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› ASRock B550M-HDV Motherboard User Manual

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ASRock B550M-HDV Motherboard User Manual

Brand: ASRock | Model: B550M-HDV

1. INTRODUCTION

The ASRock B550M-HDV Motherboard is designed to support 3rd Gen AMD AM4 Ryzen™ and future AMD Ryzen™ Processors, offering a robust foundation for your computing needs. It features sturdy components and completely smooth power delivery to the CPU, ensuring stable and efficient performance. With unmatched overclocking capabilities and enhanced performance at low temperatures, it's ideal for advanced gamers and demanding users.

Key features include:

- Supports 3rd Gen AMD AM4 Ryzen™ / Future AMD Ryzen™ Processors
- 6 Power Phase Design for stable power delivery
- Supports DDR4 4733+ (OC) memory
- 1 PCIe 4.0 x16 slot for high-speed graphics cards
- 1 PCIe 3.0 x1 slot for expansion cards
- Graphics Output Options: HDMI, DVI-D, D-Sub

2. PACKAGE CONTENTS

Verify that all items are present in your motherboard package:

- Quick Installation Guide
- Support CD
- I/O Shield
- 2 x SATA Data Cables
- 1 x Screw for M.2 Socket

3. SETUP AND INSTALLATION

3.1. Pre-Installation Precautions

Before installing the motherboard, ensure your workspace is static-free. Use an anti-static wrist strap or touch a grounded object to discharge static electricity. Always handle components by their edges and avoid touching sensitive circuits.

3.2. Component Overview



Figure 3.2.1: ASRock B550M-HDV Motherboard Layout. This image shows the overall layout of the motherboard, highlighting the CPU socket, RAM slots, PCIe slots, and I/O panel connectors.

3.3. CPU Installation (Socket AM4)

1. Open the CPU socket lever.
2. Align the golden triangle on your AMD Ryzen CPU with the triangle on the socket.
3. Gently place the CPU into the socket without force.
4. Close the lever to secure the CPU.

3.4. Memory Installation (DDR4)

This motherboard supports DDR4 memory. Insert memory modules into the DIMM slots (DDR4_A1, DDR4_B1) by aligning the notch on the module with the key in the slot and pressing down firmly until the clips on both sides snap into place.

3.5. Storage Installation

- **M.2 SSD:** Locate the Hyper M.2 slot. Insert your M.2 SSD at an angle and secure it with the provided screw.
- **SATA Drives:** Connect your SATA SSDs or HDDs to the SATA 6Gb/s ports using the provided SATA data cables.

3.6. Graphics Card and Expansion Slots

Insert your graphics card into the PCIe 4.0 x16 slot. Ensure it is seated firmly and secured with a screw to your

chassis. Additional expansion cards can be installed in the PCIe 3.0 x1 slot.

3.7. Power Connections

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

3.8. Front Panel and I/O Connections

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

I/O Panel Overview:

- PS/2 Port (Keyboard/Mouse)
- USB 3.2 Gen1 Ports
- HDMI Port
- DVI-D Port
- D-Sub (VGA) Port
- Gigabit LAN Port
- Audio Jacks (Line In, Line Out, Microphone)

4. OPERATING YOUR MOTHERBOARD

4.1. BIOS/UEFI Setup

To enter the BIOS/UEFI setup utility, press the **Del** or **F2** key during system startup. The UEFI interface allows for easy configuration of system settings, boot options, and hardware monitoring.

4.2. Operating System Installation

This motherboard supports Microsoft Windows 10 64-bit and Windows 11 64-bit operating systems. Insert your OS installation media (USB drive or DVD) and follow the on-screen prompts to install the operating system.

4.3. Driver Installation

After installing the operating system, install the necessary drivers for your motherboard components. You can find the drivers on the included Support CD or download the latest versions from the ASRock official website (www.asrock.com).

5. MAINTENANCE

5.1. Keeping Your System Clean

Regularly clean your computer case and motherboard components to prevent dust buildup, which can lead to overheating and reduced performance. Use compressed air to remove dust from fans, heatsinks, and other components.

5.2. BIOS and Driver Updates

Periodically check the ASRock website for updated BIOS versions and drivers. Keeping your BIOS and drivers up-to-date can improve system stability, performance, and compatibility with new hardware.

6. TROUBLESHOOTING

6.1. Post Status Checker (PSC)

The motherboard features a Post Status Checker (PSC) with status LEDs (LED0017, LED007, LED008, LED012) that indicate the status of the CPU, DRAM, VGA, and BOOT devices during startup. If an issue occurs, the corresponding LED will remain lit, helping you quickly identify the source of the problem.

- **CPU LED:** Indicates an issue with the CPU.
- **DRAM LED:** Indicates an issue with the memory.
- **VGA LED:** Indicates an issue with the graphics card.
- **BOOT LED:** Indicates an issue with the boot device.

6.2. Common Issues

- **No Power:** Ensure all power cables (24-pin ATX, 8-pin CPU) are securely connected. Check your power supply.
- **No Display:** Verify that your monitor is connected to the correct graphics output port (HDMI, DVI-D, D-Sub) and that the graphics card is properly seated.
- **System Instability:** Check for loose connections, ensure components are properly cooled, and update drivers/BIOS.

7. SPECIFICATIONS

Feature	Specification
Brand	ASRock
Model Name	B550M-HDV
CPU Socket	Socket AM4
Chipset Type	AMD B550
RAM Memory Technology	DDR4
Memory Clock Speed	2400 MHz (Supports 4733+ OC)
Max Memory Capacity	64 GB
PCIe Slots	1 x PCIe 4.0 x16, 1 x PCIe 3.0 x1
Storage Interfaces	6 x SATA 6Gb/s, 1 x Hyper M.2 (PCIe Gen4 x4)
Graphics Output	HDMI, DVI-D, D-Sub
USB Ports	USB 3.2 Gen1, USB 2.0
LAN	Realtek Gigabit LAN
Form Factor	Micro ATX

8. WARRANTY AND SUPPORT

For detailed warranty information, please refer to the warranty card included in your product package or visit the ASRock official website.

8.1. Official Product Video

Your browser does not support the video tag.

Video 8.1.1: Product Overview of the ASRock B550M-HDV Motherboard. This video provides a visual tour of the motherboard's features and design.

8.2. Additional Resources

For further assistance and detailed documentation, please visit the ASRock support website or refer to the PDF manuals:

- [Installation Manual \(PDF\)](#)
- [User Manual \(PDF\)](#)
- [ASRock Official Store on Amazon](#)