



## Cloud Without Compromise



High Density 1GbE through 400GbE  
Ethernet Switch System Family

Mellanox provides the **Highest Performance Open Ethernet switch systems** at port speeds ranging from 1GbE through 400GbE, enabling Data Centers, Cloud Computing, Storage, Web2.0 and High Performance Computing applications to operate with maximum functionality at scale.

## Benefits

### Cloud Native Infrastructure

- Leaf/Spine architectures that easily scale up to 10K+ nodes in 2 tiers
- Best in class VXLAN
- Automation with best of breed tools including Ansible, Chef, Puppet, and SaltStack
- OpenStack Neutron Integration
- Hyperconverged Infrastructure Integration (Nutanix)
- Turnkey Data Center Interconnect solutions with VXLAN

### Storage or Machine Learning Interconnect

- Fair, high bandwidth, low latency and bottleneck free data path
- Robust RDMA over converged Ethernet (RoCE) transport for NVMe-OF or GPUDirect
- Mellanox NEO based orchestration and seamless integration with various storage solutions
- Built-in telemetry with What Just Happened (WJH)

### Choice of Software

- Mellanox Onyx, Cumulus Linux, SwitchDev, Microsoft SONiC, and more

The Mellanox Spectrum<sup>®</sup> Open Ethernet family includes a broad portfolio of fixed form factor switches, ranging from 16 through 128 ports and with speeds from 1Gb/s to 400Gb/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 based on the “pay-as-you-grow” principle. Thus a fabric consisting of a few servers can gradually expand to include 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.

Accompanied by Mellanox’s Networking Orchestrator (NEO<sup>™</sup>), 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.

Mellanox specializes in designing advanced silicon and systems to accelerate software-defined data centers (SDDC). Mellanox Spectrum switches support rich features while concurrently delivering the highest performance for the most demanding workloads.

The SN3000 and SN2000 series offers three modes of operation:

- Preinstalled with Mellanox Onyx™, a home-grown operating system utilizing common networking user experiences and an industry standard CLI.
- Preinstalled with Cumulus® Linux, a revolutionary operating system, taking the Linux user experience from servers to switches and providing a rich routing functionality for large scale applications.
- Bare metal including ONIE image ready to be installed with the aforementioned or other ONIE-mounted operating systems.

## A CLOUD WITHOUT COMPROMISE

### PERFORMANCE WITHOUT COMPROMISE

- Fully shared packet buffer provides fair and high bandwidth datapath
- Intelligent congestion management that enables robust RoCE transport
- Adaptive flowlet routing to maximize link utilization

### FEATURES WITHOUT COMPROMISE

- Single pass VXLAN routing and bridging
- 10X better VXLAN scale
- Hardware based NAT
- MPLS/IPv6 Segment Routing

### VISIBILITY WITHOUT COMPROMISE

- Hardware based sub-microsecond buffer tracking and data summarization
- Granular and contextual visibility with What Just Happened (WJH)
- Streaming and Inband telemetry

### SCALE WITHOUT COMPROMISE

- Massive Layer-2/Layer-3 and ACL scale
- Large scale flow counters



## SN2000 SERIES



**SN2010**



**SN2100**



**SN2700 / SN2740**



**SN2410**

### General Specs

Connectors	18xSFP-28 25GbE + 4xQSFP-28 100GbE	16xQSFP-28 100GbE	32xQSFP-28 100GbE	48xSFP-28 25GbE + 8xQSFP-28 100GbE
100GbE Ports	4	16	32	8
50GbE Ports	8	32	64	16
40GbE Ports	4	16	32	8
25GbE Ports	34	64	64	64
10GbE Ports	34	64	64	64
Height	1RU	1RU	1RU	1RU
Switching Capacity [Tb/s]	1.7	3.2	6.4	4
FRUs	--	--	PS and fans	PS and fans
PSU Redundancy	✓	✓	✓	✓
Fan Redundancy	✓	✓	✓	✓
CPU	x86	x86	x86	x86
Power Consumption [W]	57	94.3	150	165
Wire Speed Switching [Bpps]	1.26	2.38	4.76	2.97

**SN3000 SERIES**

**SN3800**

**SN3700**

**SN3700C**

**SN3510**
**General Specs**

	SN3800	SN3700	SN3700C	SN3510
Connectors	64 QSFP28 100GbE	32 QSFP56 200GbE	32 QSFP28 100GbE	48 SFP 56 50GbE + 6 QSPF-DD 400GbE
400GbE Ports	--	--	--	6
200GbE Ports	--	32	--	12
100GbE Ports	64	64	32	24
50GbE Ports	128	128	64	48+48
40GbE Ports	64	32	32	12
10GbE/25GbE Ports	128	128	128	48+48
Height	2U	1U	1U	1U
Switching Capacity [Tb/s]	12.8	12.8	6.4Tbps	9.6
FRUs	✓	✓	✓	✓
PSU Redundancy	✓	✓	✓	✓
Fan Redundancy	✓	✓	✓	✓
CPU	x86	x86	x86	x86
Power Consumption [W]	TBD	TBD	TBD	TBD
Wire Speed Switching [Bpps]	8.33	8.33	4.76	7.14



For detailed information on features, compliance, and compatibility, please see each product's specific product brief.

## WARRANTY INFORMATION

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Mellanox switches come with a one-year limited hardware return-and-repair warranty, with a 14 business day turnaround after the unit is received. For more information, please visit the [Mellanox Technical Support User Guide](#).

## ADDITIONAL INFORMATION

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Support services including next business day and 4-hour technician dispatch are available. For more information, please visit the [Mellanox Technical Support User Guide](#). Mellanox offers installation, configuration, troubleshooting and monitoring services, available on-site or remotely delivered. For more information, please visit the [Mellanox Global Services web site](#).



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\*This brochure describes hardware features and capabilities. Please refer to the driver release notes on [mellanox.com](http://mellanox.com) for feature availability.

\*Actual product may differ from the images.

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