

## GIGABYTE Z370 AORUS Gaming 7

# GIGABYTE Z370 AORUS Gaming 7 Motherboard User Manual

Model: Z370 AORUS Gaming 7

## INTRODUCTION

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The GIGABYTE Z370 AORUS Gaming 7 Motherboard is designed to support 8th Generation Intel Core Processors, offering a robust platform for high-performance computing. This motherboard features dual-channel DDR4 memory support across four DIMM slots, USB 3.1 Gen 2 Type-C connectivity, and 3-Way Graphics Support with a durable design. It integrates Killer E2500 Gaming Network and Intel Gigabit LAN for optimized network performance, along with USB DAC-UP 2 with adjustable voltage for enhanced audio. The RGB FUSION with Multi-Zone LED light show design allows for personalized aesthetics. This manual provides essential information for setting up, operating, maintaining, and troubleshooting your motherboard.

### Key Features:

- Supports 8th Generation Intel Core Processors
- USB 3.1 Gen 2 Type-C and Front USB 3.1 Gen 2 Type-C header
- Killer E2500 Gaming Network + Intel Gigabit LAN
- RGB FUSION with Multi-Zone LED Light Show Design
- Dual Channel DDR4, 4 DIMMs
- 3-Way Graphics Support with Dual Armor and Ultra Durable Design
- M.2 Thermal Guard for optimal M.2 SSD performance
- ESS Sabre DAC for high-quality audio
- GIGABYTE UEFI Dual BIOS

## SETUP GUIDE

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This section outlines the steps for installing your GIGABYTE Z370 AORUS Gaming 7 Motherboard into your system. Ensure your system is powered off and unplugged before beginning any installation.

### 1. Motherboard Installation

1. Install the I/O shield into your computer case.

2. Carefully place the motherboard into the case, aligning the screw holes.
3. Secure the motherboard with screws, ensuring it is firmly seated.

## 2. CPU Installation

This motherboard supports 8th Generation Intel Core Processors with an LGA 1151 socket.

1. Open the CPU socket lever and remove the protective cap.
2. Align the CPU with the socket, ensuring the gold triangle on the CPU matches the triangle on the socket.
3. Gently lower the CPU into the socket. Do not force it.
4. Close the lever to secure the CPU.
5. Apply thermal paste and install the CPU cooler according to its instructions.

## 3. Memory (RAM) Installation

The motherboard has four DDR4 DIMM slots. For optimal performance, install memory modules in matched pairs for dual-channel operation.

1. Open the clips at both ends of the DIMM slot.
2. Align the memory module with the slot, ensuring the notch on the module matches the key in the slot.
3. Press down firmly on both ends of the memory module until the clips snap into place.

## 4. Storage Device Installation (M.2 SSDs and SATA Drives)

The motherboard supports multiple M.2 SSDs and SATA drives.

- **M.2 SSD:** Locate the M.2 slots (one with a thermal guard). Insert the M.2 SSD at an angle and secure it with the provided screw. Ensure the thermal guard is properly installed if applicable.
- **SATA Drives:** Connect SATA data cables from your storage drives (HDDs, SSDs, optical drives) to the SATA ports on the motherboard. Connect SATA power cables from your power supply to the drives.

### Important Note on SATA Conflicts:

When an M.2 SSD is installed in certain M.2 slots (e.g., M2M socket with heatsink), some SATA ports may become unavailable due to shared bandwidth. Refer to the motherboard's detailed manual for specific port conflict information to plan your storage configuration accordingly.

## 5. Graphics Card (GPU) Installation

The motherboard features PCI-Express x16 slots for graphics cards.

1. Open the retention clip on the PCIe x16 slot.
2. Align your graphics card with the slot and press down firmly until it clicks into place.
3. Secure the card to the case with screws.
4. Connect the necessary PCIe power cables from your power supply to the graphics card.

### Setup Tip:

It is recommended to install Windows and complete initial system setup using integrated graphics (if your CPU supports it) or a basic display output before installing a dedicated graphics card. This can help avoid display issues during the initial boot process.

## 6. 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) ATX 12V CPU power connector to the motherboard.
- Connect any additional power connectors required by your graphics card or other components.

## 7. Front Panel Connections

Connect the front panel cables (power button, reset button, HDD LED, power LED, USB ports, audio jacks) to the corresponding headers on the motherboard. Refer to the motherboard's detailed manual for exact pin layouts.



Image: The Gigabyte Z370 AORUS Gaming 7 Motherboard installed within a computer case, showcasing its various components and customizable RGB lighting.

## OPERATING INSTRUCTIONS

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Once your motherboard and components are installed, follow these steps for initial operation and configuration.

### 1. Initial Boot and BIOS/UEFI Setup

1. Connect your monitor, keyboard, and mouse.
2. Power on your system. Press the **DEL** key repeatedly during startup to enter the BIOS/UEFI setup utility.
3. **Load Optimized Defaults:** It is recommended to load optimized defaults first to ensure system stability.
4. **Set Boot Order:** Configure the boot order to prioritize your operating system installation media (USB drive or DVD).
5. **Enable XMP:** If using high-speed RAM, navigate to the memory settings and enable XMP (Extreme Memory Profile) to run your RAM at its advertised speed. Note that some software utilities might disable XMP; always verify in BIOS.
6. **Fan Control:** The GIGABYTE UEFI BIOS includes Smart Fan 5, allowing you to configure fan curves based on temperature sensors. This helps optimize cooling and reduce noise.
7. Save changes and exit the BIOS.

