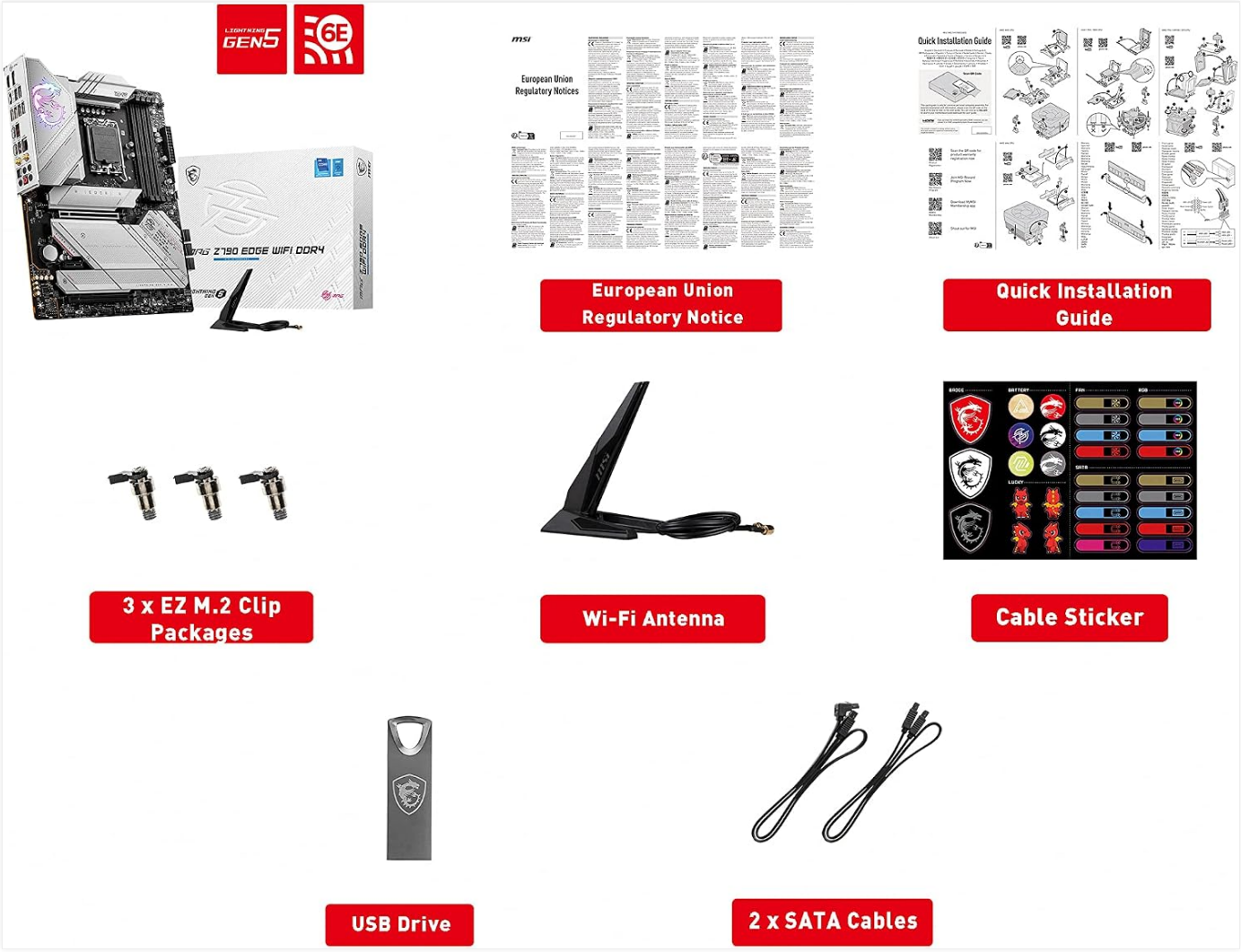



Figure 3.1: Motherboard and included accessories, including the Wi-Fi antenna, M.2 clips, SATA cables, USB drive, and documentation.

## 4. Product Overview

The MSI MPG Z790 Edge WiFi DDR4 motherboard features a silver-white aesthetic and is equipped with advanced components for high-performance gaming. Key areas include the LGA 1700 CPU socket, DDR4 DIMM slots, PCIe 5.0 slot, and multiple M.2 slots with Shield Frozr for thermal management.




Figure 4.1: General view of the MSI MPG Z790 Edge WiFi DDR4 Motherboard with its retail packaging and included Wi-Fi antenna.

