IS5030 and IS5035

36-port Non-blocking Managed 40Gb/s InfiniBand Switch System

IS5030

IS5035

The IS5030 and IS5035 switch systems provide the highest-performing fabric solutions in a 1RU form factor by delivering 2.88Tb/s of non-blocking bandwidth to High-Performance Computing and Enterprise Data Centers, with 100ns port-to-port latency. Built with Mellanox's 4th generation InfiniScale® IV InfiniBand switch device, the IS5030 and IS5035 provides up to 40Gb/s full bidirectional bandwidth per port. These stand-alone switches are an ideal choice for top-of-rack leaf connectivity or for building small to medium sized clusters. The IS5030 and IS5035 are designed to carry converged LAN and SAN traffic with the combination of assured bandwidth and granular Quality of Service (QoS).

Sustained Network Performance

The IS5030 and IS5035 enable efficient computing with features such as static routing, adaptive routing, and advanced congestion management. These features ensure the maximum effective fabric bandwidth by eliminating congestion hot spots. Whether used for parallel computation or as a converged fabric, the IS5000 family of switches provides the industry's best traffic-carrying capacity.

World-Class Design

The IS5030 and IS5035 are an elegant top of the rack design, that are designed for performance, serviceability, energy savings and high-availability. The design is optimized for fitting into industry-standard racks and also for scale-out computing solutions from industry leaders. The IS5030 and IS5035 support reversible airflow making the design fit into data centers with different thermal designs. Redundant and hot swappable power supplies and fans provide high availability for both High-Performance Computing and Enterprise Data Center applications. Status LEDs for fans and power supply units are placed on both sides of the system for easy status identification. Quick start guide, rack mount kit, AC power cord and RJ45 to DB9 console cables are provided as part of the standard system providing new levels of out of the box experience and performance.

FabricIT™ - The Fabric Manager

FabricIT™ delivers complete fabric management and chassis management. FabricIT fabric management running on the IS5035 enables fast setup for cluster bring-up, fabric-wide bandwidth & latency verification, and various diagnostic tools to check node-node, node-switch connectivity and cluster topology view. FabricIT chassis management is embedded in IS5030 and IS5035 and provides administrative tools to manage the firmware, power supplies, fans, ports, and other interfaces. Various threshold parameters can be set and the chassis can be managed inband and outband.

BENEFITS

- Industry-leading, switch platform in performance, power, and density
- Highest ROI - designed for energy and cost savings
- Ultra low latency
- Granular QoS for Cluster, LAN and SAN traffic
- Quick and easy setup and management
- Maximizes performance by removing fabric congestions
- Fabric Management for cluster and converged I/O applications

KEY FEATURES

- 2.88Tb/s switching capacity
- Signal optimization for longer cable length
- Quality of Service enforcement
- Up to 6 virtual subnets
- Reversible air flow
- Redundant power supplies
- Replacable fan drawers
- Fan speed controlled by management software

INFINIBAND

- IBTA Specification 1.2.1 compliant
- Integrated subnet manager agent
- Adaptive routing
- Congestion control
- 256 to 4Kbyte MTU
- 9 virtual lanes: 8 data + 1 management
- 48K entry linear forwarding data base
- Port Mirroring

MANAGEMENT

- Fast and efficient fabric bring-up
- Fabric-wide bandwidth verification
- Comprehensive chassis management
- Mellanox API for 3rd party integration
- Intuitive CLI and GUI for easy access

HARDWARE

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

MANAGEMENT PORTS
– RS232 Console (RJ45)
– Ethernet (RJ45)

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

INDICATORS
– Per port status LED Link, Activity
– System status LED System, fans, power
  supplies

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

FANS
– Replaceable fan tray
– Status LED location on the FRU
– Optional Reversible air flow
– Fan speed controlled through management
  software

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

OPERATING CONDITIONS
– Operating 0ºC to 45ºC,
  Non Operating -40ºC to 70ºC
– Humidity: Operating 5% to 95%,
  Non Operating 5% to 95%
– Altitude: Operating -60 to 2000m,
  Non Operating -60 to 2000m
– Noise: 55dB - Noise reduction by controlling
  fan speed

OTHERS
– RoHS-5 compliant
– Rack-mountable, 1U
– 1-year warranty

ACCOUSTIC
– ISO 7779
– ETS 300 753

Ordering Part Number	Description
InfiniScale® IV - 36 QSFP ports, 1 Power Supply, Managed, includes Chassis Management. Upgradeable to FabricIT Enterprise Fabric Manager with purchase of FabricIT-EFM License.	
MIS5030D-1SFC*	DDR InfiniBand Switch, (PPC405EXR), PSU side to connector side airflow, Std depth, Rail Kit.
MIS5030D-1SRC	DDR InfiniBand Switch, (PPC405EXR), Connector side to PSU side airflow, Std depth, Rail Kit.
MIS5035D-1SFC*	DDR InfiniBand Switch, (PPC460EX), PSU side to connector side airflow, Std depth, Rail Kit.
MIS5035D-1SRC	DDR InfiniBand Switch, (PPC460EX), Connector side to PSU side airflow, Std depth, Rail Kit.
MIS5030Q-1SFC*	QDR InfiniBand Switch, (PPC405EXR), PSU side to connector side airflow, Std depth, Rail Kit.
MIS5030Q-1SRC	QDR InfiniBand Switch, (PPC405EXR), Connector side to PSU side airflow, Std depth, Rail Kit.
MIS5035Q-1SFC*	QDR InfiniBand Switch, (PPC460EX), PSU side to connector side airflow, Std depth, Rail Kit.
MIS5035Q-1SRC	QDR InfiniBand Switch, (PPC460EX), Connector side to PSU side airflow, Std depth, Rail Kit.

* Also available through Mellanox Certified Resellers and Distributors

Also available in short depth form factor. Consult your Mellanox Sales Representative for further details.

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