ASUS ROG STRIX B760-I GAMING WIFI

ASUS ROG Strix B760-I Gaming WiFi Motherboard Instruction Manual

Model: ROG STRIX B760-I GAMING WIFI
Brand: ASUS

1. Introduction

This instruction manual provides detailed guidance for the installation, operation, maintenance, and troubleshooting of your ASUS ROG Strix B760-I Gaming WiFi mini-ITX motherboard. Designed for Intel 13th and 12th Gen processors, this motherboard offers robust power delivery, efficient cooling, and advanced connectivity for a high-performance compact PC build.

2. Product Overview

2.1 KEY FEATURES

- **Intel LGA 1700 Socket:** Ready for 13th Gen Intel Core, and 12th Gen Intel Core, Pentium Gold, and Celeron Processors.
- **Robust Power Solution:** 8 + 1 power stages rated for 80A, ProCool power connector, high-quality alloy chokes, and durable capacitors.
- **Optimized VRM Thermals:** Thick heatsinks bridged to the VRM with high-conductivity thermal pads, and an integrated I/O cover for added surface area.
- **Ample M.2 Support:** Two PCIe 4.0 M.2 slots, one with a heatsink, and the other strategically placed on the rear.
- **Next-Gen Networking:** On-board Intel Wi-Fi 6E (802.11ax) and Intel 2.5G Ethernet with ASUS LANGuard.
- **Bluetooth:** Version 5.3.

2.2 MOTHERBOARD COMPONENTS

Figure 1: ASUS ROG Strix B760-I Gaming WiFi Motherboard and Retail Box. The image displays the compact mini-ITX motherboard alongside its retail packaging, highlighting its design and key features like Aura Sync and WiFi 6E support.

2.2.1 Built for Speed and Expansion

Built For Speed And Expansion

ProCool Power Connector

8+1 Power Stages

Intel® Socket LGA 1700
for 13th Gen Intel® Core™,
and 12th Gen Intel® Core™,
Pentium® Gold , and Celeron® Processors

DDR5 7600+ (OC)
• 2 x DIMM
• Dual channel

Expansion Slot
• 1 x PCIe 5.0 x16 Safeslot (x16) [CPU]
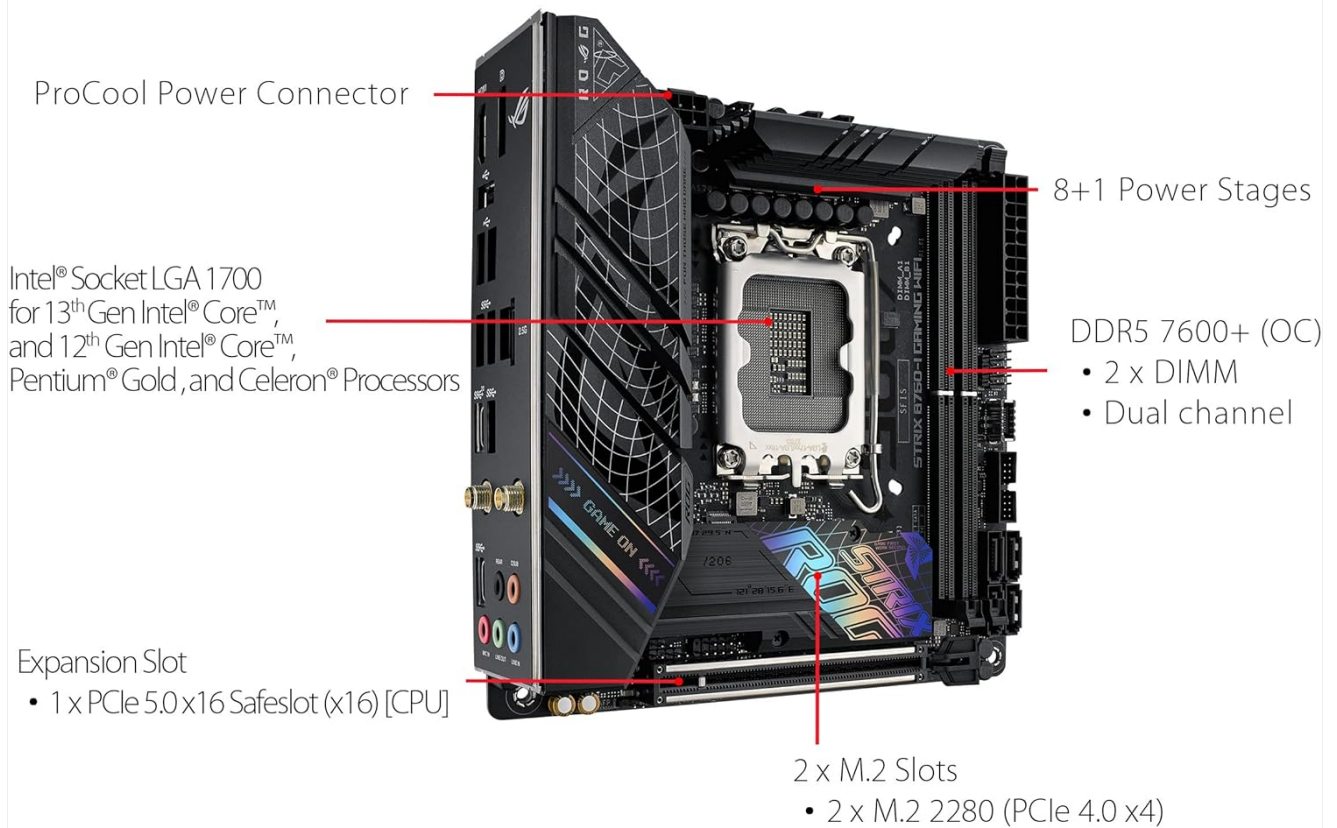
2 x M.2 Slots
• 2 x M.2 2280 (PCIe 4.0 x4)

