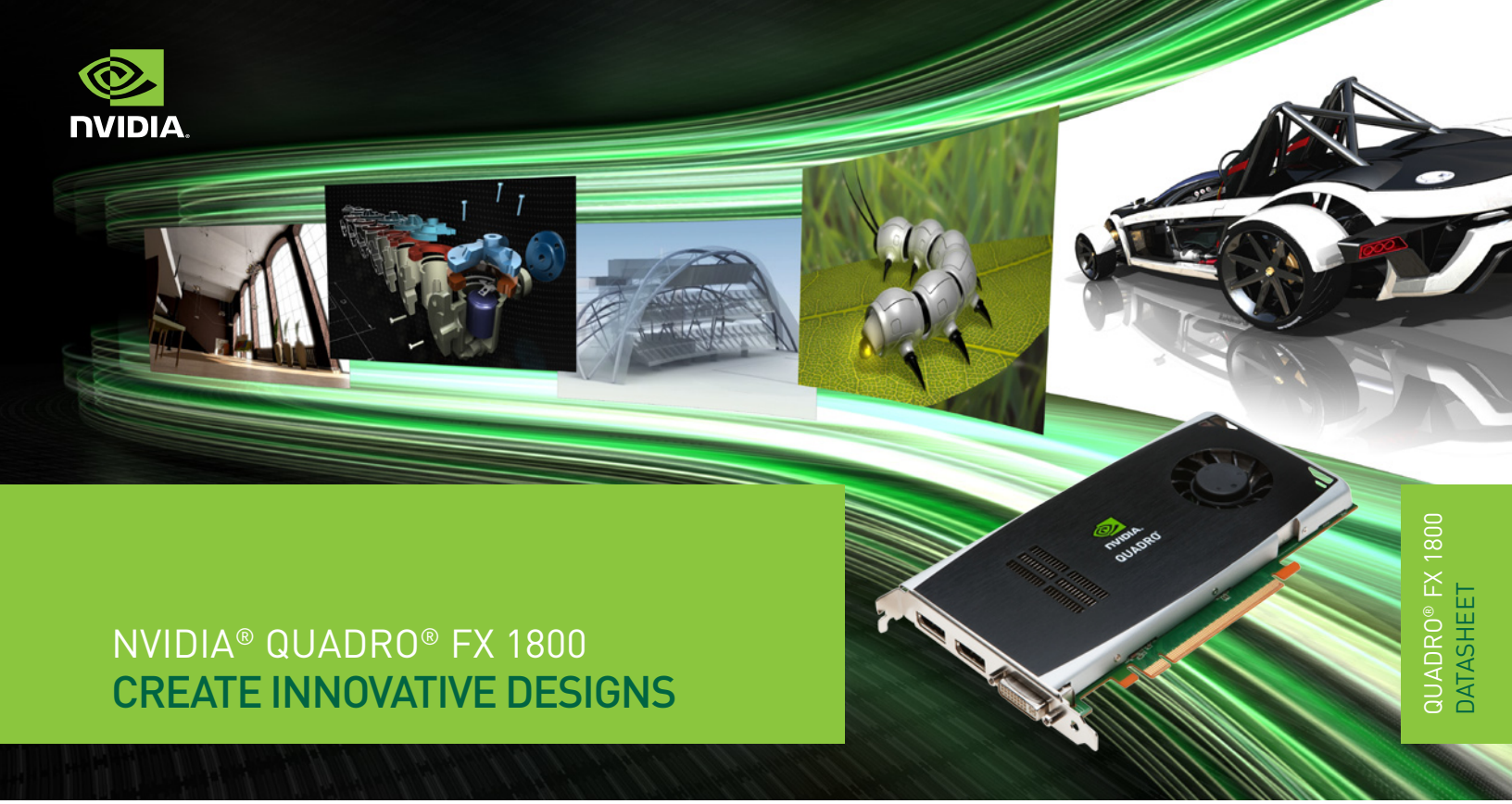

NVIDIA® QUADRO® FX 1800
CREATE INNOVATIVE DESIGNS

QUADRO® FX 1800 DATASHEET

Professionals from product designers to digital artists, strive for faster time to market for quicker revenue recognition. One way professionals can shorten their design cycles is to use ultra-realistic digital prototypes for concept approvals in place of physical prototypes.

In order to capitalize on this trend, professionals require a graphics solution that will deliver the best performance and quality, within their budget requirements, while producing maximum returns. The NVIDIA® Quadro® FX 1800 professional graphics solutions exceeds these demands.

The Quadro FX 1800 professional graphics solution is architected for leading-edge manufacturing and design companies providing them a complete toolset to create innovative designs. The next generation solution within the most requested mid-range professional graphics family, Quadro FX 1800 provides a balanced price and performance combination. Featuring NVIDIA® CUDA™ parallel computing architecture, 30-bit color fidelity, and automatic configuration of application settings, the Quadro FX 1800 sets the standard for power efficiency while delivering a rich user experience.

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 7.8" L Single Slot

FRAME BUFFER MEMORY
> 768 MB GDDR3

MEMORY INTERFACE
> 192-bit

MEMORY BANDWIDTH
> 38.4 GBps

MAX POWER CONSUMPTION
> 59W

GRAPHICS BUS
> PCI Express Gen 2 x16

DISPLAY CONNECTORS
> 2 DisplayPorts, 1 Dual Link DVI

DISPLAYPORT
> Yes (2)

DUAL LINK DVI
> Yes (1)

NUMBER OF SLOTS
> 1

THERMAL SOLUTION
> Variable speed active fansink

Image Courtesy of: NVIDIA Corporation, AutoDesk, Xavier Alana, and Rob Wolkers Product.

NVIDIA® QUADRO® FX 1800

Features	Benefits
768 MB GDDR3 GPU Memory with Ultra-Fast Memory Bandwidth	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).
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.
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 Quadro professional GPUs enabling breakthrough performance in areas such as video encoding, image processing, and accurate physics.
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).
Dual DisplayPort Digital Display Connectors	Dual DisplayPort connectors support ultra-high-resolution panels (up to 2560 x 1600), which results in amazing image quality producing detailed photorealistic images.

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 1800 ARCHITECTURE

- 128-bit color precision
- 10-bit per color display pipeline
- Unlimited fragment instruction
- Unlimited vertex instruction
- 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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