Mellanox TECHNOLOGIES

KEY FEATURES

- Dual 10Gb/s 4X InfiniBand Ports
- Integrated Serializer/Deserializer (SerDes) interfaces
- Supports Millions of Queue Pairs
- InfiniRISC™ embedded RISC processors
- IBTA version 1.2 compatible
- Memory Options of 128 or 256MB of DDR Memory
- Support for Eight Data VLs plus the VL15 Management Lane
- Sophisticated Quality of Service (QoS) Features
- Multicast, Atomic and Large Message Support
- Hardware Support for UC, UD, RC and RAW Mechanisms

Software Support

- Linux and Windows drivers
- InfiniBand Compatible Verbs API
- Linux management and applications package available
- Various upper layer protocols

KEY APPLICATIONS

- Virtualized data centers that require a high-bandwidth, low-latency interconnect for server and storage grids
- High performance parallelized computing leveraging Message Passing Interface (MPI) based applications such as molecular modeling, oil and gas exploration, car crash simulations, etc.
- Clustered database applications, parallel RDBMS queries, high-throughput data warehousing
- Performance storage applications such as backup, restore, mirroring, etc.
- High bandwidth streaming content such as video-on-demand and HDTV
- Electronic Design Automation (EDA)
- Networking, Telecom and Industrail data acquisition

InfiniHost™ Dual-Port 10Gb/s InfiniBand HCA Cards with PCI-X

Overview

InfiniHost-based InfiniBand HCA adapters are dual-port 10Gb/s PCI-X cards that are designed to drive the full performance of high-speed InfiniBand fabrics. These second generation cards unleash performance with dual 10Gb/s links.

These InfiniBand cards are based on an architecture that enables 10Gb/s Database or High Performance Computing (HPC) clustering, and provide the high throughput and low CPU utilization required by these applications. The cards come with either 128 or 256MB of DDR memory.

InfiniBand HCA Application Support

The InfiniBand architecture defines and supports many applications, most with remote direct memory access (RDMA) capabilities. This dexterity enables high performance clustering, communication and storage traffic to be run over an InfiniBand fabric.

These HCA cards have hardware support for the following protocols: MPI (for HPC clusters), DAT (for databases), SDP (for legacy applications), IPoIB (Internet Protocol over InfiniBand), NFS over RDMA (for network attached storage), SRP (for block storage), and many embedded applications like video streaming, aerospace, military, and electronic controls.

MHET2X *– Dual 10Gb/s InfiniBand*
128MB or 256MB local SDRAM w/ PCI-X

MHET2X-1TC and MHET2X-2TC HCA Cards

CHARACTERISTICS

- 10+10 Gb/s Full Duplex InfiniBand Bandwidth
- Low Profile PCI-X card
- Requires 4X InfiniBand copper cable(s) (not included)
- Link status indication LED
- Serial EEPROM for Vital Product Data (VPD)
- Regulatory compliance testing
- ISO 9002 qualified manufacturing
- OEM labeling options

INFINIBAND BENEFITS

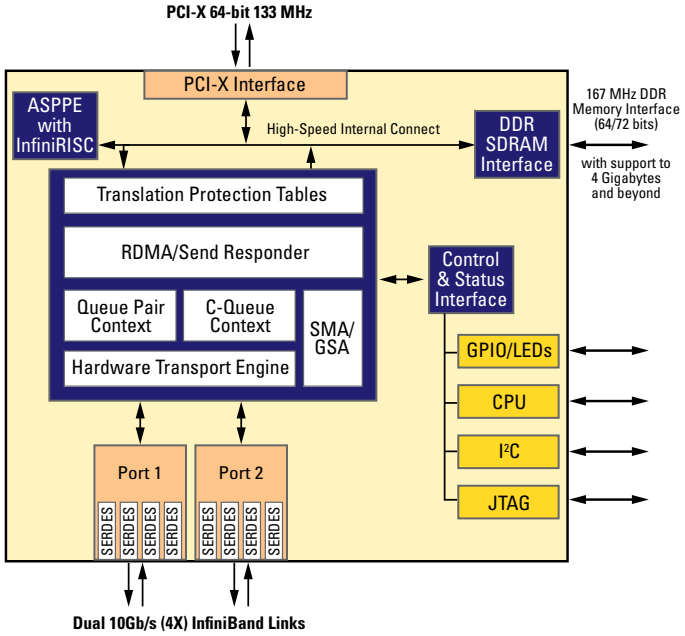
- Industry-standard technology
- Unified computing, storage and management
- High-bandwidth, low-latency
- Performance roadmap to 120Gb/s
- Highly-efficient clustering
- Ultimate reliability and scalability
- Multi-platform support
- Congestion management and QoS
- Virtualized I/O fabric
- World-class price/performance

High Performance Mellanox Silicon

InfiniHost is a single chip dual-port 10Gb/s InfiniBand host channel adapter with a PCI-X interface and an integrated physical layer. The device features an HCA core that is capable of full wire-speed transmissions over a 10Gb/s InfiniBand link. The core features a full implementation of the InfiniBand architecture with hardware transport. These features fully support RDMA transfers that drastically reduce CPU overhead and enable the host processors to spend its cycles on applications and not on communications.

Software Support

All InfiniHost HCA cards include verbs interface and device drivers for both Windows and Linux operating systems. In addition, the cards include internal Subnet Management Agent (SMA) and General Service Agents, eliminating the requirement for an external management agent CPU. The HCAs are fully compatible with the open source OpenIB.org software suite. Mellanox also provides InfiniBand Gold, an easy-to-install, open-source software package including device drivers, upper layer protocols and management tools. In addition to Linux and Windows, industry support for virtually all other operating systems is available including HPUX, AIX, OS-X, Solaris, and VxWorks.



InfiniHost Block Diagram

HCA Card Family

InfiniHost HCA Cards	InfiniBand Ports	Local Memory	Power (Typical)
MHET2X-1TC (Tall Bracket)	Dual 10Gb/s	128MB	12W
MHET2X-2TC (Tall Bracket)	Dual 10Gb/s	256MB	12W
MHET2X-1SC (Short Bracket)	Dual 10Gb/s	128MB	12W
MHET2X-2SC (Short Bracket)	Dual 10Gb/s	256MB	12W

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