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› [MSI GeForce RTX 4060 Ti Ventus 2X Black 8G OC Graphics Card User Manual](#)

msi V515-017R

MSI GeForce RTX 4060 Ti Ventus 2X Black 8G OC Graphics Card User Manual

INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your MSI GeForce RTX 4060 Ti Ventus 2X Black 8G OC Graphics Card. Designed with the NVIDIA Ada Lovelace architecture, this graphics card is engineered to deliver robust performance for gaming and creative applications, featuring advanced ray tracing and AI-accelerated DLSS 3 technology.



Image: Front view of the MSI GeForce RTX 4060 Ti Ventus 2X Black 8G OC Graphics Card.

WHAT'S IN THE BOX

Upon opening your product packaging, verify that all components are present:

- MSI GeForce RTX 4060 Ti Ventus 2X Black 8G OC Graphics Card

PRODUCT OVERVIEW & KEY FEATURES

The MSI GeForce RTX 4060 Ti Ventus 2X Black 8G OC Graphics Card integrates cutting-edge technology to enhance your computing experience. Key features include:

- **NVIDIA Ada Lovelace Architecture:** Experience fast raytracing and AI-accelerated performance with DLSS 3.
- **8GB GDDR6 Memory:** Equipped with 8GB of GDDR6 memory, providing ample bandwidth for modern games and demanding creative tasks.

- **Dual Fan Cooling System:** The Ventus 2X design incorporates a dual fan cooling system with TORX Fan 4.0 and a core pipe heatsink to ensure efficient heat dissipation and quiet operation, even under heavy loads.
- **Display Outputs:** Features 3x DisplayPort 1.4a and 1x HDMI 2.1a for versatile display connectivity, supporting resolutions up to 8K at 60Hz.
- **PCIe Gen 4 Interface:** Utilizes a PCI Express Gen 4 interface for high-speed data transfer.
- **MSI Center & Afterburner:** Leverage MSI's exclusive software for real-time monitoring, tweaking, and optimizing your graphics card's performance.

SETUP (INSTALLATION)

Before installation, ensure your system meets the minimum requirements: a PCI Express graphics slot, Microsoft Windows 10/11 64-bit or Linux 64-bit operating system, one 8-pin PCIe power connector, and a minimum 450W power supply.

1. Power off your computer and disconnect all cables.
2. Open your computer case.
3. Locate an available PCI Express x16 slot on your motherboard.
4. Carefully insert the graphics card into the PCI Express slot until it is securely seated.



Image: The MSI GeForce RTX 4060 Ti graphics card with its dual fans, ready for installation into a PCI Express slot.

