GIGABYTE B760M A E WF6E GEN5

GIGABYTE B760M AORUS Elite WIFI6E GEN5 Motherboard User Manual

Model: B760M A E WF6E GEN5

Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your GIGABYTE B760M AORUS Elite WIFI6E GEN5 Motherboard. Please read this manual thoroughly before installing or using the product to ensure correct operation and to prevent damage.

Setup and Installation

Before beginning installation, ensure your system is powered off and unplugged from the wall outlet. Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage to components.

Motherboard Layout

Familiarize yourself with the motherboard's layout and key components before proceeding with installation.

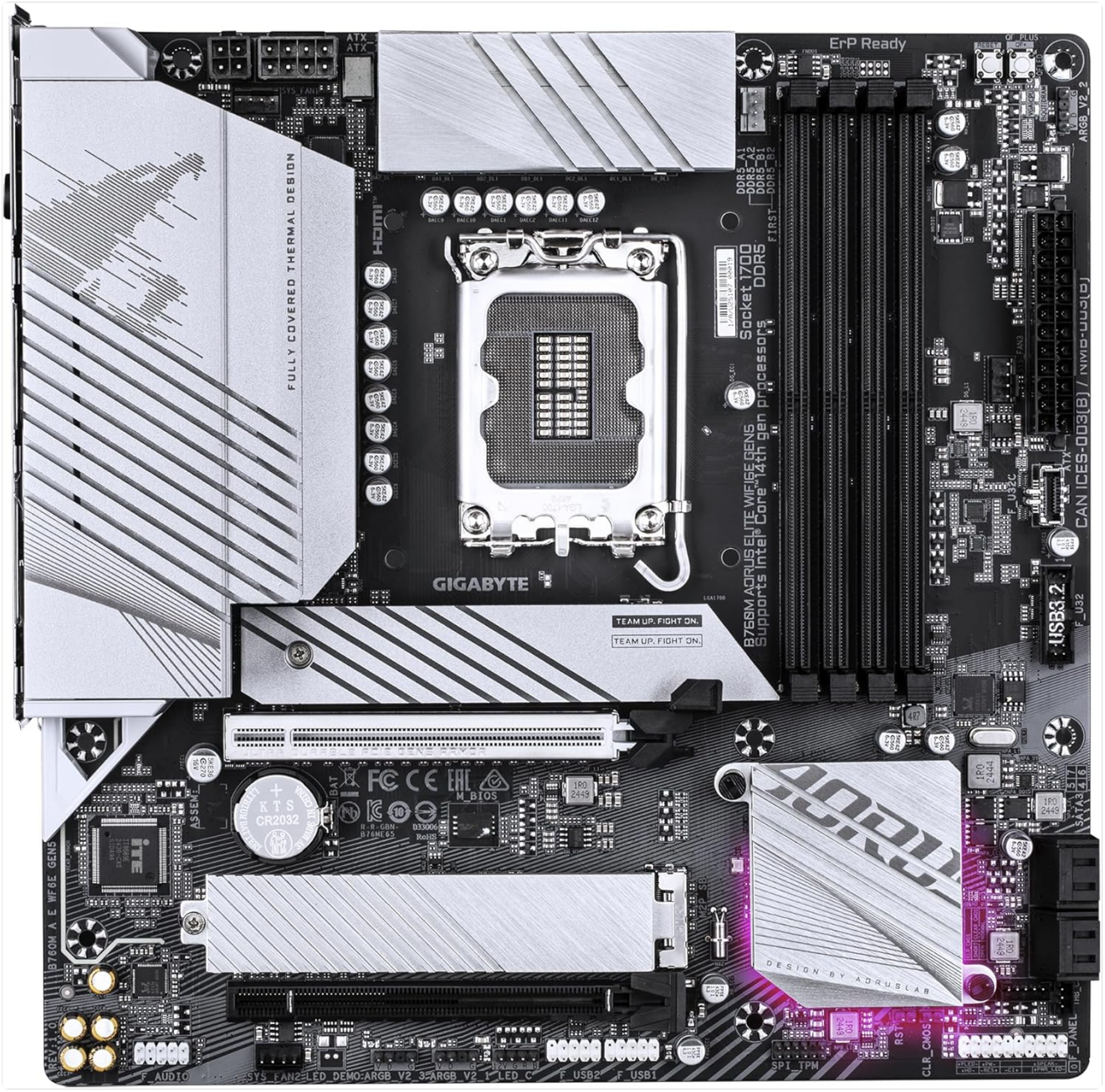

Figure 1: Top-down view of the GIGABYTE B760M AORUS Elite WIFI6E GEN5 Motherboard, showing the CPU socket, DIMM slots, PCIe slots, and M.2 slots.

Figure 2: Angled view of the motherboard, highlighting the VRM heatsinks and M.2 thermal guards.

