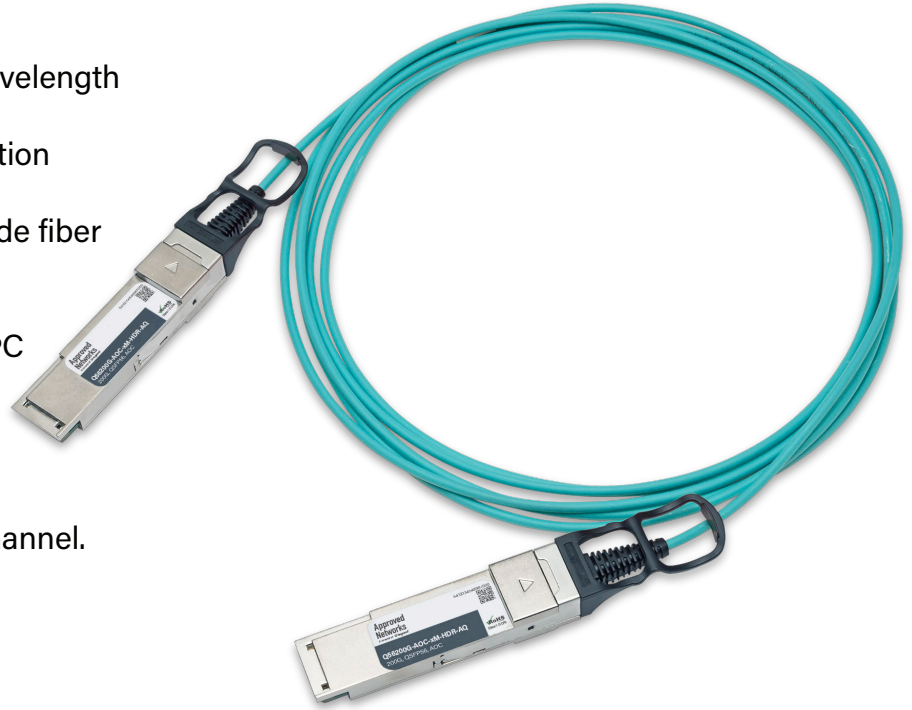


Features

- 4 parallel lanes on 850 nm center wavelength
- Compliant to IEEE 802.3cd Specification
- Up to 70m transmission on multi-mode fiber (MMF) OM3 with FEC
- Operating case temperature: 0 to 70°C
- 4x53.125Gb/s electrical interface (200GAUI-4)
- Data Rate 53.125Gbps (PAM4) per channel.
- Maximum power consumption 5W
- RoHS compliant



Applications

- Data Center Interconnect
- 200G Ethernet
- Infiniband interconnects
- Enterprise networking

1. Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Units
Storage Temperature	TS	-40	85	degC
Operating Case Temperature	TOP	0	70	degC
Power Supply Voltage	VCC	-0.5	3.6	V
Relative Humidity (non- condensation)	RH	0	85	%

2. Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Units	Notes
Operating Case Temperature	TOP	0		70	degC	
Power Supply Voltage	VCC	3.135	3.3	3.465	V	

Data Rate, each Lane			26.5625		GBd	PAM4
Data Rate Accuracy		-100		100	ppm	
Pre- FEC Bit Error Ratio				2.4×10^{-4}		
Post-FEC Bit Error Ratio				1×10^{-12}		1
Link Distance with OM3	D	0.5		70	m	2

Notes:

