ASUS RTX 5090 Astral LC Overclocked

ASUS GeForce RTX 5090 Astral LC Overclocked Liquid Cooled 32GB GDDR7 PCIe 5.0 Graphics Card User Manual

Model: RTX 5090 Astral LC Overclocked

1. Introduction

This manual provides essential information for the installation, operation, and maintenance of your ASUS GeForce RTX 5090 Astral LC Overclocked Liquid Cooled 32GB GDDR7 PCIe 5.0 Graphics Card. The RTX 5090 Astral LC is engineered for high-performance computing, featuring a 360mm AIO cooler, 32GB GDDR7 memory, and PCIe 5.0 interface, designed to deliver exceptional graphics processing capabilities. Please read this manual thoroughly before proceeding with installation or use.

2. Safety Information

- Always disconnect the power supply from your computer before installing or removing any components.
- Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage to components.
- Handle the graphics card by its edges to avoid touching sensitive components.
- Ensure proper ventilation within your computer case to prevent overheating.
- Do not attempt to open or modify the liquid cooling system, as this may void your warranty and cause damage.
- Keep the product away from moisture, dust, and extreme temperatures.

3. Package Contents

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

- ASUS GeForce RTX 5090 Astral LC Graphics Card with integrated liquid cooling block
- 360mm Radiator with three pre-installed fans
- Mounting hardware for radiator and fans
- Power cables (if applicable)
- Documentation (Quick Start Guide, Warranty Card)

4. Product Overview

The ASUS GeForce RTX 5090 Astral LC is a high-performance graphics card featuring advanced liquid cooling for optimal thermal management. It includes a 360mm AIO cooler, a full-coverage copper plate, and powerful 80-amp MOSFETs for enhanced overclocking potential.

Image: The ASUS GeForce RTX 5090 Astral LC graphics card displayed alongside its retail packaging, highlighting the product's design and branding.

Image: Various perspectives of the ASUS GeForce RTX 5090 Astral LC graphics card, showcasing the integrated liquid cooling unit, radiator, and fans.

Key Features:

- **NVIDIA GeForce RTX 5090 GPU:** Delivers cutting-edge graphics performance.
- **32GB GDDR7 Memory:** High-bandwidth memory for demanding applications and games.
- **PCIe 5.0 Interface:** Provides high-speed data transfer with compatible motherboards.
- **Liquid Cooling System:** Integrated 360mm AIO cooler with full-coverage copper plate for efficient heat dissipation.
- **Overclocked Performance:** Factory-overclocked for enhanced speed and responsiveness.
- **Premium Power Delivery:** Features 80-amp MOSFETs for stable power and high overclocking potential.
- **Protective PCB Coating:** Guards against moisture and debris.
- **ASUS GPU Guard & Bracket:** Ensures secure mounting and stability.
- **Auto-Extreme Technology:** Automated manufacturing process for improved reliability.

Image: An infographic highlighting features such as the 360mm Radiator, Premium Power Delivery, Protective PCB Coating, Full-Coverage Cold Plate, Efficient Integrated Cooling, GPU Tweak III, and MuseTree.

