

Main Benefits

MAXIMIZE THE NETWORK

- Maximize datacenter connectivity ROI through: Density, Scale, Performance

OPEN THE NETWORK

- Leverage new technologies that increase functionality, investment & ROI
- Freedom from vendor lock-in

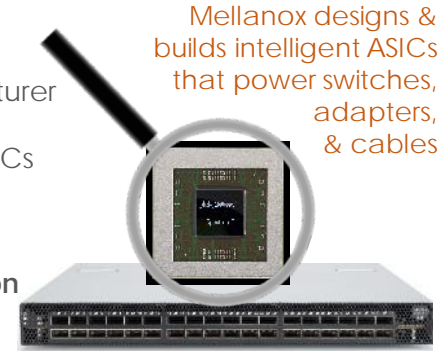
Unique Capability

MELLANOX: THE DIFFERENCE IS IN THE CHIP

- Founded as a state-of-the-art silicon chip (ASIC) manufacturer
- Intelligence built directly onto our own chip
- Other switch vendors are forced to source expensive ASICs from third parties such as Broadcom
- Mellanox uses own chip & passes savings to customers

SwitchX² 6th Generation
10/40/56GbE & 40/56 Gb IB

SwitchIB² 8th Generation
40/56/100 Gb IB



Key Differentiators



DENSITY & SCALE

- Lowest power consumption
- Use fixed switches to build scalable, affordable networks
- Most ports in smallest footprint



VALUE & FUTURE PROOF

- Better End-User experience
- Future Proof 10GbE w/40GbE capability
- 56GbE uplinks – 40% better than 40GbE due to fewer cables




PERFORMANCE

- Predictable Performance
- Fair throughput for all ports
- Never drop packets
- Lowest Latency
- Expedited delivery using **cut through** vs. store & forward



UFM MANAGEMENT & AUTOMATION

- Easy to install Appliance 
- Simplified fabric management
- Performance and traffic monitoring
- Easy integration w/ open REST APIs
- Historical analytic graphs

Sales Opportunities

SCALE-OUT STORAGE

Combines compute & storage, easier to manage & lowers cost – **top of rack switch with density at lower price point** most attractive

MEDIA & ENTERTAINMENT

Video streaming & post-production on 4k/8k workflows – **needs extreme high bandwidth** to support real-time frame-rates

GENOMICS

Extreme scalability using a building - block approach: Capacity, bandwidth and a single name space expand as more building blocks are added, resulting in near-linear performance gains

CLOUD

Create economies of scale through shared services – **open switch platform with fairness** best for software-defined DC.

BIG DATA

Improved analytics for better business decisions – needs **non-blocking architecture** to speed data ingestion.

SCALE OUT DATABASE

Scale out of DB2 PureScale, Oracle RAC, SAP HANA



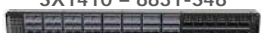

Company Background

- Established 1999 * NASDAQ: MLNX
- **End-to-end Ethernet Connectivity Solutions** – Adapters, Switches, Cables, Software, Support
- World-class, non-outsourced technical support
- Trusted as switch manufacturer for every major server OEM

IBM Mellanox Switch Portfolio







SX Series:

Based on **SwitchX-2** ASIC, all versions are 1/10/40/56 out of box, fully licensed. Simple speed negotiation upon cable insertion, including a patented (x1) 40GbE QSFP to (x4) 10GbE SFP+ breakout cable.

 SX6036 – 8831-F36	QDR/FDR 40/56Gb ToR / Aggregation Switch	36x 56Gb / 36x 40Gb	1U	PPC	MLNX-OS	
 SX1410 – 8831-S48	Non-blocking 10 GbE to 40GbE ToR	48x10GbE + 12x 40GbE	1U	x86	MLNX-OS	
 SX1710 – 8831-NF2	40GbE Switch for ToR / Aggregation	36x40GbE/56GbE	1U	x86	MLNX-OS	

SB Series:

Based on the **Switch-IB/2** ASIC, the SB series switches are all **x86** based, and come standard supporting QDR/FDR/EDR

















 SB7700 – 8828-E36	FDR/EDR IB 56/100Gb ToR / Aggregation Switchb - Managed	36x 100Gb / 36x 56Gb	1U	x86	MLNX-OS	
 SB7780 – 8828-ER6	FDR/EDR IB 56/100Gb Router - Managed	36x 100Gb / 36x 56Gb	1U	x86	MLNX-OS	
 SB7800 – 8828-G36	FDR/EDR IB 56/100Gb ToR / Aggregation Switch w/ SHArP - Managed	36x 100Gb / 36x 56Gb	1U	x86	MLNX-OS	
 SB7890 – 8828-GU6	FDR/EDR IB 56/100Gb ToR / Aggregation Switch w/ SHArP – Un-Managed	36x 100Gb / 36x 56Gb	1U	x86	MLNX-OS	

4610 Series:

Based on the **Helix-4** ASIC, the 4610 series switches are ARM based, and come standard supporting 1/10GbE

