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MSI RTX 4060 VENTUS 2X BLACK 8G OC

MSI Gaming GeForce RTX 4060 Graphics Card User Manual

Model: RTX 4060 VENTUS 2X BLACK 8G OC

INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your MSI Gaming GeForce RTX 4060 8GB GDDR6 Graphics Card. Designed for gamers and creators, this card leverages the ultra-efficient NVIDIA Ada Lovelace architecture to deliver immersive, AI-accelerated gaming with ray tracing and DLSS 3, enhancing both creative processes and productivity.

PACKAGE CONTENTS

Upon opening the package, please verify that all components are present and in good condition. The standard package includes:

- MSI Gaming GeForce RTX 4060 Graphics Card
- Quick Setup Guide



Image: The MSI Gaming GeForce RTX 4060 graphics card displayed alongside its retail packaging, highlighting the product and its branding.

SETUP AND INSTALLATION

Before installing your new graphics card, ensure your system meets the minimum requirements and that your power supply unit (PSU) has sufficient wattage and the necessary PCIe power connectors.

System Requirements

- PCI Express-compliant motherboard with one dual-width x16 graphics slot.
- Minimum 550W power supply with one 8-pin PCIe power connector (check your PSU specifications).
- Operating System: Windows 10 64-bit or later.
- 8GB system memory (RAM) or more.

Physical Installation

1. **Prepare Your System:** Power off your computer and unplug all cables. Open your computer case.
2. **Remove Old Graphics Card (if applicable):** Unscrew and carefully remove any existing graphics card.

3. **Insert New Graphics Card:** Locate an available PCI Express x16 slot on your motherboard. Align the graphics card with the slot and press down firmly until it clicks into place. Secure the card with the retaining screw or clip.
4. **Connect Power:** Connect the 8-pin PCIe power connector from your power supply to the corresponding port on the graphics card.
5. **Close Case and Connect Peripherals:** Close your computer case, reconnect all cables (monitor, power, etc.), and power on your system.



Image: Front view of the MSI GeForce RTX 4060 graphics card, showcasing its dual TORX fans and sleek design.



Image: An angled view of the MSI GeForce RTX 4060 graphics card, showcasing its dual-fan cooling system and overall compact design, ready for installation.



Image: Side view of the MSI GeForce RTX 4060 graphics card, highlighting the PCIe power connector required for operation.



Image: Close-up of the display output ports on the MSI GeForce RTX 4060, including DisplayPort and HDMI connections.

Driver Installation

After physical installation, you must install the latest graphics drivers for optimal performance and stability.

1. **Download Drivers:** Visit the official NVIDIA website (www.nvidia.com/drivers) or the MSI support page for your specific model.
2. **Install Drivers:** Run the downloaded driver installer and follow the on-screen prompts. It is recommended to perform a clean installation.
3. **Restart System:** Restart your computer after the driver installation is complete.


OPERATING YOUR GRAPHICS CARD

The MSI Gaming GeForce RTX 4060 is designed to deliver high performance for gaming, streaming, and content creation.

Key Features and Technologies

- **NVIDIA Ada Lovelace Architecture:** Provides significant performance and power efficiency improvements.
- **Ray Tracing:** Experience realistic lighting, shadows, and reflections in supported games.
- **DLSS 3:** NVIDIA Deep Learning Super Sampling uses AI to boost frame rates while maintaining image quality.
- **NVIDIA Studio:** Accelerates creative applications for artists and designers.
- **TORX Fan 4.0:** Advanced fan design for enhanced cooling performance.
- **Zero Frozr:** Fans stop spinning during low-load situations for silent operation.

The Ultimate Platform for Gamers and Creators
Powered by GeForce RTX 40 Series



- New Streaming Multiprocessors**
Up to 2x performance and power efficiency
- Fourth-Gen Tensor Cores**
Up to 2x AI performance
- Third-Gen RT Cores**
Up to 2x ray tracing performance

Image: Visual representation of the NVIDIA Ada Lovelace architecture, highlighting its core components like Streaming Multiprocessors,

Tensor Cores, and RT Cores.