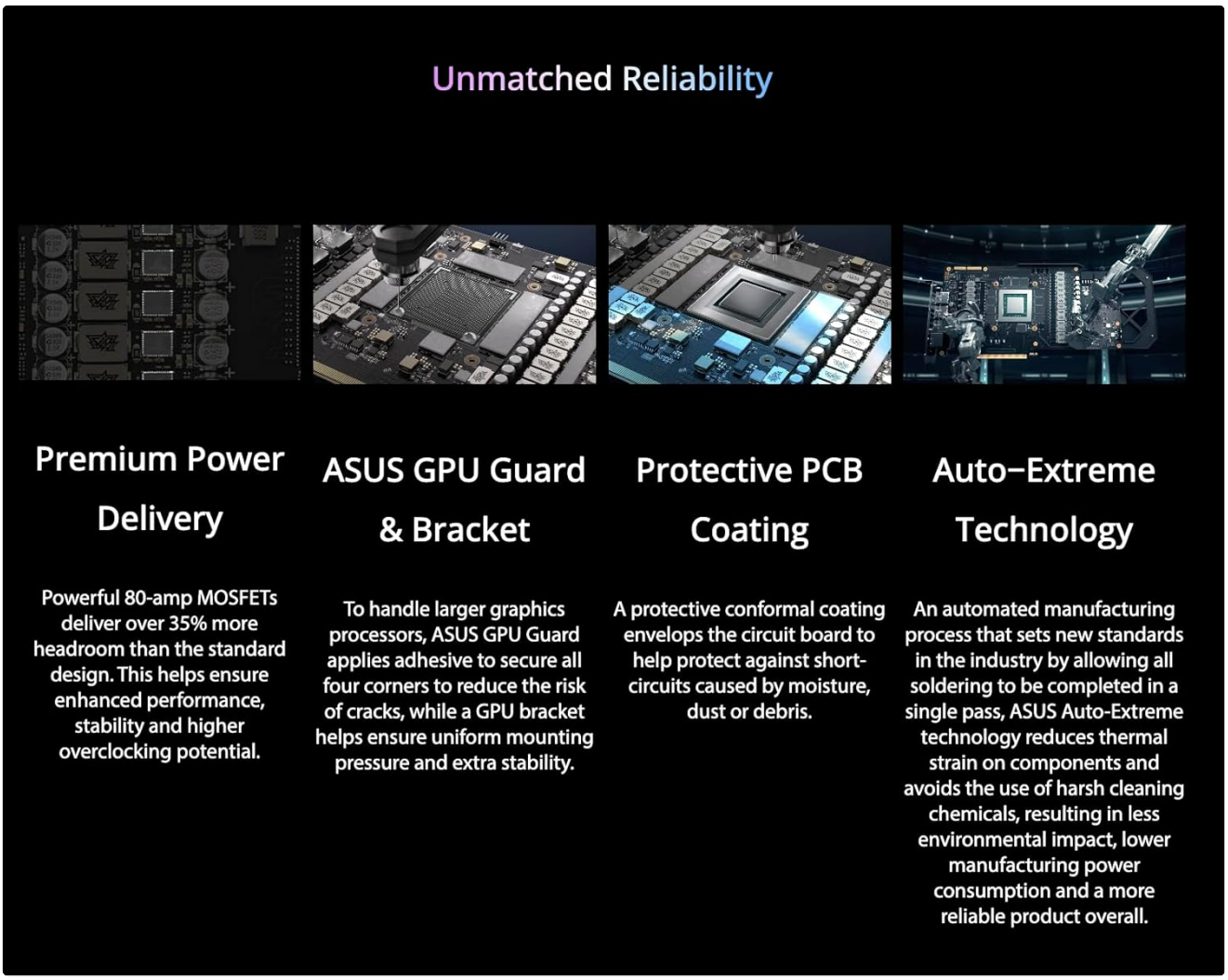

Image: An infographic detailing the reliability features, including Premium Power Delivery, ASUS GPU Guard & Bracket, Protective PCB Coating, and Auto-Extreme Technology.

Image: A detailed top-down view of the graphics card, showing the 'Republic of Gamers' branding and integrated RGB lighting elements.

Image: The rear view of the graphics card, showcasing its protective backplate and 'GEFORCE RTX' branding.

5. Setup and Installation

5.1 Pre-Installation Checks

- **Power Supply Unit (PSU):** Ensure your PSU has sufficient wattage and the necessary PCIe 5.0 power connectors. A high-wattage PSU (e.g., 1000W or higher) is recommended for optimal performance.
- **Case Clearance:** Verify that your computer case has adequate space for a triple-slot graphics card and a 360mm radiator.
- **Motherboard:** Confirm your motherboard has a PCIe 5.0 x16 slot.

5.2 Hardware Installation

1. **Prepare Your System:** Power off your computer and disconnect all cables. Open the computer case.
2. **Install the Graphics Card:** Locate an available PCIe 5.0 x16 slot on your motherboard. Carefully align the graphics card with the slot and press down firmly until it is securely seated. Secure the card with the case's retention mechanism or screws.
3. **Mount the Radiator:** Identify a suitable mounting location for the 360mm radiator (e.g., top, front, or side panel of your case). Secure the radiator using the provided screws. Ensure the tubing from the graphics card reaches the radiator without excessive tension or kinking.
4. **Connect Power:** Connect the required PCIe 5.0 power cables from your PSU to the graphics card. Ensure all

connections are firm.

5. **Connect Display Cables:** Connect your monitor(s) to the graphics card's DisplayPort 2.1b or HDMI 2.1b outputs.
6. **Close Case and Power On:** Close your computer case, reconnect all external cables, and power on your system.

5.3 Driver Installation

After booting into your operating system, install the latest NVIDIA drivers for the GeForce RTX 5090. These can be downloaded from the official NVIDIA website or the ASUS support page for your product. Follow the on-screen instructions for a complete installation.

6. Operating Your Graphics Card

6.1 Initial Boot and Verification

Upon successful driver installation, your operating system should recognize the ASUS GeForce RTX 5090 Astral LC. You can verify this in your system's Device Manager (Windows) or system information. Ensure your display is outputting at the desired resolution and refresh rate.

6.2 Software Utilities

- **ASUS GPU Tweak III:** Download and install ASUS GPU Tweak III from the ASUS website. This utility allows you to monitor GPU performance, adjust clock speeds, fan curves, and other settings for optimal performance and thermal management.
- **NVIDIA Control Panel:** Access the NVIDIA Control Panel for advanced display settings, 3D settings, and other GPU-specific configurations.

Image: The graphics card paired with an ROG Thor III PSU, illustrating the

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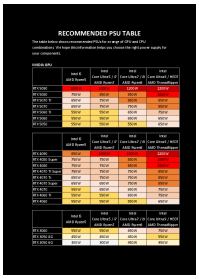	[Recommended Power Supply Units for GPU and CPU Combinations] A guide to selecting the appropriate power supply unit (PSU) based on various NVIDIA and AMD GPU models paired with Intel and AMD CPUs.

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