



FEROCIOUS GRAPHICS ON THE GO

FEATURING **AGP 8X**

The GeForce™ 4200 Go mobile graphics processing unit (GPU) delivers the features and performance found in the revolutionary NVIDIA GeForce4 Ti to the notebook PC. Features include the advanced NVIDIA nfiniteFX™ II engine, superior NVIDIA Accuview Antialiasing™ techniques, flexible NVIDIA nView™ multi-display technology, and support for AGP 8X. The GeForce4 4200 Go GPU combines the most intense 3D graphics performance, and the most realistic, life-like images ever experienced on a mobile platform.

THE NFINITEFX II ENGINE

For the first time, NVIDIA brings the nfiniteFX II engine to the notebook PC. The nfiniteFX II engine is a groundbreaking new technology enabling unprecedented levels of real-time character animation. Dual vertex shaders inject personality into characters and environments like never before, driving the complex type of geometries required for a character like the NVIDIA Wolfman. Advanced pixel shaders with new Z-correct bump mapping, enable surface detail never before seen in a notebook, delivering high quality graphics at real-time frame rates. Shading and 3D texture effects run faster than any other mobile solution on the market today. The nfiniteFX II engine gives developers the freedom to program a virtually infinite number of custom special effects to create true-to-life characters and environments.

LIGHTSPEED MEMORY ARCHITECTURE

The GeForce4 4200 Go GPU features NVIDIA Lightspeed Memory Architecture™ (LMA) II, an advanced 128-bit DDR memory interface, delivering double the effective memory bandwidth and improved performance up to three times more than previous-generation solutions. Some of the memory enhancements include 4:1 lossless Z-compression technology, which saves crucial memory bandwidth; and second generation Z-occlusion culling, a hardware technique that uses memory bandwidth more efficiently by not rendering pixels that are hidden behind other objects in the scene. The GeForce4 4200 Go GPU is the only mobile solution with quad cache—four individually dedicated and optimized memory caches allowing for almost instant pipeline access and efficient use of bandwidth.

ACCUVIEW ANTIALIASING ENGINE

The NVIDIA Accuview Antialiasing (AA) subsystem tackles jagged edges and delivers high-quality graphics at unbeatable levels of performance. Accuview AA provides a variety of multisampling modes, including 2X, 4X, Quincunx and a new 4XS mode that delivers improved subpixel coverage and better texture quality. 4XS mode delivers 50% more subpixel coverage than previous modes, resulting in a smoother antialiased edge.

AGP 8X SUPPORT

The GeForce4 4200 Go GPU is the first AGP 8X notebook solution available, taking mobile graphics performance to the next level. With double the bandwidth of AGP 4X, AGP 8X enables more complex models and detailed textures, creating richer and more life like environments. Further, uninterrupted data flow allows for smoother video streaming and faster, seamless game play.



NVIDIA SOFTWARE SUITE

NVIDIA offers the most advanced software solution set for the notebook PC.

NVIDIA nView™ allows end users to select any combination of multiple displays, including digital flat panels, analog CRTs, or TVs, and allows users to modify the display properties using an intuitive software interface. nView also provides increased efficiency on a single monitor by enabling multiple Windows desktops, quicker access to hidden windows with transparency and window rollups, and hotkeys for access to all nView functions.

PowerMizer™, integral to all NVIDIA mobile GPUs, is a combination of software and hardware technology that automatically adjusts to deliver great performance and long battery life.

NVDVD™ offers a complete set of advanced features and end-user controls allowing for the smoothest video playback and total control of the DVD and digital media experience.

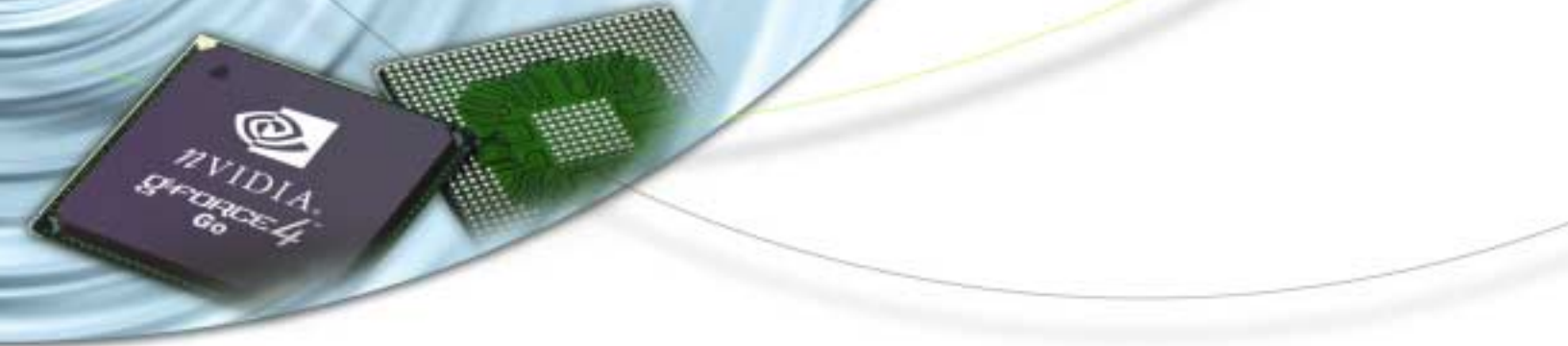
NVKeystone™ is a must have for every notebook attached to an external LCD projector. Real-time display correction technology with full hardware acceleration and intuitive controls, allowing users to adjust the frame display onto any surface with superb picture quality.

