

## Overview

## Models

NVIDIA Quadro FX 5500 Graphics Board

RF089AA

NVIDIA Quadro G-Sync Card (requires NVIDIA Quadro FX 5500 Controller to be installed)

ED087AA

## Introduction

NVIDIA Quadro® FX 5500 graphics board is an ultra high-end 3D graphics solution for CAD, DCC, and visualization applications. NVIDIA Quadro FX 5500 ultra high-end graphics shatters performance limits facing CAD, DCC, and visualization applications. Armed with a radically new graphics architecture engineered to address the most demanding challenges, NVIDIA Quadro FX 5500 delivers 33.6GB/sec memory bandwidth and a 256-bit memory interface with 1GB ultra-fast GDDR2 memory. Featuring two dual-link DVI connectors, NVIDIA Quadro FX 5500 offers one of the industry's best image quality at resolutions up to 3840 x 2400.

The ultra-high end NVIDIA Quadro FX 5500 graphics card offers ultimate workstation feature-set and performance. Full 128-bit precision graphics pipeline enables sophisticated mathematical computations to maintain high accuracy, resulting in unmatched visual quality. Full IEEE 32-bit floating-point precision per color component (RGBA) delivers millions of color variations with the broadest dynamic range. Performance and features include 1 GB GDDR2 memory, Rotated-Grid Full-Scene Antialiasing (FSAA) and performance optimized OpenGL and DirectX drivers. Features also include support of Scalable Link Interface (SLI) Technology which enables two FX 5500s to be linked together resulting in true graphics scaling to optimum levels of performance and quality. NVIDIA PureVideo technology is the combination of high-definition video processors and software that delivers unprecedented picture clarity, smooth video, accurate color, and precise image scaling for SD and HD video content. Features include, high-quality scaling, spatial temporal de-interlacing, inverse telecine, and high quality HD video playback from DVD. Greater than 2.4GB/sec pixel read-back performance delivers massive host throughput, more than 10x the performance of previous generation graphics systems. The Quadro FX 5500 Graphics Controller is a perfect solution for the ultra-high end CAD and professional DCC user communities requiring breakthrough application performance.

The NVIDIA Quadro FX 5500 graphics controller can be used alone or combined with the NVIDIA Quadro G-Sync card for advanced multi-system visualization and multi-device film and video environments.

The NVIDIA Quadro G-Sync is an option card that delivers Frame lock/Genlock functionality to unprecedented levels of industrial realism, visualization and collaborative capabilities. Frame lock allows the display channels from multiple workstations to be synchronized, thus creating one large "virtual display" that can be driven by a multi-system cluster for performance scalability, while Genlock allows the graphics output to be synchronized to an external source, typically for film and broadcast video applications. The NVIDIA Quadro G-Sync requires the installation of an NVIDIA Quadro FX 5500 graphics controller and an available expansion slot.

### Overview

#### Key Benefits of the NVIDIA Quadro FX 5500

- 1 GB of GDDR2 graphics memory
- NVIDIA PureVideo Technology
- Next Generation Vertex and Pixel Programmability
- 2.4 GB/s pixel read-back performance
- Two dual-link DVI-I outputs
- SLI support
- Full support for Vertex and Shader Model 3.0
- Infinite length vertex and pixel programmability and dynamic flow control
- 12-bit subpixel precision
- Rotated-Grid Full-Scene antialiasing
- OpenGL quad-buffered stereo
- Advanced high-level shading language support for both OpenGL and DirectX
- Optimized and certified for OpenGL 2.0 and DirectX. 9.0c
- Multi-display productivity

#### Key Benefits of the NVIDIA Quadro G-Sync

- 2 RJ-45 connectors for Framelock synchronization of multiple systems in a cluster environment
- Genlock with a house provided sync signal (1 BNC connector)
- One G-Sync card will support up to two FX 5500 cards installed in the same system
- Two Internal ribbon cables included for connection to FX 5500
- G-Sync card can be installed in any available slot (PCI or PCI Express).

#### Performance

The Quadro FX 5500 is optimized for Ultra High End 3D imaging, including CAD, DCC, medical, scientific, and oil & gas configurations. Add the NVIDIA Quadro G-Sync for advanced multi-system visualization and multi-device film and video environments.

#### Compatibility

The Quadro FX 5500 is supported on the following HP Personal Workstations: xw8400, xw9400.

The NVIDIA Quadro G-Sync is supported on HP Personal Workstations with a NVIDIA Quadro FX 5500 Graphics Board installed.

#### Service and Support

The NVIDIA Quadro FX 5500 and G-Sync cards have 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

<b>Graphics Controller</b>	NVIDIA Quadro FX 5500 Workstation GPU
<b>Bus Type</b>	PCI Express x16
<b>RAMDAC</b>	Dual 400 MHz integrated
<b>Memory</b>	1 GB GDDR2 SDRAM unified graphics memory
<b>Connectors</b>	2 Dual-link DVI-I, 1 Stereo
<b>Multi-monitor Support</b>	Yes
<b>NVIDIA Quadro FX 4500 Architecture</b>	256-bit memory interface 33.6 GB/sec. memory bandwidth Full 128-bit floating point color precision 12-bit subpixel precision Unlimited fragment instruction Unlimited vertex instruction 3D volumetric textures support Single-system powerwall 12 pixels per clock rendering engine Hardware accelerated antialiased points & lines Hardware OpenGL® overlay planes Hardware accelerated two-sided lighting Hardware accelerated clipping planes 3rd-generation occlusion culling OpenGL quad-buffered stereo Hardware-Accelerated Line Strippling 16 textures per pixel in fragment programs Window ID clipping functionality
<b>Shading Architecture</b>	Fully programmable GPU (OpenGL2.0/DirectX 9.0c 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
<b>High-level Shader Languages</b>	Optimized compiler for Cg and Microsoft® HLSL OpenGL 2.0 and DirectX 9.0c support Open source compiler
<b>High-resolution Antialiasing</b>	12-bit subpixel sampling precision enhances AA quality Rotated Grid Full Scene Antialiasing (RG FSAA) 16x FSAA dramatically reduces visual aliasing artifacts or "jaggies" at resolution up to 1920x1200
<b>Display Resolution Support</b>	2 Dual-Link DVI-I output-drives digital displays at resolutions up to 3840 x 2400 @ 24Hz Internal 400 MHz DACs - Two analog displays up to 2048x1536 @ 75 Hz each
<b>nView Architecture</b>	Advanced multi-display desktop & application management seamlessly integrated into Microsoft® Windows®.
<b>Supported Graphics APIs</b>	OpenGL 2.0 DirectX 9.0c
<b>3D Primitive Perf</b>	Geometry (Triangles per Second) 225 Million Fill Rate (Texels per Second) 15.6 Billion
<b>Available Graphics Drivers</b>	Microsoft Windows XP Professional, Windows XP Professional x64 Edition, Linux® - Full Open GL implementation, complete with NVIDIA and ARB extensions. HP qualified drivers may be preloaded or available from the HP support web site: <a href="http://welcome.hp.com/country/us/eng/software_drivers.html">http://welcome.hp.com/country/us/eng/software_drivers.html</a>

## *Technical Specifications*

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