

# Supporting data rates up to 56Gb/s

Mellanox cables are a cost-effective solution for connecting high bandwidth fabrics, extending the benefits of Mellanox's high-performance InfiniBand and 10 and 40 Gigabit Ethernet adapters throughout the network. In addition to meeting or exceeding IBTA and IEEE standards, Mellanox Certified cables are 100% tested on Mellanox equipment to ensure optimal signal integrity and the best end-to-end performance. With Mellanox cables you will experience trouble-free installation and long-term operation.

# **Mellanox Copper Cables**

Mellanox passive copper cables provide robust connections and require no power from the connector. Mellanox active cables are a thinner alternative to the passive cables, and are available in longer lengths.

# **Mellanox Optical Cables**

Mellanox optical solutions provide long range scalability for all topologies and utilize innovative optical technologies to enable extremely high signal integrity and reliability. Mellanox assembled QSFP cables are available for short, medium and long range lengths. Mellanox SFP+ optical modules support LC-LC fiber connections for Enterprise (10GBASE-SR) or long distance (10GBASE-LR) applications.

# **Hybrid Copper Cables**

Hybrid cables connect network equipment with different connector types. These cables can connect InfiniBand switch or HCA ports with the original microGiGaCN connector to equipment with the newer QSFP connector. Hybrid cables also enable Mellanox's VPI adapters and 40 Gigabit Ethernet NIC to connect to 10 Gigabit Ethernet switches with either CX4 or SFP+ ports.

# **Quad to Serial Small Form Factor Pluggable (QSA) Adapter**

The Quad to Single Small Form Factor Pluggable Adapter (QSFP to SFP+ adapter or QSA) is the world's first solution for the QSFP to SFP+ conversion challenge. The QSA enables smooth, cost-effective, connections between Virtual Protocol Interconnect® (VPI) or 40 Gigabit Ethernet adapters using contemporary QSFP ports and 1 or 10 Gigabit Ethernet networks using existing SFP or SFP+ based cabling. Similarly, Ethernet switches with 40Gb/s QSFP ports can connect to servers with 10Gb/s Ethernet NIC ports using QSA. Mellanox QSA conforms to the SFF-8431 SFP+ and SFF-8436 QSFP connector standards and is 100 percent tested to strict quality requirements. The adapter is built in QSFP form factor with a receptacle for SFP+ cable connector.

# **Connector Types**

Mellanox cables are available with a wide range of connector types, complying with the different protocols in the market. CX4, QSFP or SFP+ cable solutions provide highest flexibility for network installations. Hybrid cables allow you to make connections when the adapter card port doesn't match the switch port. For example, hybrid cables can connect between DDR adapters with CX4 connectors to high density switches with QSFP connectors. With a QSFP to SFP+ cable, you can connect a VPI adapter card to a 10GbE switch.

### Why Mellanox?

Mellanox delivers the industry's most robust end-to-end InfiniBand and Ethernet portfolios. Our mature, field-proven product offerings include solutions for I/O, switching, and advanced management software making us the only partner you'll need for high-performance computing and data center connectivity.

Mellanox allows customers to choose the fabric that is right for them based on their application requirements and individual technology practices - without sacrificing scalability and performance.

### Why 40Gb/s to 56Gb/s InfiniBand?

# Enables the highest performance and lowest latency

Proven scalability for 10s of thousands of nodes
 Maximum return on investment

#### Highest Efficiency / Maintains balanced system ensuring highest productivity

- No artificial bottlenecks, performance match for PCIe Gen2
- Proven to fulfill multi-process networking requirements
- Guaranteeing no performance degradation

# Performance driven architecture

- MPI latency 1us, 6.6Gb/s with 40Gb/s InfiniBand (bi-directional)
- MPI message rate of >40 Million/sec

#### Superior application performance

- From 30% to over 100% HPC applications performance increase
- Doubles the storage throughput, reducing backup time in half

# Why Mellanox 10/40 Gigabit Ethernet?

Mellanox's scale-out 10/40GbE products enable users to benefit from a far more scalable, lower latency, and virtualized fabric with lower overall fabric costs and power consumption, greater efficiencies, and simplified management than traditional Ethernet fabrics. From 10 and 40 Gigabit Ethernet Converged Network Adapters, core and top-of-rack switches and fabric optimization software, a broader array of end users with less rigid performance requirements than those addressed by InfiniBand can benefit from a more scalable and highperformance Ethernet fabric.



