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## ASUS DUAL-RTX3070-O8G-V2

# ASUS Dual NVIDIA GeForce RTX 3070 V2 OC Edition Graphics Card User Manual

Model: DUAL-RTX3070-O8G-V2

## 1. PRODUCT OVERVIEW

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The ASUS Dual GeForce RTX 3070 V2 OC Edition is a high-performance gaming graphics card designed for demanding applications and gaming. It features 8GB of GDDR6 memory and supports PCIe 4.0, offering enhanced power efficiency and advanced cooling solutions. This card is engineered to deliver a balanced blend of performance and quiet operation for a superior computing experience.



Figure 1: ASUS Dual GeForce RTX 3070 V2 OC Edition Graphics Card

### Key Features:

- **NVIDIA Ampere Streaming Multiprocessors:** Provides 2X the FP32 throughput and improved power efficiency for faster, more efficient GPU performance.
- **2nd Generation RT Cores:** Delivers 2X the throughput of 1st gen RT Cores, enabling a new level of ray tracing performance with concurrent RT and shading.
- **3rd Generation Tensor Cores:** Offers up to 2X the throughput with structural sparsity and advanced AI algorithms like DLSS, supporting up to 8K resolution for boosted game performance and AI capabilities.
- **OC Edition:** Features a boost clock of 1800 MHz in OC mode and 1770 MHz in Gaming mode for enhanced performance.
- **Axial-tech Fan Design:** Incorporates two powerful fans with a smaller fan hub and longer blades, along with a barrier ring to increase downward air pressure for improved cooling.
- **0dB Technology:** Fans come to a complete stop below 55°C, allowing for quiet operation during light gaming or low-load tasks.
- **Dual BIOS:** Allows users to switch between Performance Mode for maximum cooling and Quiet Mode for reduced noise levels.

- **Protective Backplate:** A rigid backplate prevents PCB flex and protects components from damage.
- **LHR (Lite Hash Rate):** This graphics card delivers an estimated 25 MH/s ETH hash rate.

## 2. SETUP AND INSTALLATION

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### 2.1 What's in the Box

Verify that all components are present before proceeding with installation:

- ASUS Dual GeForce RTX 3070 V2 OC Edition Graphics Card (DUAL-RTX3070-O8G-V2)
- Collection Card
- Speed Setup Manual

### 2.2 Physical Installation

1. **Power Off System:** Ensure your computer is completely powered off and unplugged from the wall outlet.
2. **Open PC Case:** Remove the side panel of your computer case to access the motherboard.
3. **Locate PCIe Slot:** Identify an available PCI Express 4.0 x16 slot on your motherboard. This card typically requires two expansion slots due to its size.
4. **Remove Slot Covers:** Remove the necessary expansion slot covers from the back of your PC case.
5. **Insert Graphics Card:** Carefully align the graphics card with the PCIe slot and press it down firmly until it clicks into place. Ensure the retention clip on the PCIe slot locks the card.
6. **Secure Card:** Use screws to secure the graphics card to the PC case at the expansion slot bracket.
7. **Connect Power Cables:** Connect the required 8-pin PCIe power connectors from your power supply unit (PSU) to the graphics card. The ASUS Dual RTX 3070 V2 OC Edition requires two 8-pin power connectors.

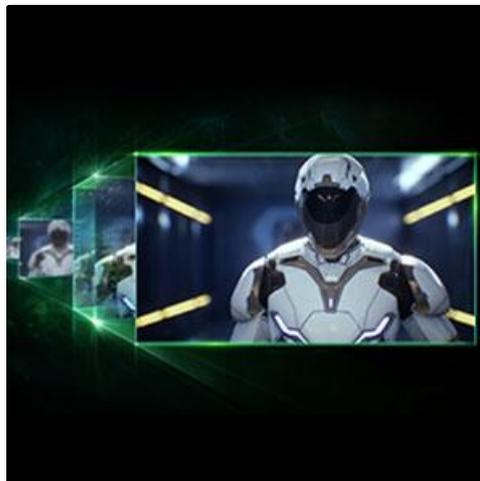


Figure 2: Graphics card showing two 8-pin power connectors.

8. **Close PC Case:** Replace the side panel of your PC case.
9. **Connect Display:** Connect your monitor(s) to the graphics card's DisplayPort 1.4a or HDMI 2.1 outputs.

# Protective Backplate

A rigid backplate prevents PCB flex and trace damage.



Figure 3: Graphics card showing 2x HDMI 2.1 and 3x DisplayPort 1.4a outputs.

10. **Power On:** Plug in your computer and power it on.

## 3. OPERATION

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### 3.1 Driver Installation

For optimal performance and stability, it is crucial to install the latest graphics drivers:

1. **Download Drivers:** Visit the official ASUS support website ([www.asus.com/support/](http://www.asus.com/support/)).
2. **Select Product:** Navigate to "Graphics Cards" from the menu, then search for your specific model (DUAL-RTX3070-O8G-V2).
3. **Choose Operating System:** Select your operating system (e.g., Windows 10, Windows 11).
4. **Download and Install:** Download the latest "Driver & Utility" package and follow the on-screen instructions to complete the installation. A system restart may be required.

