

ASUS Z170 PRO GAMING

ASUS Z170 PRO Gaming Motherboard User Manual

Model: Z170 PRO GAMING

1. INTRODUCTION

This manual provides detailed instructions for the installation, configuration, and maintenance of your ASUS Z170 PRO Gaming ATX Motherboard. This motherboard is designed to support 6th-generation Intel Core i7/i5/i3/Pentium/Celeron processors in the LGA1151 package. It features integrated graphics, memory, and PCI Express controllers, supporting onboard graphics output, two-channel (4-DIMM) DDR4 memory, and 16 PCI Express 3.0/2.0 lanes for robust performance.

2. PACKAGE CONTENTS

Verify that all items listed below are present in your motherboard package. If any item is damaged or missing, contact your retailer.

- User's Manual
- I/O Shield
- SATA 6Gb/s cable(s) (4 cables included)
- M.2 Screw Package
- CPU installation tool
- Supporting DVD
- SLI bridge
- 12 in 1 Cable Label (s)

3. PRODUCT FEATURES

The ASUS Z170 PRO Gaming motherboard incorporates several features designed to enhance system performance and user experience:

- **LGA1151 Socket:** Supports 6th Generation Intel Core Desktop Processors with DDR4 memory compatibility.
- **SupremeFX Audio:** Provides high-fidelity audio output for an immersive sound experience.
- **Intel Gigabit Ethernet with LANGuard:** Offers high-speed, protected network connectivity.
- **USB 3.1 Type A/C & M.2:** Enables ultra-speedy data transfer for faster system responsiveness and gaming.

- **Gamer's Guardian:** Features highly-durable components and smart DIY features for enhanced longevity and ease of assembly.

4. SETUP AND INSTALLATION

Before installing any components, ensure your system is powered off and disconnected from the power outlet. Handle the motherboard by its edges to avoid static discharge.

4.1 Motherboard Layout



Image Description: This image displays a top-down view of the ASUS Z170 PRO Gaming motherboard. Key components visible include the LGA1151 CPU socket at the center, four DDR4 DIMM slots to its right, multiple PCIe expansion slots below the CPU, and various headers and connectors around the board's perimeter. The I/O panel is visible on the left edge, and the Z170 chipset

heatsink with "PRO GAMING" branding is located at the bottom right.

4.2 CPU Installation

The motherboard uses an LGA1151 socket. Carefully align the CPU with the socket, ensuring the golden triangle on the CPU matches the triangle on the socket. Lower the CPU gently into the socket without forcing it. Close the load plate and secure the retention lever.

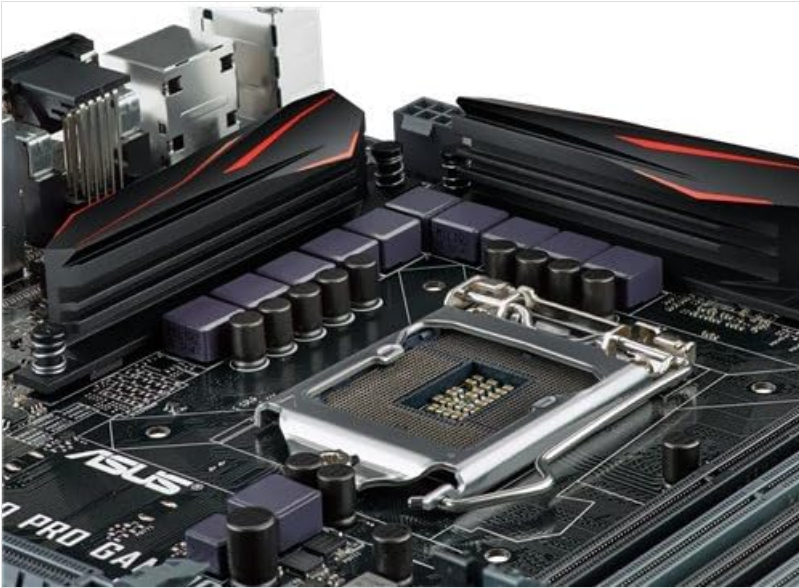


Image Description: A close-up view of the LGA1151 CPU socket on the ASUS Z170 PRO Gaming motherboard. The metal load plate is open, revealing the pins within the socket. The surrounding area shows power delivery components and heatsinks, indicating the robust design for CPU stability.

4.3 Memory (RAM) Installation

Insert DDR4 memory modules into the DIMM slots. Ensure the notches on the memory modules align with the keys in the DIMM slots. Press down firmly on both ends of the memory module until the clips on the slots snap into place.

4.4 Storage Device Installation

The motherboard supports M.2 SSDs and SATA 6Gb/s devices. Install M.2 SSDs into the dedicated M.2 slot and secure with the provided screw. Connect SATA drives using the SATA cables to the SATA ports on the motherboard.

4.5 Expansion Card Installation

Install graphics cards or other PCIe expansion cards into the appropriate PCI Express slots. Ensure the card is fully seated and secured with the case's retention mechanism.



Image Description: An angled view of the ASUS Z170 PRO Gaming motherboard, highlighting the multiple PCI Express slots. The red accents on the heatsinks and along the board's edge are visible, contributing to the gaming aesthetic. The I/O panel connectors are also partially visible on the left.

4.6 Power Connections

Connect the 24-pin ATX power connector and the 8-pin CPU power connector from your power supply unit (PSU) to the corresponding ports on the motherboard. Ensure all power connections are secure.

4.7 Front Panel and I/O Connections

Connect your case's front panel headers (power button, reset button, USB ports, audio jacks) to the corresponding pins on the motherboard. Refer to the motherboard layout diagram in the full user manual for precise pin locations.



