

Features

- 4 channels full-duplex transceiver modules
- Supports 100Gbps total data rate
- 4 channels 850nm VCSEL array
- 4 channels PIN photo detector array
- Low power consumption <3.5W
- Hot Pluggable QSFP form factor
- Maximum link length of 70m on OM3 Multimode Fiber (MMF) and 100m on OM4 MMF
- Single MPO connector receptacle
- Built-in digital diagnostic functions
- Operating case temperature 0°C to +70°C
- 3.3V power supply voltage
- RoHS 6 compliant (lead free)



Applications

- IEEE 802.3bm 100GBASE SR4
- Infiniband EDR

1. Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Units
Storage Temperature	TS	-20	85	°C
Operating Case Temperature	TOP	0	70	°C
Power Supply Voltage	VCC	-0.3	3.6	V
Relative Humidity (non-condensation)	RH	5	95	%
Input Voltage	Vin	-0.3	Vcc+0.3	V

2. Recommended Operating Conditions and Power Supply Requirements

Parameter	Symbol	Min	Typical	Max	Units
Operating Case Temperature	TOP	0		70	°C
Power Supply Voltage	VCC	3.13	3.3	3.47	V
Data Rate, each Lane			25.78125		Gb/s
Humidity	Rh	5		85	%
Power Dissipation	Pm			3.5	W
Fiber Bend Radius	Rb	3			cm

3. Electrical Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Differential input impedance	Zin	90	100	110	ohm
Differential Output impedance	Zout	90	100	110	ohm
Differential input voltage amplitude	ΔV_{in}	300		1100	mVp-p
Differential output voltage amplitude	ΔV_{out}	500	8	00	mVp-p
Skew	Sw			300	ps
Bit Error Rate	BER			E-12	
Input Logic Level High	VIH	2.0		VCC	V
Input Logic Level Low	VIL	0		0.8	V
Output Logic Level High	VOH	VCC-0.5		VCC	V
Output Logic Level Low	VOL	0		0.4	V

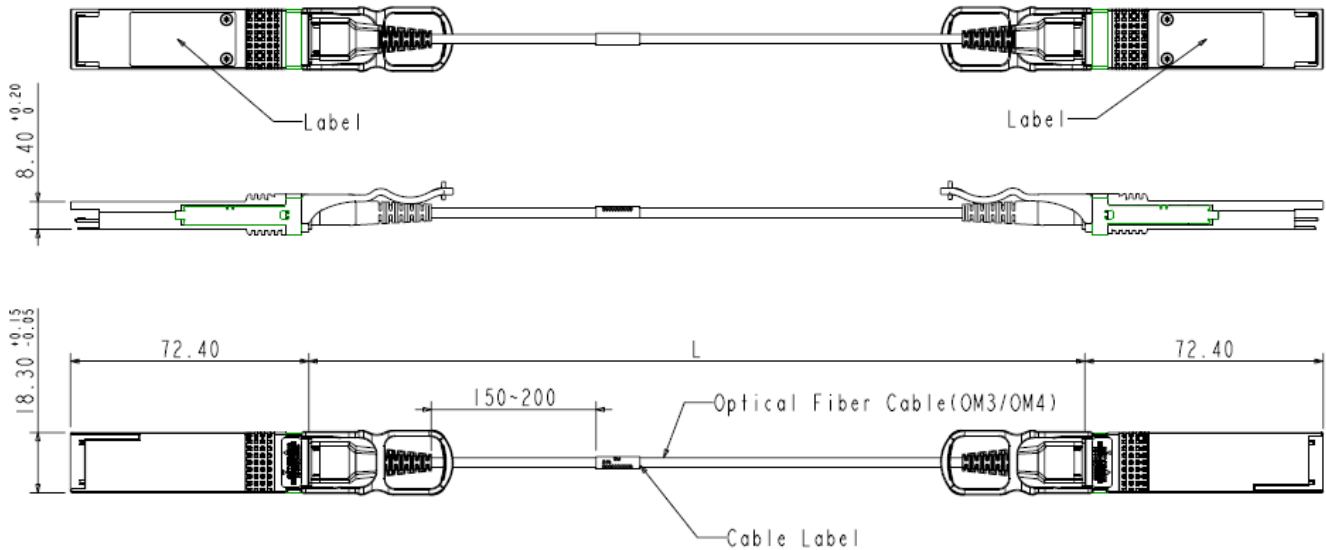
Notes:

1. BER=10⁻¹²; PRBS 2³¹-1@25.78125Gbps.
2. Differential input voltage amplitude is measured between TxnP and TxnN.
3. Differential output voltage amplitude is measured between RxnP and RxnN.

4. Optical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Transmitter						
Centre Wavelength	λ_c	840	850	860	nm	-
RMS spectral width	$\Delta\lambda$	-	-	0.6	nm	-
Average launch power, each lane	P _{out}	-8.4	-	2.4	dBm	-
Optical Modulation Amplitude (OMA), each lane	OMA	-6.4		3	dBm	-
Transmitter and dispersion eye closure (TDEC),each lane	TDEC		4.3	dB		
Extinction Ratio	ER	3	-	-	dB	-
Average launch power of OFF transmitter, each lane				-30	dB	-
Eye Mask coordinates: X1, X2, X3, Y1, Y2, Y3	SPECIFICATION VALUES {0.3,0.38,0.45,0.35,0.41,0.5}				Hit Ratio = 5x10 ⁻⁵	
Receiver						
Centre Wavelength	λ_c	840	850	860	nm	-
Stressed receiver sensitivity in OMA				-5.2	dBm	1
Maximum Average power at receiver, each lane				2.4	dBm	-
Minimum Average power at receiver, each lane				-10.3	dBm	
Receiver Reflectance				-12	dB	-
LOS Assert		-30			dBm	-
LOS De-Assert – OMA				-7.5	dBm	-
LOS Hysteresis		0.5			dB	-

5. 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.

6. Ordering Information

Our 100GBase QSFP28 Multi-vendor active optical cables come in varying lengths and OEM connection options. To build the perfect fit for you, please view how to create your part number below.

Example:

For a **Brocade to Cisco** AOC measuring the length of **1m**, the part number would be as follows: QSFP100G-**BRCS**-AOC-**1M**.

Please note that OEM abbreviations should be listed in alphabetical order.

Sample	OEM	OEM Abbreviations	Length <L>
QSFP100G-XXXX-AOC-<L>M	Arista	AN	1m
	Brocade	BR	3m
	Cisco	CS	5m
	Dell	DF	7m
	Intel	IN	10m
	Juniper	JN	12m
	Mellanox	MX	15m
	MSA	MS	20m
	-	-	25m

7. Contact Information

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