

## Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

manuals.plus /

› [ASRock](#) /

› [ASRock A520M-ITX/AC Mini ITX Motherboard User Manual](#)

## ASRock A520M-ITX/AC

# ASRock A520M-ITX/AC Mini ITX Motherboard User Manual

## INTRODUCTION

---

This manual provides detailed instructions for the installation, operation, and maintenance of your ASRock A520M-ITX/AC Mini ITX Motherboard. Please read this guide thoroughly before beginning installation to ensure proper setup and functionality.

The ASRock A520M-ITX/AC is designed to support 3rd Gen AMD AM4 Ryzen™ and future AMD Ryzen™ Processors (3000 and 4000 Series Processors). It features robust power delivery, DDR4 memory support, and integrated connectivity options suitable for compact PC builds.

## UNBOXING AND PACKAGE CONTENTS

---

Carefully open the motherboard packaging and verify that all components are present. The standard package contents include:

- ASRock A520M-ITX/AC Motherboard
- Quick Installation Guide
- Support CD
- I/O Shield
- 2 x SATA Data Cables
- 2 x ASRock WiFi 2.4/5 GHz Antennas



Image: The ASRock A520M-ITX/AC motherboard alongside its retail packaging, showcasing the compact Mini ITX form factor.

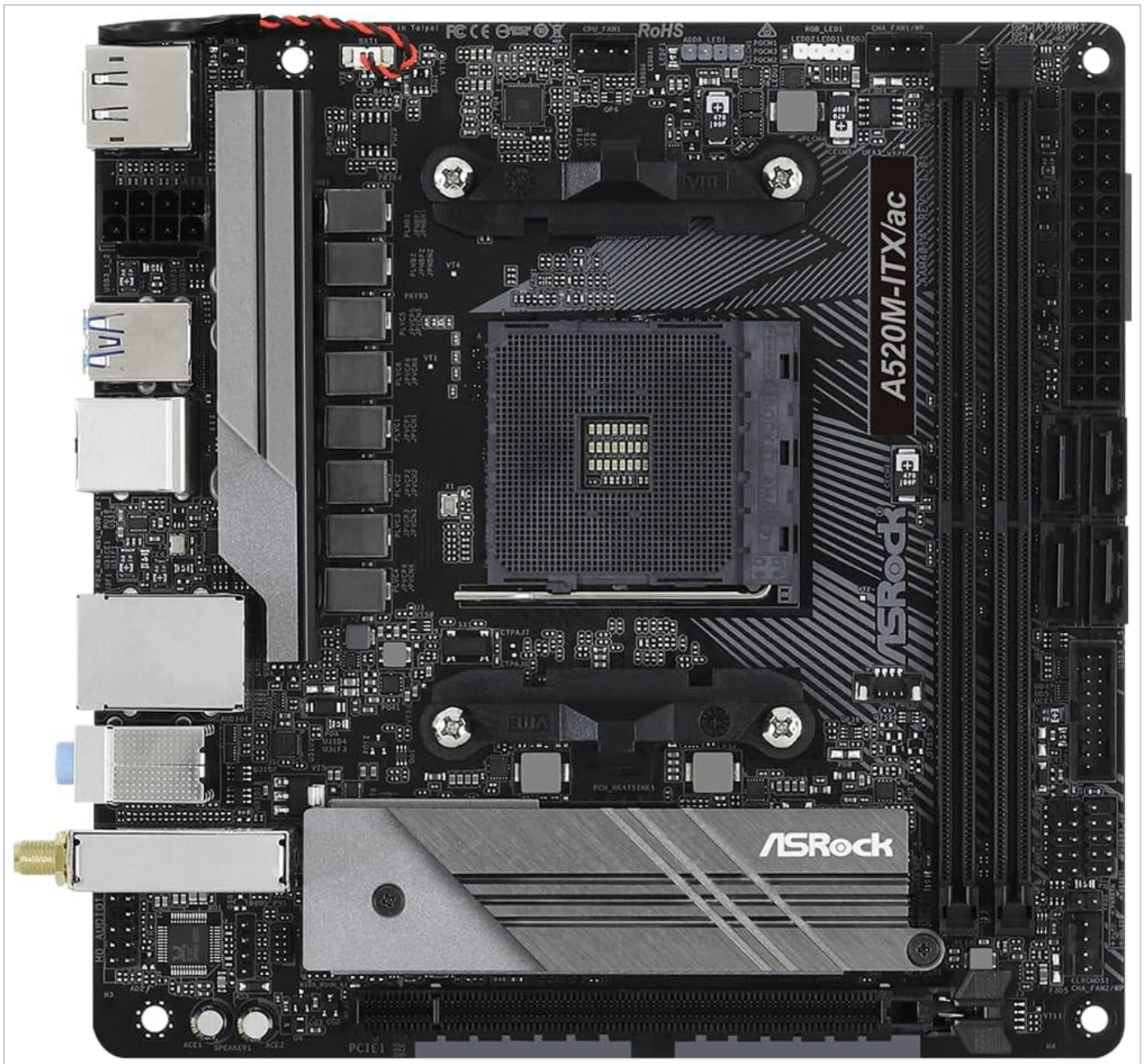


Image: A top-down view of the ASRock A520M-ITX/AC motherboard, highlighting the CPU socket, RAM slots, and M.2 slot.

## SETUP AND INSTALLATION

### 1. CPU Installation

This motherboard uses an AM4 socket. Ensure the CPU is correctly oriented before placing it into the socket. Gently lower the retention arm to secure the CPU.

### 2. RAM Installation

The motherboard supports DDR4 memory. Open the clips on both ends of the DIMM slots. Align the memory module with the slot key and press firmly until the clips snap into place.

The motherboard features two 288-pin DDR4 DIMM slots (DDR4\_A1, DDR4\_B1) supporting DDR4 4733+ (OC).

### 3. Storage Installation

Install your M.2 NVMe SSD into the Ultra M.2 slot (Gen3 x4 & SATA3). For traditional SATA drives, connect them to the SATA3 connectors (SATA3\_1\_3, SATA3\_2\_4) using the provided SATA cables.

