ASUS ROG STRIX Z690-F GAMING WIFI

ASUS ROG Strix Z690-F Gaming WiFi 6E Motherboard User Manual

Model: ROG STRIX Z690-F GAMING WIFI | Brand: ASUS

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your ASUS ROG Strix Z690-F Gaming WiFi 6E ATX Motherboard. Designed for 12th Gen Intel Core processors, this motherboard offers robust power delivery, optimized cooling, and advanced connectivity features including Wi-Fi 6E, DDR5 memory, and PCI Express 5.0. Its design incorporates futuristic elements, an iridescent ROG logo, and Aura lighting for a distinct aesthetic.

2. Key Features

- **Intel LGA 1700 Socket:** Supports 12th Gen Intel Core processors, PCIe 5.0, and DDR5 memory. Ready for Windows 11.
- **AI Motherboard Features:** Includes AI Overclocking, AI Cooling, AI Networking (GameFirst VI), and AI Noise Cancellation for enhanced performance and user experience.
- **Robust Power Solution:** Features 16+1 power stages with ProCool II power connector, high-quality alloy chokes, and durable capacitors to support multi-core processors.
- **Optimized Thermal Design:** Equipped with VRM heatsink, PCH fanless heatsink, double-sided M.2 heatsinks, hybrid fan headers, and Fan Xpert 4 utility for efficient cooling.
- **High-performance Gaming Networking:** Integrated with On-board WiFi 6E and Intel 2.5 Gb Ethernet with ASUS LANGuard for stable and fast network connectivity.

3. Setup Guide

Follow these steps for proper installation of your motherboard components:

1. **CPU Installation:** Carefully open the CPU socket lever, align the CPU with the socket keying, and gently place it into the socket. Close the lever to secure the CPU.
2. **RAM Installation:** Open the clips on the DDR5 DIMM slots. Align the memory modules with the slots and

press down firmly until the clips snap into place.

3. **Storage Installation (M.2 SSDs):** Locate the M.2 slots. Remove the heatsink and protective film. Insert the M.2 SSD at an angle and secure it with the provided screw or latch mechanism. Reattach the heatsink.
4. **Graphics Card Installation:** Open the PCIe slot latch. Insert your graphics card firmly into the PCIe 5.0 x16 slot until it clicks. Secure the card with a chassis screw.
5. **Power Connections:** Connect the 24-pin ATX power connector and the 8-pin + 4-pin CPU power connectors from your power supply to the motherboard.
6. **Front Panel Connections:** Connect the front panel headers (power button, reset button, USB ports, audio jacks) to their respective pins on the motherboard. Refer to the detailed motherboard layout in the full manual for precise locations.

4. Operating Instructions

Once your system is assembled, follow these general operating guidelines:

- **BIOS/UEFI Access:** Power on your system and repeatedly press the 'Delete' or 'F2' key to enter the BIOS/UEFI setup utility. Here you can configure boot options, system settings, and monitor hardware.
- **Driver Installation:** After installing your operating system, install all necessary drivers for the motherboard, chipset, audio, LAN, and Wi-Fi. These are typically provided on a support DVD or available for download from the ASUS support website.
- **System Monitoring:** Utilize ASUS Armoury Crate software for real-time system monitoring, fan control, and Aura Sync RGB lighting customization.

5. Maintenance

Regular maintenance ensures optimal performance and longevity of your motherboard:

- **Cleaning:** Periodically clean dust from the motherboard and heatsinks using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** Check the ASUS support website for the latest BIOS updates. Updating the BIOS can improve system stability, compatibility, and performance. Follow the instructions carefully to avoid system damage.
- **Driver Updates:** Keep your motherboard drivers updated to ensure compatibility with new software and hardware, and to benefit from performance improvements and bug fixes.

6. Troubleshooting

Here are solutions for common issues:

- **No Power/No POST:** Verify all power connections (24-pin ATX, 8-pin + 4-pin CPU) are securely seated. Check that the CPU, RAM, and graphics card are correctly installed. Try booting with only essential components.
- **Peripheral Not Detected:** Ensure the peripheral is correctly connected. Install or update the relevant drivers. Check BIOS settings for proper port configuration.
- **Network Connectivity Issues:** Verify Ethernet cable connection or Wi-Fi antenna installation. Ensure network drivers are installed and updated. Check router/modem status.
- **BIOS Update Issues:** If a BIOS update fails, use the BIOS FlashBack feature (if available on your model) to recover. Refer to the specific instructions for BIOS FlashBack.

7. Specifications

Feature	Detail
CPU Socket	LGA 1700
Compatible Processors	12th Gen Intel Core, Pentium Gold, Celeron Processors
Chipset	Intel Z690
RAM Memory Technology	DDR5
Memory Speed	Up to 6400 MHz (OC)
PCIe Slots	1 x PCIe 5.0 x16, 2 x PCIe 3.0 x16 (x4 mode), 1 x PCIe 3.0 x1
M.2 Slots	4 x M.2 slots (PCIe 4.0)
SATA Ports	6 x SATA 6Gb/s ports
Wireless Connectivity	Wi-Fi 6E (802.11ax), Bluetooth v5.2
LAN	Intel 2.5Gb Ethernet
USB Ports	Rear: USB 3.2 Gen 2x2 Type-C, USB 3.2 Gen 2 Type-A/C, USB 3.2 Gen 1, USB 2.0. Front: USB 3.2 Gen 2x2 Type-C, USB 3.2 Gen 1, USB 2.0
Audio	ROG SupremeFX 7.1 Surround Sound High Definition Audio CODEC ALC4080
Form Factor	ATX (12 inch x 9.6 inch)

8. Warranty and Support

ASUS provides a standard manufacturer's warranty for this product. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official ASUS support website. Extended protection plans are available for purchase, offering additional coverage for 3 or 4 years, or a monthly complete protection plan. For technical assistance, driver downloads, and BIOS updates, please visit the ASUS support portal.

9. Visual Guide

Product Images



The ASUS ROG Strix Z690-F Gaming WiFi 6E Motherboard shown alongside its retail packaging, highlighting the product's design and branding.



A top-down perspective of the ASUS ROG Strix Z690-F Gaming WiFi 6E Motherboard, showcasing the LGA 1700 socket, DDR5 DIMM slots, and heatsink designs.



The ASUS ROG Strix Z690-F Gaming WiFi 6E Motherboard displayed with its various included accessories, such as cables, Wi-Fi antenna, and documentation.



A close-up view of the rear Input/Output (I/O) panel of the motherboard, detailing the various ports for connectivity, including USB, Ethernet, Wi-Fi antenna connectors, and audio jacks.

Official Product Videos

This video provides a concise product overview of the ASUS ROG Strix Z690-F Gaming WiFi 6E Motherboard, highlighting its key features and design elements.

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