1. FEC provided by host system.
2. FEC required on host system to support maximum distance.

3. Electrical Characteristics

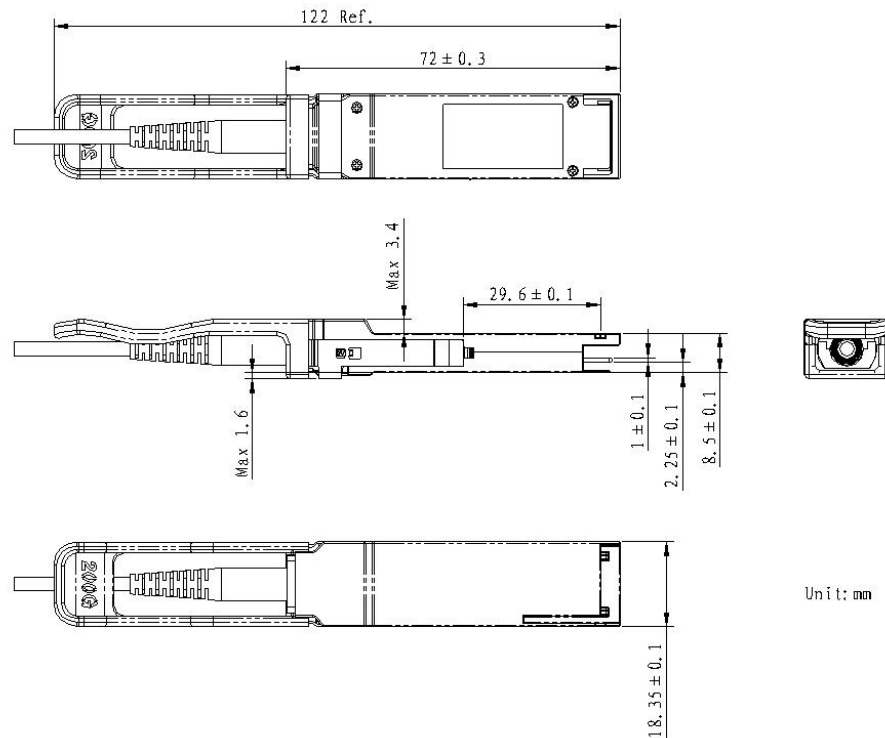
Parameter	Test Point	Min	Typical	Max	Units	Notes
Power Consumption				5	W	
Supply Current	Icc			1.52	A	
Transmitter (each Lane)						
Signaling Rate, each Lane	TP1	26.5625 ± 100 ppm			GBd	
Differential pk- pk Input Voltage Tolerance	TP1a	900			mVpp	1
Differential Termination Mismatch	TP1			10	%	
Differential Input Return Loss	TP1	IEEE 802.3-2015 Equation (83E-5)			dB	
Differential to Common Mode Input Return Loss	TP1	IEEE 802.3-2015 Equation (83E-6)			dB	
Module Stressed Input Test	TP1a	See IEEE 802.3bs 120E.3.4.1 2				
Single- ended Voltage Tolerance Range (Min)	TP1a	-0.4 to 3.3			V	
DC Common Mode Input Voltage	TP1	-350		2850	mV	3
Receiver (each Lane)						
Signaling Rate, each lane	TP4	26.5625 ± 100 ppm			GBd	
Differential Peak- to- Peak Output Voltage	TP4			900	mVpp	

Common Mode Voltage		-350		2850	mV	
AC Common Mode Output Voltage, RMS	TP4	17.5			mV	
Differential Termination Mismatch	TP4			10	%	
Differential Output Return Loss	TP4	IEEE 802.3-2015 Equation (83E-2)				
Common to Differential Mode Conversion Return Loss	TP4	IEEE 802.3-2015 Equation (83E-3)				
Transition Time, 20% to 80%	TP4			9.5	ps	
Near- end Eye Symmetry Mask Width (ESMW)	TP4		0.265		UI	
Near- end Eye Height, Differential	TP4	70			mV	
Far- end Eye Symmetry Mask Width (ESMW)	TP4		0.2		UI	
Far-end Eye Height, Differential	TP4	30			mV	
Far- end Pre-cursor ISI Ratio	TP4	-4.5		2.5	%	
Common Mode Output Voltage (Vcm)	TP4	-350		2850	mV	3

Notes:

1. With the exception to IEEE 802.3bs 120E.3.1.2 that the pattern is PRBS31Q or scrambled idle.
2. Meets BER specified in IEEE 802.3bs 120E.1.1.

4. Mechanical Diagram



Note: External physical characteristics are subject to variation. This may include, but is not limited to, external case designs, pull tab colors and/or shapes, removal latch styles or colors, and label sizes and placement. These variations do not affect the function or characteristics of the transceivers.

5. Ordering Information

OEM	Part Number	OEM	Part Number
Mellanox	MFS1S00-H002E-A	Mellanox	MFS1S00-H002E-A
Mellanox	MFS1S00-H005E-A	Mellanox	MFS1S00-H007E-A
Mellanox	MFS1S00-H009E-A	Mellanox	MFS1S00-H010E-A
Mellanox	MFS1S00-H015E-A	Mellanox	MFS1S00-H020E-A
Mellanox	MFS1S00-H030E-A		

6. Contact Information

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Web: <http://www.approvednetworks.com>