NVIDIA GeForce Go 7 Series GPU Specifications

NVIDIA® CineFX® 4.0 Shading Architecture

- Vertex Shaders
  - Support for Microsoft® DirectX® 9.0 Vertex Shader 3.0
  - Displacement mapping
  - Geometry instancing
  - Infinite length vertex programs
- Pixel Shaders
  - Support for DirectX 9.0 Pixel Shader 3.0
  - Full pixel branching support
  - Support for Multiple Render Targets (MRTs)
  - Infinite length pixel programs
- Next-Generation Texture Engine
  - Accelerated texture access
  - Up to 16 textures per rendering pass
  - Support for 16-bit floating point format and 32-bit floating point format
  - Support for non-power of two textures
  - Support for sRGB texture format for gamma textures
  - DirectX and S3TC texture compression
- Full 128-bit studio-quality floating point precision through the entire rendering pipeline with native hardware support for 32bpp, 64bpp, and 128bpp rendering modes

64-bit Texture Filtering and Blending

- Full floating point support throughout entire pipeline
- Floating point filtering improves the quality of images in motion
- Floating point texturing drives new levels of clarity and image detail
- Floating point frame buffer blending gives detail to special effects like motion blur and explosions

NVIDIA® Intellisample™ 4.0 Technology

- Advanced 16x anisotropic filtering (with up to 128 taps)
- Blistering-fast antialiasing and compression performance
- Transparent multisampling and transparent supersampling modes boost antialiasing quality to new levels
- Gamma-adjusted rotated-grid antialiasing removes jagged edges for incredible image quality
- Support for normal map compression
- Support for advanced lossless compression algorithms for color, texture, and z-data at even higher resolutions and frame rates
- Fast z-clear

NVIDIA® UltraShadow™ II Technology

- Designed to enhance the performance of shadow-intensive games

NVIDIA® PureVideo™ Technology

- Adaptable programmable video processor
- High-definition H.264, MPEG-2, and WMV9 hardware acceleration
- HD, spatial-temporal de-interlacing
- Inverse Telecine (3:2 and 2:2 pull-down correction)
- 4-tap horizontal, 5-tap vertical scaling
- LCD Sharpening
- Overlay color temperature correction
- Microsoft® Video Mixing Renderer (VMR) supports multiple video windows with full video quality and features in each window
- Integrated TV output

NVIDIA® TurboCache™ Technology[1]

- Combines the capacity and bandwidth of dedicated video memory with dynamically allocated system memory to dramatically turbocharge performance

NVIDIA® SLI™ Technology[2]

- Patented hardware and software technology allows two GeForce Go-based graphics cards to run in parallel to scale performance and enhance image quality on today's top titles.
- Scales performance on today's games and applications

Composited Desktop Hardware Engine

- Real time desktop compositing
- Accelerated antialiased text rendering
- Pixel shader driven special effects and animation technology capability

Advanced Display Functionality

- Dual integrated 400MHz RAMDACs for display resolutions up to and including 2048x1536 at 85Hz
- Dual DVO ports for interfacing to external TMDS transmitters and external TV encoders
- Full NVIDIA® nView® multi-display technology capability

Advanced Engineering

- PCI Express x16
- High-speed GDDR1, DDR2, and GDDR3 memory

NVIDIA® Digital Vibrance Control® (DVC) 3.0 Technology

- DVC color controls
- DVC image sharpening controls

Built for Microsoft® Windows Vista™

- Third-generation GPU architecture built for Windows Vista
- Delivers best possible experience when running Windows Vista 3D graphical user interface
- New OS supported by renowned NVIDIA® Unified Driver Architecture (UDA) for maximum stability and reliability
- NVIDIA PureVideo technology delivers high-quality VMR pipeline for best-in-class video for Windows Vista

Operating Systems

- Built for Microsoft Windows Vista
- Windows XP/Windows XP 64
- Windows ME
- Windows 2000
- Linux
- Macintosh OS X

API Support

- Complete DirectX support, including the latest version of Microsoft DirectX 9.0 Shader Model 3.0
- Full OpenGL support, including OpenGL 2.0

