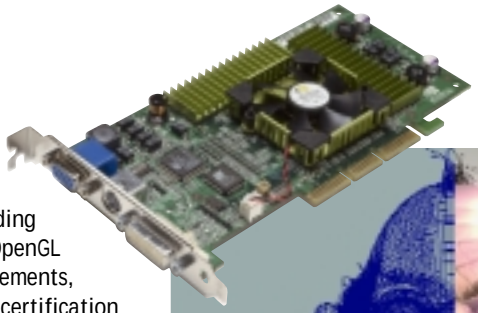
POWERING THE NEXT GENERATION OF DIGITAL CONTENT CREATION



The **NVIDIA® Quadro DCC™** is the premier workstation graphics solution for professional Digital Content Creation (DCC) applications. Quadro DCC is the only professional graphics solution that can take advantage of every new feature incorporated into leading DCC applications and is certified for Discreet's **3ds max™ 4**. Quadro DCC enables the latest 3D modeling, animation and rendering software so that developers can create a virtually infinite palette of special effects in real time, while reducing production time and providing artists with instant feedback on changes made to 3D models. Real-time Hollywood style effects are only made possible using the Quadro DCC, making it the ultimate productivity tool for authoring content for the PC, Microsoft® Xbox™ and other digital media platforms.

PROFESSIONAL QUALITY PERFORMANCE AND USABILITY

The NVIDIA Quadro DCC has been customized for the professional DCC production environment. Quadro DCC provides graphics professionals with the ultimate performance for Microsoft's DirectX® and OpenGL® applications due to the many optimizations exclusive to NVIDIA's Quadro™ workstation product line, and additional performance tuning for Intel®- and AMD®-based workstation platforms. The Quadro DCC's power is unleashed by NVIDIA's custom ELSA MAXtreme™ driver, featuring key enhancements vital to graphics professionals, including in-window rendering tools, OpenGL window management enhancements, OpenGL overlay support and certification support for an extensive list of professional applications.

NVIDIA's Lightspeed Memory Architecture™ for Quadro DCC delivers the rendering performance that DCC professionals require by combining advanced back-buffered memory management techniques and other workstation memory optimizations with the performance advantages of a crossbar memory architecture.

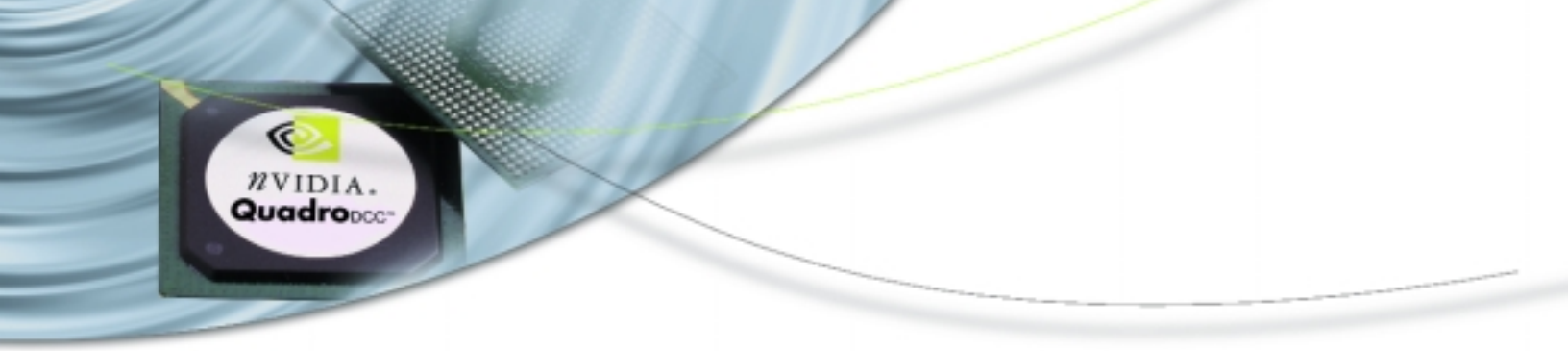
nFINITEFX FOR PROFESSIONAL DIGITAL CONTENT CREATION