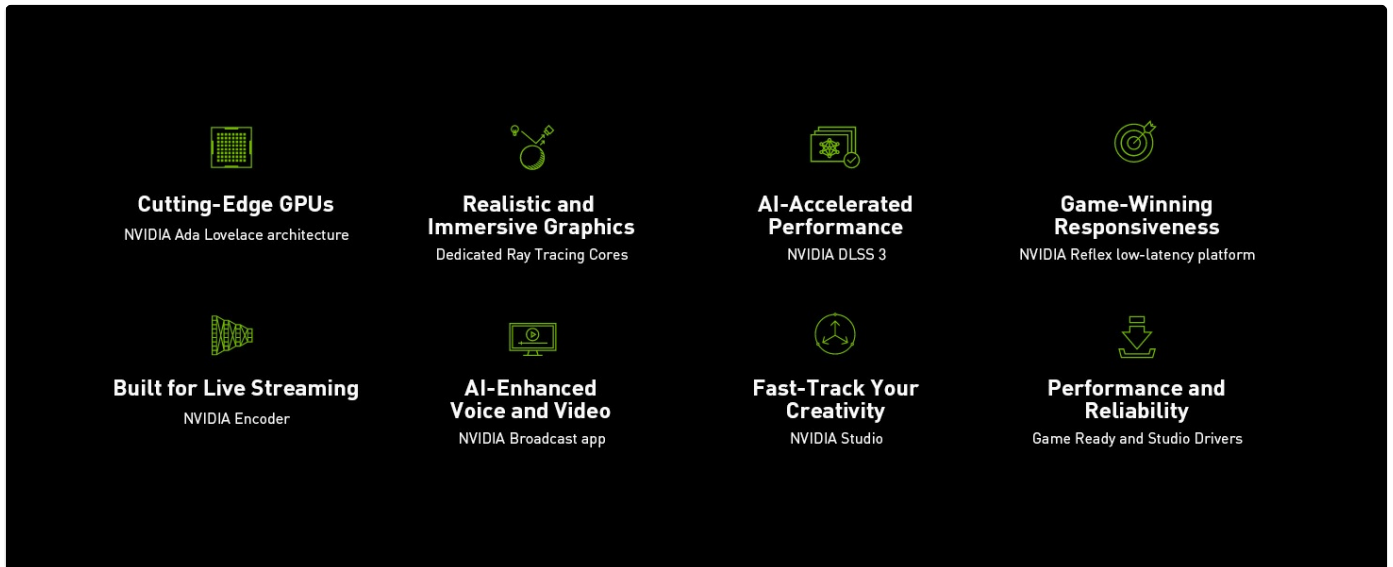


Image: An infographic showcasing the comprehensive features of the NVIDIA RTX 40 series, including cutting-edge GPUs, realistic graphics, AI-accelerated performance, and more.

Software and Utilities

MSI provides dedicated software to help you get the most out of your graphics card.

- **MSI Center:** MSI's exclusive software for monitoring, tweaking, and optimizing your MSI products in real-time. It also allows control over RGB lighting with Mystic Light.
- **MSI Afterburner:** A widely recognized graphics card overclocking software. It allows you to take full control of your graphics card, monitor key system metrics, and customize performance settings.

