QSFP28-4x25G-AOC-xM

100G QSFP-DD to 4x 25G SFP28
AOC Cable
From 0.5m to 100m Reach

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Features

- QSFP28 MSA compliant
- SFP28 MSA compliant
- 4x 25Gb/s transmitter at QSFP28 end
- 4x channels 850nm at QSFP28 end
- 4x receiver at QSFP28 end
- 1x 25Gb/s transmitter at SFP28 end
- 1x channels 850nm VCSEL at SFP28 end
- 1x 25Gb/s receiver at SFP28 end
- Built-in CDR on transmitter & receiver channels
- Power dissipation <2W (0~70°C) at QSFP28 end
- Power dissipation <1W (0~70°C) at SFP28 end
- Both CMIS V5.1 & SFF8636 compliant
- 3.3V power supply
- RoHS-6 compliant & Lead Free

Applications

- 100GBASE to 25GBASE breakout
- Datacenter

Part number	Product description
QSFP28-4x25G-AOC-xM	xm 100GBase QSFP28 to 4x SFP28 AOC

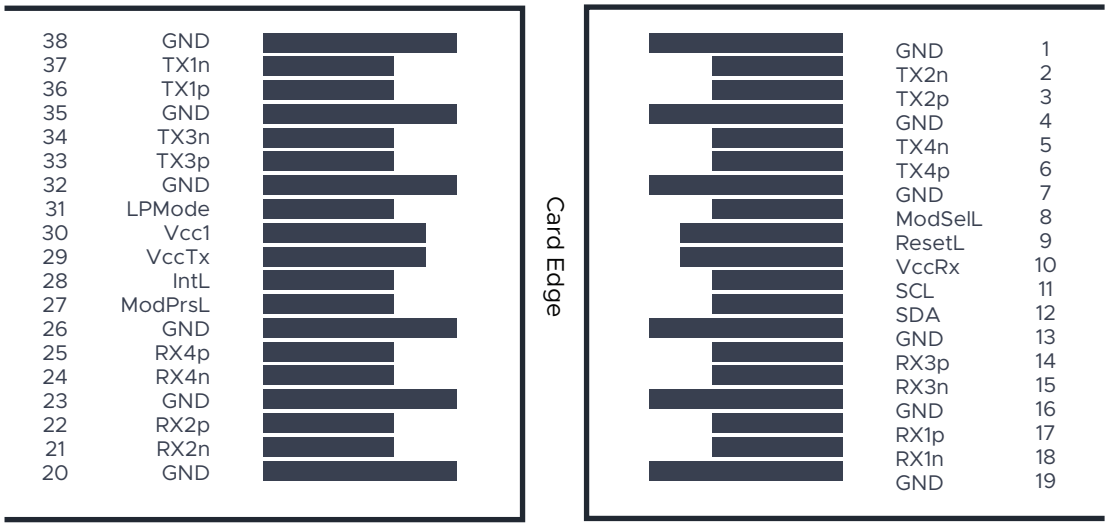
Notes:
1. x ranges from 0.5 to 100 (represents the cable length in meters)

PIN Description (QSFP28)

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 (C ommon 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 4.7KΩ to 10KΩ pull-up resistor to VccHost.

Pin Diagram (QSFP28)