5. Connect the required 8-pin PCIe power connector from your power supply to the graphics card.

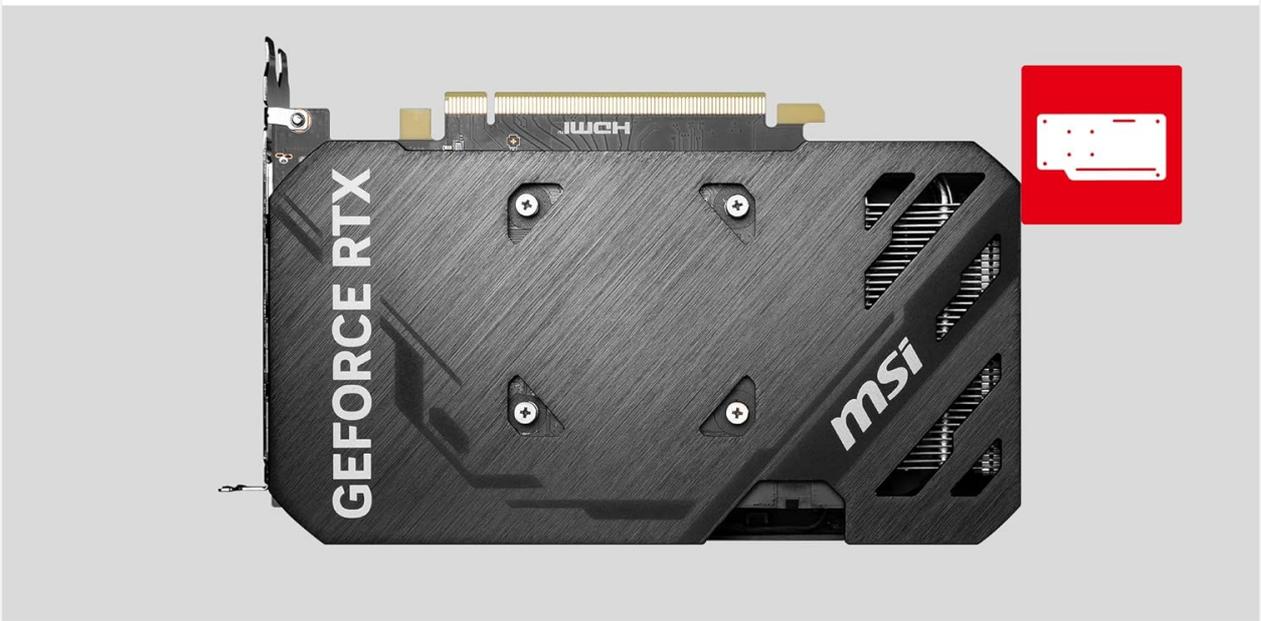


Image: Detail of the 8-pin power connector location on the graphics card.

6. Secure the graphics card to the chassis with screws.
7. Close your computer case and reconnect all cables.
8. Connect your display monitor(s) to the graphics card using DisplayPort or HDMI cables.



Image: The rear I/O panel of the graphics card, featuring multiple DisplayPort and HDMI outputs.

9. Power on your computer.

10. Install the latest NVIDIA drivers from the official NVIDIA website ([nvidia.com/drivers](https://www.nvidia.com/drivers)) for optimal performance.

OPERATING (USAGE)

Once installed and drivers are updated, your MSI GeForce RTX 4060 Ti is ready for use. This card supports advanced features to enhance your gaming and creative workflows:

- **NVIDIA DLSS 3:** Utilize AI-powered upscaling for significantly higher frame rates and improved image quality in supported games.
- **Ray Tracing:** Experience realistic lighting, shadows, and reflections in real-time for immersive visuals.
- **NVIDIA Reflex:** Reduce system latency for competitive gaming, providing a faster response time.
- **NVIDIA Broadcast:** Transform any room into a home studio with AI-enhanced voice and video capabilities.
- **NVIDIA Studio:** Accelerate your creative workflows with NVIDIA Studio drivers and exclusive tools.

For monitoring and fine-tuning your graphics card, install the MSI Center and MSI Afterburner software from the official MSI website.

Product Overview Video

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Video: A brief overview of the MSI GeForce RTX 4060 Ti graphics card, highlighting its design and features.

MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your graphics card.

- **Dust Removal:** Periodically clean the fans and heatsink using compressed air to prevent dust buildup, which can impede cooling performance. Ensure the system is powered off before cleaning.
- **Driver Updates:** Keep your graphics drivers updated to the latest version from the NVIDIA website to benefit from performance improvements, bug fixes, and new features.
- **Temperature Monitoring:** Use MSI Center or other monitoring software to keep an eye on your GPU temperatures, especially during intensive tasks.

TROUBLESHOOTING

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

- **No Display Output:** Ensure all power cables (including the 8-pin PCIe connector) and display cables are securely connected. Verify that your monitor is set to the correct input source.
- **Low Performance in Games:** Check if the latest NVIDIA drivers are installed. Ensure your game settings are optimized for your system. Monitor GPU usage and temperatures to identify potential bottlenecks or overheating.
- **Overheating:** Ensure proper airflow within your PC case. Clean dust from the graphics card fans and heatsink. Verify that the fans are spinning correctly.
- **System Instability/Crashes:** Update your graphics drivers. Check for any conflicting software. Ensure your power supply unit (PSU) meets the minimum 450W requirement and is functioning correctly.

SPECIFICATIONS

Detailed technical specifications for the MSI GeForce RTX 4060 Ti Ventus 2X Black 8G OC Graphics Card:

Feature	Specification
GPU	NVIDIA GeForce RTX 4060 Ti
Architecture	NVIDIA Ada Lovelace
Memory	8GB GDDR6
Memory Interface	128-bit
Boost Clock	2565 MHz (OC Model: 2580 MHz Extreme Performance)
CUDA Cores	4352
Interface	PCIe Gen 4
Power Consumption	160W

Feature	Specification
Power Connector	1x 8-pin
Display Outputs	3x DisplayPort 1.4a, 1x HDMI 2.1a
Max Screen Resolution	7680x4320
Cooling	Dual Fan (TORX Fan 4.0, Core Pipe)
Dimensions (approx.)	199mm (Length) x 120mm (Width) x 42mm (Height)
Model Number	V515-017R

