GIGABYTE GV-N3060WF2OC-12GD REV2.0

GIGABYTE GeForce RTX 3060 WINDFORCE OC 12G (rev. 2.0) Graphics Card User Manual

Model: GV-N3060WF2OC-12GD REV2.0

1. INTRODUCTION

This user manual provides comprehensive instructions for the installation, operation, and maintenance of your GIGABYTE GeForce RTX 3060 WINDFORCE OC 12G (rev. 2.0) Graphics Card. Please read this manual thoroughly before installing and using the product to ensure proper functionality and to prevent damage. Keep this manual for future reference.

2. SAFETY INFORMATION

Observe the following safety guidelines to prevent injury and damage to your equipment:

- Always disconnect the power supply from your computer before installing or removing any hardware components.
- Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) when handling the graphics card. ESD can damage sensitive electronic components.
- Handle the graphics card by its edges and avoid touching the gold-plated connector pins or other components.
- Ensure your computer case has adequate ventilation to prevent overheating.
- Do not expose the graphics card to moisture or extreme temperatures.
- If you encounter any difficulties during installation, consult a qualified technician.

3. PACKAGE CONTENTS

Verify that your package contains the following items:

- GIGABYTE GeForce RTX 3060 WINDFORCE OC 12G (rev. 2.0) Graphics Card
- User Manual (this document)

4. PRODUCT OVERVIEW

The GIGABYTE GeForce RTX 3060 WINDFORCE OC 12G (rev. 2.0) Graphics Card is designed for enhanced visual performance. It features NVIDIA Ampere Streaming Multiprocessors, 2nd Generation RT Cores, and 3rd Generation Tensor Cores. The card is equipped with 12GB of GDDR6 memory on a 192-bit interface and utilizes the WINDFORCE 2X Cooling System for efficient heat dissipation.

4.1 Key Features

- NVIDIA Ampere Streaming Multiprocessors
- 2nd Generation RT Cores
- 3rd Generation Tensor Cores
- Powered by GeForce RTX 3060
- Integrated with 12GB GDDR6 192-bit memory interface
- WINDFORCE 2X Cooling System with alternate spinning fans
- Screen Cooling technology
- Compact 200mm size
- Core Clock: 1792MHz

4.2 Component Identification

Figure 1: GIGABYTE RTX 3060 WINDFORCE OC 12G Graphics Card and its packaging. This image shows the graphics card alongside its retail box, illustrating the product's overall presentation.

Figure 2: Front view of the GIGABYTE RTX 3060 WINDFORCE OC 12G Graphics Card. This perspective highlights the dual WINDFORCE fans and the heatsink design.

Figure 3: Top view of the GIGABYTE RTX 3060 WINDFORCE OC 12G Graphics Card. This view clearly shows the required 8-pin PCIe power connector for the card.

Figure 4: Close-up of the display output ports on the GIGABYTE RTX 3060 WINDFORCE OC 12G Graphics Card. This image details the available HDMI and DisplayPort connections.
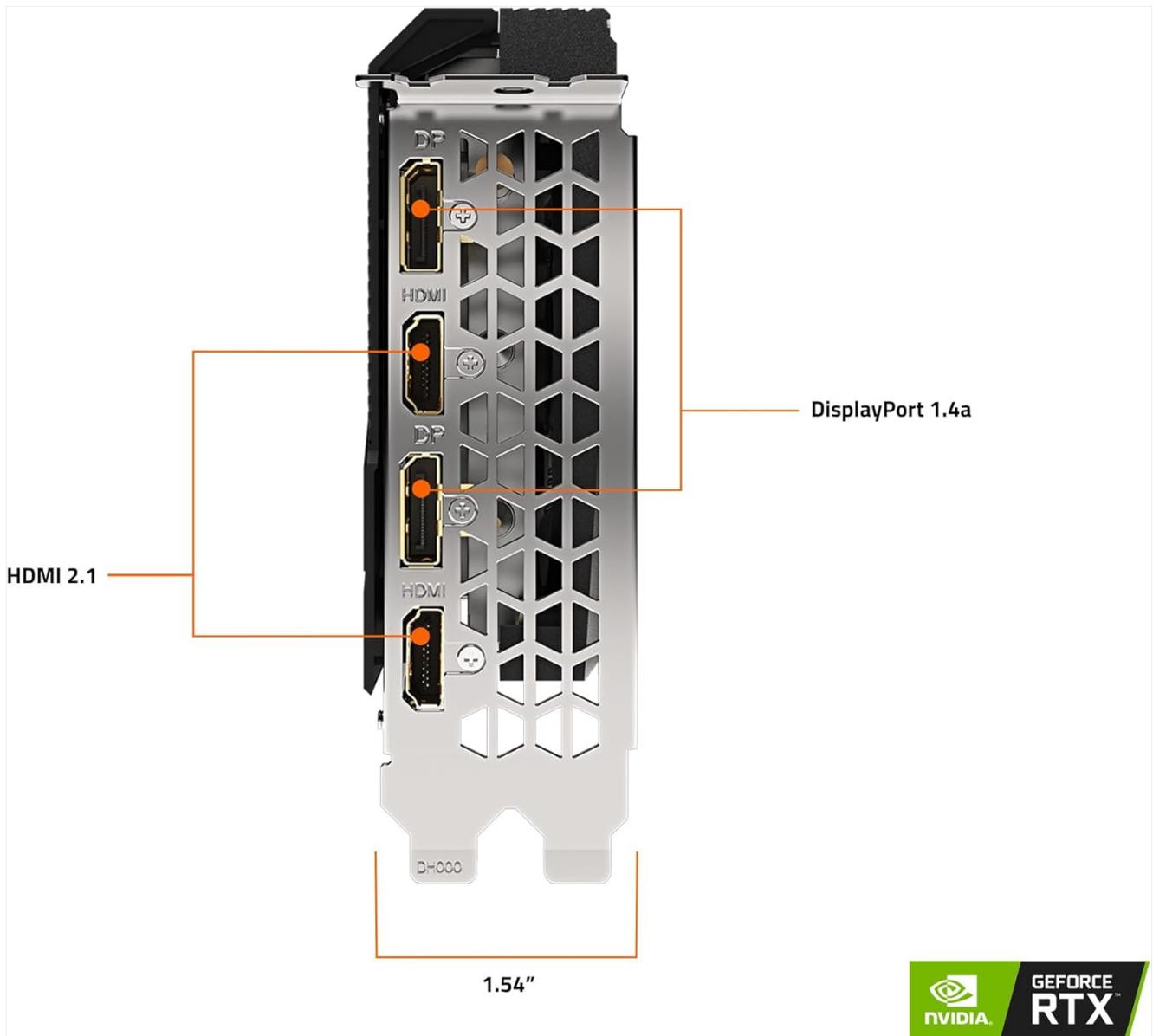
Figure 5: Diagram showing the dimensions of the GIGABYTE RTX 3060 WINDFORCE OC 12G Graphics Card. This provides critical measurements for compatibility with PC cases.

