



## THE FIRST MOBILE GPU

### PRODUCT DESCRIPTION

At last, notebooks can have the graphics computing power of their desktop counterparts. With the NVIDIA® GeForce2 Go™ family, the world's first mobile graphics processing units (GPU), you now have the power to create, present, and entertain anytime, anyplace. Based on NVIDIA's GeForce2™ line of desktop GPUs, the GeForce2 GO family enables applications previously only available in desktop computers. Now, your ability to impress audiences and clients with multimedia presentations on your notebook is limited only by your imagination—not by your machine.

GeForce2 Go users can take advantage of its transform and lighting hardware for smoother graphics, the NVIDIA Shading Rasterizer™ (NSR) for more realistic images, Digital Vibrance Control™ (DVC) for improved display options, and other features that make 3D and 2D graphics look and perform better than on any other mobile graphics processor.



For the user desiring a fully capable but smaller, lighter notebook, the GeForce2 Go 100 and GO 200 GPUs are the ideal solution. Packaged in an extremely small 23X23 mm BGA package, they meet the layout requirements of thin and light notebook



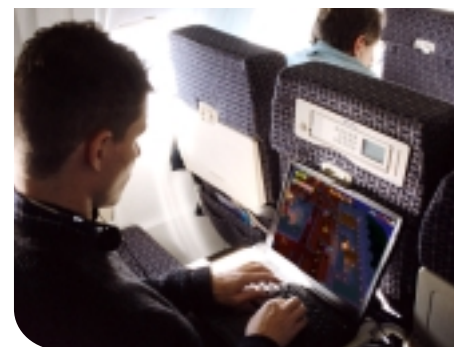
designs. GeForce2 Go 200 provides all the performance of the original GeForce2 Go while improving the design flexibility and space efficiency. Designed with the mainstream segment in mind, the GeForce2 Go 100 fits in the same design and is targeted for the most cost effective graphics configurations.

NVIDIA's TwinView™ feature provides the flexibility to connect a second display to your notebook and use it to double your Microsoft® Windows® desktop space, mirror your presentation onto a large screen, or run different applications on different screens. NVIDIA's unique Digital Vibrance Control (DVC) allows users to adjust the color and brightness of each display, providing ideal ergonomic viewing conditions on both displays.

The entire GeForce2 Go family incorporates PowerMizer™ technology to conserve battery life. PowerMizer allows individual users to determine their own priorities: longer battery life or maximum performance. Computationally intense geometry calculations such as hardware transform and lighting are offloaded from the CPU to the GPU to provide superior

performance while using minimal system power; and efficient dual pixel pipelines render scenes faster to spend less time running at full power. NVIDIA's PowerMizer technology provides hardware and software control techniques to minimize power consumption, and operating at an industry-low 1.575 volts ensures users of an uncompromised mobile graphics experience.

Anytime, anyplace—a GeForce2 Go mobile GPU gives you the 3D graphics power you need.





## GEFORCE2GO FEATURES

- Second generation 256-bit GPU architecture
- Supports 32/64-bit DDR SDRAM
- 23x23 mm, 484 PBGA package
- 0.18um process
- 32-bit color
- 32-bit Z/stencil buffer
- 350MHz Palette-DAC
- Fully compatible with Intel™ SpeedStep™ and AGP\_STOP#/AGP\_BUSY# protocol
- APM1.2 power management support
- Supports Suspend-to-RAM and Suspend-to-DISK
- Integrated hardware transform engine
- Integrated hardware lighting engine
  - 8 lights per rendering pass
  - Any combination of infinite, local, directional or spot
  - Colored lights
- NVIDIA Shading Rasterizer (NSR)
  - Real-time per-pixel effects
  - Dot3 bump mapping
  - Emboss bump mapping
  - Multitexture and multipass
  - Fog—radial or linear
  - Depth cueing
- Cube environment mapping
  - Reflection maps
  - Accurate, real-time environment reflections

- TwinView architecture
  - LVDS transmitter at 108MHz per link
  - Digital flat panel interface with scaling and filtering for flat panels up to 1280x1024
  - Dual independent display controllers support:
    - Showing same material on both displays for presentations
    - Showing different material on each display for an enlarged Windows desktop
    - LCD and CRT
    - LCD and TV
    - LCD and DVI digital flat panel or projector
- Digital Vibrance Control (DVC)
- High-performance 2D rendering engine
  - Optimized for 32-, 24-, 16-, 15- and 8-bpp modes
  - True-color hardware cursor
  - Multi-buffering (double, triple, or quad) for smooth animation and video playback
- High-quality HDTV/DVD playback
  - DVD-ready motion compensation for MPEG-2
  - Supports VIP2.0 interface
  - High-definition video processor 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
- API support
  - OpenGL 1.2 and lower
  - DirectX 7 and lower

## PERFORMANCE

- 17.2 million triangles/sec
- 286 million pixels/sec
- 572 million texels/sec
- 2.6GB/sec memory bandwidth
- 2.4 watts maximum power consumption
- 2048x1536 @ 60Hz maximum resolution

## QUALITY

- NVIDIA Unified Driver Architecture (UDA)
- Industry's first fully compliant professional OpenGL 1.2 support for all Linux™ and Windows operating systems
- WHQL-certified Windows 2000, Windows NT®, Windows 98, Windows 95, Windows ME, and Windows 3.5
- Complete Linux drivers, including full OpenGL

	GeFORCE2GO	GEFORCE2GO 200	GeFORCE2GO 100
<b>TARGET MARKET</b>	PERFORMANCE 16/32MB	THIN & LIGHT HIGH END 16/32 MB	MAINSTREAM 8/16MB
<b>ENGINE/MEM CLOCK</b>	143/166	143/166	125/166
<b>MEMORY INTERFACE</b>	64-bit DDR or 128-bit SDR 2.6GB/sec.	64-bit DDR, 2.6GB/sec.	32-bit DDR, 1.3GB/sec.
<b>SIZE</b>	31x31 MM	23x23 MM	23x23 MM
<b>DUAL CHANNEL LVDS</b>	24-bit PANELS	18-bit PANELS	18-bit PANELS



NVIDIA Corporation  
 2701 San Tomas Expressway  
 Santa Clara, CA 95050  
 T 408.486.2000  
 F 408.486.2200  
[www.nvidia.com](http://www.nvidia.com)