

TX6000

Long-Haul Solutions to Data Centers

The MetroDX™ TX6000 series extends InfiniBand from a single-location data center network to distances up to 1km for local and campus applications.

Scaling-Out Data Centers with MetroDX

Data centers, compute clusters and supercomputers are overwhelmed by unprecedented growth in data volume, fueled by strong application and technology trends.

While InfiniBand products have been traditionally deployed for their high-performance interconnect benefits within the data center, Mellanox MetroDX solutions implementing long-haul InfiniBand, enable connecting between data centers deployed across multiple geographically distributed sites, extending the same world-leading interconnect benefits of InfiniBand beyond local data centers and storage clusters.

Mellanox's MetroDX is the perfect cost-effective, low power, easily managed and scalable solution that enables today's data centers and storage to run over local and distributed InfiniBand fabrics, managed as a single unified network infrastructure.

Long-Haul InfiniBand

MetroDX systems, which implement long-haul InfiniBand, can transfer data to distances of up to 1km. MetroDX enables aggregate data and storage networking over a single, consolidated InfiniBand fabric. The long-haul InfiniBand technology guarantees high-performance, high-volume data sharing between distant sites, enabling existing data centers expansion, disaster recovery, data mirroring and campus connectivity.

MetroDX enables a campus network to assemble large aggregate clusters, all connected and easily managed by an InfiniBand Subnet Manager - an embedded manager, OpenSM, or using Mellanox's Unified Fabric Manager (UFM®).

40Gb/s Across Campus, 56Gb/s Locally

Mellanox's MetroDX supports up to 18 long-haul ports running at 40Gb/s for up to 1km and 18 downlink ports running at 56Gb/s (FDR).

MetroDX latency is 200ns, and each kilometer of transmission across fiber glass adds 5 microseconds of latency.

MetroDX ports support Mellanox's Virtual Protocol Interconnect® (VPI) technology, which enables any standard networking, storage or management protocol to seamlessly operate over any converged network.

MetroDX provides 2 Virtual Lanes for QoS applications to ensure efficient computing while taking advantage of the industry-proven capabilities of Mellanox InfiniBand switches, such as adaptive routing, congestion control and port mirroring.

metroDX™

HIGHLIGHTS

BENEFITS

- Extends InfiniBand networks up to a 1km radius over dark fiber
- Low cost, low power, long-haul solution over an InfiniBand fabric
- Simple management
- RDMA execution over a distant site

KEY FEATURES

- 18 Long haul (40Gb/s) ports in a 1U system
- Up to 720Gb/s long-haul aggregate data
- 18 Downlink (56Gb/s) VPI ports
- Compliant with IBTA 1.2.1 and 1.3
- 2 Virtual Lanes for QoS applications
- Compliant with Mellanox LR4 QSFP+ 40Gb/s transceivers
- Redundant power supplies and fan drawers

SPECIFICATIONS

MELLANOX TX6000

- 19" rack mountable chassis, 1U with redundant power supplies and Fan units
- 18 Downlink QSFP non blocking ports with aggregate data throughput up to 1Tb/s (FDR)
- 18 Uplink QSFP non-blocking ports with aggregate data throughput up to 720Gb/s

LONG HAUL SPECIFICATIONS

- Compliant with IBTA 1.2.1 and 1.3
- 3 Virtual Lanes: 2 data + 1 management
- 4X48K entry linear forwarding data base

MANAGEMENT PORTS

- Dual 100/1000 Ethernet ports
- RS232 port over DB9
- USB port

DEVICE MANAGEMENT

- CLI or SNMP

FABRIC MANAGEMENT

- On-board SM for fabrics up to 648 nodes
- Unified Fabric Manager (UFM™)Agent*

CONNECTORS AND CABLING

- QSFP connectors
- Passive copper or active fiber cables
- Fiber media adapters*

INDICATORS

- Per port status LED Link, Activity
- System status LEDs: System, fans, power supplies
- Port Error LED
- Unit ID LED**

PHYSICAL CHARACTERISTICS

- Dimensions: 1.72"H x 16.84"W x 24.7"D
- Weight: 20.5 Lbs (9.3 Kgs)

POWER SUPPLY

- Dual redundant slots
- Hot plug operation
- Input range: 100 - 240VAC
- Frequency: 50-60Hz, single phase AC

COOLING

- Front-to-rear cooling option
- Hot-swappable fan unit
- Auto-heat sensing for silent fan operation

POWER CONSUMPTION

- Passive cable: 126W
- Active cable: 231W

COMPLIANCE

SAFETY

- US/Canada: cTUVus
- EU: IEC60950
- International: CB
- Russia: GOST-R
- Argentina: S-mark

POWER SUPPLIES

- China CCC
- Korea KCC

EMC (EMISSIONS)

- USA: FCC, Class A
- Canada: ICES, Class A
- EU: EN55022, Class A
- EU: EN55024, Class A
- EU: EN61000-3-2, Class A
- EU: EN61000-3-3, Class A
- Japan: VCCI, Class A
- Australia: C-TICK

ENVIRONMENTAL

- EU: IEC 60068-2-64: Random Vibration
- EU: IEC 60068-2-29: Shocks, Type I / II
- EU: IEC 60068-2-32: Fall Test

OPERATING CONDITIONS

- Operating 0°C to 45°C, Non Operating -40°C to 70°C
- Humidity: Operating 5% to 95%
- Altitude: Operating -60 to 2000m

ACOUSTIC

- ISO 7779
- ETS 300 753

OTHERS

- RoHS-6 compliant
- Rack-mountable, 1U
- 1-year warranty

Ordering Part Number	Description
MTX6000-2SFS	MetroDX™ 1KM FDR10 long-haul solution, 18 long-haul and 18 downlink QSFP ports, 2 power supplies, Standard depth, Managed, PSU side to Connector side airflow, Rail Kit and RoHS6
MC2210511-LR4	Mellanox Optical Module 40Gb/S QSFP LC-LC 1310NM LR4, up to 10KM

* Available in a future release



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