Top Side
Viewed from Top

Bottom Side
Viewed from Bottom

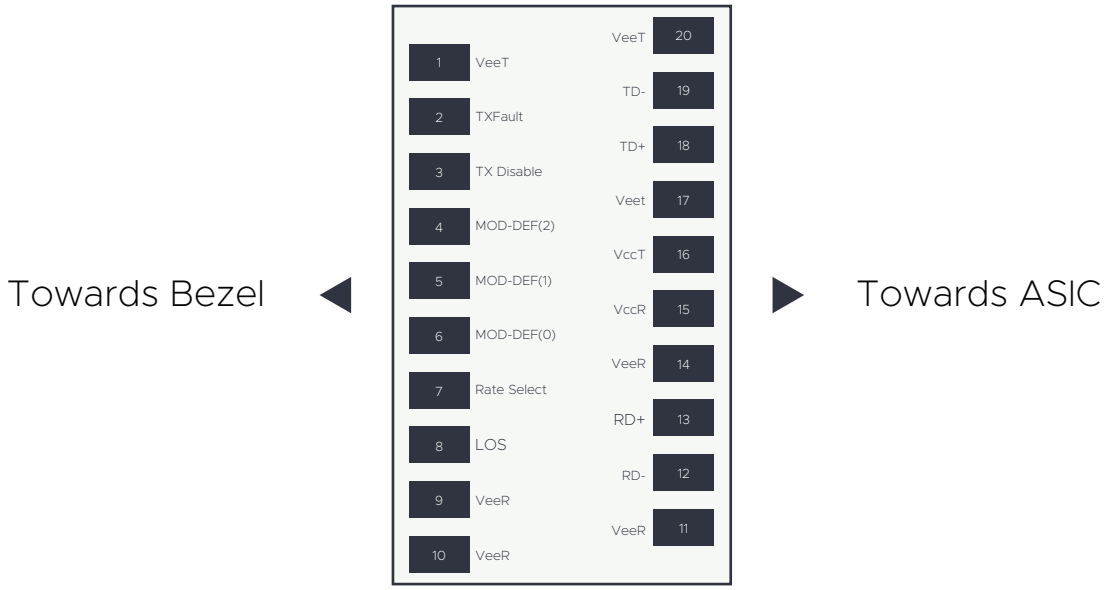
PIN Description (SFP28)

PIN	Symbol	Name - Description	Notes
1	VEET	Transmitter Ground (Common with Receiver Ground)	
2	TFAULT	Transmitter Fault. Not supported.	1
3	TDIS	Transmitter Disable. Laser output disabled on high or open.	2
4	MOD_DEF(2)	Module Definition 2. Data line for Serial ID.	1
5	MOD_DEF(1)	Module Definition 1. Clock line for Serial ID.	1
6	MOD_DEF(0)	Module Definition 0. Grounded within the module.	1
7	Rate Select	No connection required	
8	LOS	Loss of Signal indication. Logic 0 indicates normal operation.	3
9	VEER	Receiver Ground (Common with Transmitter Ground)	
10	VEER	Receiver Ground (Common with Transmitter Ground)	
11	VEER	Receiver Ground (Common with Transmitter Ground)	
12	RD-	Receiver Inverted DATA out. AC Coupled	4
13	RD+	Receiver Non-inverted DATA out. AC Coupled	4
14	VEER	Receiver Ground (Common with Transmitter Ground)	
15	VCCR	Receiver Power Supply	
16	VCCT	Transmitter Power Supply	
17	VEET	Transmitter Ground (Common with Receiver Ground)	
18	TD+	Transmitter Non-Inverted DATA in. AC Coupled.	5
19	TD-	Transmitter Inverted DATA in. AC Coupled.	5
20	VEET	Transmitter Ground (Common with Receiver Ground)	

Notes:

1. Open collector/drain output, which should be pulled up with a 4.7kΩ to 10kΩ resistor on the host board if intended for use. Pull up voltage should be between 2.0V to 3.6V. A high output indicates a transmitter fault caused by either the TX bias current or the TX output power exceeding the preset alarm thresholds. A low output indicates normal operation. In the low state, the output is pulled to <0.8V.
2. Laser output disabled on Tx_Disable >2.0V or open, enabled on Tx_Disable <0.8V.
3. LOS is open collector output. Should be pulled up with 4.7kΩ to 10kΩ on host board to a voltage between 2.0V and 3.6V. Logic 0 indicates normal operation; logic 1 indicates loss of signal.
4. RD-/+: These are the differential receiver outputs. They are internally AC-coupled 100Ω differential lines which should be terminated with 100Ω (differential) at the user SERDES.
5. TD-/+: These are the differential transmitter inputs. They are internally AC-coupled, differential lines with 100Ω differential termination inside the module.

