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> GIGABYTE B760M Gaming X AX DDR4 Intel LGA 1700 m-ATX Motherboard User Manual

GIGABYTE B760M GAMING X AX DDR4

GIGABYTE B760M Gaming X AX DDR4 Motherboard User Manual

Comprehensive guide for installation, operation, and maintenance of your GIGABYTE B760M Gaming X AX DDR4 motherboard.

1. INTRODUCTION

This manual provides detailed instructions for the installation, configuration, and troubleshooting of your GIGABYTE B760M Gaming X AX DDR4 motherboard. Designed for Intel LGA 1700 processors, this m-ATX motherboard offers robust performance and advanced features for a superior computing experience.



Key Features

- **Intel Socket LGA 1700:** Supports 13th and 12th Gen Series Processors.
- **Unparalleled Performance:** Hybrid 8+1+1 Phases Digital VRM Solution.
- **Dual Channel DDR4:** 4*DIMMs XMP Memory Module Support.
- **Next Generation Storage:** 2*PCIe 4.0 x4 M.2 Connectors.
- **Advanced Thermal Design & M.2 Thermal Guard:** Ensures VRM Power Stability & M.2 SSD Performance.
- **EZ-Latch:** PCIe 4.0x16 Slot with Quick Release Design.
- **Fast Networks:** 2.5GbE LAN & Intel Wi-Fi 6E 802.11 ax.
- **Extended Connectivity:** Front USB-C 10Gb/s, DP, HDMI.
- **Smart Fan 6:** Features Multiple Temperature Sensors, Hybrid Fan Headers with FAN STOP.
- **Q-Flash Plus:** Update BIOS Without Installing the CPU, Memory and Graphics Card.

2. SETUP GUIDE

2.1 Package Contents

Before you begin, ensure all components are present in the motherboard package:

- GIGABYTE B760M Gaming X AX DDR4 Motherboard
- SATA Cables
- Wi-Fi Antenna
- I/O Shield (if not pre-attached)
- M.2 Screws/Standoffs
- Driver CD/USB (or download instructions)
- Quick Installation Guide

2.2 Before You Begin

Observe the following precautions to prevent damage to the motherboard or injury:

- Always disconnect the power cord from the wall outlet before installing or removing any components.
- Wear an anti-static wrist strap or frequently touch a grounded metal object to discharge static electricity.
- Handle components by their edges, avoiding contact with pins or circuitry.
- Ensure a well-ventilated and static-free workspace.

2.3 Installation Steps

Follow these steps for proper installation of your motherboard and components:

1. **Prepare the PC Case:** Install the I/O shield into the case's rear opening. Ensure standoffs are correctly aligned for the m-ATX form factor.
2. **Install the Motherboard:** Carefully place the motherboard into the case, aligning the screw holes with the standoffs. Secure it with screws.
3. **Install the CPU:** Open the CPU socket lever. Align the triangular mark on the CPU with the mark on the socket. Gently place the CPU into the socket. Close the lever to secure the CPU.

