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› **ASUS TUF Gaming NVIDIA GeForce RTX 4070 Ti Super OC Edition Graphics Card User Manual**

ASUS TUF-RTX4070TIS-O16G-GAMING

ASUS TUF Gaming NVIDIA GeForce RTX 4070 Ti Super OC Edition Graphics Card User Manual

Model: TUF-RTX4070TIS-O16G-GAMING

INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your ASUS TUF Gaming NVIDIA GeForce RTX 4070 Ti Super OC Edition Graphics Card. This graphics card features the NVIDIA Ada Lovelace architecture, offering enhanced ray tracing performance and advanced gaming capabilities.

Image: The ASUS TUF Gaming RTX 4070 Ti Super OC Edition Graphics Card shown with its retail packaging.

SETUP AND INSTALLATION

Proper installation is crucial for optimal performance and system stability. Ensure your system is powered off and unplugged before proceeding.

1. **Prepare Your System:** Power down your computer and disconnect all cables. Open your computer case.

2. **Locate PCIe Slot:** Identify an available PCI Express 4.0 x16 slot on your motherboard.

3. **Remove Slot Covers:** Remove the necessary expansion slot covers from your computer case. This graphics card typically requires 3 to 3.5 slots.

4. **Insert Graphics Card:** Carefully align the graphics card with the PCIe slot and press down firmly until it is securely seated.

5. **Secure the Card:** Fasten the graphics card to the case using screws or the case's locking mechanism.

6. **Connect Power Cables:** Connect the required power cables from your power supply unit (PSU) to the graphics card. This model requires a compatible power supply.

7. **Close Case and Connect Peripherals:** Close your computer case, reconnect all cables, and connect your display to one of the graphics card's output ports.

8. **Install Drivers:** Power on your system and install the latest NVIDIA drivers from the official NVIDIA or ASUS website.
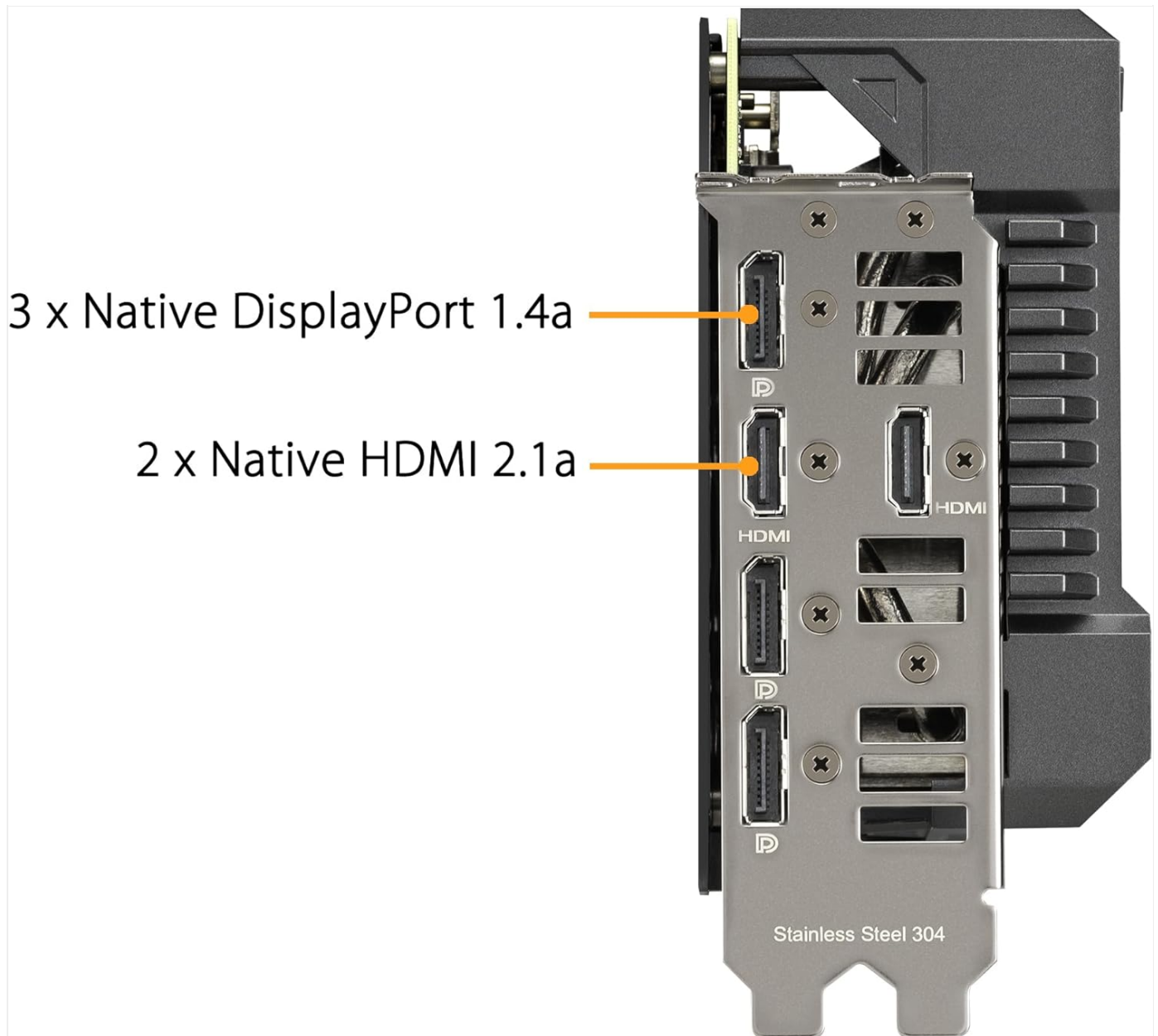

