ASUS PRIME A520M-A II/CSM

ASUS Prime A520M-A II/CSM AMD AM4 microATX Motherboard User Manual

Model: PRIME A520M-A II/CSM

Brand: ASUS

INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your ASUS Prime A520M-A II/CSM microATX Commercial Motherboard. Designed for 3rd Gen AMD Ryzen processors, this motherboard offers a robust platform with enhanced features for stability and reliability.

Figure 1: ASUS Prime A520M-A II/CSM Motherboard and Retail Packaging.

SETUP

1. Physical Installation

Before beginning installation, ensure your workspace is static-free. Refer to your PC case manual for specific mounting instructions.

- **CPU Installation:** Carefully align your AMD AM4 processor with the socket on the motherboard. Ensure the golden triangle on the CPU matches the triangle on the socket. Lower the CPU gently into the socket and secure it with the retention arm.

- **RAM Installation:** This motherboard supports DDR4 memory. Open the clips on the DIMM slots, align the memory modules with the notches, and press firmly until the clips snap into place. This motherboard features four DDR4 RAM slots.

- **M.2 SSD Installation:** Locate the M.2 slot. Insert your M.2 SSD at an angle and secure it with the provided screw. This motherboard includes one 32Gbps M.2 slot.

- **Graphics Card (GPU) Installation:** Insert your graphics card into the primary PCIe x16 slot. Ensure it is seated firmly and secure it with the case latch or screw.

- **Power Supply Connection:** Connect the 24-pin ATX power connector and the 8-pin CPU power connector from your power supply to the corresponding ports on the motherboard. Connect SATA power cables to storage devices as needed.
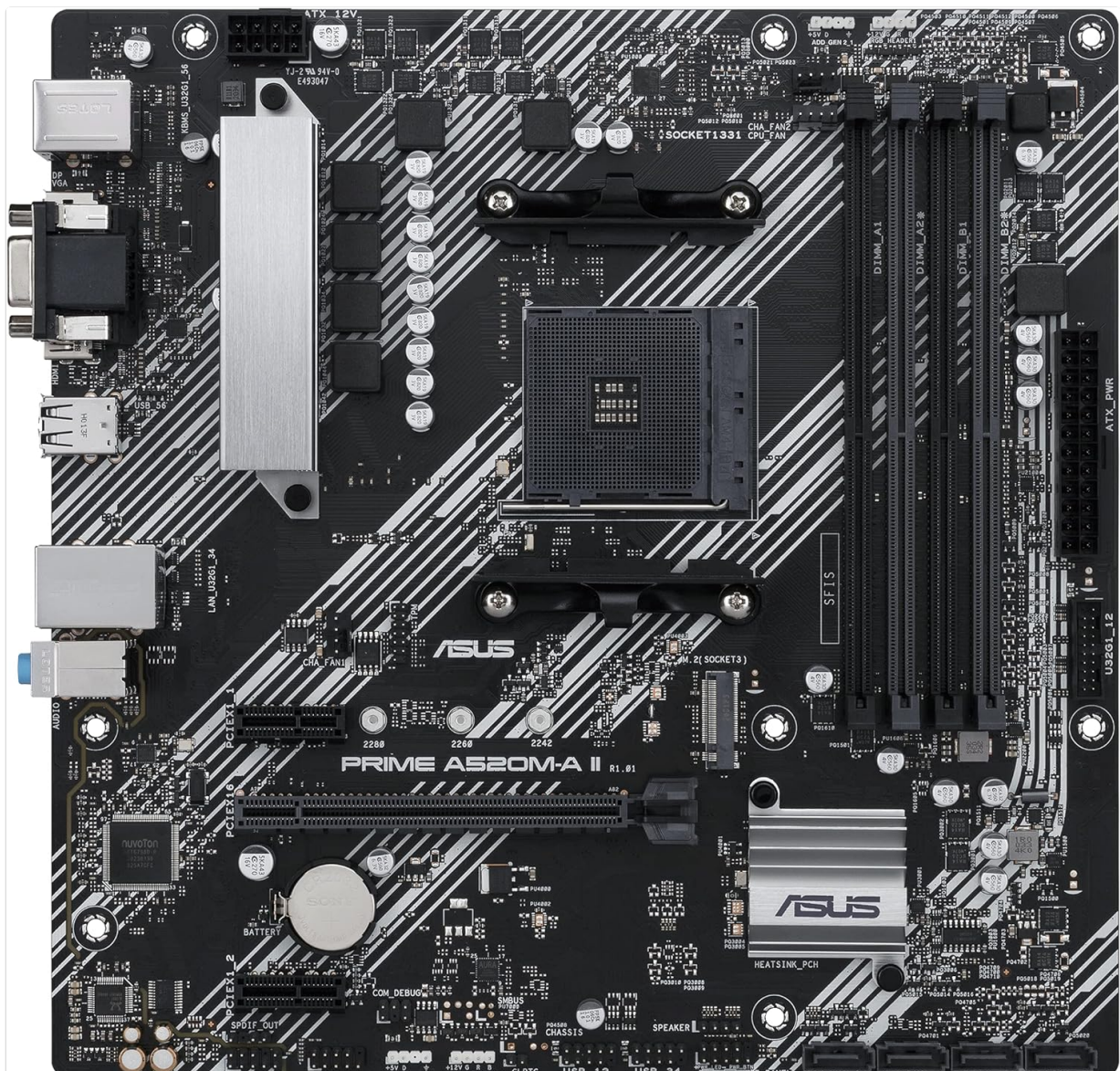
2. Initial Boot and BIOS Configuration

