SCALABLE SOLUTIONS FOR SERVERS AND WORKSTATIONS WITH NVIDIA NFORCE PROFESSIONAL

NVIDIA NFORCE PROFESSIONAL KEY POINTS

Scalability
- Same architecture for workstations and 1P to 8P+ servers
- Support for multi-core, multi-processor designs
- Highly integrated, feature-rich architecture integrates PCI Express (PCIe), Gigabit Ethernet, SATA, and legacy I/O on a single chip

Connectivity
- Highest throughput PCI Express implementation
- Support for multiple SATA 3Gb/s drives, multiple RAID configurations and hotplug capability
- NVIDIA® SLI™ Technology for intelligent and transparent scaling of workstation graphics
- Integrated USB and legacy connectivity

Lower Total Cost of Ownership
- Advanced reliability, availability, and serviceability (RAS) features
- Designed to enable smaller, low-power systems including rack and blade designs
- Support for IMPI 2.0 remote management software
- Enclosure management features

Advanced Networking
- Native Gigabit Ethernet solution with lowest CPU Utilization and highest performance
- Load Balancing and Failover (LBFO) with TCP/IP Acceleration for greater bandwidth, system performance, and fault tolerance

			CPU				CONNECTIVITY					OS SUPPORT AND SOFTWARE				AUDIO	AVANCED RAS FEATURES			ADVANCED NETWORKING		
	Product	Ideal for	Processor Supported	Socket Supported	FSB Speed	Memory Support	PCI Express® Support	NVIDIA SLI™ Technology**	SATA 3.0/PATA Drive Support	MediaShield™ supported RAID Configurations	USB 2.0 and Legacy support	Support for popular Linux installs	Support for existing Microsoft Windows	Microsoft® Windows® Vista™ Capable	Unified Driver Architecture (UDA)	Audio Specification	Error Reporting	IMPI 2.0	Enclosure Management	NVIDIA Gigabit Ethernet Connections	Load Balancing and Failover (LBFO)	TCP/IP Acceleration
NVIDIA nForce Professional 3000 Series	**NVIDIA nForce Professional 3600 and 3050**	**High end** Highest performance, multi-socket servers and workstations	AMD Opteron	F(1207) AM2	1GHz Hypertransport	DDR2	56 Lanes 12 Links Flexible	SLI x16	12/4	0, 1, 0+1, 5	✔	✔	✔	✔	✔	HDA	✔	✔	✔	4	✔	✔
	NVIDIA nForce Professional 3600	**Mid-range** General purpose multi-socket servers and workstations	AMD Opteron	F(1207) AM2	1GHz Hypertransport	DDR2	28 Lanes 6 Links Flexible	SLI x8	6/2	0, 1, 0+1, 5	✔	✔	✔	✔	✔	HDA	✔	✔	✔	2	✔	✔
	NVIDIA nForce Professional 3400	**Entry** Single-socket, low cost servers and workstations	AMD Opteron	AM2	1GHz Hypertransport	DDR2	28 Lanes 6 Links Fixed	SLI x8	6/2	0, 1, 0+1, 5	✔	✔	✔	✔	✔	HDA	✔	✔	✔	2	✔	✔
NVIDIA nForce Professional 2000 Series	**NVIDIA nForce Professional 2200 and 2050**	**High end** Highest performance, multi-socket servers and workstations	AMD Opteron	940	1GHz Hypertransport	DDR2* DDR	40 Lanes 8 Links Flexible	SLI x16	8/4	0, 1, 0+1, 5	✔	✔	✔	✔	✔	AC'97				2		✔
	NVIDIA nForce Professional 2200	**Mid-range and Entry** General purpose single and multi-socket servers and workstations	AMD Opteron	F(1207) AM2 940 939	1GHz Hypertransport	DDR2* DDR	20 Lanes 4 Links Flexible	SLI x8	4/4	0, 1, 0+1, 5	✔	✔	✔	✔	✔	AC'97				1		✔

