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› ASUS Prime B350-Plus AMD Ryzen AM4 Motherboard User Manual

## ASUS Prime B350-Plus

# ASUS Prime B350-Plus Motherboard User Manual

Model: Prime B350-Plus | Brand: ASUS

## 1. INTRODUCTION

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This manual provides detailed instructions for the installation, operation, maintenance, and troubleshooting of the ASUS Prime B350-Plus motherboard. Designed to support AMD Ryzen AM4 processors, this motherboard offers advanced connectivity and features for building a reliable computing system.

The ASUS Prime B350-Plus incorporates 5X Protection III hardware safeguards for enhanced component longevity and reliability, alongside a SafeSlot Core for reinforced PCIe slots. Please note that AMD Ryzen CPUs require a discrete graphics card to function, and officially support Windows 10. Compatibility with earlier Windows versions is not guaranteed by AMD.

## 2. PACKAGE CONTENTS

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Before proceeding with installation, please verify that all items are present in your package:

- ASUS Prime B350-Plus Motherboard
- Serial ATA 6.0Gb/s cables (2)
- I/O Shield
- M.2 screw package
- User's Manual (this document)

## 3. SETUP AND INSTALLATION

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This section guides you through the physical installation of the motherboard and its primary components.



1. Open the clips at both ends of the DIMM slots (labeled 'DDR4 Support' on the right side of the board).
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 clips snap into place.
4. For dual-channel, refer to the motherboard manual for recommended slot pairings (typically A2/B2 or slots 2 and 4).

### 3.3. Installing Storage Devices

The Prime B350-Plus supports both M.2 NVMe SSDs and SATA 6Gb/s drives.

- **M.2 SSD:** Locate the M.2 slot (labeled '32Gb/s M.2 X4' below the CPU socket). Insert the M.2 SSD at an angle and secure it with the provided M.2 screw.
- **SATA Drives:** Connect SATA data cables from your SSDs/HDDs to the SATA 6Gb/s ports (labeled 'SATA 6Gb/s' on the lower right edge). Connect power cables from your power supply to the drives.

### 3.4. Installing Expansion Cards (PCIe)

Install your graphics card and other expansion cards into the appropriate PCIe slots.

- **Graphics Card:** Insert your discrete graphics card into the primary PCIe x16 slot (the reinforced slot, featuring SafeSlot Core, labeled 'PCIe 3.0'). Ensure it clicks into place. Connect any required PCIe power cables from your power supply to the graphics card.
- **Other Cards:** Install other PCIe x1 or x16 cards into the remaining available slots.

### 3.5. Connecting Power Supply

Connect the main 24-pin ATX power connector and the 8-pin CPU power connector from your power supply to the corresponding ports on the motherboard.

### 3.6. Connecting Front Panel Headers

Connect the cables from your PC case's front panel (USB, audio, power switch, reset switch, LEDs) to the corresponding headers on the motherboard. Refer to the motherboard's silkscreen labels for correct pin alignment (e.g., 'USB34', 'USB12', 'COM\_IN', 'EPU').

### 3.7. Installing the I/O Shield

Before installing the motherboard into the PC case, snap the I/O shield into the rear opening of your case. Ensure it is securely seated.

## 4. OPERATING INSTRUCTIONS

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Once all components are installed, you can proceed with initial power-on and system configuration.

### 4.1. First Boot and BIOS/UEFI Access

1. Connect your monitor, keyboard, and mouse.
2. Power on your system.
3. During the boot process, repeatedly press the **DEL** or **F2** key to enter the BIOS/UEFI setup utility.

### 4.2. BIOS/UEFI Configuration

The UEFI BIOS provides an intuitive interface for system configuration.

- **Boot Order:** Configure the boot priority for your storage devices to install the operating system.
- **Memory Profile:** Enable XMP/DOCP for your DDR4 memory to run at its rated speed.
- **Fan Control:** Utilize FanXpert 2+ within the BIOS or through ASUS software to optimize cooling

performance and noise levels.

- **EZ Flash 3:** Use this utility for convenient BIOS updates.

### 4.3. Operating System and Driver Installation

Install your preferred operating system, ensuring it is Windows 10 for full Ryzen CPU compatibility. After OS installation, install the latest drivers for your motherboard chipset, graphics card, and other peripherals from the ASUS support website.

## 5. MAINTENANCE

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Regular maintenance helps ensure the longevity and stable operation of your motherboard.

- **BIOS Updates:** Periodically check the ASUS support website for BIOS updates. Updates can improve stability, compatibility, and performance. Use the EZ Flash 3 utility for safe updates.
- **Cleaning:** Keep the motherboard and PC case free of dust. Use compressed air to gently remove dust from components, especially heatsinks and fan blades. Ensure the system is powered off and unplugged before cleaning.
- **Driver Updates:** Keep your system drivers updated to ensure optimal performance and compatibility with new software and hardware.

## 6. TROUBLESHOOTING

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This section addresses common issues you might encounter.

- **No Power/No POST:**
  - Ensure all power cables (24-pin ATX, 8-pin CPU, PCIe for GPU) are securely connected.
  - Verify the CPU and RAM are correctly seated. Try reseating them.
  - Check that the power supply is functional.
  - Remove all non-essential components (e.g., extra drives, expansion cards) and attempt to boot with only CPU, one RAM stick, and GPU.
- **Memory Issues:**
  - Ensure RAM modules are fully seated in the correct slots for dual-channel operation.
  - Try booting with only one RAM stick.
  - Check the Qualified Vendor List (QVL) on the ASUS website for compatible memory modules.
- **Operating System Not Booting:**
  - Verify the boot order in the BIOS/UEFI settings.
  - Ensure the operating system is installed on a recognized drive.
  - Confirm that your Ryzen CPU is running Windows 10, as earlier versions are not officially supported.
- **Peripheral Not Detected:**
  - Check physical connections.
  - Install or update relevant drivers.
  - Test the peripheral on another port or system if possible.

## 7. SPECIFICATIONS

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Key technical specifications for the ASUS Prime B350-Plus motherboard.

Feature	Specification
Brand	ASUS
Model Name	Prime B350-Plus
CPU Socket	Socket AM4
Chipset Type	AMD B350
Compatible Processors	AMD Ryzen, 7th generation Athlon, HD 2000 series
RAM Memory Technology	DDR4
Memory Speed	Up to 2400 MHz (and higher with OC)
Number of USB 2.0 Ports	2 (internal headers)
Product Dimensions (LxWxH)	12 x 1 x 9.35 inches
Item Weight	1.5 pounds
Platform	Windows 10 (recommended)

## 8. WARRANTY AND SUPPORT

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ASUS products are manufactured to high quality standards. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official ASUS support website.

For technical assistance, driver downloads, and further information, please visit the [ASUS Support Website](#).