After all components are installed and connected, power on your system. Access the BIOS/UEFI setup by pressing the designated key (usually DEL or F2) during startup. Here you can:

- Verify detected components (CPU, RAM, storage).
- Configure boot order for your operating system installation media.
- Adjust memory profiles (XMP/DOCP) for optimal RAM performance.

OPERATING

1. Driver Installation

After installing your operating system, install the latest drivers for your motherboard's chipset, audio, LAN, and other integrated devices. These can typically be found on the ASUS support website for your specific model.

2. Software Utilities

- **ASUS Control Center Express (ACCE):** This utility simplifies IT endpoint management, offering comprehensive system protection and monitoring for commercial environments.
- **Aura Sync:** Utilize the onboard RGB headers and addressable Gen 2 headers to synchronize RGB LED strips and other Aura Sync-capable hardware for customized lighting effects.

3. Connectivity

The rear I/O panel provides various ports for external devices:

- **Video Outputs:** HDMI 2.1 (4K@60Hz), D-Sub, and DisplayPort for connecting monitors.
- **USB Ports:** Multiple USB 3.2 Gen 1 Type-A ports for high-speed peripherals.
- **Ethernet:** 1Gb Ethernet port for network connectivity.
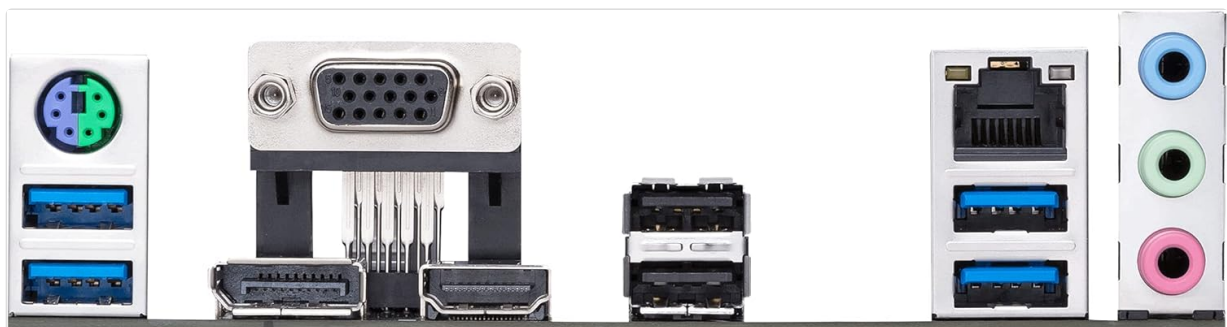- **Audio Jacks:** Standard audio jacks for speakers, headphones, and microphones.