1 Featured in GeForce Go 7300 and GeForce Go 7400 GPUs only

2 Available on NVIDIA SLI-based notebooks only

GeForce Go 7 Series GPUs Model Comparison

Feature	GeForce Go 7900 Models	GeForce Go 7800 Models	GeForce Go 7600 Models	GeForce Go 7400 Models	GeForce Go 7300 Models
Graphics Bus Technology	PCI Express®	PCI Express	PCI Express	PCI Express	PCI Express
Microsoft® DirectX® 9.0	SM 3.0	SM 3.0	SM 3.0	SM 3.0	SM 3.0
NVIDIA® Intellisample™ Technology	4.0	4.0	4.0	4.0[1]	4.0[1]
NVIDIA® CineFX® Technology	4.0	4.0	4.0	4.0	4.0
NVIDIA® SLI™ Technology	√[2]	√[2]	√[2]	n/a	n/a
NVIDIA® TurboCache™ Technology	n/a	n/a	n/a	√	√
NVIDIA® PureVideo™ Technology	√[3]	√[3]	√[3]	√[3]	√[3]
Memory	GDDR1/DDR2/GDDR3	GDDR1/DDR2/GDDR3	GDDR1/DDR2/GDDR3	GDDR1/DDR2/GDDR3	GDDR1/DDR2/GDDR3
Process	0.09 µ	0.11 µ	0.09 µ	0.09 µ	0.09 µ
RAMDACs	400MHz	400MHz	400MHz	400MHz	400MHz

1 GeForce Go 7300 and GeForce Go 7400 models do not include compression technology 2 Available on NVIDIA SLI-based notebooks only 3 Features may vary by product. Some features may require additional software

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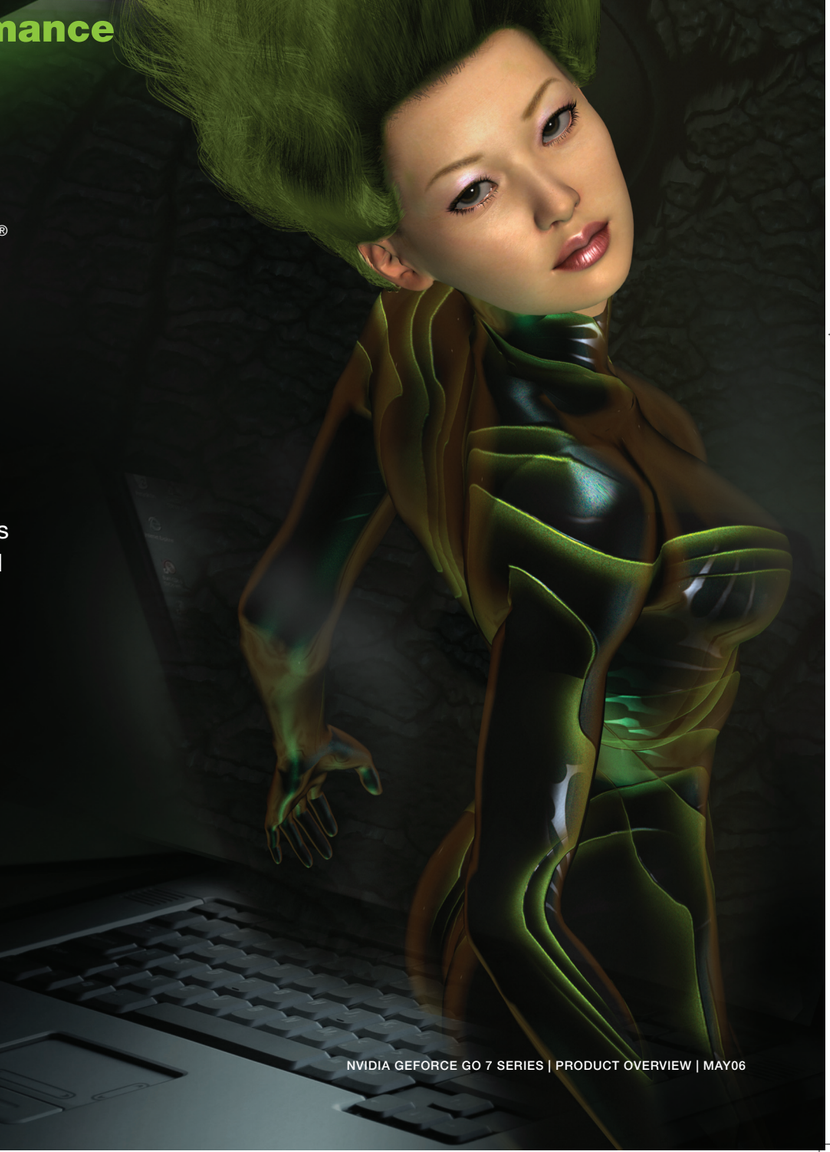
NVIDIA GeForce Go 7 Series

Extreme Performance Unleashed

Notebook PCs have entered a new age of stunning performance and image quality. The NVIDIA® GeForce® Go 7 Series of graphics processing units (GPUs) powers the latest notebook PCs, delivering up to twice the performance of previous-generation notebook GPUs, advanced 3D graphics design for unparalleled horsepower, and revolutionary technologies to tackle the latest games and video applications.



