

QSFP28-100G-AOC-xM

100GBase QSFP28 to QSFP28
AOC Cable
Up to 150m Reach

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Features

- Supports 103.125 Gb/s Data Rate
- Up to 70m on OM3 and 100m on OM4 MMF
- Active optical cable
- Hot-pluggable QSFP28 form factor
- QSFP28 mechanical specification compliant with QSFP28 MSA
- Compliant with IEEE 802.3bm 100GBASE-SR4 standard
- Single +3.3V power supply
- Power consumption less than 2 W
- Commercial Operating Case Temperature: 0°C to 70°C
- RoHS compliant



Applications

- 100GBASE-SR4
- Data Center

Part number	Product description
QSFP28-100G-AOC-xM	xm 100GBase QSFP28 to QSFP28 AOC x = value for meters (e.g. 7M = 7 meters length)

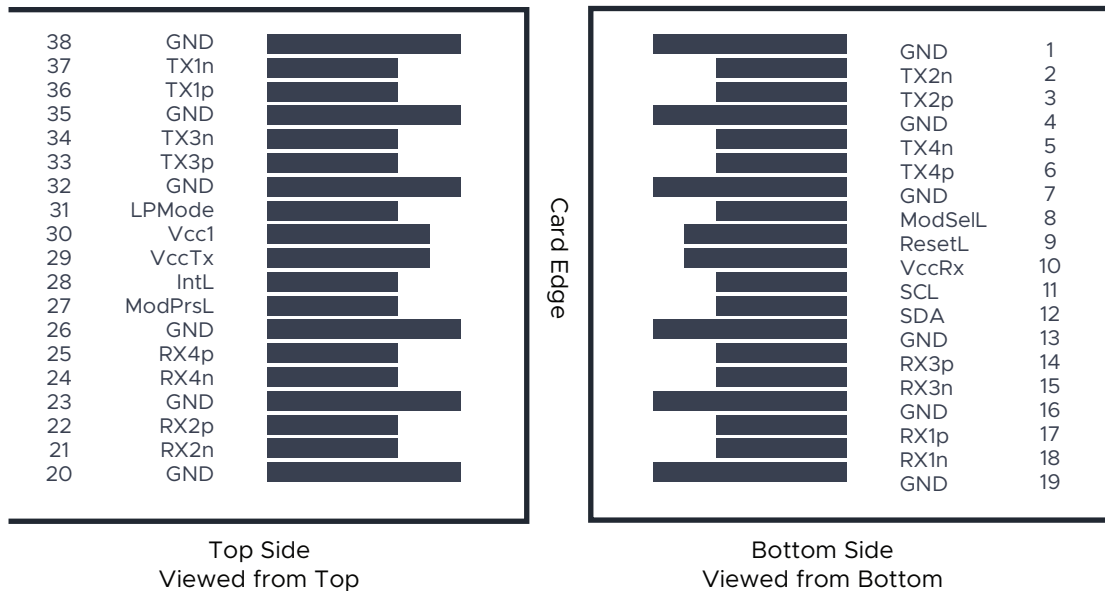
PIN Description

Pin		Function/Description	Notes
1	GND	Transmitter Ground (Common with Receiver Ground)	1
2	Tx2-	Transmitter Inverted Data Input	
3	Tx2+	Transmitter Non-Inverted Data output	
4	GND	Transmitter Ground (Common with Receiver Ground)	1
5	Tx4-	Transmitter Inverted Data Input	
6	Tx4+	Transmitter Non-Inverted Data output	
7	GND	Transmitter Ground (Common with Receiver Ground)	1
8	ModSelL	Module Select	2
9	ResetL	Module Reset	2
10	VccRx	3.3V Power Supply Receiver	
11	SCL	2-Wire serial Interface Clock	2
12	SDA	2-Wire serial Interface Data	2
13	GND	Transmitter Ground (Common with Receiver Ground)	1
14	Rx3+	Receiver Non-Inverted Data Output	
15	Rx3-	Receiver Inverted Data Output	
16	GND	Transmitter Ground (Common with Receiver Ground)	1
17	Rx1+	Receiver Non-Inverted Data Output	
18	Rx1-	Receiver Inverted Data Output	
19	GND	Transmitter Ground (Common with Receiver Ground)	1
20	GND	Transmitter Ground (Common with Receiver Ground)	1
21	Rx2-	Receiver Inverted Data Output	
22	Rx2+	Receiver Non-Inverted Data Output	
23	GND	Transmitter Ground (Common with Receiver Ground)	1