- Higher Profits for our Partners
- Opportunity enablement via demand creation/business
  development
- · Higher and more frequent direct & dedicated communication
- Robust product line
- More accessible marketing tools and resources
- Training and education

www.mellanox.com/PartnerFIRST

		Cables	
Ordering Part #	Description	Ordering Part #	Description
Copper Cables, Passiv	e with QSFP Connectors	Copper Cables, Passive	e Hybrid, QSFP to SFP+ Connectors
/ICD4Q26C-007	4x QSFP latch, 26 AWG, 7 meters	MCC1V30A-001	1X QSFP to SFP+, 30 AWG, 1 meter
1CD4Q26C-008	4x QSFP latch, 26 AWG, 8 meters	MCC1V30A-002	1X QSFP to SFP+, 30 AWG, 2 meters
IC2206130-00A	Mellanox copper cable, up to IB QDR/FDR10 (40Gb/s), 4X QSFP, half meter	MCC1V24A-004	1X QSFP to SFP+, 24 AWG, 4 meters
IC2206130-001	Mellanox copper cable, up to IB QDR/FDR10 (40Gb/s), 4X QSFP, 1 meter	MCC1V24A-005	1X QSFP to SFP+, 24 AWG, 5 meters
IC2206130-002	Mellanox copper cable, up to IB QDR/FDR10 (40Gb/s), 4X QSFP, 2 meter	MCC1V24A-007	1X QSFP to SFP+, 24 AWG, 7 meters
IC2206130-003	Mellanox copper cable, up to IB QDR/FDR10 (40Gb/s), 4X QSFP, 3 meter	MC2309130-001	Mellanox passive copper cable, 1X SFP+ to QSFP, 10Gb/s, 30 AWG, 1m
1C2206128-004	Mellanox copper cable, up to IB QDR/FDR10 (40Gb/s), 4X QSFP, 4 meter	MC2309130-002	Mellanox passive copper cable, 1X SFP+ to QSFP, 10Gb/s, 30 AWG, 2m
1C2206128-005	Mellanox copper cable, up to IB QDR/FDR10 (40Gb/s), 4X QSFP, 5 meter	MC2309130-003	Mellanox passive copper cable, 1X SFP+ to QSFP, 10Gb/s, 30 AWG, 3m
IC2206126-006	Mellanox copper cable, up to IB QDR (40Gb/s), 4X QSFP, 6 meter	MC2309124-004	Mellanox passive copper cable, 1X SFP+ to QSFP, 10Gb/s, 24 AWG, 4m
1C2207130-001	FDR InfiniBand QSFP passive copper cable, 1m	MC2309124-005	Mellanox passive copper cable, 1X SFP+ to QSFP, 10Gb/s, 24 AWG, 5m
1C2207130-002	FDR InfiniBand QSFP passive copper cable, 2m	MC2309124-007	Mellanox passive copper cable, 1X SFP+ to QSFP, 10Gb/s, 24 AWG, 7m
IC2207128-003	FDR InfiniBand QSFP passive copper cable, 3m	Copper Cables, Passive	Hybrid, QSFP to CX4 Connectors
IC2207126-004	FDR InfiniBand QSFP passive copper cable, 4m	MC1204128-001	Mellanox copper cable, up to 20Gb/s, 4X microGiGaCN to QSFP, 1 meter
IC2207126-005	FDR InfiniBand QSFP passive copper cable, 5m	MC1204128-002	Mellanox copper cable, up to 20Gb/s, 4X microGiGaCN to QSFP, 2 meter
ber Cables, Active w	vith QSFP Connectors	MC1204128-003	Mellanox copper cable, up to 20Gb/s, 4X microGiGaCN to QSFP, 3 meter
1FS4R12CB-003	QDR/FDR10 InfiniBand QSFP assembled optical cable, 3m	MC1204128-005	Mellanox copper cable, up to 20Gb/s, 4X microGiGaCN to QSFP, 5 meter
IFS4R12CB-005	QDR/FDR10 InfiniBand QSFP assembled optical cable, 5m	Copper Cables, Passive	
1FS4R12CB-010	QDR/FDR10 InfiniBand QSFP assembled optical cable, 10m	MCC4L30-00A	4x microGiGaCN™ latch (CX4), 0.5 meter
IFS4R12CB-015	QDR/FDR10 InfiniBand QSFP assembled optical cable, 15m	MCC4L30-002	4x microGiGaCN™ latch (CX4), 2 meters
IFS4R12CB-020	QDR/FDR10 InfiniBand QSFP assembled optical cable, 20m	MCC4L28-004	4x microGiGaCN™ latch (CX4), 4 meters
IFS4R12CB-030	QDR/FDR10 InfiniBand QSFP assembled optical cable, 30m	MCC4L28-005	4x microGiGaCN™ latch (CX4), 5 meters
