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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form Factor</td>
<td>4.376” H x 7.8” L Single Slot</td>
</tr>
<tr>
<td>Frame Buffer Memory</td>
<td>768 MB GDDR3</td>
</tr>
<tr>
<td>Memory Interface</td>
<td>192-bit</td>
</tr>
<tr>
<td>Memory Bandwidth</td>
<td>38.4 Gbps</td>
</tr>
<tr>
<td>Max Power Consumption</td>
<td>59W</td>
</tr>
<tr>
<td>Graphics Bus</td>
<td>PCI Express Gen 2 x16</td>
</tr>
<tr>
<td>Display Connectors</td>
<td>2 DisplayPorts, 1 Dual Link DVI</td>
</tr>
<tr>
<td>DisplayPort</td>
<td>Yes (2)</td>
</tr>
<tr>
<td>Dual Link DVI</td>
<td>Yes (1)</td>
</tr>
<tr>
<td>Number of Slots</td>
<td>1</td>
</tr>
<tr>
<td>Thermal Solution</td>
<td>Variable speed active fansink</td>
</tr>
</tbody>
</table>

### NVIDIA® QUADRO® FX 1800

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>768 MB GDDR3 GPU Memory with Ultra-Fast Memory Bandwidth</td>
<td>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).</td>
</tr>
<tr>
<td>30-Bit Color Fidelity</td>
<td>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.</td>
</tr>
<tr>
<td>NVIDIA Unified GPU Architecture</td>
<td>Industry’s first unified architecture designed to dynamically allocate compute, geometry, shading and pixel processing power to deliver optimized GPU performance.</td>
</tr>
<tr>
<td>NVIDIA CUDA Architecture</td>
<td>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.</td>
</tr>
<tr>
<td>PCI Express 2.0 Compliant</td>
<td>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).</td>
</tr>
<tr>
<td>Dual DisplayPort Digital Display Connectors</td>
<td>Dual DisplayPort connectors support ultra-high-resolution panels (up to 2560 x 1600), which results in amazing image quality producing detailed photorealistic images.</td>
</tr>
</tbody>
</table>

### 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

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To learn more about NVIDIA Quadro, go to [www.nvidia.com/quadro](http://www.nvidia.com/quadro)

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