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ASUS ROG Maximus XI Hero Motherboard User Manual

Model: ROG Maximus XI Hero | Brand: ASUS

1. PRODUCT OVERVIEW

The ASUS ROG Maximus XI Hero is a high-performance motherboard designed for 9th and 8th Generation Intel Core processors. It is engineered to maximize connectivity and speed, featuring Dual M.2 slots, USB 3.1 Gen 2, and ASUS Opti-MEM II for enhanced DRAM overclocking stability.

Key features include a revamped 5-Way Optimization system that intelligently overclocks based on smart prediction and thermal telemetry, alongside FanXpert 4 for dynamic system cooling. The motherboard also integrates Aura Sync RGB lighting with addressable headers, offering extensive color customization and synchronization with other AURA Sync enabled products.





Figure 1.1: The ASUS ROG Maximus XI Hero motherboard, showcasing its design and integrated RGB lighting elements.

Package Contents

Upon unboxing your ROG Maximus XI Hero motherboard, verify that all components listed below are present:

- ROG MAXIMUS XI HERO gaming motherboard
- User guide
- ROG motherboard support DVD
- 2-in-1 SATA 6Gb/s cables (2)
- Extension Cable for RGB strips
- Extension Cable for RGB Addressable strips (2 included)
- SLI™ HB bridge (2-way-M)
- Q-Connector
- ROG Coaster
- M.2 screws package

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 retention frame and push the load lever back into place until it clicks.



Figure 2.1: Close-up view of the LGA 1151 CPU socket on the motherboard, ready for processor installation.

Note: One user reported receiving a board with bent pins in the CPU socket. Always inspect the socket carefully before installing the CPU. If bent pins are observed, contact your retailer or ASUS support immediately.

2.3 RAM Installation (DDR4)

The motherboard features four DDR4 DIMM slots, supporting up to 64GB of RAM with speeds up to 4400 MHz (OC). For optimal performance, install RAM modules in matched pairs (dual-channel configuration) as indicated in the user guide.

1. Open the clips at both ends of the DIMM slot.
2. Align the notch on the RAM module with the key in the DIMM slot.
3. Press down firmly on both ends of the RAM module until the clips snap into place.

2.4 M.2 SSD Installation

The ROG Maximus XI Hero includes Dual M.2 slots for high-speed NVMe SSDs, featuring M.2 heatsinks to maintain optimal drive temperatures.

1. Locate the M.2 slots, often covered by heatsinks. Remove the heatsink screw and lift the heatsink.
2. Insert the M.2 SSD into the slot at a slight angle.
3. Gently push down the SSD and secure it with the provided M.2 screw.
4. Reattach the M.2 heatsink and secure its screw.

2.5 Motherboard Installation into Chassis

The pre-mounted I/O shield simplifies installation. Ensure your case has the correct standoffs installed for an ATX motherboard.

1. Carefully align the motherboard with the standoffs in your PC case.
2. Ensure the I/O shield aligns with the cutouts in the case.
3. Secure the motherboard with screws, typically nine, ensuring not to overtighten.

2.6 Connecting Peripherals and Power

Connect all necessary cables:

- **ATX Power Connectors:** Connect the 24-pin main power connector and the 8-pin (or 4+4-pin) CPU power connector from your power supply to the motherboard.
- **Front Panel Connectors:** Use the Q-Connector to simplify connecting the power button, reset button, HDD LED, and power LED from your case to the motherboard's front panel header.
- **USB Headers:** Connect front panel USB 2.0 and USB 3.0/3.1 headers.
- **SATA Devices:** Connect SATA data cables from your storage drives to the SATA ports on the motherboard.
- **Case Fans:** Connect case fans to the FanXpert 4 controlled fan headers.
- **Graphics Card:** Install your graphics card into the primary PCIe x16 slot and connect any necessary PCIe power cables from your power supply.