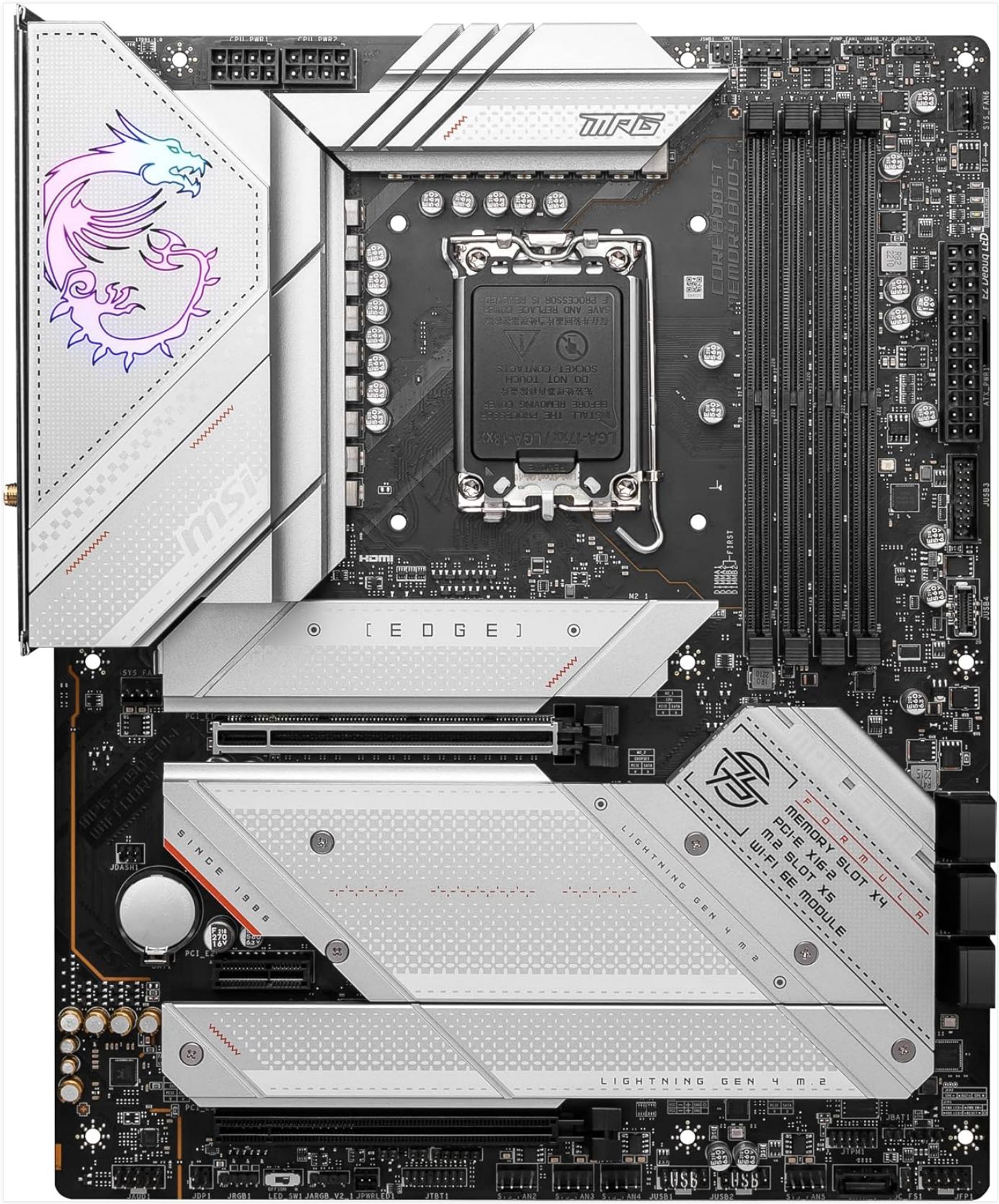



Figure 4.2: Top-down view of the motherboard, highlighting the CPU socket, RAM slots, and M.2 slots.

