

100G QSFP28 Active Optical Cable(AOC)

QSFP-100G-AOxxx



Application

- 100G Ethernet
- Infiniband EDR

Features

- 4 independent full-duplex channels
- Up to 25.78Gb/s data rate per channel
- QSFP MSA compliant
- Up to 100m OM4 MMF transmission
- Operating case temperature: 0 to 70°C
- Single 3.3V power supply
- Maximum power consumption < 2.2W each terminal
- RoHS-6 compliant

Description

The QSFP-100G-AOxxxx is a Four-Channel, Pluggable, Parallel, Fiber-Optic QSFP28 AOC for 100 Gigabit Ethernet, Infiniband FDR/EDR.

Applications. This transceiver is a high performance module for short-range multi-lane data communication and interconnect applications. It integrates four data lanes in each direction with 100Gbps bandwidth.

This module is designed to operate over multimode fiber systems using a nominal wavelength of 850nm. The electrical interface uses a 38 contact edge type connector.

Product Specifications

I. Absolute Maximum Ratings

The operation in excess of any absolute maximum ratings might cause permanent damage to this module.

Parameter	Symbol	Min.	Typ.	Max.	Unit
Storage Temperature	T _c	-40		85	°C
Relative Humidity (non-condensing)	RH	0		85	%
Supply Voltage	V _{CC}	-0.5		3.6	V

II. Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating Case Temperature	T _{OP}	0		70	°C
Power Supply Voltage	V _{CC}	3.15	3.0	3.45	V
Data Rate, each Lane			25.78125		Gb/s
Fiber Bend Radius	R _b	3			cm

- Notes:
- 1. Supply current is shared between VCCTX and VCCRX.
 - 2. In-rush is defined as current level above steady state current requirements.

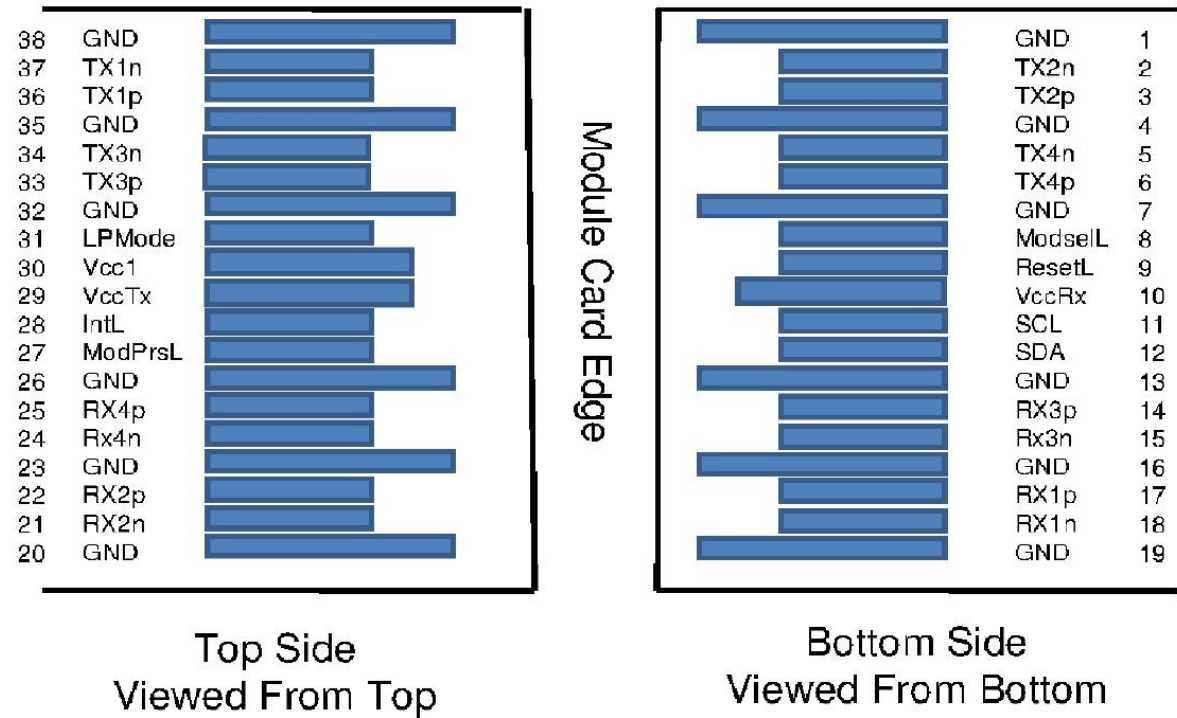
III. Transmitter Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit
Input Differential Impedance	Rin	90	100	110	Ω
Differential Input Voltage Swing, per Lane	Vin	300		1100	mV
Transmit Disable Voltage	VD	2.0	-	VCC+0.3	V
Transmit Enable Voltage	Ven	Vee		Vee+0.8	V

