

## Features and Benefits – NVIDIA® GeForce® 7800 GS

### Next-generation superscalar GPU architecture

Delivers up to 2x the shading power of previous generation products taking gaming performance to extreme levels.

### Full Microsoft® DirectX® 9.0 Shader Model 3.0 Support

The standard for today's PCs and next-generation consoles enables stunning and complex effects for cinematic realism. NVIDIA GPUs offer the most complete implementation of the Shader Model 3.0 feature set—including vertex texture fetch (VTF)—to ensure top-notch compatibility and performance for all DirectX 9 applications.

### True High Dynamic-Range (HDR) Rendering Support

The ultimate lighting effects bring environments to life for a truly immersive, ultra-realistic experience. Based on the OpenEXR technology from Industrial Light & Magic (<http://www.openexr.com/>), NVIDIA's 64-bit texture implementation delivers state-of-the-art high dynamic-range (HDR) visual effects through floating point capabilities in shading, filtering, texturing, and blending.

### NVIDIA® CineFX® 4.0 Engine

Delivers advanced visual effects at unimaginable speeds. Full support for Microsoft® DirectX® 9.0 Shader Model 3.0 enables stunning and complex special effects. Next-generation shader architecture with new texture unit design streamlines texture processing for faster and smoother gameplay.

### NVIDIA® Intellisample™ 4.0 technology

The industry's fastest antialiasing delivers ultra-realistic visuals, with no jagged edges, at lightning-fast speeds. Visual quality is taken to new heights through a new rotated grid sampling pattern, advanced 128 Tap sample coverage, 16x anisotropic filtering, and support for transparent supersampling and multisampling.

### 128-bit studio-precision computation

128-bit studio-precision computation through the entire pipeline prevents image defects due to low precision and ensures the best image quality for even the most demanding applications.

### NVIDIA® PureVideo™ Technology

The combination of high-definition video processors and video decode software that delivers unprecedented picture clarity, smooth video, accurate color, and precise image scaling for all video content to turn your PC into a high-end home theater. *Feature requires supported video software. Features may vary by product.*

### Adaptable Programmable Video Processor

NVIDIA PureVideo is a programmable technology that can adapt to new video encoding formats as they are developed to provide a future-proof video solution. *Feature requires supported video software. Features may vary by product.*

### High-Definition MPEG-2 and WMV Hardware Acceleration

Smoothly playback all MPEG-2 and WMV video—including WMV-HD—with minimal CPU usage so the PC is free to do other work. *Feature requires supported video software. Features may vary by product.*

**Spatial-Temporal De-Interlacing**

Smooths video and DVD playback on progressive displays to deliver a crisp, clear picture that rivals high-end home theater systems. *Feature requires supported video software. Features may vary by product.*

**High-Quality Scaling**

Allows for upscaling of a low-resolution video to HDTV resolutions (up to 1080), while maintaining a clear, clean image. Also allows for downscaling videos, including high-definition, without experiencing any annoying flicker, while preserving image detail.

**Video Color Correction**

Corrects differences in color characteristics of RGB monitors and TV monitors through NVIDIA PureVideo's ProcAmp Color Controls settings, such as Brightness and Contrast. The display gamma correction ensures videos are not too dark, overly bright, or washed out regardless of the video format or display. *Feature requires supported video software. Features may vary by product.*

**Integrated TV Output**

Provides world-class TV-out functionality (Composite/S-Video/Component) up to 1080i resolution.

**NVIDIA® ForceWare® Unified Driver Architecture (UDA)**

Delivers a proven record of compatibility, reliability, and stability with the widest range of games and applications. ForceWare ensures the best out-of-box experience for every user and delivers continuous performance and feature updates over the life of NVIDIA GeForce GPUs. Includes full support for PCI Express and AGP.

**AGP 8X**

Provides double the bandwidth of AGP 4X—2.1GB/sec. vs. 1.1GB/sec. AGP 8X enables more complex models and detailed textures, creating richer and more lifelike environments. Uninterrupted data flow allows for smoother video streaming and faster more seamless gameplay. *(AGP 8X/4X compliant)*

**NVIDIA® nView® Multi-Display Technology**

Advanced technology provides the ultimate in viewing flexibility and control for multiple monitors.

**NVIDIA® Digital Vibrance Control® 3.0 Technology**

Allows the user to adjust color controls digitally to compensate for the lighting conditions of their workspace, in order to achieve accurate, bright colors in all conditions.

**OpenGL® 2.0 Optimizations and Support**

Ensures top-notch compatibility and performance for all OpenGL applications.

**Dual 400MHz RAMDACs**

Blazing-fast RAMDACs support dual QXGA displays with ultra-high, ergonomic refresh rates up to and including 2048x1536@85Hz. *May vary by model.*

**Dual DVI Support**

Able to drive the industry's largest and highest resolution flat-panel displays.