NVIDIA® QUADRO® FX 3800
THE UNRIVALED PROFESSIONAL GRAPHICS SOLUTION

Industries from automotive to aerospace have seen product development cycles reduced as processes have shifted from physical prototypes to digital prototypes. With shorter design cycles, companies can reduce costs and time to market.

In order to capitalize on this trend, professionals demand a graphics solution that will deliver optimized performance and features, within budget requirements, while producing maximum returns. The NVIDIA® Quadro® FX 3800 professional graphics solutions exceeds these demands.

The Quadro FX 3800 is the unrivaled professional graphics solution among Fortune 1,000 companies. Featuring a 192-core NVIDIA® CUDA™ parallel computing architecture, 30-bit color fidelity, and automatic configuration of application settings, Quadro FX 3800 delivers a power efficient, full featured, ultimate performance experience. Plus, design and video professionals can take advantage of NVIDIA® SLI® Multi OS technology to run multiple Windows or Linux- based applications with GPU acceleration from a single system - eliminating the need for dual systems.

The entire Quadro family takes the leading professional applications to a new level of interactivity by enabling unprecedented capabilities in programmability and precision.

The industry's leading workstation applications leverage this architecture to enable hardware-accelerated features, performance, and quality not found in any other professional graphics solutions. From Quadro FX 5800 at the ultra-high-end, and Quadro FX 4800 and 3800 at the high-end, through Quadro FX 1800 at the mid-range, to Quadro FX 580, 380, and 370 Low Profile at the entry-level, Quadro delivers the productivity you need at every price point and form factor.

PRODUCT SPECIFICATIONS

FORM FACTOR
> 4.376" H x 9" L

FRAME BUFFER MEMORY
> 1 GB GDDR3

MEMORY INTERFACE
> 256-bit

MEMORY BANDWIDTH
> 51.2 GBps

MAX POWER CONSUMPTION
> 108W

GRAPHICS BUS
> PCI Express x16 Gen 2

DISPLAY CONNECTORS
> Dual DisplayPort, DVI-I (dual link), and Stereo*

DUAL LINK DVI
> Yes (1)

NUMBER OF SLOTS
> 1

THERMAL SOLUTION
> Variable speed fan

* Optional

Image Courtesy of: AutoDesk, WTVF station and WSI Corporation, and Rob Wolkers Product.

QUADRO FX 3800 | DATASHEET | MAR09 | FINAL

NVIDIA® QUADRO® FX 3800

Features	Benefits
NVIDIA Unified GPU Architecture	Industry's first unified architecture designed to dynamically allocate compute, geometry, shading and pixel processing power to deliver optimized GPU performance.
NVIDIA CUDA Architecture	NVIDIA® CUDA™ is a revolutionary parallel computing architecture for NVIDIA Quadro GPUs enabling breakthrough performance in areas such as such as interactive ray tracing, finite element analysis, and computational fluid dynamics.
30-Bit Color Fidelity	30-Bit color fidelity (10 bits per color) enables billions rather than millions of color variations for rich, vivid image quality with the broadest dynamic range.
Fully Virtualized Workstation	NVIDIA SLI Multi OS enables multiple Windows or Linux workstation environments from a single system featuring dual Quadro FX 3800 graphics boards, with each operating system directly assigned to a Quadro FX 3800 GPU. Professional applications take full advantage of Quadro GPU accelerated features on both operating systems.
PCI Express 2.0 Compliant	Doubles the data transfer rate up to 5 GT/sec per lane for an aggregate bandwidth of 16 GB/sec bi-directional (8 GB/sec in each direction).
Quad Buffered Stereo	Offers enhanced visual experience for professional applications that demand stereo viewing capability.
Wide Range of Display Support Options	Provides customers with a wide range of display options ranging from DisplayPort, DVI dual link and Stereo to HDMI and VGA support through adaptors. DisplayPort and DVI connectors support ultra-high-resolution panels (up to 2560 x 1600 at 60Hz), which results in amazing image quality producing detailed photorealistic images.
Uncompressed 8-, 10-, or 12-Bit SDI Output*	Enables on-air broadcast, video production and post production professionals to composite and output live video and graphics to true, uncompressed 12-bit SDI in 2K, SD, or HD resolutions and allows direct connection to a broadcast monitor, switcher, tape deck, or SDI projector.

*Need NVIDIA Quadro SDI Output option card.

TECHNICAL 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 3800 ARCHITECTURE

> 128-bit color precision
> 10-bit per color display pipeline
> Unlimited fragment instruction
> Unlimited vertex instruction
> 3D volumetric texture support
> Hardware-accelerated, antialiased points & lines
> Hardware OpenGL overlay planes

> Hardware-accelerated, two-sided lighting
> Hardware-accelerated clipping planes
> 3rd-generation occlusion culling
> Window ID clipping functionality
> Hardware-accelerated line stippling

SHADING ARCHITECTURE

> Full Shader Model 4.0 (OpenGL 3.0/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 3.0 and DirectX 10 support
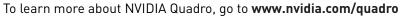> Open source compiler

HIGH-RESOLUTION ANTIALIASING

> Rotated Grid Full-Scene Antialiasing (RG FSAA)
> 32x FSAA dramatically reduces visual aliasing artifacts or "jaggies" at resolution up to 1920 x 1200

DISPLAY RESOLUTION SUPPORT

> Dual DisplayPort support—ultra-high resolution panels (up to 2560 x 1600 @60Hz)
> Single dual-link DVI-I output drives digital displays at resolutions up to 2560 x 1600 @ 60Hz
> Internal 400 MHz DACs—One analog display up to 2048 x 1536 @ 85Hz

NVIEW ARCHITECTURE

> The nView Display Management Software, seamlessly integrated into Microsoft Windows, delivers maximum flexibility and productivity for single large display or multi-display setups

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

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