MSI GeForce RTX 4090 GAMING X TRIO 24G

MSI Gaming GeForce RTX 4090 User Manual

Brand: MSI | **Model:** GeForce RTX 4090 GAMING X TRIO 24G

1. Introduction

The MSI Gaming GeForce RTX 4090 is a high-performance graphics card designed for demanding gaming and creative applications. Powered by the NVIDIA Ada Lovelace architecture, it features 24 GB of G6X memory, delivering exceptional performance, efficiency, and AI-powered graphics. This manual will guide you through the essential steps to set up, operate, and maintain your graphics card.

2. Product Overview

2.1 Key Features

- **Chipset:** GeForce RTX 4090
- **Video Memory:** 24GB GDDR6X
- **Memory Interface:** 384-bit
- **Output:** DisplayPort x 3 (v1.4a) / HDMI 2.1 x 1
- **Digital Maximum Resolution:** 7680 x 4320
- **Recommended PSU:** 850 W

2.2 Components

Familiarize yourself with the main components of your MSI Gaming GeForce RTX 4090 graphics card:



Figure 2.2.1: The MSI Gaming GeForce RTX 4090 graphics card alongside its retail packaging.



Figure 2.2.2: Front view of the graphics card, highlighting the triple fan cooling system.



Figure 2.2.3: Rear view of the graphics card, showing the protective backplate.



Figure 2.2.4: Close-up of the display output ports, including DisplayPort and HDMI.

3. Setup and Installation

3.1 System Requirements

- PCI Express-compliant motherboard with one dual-width x16 graphics slot.
- Minimum 850W power supply with appropriate power connectors.
- Minimum 450MB of available hard-disk space.
- 8GB system memory (16GB recommended).
- Microsoft Windows 10 64-bit or later.
- Internet connection for driver installation.

3.2 Physical Installation

1. **Prepare Your System:** Turn off your computer and disconnect the power cable. Open your computer case.

2. **Locate PCIe Slot:** Identify an available PCI Express x16 slot on your motherboard.
3. **Remove Slot Covers:** Remove the necessary expansion slot covers from your computer case.
4. **Install Graphics Card:** Carefully align the graphics card with the PCIe slot and press down firmly until it is securely seated. Ensure the retention clip on the motherboard clicks into place.
5. **Secure Card:** Secure the graphics card to the case with screws.
6. **Connect Power:** Connect the required power cables from your power supply to the graphics card. The RTX 4090 typically requires multiple 8-pin PCIe power connectors or a 12VHPWR connector.
7. **Install Support Bracket:** Utilize the included GPU support bracket to prevent sag and provide additional stability for the card.
8. **Close Case:** Close your computer case and reconnect all cables.

3.3 Driver Installation

1. **Power On:** Turn on your computer.
2. **Download Drivers:** Visit the official NVIDIA website (www.nvidia.com/drivers) and download the latest drivers for your GeForce RTX 4090.
3. **Install Drivers:** Follow the on-screen instructions to complete the driver installation. A restart may be required.

4. Operating Instructions

4.1 Initial Setup

After driver installation, your graphics card is ready for use. Connect your display to one of the available DisplayPort or HDMI outputs on the card.

4.2 Software Utilities

MSI provides several software utilities to enhance your experience and manage your graphics card:

- **MSI Center:** This exclusive software helps you get the most out of your MSI products. It allows you to monitor, tweak, and optimize your system in real-time. Mystic Light enables control over RGB lighting for MSI devices and compatible third-party RGB products.
- **MSI Afterburner:** A widely recognized graphics card overclocking software. Use it to take full control of your graphics card, monitor key system metrics, and customize fan curves for optimal performance and acoustics.

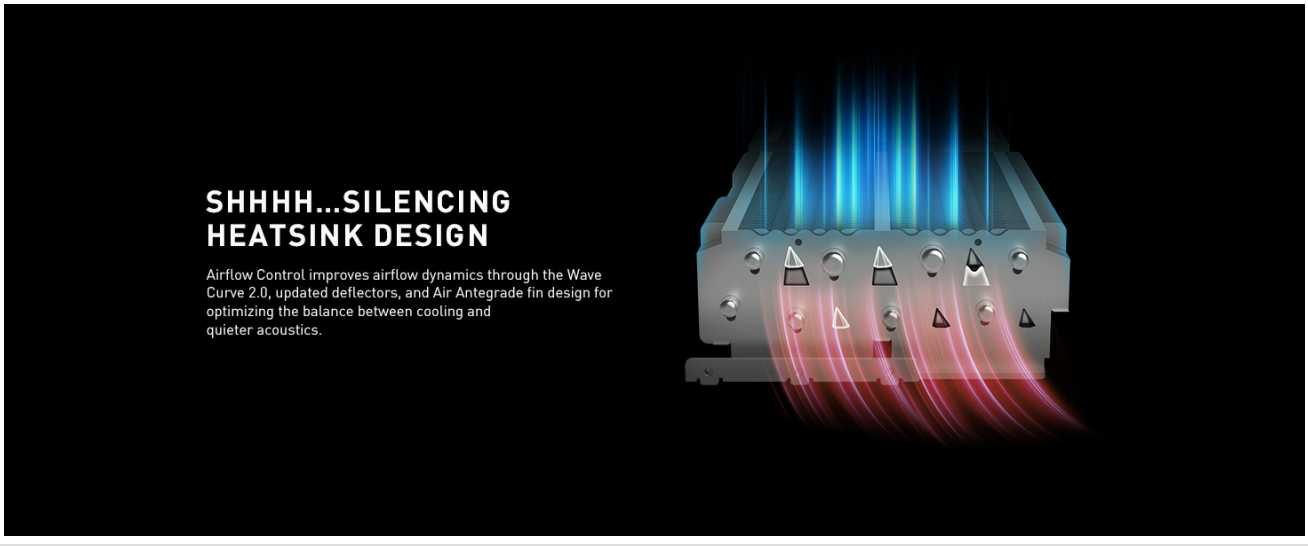


Figure 4.2.1: MSI Center software for system monitoring and customization.

