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ASUS RTX 3080 OC Edition (90YV0FB1-M0AM00)

ASUS TUF Gaming GeForce RTX 3080 OC Edition Graphics Card User Manual

Model: 90YV0FB1-M0AM00

1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your ASUS TUF Gaming GeForce RTX 3080 OC Edition Graphics Card. The TUF Gaming GeForce RTX 3080 features an all-metal shroud, three powerful axial-tech fans with dual ball fan bearings, and optimized fan rotation for reduced turbulence. Independent heatsinks manage GPU and memory thermals effectively.

2. PACKAGE CONTENTS

Verify that your package contains the following items:

- ASUS TUF-RTX3080-O10G-GAMING Graphics Card
- Collection Card
- Speed Setup Manual

3. SETUP AND INSTALLATION

Follow these steps to install your graphics card:

1. **Prepare Your System:** Power off your computer and disconnect all cables. Open the 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 PC case.
4. **Insert Graphics Card:** Carefully align the graphics card with the PCIe slot and press it down firmly until it is securely seated. Ensure the retention clip locks into place.



Figure 3.1: Angled view of the ASUS TUF Gaming RTX 3080 OC Edition Graphics Card, showing its triple-fan design and robust build.

5. **Secure the Card:** Use screws to secure the graphics card to the PC case.
6. **Connect Power:** Connect the required PCIe power cables from your power supply unit (PSU) to the graphics card. This model typically requires two 8-pin PCIe power connectors. Ensure your PSU has sufficient wattage (recommended 750W or higher).

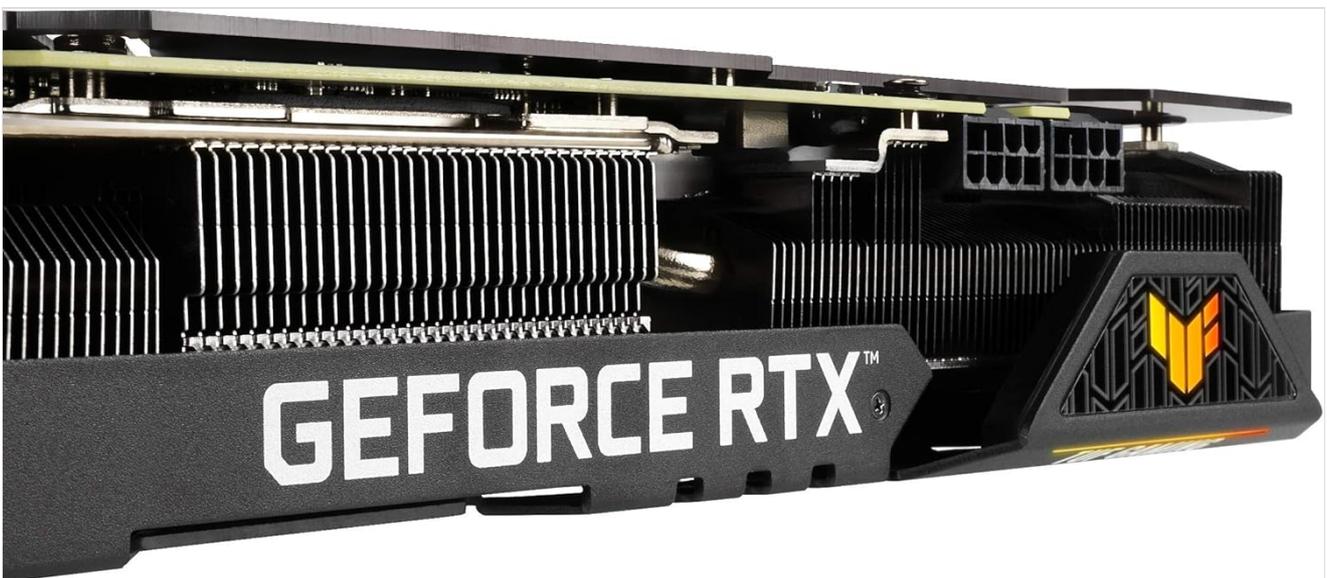


Figure 3.2: Side view of the graphics card, highlighting the dual 8-pin power connectors for stable power delivery.

7. **Connect Display:** Connect your monitor to one of the display output ports (HDMI or DisplayPort) on the graphics card.