Figure 2: Motherboard layout highlighting key components. This image shows the Intel LGA 1700 socket, 8+1 power stages, 2x DDR5 DIMM slots supporting up to 7600 MT/s, 1x PCIe 5.0 x16 SafeSlot, and 2x M.2 slots (PCIe 4.0 x4).

- **CPU Socket:** Intel LGA 1700 for 13th and 12th Gen Intel Core processors.
- **Power Delivery:** 8 + 1 power stages with ProCool power connector.
- **Memory Slots:** 2 x DDR5 Dual Channel DIMM slots, supporting up to 7600 MT/s (OC) and 96GB capacity.
- **Expansion Slot:** 1 x PCIe 5.0 x16 SafeSlot for graphics cards.
- **M.2 Slots:** Two PCIe 4.0 M.2 slots for high-speed storage.

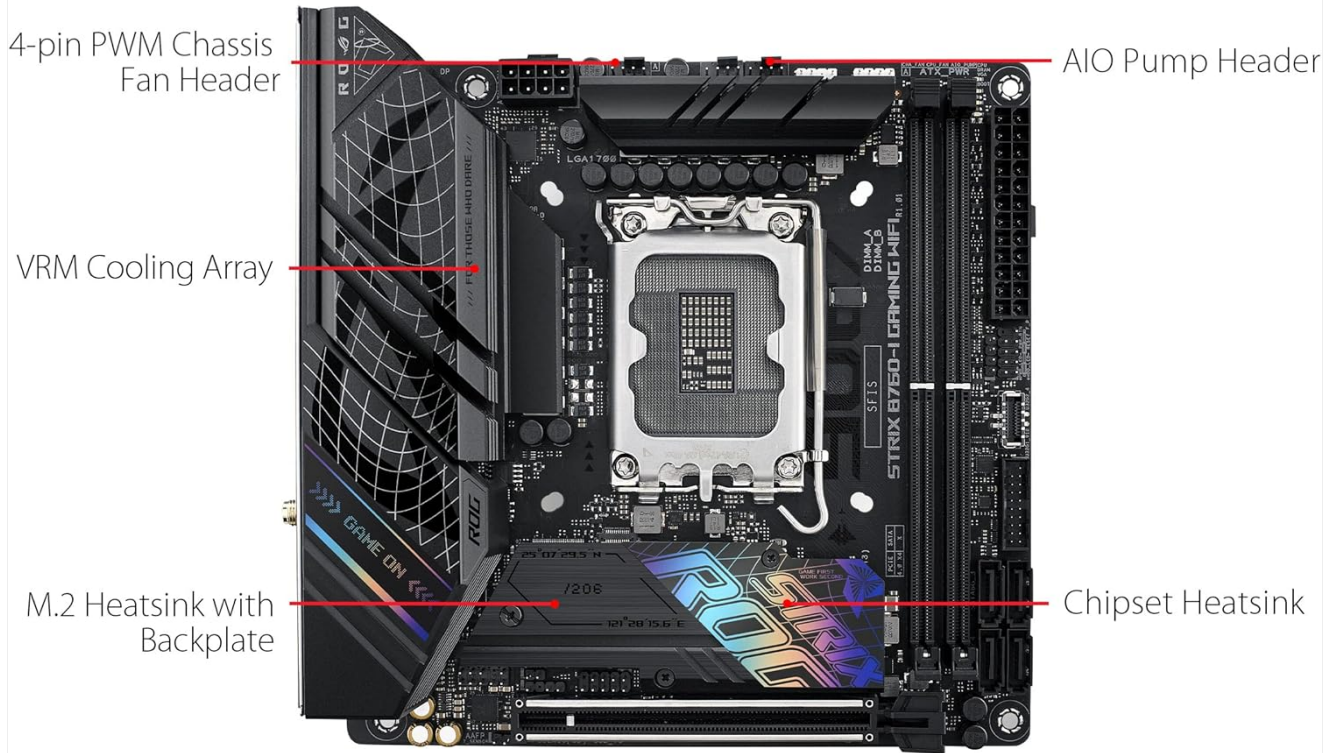## 2.2.2 Comprehensive Cooling

Comprehensive Cooling

Figure 3: Motherboard cooling features. This image highlights the VRM Cooling Array, M.2 Heatsink with Backplate, Chipset Heatsink, 4-pin PWM Chassis Fan Header, and AIO Pump Header, ensuring optimal thermal management.

- **VRM Cooling Array:** Large heatsinks for efficient heat dissipation from voltage regulator modules.
- **M.2 Heatsink:** Dedicated heatsink with backplate for the primary M.2 slot to prevent thermal throttling.