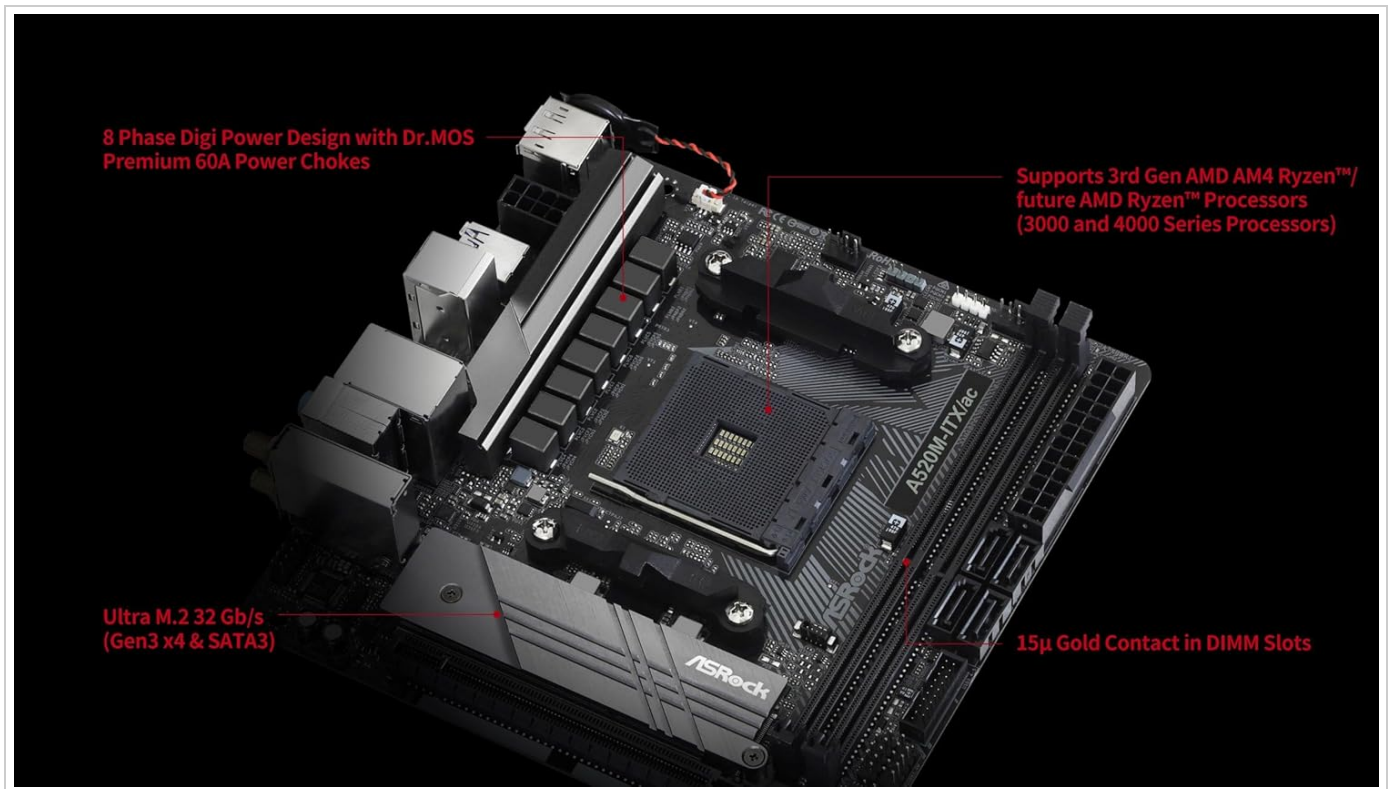


Image: Close-up of the ASRock A520M-ITX/AC motherboard highlighting the 8-phase Digi Power Design, 60A power chokes, Ultra M.2 slot, and 15µ Gold Contact in DIMM Slots.

#### 4. Power Connections

Connect the 24-pin ATX power connector (ATXPWR1) and the 8-pin ATX 12V power connector (ATX12V1) from your power supply to the motherboard.

#### 5. Front Panel and I/O Connections

Connect your case's front panel headers (power button, reset