Image: The rear I/O panel of the graphics card, featuring three Native DisplayPort 1.4a and two Native HDMI 2.1a outputs.

Pair with a PSU

Use our wattage calculator to estimate how much power you'll need to fuel your rig, and then pick a compatible ASUS power supply for ultimate performance

80 PLUS GOLD
ATX 3.0 Compatible * Illustration for reference only

Image: The graphics card displayed alongside a compatible ASUS TUF Gaming 1000W power supply unit, illustrating the need for adequate power.

OPERATING THE GRAPHICS CARD

Once installed and drivers are updated, your graphics card is ready for operation. Key features include:

- **NVIDIA DLSS 3:** Utilizes AI-powered rendering to boost frame rates and generate high-quality images.
- **4th Generation Tensor Cores:** Provides up to 4x performance with DLSS 3 compared to brute-force rendering.
- **3rd Generation RT Cores:** Delivers up to 2x ray tracing performance for realistic lighting and reflections.
- **OC Mode:** The card operates at an overclocked frequency of 2670 MHz in OC mode, or 2640 MHz in default mode, for enhanced performance.
- **GPU Tweak III:** This software provides tools for performance tweaking, thermal controls, and system monitoring. It allows users to adjust clock speeds, voltage, and fan performance.

MAINTENANCE AND COOLING

To ensure longevity and consistent performance, the graphics card incorporates advanced cooling solutions and durable components.

- **Axial-tech Fans:** Redesigned fans with larger blades and optimized barrier rings increase airflow by 21% compared to previous generations, enhancing cooling efficiency.
- **Dual Ball Fan Bearings:** These bearings are designed to last up to twice as long as conventional sleeve bearing designs, contributing to fan durability.
- **Large Heatsink:** The extensive fin array occupies most of the card's 3.25-slot footprint, providing a large surface area for effective heat dissipation.
- **Military-grade Capacitors:** Rated for 20,000 hours at 105°C, these components enhance the durability of the GPU power rail.
- **Metal Exoskeleton:** Adds structural rigidity and features vents to improve heat reliability and overall card robustness.

Image: A detailed view of the Axial-tech fans, highlighting their design for increased airflow.

Large Heatsink

The fin arrary takes up most of the card's 3.25-slot footprint, providing ample surface for dissipation

Image: A side profile of the graphics card, illustrating the substantial heatsink design that occupies a 3.25-slot footprint for efficient heat dissipation.

TROUBLESHOOTING

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

- **No Display Output:**

    - Ensure all power cables are securely connected to the graphics card and PSU.
    - Verify the display cable is connected to the graphics card, not the motherboard's integrated graphics port.
    - Test with a different display cable or monitor if possible.
    - Reseat the graphics card in its PCIe slot.

