PNY VCG4070TS16TFXXPB1-O

PNY GeForce RTX™ 4070 Ti Super 16GB XLR8 Gaming VERTO™ EPIC-X RGB™ Graphics Card Instruction Manual

Model: VCG4070TS16TFXXPB1-O
Brand: PNY

1. PRODUCT OVERVIEW

The PNY GeForce RTX™ 4070 Ti Super 16GB XLR8 Gaming VERTO™ EPIC-X RGB™ graphics card is engineered for exceptional performance in gaming and creative applications. Powered by the NVIDIA Ada Lovelace architecture, it offers advanced features like DLSS 3, ray tracing, and AI-accelerated graphics. This card is designed to deliver high frame rates, realistic visuals, and efficient workflow acceleration for demanding users.

Key Features:

- Powered by NVIDIA DLSS 3, ultra-efficient Ada Lovelace architecture, and full ray tracing.
- NVIDIA Ada Lovelace architecture with 2340MHz core clock and 2655MHz boost clock speeds.
- 16GB GDDR6X (256-bit) on-board memory, 8448 CUDA processing cores, and up to 672GB/sec of memory bandwidth.
- PCI Express 4.0 interface for broad system compatibility.
- DisplayPort and HDMI outputs for expanded connectivity.
- NVIDIA GeForce Experience for video capture, screenshots, livestreams, driver updates, and game optimization.
- EPIC-X RGB™ lighting for customizable visual effects.

2. WHAT'S IN THE BOX

- PNY GeForce RTX™ 4070 Ti Super 16GB XLR8 Gaming VERTO™ EPIC-X RGB™ Overclocked Triple Fan Graphics Card DLSS 3
- GPU Support Bracket
- 1x 16-pin to 2x 8-pin Adapter

3. SETUP & INSTALLATION

Before beginning installation, ensure your computer is powered off and unplugged from the wall. It is recommended to wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage to components.

Installation Steps:

1. **Prepare Your System:** Power down your computer, unplug it, and open the side panel of your PC case.
2. **Locate PCIe Slot:** Identify an available PCIe 4.0 x16 slot on your motherboard. This is typically the top-most long slot.
3. **Remove Slot Covers:** Remove the necessary expansion slot covers from the back of your PC case to accommodate the graphics card. This card occupies approximately 3.3 slots.
4. **Insert Graphics Card:** Carefully align the graphics card with the PCIe slot and press down firmly until it is securely seated. Ensure the retention clip on the PCIe slot locks into place.
5. **Secure Card:** Fasten the graphics card to the PC case using the screws from the removed slot covers.
6. **Connect Power:** Connect the included 1x 16-pin to 2x 8-pin adapter to the graphics card's power connector. Then, connect two 8-pin PCIe power cables from your power supply unit (PSU) to the adapter. Ensure all connections are firm.
7. **Install Support Bracket:** Due to the size and weight of the card, install the included GPU support bracket to prevent sag and ensure long-term stability. Follow the bracket's specific instructions for installation.
8. **Close Case & Connect Display:** Close your PC case, plug in your computer, and connect your display cable (HDMI or DisplayPort) to the graphics card.

Image: PNY GeForce RTX 4070 Ti Super Graphics Card, front view. This image shows the overall design of the graphics card with its triple-fan cooling system and RGB lighting elements.

Image: PNY GeForce RTX 4070 Ti Super Graphics Card, angled view of the backplate. This image highlights the robust aluminum backplate designed for structural integrity and heat dissipation.

4. OPERATING INSTRUCTIONS

Driver Installation:

After physical installation, the next crucial step is to install the latest NVIDIA drivers. You can download these directly from the official NVIDIA website (www.nvidia.com/drivers) or through the NVIDIA GeForce Experience application.

1. Boot your computer.
2. Download the latest Game Ready Driver or Studio Driver for your RTX 4070 Ti Super.
3. Run the installer and follow the on-screen prompts. A custom installation is recommended for a clean install.
4. Restart your computer after installation is complete.

NVIDIA GeForce Experience:

NVIDIA GeForce Experience is a companion application that enhances your PC gaming experience. It allows you to:

- Optimize game settings for the best performance and visual quality.
- Capture and share gameplay videos, screenshots, and livestreams.
- Keep your drivers up to date automatically.