- **Chipset Heatsink:** Ensures stable operation of the B760 chipset.
- **Fan Headers:** Includes 4-pin PWM Chassis Fan Header, CPU Fan Header, and AIO Pump Header for comprehensive cooling control.

2.2.3 Total Gaming Immersion

Total Gaming Immersion

1 x 3-Pin Addressable Gen 2 RGB Header
1 x 4-Pin Aura RGB Header

SupremeFX S1220A Codec + Savitech SV3H712 AMP
- Impedance sense
- 120 dB SNR stereo playback output
- 113 dB SNR recording input
- SupremeFX shielding

Sonic Studio III + Sonic Studio Virtual Mixer + Sonic Suite Companion
Sonic Radar III
DTS® Sound Unbound™

Figure 4: Motherboard features for gaming immersion. This image points out the SupremeFX S1220A Codec with Savitech SV3H712 AMP, impedance sense, 120 dB SNR stereo playback output, 113 dB SNR recording input, SupremeFX shielding, and Aura RGB headers for customizable lighting.

- **Audio:** SupremeFX S1220A Codec + Savitech SV3H712 AMP for high-fidelity audio, featuring impedance sense, 120 dB SNR stereo playback, 113 dB SNR recording, and SupremeFX shielding.
- **RGB Headers:** 1 x 3-Pin Addressable Gen 2 RGB Header and 1 x 4-Pin Aura RGB Header for customizable lighting effects.

