Overview

Models

NVIDIA Quadro FX 5800 4GB PCIe Graphics Card FZ559AA

Introduction

The size and complexity of data is growing at an exponential rate. Whether searching for and extracting oil, designing and bringing the next luxury vehicle to market, or providing a diagnosis of a patient's condition, professionals are faced with a mountain of data that needs to be distilled into meaningful and actionable visualizations. In an increasingly competitive and high-pressure landscape, these professionals need to deliver results better, faster, and more cost effectively than ever before. Traditional processing paradigms just cannot keep up.

With advances in the GPU architecture, the NVIDIA® Quadro® FX 5800 solution gives geophysicists, designers, scientists, engineers, and other technical professionals visual supercomputing from their desktops. Professional applications take advantage of the Quadro FX 5800's advanced feature set, including up to 4GB of frame buffer leading to greater interactivity with large datasets, providing the right set of tools to deliver results that push visualization beyond traditional 3D.

The Quadro FX 5800 is the ultra high-end solution in NVIDIA's second generation unified-architecture professional product offerings delivering up to 50% increased performance over the first generation through 240 processor cores. The entire Quadro family takes professional visualization applications to a new level of interactivity by enabling unprecedented programmability and precision. The industry's leading workstation applications leverage these capabilities to deliver hardware-accelerated features, performance, and quality not found in other professional graphics solutions.

Performance and Features

- 4 GB GDDR3 GPU Memory with ultra fast memory bandwidth: This is the industry's first 4GB GPU Memory card with massive memory bandwidth up to 102GB/sec. that delivers high throughput for interactive visualization of large models and high-performance for real time processing of large textures and frames and enables the highest quality and resolution full-scene antialiasing (FSAA).
- NVIDIA ® CUDA™ Parallel Computing Processor: A parallel computing processor architecture exposed through a C language environment and tool suite in combination with high performance visualization, CUDA unleashes new capabilities to solve highly complex challenges such as real-time ray tracing, video encoding, and interactive volume rendering.
- Single DisplayPort Digital Display Connectors: DisplayPort supports ultra-high-resolution panels (up to 2560 x 1600)-which result in amazing image quality producing detailed photorealistic images.
- Dual Dual-Link Digital Display Connectors: Dual dual-link TMDS transmitters support ultra-high-resolution panels (up to 3840 x 2400 @ 24Hz on each panel) --which result in amazing image quality producing detailed photorealistic images.
- NVIDIA® SLI® Technology: A revolutionary platform innovation that enables professional users to dynamically scale graphics performance, enhance image quality, and expand display real estate.
- NVIDIA® SLI® Multi OS: Allows a user to run multiple Windows workstation environments from a single system, with each Operating System directly assigned to a Quadro graphics solution.
- Quad Buffered Stereo: Offers enhanced visual experience for professional applications that demand stereo viewing capability.

*Paired with NVIDIA Quadro® G-Sync (available from a 3rd party) option delivers Frame lock/Genlock functionality for unprecedented levels of realism, visualization and collaborative capabilities
*NVIDIA Quadro® SDI (available from a 3rd party) is the industry-leading integrated graphics-to-video solution for broadcast and video professionals that delivers high performance graphics to uncompressed 12-bit HD SDI, enabling a direct connection to broadcast equipment.
*Integrated in NVIDIA Quadro® Plex Visual Computing System (available from a 3rd party) delivers a quantum leap in visual computing, enabling breakthrough levels of capability and productivity from a high density, industry standards-based architecture

Compatibility

The Quadro FX 5800 is supported on the following HP Personal Workstations: Z800, xw9400.

NOTE: Dual FX5800's require an 1110 PSU.

Service and Support

The NVIDIA Quadro FX 5800 has a one-year limited warranty or the remainder of the warranty of the HP product in which it is installed. Technical support is available seven days a week, 24 hours a day by phone, as well as online support forums. Parts and labor are available on-site within the next business day. Telephone support is available for parts diagnosis and installation. Certain restrictions and exclusions apply.

Technical Specifications

Form Factor	4.36" (H) x 10.5" (L), Dual Slot
Graphics Controller	NVIDIA Quadro FX 5800 Graphics Board
Bus Type	PCI Express x16, Generation 2.0
Memory	4 GB GDDR3 SDRAM unified graphics memory
Connectors	2 Dual-Link DVI-I outputs, 1 DisplayPort output, 1 3-pin Mini DIN stereo output ('DVI to VGA', 'DisplayPort to VGA' and 'DisplayPort to DVI' adapters available as an accessory)
Maximum Resolution	• Two dual-link DVI-I outputs drive two digital displays at resolutions up to 2560 x 1600 @ 60Hz • One DisplayPort output drives an ultra-high-resolution panel (up to 2560 x 1600) • Internal 400 MHz DACs-Two analog displays up to 2048 x 1536 @ 85Hz NOTE: This card supports up to two displays.
Shading Architecture	• Full Shader Model 4.0 (OpenGL 2.1/DirectX 10 class) • Long fragment programs (unlimited instructions) • Long vertex programs (unlimited instructions) • Looping and subroutines (up to 256 loops per vertex program) • Dynamic flow control • Conditional execution
Supported Graphics APIs	OpenGL 3.0 DirectX 10.0
Available Graphics Drivers	Genuine Windows 7 Professional (64-bit and 32-bit) Genuine Windows Vista Business (64-bit and 32-bit) Microsoft Windows XP Professional (64-bit and 32-bit) Red Hat Enterprise Linux(RHEL) 5 Desktop/Workstation SUSE Linux Enterprise Desktop 11 (64-bit and 32-bit) HP qualified drivers may be preloaded or available from the HP support Web site: http://welcome.hp.com/country/us/en/support.html Novell SUSE Linux Enterprise drivers may also be obtained from: ftp://download.nvidia.com/novell or http://www.nvidia.com
High-Resolution Antialiasing	• Rotated Grid Full-Scene Antialiasing (RG FSAA) • 32x FSAA dramatically reduces visual aliasing artifacts or "jaggies" at resolution up to 1920x1200
High-level Shader Languages	• Optimized compiler for Cg and Microsoft HLSL • OpenGL 2.1 and DirectX 10 support • Open source compiler
CUDA™ Parallel Processor Cores	240
Power consumption	225 Watts NOTE: An 1110 PSU is required to support this graphics card