EPIC-X RGB™ Lighting Control:

The PNY GeForce RTX 4070 Ti Super features customizable EPIC-X RGB™ lighting. You can control and synchronize the lighting effects using compatible motherboard RGB software or PNY's dedicated utility software (if available). Refer to your motherboard's manual or PNY's website for specific instructions on RGB customization.

5. PERFORMANCE FEATURES

The PNY GeForce RTX 4070 Ti Super is built upon cutting-edge technologies to deliver an unparalleled visual and

performance experience.

NVIDIA Ada Lovelace Architecture:

This architecture is the foundation of the RTX 40 Series, offering significant advancements in performance, efficiency, and AI-powered graphics. It includes new Streaming Multiprocessors, 3rd generation Ray Tracing Cores, and 4th generation Tensor Cores, enabling faster ray tracing and AI capabilities.
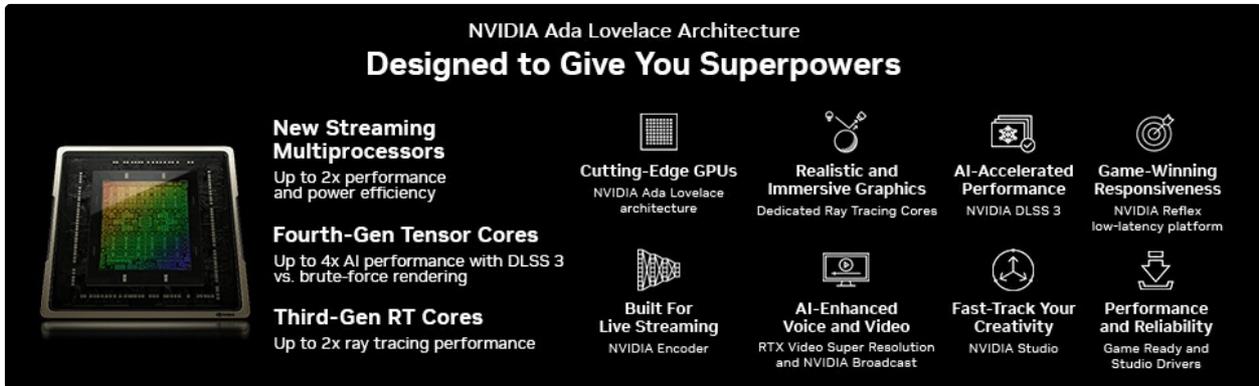

Image: Diagram illustrating the NVIDIA Ada Lovelace Architecture. It highlights key components such as new Streaming Multiprocessors, Fourth-Gen Tensor Cores, and Third-Gen RT Cores, designed to enhance performance and AI capabilities.

DLSS 3 & Ray Tracing:

NVIDIA DLSS (Deep Learning Super Sampling) 3 is a revolutionary AI-powered graphics technology that multiplies performance using AI Frame Generation. Combined with full ray tracing, it creates incredibly realistic and immersive virtual worlds with stunning lighting, reflections, and shadows.

Your browser does not support the video tag.

Video: NVIDIA DLSS 3.5 Enhances Ray Tracing with AI. This video explains how DLSS 3.5 improves ray tracing performance and visual quality using AI-powered Ray Reconstruction, offering a deeper understanding of the technology.

NVIDIA Reflex:

NVIDIA Reflex delivers the lowest latency and best responsiveness for competitive gaming. It optimizes the CPU and GPU to reduce system input lag, giving you a competitive edge.

Your browser does not support the video tag.

Video: PNY GeForce RTX 40 Super Series Counter Strike 2 Performance. This video demonstrates the performance benefits of the RTX 40 Super Series, including NVIDIA Reflex, in competitive gaming titles like Counter-Strike 2, showcasing improved responsiveness and lower latency.

Cooling System:

