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ASRock B560M-HDV

ASRock B560M-HDV Motherboard User Manual

For Intel 10th and 11th Generation Core Processors

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your ASRock B560M-HDV motherboard. Designed for Intel LGA1200 socket processors, this Micro-ATX motherboard supports Intel 10th and 11th Generation Core processors, offering a robust foundation for your personal computer system.

1.1 Key Features

- **CPU Support:** Intel Socket 1200 for Intel 10th/11th Gen Core Processors
- **Chipset:** Intel B560
- **Memory:** 2 x DIMM DDR4 slots
- **Expansion Slots:** 1 x PCIe 4.0 x16, 2 x PCIe 3.0 x1
- **Graphics Output:** HDMI, DVI-D, D-SUB
- **Storage:** 2 x M.2 slots, 4 x SATA 6Gb/s ports
- **LAN:** 1 x Intel Gigabit LAN
- **Audio:** Realtek ALC897
- **USB Ports:** 6 x USB 3.2 Gen1, 6 x USB 2.0
- **Form Factor:** Micro-ATX



The ASRock B560M-HDV motherboard displayed alongside its retail box, highlighting the product's branding and model.

2. Setup

2.1 Preparing the Motherboard

Before installation, ensure you have a clean, static-free workspace. Handle the motherboard by its edges to avoid touching components or connectors. It is recommended to wear an anti-static wrist strap.

2.2 CPU Installation

1. Locate the LGA1200 CPU socket on the motherboard.
2. Gently push down the load lever and pull it to the side to open the CPU socket cover.
3. Align the triangular mark on the CPU with the corresponding mark on the socket. Carefully place the CPU into the socket without forcing it.
4. Close the socket cover and push the load lever back into place until it clicks.

2.3 RAM Installation

1. Identify the DDR4 DIMM slots.
2. Open the clips at both ends of the DIMM slot.
3. Align the notch on the RAM module with the key in the DIMM slot.
4. Insert the RAM module firmly into the slot until the clips snap into place. Ensure both clips are closed.

2.4 Storage Device Installation (M.2 and SATA)

M.2 SSD Installation

1. Locate the M.2 slots on the motherboard.
2. Remove the screw and standoff from the desired M.2 slot.

3. Insert the M.2 SSD into the slot at an angle.
4. Gently push down the M.2 SSD and secure it with the screw and standoff.

SATA Drive Installation

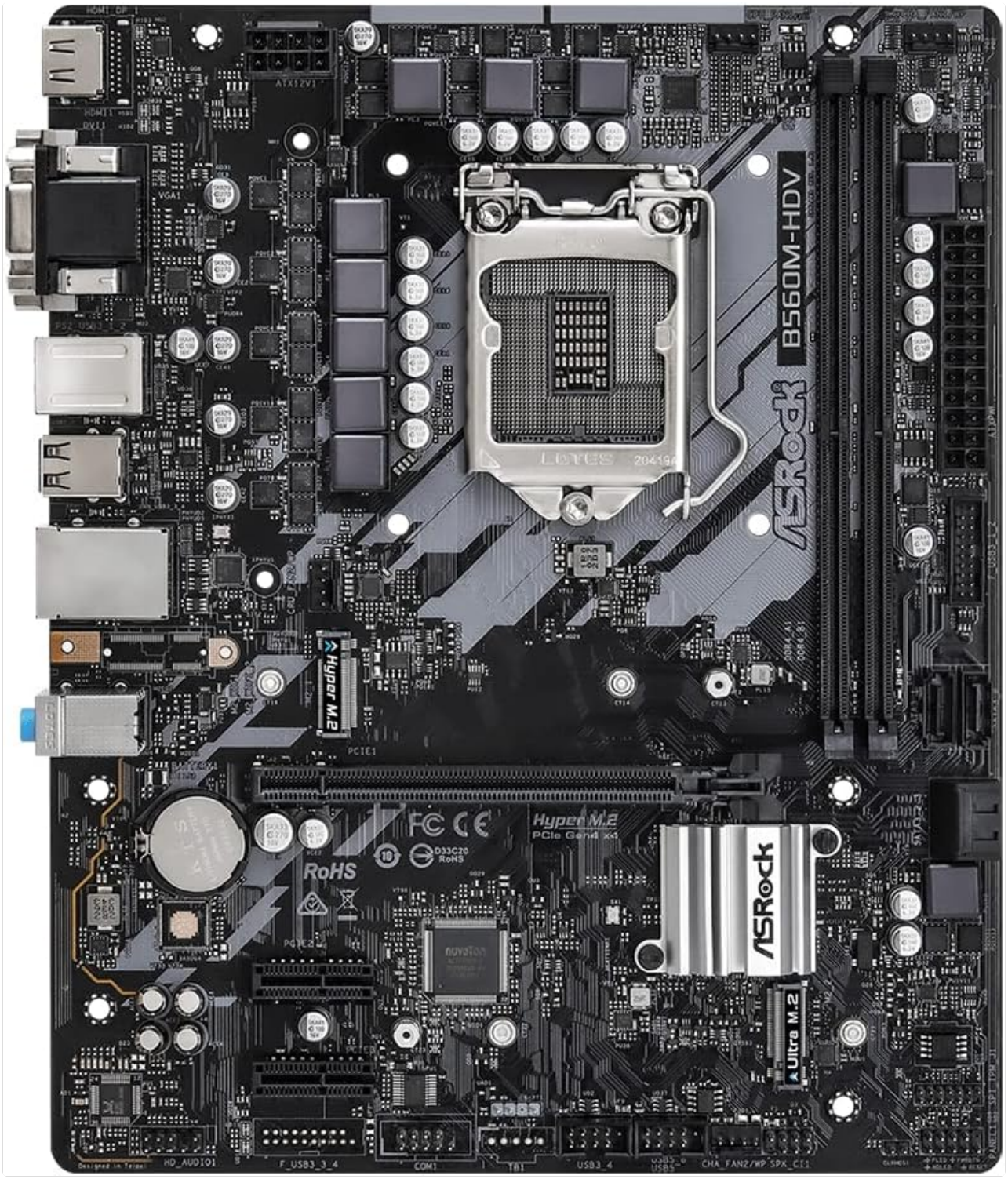
1. Connect one end of a SATA data cable to a SATA 6Gb/s port on the motherboard.
2. Connect the other end of the SATA data cable to your SATA hard drive or SSD.
3. Connect a SATA power cable from your power supply unit (PSU) to the SATA drive.

