



Mellanox Showcases World's First Single-Chip 10Gb/s Adapter

New "MemFree" InfiniBand Technology Enables Industry Leading Price/Performance, Low Power and Small Footprint

Intel Developer Forum, San Francisco, California - September 7, 2004 - Continuing its history of offering price/performance leadership in high performance data center interconnect solutions, Mellanox™ Technologies Ltd today launched the world's first single-chip 10Gb/s InfiniBand adapters. These single-chip adapters take advantage of Mellanox's patent-pending "MemFree" technology, which significantly reduces the cost, power, and board space required for 10Gb/s nodes in data center and technical computing server clusters. Industry-standard InfiniBand Host Channel Adapter (HCA) devices with MemFree technology are available today and remove the requirement for local memory on both PCI Express adapter cards and Landed on Motherboard (LOM) designs.

Eliminating local adapter memory is ideal for server blade architectures that benefit greatly from 10Gb/s performance between blades and reductions in cost, power, and board footprint. Mellanox's single-chip 10Gb/s adapters deliver the following advantages:

- Price: 10% to 35% reduction in adapter price
- Power: 20% reduction in power requirements
- Area: 40% reduction in board space requirements

"With the introduction of the first single-chip 10Gb/s adapter, Mellanox is aggressively executing down a path of InfiniBand cost reductions that will enable our OEM customers with sub \$100 10Gb/s server adapter solutions by 1Q2005, and even lower price points soon thereafter," said Kevin Deierling, vice president of product marketing for Mellanox Technologies. "The MemFree

capability is a key feature that establishes InfiniBand's price performance leadership, and simplifies the integration of 10Gb/s connectivity in servers, server blades, and storage systems."

"Mellanox's single-chip InfiniBand adapters should increase the adoption rate of 10Gb/s server and storage clustering," stated Jag Bolaria, senior Analyst of The Linley Group. "The company's MemFree technology reduces system cost, power, and space requirements. These factors combined with Mellanox's performance roadmap should accelerate adoption of InfiniBand technology on servers and storage platforms."

How MemFree Technology Works

Today, existing InfiniBand Host Channel Adapters (HCA) provide 10Gb/s server-to-server and server-to-storage I/O interconnect, and require up to 256MB of DDR memory which is directly controlled by the HCA device. This memory typically consists of multiple chips soldered directly on adapter cards and motherboards, or may take the form of a pluggable memory DIMM (Dual In-Line Memory Module). This local HCA memory, completely separate from system memory used by the CPU and other peripherals in the server, is used to store information about the connections each node has with the rest of the nodes in the cluster. Depending upon the size of the cluster, multiple connections exist between any two nodes and information on hundreds of thousands or even millions of connections may need to be stored in local memory. For performance reasons, this information needs to be closely coupled with the HCA to enable fast access.

With Intel®'s recent announcement of the E7520 and E7320 Server Chipsets supporting the new high speed PCI Express interface from the InfiniBand HCA to system memory, it is possible to remove the requirement for locally-attached memory. Using PCI Express, throughput and latency is enhanced, enabling system memory to be used to store connection information. The end result is a single-chip, cost-effective, 10Gb/s I/O solution that only InfiniBand and PCI Express can provide.

"Innovation and investment in new technology for PCI Express architecture, such as the Mellanox's MemFree capabilities of the InfiniBand HCA are of great benefit to the industry," said Tom MacDonald, vice president and general manager of Advanced Components Division of Intel's Enterprise Platforms Group.

Available for Viewing at IDF

The InfiniHost III Ex HCA, a single-chip 10Gb/s InfiniBand adapter, is available today with MemFree technology and will be demonstrated live at the Mellanox Technologies booth (#505) during exposition hours at the 2004 Fall Intel Developer Forum, September 7-9 in San Francisco.

About InfiniBand

InfiniBand is the only 10 Gb/sec ultra low latency clustering, communication, storage and embedded interconnect in the market today. InfiniBand, based on an industry standard, provides the most robust data center interconnect solution available with reliability, availability, serviceability and manageability features designed from the ground up. These features greatly reduce total cost of ownership for the data center. Low cost InfiniBand Interconnect solutions provide 10Gb/sec RDMA transfers delivering up to 25 times the performance of Ethernet, offer unprecedented performance and density, and outperform proprietary interconnects at a fraction of the cost. With 30 Gb/sec products shipping currently, InfiniBand is at least a generation ahead of competing fabric technologies today and in the foreseeable future.

About Mellanox

Mellanox's field-proven offering of interconnect solutions for communications, storage and compute clustering are changing the shape of both business and technical computing. As the leader of industry-standard, InfiniBand-based silicon and system solutions, Mellanox provides a worry-free interconnect fabric for data centers and technical compute clusters which demand increased efficiency and improved return on investment. With all first tier server vendors and leading storage vendors providing products based on three generations of InfiniBand technology, Mellanox is the driving force behind the most cost-effective, highest performance interconnect solutions available. Convergence in today's data center environment is driving companies worldwide to put in place a cost-sensitive, unified interconnect that can support communications, storage and compute clustering. This convergence within the data center requires tremendous performance and efficiency from the interconnect fabric. Addressing this challenge, Mellanox offers solutions that improve, both the utilization and performance of clustered systems, and significantly reduce total cost of ownership. The company has strong backing from corporate investors including Dell, IBM, Intel Capital, Quanta Computers, Sun Microsystems, and Vitesse as well as, strong venture

backing from Bessemer Venture Partners, Raza Venture Management, Sequoia Capital, US Venture Partners, and others. The company has major offices located in Santa Clara, CA, Yokneam and Tel Aviv, Israel.

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