## ASRock B450 PRO4 R2.0

# ASRock B450 PRO4 R2.0 AM4 AMD Motherboard Instruction Manual

Model: B450 PRO4 R2.0 | Brand: ASRock

## 1. INTRODUCTION

The ASRock B450 PRO4 R2.0 is an ATX AMD motherboard designed to support AMD AM4 Socket Ryzen™ 2000, 3000, 4000 G-Series, 5000, and 5000 G-Series Desktop Processors. This motherboard offers robust features for building a reliable and high-performance system.

**Key Features:**

- Supports DDR4 3200+ (OC) memory.
- Equipped with 2 PCIe 3.0 x16 slots and 4 PCIe 2.0 x1 slots.
- Supports AMD Quad CrossFireX™ for multi-GPU configurations.
- Multiple graphics output options: HDMI, Display Port, and D-Sub.
- Features 7.1 CH HD Audio (Realtek ALC892/897 Audio Codec).
- Storage includes 6 SATA3 ports, 1 Ultra M.2 (PCIe Gen3 x4), and 1 M.2 (PCIe Gen3 x2 & SATA3).
- Connectivity options include 2 USB 3.2 Gen2 (Rear Type A+C) and 6 USB 3.2 Gen1 (2 Front, 4 Rear).
- Integrated Realtek Gigabit LAN for stable network connectivity.

Figure 1: ASRock B450 PRO4 R2.0 Motherboard Retail Box (Front View)

Figure 2: ASRock B450 PRO4 R2.0 Motherboard Retail Box (Rear View highlighting features)

## 2. PACKAGE CONTENTS

Verify that all items are present in your motherboard package:

- ASRock B450 PRO4 R2.0 Motherboard
- Quick Installation Guide
- Support CD
- I/O Panel Shield
- 2 x SATA Data Cables
- M.2 Socket Screws (for SSD installation)

## 3. SETUP AND INSTALLATION

Before beginning installation, ensure your workspace is clean and static-free. Always handle the motherboard by its edges to avoid damaging components.

### 3.1 CPU Installation

Carefully open the CPU socket lever. Align the triangular mark on your AMD AM4 processor with the corresponding mark on the socket. Gently place the CPU into the socket without forcing it. Once seated, close

the lever to secure the CPU.

## 3.2 RAM Installation

This motherboard supports DDR4 memory. Open the clips on both ends of the DIMM slots. Align the notch on the RAM module with the key in the DIMM slot. Press down firmly on both ends of the RAM module until the clips snap into place. For optimal performance, install memory modules in a dual-channel configuration as recommended in the Quick Installation Guide.

## 3.3 Storage Installation

The motherboard provides multiple storage options:

- **SATA Drives:** Connect your SATA hard drives or SSDs to the 6 SATA3 ports using SATA data cables.
- **M.2 SSDs:** The motherboard features one Ultra M.2 slot (PCIe Gen3 x4) and one M.2 slot (PCIe Gen3 x2 & SATA3). Insert your M.2 SSD into the appropriate slot and secure it with the provided M.2 screw.

## 3.4 Graphics Card Installation

Insert your graphics card into one of the PCIe 3.0 x16 slots. Ensure it is firmly seated and secure it with the case's retention mechanism. Connect any necessary PCIe power cables from your power supply to the graphics card.