button, USB, audio) to the corresponding headers on the motherboard. Install the I/O shield into your case before mounting the motherboard.

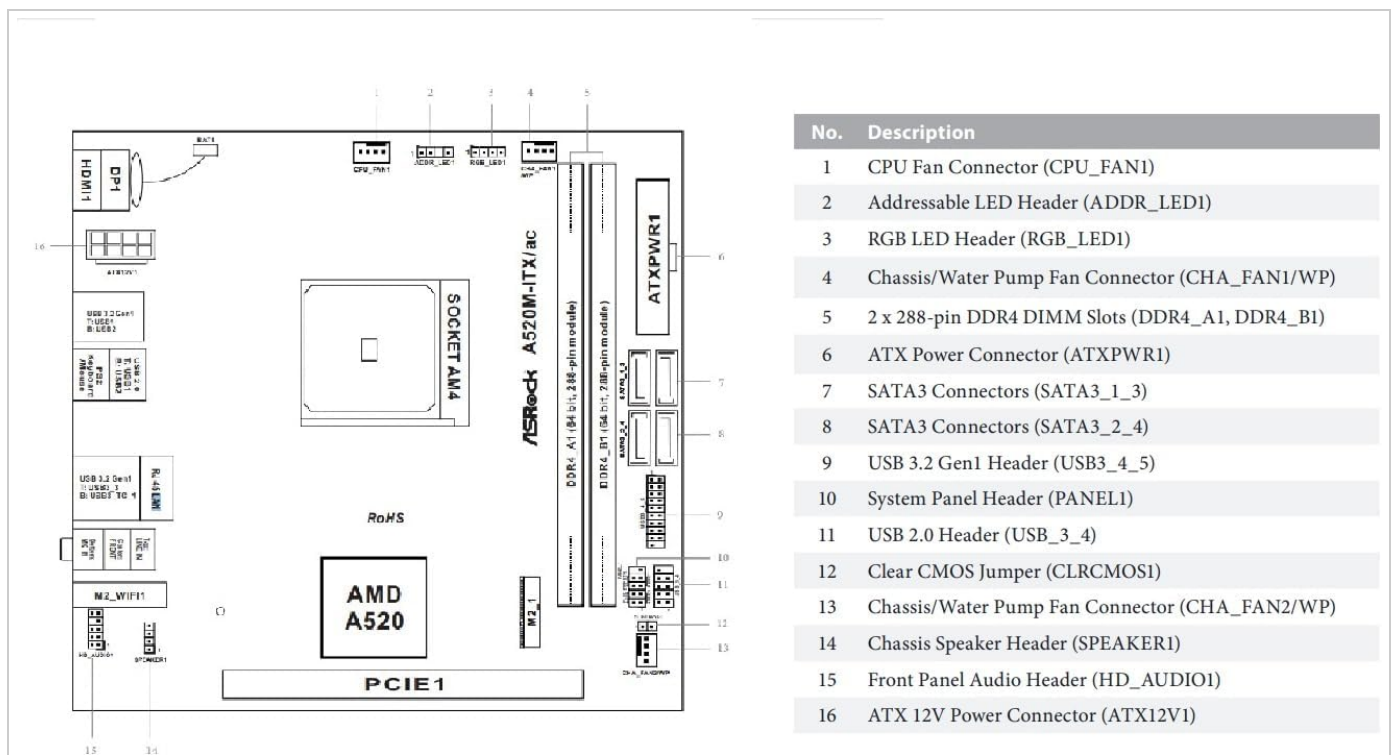


Image: A diagram illustrating the various connectors and headers on the ASRock A520M-ITX/AC motherboard, including CPU Fan, RGB

LED, Chassis/Water Pump Fan, DDR4 DIMM Slots, ATX Power, SATA3, USB 3.2 Gen1, System Panel, USB 2.0, Clear CMOS, Chassis Speaker, Front Panel Audio, and ATX 12V Power.