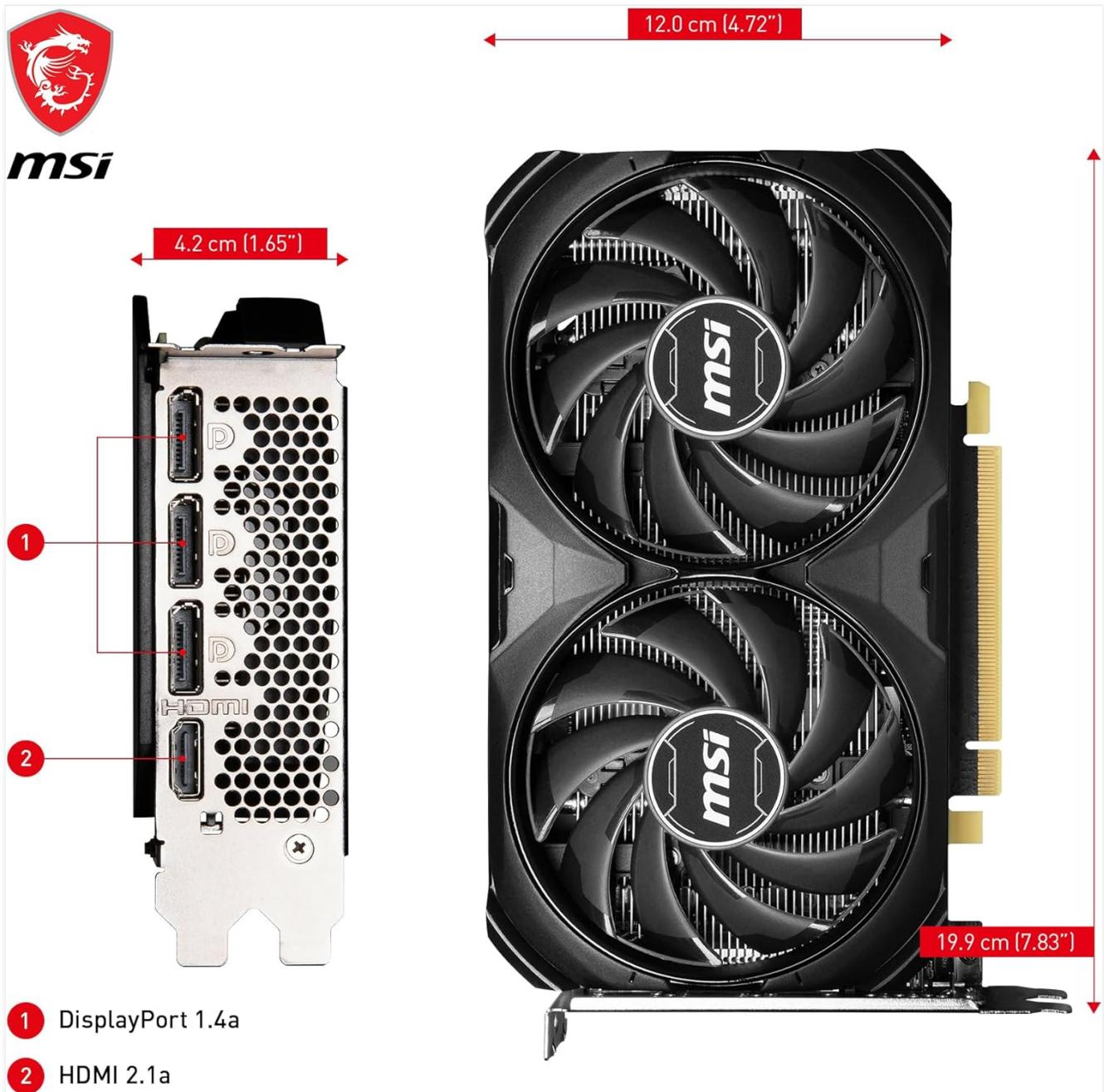


Image: Detailed dimensions and labeled display ports of the graphics card.

WARRANTY AND SUPPORT

This product comes with a manufacturer's warranty. For specific warranty terms, duration, and support, please refer to the documentation included in your product packaging or visit the official MSI website.

For technical assistance, driver downloads, and software utilities, please visit the MSI support page at [msi.com/support](https://www.msi.com/support).