



# Mellanox Technologies Introduces InfiniBand Server Blade Architecture

## **InfiniBand Sets New Levels of Performance and Reliability for Server Blades while Lowering Total Cost of Ownership**

SANTA CLARA, CALIFORNIA and YOKNEAM, ISRAEL, - December 10, 2001- Mellanox Technologies, Ltd. announced the first ever server and I/O blade designs based on InfiniBand technology that provide a single chassis implementation for densely populated server and I/O Computing. These designs offer not just greater server density but improved scalability, cost, reliability, manageability and significantly higher performance compared to other server blade designs. Unlike other local area networking technologies InfiniBand technology delivers a low latency I/O fabric and thus enables efficient and cost effective server and I/O blades to share a common form factor. InfiniBand's unique I/O sharing capabilities allow compute and I/O engines to be deployed independently to match application requirements.

"“The focus of initial server blade offerings has put too much emphasis on form factor rather than function," said Vernon Turner, IDC. "The real total costs of ownership benefits of blade technology are not realized solely by higher density, but also by providing advanced clustering, communications, and storage features delivered by the InfiniBand Architecture. InfiniBand blade technology offers the ability to transform the deployment and management of servers, while providing significant performance and total cost of ownership advantages to IT managers."

InfiniBand's low latency and high throughput enables higher density without creating bottlenecks or performance penalties. InfiniBand technology allows server clustering, I/O sharing, and the

consolidation of storage to occur on the same fabric. This unified fabric is the key to delivering server blade density and performance by allowing blades to become diskless, therefore freeing up critical area and power resources to be dedicated to higher performance processors and memory. At the same time, overall system performance is improved by taking advantage of InfiniBand's high speed links, integrated hardware transport, and QoS features which eliminate the latency and overhead of a software transport protocol stack. The Mellanox Server Blade designs embody these features in a single chassis system using the industry-leading silicon products available today from Mellanox.

Mellanox's InfiniBand server blade architecture utilizes a dual-star InfiniBand passive backplane with two central switch-blade slots and sixteen server or I/O blades slots. The switch slots utilize a 16+4 switch design based on the Mellanox InfiniScale device, which interconnects the blade chassis to the fabric with four 4X (10Gb/s) uplink ports. The server blades are based on a low power Pentium™ III processor, ServerWorks LE 3.0 chipset, and up to 3GB of memory. Together, these components implement a fully scalable, high performance server blade system. This design enables a fully redundant configuration that eliminates cables from the server rack and enables easy provisioning of server or I/O blades to meet the needs of the IT manager. Up to sixteen InfiniBand server or I/O blades can be used in combination with the switches to create a server farm that is managed and deployed using the InfiniBand fabric. This enables remote booting and remote configuration to deploy or re-configure servers to meet the time critical computing needs of the environment. The I/O blades for this design will enable bridging to other protocols key to the success of data centers, namely InfiniBand to Ethernet, and InfiniBand to Fibre Channel.

"Mellanox's blade architecture demonstrates why InfiniBand is preferred as the fabric of choice for blade designs," said Neal Waddington, president and CEO of JNI Corporation. "The improved provisioning and I/O capabilities are especially significant to customers looking to deploy dense computing environments with an open, scalable architecture like InfiniBand. Solutions such as the Mellanox InfiniBand Server Blade Architecture are one reason JNI will focus our expertise in Fibre Channel and storage protocols on InfiniBand HCA and blade products that increase performance, reduce the TCO and provide access to Fibre Channel-based storage systems."

"The redundant 16 + 4 switch architecture delivers the key non-blocking and fault tolerance mechanisms required to achieve highly available computing at lower costs," said Michael Kagan, Vice President of Architecture, Mellanox Technologies. "These switches aggregate the server and I/O blades into a tightly coupled InfiniBand fabric, providing high reliability, availability and serviceability. High performance is achieved as InfiniBand Host Channel Adapters support commu-

nication over the fabric with a few micro-seconds of latency versus the hundreds of micro seconds or even milli seconds of latency typical of TCP based communication."

Details of the InfiniBand blade architecture are available to OEM customers and partners. For more information visit the Mellanox website at [www.mellanox.com](http://www.mellanox.com).

## About Mellanox Technologies

Mellanox is the leading supplier of InfiniBand semiconductors, providing Switches, Host Channel Adapters, and Target Channel Adapters to the server, communications, and data storage markets. In January 2001, Mellanox Technologies delivered the InfiniBridge MT21108, the first 1X/4X InfiniBand device to market, and is now shipping second generation InfiniScale silicon. 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. In May 2001, Mellanox was selected by the Red Herring Magazine as one of the 50 most important private companies in the world and to Computerworld Magazine Top 100 Emerging Companies for 2002. Mellanox currently has more than 200 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. For more information on Mellanox, visit [www.mellanox.com](http://www.mellanox.com).

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