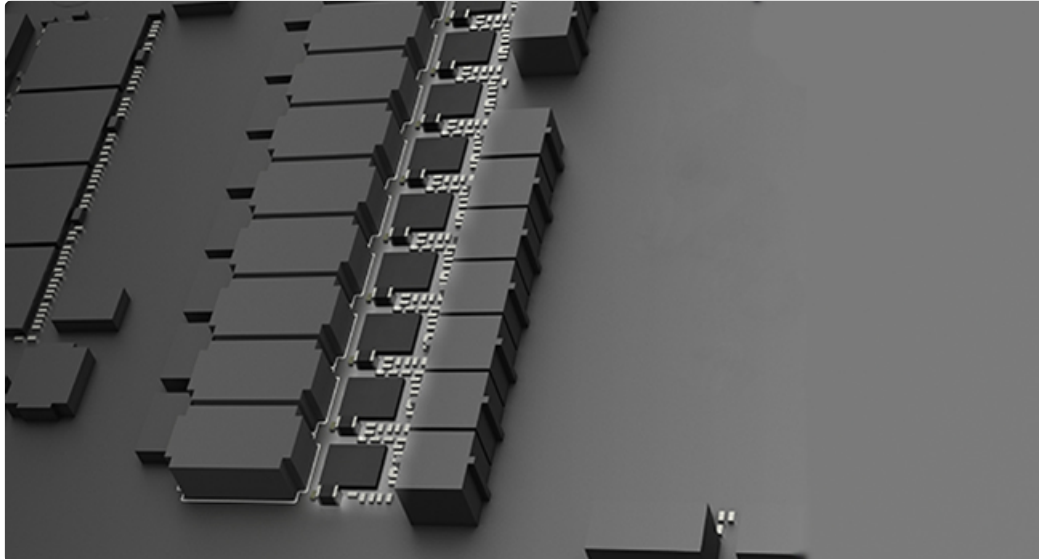


Image: A visual representation of the MSI Center software interface, demonstrating its capabilities for system monitoring and optimization.

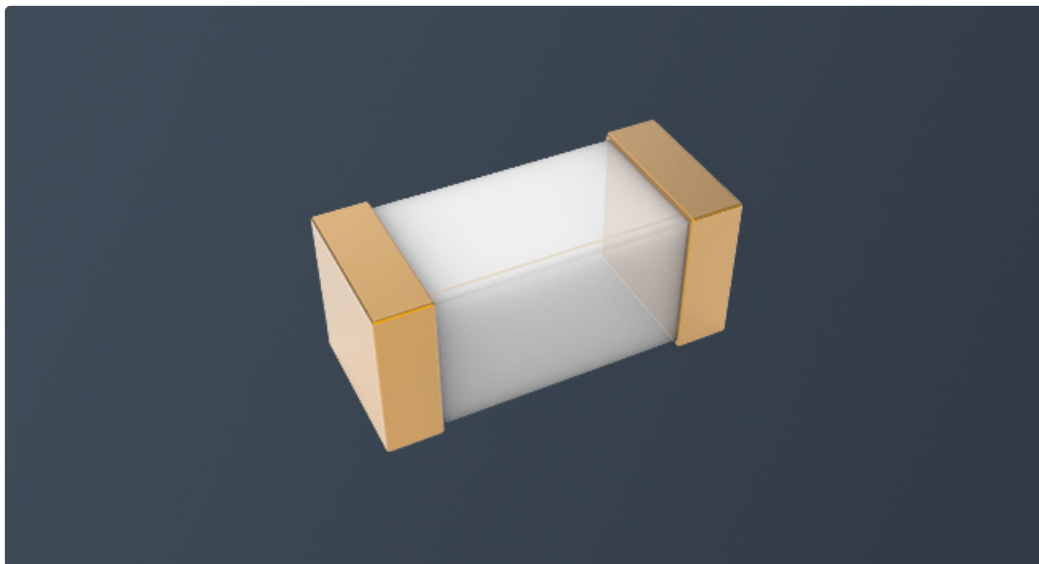


Image: A screenshot of the MSI Afterburner software, illustrating its comprehensive controls for graphics card overclocking and performance tuning.

MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your graphics card.

Cleaning

- Regularly clean dust from the fans and heatsink using compressed air. Ensure the system is powered off and unplugged before cleaning.
- Avoid touching the circuit board directly.

Driver Updates

Keep your graphics drivers updated to the latest version. New drivers often include performance optimizations, bug fixes, and support for new games and applications. Check the NVIDIA website periodically for updates.

Cooling System

The MSI RTX 4060 features an advanced cooling system to maintain optimal temperatures.