Image Description: This image provides a close-up of the rear I/O panel of the ASUS Z170 PRO Gaming motherboard. Various ports are visible, including USB ports (USB 3.0, USB 3.1 Type-A and Type-C), HDMI, DVI-D, DisplayPort, Gigabit Ethernet, and audio jacks, along with a PS/2 combo port.

5. OPERATING SYSTEM AND DRIVERS

After hardware installation, install your preferred operating system. Following the OS installation, install the necessary drivers for the motherboard components. The included Supporting DVD contains most drivers. For the latest drivers and utilities, visit the official ASUS support website for the Z170 PRO Gaming model.

5.1 BIOS/UEFI Setup

The motherboard features a UEFI BIOS interface. To access the BIOS, press the **Delete** key during system startup.

The UEFI provides options for system configuration, boot order, and advanced settings including overclocking. Refer to the full user manual for detailed BIOS navigation and settings.

6. MAINTENANCE

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

- **Cleaning:** Periodically clean dust from the motherboard and case interior using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** ASUS regularly releases BIOS updates to improve stability, add new features, and enhance compatibility. Download BIOS updates from the official ASUS support website. Note that updating the BIOS for compatibility with newer CPU generations (e.g., 7th Gen Kaby Lake) may require an older generation CPU (e.g., 6th Gen Skylake) to perform the update.
- **Battery Replacement:** The motherboard uses a CR2032 lithium coin cell battery for the CMOS. If system time or BIOS settings are frequently lost, the battery may need replacement.

7. TROUBLESHOOTING

This section addresses common issues you might encounter.

- **No Power/No POST:**
 - Ensure all power cables (24-pin ATX, 8-pin CPU) are securely connected.
 - Verify that the CPU, RAM, and graphics card are correctly seated.
 - Check for diagnostic LEDs on the motherboard. These LEDs can indicate issues with CPU, DRAM, VGA, or Boot devices. Refer to the full user manual for specific LED codes and their meanings.
- **System Instability/Crashes:**
 - Ensure all drivers are up to date.
 - Check memory modules for errors using diagnostic tools.
 - Monitor CPU and GPU temperatures to prevent overheating.
- **BIOS Update Issues:**
 - Always use the correct BIOS file for your specific motherboard model.
 - Do not interrupt the BIOS update process.
 - If a BIOS update fails, consult the ASUS support website for recovery procedures.

8. SPECIFICATIONS

Feature	Detail
Brand	ASUS
Model Name	Z170 PRO GAMING
CPU Socket	LGA 1151
Compatible Processors	Intel Celeron, Intel Pentium, 6th Gen Intel Core i3/i5/i7
Chipset Type	Intel Z170
RAM Memory Technology	DDR4 SDRAM (DIMM)

Feature	Detail
Memory Speed	Up to 3400 MHz (OC)
Graphics Card RAM Size	Supports up to 64 GB (System Memory)
Number of USB 2.0 Ports	2 (rear)
Product Dimensions (LxWxH)	12 x 9.6 x 1 inches (ATX Form Factor)
Item Weight	1.5 pounds
First Available Date	August 5, 2015

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please visit the official ASUS support website. You can find detailed warranty terms and conditions, FAQs, and contact information for customer service specific to your region.

ASUS Support Website: www.asus.com/support/

© 2024 ASUS. All rights reserved. Information in this manual is subject to change without notice.

Related Documents - Z170 PRO GAMING

<div><div>Z170 PRO GAMING/AURA</div><div>ASUS</div><div>Motherboard</div></div>	<p>ASUS Z170 PRO GAMING/AURA Motherboard User Manual</p> <p>Comprehensive user manual for the ASUS Z170 PRO GAMING/AURA motherboard, covering specifications, installation, BIOS setup, and safety information.</p>
<div><div>TUF H310M-PLUS GAMING</div><div>ASUS</div><div>Motherboard</div></div>	<p>ASUS TUF H310M-PLUS GAMING Motherboard User Manual</p> <p>User manual for the ASUS TUF H310M-PLUS GAMING motherboard, detailing specifications, installation, BIOS setup, safety guidelines, and regulatory compliance.</p>

<div>PRIME B360M-K</div> <div>ASUS</div> <div>Motherboard</div>	<p>ASUS PRIME B360M-K Motherboard User Manual</p> <p>This user manual provides detailed information for the ASUS PRIME B360M-K motherboard, including specifications, installation guides, BIOS setup, safety precautions, and compliance statements.</p>
<div>TUF B360M-PLUS GAMING</div> <div>ASUS</div> <div>Motherboard</div>	<p>ASUS TUF B360M-PLUS GAMING Motherboard User Guide</p> <p>This user guide provides comprehensive information for installing and configuring the ASUS TUF B360M-PLUS GAMING motherboard, including hardware overviews, BIOS setup, and specifications.</p>
<div>TUF H370-PRO (WI-FI) بازی</div> <div>ASUS</div> <div>Motherboard</div>	<p>ASUS TUF H370-PRO GAMING (WI-FI) Motherboard User Guide</p> <p>Comprehensive user guide for the ASUS TUF H370-PRO GAMING (WI-FI) ATX motherboard, detailing specifications, package contents, installation, BIOS setup, and troubleshooting. Features Intel H370 chipset, LGA1151 socket, DDR4 memory support, and extensive connectivity options.</p>
<div>PRIME B360M-A</div> <div>ASUS</div> <div>Motherboard</div>	<p>ASUS PRIME B360M-A Motherboard User Manual and Specifications</p> <p>Comprehensive guide to the ASUS PRIME B360M-A motherboard, covering installation, specifications, BIOS setup, and safety information.</p>