msi V530-060R

MSI GeForce RTX 5090 Ventus 3X OC Graphics Card User Manual

Model: V530-060R

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1. Introduction

This manual provides essential instructions for the installation, operation, and maintenance of your MSI GeForce RTX 5090 Ventus 3X OC Graphics Card. Please read this manual thoroughly before using the product to ensure proper functionality and to prevent damage.



Figure 1.1: MSI GeForce RTX 5090 Ventus 3X OC Graphics Card and its retail packaging.

2. Safety Information

Observe the following safety guidelines to prevent injury and damage to your equipment:

- Always disconnect the power supply from your computer before installing or removing the graphics card.
- 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 expose the graphics card to moisture or extreme temperatures.

3. Package Contents

Verify that all items are present in your product package:

- MSI GeForce RTX 5090 Ventus 3X OC Graphics Card
- Quick Start Guide / User Manual (this document)
- Support Bracket (if included with your model)
- Power Adapter Cables (if required for your power supply)

4. Setup

4.1 System Requirements

- **Motherboard:** PCI Express Gen 5.0 x16 slot.
- **Power Supply:** Minimum 1000W power supply with appropriate 12VHPWR or 8-pin PCIe power connectors.
- **Case:** A computer case with sufficient space to accommodate a large 3-slot graphics card (dimensions: 12.8 x 5.47 x 0.04 inches).

- **Operating System:** Windows 10 64-bit or later, Linux 64-bit.
- **Memory:** 16GB system RAM recommended.

4.2 Physical Installation

1. Power off your computer and disconnect all cables, including the power cord.
2. Open your computer case.
3. Locate an available PCI Express Gen 5.0 x16 slot on your motherboard. Remove any expansion slot covers that obstruct the installation.
4. Carefully align the graphics card with the PCIe slot and press down firmly until it is securely seated. Ensure the retention clip locks into place.
5. Secure the graphics card to the case with screws.
6. Connect the necessary power cables from your power supply to the graphics card's power connectors. This model typically requires a 12VHPWR connector or multiple 8-pin PCIe connectors.



Figure 4.1: The MSI GeForce RTX 5090 Ventus 3X OC Graphics Card, illustrating its physical form factor for installation.



Figure 4.2: Top view showing the power input connectors on the graphics card.

4.3 Driver Installation

1. Close your computer case and reconnect all cables.
2. Power on your computer.
3. Download the latest graphics drivers from the official NVIDIA website (www.nvidia.com/drivers) or the MSI website (www.msi.com/support/download).
4. Follow the on-screen instructions to complete the driver installation. A restart may be required.

5. Operating the Graphics Card

5.1 Connecting Displays

The MSI GeForce RTX 5090 Ventus 3X OC Graphics Card features multiple display outputs:

- 3x DisplayPort 2.1
- 1x HDMI 2.1

Connect your monitor(s) to the appropriate ports using high-quality cables. The card supports multiple displays simultaneously.



Figure 5.1: Display output ports (3x DisplayPort, 1x HDMI).

5.2 Software Configuration

- **NVIDIA Control Panel:** After driver installation, the NVIDIA Control Panel allows you to adjust display settings, 3D settings, and manage multiple displays.
- **MSI Center / MSI Afterburner:** MSI provides utility software like MSI Center or MSI Afterburner for monitoring card performance, adjusting fan curves, and overclocking (use with caution).

5.3 Key Features

- **NVIDIA Ada Lovelace Architecture:** Provides significant advancements in performance, efficiency, and AI-powered graphics.
- **DLSS 4:** Deep Learning Super Sampling leverages AI to boost frame rates while maintaining image quality.
- **Ray Tracing:** Experience realistic lighting, reflections, and shadows for immersive gaming.
- **32GB GDDR7 Memory:** High-bandwidth memory for demanding applications and games.
- **PCIe Gen 5:** High-speed interface for maximum data throughput.

6. Maintenance

6.1 Cleaning

Regular cleaning helps maintain optimal performance and longevity:

- Periodically clean dust from the graphics card fans and heatsink fins using compressed air.
- Ensure the computer is powered off and unplugged before cleaning.
- Hold the fan blades gently to prevent them from spinning rapidly during cleaning, which can damage the bearings.

6.2 Driver Updates

Keep your graphics drivers updated to ensure compatibility, optimal performance, and access to the latest features and bug fixes. Check the NVIDIA website regularly for new driver releases.

7. Troubleshooting

If you encounter issues, refer to the following common solutions:

- **No Display Output:**
  - Ensure the graphics card is fully seated in the PCIe slot.
  - Verify all power cables are securely connected to the graphics card.
  - Check that your monitor is connected to the graphics card, not the motherboard's integrated graphics.
  - Try a different display cable or monitor.
- **Poor Performance in Games/Applications:**
  - Ensure you have the latest graphics drivers installed.
  - Check in-game settings; reduce resolution or graphics quality if necessary.
  - Monitor GPU temperatures to ensure the card is not overheating.
  - Verify your power supply meets the minimum wattage requirement.
- **System Instability/Crashes:**
  - Ensure your power supply is stable and sufficient.
  - Check for any loose connections inside the computer.
  - If overclocking, revert to default settings.

8. Specifications

Feature	Detail

Model Number	V530-060R
Graphics Processor	NVIDIA GeForce RTX 5090
Graphics Memory	32 GB GDDR7
Memory Interface	512-bit
Boost Clock Frequency	Up to 2452 MHz
Interface	PCIe Gen 5
Video Output Interface	3x DisplayPort 2.1, 1x HDMI 2.1
Product Dimensions	12.8 x 5.47 x 0.04 inches
Item Weight	4.4 pounds
Manufacturer	MSI

9. Warranty and Support

MSI products are covered by a limited warranty. For detailed warranty information, please refer to the warranty card included with your product or visit the official MSI website. For technical support, driver downloads, and FAQs, please visit the MSI support page:

www.msi.com/support

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