

ZSUS B450

ZSUS B450 Motherboard for Ryzen Processors User Manual

Model: B450

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your ZSUS B450 Motherboard. Designed for AMD Ryzen processors, this AM4 mainboard offers robust performance with dual-channel DDR4 memory support and a high-speed M.2 NVME slot. Please read this manual thoroughly before proceeding with installation to ensure proper setup and optimal performance.

Key Features:

- Designed for Ryzen processors, ensuring optimal performance and compatibility for your gaming or workstation setup.
- Features dual-channel DDR4 support for enhanced memory bandwidth and faster data transfer rates.
- Equipped with M.2 NVME support, allowing for lightning-fast storage solutions and improved system responsiveness.
- Robust power system for stable performance under heavy workloads.

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent damage to the motherboard and injury to yourself:

- Disconnect the power cord from the wall outlet before touching any components.
- Wear an anti-static wrist strap or frequently touch a grounded metal object to discharge static electricity before handling components.
- Handle components by their edges to avoid touching sensitive parts.
- Ensure proper ventilation within your PC case to prevent overheating.
- Keep the motherboard away from moisture and extreme temperatures.

3. PACKAGE CONTENTS

Verify that all items are present in your motherboard package. If any items are missing or damaged, contact your retailer.

- ZSUS B450 Motherboard
- I/O Shield
- SATA Data Cables (quantity may vary)
- User Manual (this document)

- Driver CD/DVD or USB drive (if included)
- M.2 Screw/Standoff Kit

4. MOTHERBOARD LAYOUT

Familiarize yourself with the various components and connectors on the ZSUS B450 Motherboard. Refer to the image below for a visual guide.

