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ASUS TUF Z370 Plus Gaming

ASUS TUF Z370-PLUS GAMING Motherboard User Manual

Model: TUF Z370 Plus Gaming

1. INTRODUCTION

This manual provides detailed instructions for the installation, configuration, and operation of your ASUS TUF Z370-PLUS GAMING motherboard. Designed for 8th Generation Intel Core processors, this ATX motherboard offers robust performance and durability. Please read this manual thoroughly before installing or using the product to ensure correct setup and optimal performance.

2. SAFETY INFORMATION

- Always disconnect the power cable from the wall socket before touching any internal components.
- Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage to components.
- Handle components by their edges to avoid touching sensitive parts.
- 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 listed below are present in your motherboard package. If any item is missing or damaged, contact your retailer.

- TUF Z370 Plus Gaming motherboard
- User's manual
- I/O Shield
- Supporting DVD
- CPU installation tool
- Vertical M.2 Bracket set

- M.2 Screw package
- SATA 6Gb/s cable (4)
- STRIX Door Hanger
- SLI HB BRIDGE (2-WAY-S)
- Strix series sticker
- MB Cablemod Coupon
- ASUS 2T2R Dual band Wi-Fi moving antennas (Wi-Fi 802.11a/b/g/n/ac compliant)
- Cable ties packs
- CPU Fan Holder

4. SETUP

4.1 Motherboard Overview

Familiarize yourself with the layout of the ASUS TUF Z370-PLUS GAMING motherboard. This overview highlights key components and connectors.



Image 1: Top-down view of the ASUS TUF Z370-PLUS GAMING Motherboard, showing the CPU socket, RAM slots, PCIe slots, and various headers.

4.2 CPU Installation (LGA 1151)

1. Locate the LGA 1151 socket on the motherboard.
2. Push down the load lever and pull it out to open the CPU socket cover.
3. Carefully align the notches on your 8th Generation Intel Core processor with the keys on the socket. Ensure

the golden triangle on the CPU matches the triangle on the socket.

4. Gently place the CPU into the socket without applying force.
5. Close the socket cover and push the load lever back into place until it clicks. The plastic protective cap will pop off automatically.
6. Install the CPU cooler according to its manufacturer's instructions.

4.3 Memory Installation (DDR4)

The motherboard supports DDR4 memory modules. For optimal performance, install modules in matched pairs into the designated dual-channel slots.

1. Open the retention clips at both ends of the DIMM slot.
2. Align the notch on the DDR4 memory module with the key in the DIMM slot.
3. Insert the module firmly into the slot until the retention clips snap into place.
4. Repeat for additional memory modules, following the motherboard's manual for recommended slot population for dual-channel configuration.

4.4 Storage Installation

4.4.1 M.2 SSD Installation

The motherboard features dual M.2 slots for high-speed NVMe or SATA M.2 SSDs.

1. Locate the M.2 slot(s) on the motherboard.
2. Remove the M.2 screw and standoff from the desired slot.
3. Insert the M.2 SSD into the slot at a 30-degree angle.
4. Push the M.2 SSD down and secure it with the screw and standoff.

4.4.2 SATA Drive Installation

Connect your SATA hard drives or SSDs to the SATA 6Gb/s ports.

1. Connect one end of a SATA data cable to a SATA port on the motherboard.
2. Connect the other end of the SATA data cable to your storage device.
3. Connect a SATA power cable from your power supply unit (PSU) to the storage device.

4.5 Expansion Card Installation

Install graphics cards or other PCIe expansion cards into the available PCIe slots.

1. Align your expansion card with the desired PCIe slot.
2. Press down firmly until the card is seated correctly and the retention clip locks into place.
3. Secure the card to the PC case with a screw.
4. For graphics cards, connect the necessary PCIe power cables from your PSU.

4.6 Power Connections

Connect the main power cables from your power supply unit to the motherboard.

- **24-pin ATX Power Connector:** Connect the main 24-pin power cable from your PSU to the 24-pin connector on the motherboard.
- **8-pin ATX 12V Power Connector:** Connect the 8-pin (or 4+4 pin) CPU power cable from your PSU to the 8-pin connector near the CPU socket.