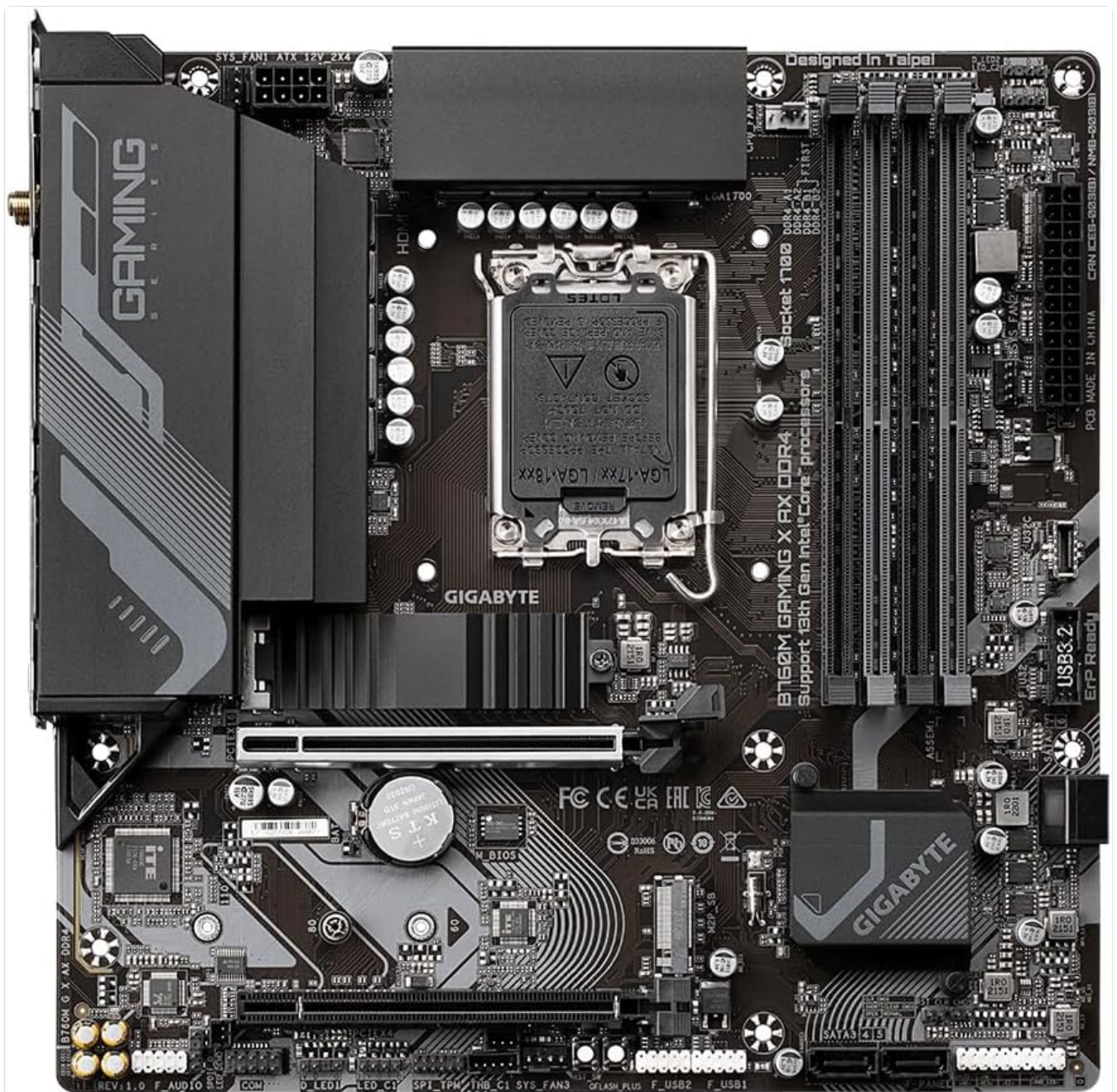


Image 2.1: Close-up view of the LGA 1700 CPU socket on the motherboard.

4. **Install the CPU Cooler:** Apply thermal paste (if not pre-applied) and install your CPU cooler according to its manufacturer's instructions. Connect the CPU fan cable to the CPU_FAN header.
5. **Install RAM Modules:** Open the clips on the DDR4 DIMM slots. Align the notch on the memory module with the key in the slot. Press down firmly on both ends until the clips snap into place. For dual-channel performance, refer to the motherboard manual for recommended slot configurations (typically slots 2 and 4).



Image 2.2: Overview of the motherboard showing the four DDR4 DIMM slots.

6. **Install M.2 SSDs:** Locate the M.2 slots. Insert the M.2 SSD at an angle into the slot, then gently push it down and secure it with the provided M.2 screw/standoff. Ensure the M.2 Thermal Guard is properly installed over the SSD for optimal performance.
7. **Install Graphics Card (GPU):** Open the latch on the PCIe 4.0 x16 slot. Align your graphics card with the slot and press down firmly until it is seated. The EZ-Latch design simplifies this process. Secure the card to the case with screws.
8. **Connect Power Supply Cables:** Connect the 24-pin ATX main power connector and the 8-pin CPU power connector (ATX_12V) from your power supply to the motherboard. Connect power to your graphics card if required.
9. **Connect Storage Devices:** Connect SATA data cables from your storage drives (HDDs/SSDs) to the SATA ports on the motherboard. Connect power cables from your power supply to these drives.
10. **Connect Front Panel Cables:** Connect the power button, reset button, HDD LED, power LED, USB ports, and audio jacks from your PC case's front panel to the corresponding headers on the motherboard. Refer to the motherboard's silkscreen labels for correct orientation.
11. **Connect Wi-Fi Antenna:** Screw the included Wi-Fi antenna onto the connectors at the rear I/O panel.

