msi GeForce RTX 5090 32G VANGUARD SOC

MSI Gaming RTX 5090 32G Vanguard SOC Graphics Card User Manual

Introduction

The MSI Vanguard series graphics card is engineered for high-performance computing and gaming. It features aerodynamic edges, fractured lines, and customizable RGB lighting. This manual provides essential information for the setup, operation, maintenance, and troubleshooting of your MSI Gaming RTX 5090 32G Vanguard SOC Graphics Card.

Package Contents

- MSI Gaming RTX 5090 32G Vanguard SOC Graphics Card
- Quick Setup Guide

Specifications

Feature	Detail
Brand	msi
Model Number	GeForce RTX 5090 32G VANGUARD SOC
Graphics Coprocessor	NVIDIA GeForce RTX 5090
Video Memory	32 GB GDDR7
Memory Interface	512-bit
GPU Clock Speed	2527 MHz
Output Ports	DisplayPort x 3 (v2.1a) / HDMI 2.1b x 1
Digital Maximum Resolution	7680 x 4320

Feature	Detail
Product Dimensions	4.72 x 17.72 x 10.83 inches
Item Weight	7.52 pounds

Setup

System Requirements

- PCI Express-compliant motherboard with one x16 graphics slot.
- Minimum 850W power supply with appropriate PCIe power connectors.
- Sufficient space within the PC case for a graphics card of dimensions 4.72 x 17.72 x 10.83 inches.
- Compatible operating system (e.g., Windows 10/11 64-bit).
- Internet connection for driver installation.

Installation Steps

1. **Prepare Your System:** Power off your computer and unplug all cables. Open your PC case.
2. **Locate PCIe Slot:** Identify an available PCI Express x16 slot on your motherboard.
3. **Remove Existing Graphics Card (if applicable):** If upgrading, carefully remove your old graphics card by unscrewing its bracket and releasing the PCIe retention clip.
4. **Install New Graphics Card:** Align the MSI RTX 5090 graphics card with the PCIe x16 slot and press down firmly until it is securely seated and the retention clip locks into place.
5. **Secure the Card:** Use screws to fasten the graphics card's bracket to your PC case.
6. **Connect Power Cables:** Connect the required PCIe power cables from your power supply to the graphics card. Ensure all connectors are fully seated.
7. **Close Case and Connect Peripherals:** Close your PC case, reconnect all cables (power, monitor, peripherals), and power on your computer.
8. **Install Drivers:** Once your operating system loads, download and install the latest NVIDIA drivers from the official NVIDIA website or MSI support page.



Figure 1: Front view of the MSI Gaming RTX 5090 32G Vanguard SOC Graphics Card.



Figure 2: Angled view of the graphics card, showcasing its cooling solution.



Figure 3: Rear view of the graphics card, showing the protective backplate.



Figure 4: Top view of the graphics card, indicating its branding and cooling fins.