## 3.5 Power Connections

Connect the 24-pin ATX power connector from your power supply to the motherboard. Also, connect the 8-pin CPU power connector (ATX 12V) located near the CPU socket.
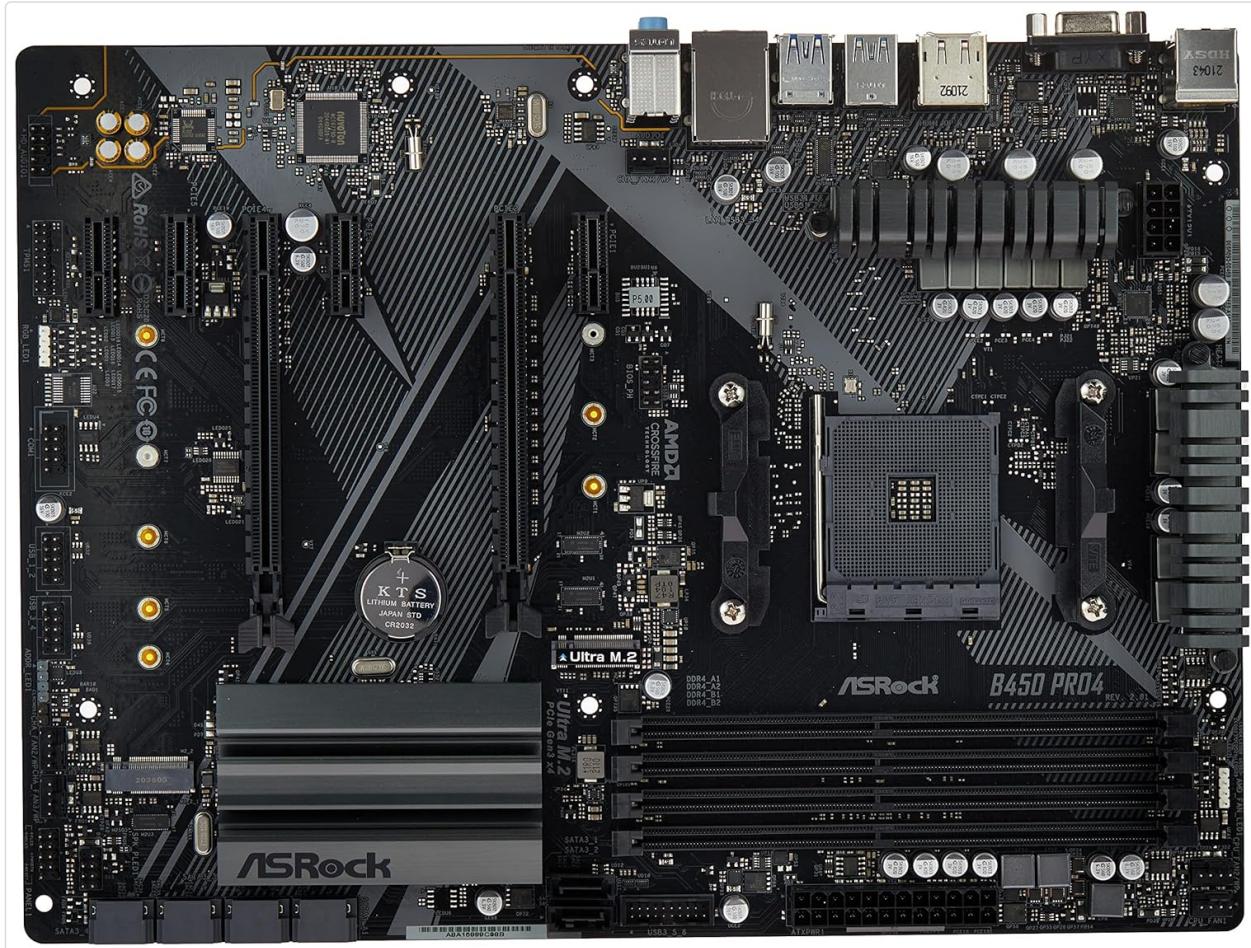