4.7 Front Panel Connections

Connect your PC case's 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 diagram in the user manual for exact pin assignments.

5. OPERATING INSTRUCTIONS

5.1 First Boot and BIOS Setup

1. After assembling all components, connect your monitor, keyboard, and mouse.
2. Power on your system. Press the **DEL** key or **F2** key during startup to enter the BIOS/UEFI setup utility.
3. In the BIOS, you can configure boot order, system time, fan speeds (using FanXpert 4 Core), and other system settings.
4. Save your changes and exit the BIOS to boot into your operating system installer.

5.2 Driver Installation

After installing your operating system, install the necessary drivers for your motherboard components. These can be found on the included supporting DVD or downloaded from the official ASUS support website.

- Chipset Drivers
- LAN Drivers (Gigabit LAN)
- Audio Drivers
- USB 3.1 Drivers
- Graphics Drivers (for integrated graphics or discrete GPU)

5.3 ASUS Software Utilities

ASUS provides several utilities to enhance your system's performance and customization.

- **ASUS AURA Sync:** Control the RGB lighting on your motherboard and compatible peripherals.
- **FanXpert 4 Core:** Monitor and control system fans for optimal cooling and noise levels.
- **AI Suite 3:** An all-in-one utility for system tuning, monitoring, and updates.

6. MAINTENANCE

6.1 Cleaning Your Motherboard

Regular cleaning helps maintain optimal performance and longevity.

- Ensure the system is powered off and unplugged before cleaning.
- Use compressed air to remove dust from components, especially heatsinks and fan blades.
- For stubborn dirt, use a soft, lint-free cloth lightly dampened with isopropyl alcohol.
- Avoid using harsh chemicals or abrasive materials.

6.2 BIOS Updates

Periodically check the ASUS support website for BIOS updates. BIOS updates can improve system stability, compatibility, and performance. Follow the instructions provided by ASUS carefully when performing a BIOS update

to avoid system damage.

7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

7.1 No Display or System Fails to Boot

- **Check Power Connections:** Ensure the 24-pin ATX and 8-pin CPU power cables are securely connected.
- **Reseat Components:** Remove and re-install the CPU, RAM modules, and graphics card.
- **Clear CMOS:** Refer to your motherboard manual for instructions on how to clear the CMOS (Complementary Metal-Oxide-Semiconductor) settings, which can resolve boot issues.
- **Test with Minimal Components:** Try booting with only the CPU, one RAM stick, and the graphics card (if no integrated graphics) to isolate the problem.

7.2 System Instability or Crashes

- **Check Temperatures:** Use monitoring software to check CPU and GPU temperatures. Overheating can cause instability.
- **Update Drivers:** Ensure all motherboard and component drivers are up to date.
- **Test Memory:** Run a memory diagnostic tool (e.g., Windows Memory Diagnostic) to check for RAM errors.
- **Check PSU:** Ensure your power supply unit has sufficient wattage for all components.

8. SPECIFICATIONS

Key technical specifications for the ASUS TUF Z370-PLUS GAMING Motherboard.

Feature	Specification
Brand	ASUS
Model Name	TUF Z370 Plus Gaming
CPU Socket	LGA 1151
Compatible Processors	8th Generation Intel Core
Chipset Type	Intel Z370
RAM Memory Technology	DDR4
Memory Clock Speed	2400 MHz (Supports higher via OC)
Ram Memory Maximum Size	64 GB
Memory Slots Available	4
Total SATA Ports	6
M.2 Slots	Dual M.2
USB 3.1 Gen 2	Yes
Gigabit LAN	Yes

Graphics Card Interface	Integrated (via CPU)
Total Number of HDMI Ports	1
DVI Port	1
Form Factor	ATX
Item Weight	1.5 Pounds

9. WARRANTY INFORMATION

The ASUS TUF Z370-PLUS GAMING Motherboard comes with a **5-year warranty**. This warranty covers defects in materials and workmanship under normal use. For detailed terms and conditions, please refer to the warranty card included in your package or visit the official ASUS support website.

Keep your proof of purchase for warranty claims.

10. TECHNICAL SUPPORT

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

www.asus.com/support/

You may also contact ASUS customer service directly for personalized support.