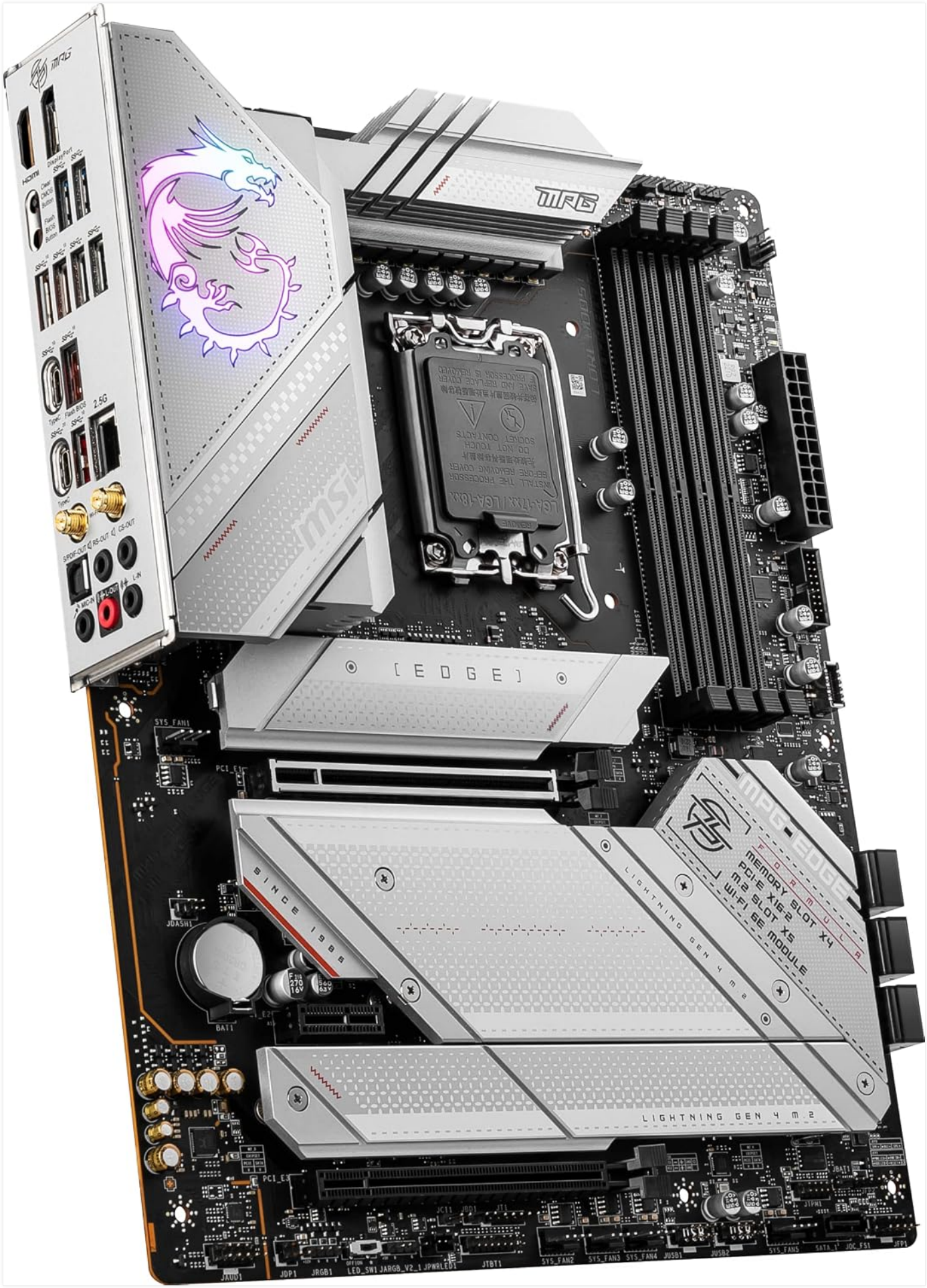



Figure 4.3: Rear I/O panel, showing various ports including USB, DisplayPort, HDMI, 2.5G LAN, Wi-Fi 6E antenna connectors, and audio jacks.

# 5. Setup

## 5.1. Installing the CPU

1. Locate the LGA 1700 CPU socket on the motherboard.
2. Open the CPU socket lever and lift the load plate.
3. Carefully align the CPU with the socket, ensuring the triangular mark on the CPU matches the mark on the socket.
4. Gently place the CPU into the socket without forcing it.
5. Close the load plate and press down the lever until it locks into place.

## 5.2. Installing DDR4 Memory

1. Open the clips on both ends of the DIMM slots.
2. Align the notch on the DDR4 memory module with the key in the DIMM slot.
3. Insert the memory module firmly into the slot until the clips snap into place.
4. Ensure both clips are fully closed and the module is seated evenly.

## 5.3. Installing M.2 SSDs

1. Unscrew and remove the M.2 Shield Frozr heatsink from the desired M.2 slot.
2. Insert the M.2 SSD into the slot at an angle.
3. Gently push down the M.2 SSD and secure it with the provided EZ M.2 Clip.
4. Reattach the M.2 Shield Frozr heatsink and screw it back into place.