5. HARDWARE INSTALLATION

5.1 Pre-installation Checklist

- **Power Supply:** Ensure your power supply unit (PSU) has at least one 8-pin PCIe power connector and meets the recommended wattage for an RTX 3060 (typically 550W or higher).
- **Motherboard:** Verify your motherboard has an available PCI Express x16 slot.
- **Case Clearance:** Check your computer case for sufficient space to accommodate the graphics card's dimensions (approximately 198mm length, 121mm width, 41mm height).
- **Monitor Cables:** Have appropriate display cables (HDMI or DisplayPort) ready.

5.2 Installation Steps

1. **Power Off and Disconnect:** Shut down your computer completely and unplug the power cord from the wall outlet.
2. **Open Case:** Remove the side panel of your computer case to access the motherboard.
3. **Locate PCIe Slot:** Identify an available PCI Express x16 slot on your motherboard. If an old graphics card is present, carefully remove it.
4. **Remove Slot Covers:** Remove the necessary expansion slot covers from the back of your computer case that

correspond to the graphics card's I/O bracket.

5. **Insert Graphics Card:** Align the graphics card with the PCIe x16 slot and press down firmly until it is securely seated. You should hear a click from the slot's retention clip.

6. **Secure Card:** Use screws to fasten the graphics card's I/O bracket to the computer case.

7. **Connect Power:** Connect the 8-pin PCIe power connector from your power supply to the corresponding port on the graphics card (refer to Figure 3). Ensure the connection is firm.

8. **Close Case:** Replace the side panel of your computer case.

9. **Connect Monitor:** Connect your monitor to one of the display output ports (HDMI or DisplayPort) on the graphics card (refer to Figure 4).

10. **Power On:** Plug the power cord back into the wall outlet and power on your computer.

6. OPERATING INSTRUCTIONS

6.1 Driver Installation

After installing the graphics card, you must install the latest drivers for optimal performance and stability.

1. **Boot System:** Start your computer. Windows will typically install a basic display driver, allowing you to see the desktop.

2. **Download Drivers:** Visit the official GIGABYTE website (www.gigabyte.com) or NVIDIA's official driver download page (www.nvidia.com/drivers).

3. **Select Product:** Navigate to the support section for your specific graphics card model (GeForce RTX 3060) and operating system.

4. **Download and Install:** Download the latest recommended graphics drivers. Once downloaded, run the installer and follow the on-screen prompts. It is often recommended to perform a 'Clean Installation' if prompted.

5. **Restart:** Restart your computer after the driver installation is complete.

6.2 Display Configuration

Once drivers are installed, you can configure your display settings:

- **Windows Display Settings:** Right-click on your desktop and select 'Display settings' (Windows 10/11) or 'Screen Resolution' (Windows 7/8) to adjust resolution, orientation, and multiple display setups.

- **NVIDIA Control Panel:** Right-click on your desktop and select 'NVIDIA Control Panel' for advanced display, 3D settings, and video adjustments.

7. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your graphics card.

- **Dust Removal:** Periodically open your computer case and use compressed air to gently remove dust buildup from the graphics card's fans and heatsink. Ensure the fans do not spin rapidly during cleaning to prevent damage.

