

## MTS2400 InfiniBand Switch System

**Flexible InfiniBand Switch Supports Both 24 Ports at 10Gb/sec and 8 Ports at 30Gb/sec**

### The Ultimate InfiniBand Switch

The Mellanox MTS2400 Switch Family is based on 3rd generation InfiniScale III semiconductor that delivers an unmatched 480 Gb/sec bandwidth and the highest performance in the industry. The switch supports both 24-Ports (10Gb/sec) and 8-Ports (30Gb/sec) or a combination of the two, with non-blocking bandwidth running at full-wire-speed and at ultra-low latencies. The MTS2400 is optimized for building flexible, scalable, robust and reliable InfiniBand fabrics for the server, storage, embedded, enterprise data center and high performance computing (HPC) markets. Boasting the best price/performance of any data center class switch in the industry, the MTS2400 is designed for creating low cost, high performance clusters. Reliability and intelligent manageability features include built-in Quality of Service (QoS), virtual lanes, and comprehensive redundancy that result in enterprise levels of operational performance and fault tolerance.



### High Performance Silicon

The InfiniScale III device features 24 full wire speed, non-blocking, full duplex 10Gb/s ports with a total of 480 Gigabits of aggregate bandwidth. These twenty-four 10Gb/sec ports can also be configured as eight 30Gb/sec ports or any combination of the two. The architecture features an intelligent non-blocking packet switch design with an advanced scheduling engine that provides InfiniBand compliant latencies of less than 200 nanoseconds. The device features a fully integrated physical layer and built in fabric management that allows for the creation of an intelligent 24-port switch with a single device.

### Scalability

With 24 InfiniBand ports, the MTS2400 has the ability to easily connect multiple switches to enable virtually any cluster size. Whether the cluster is a few nodes or significantly larger, the MTS2400 meets the clustering needs of the market today. In addition, with 10 or 30 Gb/sec port implementations IT managers can protect their initial investments as expansion capabilities allow for database compute clusters to scale larger and run applications faster by just adding additional nodes. The MTS2400 architecture also has the ability to scale to meet the needs of the HPC computing market. When combined with larger switch systems the architecture supports low latency 2-stage clusters of over 1,500 nodes and 3-stage clusters well beyond 5,000 nodes.

### Management

The MTS2400 features built-in InfiniBand Subnet Management Agent (SMA) and Performance Management Agents (PMA). These intelligent agents support sophisticated subnet management, fabric discovery and initialization, and quality of service. In addition, the performance management agent monitors fabric health and link and packet errors. Providing intelligence in every switch means that sophisticated management packages can detect and isolate potential problems before they occur. The MTS2400 also fully supports multi-pathing and automatic path migration, which enables fault tolerance and failover, and provides for notification that a self-healing fabric event has occurred and maintenance may be required.



## KEY FEATURES

- Modular 24-Port 4X or 8-Port 12X 1U InfiniBand Switch
- Non-Blocking Full-Wire-Speed
- Ultra Low Latency
- 480 Gigabits of Total Bandwidth



## Unprecedented Affordability

Thanks to the highly integrated InfiniScale III device, the MTS2400 is designed and built from a single semiconductor device in a compact 1U form factor. Existing switches can not match the MTS2400 and InfiniBand in price and performance. The MTS2400 is projected to cost less than existing 2 Gb/sec Fibre Channel and even some non-blocking 1 Gb/sec Ethernet switches in the market today. Other 10Gb/sec technologies, like 10Gb/sec Ethernet, do not even come close as they average more than 20 times the cost of InfiniBand switch ports.

## Enterprise Class Switch

The compact 1U chassis features port density, low power consumption and robustness that enterprise data centers demand. In addition to 24-10Gb/sec ports in just 1U, the switch includes the robustness of dual redundant hot swappable power supply modules and fan tray module. The switch also enables all the key RAS (Reliability, Availability and Serviceability) features of the InfiniBand architecture including: QoS, multi-cast, automatic node recognition, multipathing, automatic fail-over, virtual lanes, and more. Benefiting from the highly integrated single chip implementation and redundant sub-system components, this product offers a high reliability for improved up-time. With power requirement of less than 50 watts (with a single supply), the MTS2400 delivers the lowest power per Gb/sec in the market.

## Applications

The MTS2400 switch is ideal for the following markets:

- Enterprise Data Center Clusters - Clustered Databases, Application Servers, Storage, etc.
- High Performance Computing Clusters (HPCC) for Scientific, Automotive, Seismic, Medical Imaging, and other Numerically Intensive Applications.
- Embedded Applications - Communications, Telemetry, Avionics, Medical, Video, etc.

## Availability

The MTS2400 switch is currently available through Mellanox OEM partners. Availability from these partners is expected in Q1, 2004.



## MTS2400: 24-Port 10Gb/sec or 8-Port 30 Gb/sec InfiniBand Switch

### Key Features

- Support for both 10 and 30 Gb/sec Ports in Flexible Configurations
  - 24-Ports at 10Gb/sec
  - 8-Port at 30Gb/sec
  - 12-Ports at 10Gb/sec and 4-Port at 30Gb/sec
- 480 Gigabit of total bandwidth
- Ultra Low Latency Cut-Through Switching (less than 200 nanoseconds)
- Hot Swap Redundant Power Supplies and Fan Tray Module
- Mellanox InfiniScale III 3rd Generation Switching Device (single chip implementation)
- Chassis Management Software
- LED Status Indicators for InfiniBand Ports and Major Components

### Power Supply Features

- 120/220V 50/60 Hz input with hot swap controller
- Second power supply unit enables N+1 redundancy
- Dual AC power inputs

### Mechanical and Environmental Specifications

- Standard 19-Inch Rack Mount Chassis
- 1U (1.75 Inch) Height
- 15 Inches Deep
- Approximately 16 lbs
- Operating Temperature: 0°C to 55°C
- Air Flow Front to Rear (port side)
- Average power consumption ~ 50 Watts (per PSU)

### Advanced Management Configuration

- Advanced Management feature installed as factory option includes:
  - Embedded CPU with RS-232 console
  - RJ-45 10/100 Ethernet Port
- Consult Factory for more details

### Ordering Part Numbers

- MTS2400-24: 24-Ports at 10Gb/sec
- MTS2400-T8: 8-Port at 30Gb/sec
- MTS2400-12T4: 12-Ports at 10Gb/sec and 4-Port at 30Gb (For dual power supply units add a "-2P" to the end of the part number.)



2900 Stender Way, Santa Clara CA 95054 • Tel 408.970.3400 • Fax 408.970.3403 • [www.mellanox.com](http://www.mellanox.com)

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