Figure 3: ASRock B450 PRO4 R2.0 Motherboard (Top View with components)
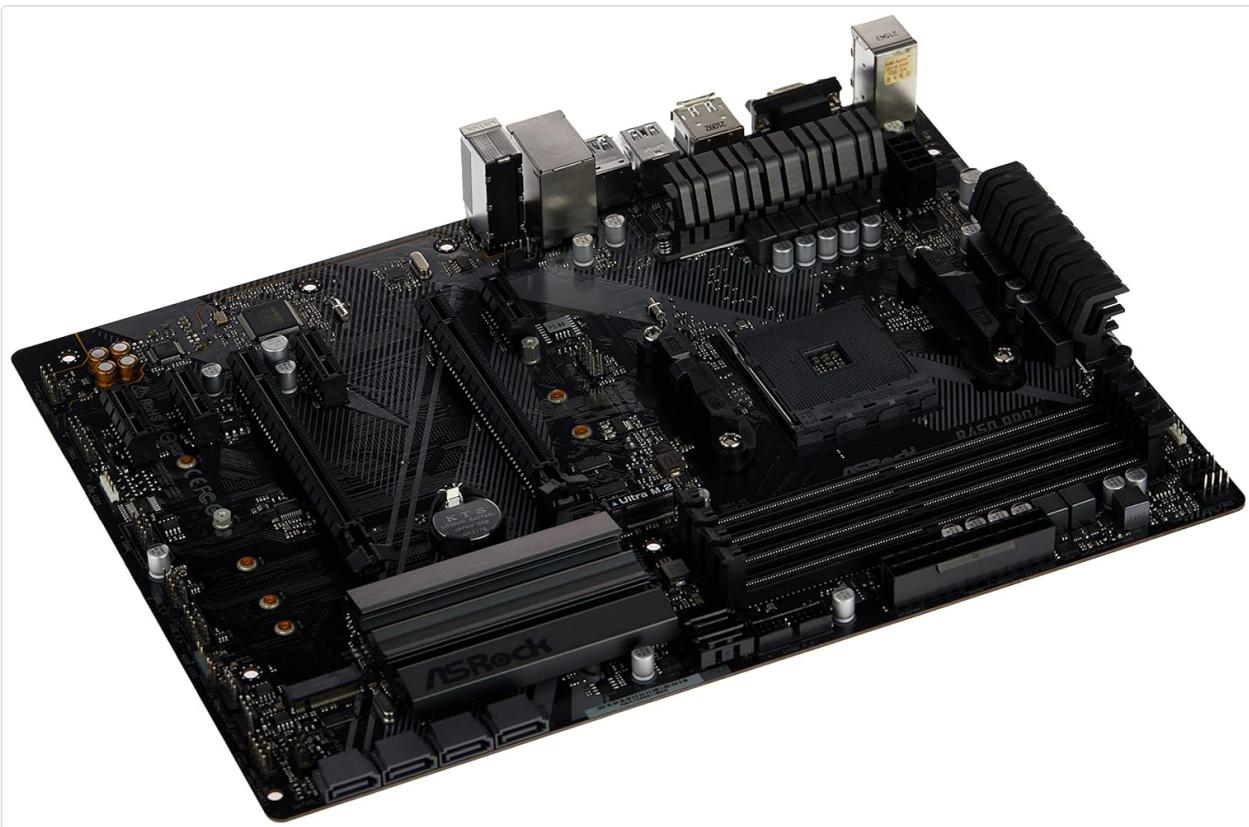
Figure 4: ASRock B450 PRO4 R2.0 Motherboard (Angled View)

## 4. OPERATING INSTRUCTIONS

### 4.1 BIOS Setup

Upon first boot, press the 'Del' or 'F2' key during startup to enter the BIOS setup utility. Here you can configure system settings, boot order, and monitor hardware status. Refer to the Quick Installation Guide for detailed BIOS navigation and options.

### 4.2 Operating System Installation

Insert your operating system installation media (USB drive or DVD) and set it as the primary boot device in the BIOS. Follow the on-screen prompts to install your preferred operating system. After installation, install the necessary drivers from the provided Support CD or ASRock's official website for full hardware functionality.

## 5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your motherboard:

- **Dust Removal:** Periodically clean dust from the motherboard and case fans using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **BIOS Updates:** Check ASRock's official website for the latest BIOS updates. Updating the BIOS can improve compatibility, stability, and performance. Follow the update instructions carefully.
- **Cable Management:** Ensure all cables are neatly routed and secured to promote better airflow and prevent interference.

## 6. TROUBLESHOOTING

If you encounter issues, try the following basic troubleshooting steps:

- **No Power:** Check all power connections (24-pin ATX, 8-pin CPU, GPU power). Ensure the power supply is switched on.
- **No Display:** Verify that your monitor is connected to the correct graphics output (either motherboard or discrete GPU). Reseat the graphics card and RAM modules.
- **System Instability:** Check RAM seating. Ensure CPU cooler is properly installed. Update BIOS and drivers.
- **Component Not Detected:** Verify that the component (e.g., M.2 SSD, SATA drive) is correctly installed and connected. Check BIOS settings to ensure it is enabled.