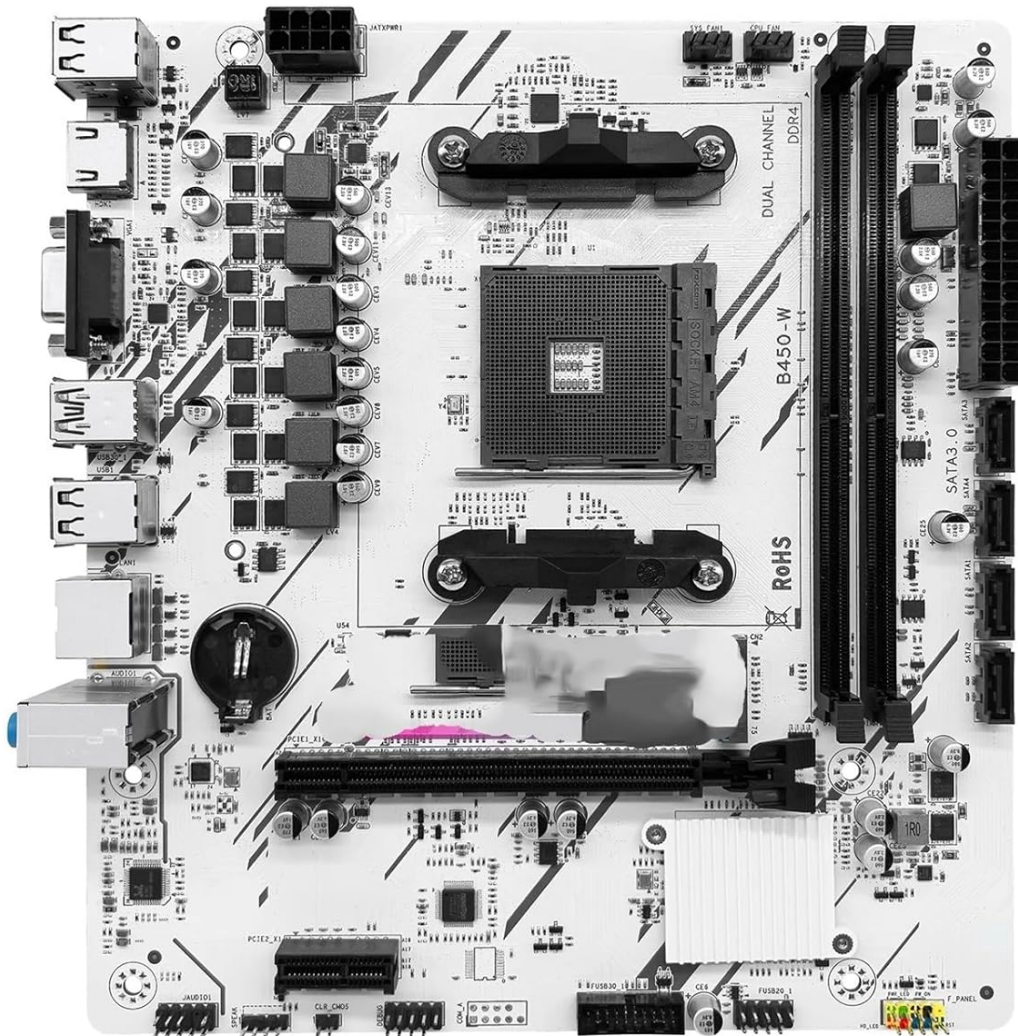


Figure 4.1: ZSUS B450 Motherboard Top-Down View. This image displays the overall layout of the motherboard, highlighting the central AM4 CPU socket, two DDR4 memory slots to the right, multiple PCIe expansion slots, SATA ports, and various headers for front panel connections and USB ports.

Key Components:

- **AM4 CPU Socket:** For AMD Ryzen processors.
- **DDR4 DIMM Slots:** Two slots for dual-channel DDR4 memory modules.
- **PCIe Slots:** For graphics cards and other expansion cards.

- **M.2 NVME Slot:** High-speed interface for NVME solid-state drives.
- **SATA 3.0 Ports:** For traditional SATA hard drives and SSDs.
- **24-pin ATX Power Connector:** Main power input from the power supply.
- **8-pin EPS 12V Power Connector:** CPU power input.
- **Front Panel Headers:** Connectors for power button, reset button, HDD LED, power LED, and front audio/USB ports.
- **Rear I/O Panel:** USB ports, LAN port, audio jacks, video outputs (if applicable to specific CPU/APU).

5. SETUP AND INSTALLATION

Follow these steps carefully to install your ZSUS B450 Motherboard and its components.

5.1. Installing the CPU

1. Open the CPU socket lever.
2. Align the triangular mark on the CPU with the mark on the socket.
3. Gently place the CPU into the socket without forcing it.
4. Close the CPU socket lever to secure the CPU.

5.2. Installing the CPU Cooler

Refer to your CPU cooler's instruction manual for specific installation steps. Ensure thermal paste is applied correctly.

5.3. Installing Memory (RAM)

1. Open the clips at both ends of the DDR4 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.

5.4. Installing Storage Devices

M.2 NVME SSD:

1. Locate the M.2 slot and remove the standoff screw.
2. Insert the M.2 SSD into the slot at a 30-degree angle.
3. Push the SSD down and secure it with the standoff screw.

SATA Drives:

1. Connect one end of the SATA data cable to a SATA port on the motherboard.
2. Connect the other end to your SATA hard drive or SSD.
3. Connect a SATA power cable from your power supply to the drive.

5.5. Installing Expansion Cards (e.g., Graphics Card)

1. Open the latch on the desired PCIe slot.
2. Align the expansion card with the slot and press down firmly until it clicks into place.
3. Secure the card with a screw to the PC case.

5.6. Connecting Power Supply

1. Connect the 24-pin ATX power cable from your power supply to the motherboard's 24-pin connector.
2. Connect the 8-pin EPS 12V power cable to the motherboard's 8-pin CPU power connector.

5.7. Connecting Front Panel Cables

Connect the power switch, reset switch, HDD LED, and power LED cables from your PC case to the corresponding pins on the

motherboard's front panel header. Refer to the motherboard layout diagram for pin assignments.

5.8. Connecting Peripherals

Connect USB devices, audio devices, and other peripherals to the appropriate ports on the rear I/O panel or internal headers.

6. OPERATING INSTRUCTIONS

6.1. First Boot

After all components are installed and connected, connect your monitor, keyboard, and mouse. Power on your system. The system should display the BIOS/UEFI splash screen.

6.2. BIOS/UEFI Setup

Press the designated key (usually **Del** or **F2**) during startup to enter the BIOS/UEFI setup utility. Here you can configure boot order, system time, and other advanced settings.

6.3. Driver Installation

After installing your operating system, install the necessary drivers for the motherboard chipset, LAN, audio, and any other integrated components. These drivers are typically provided on a driver CD/DVD or can be downloaded from the manufacturer's website.

6.4. Operating System Installation

Insert your operating system installation media (USB drive or DVD) and follow the on-screen instructions to install your preferred operating system.

7. MAINTENANCE

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

7.1. Cleaning

Periodically clean dust from inside your PC case, especially from fans and heatsinks, using compressed air. Ensure the system is powered off and unplugged before cleaning.