2.2.4 Full Connectivity

Full Connectivity

1 x HDMI® Port
1 x Display Port

3 x USB 2.0 Ports
(3 x Type-A)

4 x USB 3.2 Gen 1 Ports
(3 x Type-A + 1 x USB Type-C®)
Intel® 2.5G Ethernet Port

1 x USB 3.2 Gen 2x2
(USB Type-C®)

Wi-Fi 6E

5 x Audio Jacks

1 X USB 3.2 Gen 2
USB Type-C®
Front Panel Connector

1 x USB 3.2 Gen 1 Header
(Supports 2 USB 3.2
Gen 1 Ports)

4 x SATA 6Gb/s Ports

1 x USB 2.0 Header
(Supports 2 x USB 2.0 Ports)

Figure 5: Motherboard connectivity options. This image details the rear I/O panel with HDMI, DisplayPort, multiple USB ports (including USB 3.2 Gen 2x2 Type-C), Intel 2.5G Ethernet, Wi-Fi 6E, and 5 audio jacks. It also shows internal headers for USB 3.2 Gen 2, USB 3.2 Gen 1, USB 2.0, and SATA 6Gb/s ports.

- **Rear I/O Ports:** 1 x HDMI® Port, 1 x DisplayPort, 3 x USB 2.0 Ports (3 x Type-A), 4 x USB 3.2 Gen 1 Ports (3 x Type-A + 1 x USB Type-C®), 1 x USB 3.2 Gen 2x2 (USB Type-C®), Intel® 2.5G Ethernet Port, Wi-Fi 6E, 5 x Audio Jacks.
- **Internal Headers:** 1 x USB 3.2 Gen 2 Front Panel Connector, 1 x USB 3.2 Gen 1 Header (Supports 2 USB 3.2 Gen 1 Ports), 1 x USB 2.0 Header (Supports 2 x USB 2.0 Ports), 4 x SATA 6Gb/s Ports.

2.2.5 What's in the Box

What's in the box

Figure 6: Contents of the retail package. The image shows the ASUS ROG Strix B760-I Gaming WiFi motherboard, manual, ROG Strix stickers & thank you card, ROG key chain, thermal pad, and SATA cables.

- ASUS ROG Strix B760-I Gaming WiFi Motherboard
- User Manual
- ROG Strix Stickers & Thank You Card
- ROG Key Chain
- Thermal Pad
- SATA Cables

2.3 PRODUCT VIDEOS

Your browser does not support the video tag.

Video 1: Product Demonstration Video. This video provides a brief demonstration of the ASUS ROG Strix B760-I Gaming WiFi motherboard's features and design.

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Video 2: Product Overview Video. This video offers a comprehensive overview of the ASUS ROG Strix B760-I Gaming WiFi motherboard, detailing its various components and functionalities.

3. Setup

3.1 PRE-INSTALLATION CHECKLIST

- Ensure you have all necessary components: CPU, CPU cooler, DDR5 RAM, M.2 SSDs, power supply, graphics card (if not using integrated graphics), and PC case.
- Gather tools: Phillips-head screwdriver, anti-static wrist strap (recommended).
- Read the full manual before starting.

3.2 MOTHERBOARD INSTALLATION

1. **Prepare the Case:** Install standoffs in your mini-ITX case according to the motherboard's mounting holes.
2. **Install CPU:** Open the CPU socket lever, align the CPU with the socket (triangle mark on CPU matches socket), gently place the CPU, and close the lever.
3. **Install CPU Cooler:** Follow the cooler manufacturer's instructions to install the CPU cooler. Apply thermal paste if not pre-applied.
4. **Install RAM:** Open the clips on the DDR5 DIMM slots, align the RAM modules with the notch, and press firmly until the clips lock into place.
5. **Install M.2 SSDs:** For the front M.2 slot, remove the heatsink, insert the M.2 SSD, secure it with the Q-Latch mechanism, and reattach the heatsink. For the rear M.2 slot, insert the SSD and secure it with the provided screw.
6. **Mount Motherboard:** Carefully place the motherboard into the case, aligning the I/O shield with the case opening and the mounting holes with the standoffs. Secure with screws.
7. **Install Graphics Card:** Insert the PCIe 5.0 x16 graphics card into the slot until it clicks. Secure it to the case with screws.
8. **Connect Power Supply:** Connect the 24-pin ATX power connector and the 8-pin CPU power connector to the motherboard. Connect PCIe power cables to the graphics card.
9. **Connect Peripherals:** Connect front panel headers (USB, audio, power/reset buttons, LEDs), SATA cables, and case fans.

