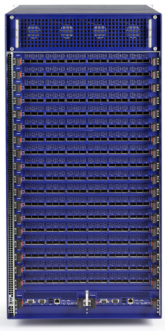
Mellanox TECHNOLOGIES

SWITCH SYSTEM

MTS3610

324-port 20 and 40Gb/s InfiniBand Chassis Switch



19U 324-port InfiniBand Switch with QSFP connectors

The MTS3610 chassis switch provides the highest performing fabric solution by delivering high-bandwidth and low-latency to Enterprise Data Centers and High-Performance Computing environments in a compact 19RU chassis. Networks built with MTS3610 systems can carry converged traffic with the combination of assured bandwidth and granular quality of service.

World Class Density and Scalability

Built with Mellanox's 4th generation InfiniScale® IV InfiniBand switch device, MTS3610 systems provide up to 40Gb/s full bisectional bandwidth per port. With up to 324 ports, these systems are among the densest switching systems available. These chassis switches are an ideal choice for building small to medium size clusters or for use as core switches for large clusters.

Sustained Network Performance

The MTS3610 supports adaptive routing as well as static routing to reduce or eliminate congestion situations. Hardware-based adaptive routing dynamically and automatically re-routes traffic to alleviate congested ports. In situations where switching contention is unavoidable, such as many-to-one traffic patterns, the MTS3610 supports IBTA 1.2 congestion control mechanisms. The switch systems work in conjunction with ConnectX® InfiniBand Adapters to restrict the traffic causing congestion ensuring high bandwidth and low-latency to all other flows.

Whether used for parallel computation or as a converged fabric, the combination of high bandwidth, adaptive routing, and congestion control provide the industry's best traffic carrying capacity.

Utility Computing

Virtual partitioning of a cluster enables efficient use of all of its computing resources. Allocating only the compute power that each client needs enables more clients on the cluster at one time. Clusters built on the MTS3610 systems can run up to six separate subnets, securely segregating client processes while ensuring the highest productivity of the cluster.

High Availability

The MTS3610 delivers director-class availability required for mission-critical application environments. The leaf and spine blades as well as the power supplies and fan units are all hot-swappable to help eliminate down time.

Easy Management

The MTS3610 ships with the management module providing embedded chassis management with an option to upgrade to complete fabric management. The MTS3610 is easily managed through any IBTA compliant subnet manager. Port configuration and data paths can be set up automatically or customized to meet the needs of the application.

BENEFITS

- High-performance fabric for parallel computation or I/O convergence
- Wirespeed InfiniBand switch platform up to 40Gb/s per port
- High-bandwidth, low-latency fabric for compute-intensive applications

KEY FEATURES

- 51.8Tb/s switching capacity
- 100ns to 300ns switching latency
- Hardware-based routing
- Congestion control
- Quality of Service enforcement
- Up to 6 separate subnets
- Embedded chassis management

INFINIBAND

- IBTA Specification 1.2 compliant
- Integrated subnet manager agent
- Hardware-based congestion control
- Adaptive routing
- Fine grained end-to-end QoS
- 25.9Tb/s total switching bandwidth
- 256 to 4Kbyte MTU
- 9 virtual lanes: 8 data + 1 management
- 48K entry linear forwarding data base
- 4K entry multicast forwarding data base

MANAGEMENT

- Integrated Management module
- Dual redundant I^2C interfaces
- Supports OpenSM or third-party subnet managers
- Up to 6 separate subnets with dynamic port allocation
- Port mirroring
- Diagnostic and debug tools

HARDWARE

INFINIBAND SWITCH
- Up to 324 ports
- Up to 40Gb/s per port
- Fully non-blocking architecture

CONNECTORS AND CABLING
- QSFP connectors
- Passive copper cable
- Active copper and fiber cables
- Fiber media adapters

INDICATORS
- Per port status LEDs: Link, Activity
- System status LEDs: System, thermal, voltages, fans

DIMENSIONS AND WEIGHT
- 33.1H x 19W x 25.7D inches
- 233 lbs (minimum configuration)
- 345 lbs (full configuration)

POWER SUPPLY
- Six 1KW 48VDC hot-swappable units
- Two additional slots for optional redundancy
- Input range: 90-264VAC
- Frequency: 47-63Hz, single phase AC

MAXIMUM POWER CONSUMPTION
- 4765W (MTS3610D full configuration)
  - Dissipated power: 3415W
  - Power through QSFP: 3.5W available per port
- 5170W (MTS3610Q full configuration)
  - Dissipated power: 3820W
  - Power through QSFP: 3.5W available per port

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
- Japan: VCCI, 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

ACOUSTIC
- ISO 7779
- ETS 300 753

OPERATING CONDITIONS
- Operating temperature: 10 to 45° C
- Humidity: 10-90% non-condensing

PRODUCTION KIT
- 19U 18-slot modular chassis
- 18 InfiniBand ports per blade
  - Up to 40Gb/s
  - Port speed auto-negotiation
  - Up to 3.5W per port for active cable or fiber module support
- Full bisectional bandwidth to all ports
- IBTA 1.2 compliant
- 6+2 redundant auto-sensing 110/220VAC power supplies
- Hot-swappable fan trays
- Port and system status LED indicators
- RoHS-5 compliant
- 1-year warranty

Ordering Part Number	Description
MTS3610Q-6DNC	InfiniScale IV 25.9Tb/s QDR InfiniBand Chassis Switch, 18 Leaf Slots, managed
MTS3610D-6DNC	InfiniScale IV 13Tb/s DDR InfiniBand Chassis Switch, 18 Leaf Slots, managed
MTS3611QC	InfiniScale IV 18+18 port QSFP 40Gb/s InfiniBand Leaf Blade
MTS3611DC	InfiniScale IV 18+18 port QSFP 20Gb/s InfiniBand Leaf Blade
MTS3610QSC	InfiniScale IV 2.88Tb/s QDR InfiniBand Spine Blade
MTS3610DSC	InfiniScale IV 1.44Tb/s DDR InfiniBand Spine Blade

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