- **TORX Fan 4.0:** Designed with pairs of fan blades bound together with a linked outer ring, focusing airflow into the Dual-Fan cooling system for efficient heat dissipation.
- **Chillingly Silent:** The fans are designed to stop completely when temperatures are relatively low, eliminating noise when active cooling is not needed. They will automatically resume spinning when the GPU temperature rises during gaming or heavy loads.
- **Effective Thermal Padding:** Clay-based thermal pads are strategically placed to provide additional heat dissipation for critical board components.
- **Reinforcing Backplate:** A sturdy backplate provides structural rigidity and features a flow-through design for additional ventilation, contributing to overall cooling efficiency.

TORX FAN 4.0

TORX FAN 4.0 is built on teamwork, with pairs of fan blades bound together with a linked outer ring design that focuses airflow into the Dual-Fan cooling system.



Image: An illustration detailing the TORX Fan 4.0 design, showing how linked fan blades improve airflow and cooling efficiency.

CHILLINGLY SILENT

The fans completely stop when temperatures are relatively low, eliminating all noise when active cooling is not needed. The fans will automatically start spinning again when the heat is on during gaming.



Image: A graphic illustrating the "Chillingly Silent" feature, where fans stop at low temperatures and spin up when heat increases.

EFFECTIVE THERMAL PADDING

An abundance of clay-based thermal pads provide additional heat dissipation for board components.

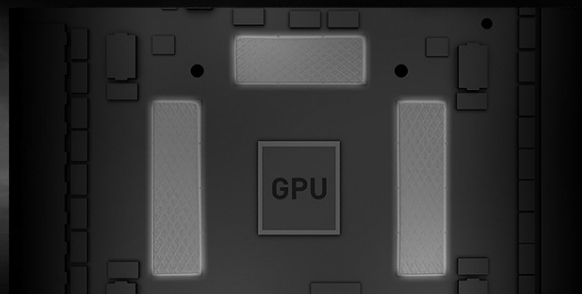


Image: A diagram showing the strategic placement of effective thermal padding on the graphics card's PCB for improved heat dissipation.



WE HAVE YOUR BACK

The reinforcing backplate features a flow-through design that provides additional ventilation.

Image: A visual of the reinforcing backplate, highlighting its role in providing structural support and additional ventilation for the graphics card.

TROUBLESHOOTING

If you encounter issues with your graphics card, consider the following common troubleshooting steps:

• No Display/Black Screen:

- Ensure the monitor cable is securely connected to the graphics card and the monitor.
- Verify that the PCIe power connector(s) are fully seated in the graphics card.
- Check if the graphics card is properly seated in the motherboard's PCIe slot.
- Try a different display output port on the graphics card or a different monitor/cable.

• Driver Issues/Crashes:

- Perform a clean installation of the latest graphics drivers from the NVIDIA website.
- Ensure your operating system is up to date.
- Check for conflicts with other software or drivers.

• Poor Performance/Low FPS:

- Ensure your system meets the recommended specifications for the games/applications you are running.
- Monitor GPU temperatures using MSI Afterburner or similar software to check for thermal throttling.
- Close unnecessary background applications.
- Verify that your CPU is not bottlenecking the GPU performance.

• Fan Noise/Overheating:

- Ensure adequate airflow within your PC case.
- Clean dust from the graphics card fans and heatsink.
- Check fan curves in MSI Afterburner to ensure they are set appropriately.

SPECIFICATIONS

Feature	Specification
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Feature	Specification
Chipset	GeForce RTX 4060
Video Memory	8GB GDDR6
Memory Interface	128-bit
Extreme Clock	2505 MHz
Output Ports	DisplayPort x 3 (v1.4a) / HDMI 2.1 x 1
Digital Maximum Resolution	7680 x 4320
Item Model Number	RTX 4060 VENTUS 2X BLACK 8G OC
Item Weight	1.69 pounds
Product Dimensions (LxWxH)	7.83 x 1.61 x 4.72 inches
Manufacturer	MSI

WARRANTY AND SUPPORT

For detailed warranty information and technical support, please refer to the official MSI website or contact MSI customer service directly.

- **MSI Official Website:** www.msi.com
- **MSI Support:** Visit the support section on the MSI website for drivers, FAQs, and service contact information.
- **MSI Brand Store:** [MSI on Amazon](#)

