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› GIGABYTE B550M DS3H AC R2 Motherboard User Manual

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Model: B550M DS3H AC R2

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your GIGABYTE B550M DS3H AC R2 motherboard. This micro-ATX motherboard is designed to support AMD Ryzen 5000, 4000, and 3000 series CPUs on the AM4 socket, offering a robust platform for various computing needs. Please read this manual thoroughly before beginning installation to ensure proper setup and functionality.



Figure 1.1: Top-down view of the GIGABYTE B550M DS3H AC R2 Motherboard, showcasing its layout including the CPU socket, DIMM slots, and various connectors.

2. KEY FEATURES

- **AMD B550 Chipset:** Supports AMD Ryzen 5000, 4000, and 3000 series CPUs with AM4 socket.
- **High-Speed DDR4 Memory:** Dual-channel support for up to 4733MHz (O.C.) across 4 DIMM slots.
- **Advanced Storage Options:** Includes one PCIe 4.0 M.2 slot and one PCIe 3.0 M.2 slot, alongside PCIe slots for graphics and expansion.
- **Integrated Connectivity:** Features Wi-Fi 5, Bluetooth 5.0, and 1GbE LAN for reliable network connections.
- **Flexible Display Outputs:** Equipped with HDMI and DisplayPort for multi-monitor configurations.
- **Smart Cooling System:** Smart Fan 6 with multiple temperature sensors ensures efficient thermal management.
- **Q-Flash Plus:** Allows BIOS updates without the need for CPU, memory, or graphics card installation.

3. SETUP AND INSTALLATION

3.1 CPU Installation

1. Ensure the CPU socket lever is in the open position.
2. Carefully align the triangular mark on the AMD Ryzen CPU with the mark on the AM4 socket.
3. Gently place the CPU into the socket without forcing it.
4. Lower the lever to secure the CPU in place.
5. Install the CPU cooler according to its manufacturer's instructions.

3.2 Memory (RAM) Installation

1. Open the clips at both ends of the DIMM slots.
2. Align the notch on the DDR4 memory module with the key in the DIMM slot.
3. Insert the memory module firmly until the clips snap into place. For dual-channel operation, refer to the motherboard manual for recommended slot configurations.

3.3 Storage Device Installation

This motherboard supports both M.2 NVMe SSDs and SATA drives.

- **M.2 SSD:** Locate the M.2 slots (one PCIe 4.0, one PCIe 3.0). Insert the M.2 SSD at an angle and secure it with the provided screw.
- **SATA Drives:** Connect SATA data cables from your SSDs/HDDs to the SATA ports on the motherboard. Connect power cables from your power supply to the drives.

3.4 Expansion Card Installation

Install your graphics card or other PCIe expansion cards into the appropriate PCIe slots. Ensure they are seated firmly and secured with the case screw.

3.5 Power Connections

- Connect the 24-pin ATX main power connector from your power supply to the motherboard.
- Connect the 8-pin ATX 12V CPU power connector to the motherboard.

3.6 Rear I/O Panel Overview

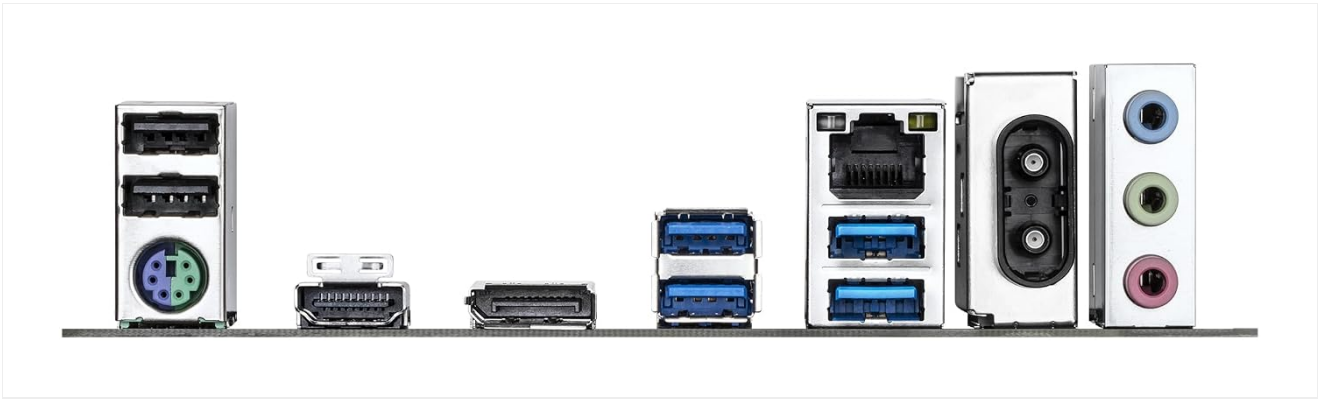


Figure 3.1: The rear I/O panel of the GIGABYTE B550M DS3H AC R2 motherboard, showing various ports including USB, HDMI, DisplayPort, LAN, and audio jacks.