IFS4R12CB-050	40Gb/s InfiniBand QSFP assembled optical cable, 50m	MCC4L24-006	4x microGiGaCN™ latch (CX4), 6 meters
1FS4R12CB-100	40Gb/s InfiniBand QSFP assembled optical cable, 100m	MCC4L24-007	4x microGiGaCN™ latch (CX4), 7 meters
1C2206310-003	Mellanox active fiber cable, 4X QSFP, IB QDR/FDR10 (40Gb/s), 3m	MCC4L24-008	4x microGiGaCN™ latch (CX4), 8 meters
1C2206310-005	Mellanox active fiber cable, 4X QSFP, IB QDR/FDR10 (40Gb/s), 5m	MC01221000	Mellanox copper cable, up to 40Gb/s, 4X microGiGaCN (CX4), 1 meter
AC2206310-010	Mellanox active fiber cable, 4X QSFP, IB QDR/FDR10 (40Gb/s), 10m	MC1104130-003	Mellanox copper cable, up to 40Gb/s, 4X microGiGaCN (CX4), 3 meter
1C2206310-015	Mellanox active fiber cable, 4X QSFP, IB QDR/FDR10 (40Gb/s), 15m	Fiber Cables, Active with QSFP to CX4 (Hybrid)	
1C2206310-020	Mellanox active fiber cable, 4X QSFP, IB QDR/FDR10 (40Gb/s), 20m	MC1204310-025	4x QSFP to microGiGaCN™ latch (CX4), 25m fiber optic cable
1C2206310-030	Mellanox active fiber cable, 4X QSFP, IB QDR/FDR10 (40Gb/s), 30m	-	Gig Ethernet or FDR Infiniband
1C2206310-050	Mellanox active fiber cable, 4X QSFP, IB QDR/FDR10 (40Gb/s), 50m	MC2207411-SR4	Mellanox FDR IB, 56Gbps QSFP optical module, MPO connector, SR4, 850ni
102206310-100	Mellanox active fiber cable, 4X QSFP, IB QDR/FDR10 (40Gb/s), 100m	MC2210411-SR4	Mellanox 40GE Ethernet, QSFP optical module, MPO connector, SR4, 850nr
102206310-300	Mellanox active fiber cable, 4X QSFP, IB QDR/FDR10 (40Gb/s), 300m	-	Gig Ethernet or Infiniband
102200310-005	FDR InfiniBand QSFP assembled optical cable, 5m		Mellanox SFP+ optical module for 10GBASE-LR
102207310-003	FDR InfiniBand QSFP assembled optical cable, 5m	MFM1T02A-LR	
1C2207310-015	FDR InfiniBand QSFP assembled optical cable, 10m	MFM1T02A-SR MFM1T022-FC	Mellanox SFP+ optical module for 10GBASE-SR
102207310-013	FDR InfiniBand QSFP assembled optical cable, 10m		Mellanox SFP+ optical module for 2Gb/s Fibre Channel
102207310-020	FDR InfiniBand QSFP assembled optical cable, 20m	MFM1T024-FC	Mellanox SFP+ optical module for 4Gb/s Fibre Channel
102207310-030	FDR InfiniBand QSFP assembled optical cable, 50m	MFM1T028-FC	Mellanox SFP+ optical module for 8Gb/s Fibre Channel
		MFM4R12C-QDR	40Gb/s InfiniBand QSFP optical module
	with QSFP connectors	Cable Adapters	
1CC4R32C-008	4x QSFP latch, 8 meters	MAM1000A-0SA	QSFP to SFP+ cable adapter
102206230-008	Mellanox Active Copper cables 4x QSFP latch, 8 meters	10G - SFP+ Transceiver	
1C2206230-010	Mellanox Active Copper cables 4x QSFP latch, 10 meters	OPT-90003	6024 ETH SFP+ SR TRANSCEIVER (UP TO 300M)
	e with SFP+ Connectors	OPT-90004	6024 ETH SFP+ LR TRANSCEIVER (UP TO 10KM)
ICC1S30A-00A	1X SFP+, 0.5 meter	1G - SFP Transceivers	
1CC1S30A-001	1X SFP+, 1 meter	OPT-90007	6024 ETH SFP LX FIBER TRANSCEIVER (UP TO 10KM)
1C3309130-00A	Mellanox passive copper cable, 1X SFP+, 10 Gb/s, 0.5m	_	
1C3309130-001	Mellanox passive copper cable, 1X SFP+, 10 Gb/s, 1m	-	
IC3309130-002	Mellanox passive copper cable, 1X SFP+, 10 Gb/s, 2m	-	
1C3309130-003	Mellanox passive copper cable, 1X SFP+, 10 Gb/s, 3m	_	
1C3309124-005	Mellanox passive copper cable, 1X SFP+, 10 Gb/s, 5m		



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