ASUS PRIME A620-PLUS WIFI6

ASUS Prime A620-PLUS WIFI6 Motherboard User Manual

Model: PRIME A620-PLUS WIFI6 | Brand: ASUS

INTRODUCTION

The ASUS Prime A620-PLUS WIFI6 motherboard is engineered to support AMD Ryzen 7000-series and 8000-series processors, offering a robust foundation for PC DIY builders and users. This manual provides essential information for setup, operation, and maintenance of your motherboard, ensuring optimal performance and stability.

SAFETY INFORMATION

Always observe the following safety precautions when handling your motherboard:

- Disconnect power before installation or maintenance.
- Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage.
- Handle the motherboard by its edges to avoid touching sensitive components.
- Ensure proper ventilation within your PC case to prevent overheating.
- Keep the motherboard away from moisture and extreme temperatures.

PACKAGE CONTENTS

Verify that all items are present in your motherboard package:

- ASUS Prime A620-PLUS WIFI6 Motherboard
- User Manual
- I/O Shield
- SATA 6Gb/s Cables
- M.2 Screw Package
- Wi-Fi Antenna
- Support DVD (for drivers and utilities)

MOTHERBOARD LAYOUT

Familiarize yourself with the key components and connectors on your ASUS Prime A620-PLUS WIFI6 motherboard.
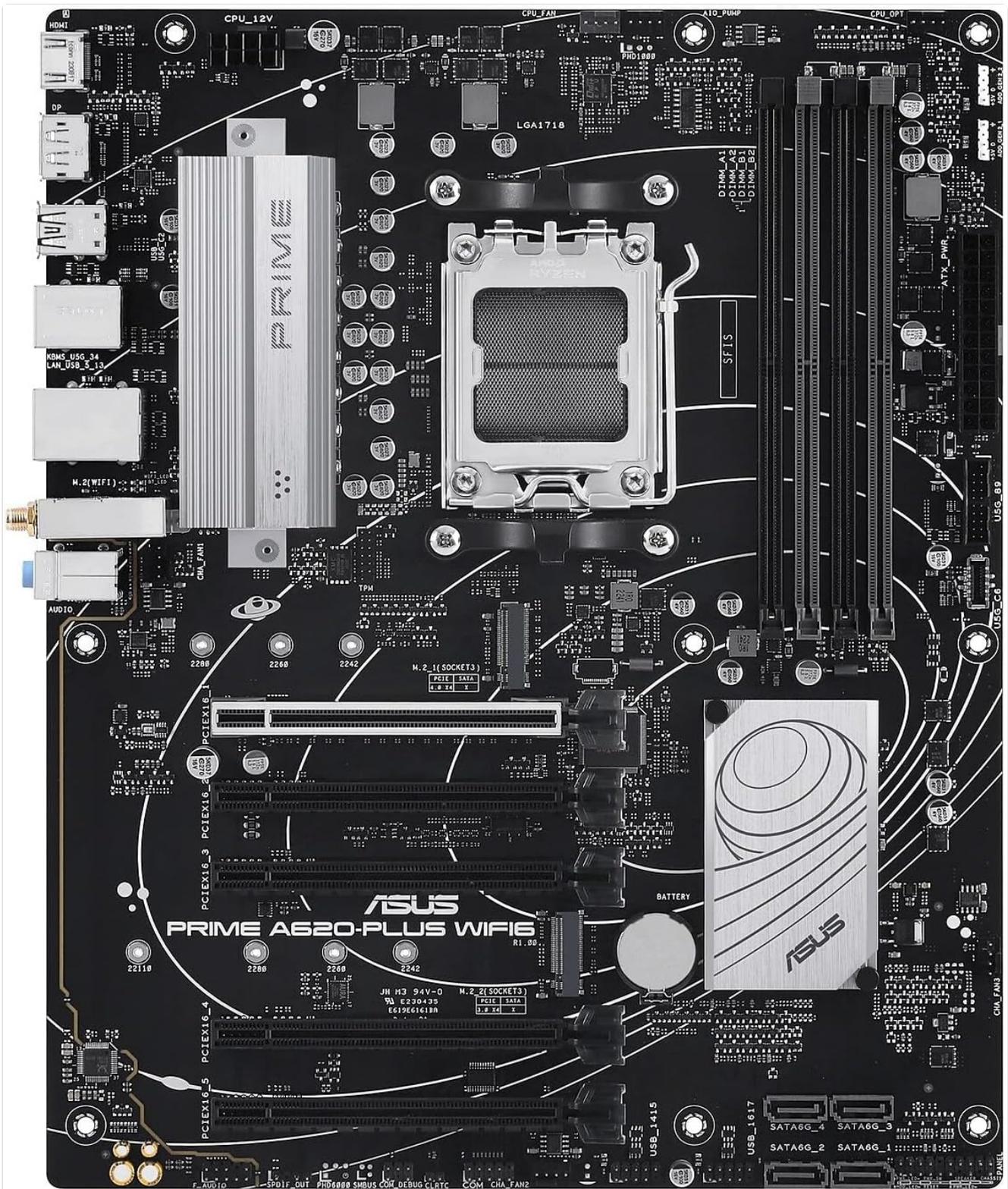
Figure 1: Top-down view of the ASUS Prime A620-PLUS WIFI6 Motherboard, highlighting the CPU socket, RAM slots, and PCIe slots.