Pin Diagram (SFP28)



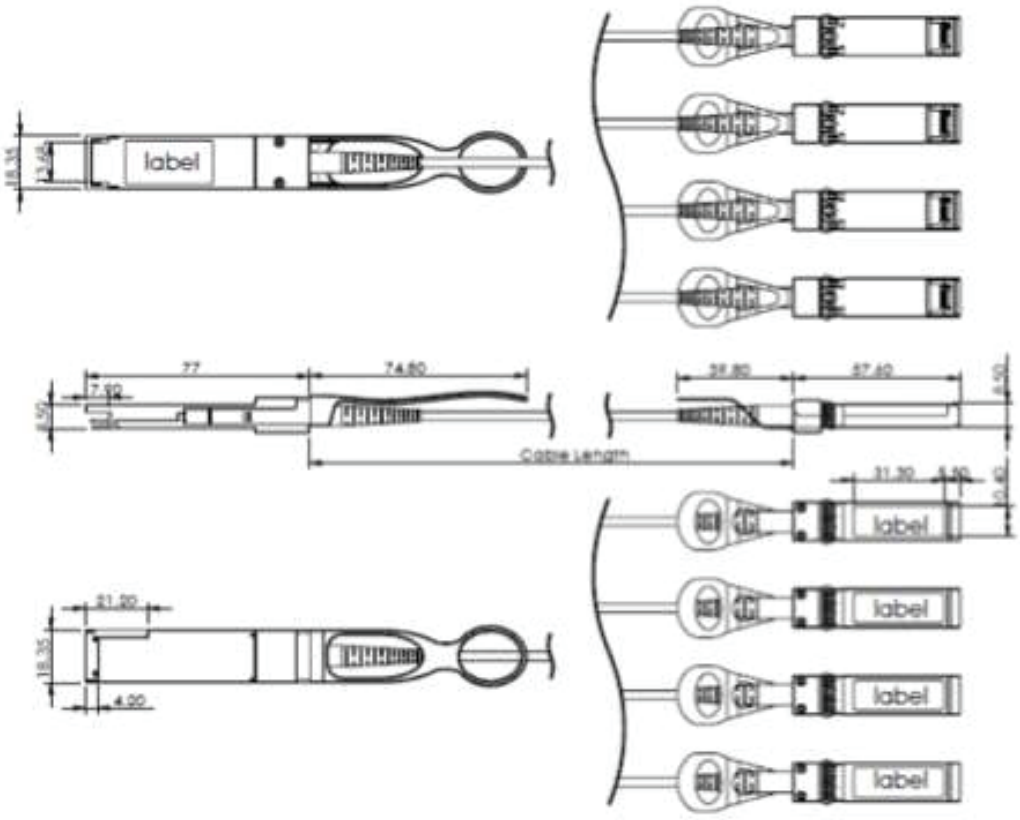
Absolute Maximum Ratings

Parameter	Min	Typ	Max	Unit	Notes
Storage Temperature	-40	-	85	°C	-
Power Supply Voltage	-0.5	-	4.0	V	-
Relative Humidity (non-condensation)	5.0	-	95	%	-

Recommend Operation Conditions

Parameter	Min	Typ	Max	Unit	Notes
Power Supply Voltage	3.13	3.3	3.47	V	-
Power Supply Current (com.) ASQSFP28 end	-	-	630	mA	-
Power Supply Current (com.) SFP28 end	-	-	300	mA	-
Case Operating Temperature (com.)	0	-	+70	°C	-

Mechanical specifications



units : mm

Revision history

Revision	Date	Author	Description
V1.1	16-05-2023	JGN	Initial Document

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