7.2. BIOS Updates

Check the manufacturer's website for BIOS/UEFI updates. Updates can improve compatibility, stability, and performance. Follow the update instructions carefully to avoid system damage.

7.3. Driver Updates

Keep your system drivers updated to ensure optimal performance and compatibility with new software and hardware.

8. TROUBLESHOOTING

This section addresses common issues you might encounter. For more complex problems, consult the manufacturer's support resources.

- **No Power:** Ensure all power cables (24-pin ATX, 8-pin EPS 12V) are securely connected. Check power supply unit (PSU) and wall outlet.
- **No Display:** Verify that the monitor is connected to the graphics card (or motherboard if using an APU with integrated graphics). Reseat the graphics card and RAM modules.
- **System Fails to Boot (No POST):** Check CPU, RAM, and graphics card installation. Listen for beep codes (if your motherboard has a speaker) which can indicate specific errors.
- **Operating System Not Found:** Check boot order in BIOS/UEFI. Ensure storage drives are properly connected and

detected.

- **Overheating:** Ensure CPU cooler is properly installed and fans are spinning. Check for adequate airflow in the PC case.

9. SPECIFICATIONS

Detailed technical specifications for the ZSUS B450 Motherboard.

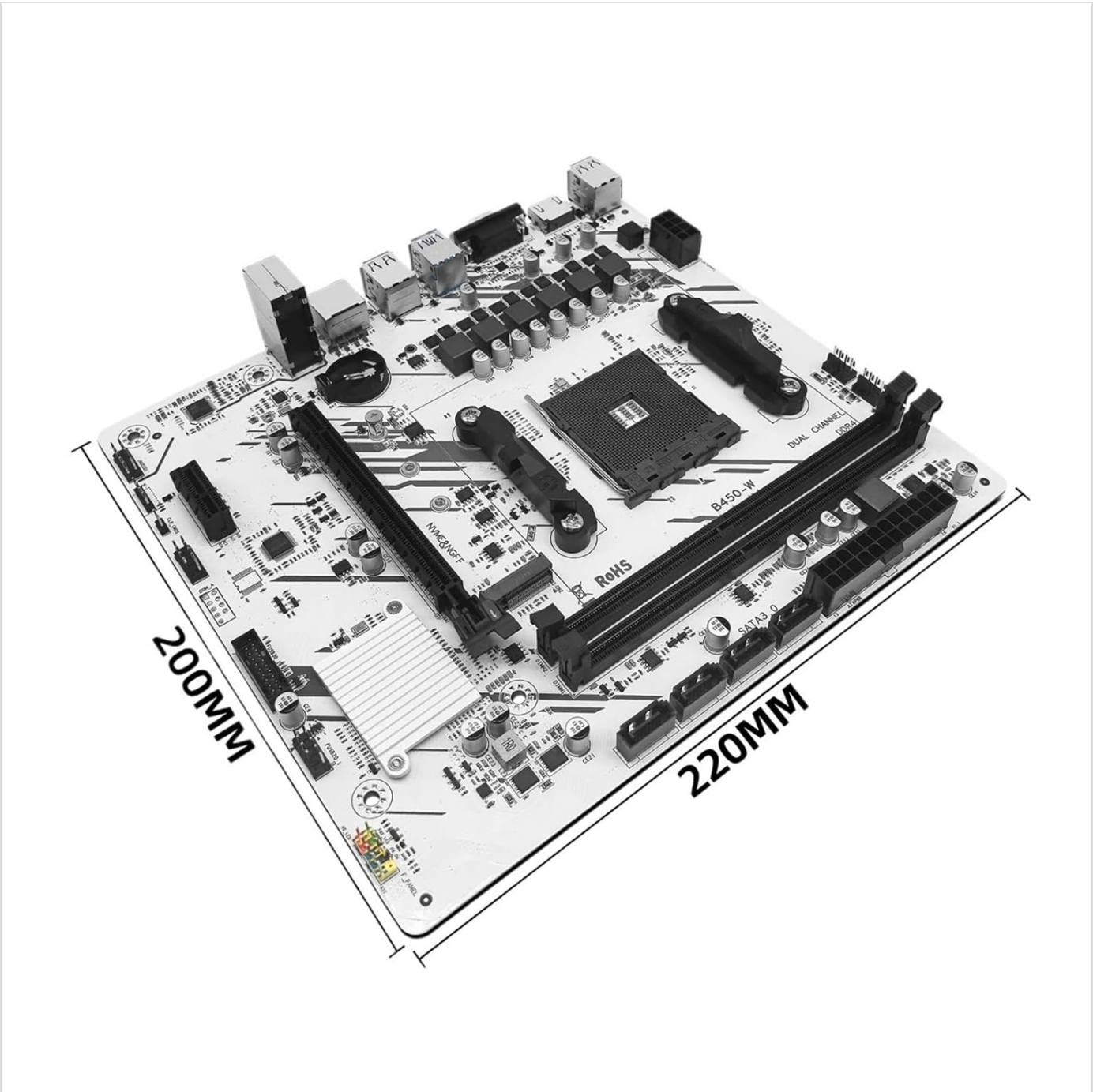


Figure 9.1: ZSUS B450 Motherboard Dimensions. This image illustrates the physical dimensions of the motherboard, indicating a width of 200mm and a length of 220mm, which is typical for a Micro-ATX form factor.

Feature	Specification
Model Number	SVCBYUYVR
CPU Socket	AM4
Chipset	AMD B450

Feature	Specification
Memory	2 x DDR4 DIMM slots, Dual-Channel support
Storage	1 x M.2 NVME slot, Multiple SATA 3.0 ports
Expansion Slots	PCIe slots (specific configuration not provided, typical for B450)
Form Factor	Micro-ATX (approx. 220mm x 200mm)
Package Dimensions	0.39 x 0.39 x 0.39 inches
Item Weight	12.63 ounces

10. WARRANTY AND SUPPORT

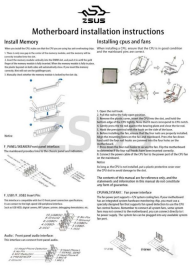
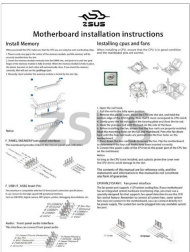
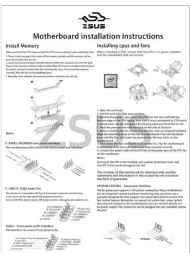