Figure 3.3: Rear view of the graphics card showing the HDMI 2.1 and DisplayPort 1.4a outputs.

8. **Close Case and Power On:** Close your computer case, reconnect all cables, and power on your system.
9. **Install Drivers:** Once your operating system loads, install the latest NVIDIA drivers from the official NVIDIA website or the ASUS support page for optimal performance.

4. OPERATING THE GRAPHICS CARD

Your ASUS TUF Gaming GeForce RTX 3080 OC Edition Graphics Card is designed for high-performance computing and gaming. Key operational features include:

- **NVIDIA Ampere Streaming Multiprocessors:** Provides enhanced FP32 throughput and improved power efficiency for superior performance.
- **2nd Generation RT Cores:** Delivers advanced ray tracing performance with concurrent RT and shading capabilities.
- **3rd Generation Tensor Cores:** Offers significant boosts in AI capabilities and game performance, supporting up to 8K resolution with DLSS.
- **Axial-Tech Fan Design:** Features three fans with a reversed central fan direction to reduce turbulence and improve cooling efficiency.



Figure 4.1: Front view of the graphics card, showcasing the triple Axial-Tech fan design for optimized airflow.

- **Dual Ball Fan Bearings:** Ensures extended fan lifespan, lasting up to twice as long as traditional sleeve bearing designs.

- **Military-grade Capacitors:** Enhances the card's durability and overall performance stability.
- **GPU Tweak II:** Utilize the ASUS GPU Tweak II software for intuitive performance tweaking, thermal controls, and system monitoring. This software allows for overclocking, fan speed adjustments, and custom profiles.

The card includes a physical switch on the backplate to select between Performance Mode and Quiet Mode, allowing you to prioritize either maximum cooling and clock speeds or reduced fan noise.



Figure 4.2: Backplate of the graphics card, featuring the switch to toggle between Performance Mode and Quiet Mode.

5. MAINTENANCE

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

- **Dust Cleaning:** Regularly clean dust from the fans and heatsink using compressed air. Ensure the system is powered off before cleaning.
- **Driver Updates:** Keep your graphics drivers updated to the latest version from the NVIDIA website. This ensures compatibility, performance improvements, and bug fixes.
- **Temperature Monitoring:** Use software like GPU Tweak II to monitor GPU temperatures. Ensure adequate airflow within your PC case to prevent overheating.

6. TROUBLESHOOTING

If you encounter issues, consider the following troubleshooting steps:

- **No Display Output:**
 - Ensure the monitor cable is securely connected to the graphics card and the monitor.
 - Verify that the graphics card is fully seated in the PCIe slot.
 - Check that all PCIe power cables are correctly connected to the graphics card.
 - Test with a different display cable or monitor if possible.
- **Driver Issues:**
 - Perform a clean installation of the latest graphics drivers. Uninstall existing drivers before installing new ones.
 - Ensure your operating system is up to date.

- **Overheating:**

- Check for proper case airflow and ensure case fans are functioning.
- Clean dust from the graphics card's fans and heatsink.
- Ensure the graphics card is not obstructed by other components.

- **Performance Issues:**

- Verify that the graphics card is running in Performance Mode (if applicable via the physical switch or software).
- Check background applications that might be consuming system resources.
- Ensure your CPU and RAM are not bottlenecking the GPU.

7. SPECIFICATIONS

Feature	Specification
Graphics Coprocessor	NVIDIA GeForce RTX 3080
Video Memory	10 GB GDDR6X
Memory Speed	14000 MHz
Max Screen Resolution	7680x4320
Video Output Interface	DisplayPort, HDMI
Item Model Number	90YV0FB1-M0AM00
Product Dimensions (LxWxH)	16 x 9.2 x 3.5 inches
Item Weight	2 pounds
Manufacturer	ASUS

8. WARRANTY INFORMATION

ASUS products are manufactured to the highest quality standards. For detailed warranty information, including terms, conditions, and registration, please refer to the warranty card included in your product packaging or visit the official ASUS support website.

9. SUPPORT

For technical support, driver downloads, FAQs, and further assistance, please visit the official ASUS support website:

<https://www.asus.com/support/>

You may also find helpful resources and community forums on the NVIDIA website for driver-related inquiries and performance optimization.