4. Operating Your System

4.1 FIRST BOOT-UP

- After assembly, connect your monitor, keyboard, and mouse.
- Power on your system. The system should display the ASUS ROG logo and enter the BIOS/UEFI interface.

4.2 BIOS/UEFI SETUP

- Press **DEL** or **F2** during boot to enter BIOS.
- Configure boot order to install your operating system from a USB drive or optical media.
- Enable XMP/EXPO for optimal RAM performance if your memory supports it.
- Save changes and exit BIOS.

4.3 DRIVER INSTALLATION AND SOFTWARE

- After OS installation, install all necessary drivers from the ASUS support website or the provided driver DVD/USB.
- Install **ASUS Armoury Crate** for system monitoring, RGB control (Aura Sync), fan control (Fan Xpert 4), and driver/utility updates.
- Utilize **GameFirst** for network optimization and **ASUS WiFi Q-Antenna** for optimal Wi-Fi signal strength.

5. Maintenance

5.1 CLEANING

- Regularly clean dust from the motherboard, CPU cooler, and case fans using compressed air.
- Ensure the system is powered off and unplugged before cleaning.

5.2 BIOS UPDATES

- Periodically check the ASUS support website for BIOS updates to improve system stability, compatibility, and performance.
- Use the **BIOS FlashBack** feature for convenient BIOS updates without a CPU or RAM installed.

6. Troubleshooting

6.1 COMMON ISSUES AND SOLUTIONS

- **No Power/No Boot:**

  - Check all power connections (24-pin ATX, 8-pin CPU, GPU).
  - Ensure the power supply is switched on.
  - Verify front panel power button connection.

- **No Display:**

  - Ensure monitor is connected to the graphics card (or motherboard if using integrated graphics).
  - Reseat graphics card and RAM modules.
  - Try a different display cable or monitor.

- **System Instability/Crashes:**

  - Update BIOS and drivers to the latest versions.
  - Check RAM for errors using memory diagnostic tools.
  - Monitor CPU and GPU temperatures to prevent overheating.

- **Slow Performance:**

  - Ensure M.2 SSDs are properly installed and drivers are up-to-date.
  - Verify XMP/EXPO profile is enabled for RAM.
  - Check for background applications consuming resources.

6.2 CLEAR CMOS

If your system encounters issues after changing BIOS settings, you can clear the CMOS to restore default settings. Locate the **Clear CMOS button** on the rear I/O panel and press it while the system is powered off and unplugged.

7. Specifications

Feature	Detail
Brand	ASUS
Model Name	ROG STRIX B760-I GAMING WIFI
CPU Socket	LGA 1700
Chipset Type	Intel B760

Feature	Detail
RAM Memory Technology	DDR5
Memory Speed	Up to 7600 MT/s (OC)
Wireless Type	Wi-Fi 6E (802.11ax), Bluetooth 5.3
Ethernet	Intel 2.5G Ethernet
Product Dimensions	9 x 7.3 x 3.8 inches (Mini-ITX)
Item Weight	2.35 pounds
M.2 Slots	2 x PCIe 4.0 M.2 slots
PCIe Slot	1 x PCIe 5.0 x16
USB Ports	USB 3.2 Gen 2x2 Type-C, USB 3.2 Gen 1, USB 2.0

8. Warranty and Support

8.1 WARRANTY INFORMATION

ASUS products are manufactured to the highest quality standards. For detailed warranty information, please refer to the warranty card included in your product packaging or visit the official ASUS support website.

8.2 TECHNICAL SUPPORT

For technical assistance, driver downloads, or further product information, please visit the official ASUS support website:
www.asus.com/support/
You can also contact ASUS customer service for direct support.