24	Rx4-	Receiver Inverted Data Output	1
25	Rx4+	Receiver Non-Inverted Data Output	
26	GND	Transmitter Ground (Common with Receiver Ground)	1
27	ModPrsl	Module Present	
28	IntL	Interrupt	2
29	VccTx	3.3V power supply transmitter	
30	Vcc1	3.3V power supply	
31	LPMODE	Low Power Mode	2
32	GND	Transmitter Ground (Common with Receiver Ground)	1
33	Tx3+	Transmitter Non-Inverted Data Input	
34	Tx3-	Transmitter Inverted Data Output	
35	GND	Transmitter Ground (Common with Receiver Ground)	1
36	Tx1+	Transmitter Non-Inverted Data Input	
37	Tx1-	Transmitter Inverted Data Output	
38	GND	Transmitter Ground (Common with Receiver Ground)	1

Notes:

1. The module signal grounds are isolated from the module case.
2. This is an open collector/drain output that on the host board requires a 4.7K Ω to 10K Ω pull-up resistor to VccHost.

Pin Assignment and Description



Absolute Maximum Ratings

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Maximum Supply Voltage	Vcc	-0.5	-	+4.0	V	
Storage Temperature	Ts	-40	-	+85	°C	
Relative Humidity	RH	5	-	95	%	1

Notes:

1. Non-condensing.

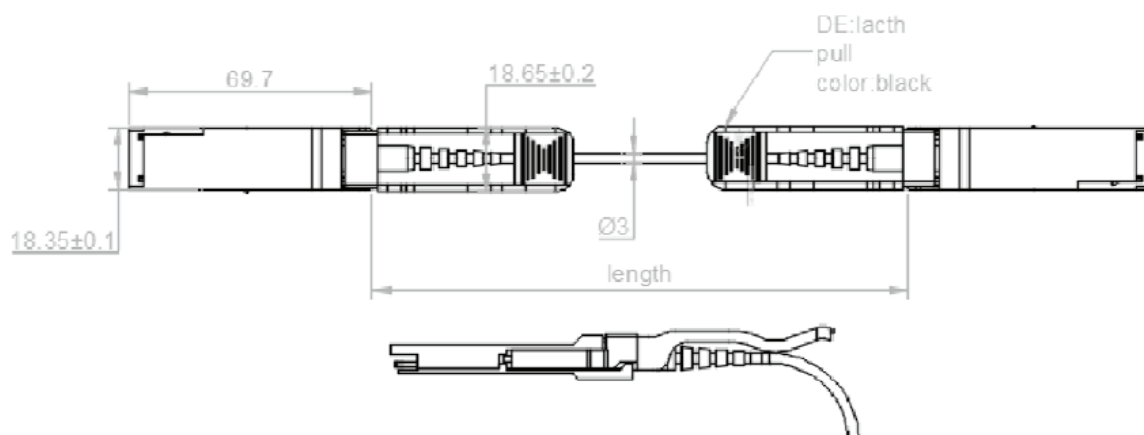
Recommend Operation Conditions

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Data Rate (per lane)	-	25.78	-	28.02	Gb/s	
Power Supply Voltage	Vcc	3.13	3.3	3.47	V	
Power Dissipation	Po	-	-	2.0	W	
Case Operating Temperature (com.)	Top	0	-	+70	°C	

Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Transmitter						
Input Differential Impedance	Zin	90	100	110	Ω	
Differential Input Voltage	Vppin	200	-	900	mV	
Receiver						
Output Differential Impedance	Zout	90	100	110	Ω	
Differential Output Voltage	Vppout	200	-	900	mV	

Block Diagram



Revision history

Revision	Date	Author	Description
V1.1	05-03-2020	JGN	Initial Document

Note : Nexgen A/S reserves the right to change this document without notice.