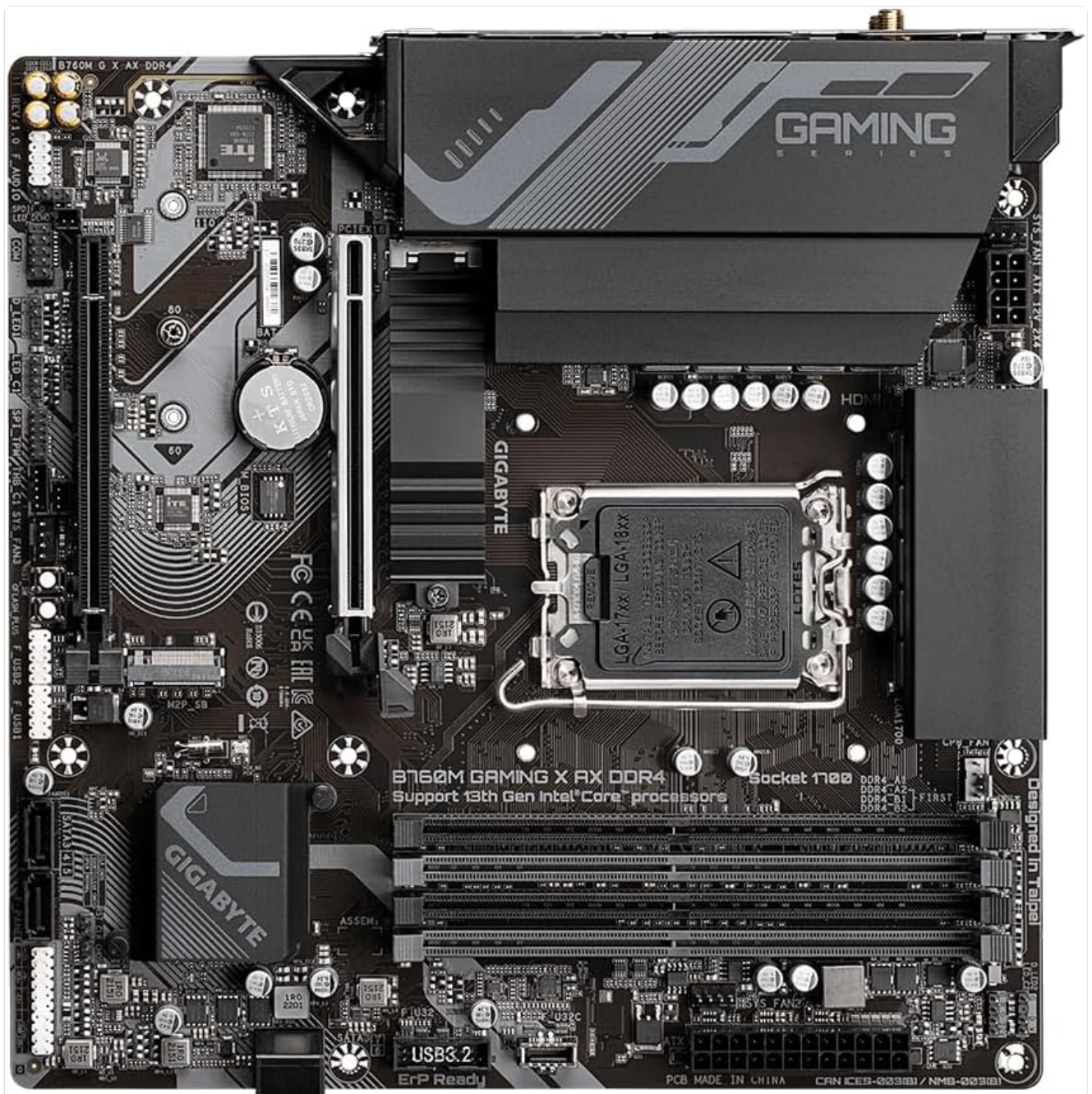


Image 2.3: The rear I/O panel of the motherboard, showing various ports including Wi-Fi antenna connectors, USB, HDMI, DisplayPort, and LAN.