CPU Installation (LGA 1700)

1. Locate the LGA 1700 CPU socket on the motherboard.
2. Gently push down the load lever and pull it to the side to open the CPU socket cover.
3. Align the triangular mark on the CPU with the corresponding mark on the socket. Carefully place the CPU into the socket without forcing it.
4. Close the load plate and push the load lever back into its locked position. The socket cover will pop off automatically.
5. Install the CPU cooler according to its manufacturer's instructions.

Memory (RAM) Installation

This motherboard supports DDR5 memory modules. For optimal performance, install memory modules in the recommended slots for dual-channel configuration.

1. Open the clips at both ends of the DIMM slot.
2. Align the notch on the DDR5 memory module with the key in the DIMM slot.
3. Insert the module firmly into the slot until the clips snap into place. Ensure both clips are fully closed.

Storage Device Installation (M.2 SSDs)

The motherboard features M.2 slots with EZ-Latch Plus for tool-less installation.

1. Locate the M.2 slots, typically covered by thermal guards.
2. Remove the M.2 thermal guard by unscrewing it (if applicable) or using the EZ-Latch mechanism.
3. Insert the M.2 SSD into the slot at a 30-degree angle.
4. Push the M.2 SSD down and secure it using the EZ-Latch Plus mechanism or the provided screw.
5. Reinstall the M.2 thermal guard to ensure proper cooling.

Graphics Card Installation (PCIe)

The primary PCIe 5.0 x16 slot features EZ-Latch for easy removal.

1. Open the retention clip at the end of the PCIe x16 slot.
2. Align your graphics card with the slot and press it down firmly until it clicks into place. Ensure the retention clip is closed.
3. Secure the graphics card to your PC case with screws.

Connecting Peripherals and Power

- **Power Connectors:** Connect the 24-pin ATX main power connector and the 8-pin CPU power connector from your power supply to the motherboard.
- **Front Panel Connectors:** Connect the power button, reset button, HDD LED, and front panel USB/audio headers to their respective pins on the motherboard. Refer to the motherboard diagram for exact locations.
- **SATA Devices:** Connect SATA data cables from your storage drives (HDDs/SSDs) to the SATA ports on the motherboard, and connect SATA power cables from your power supply to the drives.
- **Rear I/O Panel:** Connect your monitor, keyboard, mouse, and other USB devices to the appropriate ports on the rear I/O panel.

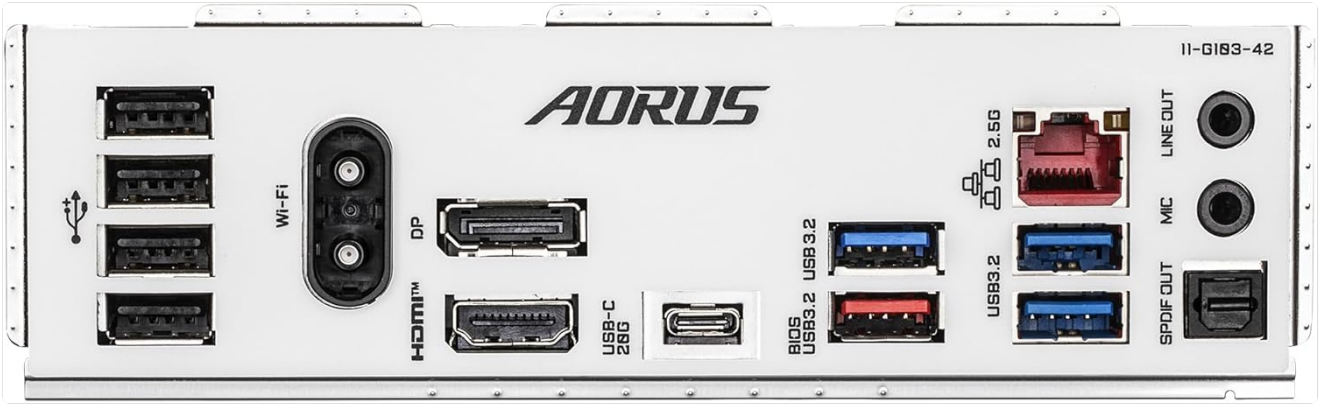

Figure 3: Rear I/O panel showing USB ports, Wi-Fi antenna connectors, HDMI, DisplayPort, 2.5GbE LAN, and audio jacks.

Wi-Fi Antenna Installation

The motherboard includes a Wi-Fi 6E module. Install the included antenna for wireless connectivity.

1. Locate the two antenna connectors on the rear I/O panel.
2. Screw the Wi-Fi antenna connectors onto the corresponding ports.
3. Position the antenna for optimal signal reception. The WIFI Compass feature can assist in finding the best orientation.

Operating Instructions

First Boot-Up and BIOS/UEFI Setup

1. After assembling all components, connect your monitor, keyboard, and mouse.
2. Plug in the power cord and turn on the power supply.
3. Press the power button on your PC case.
4. During the boot process, repeatedly press the**DEL** key to enter the BIOS/UEFI setup utility.
5. In the BIOS, you can configure system settings, boot order, and enable features like XMP for your DDR5 memory.

