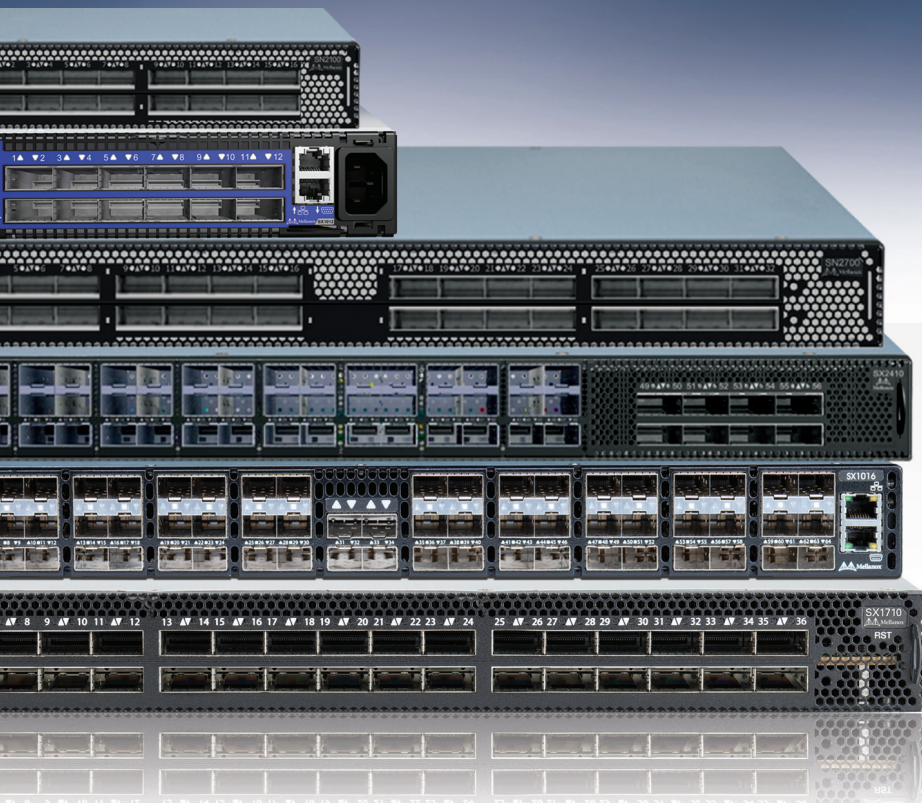


# 10/25/40/50/56/100Gb/s Ethernet Switch System Family

Uncompromising Performance  
Elastic Network Manageability  
Maximum System Productivity



# Mellanox provides the highest performing Open Ethernet switch systems at speeds of 10/25/40/50/56/100Gb/s, enabling Data Centers, Cloud Computing, Storage, Web2.0 and High Performance Computing applications to operate at maximum functionality at any scale.

From **SwitchX to Spectrum, the Mellanox family of Open Ethernet switches** provides the most efficient network solution for the ever-increasing performance demands of Data Center applications.

Accompanied by Mellanox's Unified Fabric Manager (UFM®), as well as the world's fastest network interface cards, interconnect modules and cables, Mellanox provides a complete end-to-end Ethernet solution that scales to perform at the highest level.

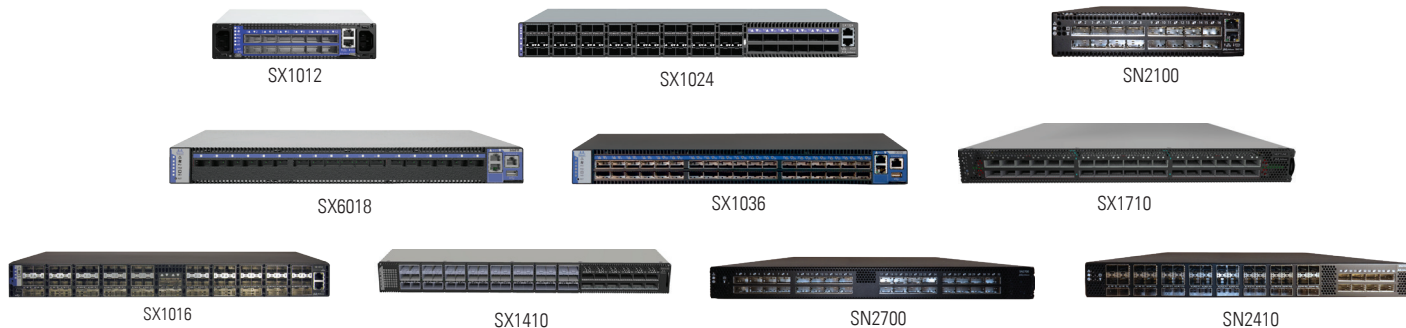
The Open Ethernet family includes a broad portfolio of 1RU-sized switches, ranging from 12 ports through 64 ports and with speeds from 1Gb/s to 100Gb/s, allowing the construction of purpose-built data centers at any scale with any desired blocking ratio. This enables network and data center managers to design and implement a cost-effective switch fabrics by the "pay as you grow" principle, in which the fabric can be composed of a few servers in the beginning, and grow gradually into hundreds of thousands of servers. Incorporating SDN attributes, the Mellanox Ethernet solution rewards the data center administrator with tools that provide a clean, simple and flexible view, and orchestration capabilities for the infrastructure. The result is an easily accessible framework that provides the data center applications with utmost elasticity.

