



Performance. Compatibility. Reliability.

CINEFX SHADING ARCHITECTURE

- Support for DX 9.0 pixel shader 2.0+
- Support for DX 9.0 vertex shader 2.0+
- Very long pixel programs up to 1024 instructions
- Very long vertex programs with up to 256 static instructions and up to 65536 instructions executed before termination
- Looping and subroutines with up to 256 loops per vertex program
- Subroutines in shader programs
- Dynamic flow control
- Conditional write masking
- Conditional execution
- Procedural shading
- Full instruction set for vertex and pixel programs
- Z-correct bump-mapping
- Hardware-accelerated shadow effects with shadow buffers
- Two-sided stencil
- Programmable matrix palette skinning
- Keyframe animation
- Custom lens effects: fish eye, wide angle, fresnel effects, water refraction

HIGH-PERFORMANCE, HIGH-PRECISION 3D RENDERING ENGINE

- Up to 8 pixels per clock rendering engine
- 128-bit, studio-quality floating point precision through the entire graphics pipeline
- Native support for 128-bit floating point, 64-bit floating point and 32-bit integer rendering modes
- Up to 16 textures per pass
- Support for sRGB texture format for gamma textures
- DirectX and S3TC texture compression

HIGH-PERFORMANCE 2D RENDERING ENGINE

- Optimized for 32-, 24-, 16-, 15- and 8-bpp modes
- True-color, 64x64 hardware cursor with alpha
- Multi-buffering (double, triple or quad) for smooth animation and video playback

INTELLISAMPLE TECHNOLOGY

- Blistering-fast antialiasing performance
- Adaptive texture filtering
- 4-partition DDR-II memory interface*
- Support for advanced loss-less compression algorithms for both color and z data**
- Fast Z-clear

ADVANCED DISPLAY PIPELINE WITH FULL NVVIEW CAPABILITIES

- Dual RAMDACs (up to 400 MHz) for display resolutions up to and including 2048x1536@85Hz
- Integrated NTSC/PAL TV encoder support resolutions up to 1024x768 without the need for panning with built-in Macrovision copy protection
- DVD and HDTV-ready MPEG-2 decoding up to 1920x1080i resolutions
- DVI support for compatibility with next-generation flat panel displays with resolutions up to and including 1600x1200

- NVIDIA NVRotate™ application for advanced viewing flexibility
- NVIDIA NVKeystone™ application for advanced display correction

DIGITAL VIBRANCE CONTROL (DVC) 3.0

- DVC color controls
- DVC image sharpening controls

ROCKET SCIENCE FOR A SYSTEM-LEVEL SOLUTION

- 0.13µ process technology for higher levels of integration and higher operating clock speeds**
- Copper vias and wiring**
- Advanced thermal monitoring and thermal management**
- World's fastest memory with speeds up to 1.0GHz DDR-II*
- AGP 8X including Fast Writes and sideband addressing
- Flip-chip BGA packaging*

OPERATING SYSTEMS

- Windows® XP
- Windows 2000
- Windows Me
- Windows NT® (all)
- Windows 98, Windows 95
- Linux compatible

API SUPPORT

- Complete DirectX support, including DirectX 9.0 and lower
- Full OpenGL 1.4 and lower support

COMPATIBILITY

- NVIDIA Unified Driver Architecture (UDA)
- Fully compliant professional OpenGL 1.4 API with NVIDIA extensions, on all Linux and Windows operating systems
- WHQL-certified for Windows XP, Windows Me, Windows 2000
- Complete Linux XFree86 drivers

*GeForce FX 5800 models only.

**GeForce FX 5800 and 5600 models only.



CINEMATIC COMPUTING FOR EVERY USER

The NVIDIA® GeForce™ FX family of graphics processing units (GPUs) takes your graphics experiences to a new level. Once again, NVIDIA has broken with convention by delivering a top-to-bottom family of GPUs that redefines the limits of 3D graphics technology. Powered by pure adrenaline and engineered for precision, the NVIDIA GeForce FX GPUs bring unprecedented 3D graphics performance to all PC users—from business and home users to extreme gamers. In addition, the revolutionary new NVIDIA CineFX™ engine introduces cinematic-quality special effects and studio-quality color to the PC for the first time. When combined with NVIDIA's rock-solid drivers, wide developer support, and unique software features, you have a family of GPUs that redefines the limits of graphics engineering, performance, compatibility, and visual quality at every price point.