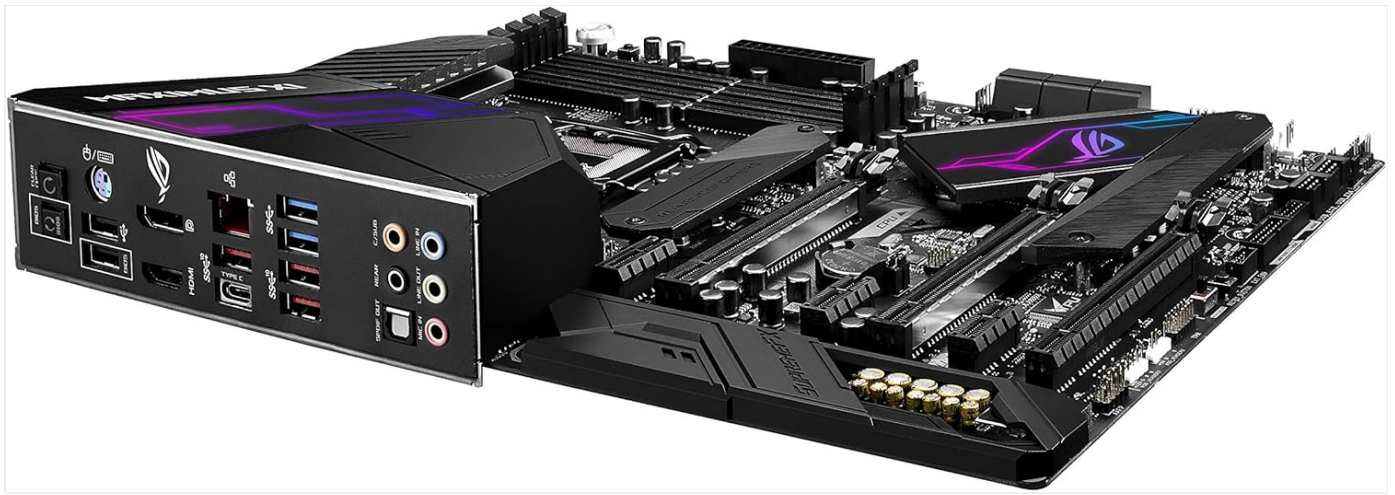


Figure 2.2: The rear I/O panel of the motherboard, showing various ports including USB, HDMI, and audio jacks.

3. OPERATING YOUR MOTHERBOARD

Once your system is assembled, you can proceed with initial power-on, BIOS configuration, and operating system installation.

3.1 First Boot and BIOS Setup

1. Connect your monitor, keyboard, and mouse.
2. Connect the power cable to your power supply and turn on the power supply switch.
3. Press the power button on your PC case.
4. During POST (Power-On Self-Test), repeatedly press the **DEL** key or **F2** key to enter the UEFI BIOS Utility.
5. In the BIOS, you can configure boot order, enable XMP for RAM, adjust fan curves via FanXpert 4, and perform initial system checks.
6. Save changes and exit the BIOS to continue with operating system installation.

The BIOS is designed to be user-friendly and offers extensive options for system tuning and monitoring.

3.2 Driver and Software Installation

After installing your operating system (e.g., Windows 10), install the necessary drivers for optimal performance and stability. The ROG Maximus XI Hero comes with a support DVD, but it is recommended to download the latest drivers and utilities from the official ASUS support website.

- **Chipset Drivers:** Essential for proper communication between components.
- **Audio Drivers:** For the SupremeFX S1220A codec.
- **LAN/Wi-Fi Drivers:** For network connectivity.
- **Intel Management Engine Interface (MEI) Driver.**
- **ASUS Utilities:**
 - **Armoury Crate:** A software suite for system monitoring, driver updates, and Aura Sync control.
 - **ASUS AI Suite 3 (5-Way Optimization, FanXpert 4):** For intelligent overclocking, power saving, and advanced fan control.
 - **Aura Sync:** For customizing the integrated RGB lighting and synchronizing it with other compatible devices.

Tip: The motherboard may prompt you to install Armoury Crate directly after the first boot into the OS, which can streamline driver and utility installation.

3.3 Overclocking and Performance Tuning

The ROG Maximus XI Hero is designed for enthusiasts and offers robust overclocking capabilities:

- **5-Way Optimization:** This intelligent feature automatically overclocks your system based on your specific hardware and cooling, providing a balanced performance boost.
- **ASUS Opti-MEM II:** Enhances DRAM overclocking stability, allowing for higher memory frequencies.
- **UEFI BIOS:** Provides granular control over CPU voltage, frequency, memory timings, and fan curves for manual tuning.

4. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your motherboard and PC system.

4.1 Dust Cleaning

Dust accumulation can lead to overheating and component degradation. It is recommended to clean your PC interior every 3-6 months, depending on your environment.

- Disconnect power from the PC.
- Open the side panel of your PC case.
- Use compressed air to blow dust out of the motherboard, CPU cooler, GPU, and case fans. Hold fans in place to prevent over-spinning.
- For stubborn dust, use a soft brush or microfiber cloth.

4.2 BIOS Updates

ASUS periodically releases BIOS updates to improve stability, add support for new hardware, or fix bugs. Always exercise caution when updating the BIOS.

