GIGABYTE Z790 AORUS ELITE X WIFI7

GIGABYTE Z790 AORUS Elite X WIFI7 Motherboard User Manual

Model: Z790 AORUS ELITE X WIFI7 | Brand: GIGABYTE

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your GIGABYTE Z790 AORUS Elite X WIFI7 ATX Motherboard. Designed for Intel LGA 1700 processors, this motherboard features DDR5 memory support, PCIe 5.0, Wi-Fi 7, and 2.5GbE LAN for high-performance computing.

2. SAFETY INFORMATION

Always observe the following safety precautions during installation and operation:

- Disconnect the power cord from the wall outlet before touching any components.
- Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage to components.
- Handle components by their edges; avoid touching pins or circuitry.
- Ensure proper ventilation within your PC case to prevent overheating.
- Keep the motherboard away from moisture and extreme temperatures.

3. PACKAGE CONTENTS

Verify that all items are present in your motherboard package:

- GIGABYTE Z790 AORUS Elite X WIFI7 Motherboard
- SATA Cables
- Wi-Fi Antenna
- M.2 Screws/Standoffs
- User Manual and Quick Installation Guide
- Driver CD/USB (or download instructions)

4. SETUP

4.1. Component Overview

Familiarize yourself with the layout and key components of your motherboard.