For warranty information, please refer to the documentation provided with your purchase or contact your retailer. For technical support, driver downloads, and BIOS updates, please visit the official ZSUS support website (if available) or contact your point of purchase.

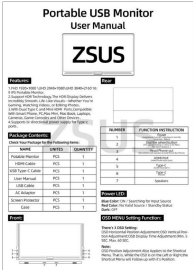
Note: The manufacturer's warranty typically covers defects in materials and workmanship under normal use. Damage resulting from improper installation, accident, abuse, or unauthorized modification is generally not covered.



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Related Documents - B450

	<p>ZSUS X99-W Motherboard Installation and BIOS Setup Guide</p> <p>Comprehensive guide for installing the ZSUS X99-W motherboard, including CPU, memory, and fan installation, along with detailed instructions for configuring BIOS settings and boot options.</p>
	<p>ZSUS X99 Motherboard Series: User Manual for LGA2011-3 Xeon Platforms</p> <p>Official user manual for ZSUS X99 series motherboards, including models X99, X99-8D3, and X99-8D4. This guide provides detailed specifications, installation instructions, and setup information for Intel LGA2011-3 Xeon E5 v3/v4 processors, DDR3/DDR4 ECC RAM, and NVMe M.2 storage.</p>
	<p>ZSUS Motherboard Installation Guide</p> <p>A comprehensive guide for installing a ZSUS motherboard, covering memory, CPU, fan installation, front panel connectors, and BIOS settings.</p>

	<p>ZSUS Portable USB Monitor User Manual</p> <p>Comprehensive user manual for the ZSUS Portable USB Monitor, covering features, specifications, connectivity options, button operations, and troubleshooting for optimal use with various devices.</p>
<p>MACHINIST</p> <p>B450M AM4-K User Manual</p>	<p>MACHINIST B450M AM4-K Motherboard User Manual</p> <p>Comprehensive user manual for the MACHINIST B450M AM4-K motherboard, detailing specifications, installation, connectors, BIOS settings, and troubleshooting for AMD AM4 socket processors.</p>
<p>B450 AM4-A User Manual (English)</p>	<p>B450 AM4-A Motherboard User Manual</p> <p>Comprehensive user manual for the B450 AM4-A motherboard, detailing specifications, installation procedures for CPU, RAM, and expansion cards, connector pinouts, BIOS configuration, and troubleshooting FAQs. Designed for PC builders and enthusiasts.</p>