

ASUS PRIME B550-PLUS AC-HES

ASUS Prime B550-PLUS AC-HES ATX Motherboard User Manual

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, configuration, and maintenance of the ASUS Prime B550-PLUS AC-HES ATX Motherboard. Designed for 3rd Gen AMD Ryzen™ processors, this motherboard offers advanced features including PCIe 4.0, WiFi 5, and 1Gb Ethernet, providing a robust foundation for personal computer systems.

2. KEY FEATURES

- **AMD AM4 Socket and PCIe 4.0:** Optimized for 3rd Gen AMD Ryzen CPUs.
- **Connectivity:** Features Dual M.2 slots, PCIe 4.0 support, WIFI 5, 1 Gb Ethernet, rear USB 3.2 Gen 2 Type-A and Type-C, and front USB 3.2 Gen 1 Type-A and Type-C ports.
- **Comprehensive Cooling:** Equipped with VRM heatsink, PCH heatsink, hybrid fan headers, and Fan Xpert 2 utility for effective thermal management.
- **5X Protection III:** Incorporates LANGuard, DRAM overcurrent protection, overvoltage protection, SafeSlot Core safeguards, and stainless-steel back I/O for enhanced durability.
- **Boosted Memory Performance:** ASUS OptiMem technology enables higher memory frequencies with lower voltages.
- **Enhanced Power Solution:** Features 8+1 DrMOS power stages with high-quality alloy chokes and durable capacitors for stable power delivery.
- **Aura Sync RGB:** Synchronizable LED effects with RGB LED header and Addressable Gen 2 RGB header for customization.
- **CEC Tier II Ready:** Complies with energy efficiency standards.

3. SETUP AND INSTALLATION

Follow these steps for proper installation of your ASUS Prime B550-PLUS AC-HES motherboard into your computer

chassis.

3.1. Motherboard Layout

Familiarize yourself with the various components and connectors on the motherboard.

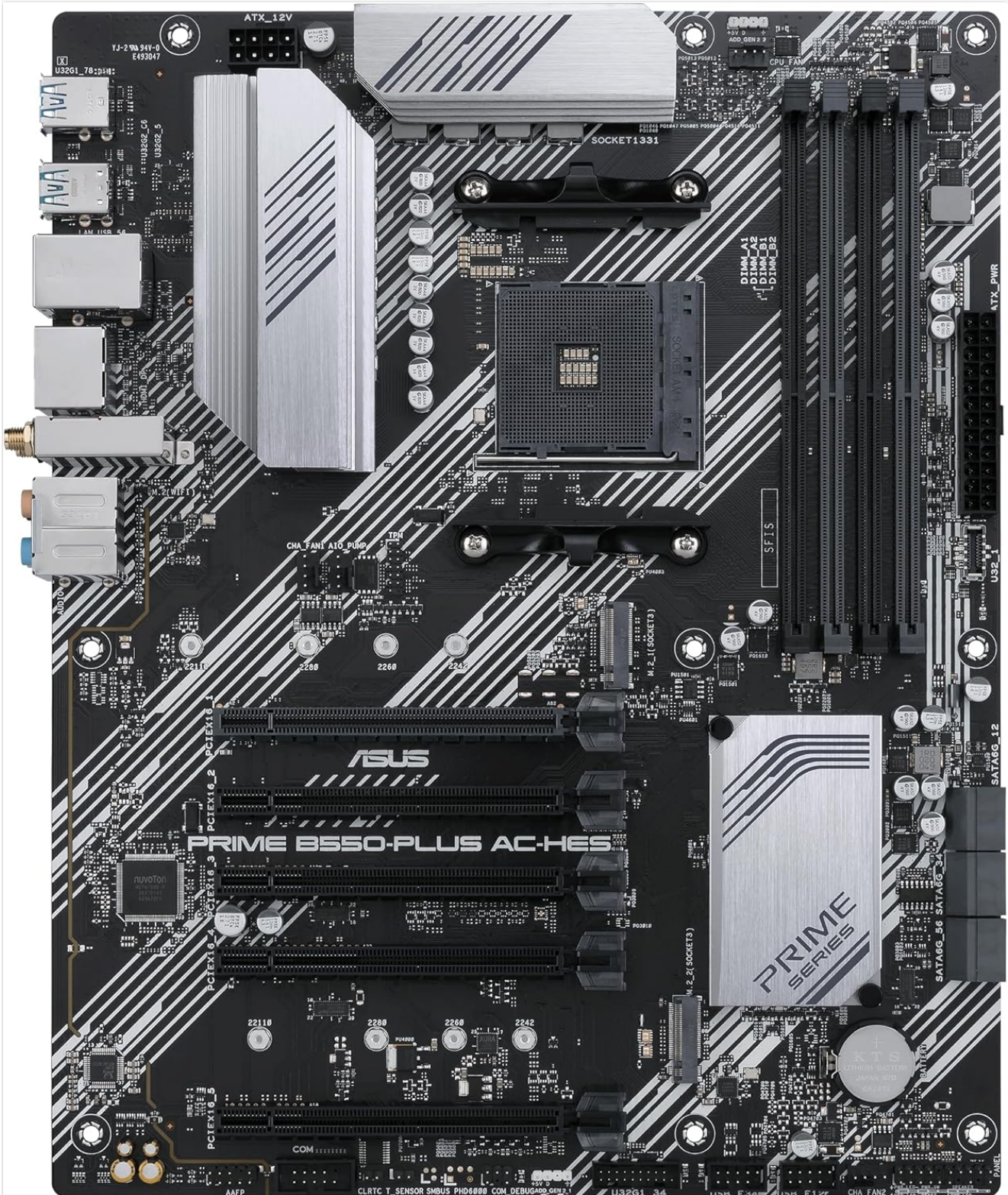


Image Description: This image displays a top-down view of the ASUS Prime B550-PLUS AC-HES ATX motherboard, highlighting the CPU socket, DIMM slots, PCIe slots, M.2 slots, and various headers and connectors. Key components like the VRM heatsinks and PCH heatsink are visible.

