144 Port Modular InfiniBand Switch Platform

Featuring Mellanox® InfiniScale™ III Silicon
HPC Clusters to 1000s of nodes
More than Ten Thousands Nodes

High Density Switch for High Performance Computing

The Mellanox MTS14400 InfiniBand high density modular switch is based on InfiniScale III third generation InfiniBand switch device. Designed for the flexible deployment of high performance computing clusters (HPCC) and InfiniBand enabled data centers, the chassis can support from 12 to 144 10Gb/sec ports in a Constant Bi-sectional Bandwidth (CBB) fat tree topology that provides full 10Gb/sec throughput and extremely low latency between each port in the switch. The MTS14400 can be used in multi-tier fat tree configurations to support cluster sizes with 1000s of nodes and beyond.

Featuring a passive mid-plane chassis design that interconnects two spine boards and twelve 12-port leaf boards, dual power supply units and fan tray, the 10U chassis offers excellent port density and hot swap capability for all components. The power supplies and the management board support redundant operation for higher availability. Each leaf board has 12 external InfiniBand 4X copper ports based on the industry leading InfiniScale III 10Gb/sec swith silicon from Mellanox. The modular architecture is designed to be upgradeable with leaf and spine cards based on different port configurations and future Mellanox switch technologies.

KEY FEATURES

- **Modular 144-port 4X InfiniBand Switch**
- **Constant Bi-sectional Bandwidth (CBB) Fat Tree Topology**
- **Ultra Low Latency**
- **Up to 2.88 Terabit/sec of Total Bandwidth**

The switch provides an unprecedented level of performance with the capability to deliver up to 2.88 Terabits of total bandwidth with ultra low latencies. The switch suports all key features of InfiniBand fabrics including Quality of Service, fail-over, RDMA, integrated physical layer and more.

Applications

This switch is ideal for the following markets:

- High Performance Computing Clusters (HPCC) for Scientific, Automotive, Seismic, Medical Imaging, and other Numerically Intensive Applications.
- High Speed Storage Systems
- Enterprise Data Center Switch Aggregation

Mellanox Technologies

Availability

This new switch platform is available today through Mellanox OEM partners.

MTS14400-144

Key Features

- Modular 144-Port InfiniBand Switch
- 2.88 Terabit Switch. (All Ports are 10 Gb/sec (bi-directional) or 144 port x 20 Gb/sec = 2.88 Terabit, full configuration.)
- Constant Bi-Sectional Bandwidth (CBB) Fat Tree Topology
- Supports up to twelve 12-Port Leaf Boards with Standard 4X Copper Connectors (Configurations of 64 to 144 ports)
- 10U 19" Rack mount Chassis
- Modular -48VDC Hot Swap 1+1 Redundant Power Supplies (configurations vary)
- Based upon Industry Leading InfiniScale III 10Gb/sec third generation Switch Device from Mellanox

Leaf Board Features

- Twelve external 4X (10Gb/sec) copper ports
- Optional configuration as four 12X Ports
- Optional Fibe support for both 4X and 12X
- Twelve 4X or 4-12X internal connections to the Spine
- Non-Blocking CBB or Fat Tree Topology
- LED Status Indicators for External Ports
- Dual Chassis Management Busses

Spine Board Features

- Non-Blocking CBB (Fat Tree) Topology
- LED Status Indicators for all Internal Links
- Dual Chassis Management Busses
- Integrated Management Controller
- Redundant Management Option

Power Supply Features

- Dual 110/220VAC Inputs
- 1000 Watts per Power Supply
- 1+1 Redundancy
- 48V Internal Distribution

Management Features

- Full In-Band Management over InfiniBand from Remote Host
- Name-Based Subnet Browsing
- Firmware Management
- Baseboard Management
- Port Statistics Monitoring

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