NVRotate™ technology allows users to pivot any display connected to an NVIDIA GPU 90, 180 or 270 degrees for maximum flexibility—without the performance penalties common to other solutions. The result is increased productivity as users can select the most optimal way to view their applications.

NVIDIA has once again raised the bar on performance and visual quality. The GeForce4 4200 Go GPU brings the power of the highly acclaimed GeForce4 Ti series of GPUs with the added mobile features and technologies NVIDIA builds into all of its notebook solutions.

The result is truly Ferocious Graphics on the Go!





FEATURES

- nfiniteFX engine for fully programmable vertex & pixel Shaders (VS2.0+ & PS2.0+)
- Vertex Shaders
 - Procedural deformations
 - Programmable matrix palette skinning
 - Key-frame animation interpolation
 - Morphing
 - Fog effects: Radial, elevation, non-linear
 - Lens effects: Fish-eye, wide-angle, Fresnel effects, water refraction
- Pixel Shaders
 - Phong-style lighting for per-pixel accuracy
 - Dot3 bump mapping
 - Environmental bump mapping (EMBM)
 - Procedural textures
 - Per-pixel reflections
- High Resolution antialiasing
 - Quincunx AA mode
 - High quality, full speed 2xAA and 4xAA modes
- 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 bump mapping on bump maps with reflections
- High-performance 2D rendering engine
 - Optimized for 32-, 24-, 16-, 15- and 8bpp modes
 - True color hardware cursor with alpha
 - Multi-buffering (double, triple or quad) for smooth animation and video playback
- 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
 - Motion compensation
 - 5-tap horizontal and 3-tap vertical filtering
 - 8:1 up/down scaling
 - Per-pixel color keying
 - Multiple video windows supported for CSC and filtering
 - DVD sub-picture compositing
- Lightspeed Memory Architecture (LMA) II for unmatched performance. This allows end users to run incredibly complex high resolutions at astonishingly fast frame rates.
 - Up to 128MB frame buffer
 - DDR rates up to 250MHz
 - 128bit memory interface
 - 8 GBps memory bandwidth
- AGP 8X, with side-band signaling & Fast Writes
- nView display technology is a combination of hardware and software to deliver the maximum flexibility for multi-display options, and provides unprecedented end-user control over where and how applications and their windows appear.
 - Dual independent display controllers:
 - Simultaneous display on any two different devices from LCD, TV, CRT, DVI
- Separate color, brightness, gamma and hue control for every output
- Separate gamma control for desktop & video-overlay
- Digital Vibrance Control
- Advanced windows & application management
- Integrated 400 MHz Palette-DAC supporting analog VGA monitor resolutions up to 2048x1536 @ 85Hz
- NVIDIA PowerMizer technology:
 - Dynamic clock scaling to run at the lowest power whenever possible
 - Dynamic clock gating to turn off subsystem components not in use
 - Dynamic voltage scaling from an industry low 1.05V in Windows idle mode to 1.25V for low voltage, industry high performance.
 - AC Detect automatically delivers high performance when the notebook is plugged in and power-optimized performance when running on battery.
- NVIDIA Unified Driver Architecture (UDA) delivers the best performance and guarantees compatibility with all current and future 3D applications.
 - Complete Microsoft® Direct®X 8x, 7.0, 6.0, and 5.0 support
 - WHQL-certified Windows® XP & Windows 2000 drivers
 - Full legacy support for Windows NT®, Windows Me, Windows 98, and Windows 95
 - Fully compliant support for OpenGL® 1.3 for all Windows operating systems and Linux

PERFORMANCE

SPECIFICATIONS/PERFORMANCE	GEFORCE4 4200 GO
FILL RATE (AA SAMPLE/SEC.)	3.2 BILLION
VERTICES/SEC.	90 MILLION
MEMORY BANDWIDTH	6.46GB/SEC.
MAX MEMORY	128MB

