NVIDIA Quadro 2000

NVIDIA Quadro 2000 PCIe x16 1GB GDDR5 Graphics Card User Manual

Model: Quadro 2000

INTRODUCTION

This manual provides essential information for the installation, operation, maintenance, and troubleshooting of your NVIDIA Quadro 2000 PCIe x16 1GB GDDR5 graphics card. Please read these instructions carefully before installing and using the product to ensure optimal performance and safety.

SETUP

1. Physical Installation

1. **Power Off:** Ensure your computer system is completely powered off and disconnected from the power source before beginning installation.

2. **Open Case:** Open your computer's chassis to access the motherboard and expansion slots.

3. **Locate PCIe Slot:** Identify an available PCI-Express 2.0 x16 slot on your motherboard.

4. **Insert Graphics Card:** Carefully align the NVIDIA Quadro 2000 card with the PCIe slot and press down firmly until it is securely seated. Ensure the retention clip (if present) locks the card in place.

5. **Secure Card:** Fasten the graphics card to the computer case using the screw or latch mechanism provided by your chassis.

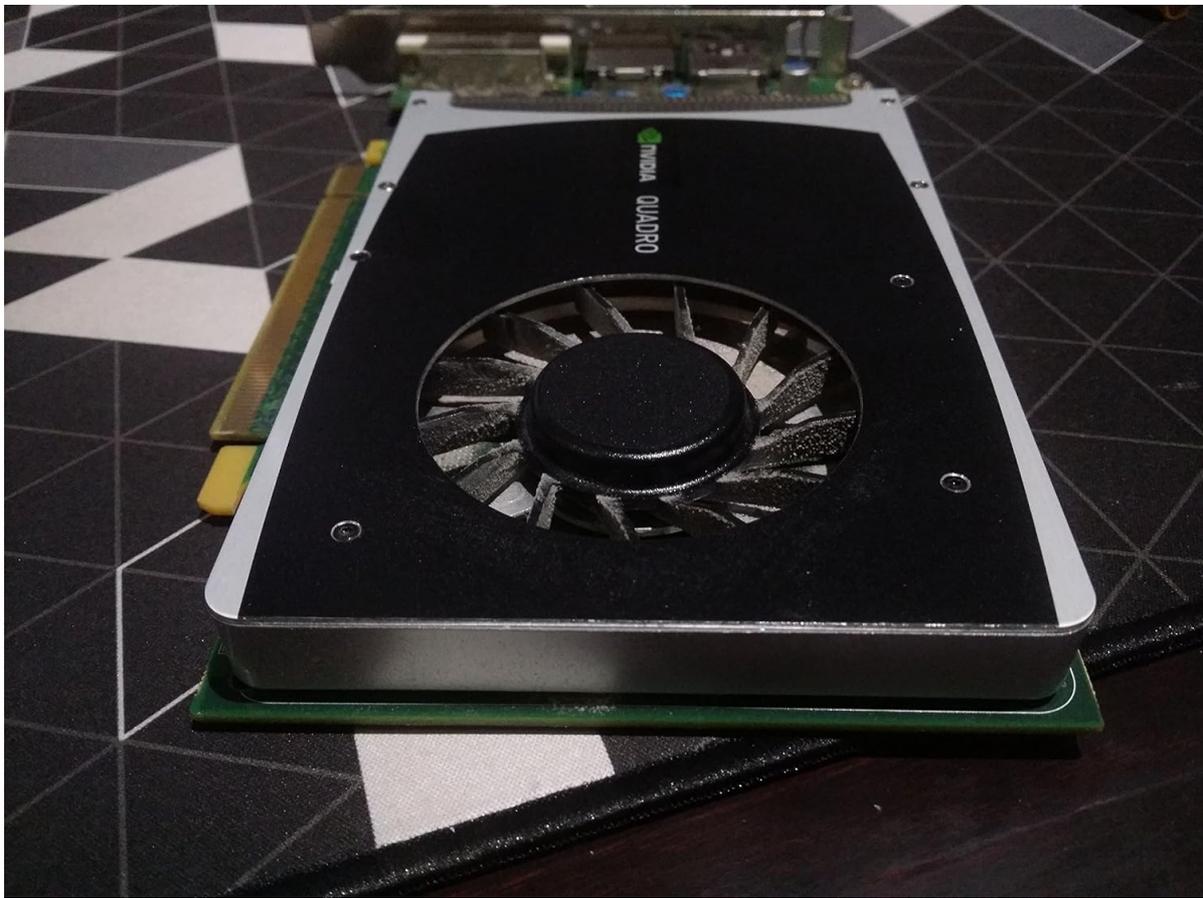6. **Close Case:** Close your computer's chassis and reconnect the power source.