Capitalizing on technology introduced in NVIDIA's revolutionary GeForce3 graphics architecture, the Quadro DCC enables stunning visual effects previously unavailable for real-time rendering. Effects such as matrix palette skinning, keyframe animation, morphing, fog effects, true reflective bump mapping, and per-pixel lighting and reflection have, until now, been impractically slow to render. Quadro DCC is the first professional-grade graphics product to accomplish real-time rendering of these effects on workstation desktops. Harnessing the power of NVIDIA's nfiniteFX™ engine, the Quadro DCC is the premier professional graphics solution with hardware support for programmable Vertex and Pixel Shaders. These two technology innovations allow digital artists to infuse animated characters with personality and emotion, instill photo-realism into materials and surfaces, and create dramatic scenes using textures and lighting techniques only made possible with Quadro DCC.

THE ULTIMATE PRODUCTIVITY TOOL FOR THE PC, XBOX AND OTHER PLATFORMS

No other professional graphics solution offers a comparable combination of features and performance. The NVIDIA Quadro DCC opens up a new world of real-time visual effects to professional digital content artists and game developers.

Combining the personality and ambiance enabled by the nFiniteFX engine, the power of the Lightspeed Memory Architecture for Quadro DCC, and the stability and performance of Quadro workstation features results in breathtaking real-time visual effects. In addition, the Quadro DCC's same core architecture is found in the GeForce3 GPU and Microsoft's Xbox GPU, making it the ideal productivity tool for creating visual effects, character animations and next-generation games for the PC, Xbox and other digital media platforms.



QUADRO DCC PROFESSIONAL FEATURES

- Optimizations for Intel and AMD workstation platforms
- Optimizations for multi-processor platforms
- Advanced memory management for OpenGL windows
- Customized application driver for 3ds max
- Certifiable for all major DCC applications (3ds max, Maya, SoftImage, Lightwave)

ARCHITECTURAL FEATURES

- nfiniteFX engine for full programmability
- Lightspeed Memory Architecture amplifies memory bandwidth for unmatched performance
- Surface engine for high-order surfaces and patches
- Programmable Vertex Shader
- Procedural deformations
- Programmable matrix palette skinning
- Keyframe animation interpolation
- Morphing
- Fog effects: radial, elevation, non-linear
- Lens effects: fish eye, wide angle, fresnel effects, water refraction
- Programmable Pixel Shader
- Phong-style lighting for per-pixel accuracy
- Dot3 bump mapping
- Environmental bump mapping (EMBM)
- Procedural textures
- Per-pixel reflections
- HRAA—high-resolution antialiasing featuring Quincunx AA mode
- Integrated hardware transform engine
- Integrated hardware lighting engine
- DirectX and S3TC® texture compression
- Dual cube environment mapping capability
- Reflection maps
- Accurate, real-time environment reflections
- Hardware accelerated real-time shadows
- True, reflective bump mapping
- Z-correct bump mapping
- Phong-style lighting effects on bump maps with reflections
- High-performance 2D rendering engine
- Optimized for 32-, 24-, 16-, 15- and 8-bpp modes
- True-color hardware cursor with alpha
- Multi-buffering (double, triple or quad) for smooth animation and video playback
- API support
- OpenGL 1.2 and lower
- DirectX 8.0 Version 1.1 and lower
- High-quality HDTV/DVD playback
- High-definition video processor (HDVP) for full-screen, full-frame video playback of HDTV and DVD content
- Independent hardware color controls for video overlay
- Hardware color-space conversion (YUV 4:2:2 and 4:2:0)
- Motion compensation
- 5-tap horizontal by 3-tap vertical filtering
- 8:1 up/down scaling
- Per-pixel color keying
- Multiple video windows supported for CSC and filtering
- DVD sub-picture alpha-blended compositing

PERFORMANCE

- 3.2 billion AA samples per second fill rate
- 7.36GB/sec. memory bandwidth
- Lightspeed Memory Architecture amplifies memory bandwidth for unmatched performance

COMPATIBILITY

- NVIDIA Unified Driver Architecture (UDA)
- Fully-compliant professional OpenGL 1.2 support for all Linux™ and Windows® operating systems
- WHQL-certified for Windows 2000, Windows NT® and Windows 98
- Complete Linux drivers

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