Figure 3: A different angled perspective of the motherboard, providing a clearer view of the M.2 slots and SATA ports.

- **CPU Socket (AM5):** Located centrally, this socket supports AMD Ryzen 7000-series/ 8000-series processors.
- **DDR5 DIMM Slots:** Four slots for DDR5 memory modules, supporting up to 192GB.
- **PCIe 4.0 x16 Slot:** For graphics cards and other expansion cards.
- **Dual M.2 Slots:** For high-speed NVMe SSDs.
- **SATA 6Gbps Ports:** For traditional SATA hard drives and SSDs.
- **Rear I/O Panel:** Includes DisplayPort, HDMI, USB 5Gbps Type-C, USB Type-A, Realtek 1Gb Ethernet, and audio jacks.
- **Wi-Fi 6 Module:** Integrated for wireless connectivity.

SETUP

1. CPU Installation (AM5 Socket)

1. Open the CPU socket lever.
2. Align the CPU with the socket's triangle mark and carefully place it into the socket. Do not force it.
3. Close the lever to secure the CPU.

2. RAM Installation (DDR5)

1. Open the clips on both ends of the DDR5 DIMM slots.
2. Align the notch on the memory module with the notch in the DIMM slot.
3. Press down firmly on both ends of the memory module until the clips snap into place.

3. Storage Installation (Dual M.2, SATA)

- **M.2 SSD:** Insert the M.2 SSD into the slot at an angle, then push it down and secure it with the provided M.2 screw.
- **SATA Drives:** Connect SATA data cables from your drives to the SATA 6Gbps ports on the motherboard. Connect power cables from your power supply to the drives.

4. Graphics Card Installation (PCIe 4.0)

1. Open the latch on the PCIe 4.0 x16 slot.
2. Align your graphics card with the slot and press down firmly until it clicks into place.
3. Secure the graphics card to your PC case with screws.

5. Power Connections

- Connect the 24-pin ATX power connector from your power supply to the motherboard.
- Connect the 8-pin ATX 12V power connector (CPU power) to the motherboard.

6. Front Panel Connections

Connect your PC case's front panel cables (power button, reset button, USB ports, audio jacks, etc.) to the corresponding headers on the motherboard. Refer to the motherboard layout diagram for precise locations.

OPERATING

1. BIOS/UEFI Setup

Upon first boot, press the `DEL` key to enter the BIOS/UEFI setup utility. This intuitive graphical interface allows you to configure system settings, including:

- **Memory Overclocking:** Adjust DDR5 memory speeds for enhanced performance.
- **Boot Options:** Set boot priority for your operating system drive.
- **Secure Boot:** Enable for enhanced security, especially for Windows 11 installations.
- **Fan Control:** Fine-tune fan speeds for optimal cooling and noise levels using Fan Xpert 2+.

2. Driver Installation

For optimal performance and functionality, install the latest drivers. The included support DVD contains necessary drivers and utilities. Alternatively, download the latest versions from the official ASUS support website.

- **Armoury Crate:** This ASUS software simplifies driver updates, system monitoring, and Aura Sync RGB control.

3. Networking

- **Wi-Fi 6:** Connect to wireless networks for high-speed internet access. Ensure the included Wi-Fi antenna is properly installed.
- **Realtek 1Gb Ethernet:** For stable wired network connections.

4. Audio

- **Two-Way AI Noise Cancelation:** Utilize this feature to reduce background noise from both microphone input and audio output, enhancing communication clarity during gaming or video conferences.

5. Aura Sync RGB Lighting

The motherboard features onboard Addressable Gen 2 headers. Connect compatible RGB LED strips and devices to these headers and synchronize lighting effects using the Aura Sync software for a personalized aesthetic.

