NVIDIA QUADRO FX 550

The Definition of Performance
The Standard for Quality

NVIDIA Quadro® FX 550 graphics board features uncompromised performance and programmability at an entry-level price for professional CAD, DCC, and visualization applications.

NVIDIA Quadro FX 550 entry-level graphics are designed to deliver cost-effective solutions without compromising quality, precision, performance, and programmability for professional 3D environments. Advanced features including 128-bit floating point graphics pipeline, 12-bit subpixel precision, and fast GDDR3 memory, NVIDIA Quadro FX 550 is the perfect choice for entry workstations. Implementation of Rotated Grid FSAA introduces far greater sophistication in the multi-sampling pattern, significantly increasing color accuracy and visual quality of edges and lines without compromising performance.

The NVIDIA Quadro FX family delivers on the promise of the industry's fastest PCI Express® workstation graphics solution. Featuring NVIDIA Quadro FX 5500, FX 4500 X2, and FX 4500 at the ultra-high-end, NVIDIA Quadro FX 3500 and FX 3450 at the high-end, NVIDIA Quadro FX 1500 and FX 1400 at the mid-range, and NVIDIA Quadro FX 560, FX 550, and FX 350 at the entry-level, NVIDIA Quadro FX delivers unmatched workstation performance and quality. CAD and DCC applications acquire a new level of interactivity by enabling unprecedented capabilities in programmability and precision. For the first time, styling and production rendering become integral functions of the design workflow, shortening the production process and enabling faster time to market.

PRODUCT SPECIFICATIONS

Form Factor	ATX, 4.376" x 7.0"
Frame Buffer Memory	128MB GDDR3
Memory Interface	128-bit
Memory Bandwidth	12.8GB/sec.
Max Power Consumption	25W
Graphics Bus	PCI Express x16
Display Connectors	DVI-I, DVI-I
Auxiliary Power Connectors	Not Required
Number of Slots	1
Thermal Solution	Active Fansink

NVIDIA Quadro FX 550 Key Features and Benefits

Highest Workstation Application Performance	Next-generation architecture enables over 2x improvement in geometry and fill rates with the industry's highest performance for professional CAD, DCC, and visualization applications.
Unmatched Color Precision	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.
Next-Generation Vertex and Pixel Programmability	NVIDIA Quadro FX GPUs introduce infinite length vertex programs and dynamic flow control, removing the previous limits on complexity and structure of shader programs. With full support for Vertex and Shader Model 3.0, NVIDIA Quadro FX GPUs deliver sophisticated effects never before imagined for real-time graphics systems.
Unparalleled Subpixel Precision	12-bit subpixel precision delivers high geometric accuracy, eliminating spreckles, cracks, and other rasterization anomalies.
Hardware-Accelerated Pixel Read-Back	Greater than 2.4GB/sec., pixel read-back performance delivers massive host throughput, more that 10x the performance of previous generation graphics systems.
Rotated Grid FSAA (FSAA)	RG FSAA sampling algorithm introduces far greater sophistication in the sampling pattern, significantly increasing color accuracy and visual quality for edges and lines, reducing "jaggies" while maintaining performance.
High Precision Dynamic Range Imaging (HPDR) technology	Sets new standards for image clarity and quality through floating point capabilities in shading, filtering, texturing, and blending. Enables unprecedented rendered image quality for visual effects processing.
NVIDIA PureVideo Technology	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.

PRODUCT SPECIFICATIONS

Supported Operating Systems

- Microsoft® Windows® XP (64-bit and 32-bit)
- Microsoft Windows 2000 (32-bit)
- Linux® - Full OpenGL® implementation, complete with NVIDIA and ARB extensions (64-bit and 32-bit)
- AMD64, Intel EM64T

NVIDIA Quadro FX 550 Architecture

- 128-bit color precision
- Unlimited fragment instruction
- Unlimited vertex instruction
- 3D volumetric texture support
- Single-system powerwall
- 12 pixels per clock rendering engine
- Hardware accelerated antialiased points and lines
- Hardware OpenGL overlay planes
- Hardware accelerated two-sided lighting
- Hardware accelerated clipping planes
- 3rd-generation occlusion culling
- 16 textures per pixel in fragment programs
- Window ID Clipping Functionality
- Hardware Accelerated Line Stippling

Shading Architecture

- 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

High Level Shader Languages

- Optimized compiler for Cg and Microsoft® HLSL
- OpenGL 2.0 and DirectX 9.0c support
- Open source compiler

High-Resolution Antialiasing

- 12-bit subpixel sampling precision enhances AA quality
- Rotated Grid Full-Scene Antialiasing (RG FSAA)

Display Resolution Support

- 2 DVI-I outputs drive digital displays at resolutions up to 1900 x1200 @ 60Hz with single link
- Internal 400 MHz DACs-Two analog displays up to 2048x1536 @ 75 Hz

NVIDIA nView Architecture

- Advanced multi-display desktop and application management seamlessly integrated into Microsoft Windows.

Where to buy NVIDIA Quadro

NVIDIA Quadro is available through major US OEMs, PNY Technologies (US and Europe), Leadtek (Asia-Pac), and ELSA Japan. Please visit **www.nvidia.com/page/workstation.html** for information.

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