NVIDIA GeForce Go 7 Series

Designed for Today's Most Breathtaking Games

As games and applications become more and more detailed and complex, support for the latest breakthrough visual effects becomes increasingly important. The GeForce Go 7 Series architecture extends NVIDIA's leadership in notebooks to support the most advanced gaming technologies, including Microsoft® DirectX® 9.0 Shader Model 3.0. Shader Model 3.0 gives developers the freedom to create unique rendering effects by removing shader size limitations and by running shaders more efficiently.

GeForce Go 7 Series GPUs feature a new texture core that accelerates floating point texture filtering and blending to deliver full-speed, state-of-the-art, high dynamic-range (HDR) lighting effects. This technique, used in professional film rendering, delivers complex, ultrarealistic lighting effects in the latest and hottest games.

Another innovative feature introduced by GeForce Go 7 Series GPUs is transparency antialiasing—a revolutionary visual quality enhancement tool that blurs the line between virtual environments and the real world. Modern games include fine details, like grass and chain-link fences, that can dominate a player's field of view. These details are actually textures painted onto transparent surfaces in the environment. Traditional antialiasing does not improve these details, regardless of the number of antialiasing samples. GeForce Go 7 Series GPUs are the first and only notebook GPUs that can antialiase these details, resulting in smoother images and more immersive gaming environments.

Titan Quest™
image courtesy THQ

High-Definition Home-Theater Experience

Consumers demand a high-definition (HD) home-theater experience driven by their notebook PCs. They want superb picture clarity, stutter-free playback, and multiple display connectivity options. GeForce Go 7 Series GPUs bring all of this video processing excellence to a notebook PC, using NVIDIA® PureVideo™ technology[1].

Watch videos on your notebook PC without annoying artifacts and imperfections of older notebook-based video solutions. PureVideo technology is the combination of a dedicated video processing core and software that delivers ultra-smooth, high-definition H.264, WMV, and MPEG-2 movies with minimal CPU utilization, and low power consumption. And the high-precision subpixel processing enables videos to be scaled to any size, so that even small videos look like they were recorded in high-resolution.

SiN Episodes™
image courtesy
Ritual Entertainment

GeForce Go 7 Series: Continuing the Revolution

Raising the bar for performance, visual effects, image quality, and video functionality, GeForce Go 7 Series GPUs power an extreme notebook experience. No longer do you have to choose between blazing frame rates and the highest image quality. By equipping your notebook with a GeForce Go 7 Series GPU, you can experience the power of full-throttle graphics performance.

1 Some features may require additional software
2 Available on select NVIDIA SLI-based notebooks only

INNOVATIVE TECHNOLOGIES

NVIDIA PowerMizer: Advanced Power Management to Maximize Battery Life

Remarkably, the additional performance provided by the GeForce Go 7 Series GPU is achieved in the same power budget as the previous-generation GPUs, the GeForce Go 6 Series. The massive increase in performance per watt in the GeForce Go 7 architecture, coupled with refinements in NVIDIA's acclaimed PowerMizer™ technology, means less heat generated with maximum battery life. You'll be able to play high-end games and watch high-resolution videos at peak performance without sacrificing battery life.

NVIDIA SLI: Blazing Performance

The GeForce Go 7 Series GPUs are designed to reach even higher levels of performance through NVIDIA® SLI™ technology[2]. Expanding the SLI universe to notebook PCs, for the first time, three NVIDIA chips—two NVIDIA® GeForce® Go GPUs and an NVIDIA nForce®4 SLI media and communications processor (MCP)—combine to provide unmatched notebook performance and visual quality. Blast through today's graphic intensive games at Extreme High Definition (XHD) resolution without compromising quality or performance.

MXM: Leading Mobile Graphics Innovation

NVIDIA and leading notebook manufacturers have jointly designed a consistent interface for mobile PCI Express graphics: MXM, or the Mobile PCI Express Module. The MXM graphics interface reduces the length of the design cycle for notebook platforms, facilitating faster time to market for the latest notebook graphics, and enabling multiple configure-to-order solutions and price points.