MAINTENANCE

- **Cleaning:** Regularly clean dust from the motherboard and components using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** Periodically check the ASUS support website for BIOS/UEFI updates. Updating the BIOS can improve system stability, compatibility, and performance. Follow the instructions provided by ASUS carefully during the update process.
- **Driver Updates:** Keep your drivers updated using Armoury Crate or by regularly checking the ASUS support website. Updated drivers ensure optimal performance and compatibility with new software and hardware.

TROUBLESHOOTING

If you encounter issues with your motherboard, consider the following common troubleshooting steps:

- **No Power/No Boot:**

  - Check all power connections (24-pin ATX, 8-pin ATX 12V).
  - Ensure the power supply is functioning correctly.
  - Verify that the CPU and RAM are properly seated.

- **Display Issues:**

  - Ensure the graphics card is fully seated in its PCIe slot.
  - Check display cable connections to both the graphics card/motherboard and monitor.
  - Test with a different display cable or monitor if possible.

- **System Instability/Crashes:**

  - Update BIOS/UEFI to the latest version.
  - Ensure all drivers are up to date.
  - Run memory diagnostic tools to check for RAM errors.
  - Monitor CPU and GPU temperatures to prevent overheating.

- **Network Connectivity Problems:**

  - For Wi-Fi, ensure antennas are connected and drivers are installed.
  - For Ethernet, check the cable connection and ensure network drivers are installed.
  - Reset your router/modem.

SPECIFICATIONS

Feature	Detail
Brand	ASUS
Model Name	PRIME A620-PLUS WIFI6
CPU Socket	Socket AM5

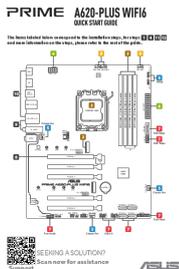| Feature	Detail
Compatible Processors	AMD Ryzen 7000-series/ 8000-series processors
Chipset Type	AMD A620 AM5
RAM Memory Technology	DDR5
Memory Clock Speed	7600 MHz (OC)
Memory Storage Capacity	192 GB (Max)
PCIe Slots	1 x PCIe 4.0 x16, 2 x PCIe 4.0 x1
M.2 Slots	Dual M.2 Slots
SATA Ports	4 x SATA 6Gbps ports
Wireless Connectivity	WiFi 6
Ethernet	Realtek 1Gb Ethernet
Audio	Two-Way AI Noise Cancelation
Dimensions	12 x 9.6 x 1.6 inches
Item Weight	1.8 pounds

WARRANTY AND SUPPORT

ASUS provides comprehensive warranty and support for its products. For detailed warranty terms, technical assistance, and driver downloads, please visit the official ASUS support website:

www.asus.com/support/

You may also contact ASUS customer service for further assistance.

Related Documents - PRIME A620-PLUS WIFI6

ASUS PRIME A620-PLUS WIFI6 Quick Start Guide - Installation and Setup
Comprehensive quick start guide for the ASUS PRIME A620-PLUS WIFI6 motherboard, covering component preparation, installation steps, system setup, and safety precautions. Includes detailed instructions and textual descriptions of diagrams.

PRIME A620-PLUS WIFI6 Motherboard	[ASUS PRIME A620-PLUS WIFI6 Motherboard User Manual](#) Comprehensive user manual for the ASUS PRIME A620-PLUS WIFI6 motherboard, covering specifications, installation, BIOS, RAID, safety, and support information. Includes detailed guides for CPU and DIMM installation, rear panel connectors, and system panel headers.
	[ASUS TUF GAMING A620M-PLUS WIFI Motherboard: Quick Start Guide](#) Comprehensive guide for installing the ASUS TUF GAMING A620M-PLUS WIFI motherboard, covering CPU, RAM, expansion cards, storage, and system connections. Includes setup steps and component identification.
	[ASUS Dual GeForce RTX 4060 Ti SSD Motherboard Compatibility List](#) This document provides a comprehensive list of compatible ASUS motherboards for the Dual GeForce RTX 4060 Ti SSD, detailing PCIe lane configuration requirements and BIOS settings for optimal performance.
PRIME B650M-A AX Motherboard	[ASUS PRIME B650M-A AX Motherboard: Features, Specifications, and User Guide](#) A comprehensive guide to the ASUS PRIME B650M-A AX motherboard, detailing its features, specifications, installation precautions, BIOS/RAID support, and connectivity options. Includes information on CPU socket, memory, expansion slots, and rear panel I/O.
TUF GAMING X670E-PLUS Motherboard	[ASUS TUF GAMING X670E-PLUS Motherboard User Manual](#) Comprehensive user manual for the ASUS TUF GAMING X670E-PLUS motherboard, covering installation, specifications, BIOS setup, and troubleshooting. Learn about CPU, memory, expansion slots, and more.