*Socket F(1207) and AM2 only

**Workstation implementations only

NVIDIA NFORCE PROFESSIONAL FEATURES AND BENEFITS*

	FEATURES	BENEFITS
CPU	Support for single and multiple AMD Opteron™ CPUs	Full support for Opteron CPUs in single and multiple CPU configurations including multi-core versions
	Hypertransport Technology	NVIDIA Hypertransport™ design integrates tightly with AMD Opteron™ Direct Connect Architecture to deliver leading-edge 32-bit and 64-bit performance
	DDR2 Support	The latest memory standard supported by AMD Opteron processors
CONNECTIVITY	PCI Express®	Highest throughput PCI Express implementation delivering over 4GB/sec. in both upstream and downstream data transfers
	NVIDIA® SLI™ Technology	NVIDIA SLI technology is a revolutionary platform innovation that allows users to intelligently scale graphics performance by combining multiple NVIDIA graphics solutions in a single system with an NVIDIA nForce® SLI MCP
	SATA 3.0/PATA Drive Support	- SATA: Blazingly fast disk performance with the latest SATA-2 hard disk drives with full support for native and tagged command queuing and hot plug - PATA: Dual-channel ATA interface capable of a maximum data transfer rate of 133 Mbps per channel
	NVIDIA® MediaShield™ Storage technology	Suite of features that safeguards your most important digital media assets, including: - Multiple Disk Setup: Simple point and click wizard-based interface for RAID 0, 1, 0+1, or 5 across SATA devices - DiskAlert System: identifies the specific disk in the event of a failure - RAID Morphing: ability to change from one supported RAID configuration to another - Bootable RAID Array: supports the use of multi-disk configurations for loading the operating system at power-up
	USB 2.0 and legacy support	A standard plug-and-play interface that provides easy-to-use connectivity for USB devices. Support for legacy connections
OS SUPPORT AND SOFTWARE	Extensive operating system support	Including: Redhat® Linux® 3 & 4, Novell® SUSE® Pro and Enterprise Edition, Fedora Core, Microsoft® Windows® Server 2000 and 2003, and Microsoft Windows XP
	Microsoft® Windows® Vista™ Capable	NVIDIA nForce-based motherboards are perfect for Microsoft Windows Vista when coupled with an NVIDIA Quadro® graphics processing unit and 512MB of system memory
	Unified Driver Architecture (UDA)	A single driver solution across all NVIDIA products ensuring easy installation and maintenance. Backward and forward compatibility allows upgrades without changing already qualified drivers
AUDIO	High Definition Audio (HDA)	Features 32-bit, 192kHz quality for eight channels
	AC'97 Audio	Features 20-bit, 48kHz support, and is fully AC'97 compliant
ADVANCED RAS FEATURES	Error Reporting	PCI Express Advanced Error Reporting 1.1 support enables extensive error reporting and end to end error propagation and containment for all key interfaces
	IMPI 2.0	Integrated support for Intelligent Platform Management Interface 2.0 and Alert Standard Format 2.0 to remotely monitor and manage workstation health from a centralized location
	SATA Drive Enclosure Management	Integrated support using industry standard SGPIO interface for visibility into drive activity, fail and rebuild status; enabling high performance, reliable storage systems
ADVANCED NETWORKING	NVIDIA Native Gigabit Ethernet	The industry's fastest Gigabit Ethernet performance eliminates network bottlenecks and improves overall system efficiency and performance
	Load Balance/Failover (LBFO)	- Two Gigabit Ethernet MACs with TCP/IP acceleration - Load Balance: allows two connections to work together to provide up to twice the Ethernet bandwidth for large data transfers from file servers to other PCs. It also provides network redundancy through fail-over capability
	TCP/IP Acceleration	Delivers the highest system performance by offloading CPU-intensive packet filtering tasks in hardware, providing users with a fast networking environment
	Checksum Offload	Improves networking efficiency by reducing CPU utilization. Allows the processor to concentrate on other tasks
	Jumbo Frame Support	Reduces the number of calls to the network driver, thereby reducing CPU overhead and improves throughput
	Windows Control Panel/Web-based Management	Provides easy access to system set-up and configuration. Interface determined by software version
	IPv6 Support	Ability to future proof systems as standards evolve

* Features vary by product and motherboard design. Please confirm actual specs with your motherboard manufacturer

NVIDIA Corporation | 2701 San Tomas Expressway, Santa Clara, CA 95050 | **T** (408) 486 2000 | **F** (408) 486 2200 | **www.nvidia.com**