With its unique design principles and uncompromised quality, Mellanox's 3rd generation of Ethernet data center switch integrated circuits draws a new benchmark line for industry performance.

These switch products feature the market's lowest latency with the most efficient cut-through technology, optimized for big data and high performance computing applications, running from 10GbE all the way up to 100GbE. Regardless of the network load or traffic patterns, these switch products handle all incoming data with the lowest latency and transfer the data to the destinations without dropping a single packet.

Another valuable feature of Mellanox switch devices and systems is their industry lowest power consumption. The unique ASIC design of these Mellanox switch devices smartly manages the consumption of power such that running at higher speed at maximum performance 100% of the time does not translate into a linear increase in power. Switch fabrics using Mellanox devices enjoy the world's lowest power consumption per Gb/s of bandwidth at any line rate and at any network scale, providing the most cost-effective solution for any and all use cases.

Mellanox's Open Ethernet portfolio includes systems running with PPC CPUs as well as x86 CPUs which also allow for the installation of a virtual machine on the switch that can be supplied with a variety of software packages -- whether it is a complete solution running the MLNX-OS® operating system and a protocol stack, all the way down to a bare metal system that allows the implementation of 3rd-party software over the Open SDK API or the SAI interface of the switch silicon device.



	SX1012	SX1016	SX1024	SX1036	SX1410	SX1710	SN2700	SN2410	SN2100
100GbE ports	-	-	-	-	-	-	32	8	16
50GbE ports	-	-	-	-	-	-	64	16	32
25GbE ports	-	-	-	-	-	-	64	64	64
40/56GbE Ports	12	0	12	36	12	36	32	8	16
10GbE Ports	48	64	48	64	48	64	64	64	64
Height	1U	1U	1U	1U	1U	1U	1RU	1RU	1RU
Switching Capacity	672Gb/s	640Gb/s	1.15Tb/s	2.02Tb/s	1.15Tb/s	2.02Tb/s	3.2Tb/s	2Tb/s	1.6Tb/s
Performance	Non-blocking	Non-blocking	Non-blocking	Non-blocking	Non-blocking	Non-blocking	Non-blocking	Non-blocking	Non-blocking
FRUs	N	N	PS and Fans	PS and Fans	PS and Fans	PS and Fans	PS and Fans	PS and Fans	N
PSU Redundancy	Y	Y	Y	Y	Y	Y	Y	Y	Y
FAN Redundancy	Y	Y	Y	Y	Y	Y	Y	Y	Y
CPU	PPC	PPC	PPC	PPC	x86	x86	x86	x86	x86
Power consumption [W]	49.9	61.6	74.7	78.3	83.3	82.3	150	165	94.3
Wire speed switching [Bpps]	1.00	0.95	1.71	3.00	1.71	3.00	4.76	2.98	2.38

## FEATURE SUMMARY

### HARDWARE

- 1GbE to 100GbE per port
- Zero packet loss performance at all levels
- Full bisectonal bandwidth of all ports
- All port connectors support passive and active cables
- Redundant auto-sensing 110/220VAC power supplies
- Per port status and link activity LEDs
- 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 diagnostic 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 -60m to 2000m

## BENEFITS

- Software Defined Networking (SDN) support
- Efficiency
- Easy scale from one to thousands of nodes and switches
  - *Configure and manage the data center from a single location*
- Elasticity
  - *Low-latency at any port speed*
  - *Full cut-through switching*
- Arranged and organized Data Center
  - *Supports speeds of 10/25/40/50/56/100GbE*
  - *Easy deployment*
- *Easy maintenance*
- Unprecedented performance
  - *Line rate performance on all ports at any speed*
  - *Storage and server applications run faster*
- Running MLNX-OS, alternative operating systems over ONIE



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