



ENABLING A NEW GENERATION OF ULTRA-PORTABLE COMPUTERS

Imagine your palm-size PC with all the same functionality as your desktop PC: it plays music, movies, and, today's hottest games. You can view pictures and store all of your valuable data. Imagine a PDA that runs Microsoft® Windows® XP and the same applications as your desktop, with the convenience of being able to carry it in your shirt pocket. Imagine surfing the Web while waiting in line at the coffee shop, or docking your PDA to your desktop for a full-size screen and keyboard. Imagine no more. This ultra-portable computer (UPC) is now a reality thanks to the NVIDIA nForce™3 Go120 media and communications processor (MCP) and its innovative design.

The new NVIDIA nForce3 Go120 MCP coupled with an NVIDIA® GeForce™ Go mobile graphics processing unit (GPU) delivers the smallest form factor design for the latest UPCs, without compromising full PC functionality. This unique architecture enables innovative form factors and low system power consumption, powering a desktop PC experience in the palm of your hand.

COMPLETE MEDIA AND COMMUNICATIONS FEATURE SET

The NVIDIA nForce3 Go120 brings together all the features required to deliver the power and functionality of a full-fledged PC into a product small enough to fit in your pocket. This is done by incorporating the latest technologies found in today's desktop PCs and architecting these to fit into an ultra-portable form factor. Support for a combination of industry standards as well as NVIDIA-crafted technologies make this possible.

- NVIDIA StreamThru™ technology for superior networking and broadband communications
- Advanced storage technology providing for efficient storage of media and other data files
- USB 2.0 support for a standard plug-and-play interface with external devices
- Support for multi-channel audio via the AC '97 2.1 compliance interface
- HyperTransport™ low-power memory interface which maximizes application performance

These and other leading innovations combine to deliver media-rich content and applications for UPCs.

SMALLEST FOOTPRINT AND HIGHEST PERFORMANCE

The single-chip, full-featured NVIDIA nForce3 Go120 MCP is an extremely compact solution (the size of a quarter), designed specifically for ultra-portable computers.

The NVIDIA nForce3 MCP is architected to optimize the movement of data throughout the system. This built-in capability eliminates system bottlenecks and speeds up every-day media-rich applications to help you work and play faster. By evolving beyond traditional PC chipset designs, the NVIDIA nForce3 Go120 MCP single-chip solution offers improved reliability, speed, and overall performance for all computing environments.

INDUSTRY LEADING LOW-POWER SOLUTION

The NVIDIA nForce3 Go120 MCP uses innovative power management technologies to maintain system performance and long battery life. A host of power-saving features enable the highest performance while maintaining system power budgets:

- ACPI 2.0b compliance enables efficient operating system (OS) power/performance management of PC devices
- Dynamic frequency scaling and interface performance scaling deliver the power/performance balance to meet specific application requirements
- Different voltage levels of operation allow for direct power reduction and savings

- NVIDIA PowerMizer™ dynamic power-modulation technology allows users to adjust system performance and battery consumption for their specific needs

These features enable the lowest system power consumption and the longest battery life on UPCs.

ENABLES NVIDIA GEFORCE GRAPHICS PERFORMANCE

The NVIDIA nForce3 Go120 is the industry's first MCP enabling high-performance AGP graphics on these low-power UPCs, thus delivering true-to-life digital entertainment experiences and uncompromised performance through a number of architectural advances.

NVIDIA mobile AGP package (MAP) solutions deliver the power of AGP graphics cards to smaller form factors. The advanced designs of the NVIDIA nForce3 Go120 MCP and GeForce Go GPUs power a fully functional, feature-rich, and uncompromised Windows XP experience in the palm of your hand.

The NVIDIA nForce3 Go120 MCP brings a new level of PC power to ultra-portable computing. When paired with an NVIDIA GeForce Go GPU, this combination delivers a fast, efficient, and robust digital media experience—without sacrificing features, affordability, compatibility, or future upgradeability. UPCs powered by the NVIDIA nForce3 Go120 deliver the capabilities of a desktop or notebook PC in the convenience of a handheld device.