### 2. Operating System Installation

Insert your Windows 10 (64-bit recommended) installation media and follow the on-screen prompts to install the operating system on your chosen storage drive.

### 3. Driver Installation

After installing the operating system, install the necessary drivers for your motherboard components (chipset, LAN, audio, etc.) from the GIGABYTE support website or the included driver disc. Install graphics card drivers separately from the GPU manufacturer's website.

### 4. GIGABYTE Software Utilities

GIGABYTE provides several utilities to enhance your experience:

- **APP Center:** A central hub for GIGABYTE utilities.
- **EasyTune:** For system monitoring and performance tuning, including CPU overclocking. Note that EasyTune may sometimes reset XMP settings. Always verify RAM settings in the BIOS after using such utilities.
- **RGB FUSION:** Customize the multi-zone LED lighting on your motherboard and connected RGB devices. Settings can also be configured directly in the BIOS.
- **Cloud Station:** For cloud-based file management.



Image: The GIGABYTE AORUS logo illuminated with customizable RGB lighting, a feature of the RGB FUSION system.

## MAINTENANCE

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Regular maintenance helps ensure the longevity and optimal performance of your motherboard and system.

- **Dust Removal:** Periodically clean dust from inside your computer case, especially from fans, heatsinks, and ventilation grilles. Use compressed air for best results. Ensure the system is powered off and unplugged before cleaning.
- **Cable Management:** Ensure all cables are neatly routed and not obstructing airflow.
- **BIOS Updates:** Check the GIGABYTE support website for the latest BIOS updates. BIOS updates can improve system stability, compatibility, and performance. Follow the instructions provided by GIGABYTE carefully when updating the BIOS.
- **Driver Updates:** Keep your motherboard and component drivers updated to ensure compatibility and performance.
- **Physical Inspection:** Occasionally inspect the motherboard for any loose connections, damaged components, or signs of wear.

## TROUBLESHOOTING

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This section provides solutions to common issues you might encounter with your GIGABYTE Z370 AORUS Gaming 7 Motherboard.

### No Display on Initial Boot:

- Ensure all power cables (24-pin ATX, 8-pin CPU, GPU power) are securely connected.
- Verify that your monitor cable is connected to the correct display output (either integrated graphics or dedicated GPU).
- If using a dedicated graphics card, try removing it and booting with integrated graphics (if your CPU supports it) to rule out GPU issues.
- Reseat RAM modules. Try booting with only one RAM stick in the recommended slot.
- Clear CMOS by removing the CMOS battery for a few minutes or using the clear CMOS jumper (refer to the detailed manual).

### System Instability or Crashes:

- Ensure all drivers are up to date.
- Check CPU and GPU temperatures. Overheating can cause instability.
- Verify RAM stability. Run a memory diagnostic tool.
- If overclocking, revert to default settings to check for stability.
- Check power supply connections and ensure your PSU has sufficient wattage for your components.

## SATA Devices Not Detected:

- As noted in the setup section, installing M.2 SSDs can disable certain SATA ports. Consult your motherboard's detailed manual for a diagram of shared bandwidth.
- Ensure SATA data and power cables are securely connected to both the drive and the motherboard/PSU.
- Try different SATA ports and cables.
- Check BIOS settings to ensure SATA controllers are enabled and configured correctly (e.g., AHCI mode).

## BIOS/UEFI Issues (e.g., XMP not enabling, error code 66):

- Ensure your BIOS is updated to the latest stable version.
- If XMP is not enabling, manually set memory timings and voltage if you are comfortable, or try a different XMP profile if available.
- Error code 66 on resume from sleep is a known issue for some users and typically does not affect proper functioning. If it causes problems, ensure all drivers are updated and consider a BIOS update.
- If using GIGABYTE's EasyTune software, be aware it might sometimes reset XMP settings. Always verify RAM settings in the BIOS after using such utilities.

## SPECIFICATIONS

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Feature	Detail
Brand	GIGABYTE
Model Name	Z370 AORUS Gaming 7
CPU Socket	LGA 1151
Compatible Processors	8th Generation Intel Core
Chipset Type	Intel Z370
RAM Memory Technology	DDR4
Memory Slots Available	4
Ram Memory Maximum Size	64 GB
Memory Clock Speed	Up to 2400 MHz (and higher with XMP/OC)
Graphics Card Interface	PCI-Express x16
Total SATA Ports	6
M.2 Slots	3
USB 3.1 Gen 2 Type-C	Yes (Rear and Front Header)
Ethernet Ports	2 (Killer E2500 Gaming Network + Intel Gigabit LAN)
Audio	ESS Sabre DAC
Form Factor	ATX (305mm X 244mm)
Item Weight	4.15 Pounds

## WARRANTY AND SUPPORT

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### Warranty Information:

The GIGABYTE Z370 AORUS Gaming 7 Motherboard typically comes with a 3-year limited warranty. Please refer to the official GIGABYTE website or your purchase documentation for the most accurate and up-to-date warranty terms and conditions specific to your region.

### **Technical Support:**

For technical assistance, driver downloads, BIOS updates, and further product information, please visit the official GIGABYTE support website. You can usually find FAQs, troubleshooting guides, and contact information for customer service there.

**GIGABYTE Official Website:** [www.gigabyte.com](http://www.gigabyte.com)