MSI MPG Z390 Gaming Plus

MSI MPG Z390 Gaming Plus LGA1151 Motherboard User Manual

Model: MPG Z390 Gaming Plus | Brand: MSI

1. Introduction

This manual provides detailed instructions for the installation, configuration, and maintenance of your MSI MPG Z390 Gaming Plus motherboard. Designed for Intel 8th and 9th Generation Core, Pentium Gold, and Celeron processors, this motherboard offers a robust platform for high-performance computing.



Image 1.1: MSI MPG Z390 Gaming Plus Motherboard and Packaging

Please read this manual thoroughly before beginning installation to ensure proper setup and to maximize the performance and longevity of your system.

2. Key Features

The MSI MPG Z390 Gaming Plus motherboard includes several features designed to enhance your computing experience:

- Supports 9th i9-9900K, i7-9700K, i5-9600K and 8th Generation Intel Core / Pentium Gold / Celeron processors for LGA 1151 socket.
- Supports dual channel DDR4 Memory, up to 4400(OC) MHz.
- Features 2x TURBO M.2 slots and Intel Optane Memory Ready for high-speed storage.
- Equipped with Turbo USB 3.1 GEN2 for fast data transfer.
- Includes an Extended Heatsink design for improved thermal performance.
- Intel CNVi Ready: Supports Intel CNVi Wi-Fi module, IEEE802.11 AC wave2.
- Optimized for esports, streaming, and gaming.
- Operating system support for Windows 10 64-bit.

3. Package Contents

Verify that all items are present in your motherboard package:

- MSI MPG Z390 Gaming Plus Motherboard
- Cables and Connectors (e.g., SATA cables)
- Quick Setup Guide / User Manual

If any items are missing or damaged, please contact your retailer or MSI support.

4. Motherboard Layout and Components

Familiarize yourself with the layout of the motherboard before installation. This section highlights key components and connectors.



Image 4.1: Top-down view of the MSI MPG Z390 Gaming Plus Motherboard

Key areas include the LGA1151 CPU socket, four DDR4 DIMM slots, multiple PCIe expansion slots, two M.2 slots for NVMe SSDs, and six SATA 6Gb/s ports. The motherboard also features various headers for front panel connectivity, USB ports, and fan control.



Image 4.2: Angled view showing CPU socket and DDR4 memory slots



Image 4.3: Angled view showing PCIe expansion slots and M.2 slots

5. Installation Guide

5.1. Pre-Installation Checklist

- Ensure you have a compatible CPU (LGA1151, Intel 8th/9th Gen).
- Gather necessary tools: Phillips screwdriver, anti-static wrist strap (recommended).
- Prepare your PC case by installing standoffs if not pre-installed.
- Unplug the power supply from the wall outlet.

5.2. CPU Installation

1. Open the CPU socket lever and lift the load plate.
2. Carefully align the CPU with the socket, matching the golden triangle on the CPU to the triangle on the socket. Do not force the CPU into the socket.
3. Lower the load plate and secure it with the lever.

5.3. CPU Cooler Installation

Install your CPU cooler according to its manufacturer's instructions. Ensure proper thermal paste application and secure mounting for optimal cooling.

5.4. Memory (RAM) Installation

1. Open the clips on both ends of the DIMM slot.
2. Align the notch on the DDR4 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.

5.5. Storage Device Installation

- **M.2 SSDs:** Insert the M.2 SSD into the M.2 slot at an angle, then push it down and secure it with the provided screw.
- **SATA Drives:** Connect SATA data cables to the motherboard's SATA ports and to your SSDs/HDDs. Connect SATA power cables from your power supply to the drives.

5.6. Expansion Card Installation

Insert your graphics card or other PCIe expansion cards into the appropriate PCIe slots and secure them with the case's retention mechanism.

5.7. Connecting Peripherals and Power

Connect all necessary cables to the motherboard, including front panel connectors (power switch, reset switch, USB, audio), fan headers, and the main 24-pin ATX power connector and 8-pin CPU power connector from your power supply.