IV. Receiver Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit
Differential Output Swing, per lane	Vout	500		800	mV
Bit Error Rate	BER	-	-	10 ⁻¹²	
Output Differential Impedance	Rout	90	100	110	Ω
Loss of Signal –Asserted	-	2.0	-	VCC+0.3	V
Loss of Signal –Negated	-	Vee		Vee+0.8	V

V. Pin Function Definitions

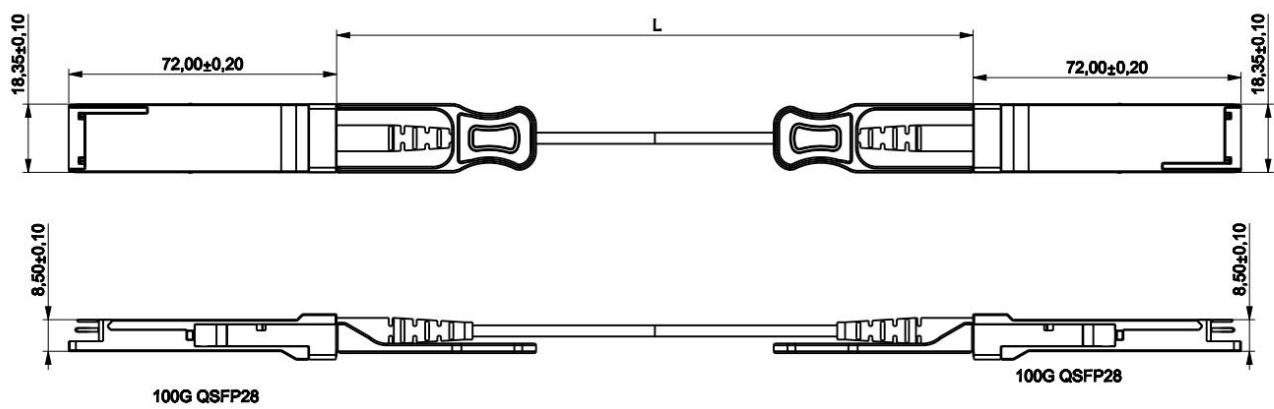


Pin	Symbol	Description
1	GND	Ground
2	Tx2n	Transmitter Inverted Data Input
3	Tx2p	Transmitter Non-Inverted Data Input
4	GND	Ground
5	Tx4n	Transmitter Inverted Data Input
6	Tx4p	Transmitter Non-Inverted Data Input
7	GND	Ground
8	ModSelL	Module Select
9	ResetL	Module Reset

Pin	Symbol	Description
10	Vcc Rx	+3.3 V Power supply receiver
11	SCL	2-wire serial interface clock
12	SDA	2-wire serial interface data
13	GND	Ground
14	Rx3p	Receiver Non-Inverted Data Output
15	Rx3n	Receiver Inverted Data Output
16	GND	Ground
17	Rx1p	Receiver Non-Inverted Data Output
18	Rx1n	Receiver Inverted Data Output
19	GND	Ground
20	GND	Ground
21	Rx2n	Receiver Inverted Data Output
22	Rx2p	Receiver Non-Inverted Data Output
23	GND	Ground
24	Rx4n	Receiver Inverted Data Output
25	Rx4p	Receiver Non-Inverted Data Output
26	GND	Ground
27	ModPrsL	Module Present
28	IntL	Interrupt
29	VCCTx	+3.3 V Power supply transmitter
30	VCC1	+3.3 V Power Supply

Pin	Symbol	Description
31	LPMODE	Low Power Mode
32	GND	Ground
33	Tx3p	Transmitter Non-Inverted Data Input
34	Tx3n	Transmitter Inverted Data Input
35	GND	Ground
36	Tx1p	Transmitter Non-Inverted Data Input
37	Tx1n	Transmitter Inverted Data Input
38	GND	Ground

VI. Mechanical Diagram



Unit: mm

VII. Order Information

Part Number	Description
QSFP-100G-AOxxx	100G QSFP28 Active Optical Cable