Figure 1: Top-down view of the NVIDIA Quadro 2000 graphics card, illustrating its compact design with a central fan and heatsink.

2. Driver Installation

1. **Power On:** Power on your computer. The system may boot with a basic display driver.

2. **Download Drivers:** Visit the official NVIDIA website (www.nvidia.com/drivers) to download the latest drivers specifically for the Quadro 2000 graphics card and your operating system (Microsoft Windows XP/Vista/7/Linux).

3. **Install Drivers:** Follow the on-screen instructions to install the downloaded drivers. A system restart may be required to complete the installation.

3. Connecting Displays

The NVIDIA Quadro 2000 features DVI and Dual DisplayPort connectors. Use appropriate cables or adapters to connect your display(s).

- **DVI:** Connect directly to DVI-compatible monitors.
- **DisplayPort:** Connect to DisplayPort-compatible monitors. Adapters (e.g., DisplayPort to DVI) may be included or purchased separately for other display types.

Figure 2: Angled view of the NVIDIA Quadro 2000 graphics card, highlighting the PCIe interface and the DVI and DisplayPort output connectors.

OPERATING

Once installed and drivers are updated, your NVIDIA Quadro 2000 graphics card will automatically manage graphics processing for your applications. It is designed for professional applications requiring high-performance visualization.

- **Supported Technologies:** The card supports nVidia CUDA Architecture, nVidia 3D Vision Technology, HDCP (High-bandwidth Digital Content Protection), Microsoft DirectX 11, Shader Model 5.0, and OpenGL 4.0.
- **Multi-Display:** Utilize the DVI and DisplayPort connectors for multi-monitor setups, supporting a maximum resolution of 2560 x 1600.
- **Power Consumption:** The maximum power consumption is 62W. Ensure your system's power supply unit (PSU) can adequately support this requirement along with other system components.

MAINTENANCE

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

- **Dust Removal:** Periodically inspect the fansink for dust accumulation. Use compressed air to gently clear dust from the fan blades and heatsink fins. Ensure the system is powered off and unplugged before cleaning.
- **Temperature Monitoring:** Monitor the card's temperature using system monitoring software, especially during heavy workloads, to ensure it operates within safe limits.
- **Driver Updates:** Keep your graphics drivers updated by regularly checking the NVIDIA website for new releases. Driver updates often include performance improvements and bug fixes.

TROUBLESHOOTING

- **No Display Output:**

  - Verify that the graphics card is fully seated in the PCIe slot.
  - Ensure display cables are securely connected to both the graphics card and the monitor.
  - Test with a different display cable or monitor if possible.
  - Confirm that your monitor is set to the correct input source.

- **Driver Issues / Display Errors:**

  - Perform a clean installation of the latest NVIDIA drivers. Uninstall existing drivers before installing new ones.
  - Check for conflicts with other installed software or drivers.

- **System Instability / Crashes:**

  - Ensure adequate airflow within your computer case to prevent overheating.
  - Verify that your power supply unit (PSU) meets the minimum wattage requirements for your system, including the graphics card.
  - Run diagnostic tools to check for hardware conflicts or memory issues.

For further assistance, refer to the NVIDIA support website or contact their customer service.

SPECIFICATIONS

Feature	Detail
Manufacturer Part Number	VCQ2000-PB
Chipset	Quadro 2000
Video Memory	1GB GDDR5
Memory Interface	128-bit
Bus Interface	PCI-Express 2.0 x16
RAMDAC	400 MHz
Stream Processors	192
Memory Bandwidth	41.6 GB/s
Max. Resolution	2560 x 1600
Connectors	DVI; Dual DisplayPort
Thermal Solution	Fansink
Supported OS	Microsoft Windows XP/ Vista/ 7/ Linux
Supported APIs	DirectX 11, Shader Model 5.0, OpenGL 4.0
Max. Power Consumption	62W

Product Dimensions	9.8 x 6.89 x 2.99 inches
Item Weight	14.4 ounces

WARRANTY AND SUPPORT

Specific warranty details for the NVIDIA Quadro 2000 graphics card are not provided in this document. For the most current warranty information, technical support, and additional resources, please visit the official NVIDIA website.

NVIDIA Support Website: www.nvidia.com/support