NVIDIA Quadro FX 4700 X2

Ultimate Visualization Solution

NVIDIA® Quadro® FX 4700 X2 dual GPU is the ultimate visualization solution for professional applications.

Quadro FX 4700 X2 graphics solution is architected with two Quadro FX 4700 graphics processing units (GPUs) and delivers the industry's most advanced graphics in a dual slot solution. Featuring a 2 GB frame buffer, the Quadro FX 4700 X2 supports NVIDIA SLI® technology on any platform and quad dual-link DVI drives maximum visual real-estate. Certified for CAD, DCC, and visualization applications, Quadro FX 4700 X2 is the ultimate visualization solution.

The entire NVIDIA Quadro family takes CAD, DCC, and 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. From Quadro FX 5600 and 4700 X2 at the ultra-high-end, and Quadro FX 4600 and 3700 at the high-end, through Quadro FX 1700 at the mid-range, to Quadro FX 570 and 370 at the entry-level, Quadro delivers the productivity you need at every price.

Product Specifications

Form Factor	ATX, 4.36"(H) x 10.5" (L)
Frame Buffer Memory	1GB GDDR3 per GPU
Memory Interface	256-bit
Memory Bandwidth	51.2 GBps
Max Power Consumption	226W
Graphics Bus	PCI Express x16
Display Connectors	4 X DVI-I, STEREO
Dual Link DVI	Yes (4)
Auxiliary Power Connectors	Yes (2)
Number of Slots	2
Thermal Solution	Active Fansink
Genlock/Framelock	Yes

NVIDIA Quadro | **The Definition of Performance. The Standard for Quality.**

Features and Benefits

Quad Dual-Link Digital Display Connectors	Quad 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.
2 GB GDDR3 (1 GB per GPU)	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).
High Bandwidth GPU Memory	GPU memory acts as high performance level two cache enabling blistering data transfer to and from the GPU for operations such as, rendering, shading, and texturing, and general purpose computation. Supports the world's fastest graphics memory with lower power consumption than previous generation systems.
Full-Scene Antialiasing (FSAA)	Up to 64x FSAA dramatically reduces visual aliasing artifacts or "jaggies," resulting in highly realistic scenes.
Frame Synchronization	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. *Available only with NVIDIA Quadro G-sync option card*
External Synchronization	Also known as "house sync," external synchronization allows the graphics output to synchronized to an external source, typically for film and broadcast video applications. *Available only with NVIDIA Quadro G-sync option card*
Next-Generation Vertex and Pixel Programmability Shader Model 4.0	Reference standard for Shader Model 4.0 enabling a higher level of performance and realistic effects for OpenGL and next generation DirectX 10 industry-leading professional applications.

Product Specifications

SUPPORTED PLATFORMS

- Microsoft Windows Vista (64-bit and 32-bit)
- 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)
- Solaris®
- AMD64, Intel EM64T
- PCI Express 2.0 Support

NVIDIA QUADRO FX 4700 X2 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 & 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

- 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

HIGH LEVEL SHADER LANGUAGES

- Optimized compiler for Cg and Microsoft HLSL
- OpenGL 2.1 and DirectX 10 support
- Open source compiler

HIGH-RESOLUTION ANTIALIASING

- Rotated Grid Full-Scene Antialiasing (RG FSAA)
- Up to 64x FSAA dramatically reduces visual aliasing artifacts or "jaggies" at resolution up to 1920 x 1200

DISPLAY RESOLUTION SUPPORT

- Quad-link Digital Display Connectors
- Quad 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

nVIEW ARCHITECTURE[1]

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

[1] NVIDIA nView will be available for Windows Vista Spring 2008

To learn more about NVIDIA Quadro, go to **www.nvidia.com/quadro**