## 5.4. Connecting Power Supply

- Connect the 24-pin ATX main power connector from your power supply to the motherboard.
- Connect the dual 8-pin CPU power connectors to the corresponding sockets on the motherboard.
- Connect SATA power cables to your storage devices (SSDs/HDDs) and then connect SATA data cables to the motherboard's SATA ports.

## 5.5. Installing Graphics Card

1. Open the latch on the PCIe 5.0 x16 slot.
2. Align your graphics card with the slot and press down firmly until it clicks into place.
3. Secure the graphics card to your PC case with screws.
4. Connect the necessary PCIe power cables from your power supply to the graphics card.

# 6. Operating the Motherboard

## 6.1. First Boot and BIOS Setup

Upon the first power-on, the system will enter the BIOS (Basic Input/Output System) setup. The MSI Click BIOS 5 offers both an EZ Mode for quick adjustments and an Advanced Mode for detailed configuration.

- Press **DEL** or **F2** during startup to enter BIOS setup.
- In EZ Mode, you can monitor CPU temperature, motherboard temperature, CPU speed, and DDR speed. You can also adjust boot priority and enable XMP profiles.
- For advanced settings, switch to Advanced Mode (usually by pressing**F7**). Here you can access detailed configurations for CPU, memory, storage, integrated peripherals, graphics, USB, power management, and more.

- The BIOS also allows for overclocking (OC) settings, with both Normal and Expert modes for fine-tuning performance. Exercise caution when adjusting overclocking settings.
- Use the M-Flash utility within BIOS to update the BIOS firmware.

### 6.2. Driver Installation

After installing your operating system, install the necessary drivers from the provided USB drive or download the latest versions from the official MSI website. This includes chipset drivers, LAN drivers, Wi-Fi drivers, audio drivers, and any other utility drivers.

### 6.3. Software Utilities

MSI provides various software utilities to enhance your experience, such as MSI Center for system monitoring and optimization, Mystic Light for RGB control, and Live Update for driver and BIOS updates.

## 7. Maintenance

- Keep the computer case clean and free of dust to ensure optimal airflow and prevent overheating. Regularly clean dust filters.
- Ensure all cables are securely connected to prevent intermittent issues.
- Periodically check for BIOS updates and driver updates on the MSI website to ensure system stability and performance.
- Monitor system temperatures using software utilities to prevent thermal throttling.

## 8. Troubleshooting

| Problem | Possible Solution |
| --- | --- |
| System does not power on. | Check power supply connections to the motherboard (24-pin ATX and 8-pin CPU).<br>Ensure the power supply unit (PSU) is switched on.<br>Verify the front panel power button connection to the motherboard. |
| No display output. | Ensure the monitor is connected to the graphics card (if dedicated) or motherboard (if using integrated graphics).<br>Reseat the graphics card and memory modules.<br>Try a different display cable or monitor. |
| System unstable or crashes. | Check CPU and motherboard temperatures.<br>Verify RAM compatibility and ensure it's properly seated.<br>Update BIOS and drivers to the latest versions.<br>If overclocking, revert to default settings. |
| Wi-Fi or LAN not working. | Install or update Wi-Fi/LAN drivers.<br>Ensure Wi-Fi antenna is securely connected.<br>Check network cable connection for LAN.<br>Verify settings in BIOS. |

## 9. Specifications

| Feature | Detail |
| --- | --- |
| CPU Socket | LGA 1700 |
| Supported Processors | 12th/13th Gen Intel Core, Pentium Gold, Celeron Processors |
| Chipset | Intel Z790 |
| RAM Technology | DDR4 |
| Memory Speed (Max) | 5333+(OC) MHz |
| PCIe Slot | PCIe 5.0 x16 |
| M.2 Slots | Lightning Gen 4 x4 M.2 with M.2 Shield Frozr |
| LAN | 2.5Gbps LAN |
| Wireless Connectivity | Wi-Fi 6E |
| USB Ports | USB 3.2 Gen 2x2 and others |
| Power Design | 16+1+1 Duet Rail Power System |
| Form Factor | ATX |
| Dimensions (LxWxH) | 12 x 9.6 x 2.5 inches |

## 10. Warranty and Support

MSI products come with a standard manufacturer's warranty. For detailed warranty terms and conditions, please refer to the warranty card included in your product package or visit the official MSI website.
For technical support, driver downloads, BIOS updates, and FAQs, please visit the official MSI support page: www.msi.com/support
You can also contact MSI customer service for further assistance.

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