3. OPERATING INSTRUCTIONS

3.1 Initial Boot-up

After completing the hardware installation, connect your monitor, keyboard, and mouse. Power on your system. The system should display the GIGABYTE splash screen. If not, check all power connections and component seating.

3.2 BIOS/UEFI Configuration

To enter the BIOS/UEFI setup, press the **DEL** key repeatedly during the initial boot-up process when the GIGABYTE logo appears. The BIOS/UEFI allows you to configure system settings such as boot order, fan speeds (Smart Fan 6), and enable/disable integrated peripherals.

3.3 Driver Installation

After installing your operating system, it is crucial to install the latest drivers for your motherboard's components. These

include chipset drivers, LAN drivers, Wi-Fi drivers, audio drivers, and any other necessary utilities. You can find the latest drivers on the official GIGABYTE website for your specific model.

4. MAINTENANCE

4.1 Cleaning

Regularly clean your PC to prevent dust buildup, which can lead to overheating and component failure. Use compressed air to remove dust from fans, heatsinks, and other components. Ensure the system is powered off and unplugged before cleaning.

4.2 BIOS Updates

GIGABYTE periodically releases BIOS updates to improve system stability, compatibility, and performance. Your motherboard features **Q-Flash Plus**, allowing you to update the BIOS without installing the CPU, memory, or graphics card. Download the latest BIOS file from the GIGABYTE website, rename it as instructed, and follow the Q-Flash Plus procedure outlined in the full manual.

5. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

Problem	Possible Cause	Solution
System does not power on.	Loose power connections, faulty power supply, incorrect front panel wiring.	Check 24-pin ATX and 8-pin CPU power cables. Verify front panel power switch connection. Test power supply.
No display on monitor.	Graphics card not seated, monitor cable loose, faulty RAM.	Reseat graphics card and RAM modules. Check monitor cable connection. Ensure monitor is on correct input.
System powers on but no POST/boot.	CPU not seated, RAM issues, corrupted BIOS.	Reseat CPU and RAM. Try one RAM stick at a time. Use Q-Flash Plus to update or reflash BIOS.
Wi-Fi/Bluetooth not working.	Drivers not installed, antenna not connected.	Install latest Wi-Fi/Bluetooth drivers from GIGABYTE website. Ensure Wi-Fi antenna is securely connected.

For more complex issues, refer to the comprehensive user manual available on the GIGABYTE support website or contact GIGABYTE technical support.

6. TECHNICAL SPECIFICATIONS

Below are the key specifications for the GIGABYTE B760M Gaming X AX DDR4 Motherboard:

Feature	Specification
CPU Socket	LGA 1700
Compatible Processors	Intel Core i3-12100, i3-12300, i5-12400, i5-12500, i5-12600, i7-12700, i7-12700K, i9-12900, i9-12900K, i9-12900KF (12th & 13th Gen)

Feature	Specification
Chipset	Intel B760
RAM Memory Technology	DDR4
Memory Clock Speed	Up to 5333 MHz (OC)
Max Memory Capacity	64 GB
M.2 Connectors	2 x PCIe 4.0 x4
SATA Ports	4
LAN	2.5GbE LAN
Wireless Connectivity	Intel Wi-Fi 6E 802.11ax
USB Ports	Front USB-C 10Gb/s, USB 3.2, USB 2.0
Video Outputs	DisplayPort, HDMI
Form Factor	m-ATX
Product Dimensions	9.61 x 9.61 x 1.26 inches
Item Weight	2.2 pounds

7. WARRANTY AND SUPPORT

GIGABYTE products are manufactured to the highest quality standards. For information regarding your product's warranty period and terms, please refer to the warranty card included with your purchase or visit the official GIGABYTE website.

For technical support, driver downloads, BIOS updates, and additional resources, please visit the official GIGABYTE support website: www.gigabyte.com/support

Please have your product model number (B760M GAMING X AX DDR4) and serial number ready when contacting support.