## 7. SPECIFICATIONS

| Feature | Specification |
| --- | --- |
| Brand | ASRock |
| Series | B450 PRO4 R2.0 |
| Item Model Number | B450 PRO4 R2.0 |
| CPU Socket | Socket AM4 |
| Compatible Processors | AMD AM4 Socket Ryzen™ 2000, 3000, 4000 G-Series, 5000 and 5000 G-Series Desktop Processors |
| Chipset Type | AMD B450 |
| RAM Memory Technology | DDR4 |
| Memory Speed | 3200+ (OC) MHz |
| Max Memory Capacity | 128 GB (based on typical 4-slot configuration) |
| PCIe Slots | 2 x PCIe 3.0 x16, 4 x PCIe 2.0 x1 |
| Graphics Output | HDMI, Display Port, D-Sub |
| Audio Codec | Realtek ALC892/897 Audio Codec (7.1 CH HD Audio) |
| SATA Ports | 6 x SATA3 |
| M.2 Slots | 1 x Ultra M.2 (PCIe Gen3 x4), 1 x M.2 (PCIe Gen3 x2 & SATA3) |
| USB 3.2 Gen2 (Rear) | 2 (Type A+C) |
| USB 3.2 Gen1 (Rear) | 4 |
| USB 3.2 Gen1 (Front) | 2 |
| LAN | Realtek Gigabit LAN |

| Feature | Specification |
| --- | --- |
| Form Factor | ATX |
| Product Dimensions | 1.1 x 9.7 x 6.5 inches |
| Item Weight | 2.6 pounds |
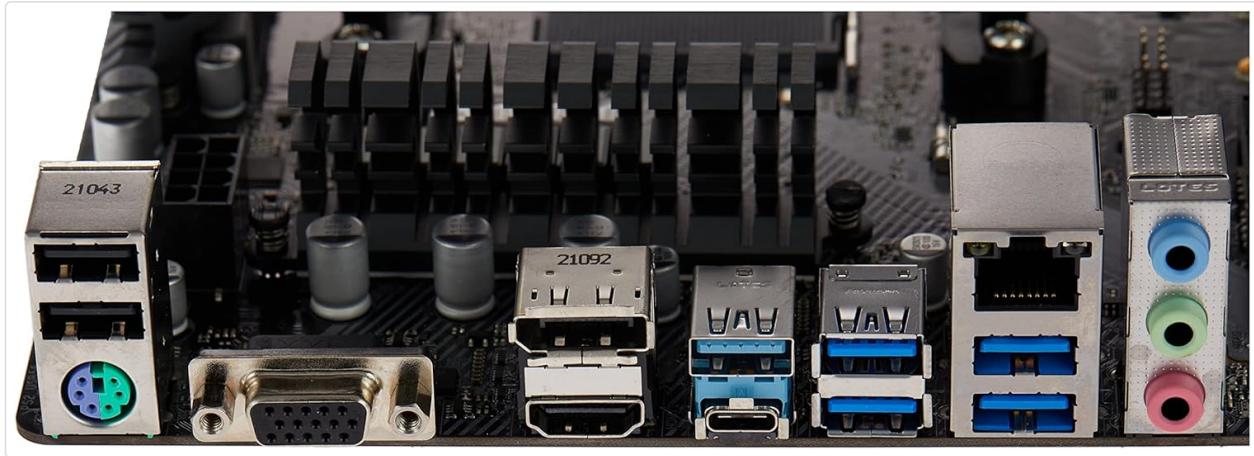


Figure 5: ASRock B450 PRO4 R2.0 Motherboard Rear I/O Ports
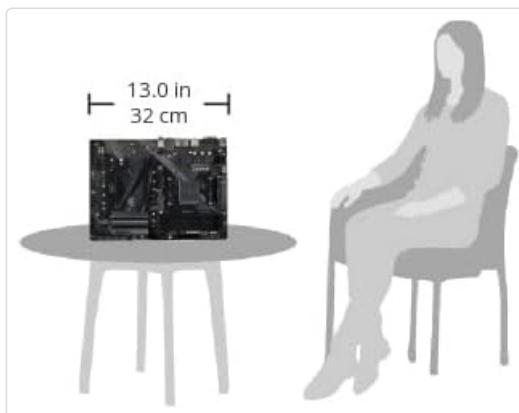


Figure 6: ASRock B450 PRO4 R2.0 Motherboard Dimensions

## 8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation included in your product package or visit the official ASRock website. Keep your proof of purchase for warranty claims.