- **Driver Issues:**

    - Uninstall existing graphics drivers using Display Driver Uninstaller (DDU) in Safe Mode.
    - Download and install the latest drivers directly from the NVIDIA or ASUS support website.

- **System Instability/Crashes:**

    - Ensure your power supply unit (PSU) meets the recommended wattage for the graphics card and your system.
    - Monitor GPU temperatures using software like GPU Tweak III. Overheating can cause instability.
    - Check for BIOS/UEFI updates for your motherboard.

- **Fan Noise/Malfunction:**

    - Ensure no cables are obstructing the fan blades.

- Clean dust from the heatsink and fans using compressed air.
- Adjust fan curves using GPU Tweak III if noise is excessive but temperatures are normal.

SPECIFICATIONS

Feature	Detail
Model Number	TUF-RTX4070TIS-O16G-GAMING
Graphics Processor	NVIDIA GeForce RTX 4070 Ti SUPER
Memory	16GB GDDR6X
OC Mode Clock Speed	2670 MHz
Default Mode Clock Speed	2640 MHz
Max Screen Resolution	7680x4320 Pixels
Video Output Interface	3 x DisplayPort 1.4a, 2 x HDMI 2.1a
Dimensions (LxWxH)	12 x 5.4 x 0.1 inches (approximate, refer to product for exact measurements)
Item Weight	2.9 pounds
Hardware Platform	Personal Computer

WHAT'S IN THE BOX

The retail package for your ASUS TUF Gaming RTX 4070 Ti Super OC Edition Graphics Card includes the following items:

- ASUS TUF-RTX4070TIS-O16G-GAMING Graphics Card
- Collection card
- Speedsetup manual
- Thank you card
- Adapter Cable (1 to 2)
- TUF Gaming Certificate
- TUF Graphics card holder
- TUF Velcro Hook & Loop

Image: An overview of the items included in the product packaging, such as the graphics card, manuals, cables, and accessories.
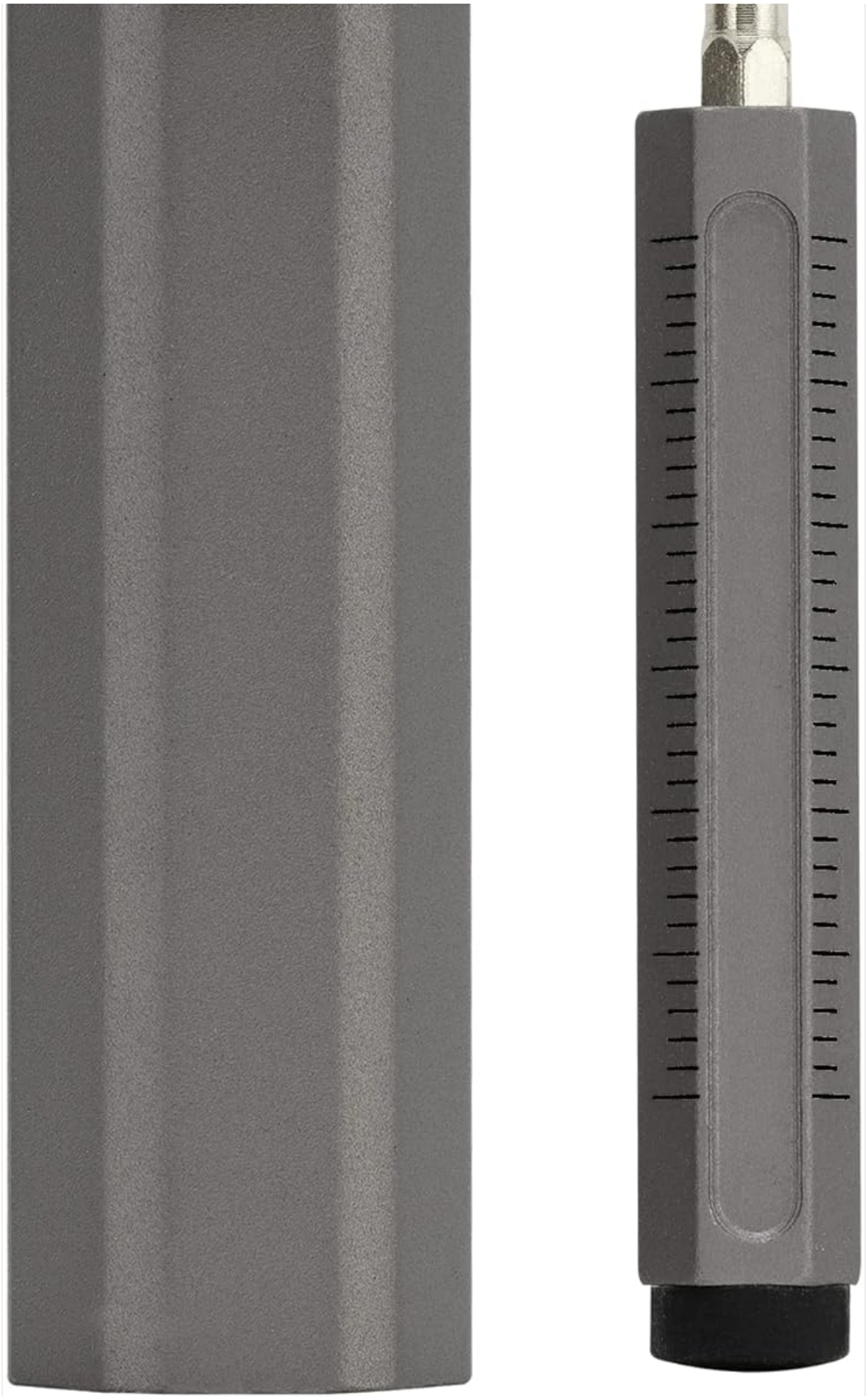
Image: A close-up of the multi-tool screwdriver included with the graphics card, featuring TUF Gaming branding.
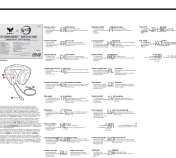
Warranty and Support