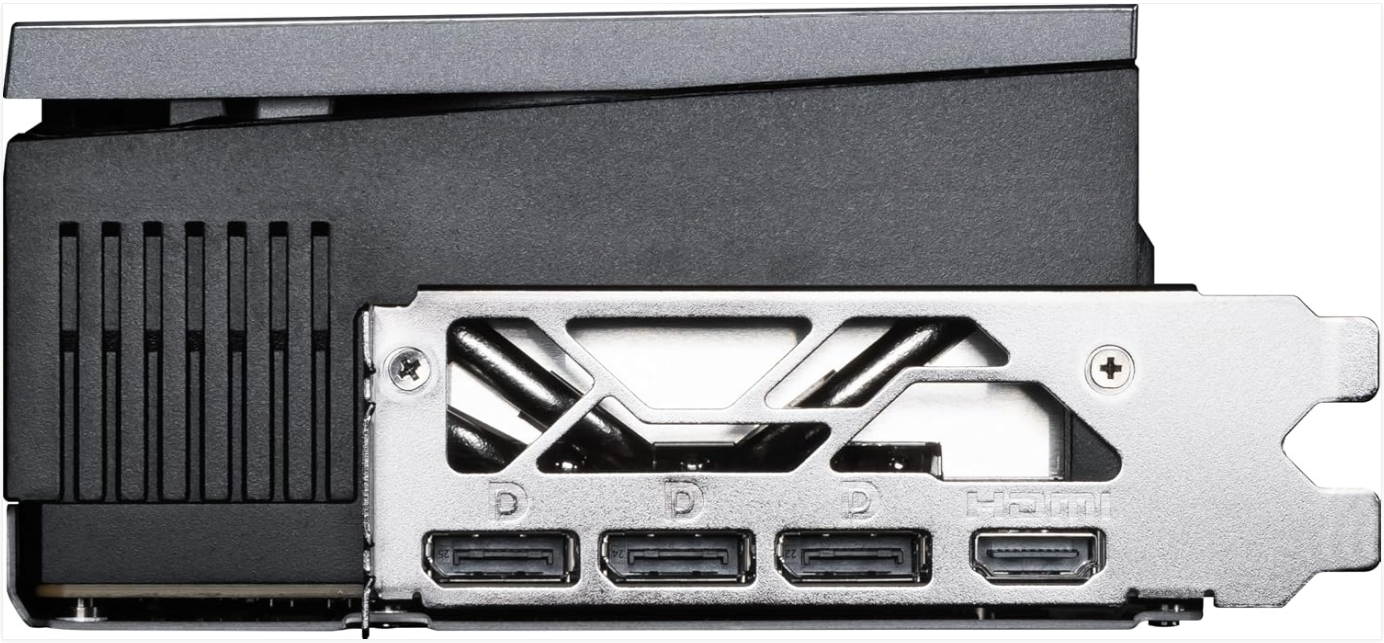


Figure 5: Display output ports of the graphics card.

Operating

Driver Installation

After physical installation, it is crucial to install the latest graphics drivers. Visit the official NVIDIA website (www.nvidia.com/drivers) or the MSI support page (www.msi.com/support) to download the most recent drivers for your RTX 5090. Follow the on-screen instructions for a clean installation.

Software Utilities

Utilize the MSI Center software for advanced control over your graphics card. This utility allows you to monitor performance, adjust fan curves, customize RGB lighting effects, and manage various system settings to optimize your experience.

Performance Modes

The graphics card features a dual BIOS switch, allowing you to toggle between a Performance Mode for maximum clock speeds and a Silent Mode for reduced fan noise during less demanding tasks. Refer to the quick setup guide for the location of this switch.

Maintenance

Cleaning

Regular cleaning helps maintain optimal performance and longevity. Periodically, with the system powered off and unplugged, use compressed air to clear dust from the fans and heatsink fins. Avoid touching the fan blades directly.

Driver Updates

Keep your graphics drivers updated to ensure compatibility with the latest games and applications, as well as to benefit from performance improvements and bug fixes. Check the NVIDIA and MSI websites regularly for new driver releases.

Troubleshooting

Common Issues and Solutions

- **No Display Output:**
  - Ensure the monitor cable is securely connected to both the graphics card and the monitor.
  - Verify that the graphics card is fully seated in the PCIe slot and all power cables are connected.
  - Test with a different display cable or monitor if possible.
- **Performance Issues (Low FPS, Stuttering):**
  - Ensure the latest graphics drivers are installed.
  - Check in-game settings and reduce graphics quality if necessary.
  - Monitor GPU temperatures using MSI Center to ensure it's not overheating.
  - Verify that your power supply meets the minimum requirements for the graphics card.
- **Overheating:**
  - Ensure adequate airflow within your PC case.
  - Clean dust from the graphics card fans and heatsink.
  - Adjust fan curves using MSI Center for more aggressive cooling.

Warranty and Support

Your MSI Gaming RTX 5090 32G Vanguard SOC Graphics Card is covered by a manufacturer's warranty. For detailed warranty terms and conditions, 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 at www.msi.com/support.

Ask a question about this manual

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

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

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