2.5 Expansion Card Installation (PCIe)

1. Locate the PCIe slots. For a graphics card, use the PCIe 4.0 x16 slot.
2. Remove the corresponding expansion slot cover from your PC case.
3. Align the expansion card with the slot and press down firmly until it is seated correctly.
4. Secure the card to the case with a screw.

2.6 Connecting Peripherals and Power

1. Connect the 24-pin ATX power connector and the 8-pin CPU power connector from your PSU to the motherboard.
2. Connect front panel connectors (power button, reset button, USB, audio) to their respective headers on the motherboard. Refer to the motherboard layout diagram for exact locations.
3. Install the motherboard into your PC case, securing it with screws.
4. Connect external peripherals (monitor, keyboard, mouse) to the rear I/O panel.



A detailed overhead view of the ASRock B560M-HDV motherboard, illustrating the layout of the LGA1200 CPU socket, DDR4 RAM slots, PCIe expansion slots, and M.2 slots.



The rear input/output (I/O) panel of the ASRock B560M-HDV motherboard, featuring D-SUB, DVI-D, HDMI display outputs, multiple USB 3.2 Gen1 and USB 2.0 ports, Intel Gigabit LAN, and Realtek ALC897 audio jacks.

3. Operating

3.1 First Boot and BIOS Setup

1. After assembling your system, connect the power cable and turn on the PC.
2. Press the `DEL` or `F2` key during startup to enter the BIOS/UEFI setup utility.
3. Configure essential settings such as boot order, date/time, and enable/disable specific features as needed. Save changes and exit the BIOS.

3.2 Operating System Installation

Insert your operating system installation media (USB drive or DVD) and restart the computer. Follow the on-screen prompts to install your preferred operating system. After installation, install the necessary drivers for the motherboard components, which can typically be found on the ASRock support website.

4. Maintenance

4.1 Cleaning

Regularly clean your computer's interior to prevent dust buildup, which can lead to overheating and component failure. Use compressed air to remove dust from fans, heatsinks, and other components. Ensure the system is powered off and unplugged before cleaning.

4.2 BIOS Updates

Periodically check the ASRock support website for BIOS/UEFI updates. Updates can provide improved compatibility, stability, and new features. Follow the instructions provided by ASRock carefully when performing a BIOS update to avoid potential issues.

5. Troubleshooting

5.1 No Power/No Boot

- Verify all power cables (24-pin ATX, 8-pin CPU, GPU) are securely connected.
- Ensure the PSU switch is in the 'ON' position.
- Check front panel connections (power button header) for correct polarity and seating.
- Try booting with minimal components (CPU, one RAM stick, GPU if no integrated graphics) to isolate the issue.

5.2 No Display Output

- Ensure the monitor is connected to the correct display output (either integrated graphics or dedicated GPU).
- Check display cable connections at both the monitor and the PC.
- Reseat the graphics card and RAM modules.
- If using a dedicated GPU, try connecting to the motherboard's integrated graphics (if your CPU supports it) to rule out GPU issues.

5.3 Component Not Detected

- **RAM:** Reseat RAM modules. Try one stick at a time in different slots.

- **Storage:** Check SATA data and power cables. Ensure M.2 SSDs are properly seated and secured. Verify detection in BIOS.
- **PCIe Devices:** Reseat the expansion card. Ensure it is fully inserted into the slot.

5.4 System Instability/Crashes

- Check CPU and GPU temperatures. Overheating can cause instability.
- Ensure all drivers are up to date.
- Run memory diagnostic tools to check for faulty RAM.
- Verify PSU wattage is sufficient for all components.

6. Specifications

Feature	Detail
Brand	ASRock
Model Name	B560M-HDV
CPU Socket	LGA 1200
Compatible Processors	10th and 11th Generation Intel Core
Chipset Type	Intel B560
RAM Memory Technology	DDR4
Memory Slots	2 x DIMM
PCIe Slots	1 x PCIe 4.0 x16, 2 x PCIe 3.0 x1
M.2 Slots	2
SATA Ports	4 x SATA 6Gb/s
Video Output	HDMI, DVI-D, D-SUB
LAN	Intel Gigabit LAN
Audio	Realtek ALC897
USB 3.2 Gen1 Ports	6
USB 2.0 Ports	6
Form Factor	Micro-ATX
Dimensions	11 x 10 x 2.5 inches
Item Weight	13.1 ounces

7. Warranty and Support

For warranty information and technical support, please refer to the official ASRock website or contact ASRock customer service. Keep your proof of purchase for warranty claims. Support resources, including driver downloads

and FAQs, are available online.

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Details

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