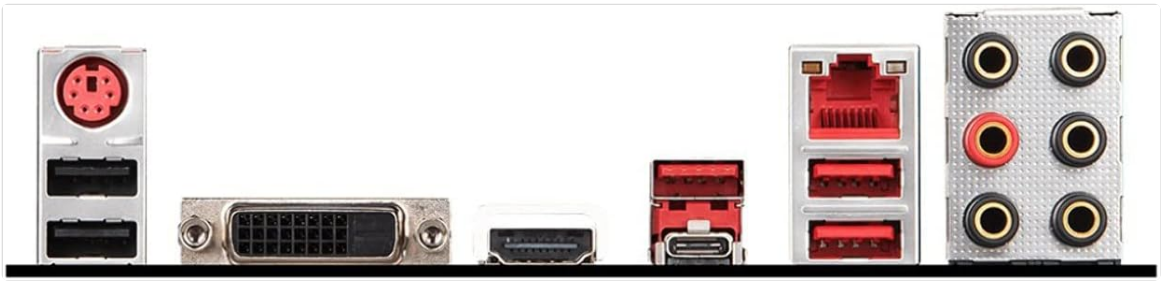


Image 5.1: Rear I/O Panel for external device connections

Connect your monitor to the graphics card or the motherboard's integrated graphics output (HDMI, DVI) if using a compatible CPU.

5.8. Mounting the Motherboard

Carefully place the motherboard into the PC case, aligning the screw holes with the standoffs. Secure the motherboard with screws.

6. Initial Setup and Operation

6.1. First Boot

After assembly, connect your monitor, keyboard, and mouse. Power on the system. The system should display the MSI logo and enter the BIOS/UEFI setup or begin the operating system installation process.

6.2. BIOS/UEFI Configuration

To enter the BIOS/UEFI setup, press the **Delete** key during the boot process. Here you can configure boot order, enable XMP for memory, adjust fan speeds, and monitor system status.

6.3. Driver Installation

After installing your operating system, install the necessary drivers for the motherboard's components (chipset, audio, LAN, etc.). These can typically be found on the MSI support website for your specific motherboard model.

7. Maintenance

7.1. Cleaning

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

7.2. BIOS/UEFI Updates

Periodically check the MSI website for BIOS/UEFI updates. Updates can provide improved compatibility, stability, and new features. Follow the instructions provided by MSI carefully when performing a BIOS update to avoid system damage.

7.3. Driver Updates

Keep your system drivers updated to ensure optimal performance and compatibility with new software and hardware. Download drivers only from the official MSI website or trusted component manufacturers.

8. Troubleshooting

This section addresses common issues you might encounter.

- **No Power:** Check all power connections (24-pin ATX, 8-pin CPU, GPU). Ensure the power supply is switched on.
- **No Display:** Verify monitor connection and input source. Reseat the graphics card and RAM modules. Check if the CPU requires integrated graphics or if a dedicated GPU is installed.
- **System Not Booting:** Listen for beep codes (if your system has a speaker) or check diagnostic LEDs on the motherboard (if present) for error indications. Reseat all components.
- **System Instability:** Ensure all components are compatible and properly seated. Check temperatures. Update drivers and BIOS.

For more complex issues, consult the detailed troubleshooting section in the full user manual available on the MSI support website or contact MSI technical support.

9. Specifications

Feature	Specification
Brand	MSI
Model Name	MPG Z390 GAMING PLUS
CPU Socket	LGA 1151
Compatible Processors	8th Generation Intel Core, 9th Generation Intel Core, Intel Celeron, Intel Pentium Gold
Chipset Type	Intel Z390
RAM Memory Technology	DDR4
Memory Clock Speed	4400 MHz (OC)

Feature	Specification
Number of USB 2.0 Ports	6
Wireless Type	802.11a/b/g/n/ac (Intel CNVi Ready)
Platform	Windows 10
Item Weight	1.52 pounds
Product Dimensions	12 x 9.6 x 1.2 inches
Manufacturer	MSI Computer

10. Warranty and Support

MSI products are covered by a limited warranty. For detailed warranty terms and conditions, please refer to the warranty card included with your product or visit the official MSI website. Keep your proof of purchase for warranty claims.
For technical support, driver downloads, and additional resources, please visit the official MSI support website:
www.msi.com/support
You can also find frequently asked questions (FAQs) and community forums on the MSI website for further assistance.

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