The rear I/O panel provides connectivity for external devices. It includes USB 2.0, USB 3.2 Gen 1, HDMI, DisplayPort, 1GbE LAN, Wi-Fi antenna connectors, and audio jacks. Refer to the detailed diagram in the physical manual for specific port identification.

4. OPERATING INSTRUCTIONS

4.1 BIOS Setup

The BIOS (Basic Input/Output System) is firmware that initializes hardware during the booting process. To enter BIOS Setup, press the **DEL** key during the Power-On Self-Test (POST). Here you can configure system settings, boot order, and monitor hardware status.

4.2 Q-Flash Plus

Q-Flash Plus allows you to update the BIOS without installing the CPU, memory, or graphics card. Simply download the latest BIOS file from the GIGABYTE website, rename it to GIGABYTE.bin, save it to a USB flash drive, and insert it into the designated Q-Flash Plus USB port. Press the Q-Flash Plus button to initiate the update.

4.3 Driver Installation

After installing your operating system, install the necessary drivers for the motherboard chipset, audio, LAN, Wi-Fi, and other integrated components. These drivers are typically provided on a support DVD or can be downloaded from the official GIGABYTE website.

5. MAINTENANCE

5.1 Cleaning

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

5.2 BIOS Updates

Periodically check the GIGABYTE website for BIOS updates. Updates can improve system stability, add support for new hardware, or fix known issues. Follow the instructions provided by GIGABYTE carefully when performing a BIOS update.

5.3 Smart Fan 6

Utilize the Smart Fan 6 utility in the BIOS or GIGABYTE's software to monitor system temperatures and adjust fan speeds.

Proper fan configuration helps maintain optimal operating temperatures and extends component lifespan.

6. TROUBLESHOOTING

- **System Fails to Boot:** Check all power connections (24-pin ATX, 8-pin CPU), ensure RAM modules are properly seated, and verify the CPU is correctly installed. Try clearing the CMOS.
- **No Display Output:** Confirm the graphics card is fully seated in its PCIe slot and connected to power (if required). Ensure your monitor cable is connected to the graphics card, not the motherboard's integrated graphics ports (unless using an APU).
- **Peripheral Issues:** If USB devices or other peripherals are not working, ensure drivers are installed and check BIOS settings for port enablement.
- **System Instability/Crashes:** This can be caused by outdated drivers, overheating, or faulty hardware. Update drivers, monitor temperatures, and test components individually if possible.
- **BIOS Update Failure:** If a BIOS update fails, use the Q-Flash Plus feature to recover the BIOS.

7. SPECIFICATIONS

Feature	Specification
Brand	GIGABYTE
Model Name	B550M DS3H AC R2
CPU Socket	Socket AM4
Compatible Processors	AMD Ryzen 3000 Series, AMD Ryzen 4000 Series, AMD Ryzen 5000 Series
Chipset Type	AMD B550
RAM Memory Technology	DDR4
Memory Clock Speed	Up to 4733 MHz (O.C.)
Memory Slots Available	4
RAM Memory Maximum Size	128 GB
Graphics Card Interface	PCI Express 4.0
Total PCIe Ports	1 (PCIe 4.0 x16 for GPU) + other PCIe slots
M.2 Slots	1x PCIe 4.0 M.2, 1x PCIe 3.0 M.2
Total SATA Ports	4
Wireless Connectivity	Wi-Fi 5, Bluetooth 5.0
LAN	1GbE LAN
Total USB Ports	6 (Rear I/O) + Internal Headers
Display Outputs	1x HDMI, 1x DisplayPort

Feature	Specification
Form Factor	Micro ATX
Item Dimensions L x W x H	24.4L x 24.4W x 3.5H Centimeters
Item Weight	980 Grams

8. WARRANTY INFORMATION

The GIGABYTE B550M DS3H AC R2 motherboard comes with a **3-YEAR Manufacturer Warranty**. Please retain your proof of purchase for warranty claims. For detailed terms and conditions, refer to the official GIGABYTE warranty policy available on their website.

9. SUPPORT AND CONTACT

For technical support, driver downloads, BIOS updates, and further product information, please visit the official GIGABYTE website. You can also contact GIGABYTE customer service for assistance.

Manufacturer Contact Information:

GIGABYTE Technology (India) Pvt. Ltd.

Unit No. 807 & 808, 8th Floor, Naman Midtown B-Wing,

Elphinstone Road, Mumbai – 400013, India

For the most up-to-date contact details and support resources, please refer to the GIGABYTE official website:

www.gigabyte.com