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ASUS ROG STRIX Z790-F GAMING WIFI II

ASUS ROG Strix Z790-F Gaming WiFi II Motherboard Instruction Manual

Model: ROG STRIX Z790-F GAMING WIFI II

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1. INTRODUCTION

The ASUS ROG Strix Z790-F Gaming WiFi II motherboard is engineered for high-performance computing, supporting Intel 12th, 13th, and 14th Gen Core processors. It features a robust power delivery system, advanced cooling solutions, and cutting-edge connectivity options including Wi-Fi 7 and PCIe 5.0, making it ideal for demanding gaming and professional applications.

2. KEY FEATURES

- **Intel LGA 1700 Socket:** Ready for Intel Core 14th, 13th, and 12th Gen Processors, Pentium Gold, and Celeron Processors.
- **Robust Power Solution:** 16+1+2 power stages rated for 90A per stage with dual ProCool II power connectors, high-quality alloy chokes, and durable capacitors for multi-core processors.
- **Optimized VRM Thermals:** Massive heatsinks with integrated I/O cover, high-conductivity thermal pads, and an L-shaped heatpipe.
- **Ample M.2 Support:** One PCIe 4.0 M.2 slot with a heatsink and backplate, and four additional PCIe 4.0 M.2 slots with heatsinks.
- **Abundant Connectivity:** USB 20Gbps, 10Gbps, and 5Gbps rear I/O ports, front-panel USB connector with PD 3.0 up to 30W, PCIe 5.0 x16 SafeSlot, HDMI 2.1, and DisplayPort 1.4.
- **Wi-Fi 7:** Integrated Wi-Fi 7 for ultra-fast wireless connectivity.
- **2.5 Gb LAN:** High-speed wired network connectivity.

3. SETUP GUIDE

3.1. Unboxing and Initial Inspection

Carefully remove the motherboard from its packaging. Inspect for any visible damage. Ensure all accessories are present, including the Wi-Fi 7 antenna, SATA cables, and documentation.



Figure 1: ASUS ROG Strix Z790-F Gaming WiFi II Motherboard and included accessories.

3.2. CPU Installation

1. Locate the LGA 1700 socket on the motherboard.
2. Open the CPU socket lever and remove the protective cover.
3. Align your Intel 12th, 13th, or 14th Gen processor with the socket, ensuring the gold triangle on the CPU matches the triangle on the socket.
4. Gently place the CPU into the socket. Do not force it.
5. Close the CPU socket lever to secure the processor.

3.3. RAM Installation

1. Connect the 24-pin ATX power connector from your power supply to the motherboard.
2. Connect the 8-pin and 4-pin (or dual 8-pin) CPU power connectors to the motherboard.

4. OPERATING INSTRUCTIONS

4.1. BIOS Configuration

Upon first boot, enter the BIOS/UEFI setup by pressing the DEL or F2 key during startup. Here you can configure boot order, enable XMP for memory, adjust fan curves, and fine-tune system settings.

4.2. Operating System Installation

Insert your Windows installation media (USB drive or DVD) and follow the on-screen prompts to install your operating system. Ensure all necessary drivers are installed after OS installation for optimal performance.

4.3. Network Connectivity

Connect the included Wi-Fi 7 antenna to the rear I/O panel for wireless internet access. Alternatively, use an Ethernet cable for the 2.5 Gb LAN port for wired connectivity.



Figure 3: The rear I/O panel of the ASUS ROG Strix Z790-F Gaming WiFi II Motherboard, showing various USB ports,

5. MAINTENANCE

5.1. Cleaning

Regularly clean your PC components, including the motherboard, to prevent dust buildup. Use compressed air to remove dust from heatsinks, fan headers, and other components. Ensure the system is powered off and unplugged before cleaning.

5.2. BIOS Updates

Periodically check the ASUS support website for the latest BIOS updates. Updating the BIOS can improve system stability, compatibility, and performance. Follow the instructions provided by ASUS for safe BIOS flashing, often utilizing the BIOS Flashback feature on the rear I/O panel.

5.3. Driver Updates

Keep all motherboard drivers (chipset, LAN, audio, etc.) updated to their latest versions. These can be downloaded from the ASUS support website.

6. TROUBLESHOOTING

6.1. No Display on Boot

If your system powers on but shows no display, check the following:

- Ensure your monitor is connected to the graphics card (if dedicated) or the motherboard's integrated graphics ports (HDMI/DisplayPort).
- Reseat your RAM modules. Try booting with only one RAM stick.
- Check the POST code display on the motherboard (if available) for diagnostic information.

6.2. System Instability/Crashes

Frequent crashes or instability can be caused by various factors:

- Ensure all drivers are up to date.
- Check CPU and GPU temperatures. Overheating can lead to instability.
- Run memory diagnostic tools to check for faulty RAM.
- Reset BIOS settings to default using the Clear CMOS button on the rear I/O panel or by removing the CMOS battery.

6.3. BIOS Flashback

If your system fails to boot after a BIOS update or due to an incompatible CPU, use the BIOS Flashback feature. Refer to the motherboard manual for detailed instructions on how to use this feature, which typically involves a USB drive and a dedicated button on the rear I/O panel.

Video 1: ROG Strix Z790-F Gaming WIFI II Product Overview. This video provides a brief overview of the motherboard's features and design.

7. SPECIFICATIONS

| Feature | Detail |
|-----------------------|--|
| Brand | ASUS |
| Series | ROG STRIX Z790-F GAMING WIFI II |
| Item Model Number | ROG STRIX Z790-F GAMING WIFI II |
| CPU Socket | LGA 1700 |
| Compatible Processors | Intel Core™ 14th & 13th Gen, Intel Core 12th Gen, Pentium Gold, Celeron Processors |
| Chipset Type | Intel Z790 |
| RAM Memory Technology | DDR5 |
| Maximum RAM | 64 GB |
| PCIe Slots | 1x PCIe 5.0 x16 SafeSlot, 4x PCIe 4.0 M.2 slots |
| LAN | 2.5 Gb LAN |
| Wireless Connectivity | Wi-Fi 7 |
| USB Ports | USB 20Gbps, 10Gbps, 5Gbps (rear I/O), Front-Panel USB with PD 3.0 (up to 30W) |
| Video Output | HDMI 2.1, DisplayPort 1.4 |
| Form Factor | ATX |
| Item Weight | 1.5 pounds |
| Product Dimensions | 11.81 x 11.81 x 11.81 inches |

8. WARRANTY & SUPPORT

This ASUS ROG Strix Z790-F Gaming WiFi II Motherboard comes with a manufacturer's warranty. For detailed warranty terms, conditions, and registration, please refer to the official ASUS website or the documentation included in your product packaging.

For technical support, driver downloads, and further assistance, please visit the [ASUS Store](#) or the official ASUS support portal.