ROCK-SOLID SOFTWARE

The NVIDIA ForceWare™ software suite is the perfect complement to the NVIDIA nForce3 MCPs. Through the NVIDIA Unified Driver Architecture (UDA), a single driver simplifies software updates and lowers total cost of ownership. Continual performance and feature upgrades ensure the longevity of NVIDIA nForce-based systems. The NVIDIA System Utility, also part of ForceWare software, puts users in control of their PC resources through easy to use wizards, including controls for audio setup and system settings.

FORCEWARE™

NVIDIA NFORCE3 GO120 SPECIFICATIONS

SINGLE CHIP SOLUTION

- 22mm x 22mm Full Ball Grid Array (FBGA) package
- Simplifies board layout and maximizes real-estate efficiency

POWER MANAGEMENT

- Full support for Transmeta LongRun™ technology
- ACPI 2.0 compliant
 - Support for ACPI C3 and C4 state
- Support for dynamic frequency scaling
- Ability to run at different core voltage levels
- Low power 0.15 micron process

NVIDIA NETWORKING TECHNOLOGY

- NVIDIA IEEE 802.3 MAC (Media Access Controller)
- Supports 10/100Base-T Ethernet and Fast Ethernet
- Supports HomePNA 2.0 PHYs
- ACR and CNR interface support
- High-performance networking features
- Jumbo frames
- Checksum offloads
- NVIDIA® StreamThru™ technology
- Isochronous controller paired with HyperTransport™ results in fastest networking performance

FAST ULTRA ATA-133 DISK DRIVE CONTROLLERS

- Each interface supports two devices, for a total of four devices
- Supports UltraDMA modes 6-0 (UltraDMA 33/66/100/133)
- Industry-standard PCI bus master IDE register set

AGP INTERFACE

- Supports AGP 2.0 1.5V signaling for 4X, 2X, and 1X modes with 4X and 2X Fast Writes data transfers
- Supports graphics address remapping table (GART) features

HYPERTRANSPORT TECHNOLOGY

- High throughput (1.6GB/sec.)
- Low voltage
- Differential signaling
- Low pin count interface
- Isochronous link between the NVIDIA nForce3 MCP and the CPU

USB 2.0

- Single USB 2.0 Enhanced Host Controller Interface (EHCI)/Dual USB 1.1 Open Host Controller Interface (OHCI)
- Support for up to 6 ports
- Supports transfer rates at high speed (480 Mbps), full speed (12 Mbps), and low speed (1.2 Mbps)
- Dynamically configures slower devices for best utilization of bandwidth
- Allows USB concurrency

AC '97 2.1 COMPLIANT INTERFACE

- Supports 2, 4, or 6-channel audio
- Dual AC-Link supports up to two codecs
- 16-bit or 20-bit stereo output and 16-bit input streams
- Supports input, output, and GPIO channels for host-based modems
- Separate independent functions for audio and modem
- Supports ACR and CNR interface
- S/PDIF output (stereo or AC-3 output)

PCI INTERFACE

- Integrates a fast PCI-to-PCI bridge running at 33MHz. It includes an arbiter that supports six external master PCI devices. Features of the PCI interface include:
 - PCI 2.3-compliant, 5V tolerant
 - PCI master and slave interfaces
 - Supports both master-initiated and slave-initiated terminations
 - Bi-directional write posting support for concurrency
 - Flexible routing of all four PCI interrupts
 - Supports read ahead: memory read line (MRL) and memory read multiple (MRM)

CLOCK SYNTHESIZER

- Integrates a clock synthesizer
- Spread spectrum support



NVIDIA

NVIDIA Corporation | 2701 San Tomas Expressway | Santa Clara, CA 95050 | T 408.486.2000 | F 408.486.2200 | www.nvidia.com

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