Image: GIGABYTE Z790 AORUS Elite X WIFI7 Motherboard and its retail packaging.
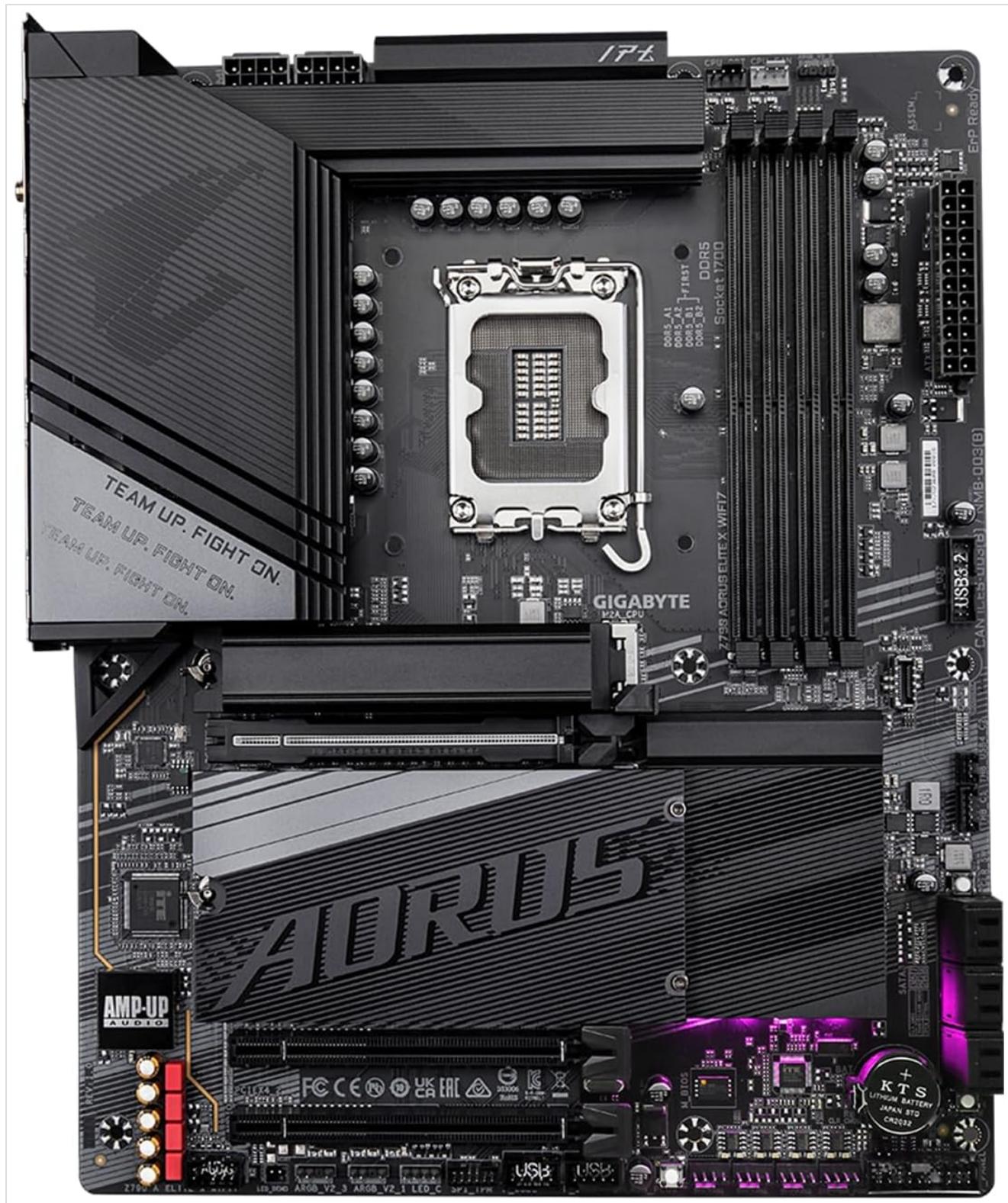
Image: Top-down view of the GIGABYTE Z790 AORUS Elite X WIFI7 Motherboard, showing the CPU socket, RAM slots, and heatsinks.
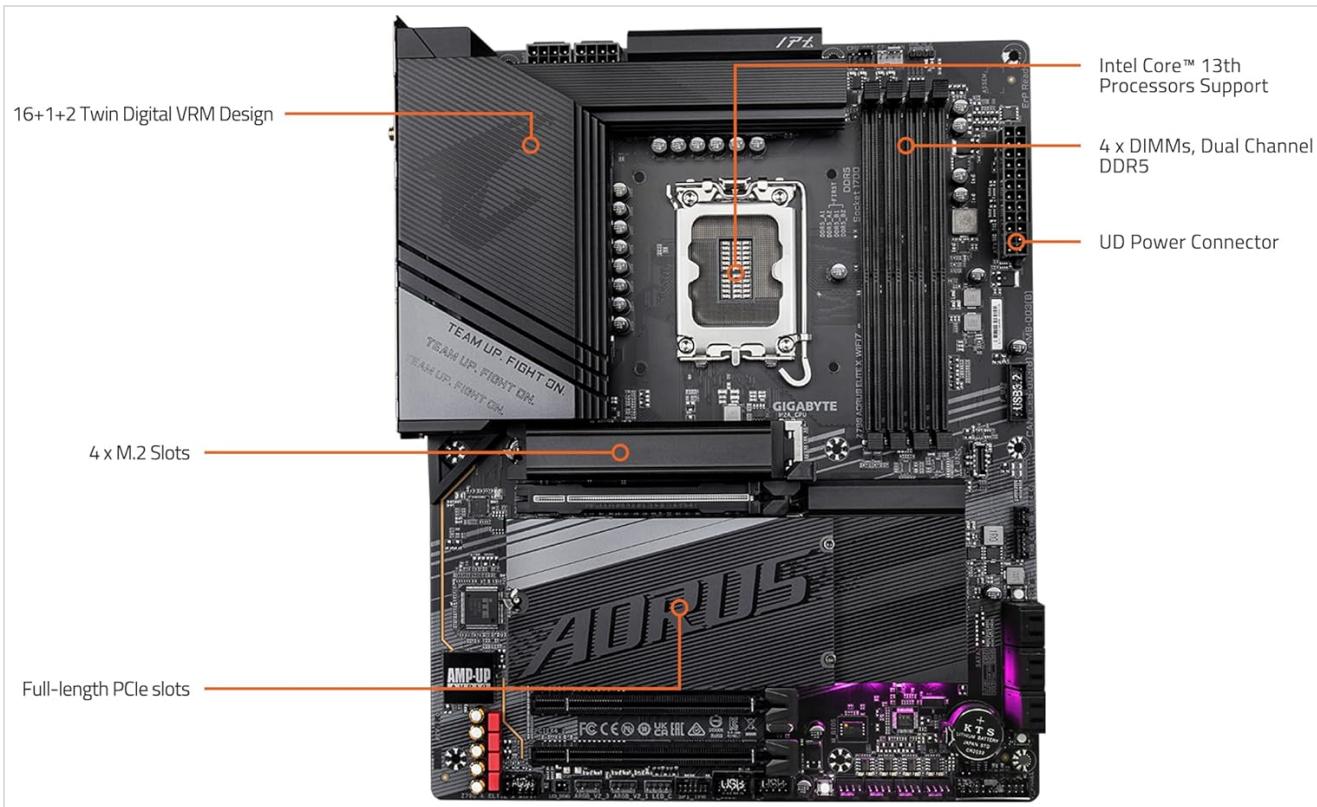
Image: Labeled diagram highlighting key components such as the Intel LGA 1700 socket, 4 DDR5 DIMM slots, 4 M.2 slots, PCIe slots, and VRM design.