 4610-54T – 8831-S52	1/10GbE Aggregation Switch	48x 1GbE RJ45 + 4x 1/10GbE SFP+	1U	ARM	Cumulus Linux	Helix-4
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IBM Mellanox Adapter Portfolio

10GbE		HP Dual Port 10GbE SFP+ HP Dual Port 10GbE SR LP Dual Port 10GbE SFP+ LP Dual Port 10GbE SR	EC38 / EL53 EC2N / EL54 EC37 / EL3X EC2M / EL40	x8	
10GbE 10/ 25 GbE		HP Dual Port 10GbE SFP+ LP Dual Port 10GbE SFP+ LP Dual Port 10/25GbE SFP+ HP Dual Port 10/25GbE SFP+ LP Dual Port 10/25GbE SFP+	EC2S EC2R EKAU EC2U EC2T	x8	
40GbE		HP Dual Port 40GbE QSFP LP Dual Port 40GbE QSFP LP Dual Port 40GbE QSFP	EC3B EC3A EKF1	x8	
100GbE 100GbE / EDR IB	 	LP Single Port 100GbE QSFP28 LP Dual Port 100GbE QSFP28 HP Dual Port 100GbE QSFP28 LP Dual Port 100GbE / EDR QSFP28 LP Dual Port 100GbE QSFP28 HP Dual Port 100GbE QSFP28 LP Dual Port 100GbE / EDR QSFP28 LP Single Port 100GbE / EDR QSFP28	EKAM EC3L EC3M EKAL EC67 EC66 EKAY EKFD	x16	 
EDR IB	 	HP Single Port EDR QSFP28 HP Dual Port EDR QSFP28 LP Single Port EDR QSFP28 LP Dual Port EDR QSFP28	EC3U EC3F EC3T EC3E	x16	
EDR IB	 	HP Single Port EDR QSFP28 LP Single Port EDR QSFP28 HP Dual Port EDR QSFP28 LP Dual Port EDR QSFP28	EC63 EC62 EC65 EC64	x16	

Choice of Cabling

25GbE Cabling

Length	Description	FC
0.5m	25GbE Copper Cable SFP28	EB4J
1m	25GbE Copper Cable SFP28	EB4K
1.5m	25GbE Copper Cable SFP28	EB4L
2m	25GbE Copper Cable SFP28	EB4M
2m	100GbE to 4x25GbE, Splitter QSFP28 to 4xSFP28.	EB4P
Transceiver	25GBASE-SR SFP28 Module	EB47

40GbE / FDR Cabling

Length	Description	FC
1m	40GbE / FDR Copper Cable QSFP	EB41
2m	40GbE / FDR Copper Cable QSFP	EB42
3m	40GbE / FDR Optical Cable QSFP	EB4A
5m	40GbE / FDR Optical Cable QSFP	EB4B
10m	40GbE / FDR Optical Cable QSFP	EB4C
15m	40GbE / FDR Optical Cable QSFP	EB4D
20m	40GbE / FDR Optical Cable QSFP	EB4E
30m	40GbE / FDR Optical Cable QSFP	EB4F
50m	40GbE / FDR Optical Cable QSFP	EB4G

EDR IB Cabling

Length	Description	FC
0.5m	EDR IB Copper Cable QSFP	EB50
1m	EDR IB Copper Cable QSFP	EB51
2m	EDR IB Copper Cable QSFP	EB52
1.5m	EDR IB Copper Cable QSFP	EB54
3m	EDR IB Optical Cable QSFP	EB5A
5m	EDR IB Optical Cable QSFP	EB5B
10m	EDR IB Optical Cable QSFP	EB5C
15m	EDR IB Optical Cable QSFP	EB5D
20m	EDR IB Optical Cable QSFP	EB5E
25m	EDR IB Optical Cable QSFP	EB5N
30m	EDR IB Optical Cable QSFP	EB5F
50m	EDR IB Optical Cable QSFP	EB5G
100m	EDR IB Optical Cable QSFP	EB5H

100GbE Cabling

Length	Description	FC
0.5m	100 GbE Copper Cable QSFP28	EB5J
1m	100 GbE Copper Cable QSFP28	EB5K
2m	100 GbE Copper Cable QSFP28	EB5L
1.5m	100 GbE Copper Cable QSFP28	EB5M
3m	100 GbE Optical Cable QSFP28	EB5R
5m	100 GbE Optical Cable QSFP28	EB5S
10m	100 GbE Optical Cable QSFP28	EB5T
15m	100 GbE Optical Cable QSFP28	EB5U
20m	100 GbE Optical Cable QSFP28	EB5V
30m	100 GbE Optical Cable QSFP28	EB5W
50m	100 GbE Optical Cable QSFP28	EB5X
100m	100 GbE Optical Cable QSFP28	EB5Y

Feature codes in **BLUE** support AIX OS Applications and Platforms | Feature Codes in **Green** support Linux Applications and Platforms | Adapters with single Feature Code support both Linux OS and AIX | HP = High Profile Bracket, LP = Low Profile Bracket