The XLR8 Gaming VERTO™ EPIC-X RGB™ features a robust cooling solution with three 100mm dual ball bearing fans, an efficient heatsink, copper base, and an aluminum backplate with air vents. This design ensures optimal thermal performance and quiet operation even under heavy loads.
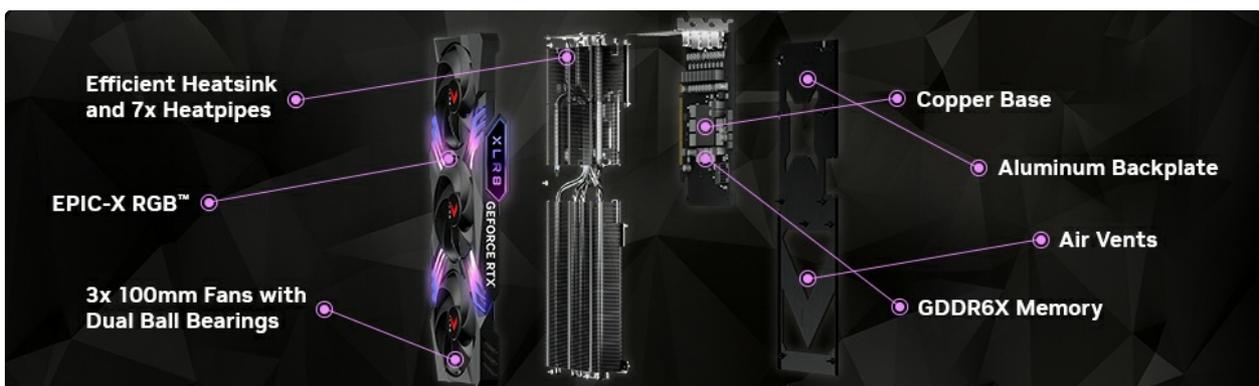
Image: Exploded diagram of the PNY GeForce RTX 4070 Ti Super cooling system. This visual details components like the efficient heatsink, copper base, aluminum backplate, air vents, and triple 100mm fans with dual ball bearings.

Image: Illustration of the dual ball bearing fans on the PNY GeForce RTX 4070 Ti Super. This image highlights the fan design, which provides 40% more airflow and 55% more air pressure compared to traditional fans for enhanced thermal performance.

6. SPECIFICATIONS

Feature	Detail
Graphics Coprocessor	NVIDIA GeForce RTX 4070 Ti SUPER
GPU Clock Speed	2340 MHz
Boost Clock Speed	2655 MHz
Graphics Card RAM Size	16 GB GDDR6X
Memory Interface	256-bit
Memory Speed	16000 MHz
CUDA Cores	8448
Max Screen Resolution	7680 x 4320 @120Hz
Video Output Interface	DisplayPort, HDMI
PCI Express Interface	PCIe 4.0
Product Dimensions (LxWxH)	13.1 x 5.37 x 2.62 inches
Item Weight	3.96 pounds
Manufacturer	PNY
Model Number	VCG4070TS16TFXXPB1-O

7. MAINTENANCE

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

- **Keep Drivers Updated:** Regularly check for and install the latest NVIDIA drivers via GeForce Experience or the NVIDIA website. Driver updates often include performance improvements and bug fixes.
- **Dust Removal:** Periodically clean dust from the graphics card fans and heatsink using compressed air. Ensure the computer is powered off and unplugged before cleaning.

- **Monitor Temperatures:** Use monitoring software (e.g., MSI Afterburner, HWMonitor) to keep an eye on your GPU temperatures during gaming or heavy workloads. Ensure temperatures remain within safe operating limits.
- **Ensure Proper Airflow:** Make sure your PC case has adequate airflow to prevent heat buildup. Ensure case fans are properly installed and not obstructed.

8. TROUBLESHOOTING

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

- **No Display Output:**

  - Ensure the display 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 power cables (16-pin to 8-pin adapter and PSU cables) are correctly and firmly connected.
  - Test with a different display cable or monitor if possible.

- **Driver Issues/Crashes:**

  - Perform a clean installation of the latest NVIDIA drivers. Use Display Driver Uninstaller (DDU) in Safe Mode to completely remove old drivers before installing new ones.
  - Ensure your operating system is up to date.

- **Poor Performance/Low FPS:**

  - Verify that your game settings are optimized. Use NVIDIA GeForce Experience for automatic optimization.
  - Check GPU temperatures to ensure thermal throttling is not occurring.
  - Ensure your power supply unit (PSU) meets the recommended wattage for the graphics card and your system.
  - Close unnecessary background applications.

- **RGB Lighting Not Working:**

  - Ensure all RGB cables (if external) are properly connected.
  - Check your motherboard's RGB software or PNY's utility for lighting control.
  - Update relevant software and drivers.

9. WARRANTY & SUPPORT

PNY products are backed by a manufacturer's warranty. For detailed warranty information, product registration, and technical support, please visit the official PNY website or contact their customer service.
PNY Support Website: www.pny.com/support
Please retain your proof of purchase for warranty claims.