3.2. Installing the CPU

1. Open the CPU socket lever.
2. Carefully align the CPU with the socket, ensuring the golden triangle on the CPU matches the triangle on the

socket.

3. Gently place the CPU into the socket without forcing it.
4. Close the socket lever to secure the CPU.

3.3. Installing Memory Modules (RAM)

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.

3.4. Connecting Peripherals and Power

Connect the 24-pin ATX power connector, 8-pin CPU power connector, SATA devices, front panel connectors, and USB devices. Ensure all connections are secure.

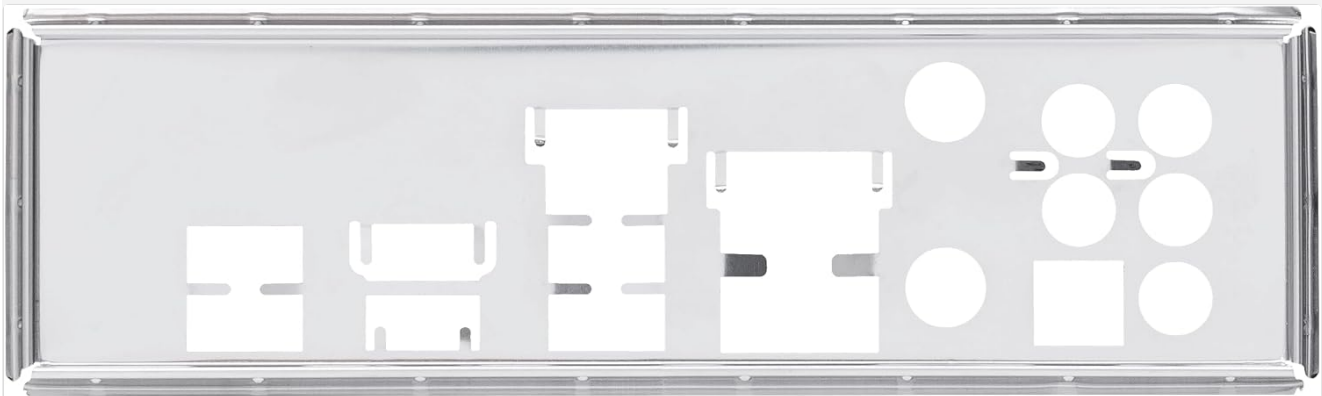


Image Description: This image shows a close-up of the rear input/output (I/O) panel of the ASUS Prime B550-PLUS AC-HES motherboard, detailing the various ports including USB, Ethernet, Wi-Fi antenna connectors, and audio jacks.

4. OPERATING INSTRUCTIONS

4.1. BIOS/UEFI Setup

Upon initial power-on, press the **Del** or **F2** key during the POST (Power-On Self-Test) to enter the BIOS/UEFI setup utility. Here you can configure system settings, boot order, and enable/disable various features.

4.2. Driver Installation

After installing your operating system, install the necessary drivers from the ASUS support website or the provided support DVD. Key drivers include chipset, LAN, Wi-Fi, and audio drivers to ensure full functionality.

5. MAINTENANCE

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

- **Dust Removal:** Periodically clean dust from the motherboard and components using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** Check the ASUS support website for the latest BIOS/UEFI updates. Updating the BIOS can improve compatibility, stability, and performance. Follow the instructions carefully to avoid system damage.
- **Driver Updates:** Keep your drivers updated to ensure compatibility with new software and hardware, and to benefit from performance improvements and bug fixes.

6. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

Problem	Possible Solution
System does not power on.	Check power supply connections to the motherboard (24-pin ATX and 8-pin CPU). Ensure the power supply is switched on. Verify front panel power button connection.
No display output.	Ensure the monitor is connected to the correct graphics output (either integrated or discrete GPU). Reseat the graphics card and memory modules. Check for POST error codes or beeps.
Operating system fails to boot.	Check boot order in BIOS/UEFI. Ensure storage drives are properly connected. Try repairing the operating system installation.
Wi-Fi or Ethernet not working.	Install or update network drivers. Ensure Wi-Fi antennas are securely connected. Check network cable for Ethernet.

7. TECHNICAL SPECIFICATIONS

Feature	Specification
Brand	ASUS
Series	PRIME B550-PLUS AC-HES
Model Number	PRIME B550-PLUS AC-HES
CPU Socket	AMD AM4 (Compatible with Ryzen™ 5000 Series/ 5000 G-Series/ 4000 G-Series/ 3000 Series Desktop Processors)
Chipset Type	AM4
RAM Memory Technology	DDR4 SDRAM
Max Memory Capacity	128 GB
Memory Speed	4866 MHz
PCIe Support	PCIe 4.0
M.2 Slots	Dual M.2
Wireless Connectivity	WIFI 5
Ethernet	1 Gb Ethernet

Feature	Specification
USB Ports	Rear USB 3.2 Gen 2 Type-A and Type-C, Front USB 3.2 Gen 1 Type-A and Type-C, 4x USB 2.0
Form Factor	ATX
Product Dimensions (LxWxH)	12.01 x 9.53 x 0.16 inches
Item Weight	1.98 pounds
Color	BLACK

8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official ASUS website or contact ASUS customer service. Keep your proof of purchase for warranty claims.

ASUS Support Website: <https://www.asus.com/support/>