- **Environmental Conditions:** Operate the computer in a clean, dry, and well-ventilated environment. Avoid direct sunlight and extreme temperatures.

- **Driver Updates:** Keep your graphics drivers updated by regularly checking the GIGABYTE or NVIDIA websites for new releases.

8. TROUBLESHOOTING

If you encounter issues with your graphics card, refer to the following common problems and solutions:

- **No Display Output:**

- Ensure the monitor cable is securely connected to both the graphics card and the monitor.
- Verify the 8-pin PCIe power connector is properly seated on the graphics card.
- Check if your monitor is set to the correct input source (HDMI, DisplayPort).
- Try connecting the monitor to a different display output port on the graphics card.
- Test the graphics card in another PCIe slot or another computer if possible.

- **Driver Installation Issues:**

  - Download the latest drivers directly from the official GIGABYTE or NVIDIA website.
  - Use a driver uninstaller utility (e.g., Display Driver Uninstaller - DDU) to remove all previous graphics drivers before attempting a fresh installation.
  - Ensure your operating system is up to date.

- **Poor Performance or Crashes:**

  - Ensure the graphics card is receiving adequate power from the PSU.
  - Monitor the graphics card's temperature using software utilities. Overheating can lead to performance throttling or crashes. Ensure proper case airflow.
  - Verify that the graphics card is securely seated in the PCIe slot.
  - Check for conflicting software or background applications that might be consuming system resources.
  - Run a stress test on the graphics card to identify if the issue is hardware-related.

- **Fan Noise:**

  - Ensure fans are free from dust and obstructions.
  - Check fan control settings in the NVIDIA Control Panel or third-party utilities.
  - High fan speeds are normal under heavy load to maintain optimal temperatures.

9. SPECIFICATIONS

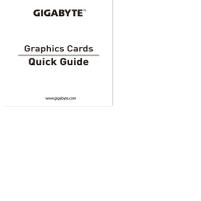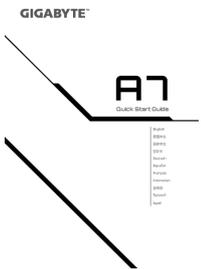| Feature	Specification
Graphics Coprocessor	NVIDIA GeForce RTX 3060
Video Output Interface	DisplayPort, HDMI
GPU Clock Speed	1792 MHz
Graphics RAM Size	12 GB GDDR6
Memory Speed	15000 MHz
Max Screen Resolution	7680x4320 Pixels
Card Description	Dedicated
Item Model Number	GV-N3060WF2OC-12GD REV2.0
Item Weight	1.85 pounds
Product Dimensions	198 x 121 x 41 mm (approx. 7.8 x 4.76 x 1.61 inches)
Color	Black
Manufacturer	GIGABYTE

10. Warranty and Support

GIGABYTE products are covered by a limited warranty. For detailed warranty terms and conditions, please refer to the warranty information included with your product or visit the official GIGABYTE website.

For technical support, driver downloads, and frequently asked questions, please visit the GIGABYTE support page:

GIGABYTE Official Support

Related Documents - GV-N3060WF2OC-12GD REV2.0

GIGABYTE™ Graphics Cards Quick Guide www.gigabyte.com	**Gigabyte Graphics Cards Quick Guide: Hardware and Software Installation** This Gigabyte Graphics Cards Quick Guide provides essential steps for hardware installation, including connecting the card to the motherboard and display, and software installation for drivers and utilities. It also details supported ports, restricted substances compliance, and important product notices.
GIGABYTE™ Graphics cards Quick Guide www.gigabyte.com	**GIGABYTE Graphics Card Quick Guide: Installation and Setup** Concise guide for installing and setting up GIGABYTE graphics cards, covering hardware installation, software setup, connector types, and RoHS compliance.
GIGABYTE™ Graphics Cards Quick Guide www.gigabyte.com	**Gigabyte GeForce RTX 4080 Gaming OC 16G Graphics Card User Manual** Comprehensive user manual for the Gigabyte GeForce RTX 4080 Gaming OC 16G Graphics Card, detailing installation, features, specifications, and troubleshooting. Includes information on the WINDFORCE cooling system and 16GB GDDR6X memory.
GIGABYTE™ Graphics Cards Quick Guide www.gigabyte.com	**GIGABYTE Graphics Cards Quick Guide** A quick guide for installing GIGABYTE graphics cards, covering hardware and software installation steps in multiple languages.
GIGABYTE™ Graphics Cards Quick Guide www.gigabyte.com	**GIGABYTE AORUS GeForce RTX 3070 MASTER 8G (rev. 2.0) LHR Graphics Card Overview** Comprehensive guide to the GIGABYTE AORUS GeForce RTX 3070 MASTER 8G (rev. 2.0) LHR graphics card, detailing its advanced cooling, performance features, and specifications for gamers and creators.
GIGABYTE™ A7 Quick Start Guide	**GIGABYTE A7 Notebook: Quick Start Guide** Get started quickly with your GIGABYTE A7 notebook. This guide provides essential setup instructions, hardware overview, hotkey explanations, and system backup/recovery information for your GIGABYTE A7 laptop.