Image: Close-up of the rear I/O panel, displaying USB ports, Wi-Fi antenna connectors, 2.5GbE LAN port, DisplayPort, HDMI, and audio jacks.

4.2. Installation Steps

1. **CPU Installation (LGA 1700):**

   - Open the CPU socket lever and remove the protective cover.
   - Carefully align the CPU with the socket, ensuring the notches on the CPU match the keys on the socket.
   - Gently place the CPU into the socket without forcing it.
   - Close the socket lever to secure the CPU.

2. **Memory Installation (DDR5 DIMMs):**

   - Open the clips at both ends of the DIMM slots.
   - Align the memory module with the slot, ensuring the notch on the module matches the key in the slot.
   - Press down firmly on both ends of the memory module until the clips snap into place.
   - For dual-channel operation, refer to your motherboard's specific manual for recommended slot configurations.

3. **M.2 SSD Installation:**

- Locate an available M.2 slot and remove the M.2 Thermal Guard if present.
- Insert the M.2 SSD into the slot at an angle.
- For EZ-Latch Plus designs, simply push the SSD down and rotate the latch to secure it. No screws are required.
- Reattach the M.2 Thermal Guard for optimal cooling.

4. **PCIe Card Installation:**

- Align your graphics card or other PCIe expansion card with the desired PCIe slot (e.g., PCIe 5.0 x16 slot).
- Press down firmly until the card is seated correctly and the retention clip locks into place.
- Secure the card to the chassis with a screw.

5. **Power Supply Connections:**

- Connect the 24-pin ATX main power connector from your power supply to the motherboard.
- Connect the 8-pin (or 4+4-pin) CPU power connector(s) to the motherboard.

6. **Front Panel Connections:**

- Connect the power button, reset button, HDD LED, and power LED cables from your chassis to the corresponding pins on the motherboard's front panel header. Refer to the motherboard diagram for correct pin assignments.
- Connect the USB 2.0, USB 3.2, and USB Type-C front panel cables.

7. **I/O Panel Connections:**

- Connect your monitor to the graphics card or the motherboard's DisplayPort/HDMI if using integrated graphics.
- Connect USB devices, Ethernet cable, and audio devices to the rear I/O panel ports.
- Attach the Wi-Fi antenna to the designated connectors for wireless connectivity.

5. OPERATING INSTRUCTIONS

5.1. Initial Boot and BIOS Setup

After assembling your system, power it on. Press the designated key (usually**DEL** or **F2**) during startup to enter the BIOS/UEFI setup utility. Here you can configure system settings, boot order, and enable features like XMP for memory.
The motherboard supports **Q-Flash Plus**, allowing you to update the BIOS without installing the CPU, memory, or graphics card. Refer to the GIGABYTE website for detailed instructions on using Q-Flash Plus.

5.2. Driver Installation

After installing your operating system, install the necessary drivers for the motherboard's components. These include chipset drivers, LAN drivers, Wi-Fi drivers, audio drivers, and any other peripheral drivers. Drivers can be found on the GIGABYTE support website for your specific motherboard model.

5.3. Software Utilities

GIGABYTE provides several utilities to enhance your system's performance and customization:

- **RGB FUSION 2.0:** Customize the RGB lighting effects on your motherboard and connected RGB devices.
- **Smart Fan 6:** Monitor and control fan speeds to optimize cooling and noise levels.

- **APP Center:** A central hub for managing GIGABYTE utilities and drivers.

6. MAINTENANCE

6.1. BIOS Update

Regularly check the GIGABYTE website for the latest BIOS updates. BIOS updates can improve system stability, compatibility, and performance. Use the Q-Flash or Q-Flash Plus utility for safe BIOS updates.

