

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

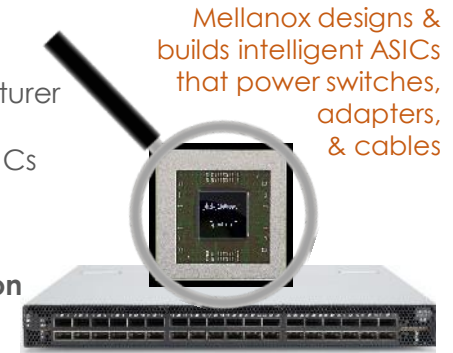
Unique Capability

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

SwitchX 2 6th Generation
10/40/56GbE & 40/56 Gb IB

SwitchIB 7th 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

CLOUD

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

MEDIA & ENTERTAINMENT

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

BIG DATA

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

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

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








SB7700 – 8828-E36 	FDR/EDR 56/100Gb ToR / Aggregation Switch	36x 100Gb / 36x 56Gb	1U	x86	MLNX-OS	Switch-IB
--	---	----------------------	----	-----	---------	------------------

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
--	----------------------------	---------------------------------	----	-----	---------------	----------------

IBM Mellanox Adapter Portfolio

10GbE 	HP Dual Port 10GbE SFP+ HP Dual Port 10GbE SR	EC38 / EL53 EC2N / EL54	x8	ConnectX-3
	LP Dual Port 10GbE SFP+ LP Dual Port 10GbE SR	EC37 / EL3X EC2M / EL40		
10/ 25 GbE 	LP Dual Port 10/25GbE SFP+	EKAU	x8	ConnectX-4 Lx
40GbE 	HP Dual Port 40GbE QSFP	EC3B	x8	ConnectX-3
	LP Dual Port 40GbE QSFP	EC3A		
100GbE 	LP Single Port 100GbE QSFP28	EKAM	x16	ConnectX-4
	LP Dual Port 100GbE QSFP28	EC3L		
	HP Dual Port 100GbE QSFP28	EC3M		
100GbE / EDR 	LP Dual Port 100GbE / EDR QSFP28	EKAL		
FDR 	HP Dual Port FDR QSFP	EC33 / EL50	x16	Connect-IB
	LP Dual Port FDR QSFP	EC32 / EL3D		
EDR 	HP Single Port EDR QSFP28 HP Dual Port EDR QSFP28	EC3U EC3F	x16	ConnectX-4
	LP Single Port EDR QSFP28 LP Dual Port EDR QSFP28	EC3T EC3E		

Choice of Cabling

40GbE / FDR Cabling

Length	Description	FC
0.5m	40GbE / FDR Copper Cable QSFP	EB40
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 Cabling

Length	Description	FC
0.5m	EDR Copper Cable QSFP28	EB50
1m	EDR Copper Cable QSFP28	EB51
2m	EDR Copper Cable QSFP28	EB52
1.5m	EDR Copper Cable QSFP28	EB54
3m	EDR Optical Cable QSFP28	EB5A
5m	EDR Optical Cable QSFP28	EB5B
10m	EDR Optical Cable QSFP28	EB5C
15m	EDR Optical Cable QSFP28	EB5D
20m	EDR Optical Cable QSFP28	EB5E
30m	EDR Optical Cable QSFP28	EB5F
50m	EDR Optical Cable QSFP28	EB5G
100m	EDR Optical Cable QSFP28	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

FOR INTERNAL USE ONLY – cannot be posted online or reproduced without Mellanox consent

www.mellanox.com | james@mellanox.com +1 (512) 897-8245

3-Mar-17 v12