SWITCH SYSTEM

PRODUCT BRIEF

TX6100

Bringing InfiniBand to Campus

The TX6100 MetroX™ series extends InfiniBand from a single-location data center network to a high-performance technology for local, campus and even metro applications.

Scaling-Out Data Centers with MetroX

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 MetroX switches, 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 MetroX 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

MetroX switches, which implement long-haul InfiniBand, can transfer data to distances of up to 10km. The switches enable 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.

MetroX 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™) .

MetroX extends InfiniBand protocol RDMA capabilities beyond the local cluster and ensures RDMA enhancements to both data centers and storage clusters alike.

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

Mellanox's MetroX supports up to 6 long-haul ports running at 40Gb/s for up to 10km and 6 downlink ports running at 56Gb/s (FDR). The port capacity enables star-like campus deployments and provides clear CAPEX reduction versus current single port-to-port long-haul solutions.

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

MetroX downlink 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.

MetroX 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.

HIGHLIGHTS

BENEFITS

- Extends InfiniBand networks up to a 10km 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

- 6 Long haul (40Gb/s) ports in a 1U switch
- Up to 240Gb/s long-haul aggregate data
- 6 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 TX6100
- 19" rack mountable chassis, 1U with redundant power supplies and Fan units
- 6 Downlink QSFP non blocking ports with aggregate data throughput up to 336Gb/s (FDR)
- 6 Uplink QSFP non-blocking ports with aggregate data throughput up to 240Gb/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 - 119W
- Active cable - 150W

Ordering Part Number	Description
MTX6100-2SFS	MetroX™ 10KM FDR 10 switch, 6 long haul and 6 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

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 0ºC to 45ºC, Non Operating -40ºC to 70ºC
- 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

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