6.2. Cleaning

To ensure optimal performance and longevity, periodically clean your motherboard and PC case. Use compressed air to remove dust from heatsinks, fans, and other components. Ensure the system is powered off and unplugged before cleaning.

7. TROUBLESHOOTING

If you encounter issues, refer to the following common troubleshooting steps:

- **No Power:** Check all power connections (24-pin ATX, 8-pin CPU, GPU power). Ensure the power supply is switched on.
- **No Display:** Verify that the monitor is connected to the correct output (graphics card or motherboard). Reseat the graphics card and memory modules.
- **System Instability/Crashes:** This can be caused by incompatible memory, unstable overclocks, or outdated drivers. Try resetting BIOS settings to default, testing memory modules individually, and updating drivers.
- **Boot Loop:** Often related to BIOS settings or boot device issues. Try clearing CMOS or checking boot order in BIOS.
- **Peripheral Not Detected:** Ensure the device is properly connected and its drivers are installed. Test the device in a different port or system if possible.

For more advanced troubleshooting, consult the GIGABYTE support website or contact technical support.

8. SPECIFICATIONS

Feature	Specification
CPU Socket	LGA 1700
Compatible Processors	Intel 12th, 13th, and 14th Gen Processors
Chipset	Intel Z790
RAM Technology	DDR5 (Dual Channel)
DIMM Slots	4
Max Memory Capacity	128 GB
Memory Speed	Up to 3200 MHz (Native), XMP 3.0 support for higher speeds
PCIe Slots	PCIe 5.0 x16, additional PCIe slots
M.2 Slots	4 x PCIe 4.0 x4 M.2 slots

LAN	2.5GbE LAN
Wireless Connectivity	Wi-Fi 7
USB Ports	USB 3.2 Type-C (20Gb/s), USB 3.2, USB 2.0
Video Outputs	DisplayPort, HDMI
Form Factor	ATX
Dimensions (LxWxH)	13.18 x 10.62 x 3.14 inches

9. WARRANTY AND SUPPORT

GIGABYTE motherboards typically come with a manufacturer's warranty. Please refer to the warranty card included with your product or visit the official GIGABYTE website for detailed warranty terms and conditions specific to your region.

For technical support, driver downloads, BIOS updates, and further assistance, please visit the official GIGABYTE support website:

GIGABYTE Support

Related Documents - Z790 AORUS ELITE X WIFI7

B850 AORUS ELITE WIFI7 ICE (B850 A ELITE WF7 ICE) B850 AORUS ELITE WIFI7 (B850 A ELITE WF7) ユーザーズマニュアル	**GIGABYTE B850 AORUS ELITE WIFI7 Motherboard Installation and User Guide** Comprehensive guide for the GIGABYTE B850 AORUS ELITE WIFI7 motherboard, covering installation, component connections, BIOS setup, and features. Includes technical specifications and regulatory information.
B650 AORUS ELITE AX B650 AORUS ELITE User's Manual	**GIGABYTE B650 AORUS ELITE AX / B650 AORUS ELITE User's Manual** Comprehensive user's manual for the GIGABYTE B650 AORUS ELITE AX and B650 AORUS ELITE motherboards, detailing hardware installation, BIOS setup, driver installation, product specifications, and regulatory information.
BIOS Setup (Intel® 700 Series)	**GIGABYTE Intel 700 Series BIOS Setup Guide** Comprehensive guide to configuring the BIOS settings for GIGABYTE motherboards featuring Intel 700 Series chipsets. Covers Advanced Mode, Easy Mode, fan control, system settings, boot options, and more.

[GIGABYTE Z890M AORUS ELITE WIFI7 ICE Аналық Тақтасы Қосымша Нұсқаулық](#)

GIGABYTE Z890M AORUS ELITE WIFI7 ICE аналық тақтасының техникалық сипаттамалары, орнату, кәдеге жарату және байланыс ақпараты.

Z790 AORUS XTREME X

使用手册
Rev. 1004

[绿色产品标识说明]

[Z790 AORUS XTREME X](#)

Z790 AORUS XTREME X   BIOS

Z790 AORUS ELITE X WIFI7
(Z790 A ELITE X WIFI7)
Z790 AORUS ELITE X AX
Z790 AORUS ELITE X

使用手册
Rev. 1005

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BIOS