For detailed warranty information and technical support, please refer to the official ASUS website or the warranty card included with your product. ASUS provides support resources, including FAQs, driver downloads, and contact information for customer service.

You can visit the ASUS Support Website for the latest information and assistance.

Related Documents - TUF-RTX4070TIS-O16G-GAMING

	ASUS TUF Gaming GeForce RTX 3060 Ti Graphics Card - Built TUF Explore the ASUS TUF Gaming GeForce RTX 3060 Ti graphics card, featuring NVIDIA Ampere architecture, advanced cooling, and robust components for superior gaming and creative performance. Detailed specifications and features.
	ASUS TUF Gaming GeForce RTX 3070 Ti OC Edition Graphics Card - Product Information Detailed information about the ASUS TUF Gaming GeForce RTX 3070 Ti OC Edition Graphics Card, including specifications, features, and product details. Learn about its NVIDIA Ampere architecture, Axial-tech fan design, and military-grade components.
	ASUS TUF Gaming GeForce RTX 5090 32GB GDDR7 Graphics Card Specifications Detailed specifications for the ASUS TUF Gaming TUF-RTX5090-O32G-GAMING NVIDIA GeForce RTX 5090 graphics card, featuring the NVIDIA GeForce RTX 5090 GPU with 32 GB of GDDR7 memory. Includes processor, memory, ports, performance, design, power, and packaging details.
	ASUS TUF Gaming Power Supply Unit Quick Start Guide Quick start guide for the ASUS TUF Gaming Power Supply Unit, detailing installation, product overview, and safety information. Available in multiple languages.
	ASUS TUF Gaming H1 Headset X Kimetsu no Yaiba - Quick Start Guide Quick start guide for the ASUS TUF Gaming H1 headset, covering package contents, setup instructions, headset features, regulatory compliance, disposal, and support information.

TUF GAMING
POWER SUPPLY UNIT

/ISUS

[ASUS TUF Gaming Power Supply Unit Quick Start Guide](#)

This guide provides essential information for the ASUS TUF Gaming Power Supply Unit, covering product overview, installation steps, and safety precautions for a smooth and secure setup.