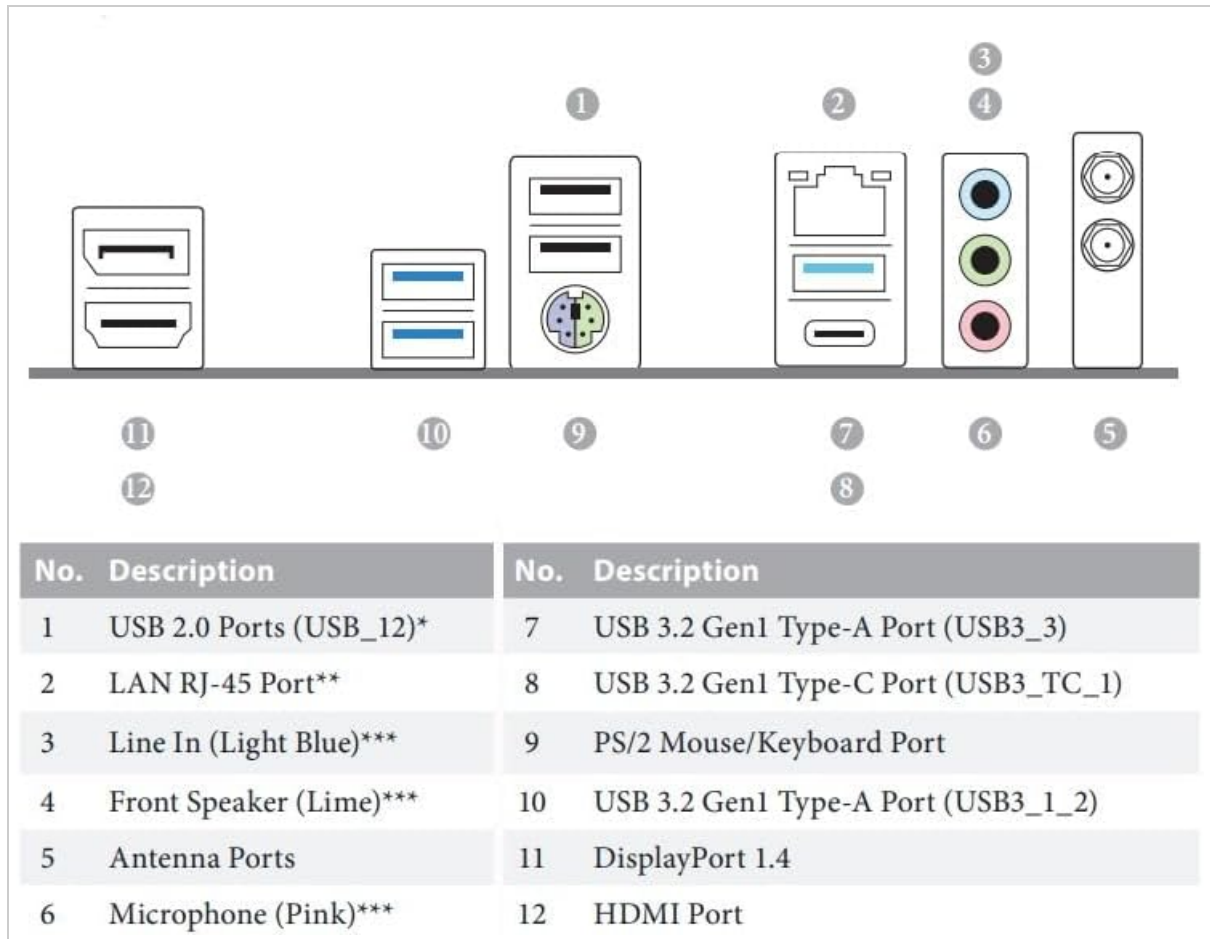


Image: A diagram detailing the rear I/O panel of the ASRock A520M-ITX/AC motherboard, showing USB 2.0, LAN RJ-45, Line In, Front Speaker, Antenna Ports, Microphone, USB 3.2 Gen1 Type-A, USB 3.2 Gen1 Type-C, PS/2 Mouse/Keyboard, DisplayPort 1.4, and HDMI Port.