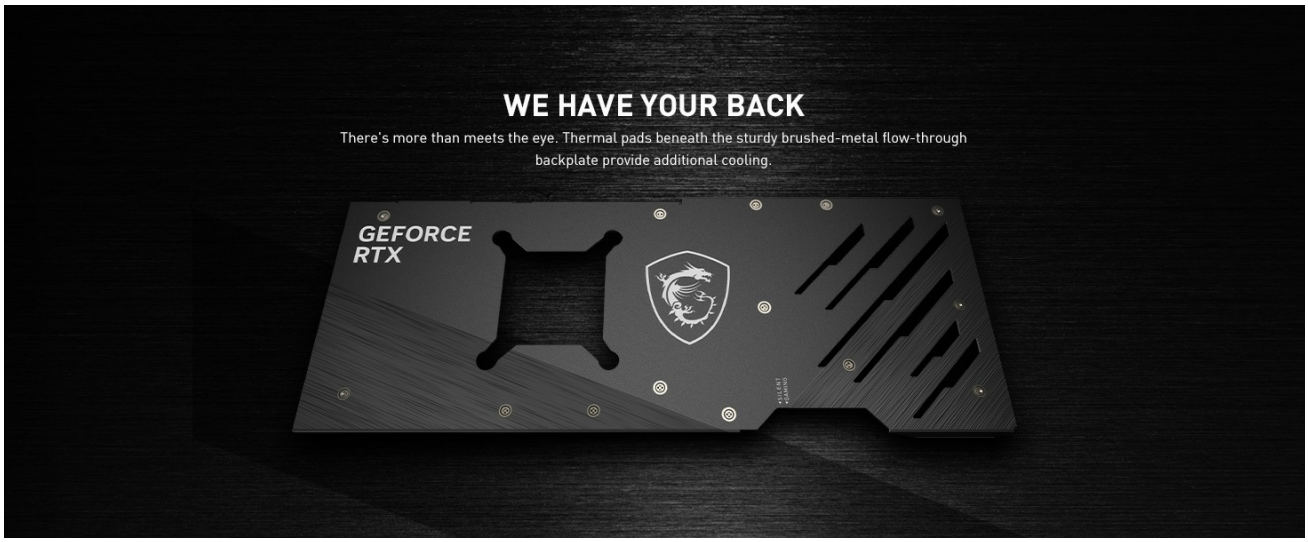


Figure 4.2.2: MSI Afterburner software for advanced graphics card control.

5. Maintenance

5.1 Cleaning

Regular cleaning helps maintain optimal performance and extends the lifespan of your graphics card.

- **Power Off:** Always power off your computer and disconnect it from the power source before cleaning.
- **Dust Removal:** Use compressed air to gently blow dust from the fans, heatsink fins, and other components. Hold the fans in place to prevent over-spinning.
- **Surface Cleaning:** Wipe the exterior surfaces with a soft, dry, lint-free cloth. Avoid using liquid cleaners directly on the card.

5.2 Storage

If storing the graphics card for an extended period, place it in an anti-static bag and store it in a cool, dry environment away from direct sunlight and extreme temperatures.

6. Troubleshooting

This section addresses common issues you might encounter with your graphics card.

6.1 No Display Output

- Ensure the display cable is securely connected to both the graphics card and the monitor.
- Verify that the graphics card is properly seated in the PCIe slot.
- Check that all power connectors are firmly attached to the graphics card.
- Confirm your monitor is set to the correct input source.
- Try a different display cable or monitor to rule out external issues.

6.2 Performance Issues or Crashes

- Ensure you have the latest graphics drivers installed from the NVIDIA website.
- Check your system's power supply. An 850W PSU is recommended for this card. Insufficient power can lead to instability.

- Monitor GPU temperatures using MSI Afterburner or similar software. Overheating can cause performance throttling or crashes. Ensure adequate case airflow.
- Verify that your system's CPU and RAM meet the recommended specifications.

6.3 Fan Noise

- Check for any obstructions in the fan blades.
- Use MSI Afterburner to adjust the fan curve.
- Ensure your case has good airflow to prevent the card from running too hot, which would cause fans to spin faster.

If issues persist, please refer to the MSI support website or contact their customer service.

7. Technical Specifications

Specification	Value
Max Screen Resolution	7680x4320
Memory Speed	2.5 GHz
Graphics Coprocessor	NVIDIA GeForce RTX 4090
Chipset Brand	NVIDIA
Graphics Card Ram Size	24 GB
Brand	MSI
Series	MSI RTX 4090 GAMING X TRIO 24G Nvidia GPU Graphic Card
Item model number	GeForce RTX 4090 GAMING X TRIO 24G
Item Weight	6.8 pounds
Product Dimensions	13.3 x 3.1 x 5.5 inches
Manufacturer	MSI
Date First Available	October 12, 2022
Video Output Interface	DisplayPort, HDMI
Graphics Processor Manufacturer	NVIDIA

8. What's in the Box

- Graphics card
- Quick setup guide

9. Warranty and Support

For warranty information and technical support, please visit the official MSI website or contact their customer service

department. Keep your proof of purchase for warranty claims.

MSI Support Website: us.msi.com/support

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Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question