Driver Installation

After installing your operating system (Windows 10 or Windows 11), install the necessary drivers for optimal performance and functionality.

- **Chipset Drivers:** Essential for motherboard functionality.
- **LAN Drivers:** For 2.5GbE wired network connectivity.
- **Wi-Fi Drivers:** For Wi-Fi 6E wireless connectivity.
- **Audio Drivers:** For sound output and input.
- **Graphics Drivers:** Install drivers for your integrated or dedicated graphics card.

Drivers can be found on the GIGABYTE official website for your specific motherboard model.

XMP Profile Activation

To achieve the rated speed of your DDR5 memory (up to 5600MHz), you may need to enable the Extreme Memory Profile (XMP) in the BIOS.

1. Enter the BIOS setup utility during boot.
2. Navigate to the memory settings section (often under "Tweaker" or "Advanced Memory Settings").
3. Locate the XMP profile option and enable it. Select the desired profile if multiple are available.
4. Save changes and exit the BIOS.

Maintenance

Regular maintenance helps ensure the longevity and stable operation of your motherboard and system.

Cleaning

- Periodically clean dust from inside your PC case, especially around fans, heatsinks, and motherboard components.
- Use compressed air to gently blow away dust. Hold fans to prevent them from spinning rapidly during cleaning.
- Ensure the system is powered off and unplugged before cleaning.

BIOS Updates

GIGABYTE periodically releases BIOS updates to improve system stability, compatibility, and performance. Check the official GIGABYTE website for the latest BIOS versions for your model.

- Download the correct BIOS file for your motherboard model.
- Follow the instructions provided by GIGABYTE for updating the BIOS, typically using a utility within the BIOS or a dedicated flashing tool.
- **Caution:** Do not interrupt the BIOS update process, as this can render your motherboard inoperable.

Driver Updates

Keep your system drivers updated to ensure optimal performance and compatibility with new software and hardware. Regularly check the GIGABYTE website for updated drivers.

TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

No Power / No Boot

- Ensure all power cables (24-pin ATX, 8-pin CPU) are securely connected to the motherboard and power supply.
- Verify that the power supply is switched on and plugged into a working outlet.
- Check front panel connections (power button header) for correct installation.
- Try booting with minimal components (CPU, one RAM stick, graphics card if no integrated graphics) to isolate the issue.

No Display Output

- Ensure your monitor is connected to the correct display output (either motherboard's integrated graphics port or dedicated graphics card port).
- Verify that the graphics card is properly seated in its PCIe slot and has all necessary power cables connected.
- Test with a different monitor or display cable if possible.

System Instability / Crashes

- Check CPU and GPU temperatures to ensure they are within safe operating limits.
- Verify that RAM modules are correctly installed and consider running a memory diagnostic tool.
- Ensure all drivers are up to date.
- If XMP is enabled, try disabling it to see if memory stability improves.

BIOS Reset (Clear CMOS)

If you encounter issues after changing BIOS settings, you can reset the BIOS to its default settings.

1. Power off your system and unplug the power cord.
2. Locate the "Clear CMOS" jumper or button on the motherboard (refer to the motherboard diagram).
3. For a jumper, move the jumper cap from pins 1-2 to 2-3 for 5-10 seconds, then move it back to 1-2. For a button, press and hold it for 5-10 seconds.
4. Alternatively, remove the CMOS battery (CR2032) for 1-2 minutes, then reinsert it.
5. Plug in the power cord and power on the system.

Specifications

Feature	Detail
Model Name	B760M A E WF6E GEN5
CPU Socket	LGA 1700
Compatible Processors	Intel Core Processors 14th, 13th, and 12th Generation
Chipset	Intel B760
RAM Memory Technology	DDR5 (4 DIMMs, Dual Channel)
Memory Clock Speed	Up to 5600 MHz (with XMP)
VRM Design	Twin 12+1+1 Phase Hybrid Digital VRM
PCIe Slots	1x PCIe 5.0 x16 (with EZ-Latch), additional PCIe slots
M.2 Slots	2x PCIe 4.0 M.2 (with EZ-Latch Plus and Thermal Guard)
LAN	2.5GbE LAN
Wireless Connectivity	Wi-Fi 6E
Operating System Support	Windows 10, Windows 11
Product Dimensions	9.61 x 9.61 x 1.38 inches
Item Weight	2.93 pounds
Batteries	1 AAAA batteries required (included) - *Note: This typically refers to the CMOS battery, which is usually a CR2032 coin cell. Please verify with product packaging.*

Warranty and Support

For detailed warranty information, please refer to the warranty card included with your product or visit the official GIGABYTE website. GIGABYTE provides technical support and resources for their products.

- **Online Support:** Visit the GIGABYTE support website for FAQs, driver downloads, BIOS updates, and troubleshooting guides.
- **Contact Support:** Refer to the GIGABYTE website for contact information for technical assistance.

Always ensure you have your product model number and serial number ready when contacting support.