

## Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

manuals.plus /

› [ASUS](#) /

› [ASUS TUF Gaming GeForce RTX 4090 OC Edition Graphics Card User Manual](#)

## ASUS TUF-RTX4090-O24G-GAMING

# ASUS TUF Gaming GeForce RTX® 4090 OC Edition Graphics Card User Manual

Brand: ASUS | Model: TUF-RTX4090-O24G-GAMING

## 1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your ASUS TUF Gaming GeForce RTX® 4090 OC Edition Graphics Card. Designed with NVIDIA's Ada Lovelace architecture, this graphics card delivers exceptional performance for gaming and content creation. Please read this manual thoroughly before installation to ensure optimal performance and longevity of your product.

## 2. PACKAGE CONTENTS

Verify that all items listed below are present in your product package:

- TUF-RTX4090-O24G-GAMING Graphics Card
- Collection card
- Speedsetup Manual
- Adapter Cable
- TUF Graphics card holder
- TUF Velcro Hook & Loop

## 3. KEY FEATURES

- **NVIDIA Ada Lovelace Streaming Multiprocessors:** Up to 2x performance and power efficiency.
- **4th Generation Tensor Cores:** Up to 2X AI performance.
- **3rd Generation RT Cores:** Up to 2X ray tracing performance.
- **Axial-tech fans:** Scaled up for 23% more airflow.

- **Dual Ball Fan Bearings:** Last up to twice as long as conventional designs.



Figure 3.1: The ASUS TUF Gaming GeForce RTX 4090 OC Edition Graphics Card and its retail packaging.

## 4. TECHNICAL SPECIFICATIONS

Specification	Value
Max Screen Resolution	7680 x 4320 Pixels
Memory Speed	1400 MHz
Graphics Coprocessor	NVIDIA GeForce RTX 4090
Chipset Brand	NVIDIA

Specification	Value
Card Description	NVIDIA GeForce RTX 4090
Graphics Card Ram Size	24 GB GDDR6X
Brand	ASUS
Series	TUF-RTX4090-O24G-GAMING
Item model number	TUF-RTX4090-O24G-GAMING
Item Weight	5.5 pounds
Product Dimensions	13.71 x 5.91 x 0.1 inches
Manufacturer	ASUS
GPU Clock Speed	2.6 GHz
Video Output Interface	DisplayPort, HDMI, PCI Express



Figure 4.1: Top view of the graphics card highlighting the triple fan design.



Figure 4.2: Rear view of the graphics card, showcasing the protective backplate.



Figure 4.3: Side view of the graphics card with its various display output ports.

## 5. INSTALLATION AND SETUP

### 5.1 System Requirements

- PCI Express-compliant motherboard with one dual-width x16 graphics slot.
- Minimum 850W power supply (1000W recommended for optimal performance and additional components).
- Three 8-pin PCIe power connectors.
- Minimum 4GB system memory (8GB or more recommended).
- Microsoft Windows 10/11 64-bit operating system.
- Internet connection for driver installation and updates.

### 5.2 Hardware Installation

1. **Prepare your system:** Power off your computer and disconnect all cables. Open your computer case.
2. **Locate the PCIe slot:** Identify an available PCI Express x16 slot on your motherboard. This graphics card requires a dual-width slot.
3. **Remove slot covers:** Remove the necessary slot covers from your PC case to accommodate the graphics card.
4. **Install the 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 the card:** Use screws to secure the graphics card to the PC case at the bracket.
6. **Connect power cables:** Connect the three 8-pin PCIe power connectors from your power supply to the corresponding ports on the graphics card. Ensure all connections are firm.
7. **Close the case:** Replace the side panel of your computer case and reconnect all cables.

## 5.3 Driver Installation

1. **Power on your system:** Boot your computer. The system may initially use a basic display driver.
2. **Download drivers:** Visit the official ASUS support website or NVIDIA's driver download page ([www.nvidia.com/drivers](http://www.nvidia.com/drivers)) to download the latest drivers for the GeForce RTX 4090.
3. **Install drivers:** Run the downloaded driver installer and follow the on-screen prompts. A system restart may be required after installation.

## 6. OPERATION

### 6.1 General Usage

Once installed and drivers are updated, your ASUS TUF Gaming GeForce RTX® 4090 OC Edition Graphics Card is ready for use. It will automatically handle graphics processing for applications and games. For optimal performance, ensure your display is connected to one of the graphics card's output ports (HDMI or DisplayPort).

### 6.2 Software Utilities

ASUS provides several software utilities to enhance your experience:

- **ASUS GPU Tweak III:** Allows for real-time monitoring, overclocking, and fan control. You can adjust clock speeds, voltage, and fan profiles to optimize performance or reduce noise.
- **ASUS Aura Sync:** Customize the RGB lighting on your graphics card and synchronize it with other Aura Sync compatible components in your system for a unified aesthetic.
- **NVIDIA GeForce Experience:** Optimizes game settings, updates drivers, and enables features like NVIDIA ShadowPlay for recording gameplay.

Your browser does not support the video tag.

Video 6.1: An official video from ASUS showcasing the TUF RTX 4090 graphics card, highlighting its design and features. This video is provided by the seller, ASUS Computer International Direct.

## 7. MAINTENANCE

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

- **Dust Removal:** Regularly clean dust from the fans and heatsink using compressed air. Ensure the system is powered off and unplugged before cleaning.
- **Driver Updates:** Keep your graphics drivers updated to the latest version to benefit from performance improvements and bug fixes.
- **Temperature Monitoring:** Use monitoring software (e.g., ASUS GPU Tweak III) to keep an eye on GPU temperatures, especially during heavy loads. Ensure adequate airflow within your PC case.

## 8. TROUBLESHOOTING

Problem	Possible Solution
No display output.	<ul style="list-style-type: none"><li>◦ Ensure the monitor cable is securely connected to the graphics card.</li><li>◦ Verify that the graphics card is properly seated in the PCIe slot.</li><li>◦ Check that all PCIe power cables are firmly connected to the graphics card.</li><li>◦ Ensure your power supply meets the minimum wattage requirements.</li></ul>
System crashes or freezes during gaming.	<ul style="list-style-type: none"><li>◦ Update your graphics drivers to the latest version.</li><li>◦ Monitor GPU temperatures; overheating can cause instability. Improve case airflow if necessary.</li><li>◦ Ensure your power supply is sufficient and stable.</li></ul>
Fans are excessively loud.	<ul style="list-style-type: none"><li>◦ Clean dust from the fans and heatsink.</li><li>◦ Adjust fan curves using ASUS GPU Tweak III to find a balance between cooling and noise.</li></ul>

## 9. WARRANTY AND SUPPORT

For warranty information, technical support, and additional resources, please visit the official ASUS support website:

[www.asus.com/support/](http://www.asus.com/support/)

You can also refer to the official User Manual PDF for more detailed information: [Download User Manual \(PDF\)](#)