Image: A physical view of the ASRock A520M-ITX/AC motherboard's rear I/O panel, displaying the various ports for external connections.



Image: An angled view of the ASRock A520M-ITX/AC motherboard, providing a comprehensive look at its layout and components.

## OPERATING INSTRUCTIONS

### 1. BIOS/UEFI Configuration

Upon first boot, access the BIOS/UEFI setup utility by pressing the **Del** or **F2** key during startup. Here you can configure system settings, boot order, memory profiles (XMP), and enable features like Secure Boot for Windows 11 compatibility.

### 2. Operating System Installation

Insert your Windows 10 64-bit or Windows 11 64-bit installation media (USB drive or DVD) and follow the on-screen prompts to install the operating system. Ensure all necessary drivers are installed after OS setup for optimal performance.

### 3. Driver Installation

Install the latest drivers for your motherboard components from the included support CD or by downloading them from the official ASRock website. This includes chipset drivers, audio drivers, LAN drivers, and Wi-Fi/Bluetooth drivers.

## MAINTENANCE

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

- **Cleaning:** 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 ASRock website for the latest BIOS updates. Updating the BIOS can improve compatibility, stability, and performance. Follow the instructions provided by ASRock carefully during the update process.
- **Component Upgrades:** When upgrading components like CPU, RAM, or storage, refer to the motherboard's specifications and compatibility list on the ASRock website to ensure proper functionality.

## TROUBLESHOOTING

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

- **No Power/No Boot:**
  - Verify all power cables (24-pin ATX, 8-pin ATX 12V) are securely connected.
  - Check if the power supply is functioning correctly.
  - Ensure the CPU and RAM are properly seated.
- **No Display:**
  - Confirm the monitor is connected to the correct graphics output (DisplayPort or HDMI).
  - If using a dedicated graphics card, ensure it is properly seated and powered.
  - Test with a single RAM stick in different slots.
- **System Instability/Crashes:**
  - Ensure all drivers are up to date.
  - Check for overheating components (CPU, chipset).
  - Run memory diagnostic tools to check RAM integrity.
- **BIOS Update Issues:**
  - Do not interrupt the BIOS update process.
  - If a BIOS update fails, refer to the ASRock website for recovery procedures.

For further assistance, refer to the ASRock support website or contact their customer service.

## SPECIFICATIONS

Feature	Detail
Brand	ASRock
Model Name	A520M-ITX/AC
CPU Socket	Socket AM4
Compatible Processors	AMD Ryzen 3000 Series, AMD Ryzen 4000 Series, AMD Ryzen 5000 Series
Chipset Type	AMD A520
RAM Memory Technology	DDR4

<b>Memory Speed</b>	2400 MHz (Supports DDR4 4733+ (OC))
<b>Graphics Output</b>	DisplayPort, HDMI
<b>PCIe Slots</b>	1 x PCIe 3.0 x16
<b>Storage</b>	Ultra M.2 (Gen3 x4 & SATA3), 4 x SATA3 (6Gb/s)
<b>Audio</b>	7.1 CH HD Audio (Realtek ALC887 Audio Codec)
<b>Wireless Type</b>	Bluetooth, 802.11ac WiFi
<b>USB Ports</b>	USB 3.2 Gen1 Type-A, USB 3.2 Gen1 Type-C, USB 2.0
<b>Operating System Support</b>	Microsoft Windows 10 64-bit / 11 64-bit
<b>Product Dimensions</b>	10.83 x 8.35 x 2.28 inches

## PRODUCT VIDEOS

---

### ASRock A520M-ITX/AC Product Demonstration



Video: A detailed product demonstration of the ASRock A520M-ITX/AC motherboard, showcasing its features and design. This video provides a visual overview of the board's layout and connectivity options.

### Mini ITX Desktop PC Motherboard Overview



Video: A brief overview of a Mini ITX desktop PC motherboard, demonstrating its compact size and typical features relevant to this form factor.

### General Product Demonstration Video



Video: A general product demonstration video, providing a visual guide to the features and components of a motherboard.

## WARRANTY AND SUPPORT

---

For warranty information and technical support, please refer to the official ASRock website or the documentation included with your product. ASRock provides support for their products, including driver downloads, BIOS updates, and troubleshooting guides.

You can also find additional support resources and contact information on the [ASRock Store on Amazon](#).