FEATURE	GEFORCE FX 5800 MODELS	GEFORCE FX 5600 MODELS	GEFORCE FX 5200 MODELS
CineFX Engine	✓	✓	✓
Intellisample Technology	✓	✓	N/A
DirectX 9	✓	✓	✓
AGP	8X	8X	8X
UDA	✓	✓	✓
Process	0.13µ	0.13µ	0.15µ
Pixels/Clock	8	4	4
Memory	DDR-II	DDR	DDR
RAMDAC	400	400	350





The Dawn of Cinematic Computing

POWERED BY PURE ADRENALINE

With the NVIDIA GeForce FX GPUs powering your graphics experiences, you can run your applications and games at speeds and resolutions never before possible. Everything you need has been combined into this powerhouse graphics processor. With its impressive performance—up to 8 pixels per clock performance, expansive AGP 8X pipeline and innovative support for high-speed DDR-II*—the GeForce FX GPUs are proof of how powerful GPUs can be. These amazing GPUs also feature NVIDIA Intellisample™ technology**, Z-culling, anisotropic filtering and powerful antialiasing. These advances in compression and antialiasing techniques ensure realistic color and smooth edges at all resolutions without sacrificing performance. You will see the most fluid frame rates possible at unmatched speeds for a truly realistic visual experience.

ENGINEERED WITH A PASSION FOR PERFECTION

Quality and stability are hallmarks of NVIDIA graphics—which can only be achieved by incorporating the best engineering process and design techniques. The NVIDIA GeForce FX GPUs take advantage of the latest and most sophisticated 0.13 micron process technology by packing up to twice the transistors into the same space as the GeForce4 Ti GPU**. The NVIDIA GeForce FX GPUs were engineered with optimizations that enable spectacular content and take full advantage of a new generation of software

tools and APIs, including the new Cg high-level shading language, DirectX® 9.0, and OpenGL® 1.4. The resulting products enable game developers to design higher quality content faster than ever before. The commitment to engineering excellence has made the NVIDIA GeForce FX GPUs the development platforms of choice for next-generation, cinematic-quality games.

CINEMATIC EFFECTS BEYOND IMAGINATION

Powered by the CineFX engine, the NVIDIA GeForce FX GPUs shift PC special effects toward cinematic quality thanks to a new level of advanced shading techniques. The CineFX engine allows designers and creators to easily convert their artistic visions into visual content, achieving cinematic visual effects in real-time. The NVIDIA GeForce FX GPUs eliminate many programming barriers previously associated with pixel shaders by supporting long programs for the most elaborate effects, and conditional branching capabilities for better program flow. The result is more advanced effects that were once impossible to create in real time. In addition, the innovative graphics pipeline of the NVIDIA CineFX engine has the built-in capacity to deliver true studio-quality 128-bit color processing. By matching film-industry levels of precision processing, the NVIDIA GeForce FX GPUs enable 3D worlds and characters to come alive—making Hollywood dreams on the desktop a reality.



gaming nirvana

THE GOLD STANDARD FOR COMPATIBILITY AND SOFTWARE EXCELLENCE

The NVIDIA GeForce FX family of GPUs leverages the industry-renowned NVIDIA Unified Driver Architecture (UDA), ensuring simple software installations and upgrades while consistently delivering the compatibility and reliability that you expect from NVIDIA. Continual driver performance and feature upgrades ensure forward compatibility with yet to be released software applications and APIs for long-term stability. In addition to using the most solid driver architecture, the NVIDIA GeForce FX GPUs carry on the NVIDIA commitment to deliver the most complete software feature set. NVIDIA nView™ multi-display technology offers a comprehensive solution for multi-monitor support, increasing screen real estate for more efficient viewing and switching between multiple active windows. NVIDIA Digital Vibrance Control™ (DVC) technology provides increased levels of adjustment for richer colors and brighter, cleaner, and consistent images and text under any lighting conditions.



Delta Force®: Black Hawk Down™/NovaLogic

GAMING NIRVANA!

Power and realism, the two elements every gamer craves, are the heart and soul of the NVIDIA GeForce FX GPUs. Representing a watershed achievement in graphics history, NVIDIA's innovative engineering will inspire new levels of creativity from developers, and raise the quality of the visual experience for all users. The GeForce FX GPUs, powered by the CineFX engine, drive elaborate visual effects on par with Hollywood movies. For the first time, developers can give users exactly what they want—games and other interactive applications that look more like what they see in the film world. The GeForce FX GPUs also include rock-solid drivers—packed with all kinds of tweakable features to allow fine-tuning to gaming rigs for reaching maximum frame rates with minimum fuss. With all of these features, it is obvious why the GeForce FX GPUs are the choice of developers creating the hottest next-generation games, and the choice of PC gamers who want to play their favorite game—the way it's meant to be played.

*GeForce FX 5800 models only.

**GeForce FX 5800 and 5600 models only.



S.T.A.L.K.E.R. Oblivion Lost™/GSC Games



Command & Conquer Generals™/EA Games



Look for games displaying this logo for the best gaming experience.

software excellence



Yeah! The Movie