### 3.2 Dual BIOS Mode Selection

The graphics card features a Dual BIOS switch, allowing you to select between two operational modes:

- **Performance Mode (P Mode):** Prioritizes maximum cooling performance, allowing fans to spin at higher RPMs to maintain lower temperatures during intense workloads.
- **Quiet Mode (Q Mode):** Optimizes for quieter operation, reducing fan speeds for a less audible experience, ideal for less demanding tasks or users who prefer a silent system.

The switch is located on the side of the graphics card's PCB, near the power connectors. Ensure your system is powered off before changing the BIOS mode.

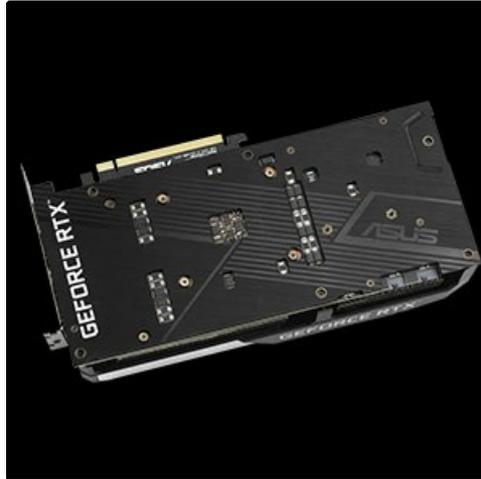


Figure 4: Location of the Dual BIOS switch on the graphics card.

## 4. MAINTENANCE

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### 4.1 Cleaning

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

- **Power Off:** Always power off your computer and unplug it before cleaning.
- **Dust Removal:** Use compressed air to gently blow dust from the heatsink fins and fan blades. Hold the fans to prevent them from spinning too fast during cleaning.



Figure 5: Axial-tech Fan Design for efficient cooling.

- **Surface Cleaning:** Use a soft, lint-free cloth lightly dampened with isopropyl alcohol to clean the exterior surfaces of the card. Avoid getting liquid into any ports or components.
- **Frequency:** Clean your graphics card every 3-6 months, or more frequently if your environment is dusty.

### 4.2 Fan Technology

The ASUS Dual GeForce RTX 3070 V2 OC Edition incorporates advanced fan technologies:

- **Axial-tech Fan Design:** Features a smaller fan hub that facilitates longer blades and a barrier ring that increases downward air pressure, enhancing cooling efficiency.
- **0dB Technology:** An advanced controller brings the fans to a complete standstill when the GPU temperature is below 55°C, providing silent operation during light loads. Fans automatically resume operation when temperatures rise.



Figure 6: 0dB Technology ensures quiet operation under light loads.

## 5. TROUBLESHOOTING

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

- **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.
- Check that all required PCIe power cables are correctly connected from the PSU to the graphics card.
- Test with a different display cable or monitor if possible.

- **Driver Issues:**

- Perform a clean installation of the latest drivers from the ASUS support website. Use a driver uninstaller utility (e.g., DDU) to remove old drivers before installing new ones.
- Ensure your operating system is up to date.

- **Overheating/Performance Drops:**

- Check for proper airflow within your PC case. Ensure case fans are functioning correctly.
- Clean dust from the graphics card heatsink and fans (refer to Section 4.1).
- Verify that the Dual BIOS switch is set to Performance Mode (P Mode) if you require maximum cooling.
- Monitor GPU temperatures using software utilities.

- **System Instability/Crashes:**

- Ensure your power supply unit (PSU) meets the minimum wattage requirements for your system, including the graphics card.
- Check for any loose connections inside the PC case.
- If overclocking, revert to default settings to rule out instability caused by excessive clock speeds.

If these steps do not resolve your issue, please contact ASUS customer support for further assistance.

## 6. TECHNICAL SPECIFICATIONS

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Feature	Specification
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Feature	Specification
Model Number	DUAL-RTX3070-O8G-V2
Graphics Coprocessor	NVIDIA GeForce RTX 3070
Video Output Interface	PCI Express 4.0
Graphics Card Ram Size	8 GB GDDR6
Memory Speed	1800 MHz
Boost Clock (OC Mode)	1800 MHz
Boost Clock (Gaming Mode)	1770 MHz
Max Screen Resolution	7680x4320
Output Ports	2 x Native HDMI 2.1, 3 x Native DisplayPort 1.4a
Item Dimensions (LxWxH)	10.51 x 5.31 x 2.05 inches
Item Weight	2.3 pounds
LHR (Lite Hash Rate)	25 MH/s ETH hash rate (est.)

## 7. WARRANTY AND SUPPORT

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ASUS products are meticulously crafted and thoroughly tested to deliver the quality you expect. For detailed warranty information, please refer to the warranty card included with your product or visit the official ASUS support website.

For technical support, driver downloads, and further assistance, please visit the ASUS support site:

[ASUS Support Website](#)