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GIGABYTE GV-N640OC-2GI Rev2.0

GIGABYTE GT 640 DDR3 2GB Graphics Card User Manual

Model: GV-N640OC-2GI Rev2.0

1. Introduction and Overview

This manual provides comprehensive instructions for the installation, operation, maintenance, and troubleshooting of your GIGABYTE GT 640 DDR3 2GB Graphics Card. This graphics card is powered by the NVIDIA GeForce GT 640 GPU and features 2GB of DDR3 memory with a 128-bit memory interface, designed to enhance your system's visual performance. Key features include:

- GIGABYTE Ultra Durable 2 components for enhanced durability and stability.
- Custom-designed 100mm fan for efficient cooling and quiet operation.
- Core Clock: 941 MHz; Memory Clock: 1800 MHz.
- Multiple display outputs: 2x DVI-D, 1x HDMI, 1x D-SUB (VGA) with HDCP protection.



Figure 1.1: GIGABYTE GT 640 Graphics Card and Packaging. This image displays the graphics card alongside its retail packaging, highlighting the product's design and branding.

2. Setup and Installation

2.1 System Requirements

- PCI Express x16 slot available.
- Minimum recommended system power supply: 350W. Ensure your power supply can provide at least 20A on the 12V rail.
- Compatible operating system (e.g., Windows 8.1 or later).
- Two available slot covers at the back of your PC case may be required due to the card's cooling assembly.

2.2 Hardware Installation

1. **Power Off and Disconnect:** Before beginning installation, power off your computer and disconnect all power cables from the wall outlet.
2. **Open PC Case:** Remove the side panel of your computer case to access the motherboard.
3. **Locate PCI Express Slot:** Identify an available PCI Express x16 slot on your motherboard.
4. **Remove Slot Covers:** Remove the necessary slot covers from the back of your PC case corresponding to the PCI Express slot. Note that this card may require two adjacent slot covers to be removed.

5. **Insert Graphics Card:** Carefully align the graphics card with the PCI Express slot and press down firmly until it is securely seated. Ensure the retention clip on the slot engages.
6. **Secure Card:** Secure the graphics card to the PC case using the screw or latch mechanism provided by your case.
7. **Close PC Case:** Replace the side panel of your computer case.
8. **Reconnect Power:** Reconnect all power cables and turn on your computer.



Figure 2.1: Side View of the Graphics Card. This image shows the side profile of the GIGABYTE GT 640, illustrating its fan and heatsink assembly, which may require dual slot clearance.

2.3 Driver Installation

After hardware installation, you must install the graphics drivers for optimal performance.

1. **Boot System:** Start your computer. The system may boot into a basic display mode.
2. **Install Drivers:**
    - **From Included CD:** Insert the driver CD that came with your graphics card into your optical drive and follow the on-screen instructions.
    - **Download from GIGABYTE/NVIDIA:** Visit the official GIGABYTE or NVIDIA website, navigate to the support or download section, and search for drivers for the GT 640 (Model GV-N640OC-2GI Rev2.0). Download and run the latest compatible drivers.
3. **Restart:** Follow any prompts to restart your computer after driver installation is complete.

3. Operating the Graphics Card

3.1 Connecting Displays

The GIGABYTE GT 640 graphics card supports multiple display outputs, allowing you to connect various types of monitors.

- **DVI-D:** Connect DVI-compatible monitors using a DVI cable. Two DVI-D ports are available.
- **HDMI:** Connect HDMI-compatible displays, such as HDTVs or monitors, using an HDMI cable.
- **D-SUB (VGA):** Connect older VGA-compatible monitors using a VGA cable.

This card is capable of running up to three monitors simultaneously, expanding your desktop workspace.



Figure 3.1: Display Output Ports. This image highlights the DVI, HDMI, and D-SUB (VGA) ports on the graphics card, indicating connectivity options.

3.2 Display Configuration

Once displays are connected, you can configure them through your operating system's display settings. This typically allows you to:

- Extend your desktop across multiple monitors.
- Duplicate your display.
- Set primary and secondary monitors.

- Adjust resolution up to 2560x1600.

4. Maintenance

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

- **Dust Removal:** Periodically clean dust from the fan and heatsink using compressed air. Ensure the system is powered off and unplugged before cleaning. Dust buildup can impede cooling efficiency.
- **Temperature Monitoring:** Use system monitoring software to keep an eye on the graphics card's temperature, especially during heavy loads.
- **Driver Updates:** Regularly check the GIGABYTE or NVIDIA website for the latest driver updates. Updated drivers can improve performance, stability, and compatibility.

5. Troubleshooting

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

- **No Display/Black Screen:**
  - Ensure the graphics card is fully seated in the PCI Express slot.
  - Verify that all power cables are securely connected to the power supply and motherboard.
  - Check that the display cable is firmly connected to both the graphics card and the monitor.
  - Confirm your monitor is set to the correct input source.
  - Ensure your power supply meets the minimum 350W requirement.
- **Driver Issues:**
  - If display issues persist after driver installation, try uninstalling current drivers and performing a clean installation of the latest drivers from the official GIGABYTE or NVIDIA website.
  - Ensure your operating system is up to date.
- **Physical Fit Issues:**
  - If the card does not physically fit, ensure your PC case has sufficient clearance, particularly for the dual-slot design required by the fan assembly. Some compact cases may not accommodate this card.
- **Performance Problems (Lag, Stuttering):**
  - Ensure drivers are up to date.
  - Check for adequate system cooling; excessive heat can cause performance throttling.
  - Verify that your system meets the recommended specifications for the applications or games you are running.

If problems persist after attempting these steps, contact GIGABYTE customer support for further assistance.

6. Specifications

Feature	Specification
Brand	GIGABYTE
Manufacturer	Gigabyte
Model Number	GV-N640OC-2GI Rev2.0
Graphics Coprocessor	NVIDIA GeForce GT 640
Graphics Card Brand	NVIDIA
Graphics RAM Type	DDR3
Graphics Card RAM Size	2 GB
Memory Clock Speed	1800 MHz
Interface	PCI Express
Video Output Interface	DVI, HDMI, VGA (D-Sub)
Number of VGA Ports	1
Max Resolution	2560x1600
Recommended Wattage	350 watts (minimum system PSU)
Product Dimensions	29.72 x 5.08 x 21.08 cm; 589.67 g (11.7 x 2 x 8.3 inches; 1.3 lbs)

7. Warranty and Support

For warranty information, please refer to the warranty card included with your product or visit the official GIGABYTE website. GIGABYTE provides technical support for its products.
If you require technical assistance, driver downloads, or have questions regarding your GIGABYTE GT 640 graphics card, please visit the GIGABYTE support page:

GIGABYTE Official Support

Please have your product model number (GV-N640OC-2GI Rev2.0) and serial number ready when contacting support.

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