NVIDIA 06G-P4-3790-KR

NVIDIA GTX TITAN X 12GB GDDR5 Graphics Card User Manual

Model: 06G-P4-3790-KR

1. Introduction

This manual provides essential information for the installation, operation, and maintenance of your NVIDIA GTX TITAN X 12GB GDDR5 PCI-e x16 Graphics Video Card. Please read this manual thoroughly before using the product to ensure optimal performance and longevity.

Figure 1: Front view of the NVIDIA GTX TITAN X Graphics Card, showcasing its cooling fan and sleek design.

2. What's in the Box

Upon unpacking, ensure all items listed below are present:

- NVIDIA GTX TITAN X Graphics Card

3. Setup and Installation

3.1 Physical Installation

1. **Power Off System:** Before installation, ensure your computer system is completely powered off and unplugged from the wall outlet.
2. **Open PC Case:** Remove the side panel of your PC case to access the motherboard.
3. **Locate PCI Express Slot:** Identify an available PCI Express 3.0 x16 slot on your motherboard. The NVIDIA GTX TITAN X is a dual-width card, requiring two adjacent expansion slots.
4. **Insert Graphics Card:** Carefully align the graphics card with the PCI Express slot and press down firmly until it is securely seated. Secure the card with the case's retention mechanism or screws.
5. **Connect Power:** The card requires an 8-pin PCI Express power connector. Connect the appropriate power cable from your power supply to the card. A minimum 600-watt power supply is recommended for stable operation.
6. **Close PC Case:** Replace the side panel of your PC case.

3.2 Driver Installation

After physical installation, power on your computer. Install the latest graphics drivers from the official NVIDIA website (www.nvidia.com/drivers) for optimal performance and compatibility.

4. Operating Instructions

4.1 Display Connectivity

The NVIDIA GTX TITAN X offers a variety of display outputs to connect to your monitors or televisions:

- **Dual Link DVI-I:** 1 port
- **HDMI 2.0:** 1 port
- **DisplayPort 1.2:** 3 ports

The card supports up to 4 displays simultaneously. Maximum digital resolution is 5120x3200, and maximum VGA resolution is 2048x1536. HDCP is supported, and audio input for HDMI is internal.

Figure 2: Rear view of the NVIDIA GTX TITAN X, highlighting the available display output ports.

4.2 Multi-Monitor Setup

For detailed instructions on setting up multiple monitors and configuring display modes (extension, duplication, tiling), refer to the NVIDIA Control Panel software installed with your drivers. The following video provides a general overview of multi-monitor video card features and uses:

Your browser does not support the video tag.

Video 1: An informational video explaining the features and uses of multi-monitor video cards, including setup and configuration options.

4.3 Key Technologies

The NVIDIA GTX TITAN X supports advanced technologies to enhance your computing and gaming experience:

- **NVIDIA SLI Ready:** Supports 4-way SLI for extreme performance.
- **NVIDIA G-Sync Ready:** Compatible with G-Sync monitors for smooth, tear-free gaming.
- **NVIDIA GameStream Ready:** Stream PC games to NVIDIA SHIELD devices.
- **GeForce ShadowPlay:** Record and share high-quality gameplay videos.
- **NVIDIA GPU Boost 2.0:** Dynamically maximizes clock speeds for optimal performance.
- **Dynamic Super Resolution (DSR):** Delivers 4K-quality graphics on HD displays.
- **Multi-Frame Sampled Anti-Aliasing (MFAA):** Provides cinematic quality anti-aliasing at a lower performance cost.
- **NVIDIA Gameworks:** Suite of advanced rendering technologies for realistic gaming visuals.
- **Microsoft Direct X 12 API with Feature Level 12.1:** Supports the latest graphics APIs for cutting-edge games.
- **OpenGL 4.5:** Industry-standard API for 2D and 3D graphics.
- **CUDA:** NVIDIA's parallel computing platform for general-purpose computing on GPUs.
- **OS Certification:** Compatible with Windows 8 & 8.1, Windows 7, Windows Vista, Linux, FreeBSD x86.

5. Maintenance

To ensure the longevity and optimal performance of your graphics card, consider the following maintenance tips:

- **Keep Clean:** Regularly clean dust from the card's fans and heatsink using compressed air. Ensure the system is powered off before cleaning.
- **Ensure Airflow:** Maintain good airflow within your PC case. Ensure no cables or other components obstruct the graphics card's fans or vents.
- **Backplate Protection:** The integrated backplate helps protect the PCB and internal components. Avoid placing excessive pressure on the card.
- **Driver Updates:** Keep your graphics drivers updated to benefit from performance improvements and bug fixes.

6. Troubleshooting

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

- **No Display:** Check all display cable connections. Ensure the graphics card is properly seated in the PCI Express slot and the 8-pin power connector is firmly attached.
- **System Instability/Crashes:** Verify your power supply meets the recommended 600W. Ensure

drivers are up-to-date. Monitor temperatures to prevent overheating.

- **Performance Issues:** Ensure your display resolution and in-game settings are appropriate for the card's capabilities. Check for background applications consuming resources.
- **Fan Noise:** Excessive fan noise might indicate dust buildup or high temperatures. Clean the card and ensure adequate case airflow.

7. Specifications

Category	Specification
Model Number	06G-P4-3790-KR
Engine Specs	CUDA Cores: 3072 | Base Clock (MHz): 1000 | Boost Clock (MHz): 1075 | Texture Fill Rate (GigaTexels/sec): 192
Memory Specs	Memory Clock: 7.0 Gbps | Standard Memory Config: 12 GB | Interface: GDDR5 | Interface Width: 384-bit | Bandwidth (GB/Sec): 336.5
Display Support	Max Digital Resolution: 5120x3200 | Max VGA Resolution: 2048x1536 | Standard Display Connectors: Dual Link DVI-I, HDMI 2.0, 3x DisplayPort 1.2 | Multi Monitors: 4 Displays | HDCP: Yes | Audio Input for HDMI: Internal
Graphic Card Dimensions	Height: 4.376 Inches | Length: 10.5 inches | Width: Dual-Width
Thermal & Power Specs	Max GPU Temperature (in C): 91 C | Graphics Card Power (W): 250 W | Recommended System Power (W): 600 W | Supplementary Power Connectors: 6-pin + 8-pin
Bus Support	PCI Express 3.0
OS Certification	Windows 8 & 8.1, Windows 7, Windows Vista, Linux, FreeBSD x86
Item Weight	2.81 pounds
Package Dimensions	14.84 x 11.54 x 4.25 inches

8. Warranty and Support

For product warranty information and technical support, please visit the official NVIDIA website or contact their customer service directly. You can also visit the NVIDIA Store on Amazon for additional product information and resources:

Visit the NVIDIA Store