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NVIDIA Quadro 6000 6GB Graphics Card   WS097AA

Introduction

The NVIDIA Quadro 6000, part of the newest NVIDIA® Quadro® professional solutions, is a true technological breakthrough, delivering up to 5X faster performance across a broad range of design, animation and video applications. Built on the innovative NVIDIA Fermi architecture, the latest Quadro offerings are the first professional-class GPUs to integrate high performance computing capabilities with advanced visualization techniques, transforming modern workflows.

The result is a visual supercomputer right at your desk, capable of streamlining the way you work every day. With Quadro solutions, your work flows -- you can design, iterate and deliver higher quality projects in less time.

Overview

Performance and Features

Building on a decade of innovation and leadership in professional graphics, the new Quadro GPU architecture has been redesigned from the ground up to integrate capabilities never before available.

- Quadro Scalable Geometry Engine dramatically improves performance across a broad range of CAD, DCC and scientific applications, enabling your work to flow interactively with models and scenes that are an order of magnitude more complex than ever before.
- Quadro GPU Tessellation Engine for OpenGL 4.0 and DirectX11 with Shader Model 5.0, automatically generates finely detailed geometry for cinematic quality environments and scenes without sacrificing performance.
- Industry's Largest Graphics Memory with up to 6 GB of fast GDDR5 memory, enables interactivity on larger projects than ever before.
- Highest Quality Visual Fidelity for the Discerning Professional is enabled by a rich, 30-bit color engine that enables vivid image quality with the broadest dynamic range of over one billion colors. Dramatically reduce visual aliasing artifacts with up to 128X full-scene antialiasing (FSAA).
- NVIDIA CUDA™ Parallel Computing Architecture enables real-time simulation, analysis, and visualization of large 4D datasets and models.
- Super-Fast Processing with Greater Precision is enabled by a new architecture designed for high performance computing. Quadro GPUs delivers the industry's fastest double precision floating point performance for applications demanding the highest accuracy, including medical imaging, finite element analysis and computational fluid dynamics.
- As the world's first GPU to feature Error Correction Codes (ECC) memory, Quadro solutions ensure data integrity and reliability for mission-critical applications by eliminating soft errors on register files, frame buffer and cache memory.
- NVIDIA GigaThread™ Engine enables the highest rates of parallel data processing between the GPU and host, as well as among multiple GPUs, accelerating video encoding, color grading, physical simulation and more.
- NVIDIA Parallel DataCache™ supports a true cache hierarchy combined with on-chip shared memory driving exceptional throughput, accelerating capabilities such as real-time ray tracing, physics processing and texture filtering.

Get an Extra boost with NVIDIA SLI™ technologies:

- NVIDIA SLI Frame Rendering technology transparently scales professional application performance on a single display by tapping the power of multiple SLI-enabled Quadro GPUs.
- NVIDIA SLI FSAA (Full Scene Anti Aliasing) technology drives unprecedented image quality with up to 128x Full Screen Anti-Aliasing, dramatically reducing visual aliasing artifacts.
- NVIDIA SLI Multi OS allows a user to run multiple Windows or Linux workstation applications from a single system, with each Operating System directly assigned to a Quadro graphics solution.
- NVIDIA SLI Mosaic Technology enables transparent scaling of any application, tear-free across up to four display channels, including support for 4K projection, while delivering full performance from a single SLI certified workstation.

Compatibility

The Quadro 6000 is supported on the following HP Personal Workstation: Z800

Service and Support

The NVIDIA Quadro 6000 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.

NOTE:
This card is only supported with the Z800 1110W PSU

Technical Specifications

Form Factor	4.376" H x 9.75" L Dual Slot
Graphics Controller	NVIDIA Quadro 6000 Graphics Card
Bus Type	PCI Express 2.0 x16
Memory	6 GB GDDR5 384-bit ECC Memory
Connectors	1 DVI-I output, 2 DisplayPort outputs, 1 Stereo(3-pin mini DIN); One DP to DVI adapter included with card DVI to VGA, DisplayPort to VGA and DisplayPort to dual link DVI adapters available as accessories
Maximum Resolution	Dual DisplayPort (up to 2560 x 1600 @ 60Hz and 1920x1200 @ 120Hz) Dual-link DVI-I output (up to 2560 x 1600 @ 60Hz and 1920x1200 @ 120Hz)
Image Quality Features	30-bit color - Up to 16K x16K texture and render processing - Transparent multisampling and super sampling 16x angle independent anisotropic filtering 128-bit floating point performance 32-bit per-component floating point texture filtering and blending 64x full scene antialiasing (FSAA) / 128x FSAA in SLI Mode - Support for any combination of two connected displays - DisplayPort 1.1a, HDMI 1.3a, and HDCP support - NVIDIA 3D Vision™ technology, 3D DLP, Interleaved, and other 3D stereo format support - Full OpenGL quad buffered stereo support - Underscan/overscan compensation and hardware scaling - NVIDIA nView® multi-display technology
Shading Architecture	Shader Model 5.0
Supported Graphics APIs	OpenGL 4.0 DirectX 11 CUDA API support includes: CUDA C, CUDA C++, DirectCompute 5.0, OpenCL, Java, Python, and Fortran
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) WS4 (64-bit and 32-bit) Red Hat Enterprise Linux (RHEL) 5 Desktop/Workstation (64-bit and 32-bit) 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
Parallel Processor Cores	448 CUDA parallel processing cores
Power consumption	204 Watts Requires 1110W PSU

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