Mellanox®
TECHNOLOGIES

TX6280

RDMA Long-Haul Solutions to the Metro

The MetroX™ TX6280 extends Mellanox's RDMA solutions from a single-location data center network to distances up to 80km for campus and 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 Mellanox products have been traditionally deployed for their high-performance interconnect benefits within the data center, Mellanox's MetroX solutions, implementing long-haul RDMA, enable connections between data centers deployed across multiple geographically distributed sites, extending the same world-leading interconnect benefits of Mellanox switches 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 fabrics, managed as a single unified network infrastructure.

Long-Haul RDMA

The TX6280 system can transfer one QSFP+ 40Gb/s port to distances of up to 80km. The solution enables aggregate data and storage networking over a single, consolidated fabric. The long-haul RDMA technology guarantees high-performance, high-volume data sharing between distant sites, enabling existing data centers expansion, disaster recovery, data mirroring and campus connectivity.

MetroX Package

The TX6280 solution package is a full bundle including all cables and WDM modules interconnect to support the long distance leaving standard QSFP and LC connector as the user interface.

The bundle includes:

- MEX6280 - 80km long haul 40Gb/s system, a DWDM transponder running standard ITU-T G.694.1 C band wavelength to run on carrier infrastructure.

- 4 X 80km WDM (colored) SFP+

- 4 X SR SFP+ and 1 X SR4 QSFP modules

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

MetroX 2U bundle latency is 700ns, where each kilometer of transmission across fiber glass adds 5 microseconds of latency.

MetroX ports support Mellanox's VPI technology, which enables any standard networking, storage or management protocol to seamlessly operate over InfiniBand or Ethernet networks.

Optional integrated EDFAs are available (different OPN) to gain booster of +10dB to +22dB and Preamp of +18 dB to overcome noisy fabric.

metroX™

HIGHLIGHTS

BENEFITS
- Extends RDMA networks up to a 80km radius over dark fiber
- Low cost, low power, long-haul solution over InfiniBand and Ethernet fabrics
- Simple management

KEY FEATURES
- Long haul (40Gb/s) port in a 2U system
- One Downlink (56Gb/s) VPI port
- Compliant with IBTA 1.2.1 and 1.3
- Supports full C-Band Tunable DWDM Line sides (SFP+)
- Optional integrated EDFAs
- Redundant power supplies and fan drawers

SPECIFICATIONS

MELLANOX TX6280

– 19'' rack mountable chassis, 2U with redundant power supplies and Fan units
– 1 Downlink QSFP non blocking ports with aggregate data throughput up to 56Gb/s
– 1 Uplink QSFP non-blocking ports with aggregate data throughput up to 40Gb/s

LONG HAUL SPECIFICATIONS

– Compliant with IBTA 1.2.1 and 1.3
– 2 Virtual Lanes: 1 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

MTX6280:

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

MEX6280:

– Dimensions: 1.77'' H x 17.32'' W x 9.05'' D
– Weight: 12.1 Lbs (5.5 Kgs)

POWER SUPPLY

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

COOLING

– Hot-swappable fan unit
– Auto-heat sensing for silent fan operation

POWER CONSUMPTION

– Passive cable - 197W
– Active cable - 291W

DWDM LINK

– Wavelength - ITU-T G.694.1 Channels,100GHz spacing, optional tunable SFP+ with 50GHz spacing
– OSC -1490nm, 1510nm
– Optical Output Power - 1dBm (min) to +2dBm (max)
– Sensitivity - 24dBm APD, -14dBm PIN
– Optical Monitoring - Tx & Rx power
– Link Attenuation - <4dB (Mux + DeMux)
– Max input power - 27dBm
– Insertion loss - Transmit side 3.8dB
        Receiver side 1.2dB

COMPLIANCE

SAFETY

– US/Canada: cTUVus
– EU: IEC60950
– International: CB

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

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, 2U
– 1-year warranty

Ordering Part Number	Description	Quantity
MTX6280-2F_BL	MetroX™ 80km WDM loss less long haul 40G system bundle, 1 long-haul QSFP+ port, PSU side to connector side airflow, RoHS6	
BOM includes:		
MTDX6280-2SFS	MetroX™ 80km long haul 40G FRU system, 1 long-haul QSFP+ ports, 2 Power Supplies, Standard depth, Managed, PSU side to connector side airflow, Rail Kit and RoHS6	1
MEX6200-2B	80km WDM FRU box part of TX6280, LC connector, 2 Power Supplies, Short depth, Managed, Rail Kit and RoHS6	1
MC2210411-SR4L	Mellanox® optical module, 40Gb/s, QSFP, MPO, 850nm, up to 30m	1
MC6709309-005	Mellanox® passive fiber hybrid cable, MPO to 8xLC, 5m	1
MFM1T02A-SR	Mellanox® optical module, 10GbE SFP+, LC-LC, 850nm, SR up to 300m	4
MC7709W11-ZR_28 MC7709W11-ZR_31	Mellanox® optical module, 10GbE SFP+, LC-LC, DWDM C-Band, 40km CH#28 up to CH#31	4

* Available in a future release

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