



Mellanox Introduces InfiniPCI Technology: Standard PCI to PCI Bridging Over InfiniBand™ Links

InfiniPCI™ Enables InfiniBand to be Implemented Today Within the Existing Network Infrastructure via PCI to PCI Bridging

SANTA CLARA, CA and YOKNEAM, ISRAEL, (April 23, 2001)—Mellanox Technologies, Ltd. introduced today InfiniPCI Technology: PCI to PCI (P2P) bridging technology enabling InfiniBridge devices to support standard P2P bridging over 2.5 Gb/s and 10 Gb/s InfiniBand links for communication, remote I/O and server applications. Enabled in hardware, Mellanox's InfiniBridge™ product family now has the ability to be recognized by Windows 2000 or Unix as a standard PCI to PCI bridge with no PCI hardware, BIOS, operating system, or device driver changes. By providing technology that allows InfiniBand and PCI to interoperate within an existing network environment, Mellanox provides InfiniBand benefits, such as increased scalability and fault tolerance, to current PCI applications. InfiniPCI enables the first important step in the migration of InfiniBand into the Internet data center by providing an efficient, cost effective method of utilizing the InfiniBand links on existing infrastructure.

"As InfiniBand finds its way to market, it must build on and interoperate with the existing base of PCI infrastructure. InfiniBridge accomplishes this and defines a smooth entry point for Infiniband technology," said Bert McComas, founder of Inquest Market Research. "By providing a bridge

from PCI to InfiniBand, Mellanox will soon allow companies to expand platforms and data centers to take advantage of InfiniBand architecture. This type of technology is a key factor in the successful deployment of InfiniBand."

"This bridging technology is essential in providing a migration path from PCI to InfiniBand, and we believe that Mellanox is the only company to have developed such a solution," said Michael Kagan, VP of Architecture of Mellanox Technologies. "By implementing InfiniPCI Technology with InfiniBridge, developers can deploy a transparent PCI to PCI bridging system utilizing existing PCI hardware and software. This will allow end users to leverage many of the benefits of InfiniBand, on their existing PCI-based networks. InfiniPCI Technology allows us to overcome some of the challenges of quickly deploying InfiniBand technology while supporting hybrid systems combining standard PCI based software, as well as, new InfiniBand software and the Virtual Interface Architecture.

InfiniPCI Technology: PCI to PCI Applications

The InfiniBridge transparent PCI to PCI bridging capability allows system developers to deploy InfiniBand today using existing software with no modifications to the PCI hardware, BIOS, operating systems, or device drivers. Mellanox's InfiniPCI Technology allows PCI and CompactPCI applications to provide greater scalability, fault tolerance and quality of service. With a fault tolerant InfiniBand connection, via fiber, the distance now allowed for external PCI devices is several kilometers.

InfiniBridge devices include a hardware Transport Protocol Engine (TPE) that automatically maps PCI to InfiniBand semantics and performs reverse mapping. The TPE hardware operates at full wire speed and performs all required InfiniBand transport functions. The P2P bridging does not require proprietary encapsulation of PCI semantics and thus utilizes completely standard InfiniBand packets. The normal BIOS boot procedure sweeps the primary and secondary PCI busses to discover I/O devices and load the appropriate device drivers, unaware that the secondary busses may be located in a remote chassis. Ordering rules for both the PCI bus and the InfiniBand fabric are maintained.

The InfiniBridge device automatically manages all I/O, memory, config, and interrupt cycles. The tunneling of the PCI semantics through InfiniBand is transparent to system software. This allows existing systems to be upgraded without changing the software. For example, a telecom application based on Compact PCI line cards can be expanded to include additional CPCI passive backplanes in another chassis, on another rack, or even in another building. This smooth transition from PCI to InfiniBand provides scalability benefits, supports fault tolerance and disaster recovery capabilities on the Infiniband fabric.

Demonstrating Mellanox's InfiniPCI Technology

For a closer look at this exciting new capability for InfiniBand and PCI, visit Mellanox's upcoming demonstrations at NetWorld + Interop at the Las Vegas Convention Center on May 6 through 11 (booth # 4829), and at the Applied Computing Conference and Expo at the Santa Clara Convention Center on May 14 through May 17 (booth #648).

“The availability of silicon is a critical milestone for InfiniBand product development,” said Vernon Turner of IDC. “System vendors will be able to leverage the rich feature set of Mellanox’s InfiniBridge devices, enabling the InfiniBand architecture to realize its potential to deliver new performance and reliability levels to the data center.”

About Mellanox

Mellanox is a leading InfiniBand semiconductor supplier, providing switches, Host Channel Adapters (HCAs), and Target Channel Adapters (TCAs) to the server, communications, and data storage markets. The company has raised more than \$33 million to date and has strong corporate and venture backing from Intel Capital, Raza Venture Management, Sequoia Capital, and US Venture Partners. Mellanox currently has more than 150 employees in multiple sites worldwide. The company’s business operations, sales, marketing, and customer support are headquartered in Santa Clara, CA; with the design, engineering, software, system validation, and quality and reliability operations based in Israel.

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