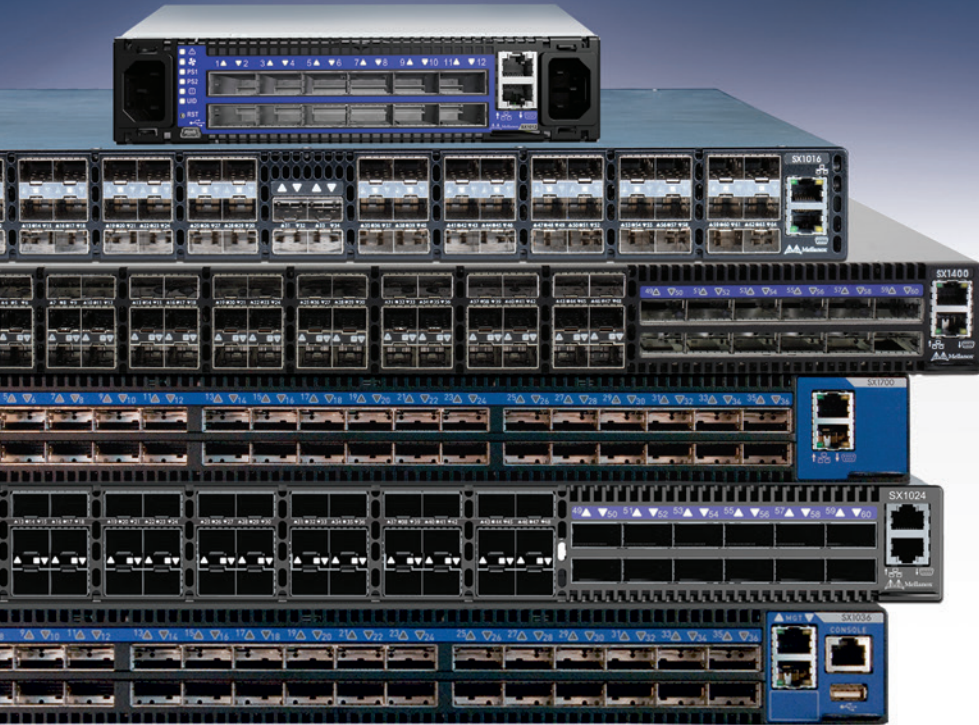


# 1/10/40/56Gb/s Ethernet Switch System Family

Highest Levels of Scalability  
Simplified Network Manageability  
Maximum System Productivity



Mellanox continues its leadership by providing  
**10/40/56 Gigabit Ethernet and SDN Switch Systems** –  
the highest performing Ethernet solutions for Enterprise Data Centers,  
Cloud Computing, Web 2.0 and High Performance Computing.

The **SwitchX<sup>®</sup>-2 Family of Ethernet switches with SDN** provides the highest performance and port density with a complete fabric management solution to enable converged data centers to operate at any scale while reducing operational costs and infrastructure complexity.

This family includes a broad portfolio of 1U switches that range from 12x1/10/40/56GbE ports through 64x1/10GbE to 36x1/10/40/56GbE ports that offer blocking and non-blocking schemes for 10/40/56GbE based servers.

These switches allow IT managers to build cost-effective, 'pay as you grow' switch fabrics for small to large clusters up to 10's-of thousands of nodes using SDN technology for simple and accurate network administration.

SwitchX-2 carries a unique design that enables users with a straight forward platform for implementation of a Software Defined Network, allowing the construction of a high scale network with advanced fine tuning control plane capabilities.

Mellanox makes fabric management as easy as it can by providing the lowest latency and highest bandwidth. This allows IT managers to deal with serving the company's business needs, while solving typical networking issues such as congestion and the inefficiencies generated by adding unnecessary rules and limitations when the network resources are sufficient.

Mellanox x86 based portfolio allows the switch to function in environments demanding high performance from the CPU and enable the implementation of virtual machines on the system's CPU to offer the user the ability of running various applications on the CPU in addition to the MLNX-OS management software.



	SX6018	SX1012	SX1016	SX1024	SX1036	SX1400	SX1700	SX1710
40/56GbE Ports	18	12	0	12	36	12	36	36
10GbE Ports	58	48	64	48	64	48	64	64
Height	1U	1U	1U	1U	1U	1U	1U	1U
Switching Capacity	2.02Tb/s	1.34TB/s	1.28TB/s	1.92Tb/s	4.03Tb/s	1.92Tb/s	4.03Tb/s	4.03Tb/s
Performance	Non-blocking	Non-blocking	Non-blocking	Non-blocking	Non-blocking	Non-blocking	Non-blocking	Non-blocking
Device Management	Y	Y	Y	Y	Y	Y	Y	Y
Fabric Management	Y	Y	Y	Y	Y	Y	Y	Y
Installation Kit	Y	Y	Y	Y	Y	Y	Y	Y
FRUs	PS and Fans	N	N	PS and Fans	PS and Fans	PS and Fans	PS and Fans	PS and Fans
PSU Redundancy	Y	Y	Y	Y	Y	Y	Y	Y
FAN Redundancy	Y	Y	Y	Y	Y	Y	Y	Y
CPU	PPC	PPC	PPC	PPC	PPC	x86	x86	x86

## BENEFITS

- **Efficiency**
  - SDN technology optimizes utilization of the HW capabilities
  - Simple configuration, no need for QoS (40/56GbE vs. 10GbE)
- **Easy Scale**
  - UFM can maintain from 1 to 1000s nodes and switches
  - Configure and manage the data center from a single location
- **Elasticity**
  - Low latency on any node
- **Arranged and Organized Data Center**
  - 40/56GbE high density switch means 4x less cables
  - Easy deployment
  - Easy maintenance
- **Unprecedented Performance**
  - Storage and server applications run faster
- **Density**
  - Ultra-high density
  - Up to 64 SFP+ ports in 1U
- **IPv6 Ready**
- **IPv6 IPsec**
- **x86 CPU**



## FEATURE SUMMARY

### HARDWARE

- 1/10Gb/s or 40/56Gb/s per port
- Full bisectional bandwidth to all ports
- All port connectors supporting passive and active cables
- Redundant auto-sensing 110/220VAC power supplies
- Per port status LED Link, Activity
- System, Fans and PS status LEDs
- Hot-swappable replaceable fan trays

### MANAGEMENT

- Comprehensive fabric management
- OpenFlow and subnet management
- Secure, remote configuration and management
- Performance/provisioning manager
- Quality of Service based on traffic type and service levels
- Cluster diagnostics tools for single node, peer-to-peer and network verification
- Switch chassis management
- Error, event and status notifications

## COMPLIANCE

### SAFETY

- USA/Canada: cTUVus
- EU: IEC60950
- International: CB Scheme

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



350 Oakmead Parkway, Suite 100  
Sunnyvale, CA 94085  
Tel: 408-970-3400  
Fax: 408-970-3403  
[www.mellanox.com](http://www.mellanox.com)

© Copyright 2014. Mellanox Technologies. All rights reserved.

Mellanox, BridgeX, ConnectX, CORE-Direct, InfiniBridge, InfiniHost, InfiniScale, MLNX-OS, PhyX, SwitchX, UFM, Virtual Protocol Interconnect and Voltaire are registered trademarks of Mellanox Technologies, Ltd. Connect-IB, CoolBox, FabricIT, Mellanox Federal Systems, Mellanox Software Defined Storage, Mellanox Virtual Modular Switch, MetroX, Open Ethernet, ScalableHPC and Unbreakable-Link are trademarks of Mellanox Technologies, Ltd. All other trademarks are property of their respective owners.