Figure 3: Detailed view of the motherboard's rear input/output panel.

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 updates. Updates can improve

compatibility, stability, and performance. Follow the provided instructions carefully when updating the BIOS.

- **Component Checks:** Ensure all cables are securely connected and components are properly seated. Inspect for any visible damage or loose connections.

TROUBLESHOOTING

- **No Power/No POST:**

  - Verify all power connections (24-pin ATX, 8-pin CPU).
  - Reseat RAM modules. Try booting with one RAM stick at a time.
  - Ensure the CPU is correctly seated and the CPU cooler is properly installed.
  - Check for any loose cables or short circuits within the case.

- **Boot Failures:**

  - Check boot order in BIOS/UEFI.
  - Ensure storage devices (SSD/HDD) are properly connected and detected.
  - If using a new M.2 SSD, ensure it is initialized and formatted in Disk Management.

- **Peripheral Detection Issues:**

  - Ensure drivers for the motherboard and peripherals are up to date.
  - Test peripherals in different USB ports.
  - Check BIOS settings for USB port enablement.

SPECIFICATIONS

Feature	Detail
CPU Socket	AMD AM4 (3rd Gen Ryzen with Radeon Graphics Processors)
Chipset	AMD A520
Memory	4 x DDR4 DIMM slots, up to 4400 MHz (OC), ECC Memory Support
Storage	1 x M.2 slot (32Gbps), 4 x SATA 6Gb/s ports
Expansion Slots	1 x PCIe 3.0 x16, 2 x PCIe 3.0 x1
Video Outputs	HDMI 2.1 (4K@60Hz), DisplayPort, D-Sub
USB Ports	USB 3.2 Gen 1 Type-A, USB 2.0
LAN	1Gb Ethernet
Audio	High Definition Audio CODEC
Form Factor	microATX (10.75 x 10.5 inches)

Special Features	ASUS Corporate Stable Model (CSM), ASUS Control Center Express (ACCE), 5X Protection III, Aura Sync RGB headers

WARRANTY AND SUPPORT

The ASUS Prime A520M-A II/CSM motherboard is part of the ASUS Corporate Stable Model (CSM) program, offering a guaranteed long product life cycle and reliable sourcing. This includes up to a 36-month supply, End-of-Life (EOL) notices, and Engineering Change Notice (ECN) control.

For detailed warranty information, technical support, and driver downloads, please visit the official ASUS support website: www.asus.com/support/

Related Documents - PRIME A520M-A II/CSM

PRIME B450M-A	**ASUS PRIME B450M-A Motherboard User Manual** Comprehensive user manual for the ASUS PRIME B450M-A motherboard, detailing package contents, specifications, installation guides for CPU, RAM, and M.2 SSDs, as well as BIOS setup instructions.
PRIME X370-PRO Motherboard	**ASUS PRIME X370-PRO Motherboard User Manual** This user manual provides detailed information on the ASUS PRIME X370-PRO motherboard, including installation, configuration, BIOS setup, RAID support, and specifications. Learn about its features, components, and safety guidelines.
PRIME B550M-A AC Motherboard	**ASUS PRIME B550M-A AC Motherboard User Manual** User manual for the ASUS PRIME B550M-A AC motherboard, covering product introduction, BIOS and RAID support, safety information, package contents, and specifications.

PRIME B450M-A	Motherboard	**[ASUS PRIME B450M-A Motherboard User Manual: Installation, Specifications, and BIOS Guide](#)** Comprehensive user manual for the ASUS PRIME B450M-A motherboard. Includes installation instructions, component specifications, BIOS setup guide, safety precautions, and regulatory compliance information.
PRIME B550M-A	Motherboard	**[ASUS PRIME B550M-A Motherboard User Manual and Specifications](#)** Comprehensive guide to the ASUS PRIME B550M-A motherboard, covering installation, BIOS setup, specifications, safety, and compliance information for AMD Ryzen processors.
PRIME A520M-A II	Motherboard	**[ASUS PRIME A520M-A II Motherboard User Manual](#)** Comprehensive user manual for the ASUS PRIME A520M-A II motherboard, covering installation, BIOS setup, specifications, and safety information.