

## **NVIDIA nForce3 Specifications:**

### **Networking**

- NVIDIA IEEE 802.3 Media Access Control (MAC)
  - Supports 10/100/1000Base-T Ethernet/Fast Ethernet/Gigabit\* Ethernet
    - Supports HomePNA 2.0 PHYs
    - Advanced Communication Riser (ACR) and Communications and Networking Riser (CNR) interface support
- High performance networking features
  - TCP segmentation offloads\*
  - Jumbo frames\*
  - Checksum offloads\*
- NVIDIA StreamThru™ technology
  - Isochronous controller paired with HyperTransport results in fastest networking performance

### **Storage**

- RAID 0 disk striping support for highest system and application performance
- RAID 1 disk mirroring support for fault tolerance
- RAID 0+1 disk striping and mirroring support for highest performance with fault tolerance
- Support for both SATA and ATA-133 disk controller standards
- Dual independent SATA controllers\*\*
  - Supports up to 4 SATA disk drives simultaneously
- Integrated SATA PHY with support for two drives\*\*
- Digital SATA interface for external PHY with support for two drives\*\*
- Fast Ultra ATA-133 disk driver controllers
  - Each interface supports two devices, for support for up to six devices
  - Supports UltraDMA modes 6-0 (UltraDMA 33/66/100/133)
  - Industry-standard PCI bus master IDE register set
  - Separate independent IDE connections for 5V-tolerant primary and secondary interfaces

### **Connectivity**

- AGP interface
  - Supports AGP3.0 - 0.8 V signaling for 8× and 4× with Fast Writes data transfers
  - Supports AGP2.0 - 1.5 V signaling for 4×, 2×, and 1× modes with 4× and 2× Fast Writes data transfers
  - Supports graphics address remapping table (GART) features
  - The AGP3.0 8× 533 MT/s (million transfers per second) interface provides the user with the ability to upgrade the external graphics card, thus avoiding obsolescence. An external AGP add-in card achieves higher performance than it would on existing platforms.
  - AGP interface is backward compatible with the AGP2.0 specification.
- 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 8 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
- PCI interface
  - Integrates a fast PCI-to-PCI bridge running at 33 MHz. It includes an arbiter that supports six external master PCI slots. Features of the PCI interface include:
    - PCI 2.3-compliant, 5 V tolerant
    - Supports six external PCI slots at 33 MHz
    - Supports six bus master arbitration
    - PCI master and slave interfaces
    - Supports both master-initiated and slave-initiated terminations
    - Bidirectional write posting support for concurrency
    - Flexible routing of all four PCI interrupts
    - Supports read ahead: memory read line (MRL) and memory read multiple (MRM)

### **Performance**

- HyperTransport technology
  - High throughput (8.0GB/sec.)\*
  - Low voltage
  - Differential

### **Audio**

- AC '97 2.1 compliant interface
- 7.1 surround sound audio\*\*
- Supports 2, 4, or 6, or 8-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 general purpose input/output (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)

### **Mobility**

- Power management
- Full support for AMD PowerNow! technology
- ACPI 2.0 compliant
- Support for ACPI C3 state
- Low power 0.15 μ process
- Maximizing real estate efficiency enabling small form factor designs
  - Single chip solution
  - Lower latency for higher performance

\* NVIDIA nForce3 Ultra, 250Gb, and 250 only.

\*\* NVIDIA nForce3 Ultra