- Visit the official ASUS support website for the ROG Maximus XI Hero to download the latest BIOS version.
- Follow the instructions provided by ASUS for updating the BIOS, typically via USB Flashback or the EZ Flash utility within the BIOS.
- *Note:* Some users have reported better stability with specific older BIOS versions (e.g., 0602) for certain overclocking scenarios. Research community feedback if you encounter issues with the latest BIOS and consider older stable versions if necessary, but generally, the latest is recommended.

4.3 Driver Updates

Keep your drivers updated to ensure compatibility, performance improvements, and security patches. Use Armoury Crate or manually download from the ASUS support website.

5. TROUBLESHOOTING GUIDE

This section addresses common issues you might encounter with your ROG Maximus XI Hero motherboard.

5.1 No Power / No POST (Power-On Self-Test)

- **Check Power Connections:** Ensure the 24-pin ATX power connector and the 8-pin CPU power connector are securely seated on the motherboard. Verify the power supply is switched on and connected to a working outlet.
- **Clear CMOS:** If the system fails to boot after hardware changes or overclocking, try clearing the CMOS. Refer to your motherboard's physical user manual for the exact location of the CLRRTC jumper or button.

- **Reseat Components:** Remove and re-install the CPU, RAM modules, and graphics card to ensure they are properly seated.
- **Minimum Boot Configuration:** Disconnect all non-essential peripherals and components (e.g., extra storage drives, PCIe cards) and attempt to boot with only the CPU, one RAM stick, and the graphics card (if no integrated graphics).

5.2 System Instability / Crashes

- **Check RAM:** Ensure RAM modules are installed in the correct slots for dual-channel operation. Test with one RAM stick at a time to identify a faulty module. Disable XMP/DOCP profiles if enabled.
- **Overclocking Issues:** If you have overclocked your CPU or RAM, revert to default settings in the BIOS to check for stability. Gradually increase frequencies and voltages, testing stability at each step.
- **Temperature Monitoring:** Use monitoring software (e.g., HWMonitor, ASUS AI Suite) to check CPU and motherboard temperatures. Ensure adequate cooling.
- **Driver Conflicts:** Ensure all drivers are up-to-date and compatible with your operating system. Perform a clean installation of graphics drivers if issues persist.

5.3 Bent CPU Socket Pins

While rare, damage to the CPU socket pins can occur, often during installation or due to manufacturing defects. This can lead to no boot, system instability, or recognition issues with components (e.g., RAM slots not working).

- **Inspection:** Carefully inspect the CPU socket pins under good lighting before installing the CPU. If any pins appear bent or misaligned, do not attempt to install the CPU.
- **Contact Support:** If you discover bent pins upon receiving the motherboard, contact your retailer or ASUS customer support immediately for assistance or an RMA (Return Merchandise Authorization). Attempting to straighten pins yourself can void the warranty and cause further damage.

6. TECHNICAL SPECIFICATIONS

Feature	Specification
Brand	ASUS
Series	ROG Maximus XI Hero
Item Model Number	ROG Maximus XI Hero
CPU Socket	LGA 1151
Compatible Processors	8th and 9th Generation Intel Core
Chipset Type	Intel
RAM Memory Technology	DDR4
Memory Speed	4400 MHz (OC)
Maximum RAM Supported	64 GB
Graphics Card RAM Size	64 GB (System Shared)
Wireless Type	802.11a/b/g/n/ac
Number of USB 2.0 Ports	2 (internal headers)
Product Dimensions (LxWxH)	12 x 1 x 9.6 inches
Item Weight	4.5 pounds
Platform	Windows 10
Batteries	1 CR2 battery required (included)
Manufacturer	ASUS Computer International Direct
Date First Available	October 9, 2018

7. WARRANTY INFORMATION

ASUS provides a limited warranty for its motherboards. The specific terms and duration of the warranty may vary by region and retailer. Please retain your proof of purchase for warranty claims.

For detailed warranty information, including coverage, exclusions, and the claims process, please refer to the warranty card included in your product packaging or visit the official ASUS support website.

8. CUSTOMER SUPPORT

For technical assistance, driver downloads, BIOS updates, or service inquiries regarding your ASUS ROG Maximus XI Hero motherboard, please contact ASUS customer support.

- **ASUS Official Support Website:** Visit www.asus.com/support/ for FAQs, troubleshooting guides, driver downloads, and contact options.
- **Product Page:** Specific information for the ROG Maximus XI Hero can be found on its dedicated product page on the ASUS website.
- **Online Resources:** Many community forums and online resources exist for ASUS ROG products, which can be helpful for general questions and user experiences.

You can also visit the official ASUS Store on Amazon for product information and related accessories: [ASUS Store](#).

