

1-3m 400 Gbps to 2 x 200 Gbps Breakout DAC Cable

ET7502-B2D-xM



The ET7502-B2D-xM is a 1-3 m short passive breakout copper direct attach cable with one QSFP-DD 400G connector and two QSFP56 200G connectors. The QSFP-DD DAC modules allow hardware manufactures to achieve high port density, configurability and utilization at a very low cost and reduced power budget. The high-speed cable assemblies meet and exceed Gigabit Ethernet and Fibre Channel industry-standard requirements for performance and reliability.

Key Features and Benefits

- QSFP-DD module compliant to QSFP-DD MSA
- QSFP56 module compliant to SFF8661
- Transmission data rate up to PAM4 53.125 Gbps per channel
- Enables 400 Gb/s to 2 x 200 Gb/s transmission
- Link length up to 3 m
- Built-in EEPROM functions
- Operating case temperature 0°C to +70°C
- RoHS2.0 compliant

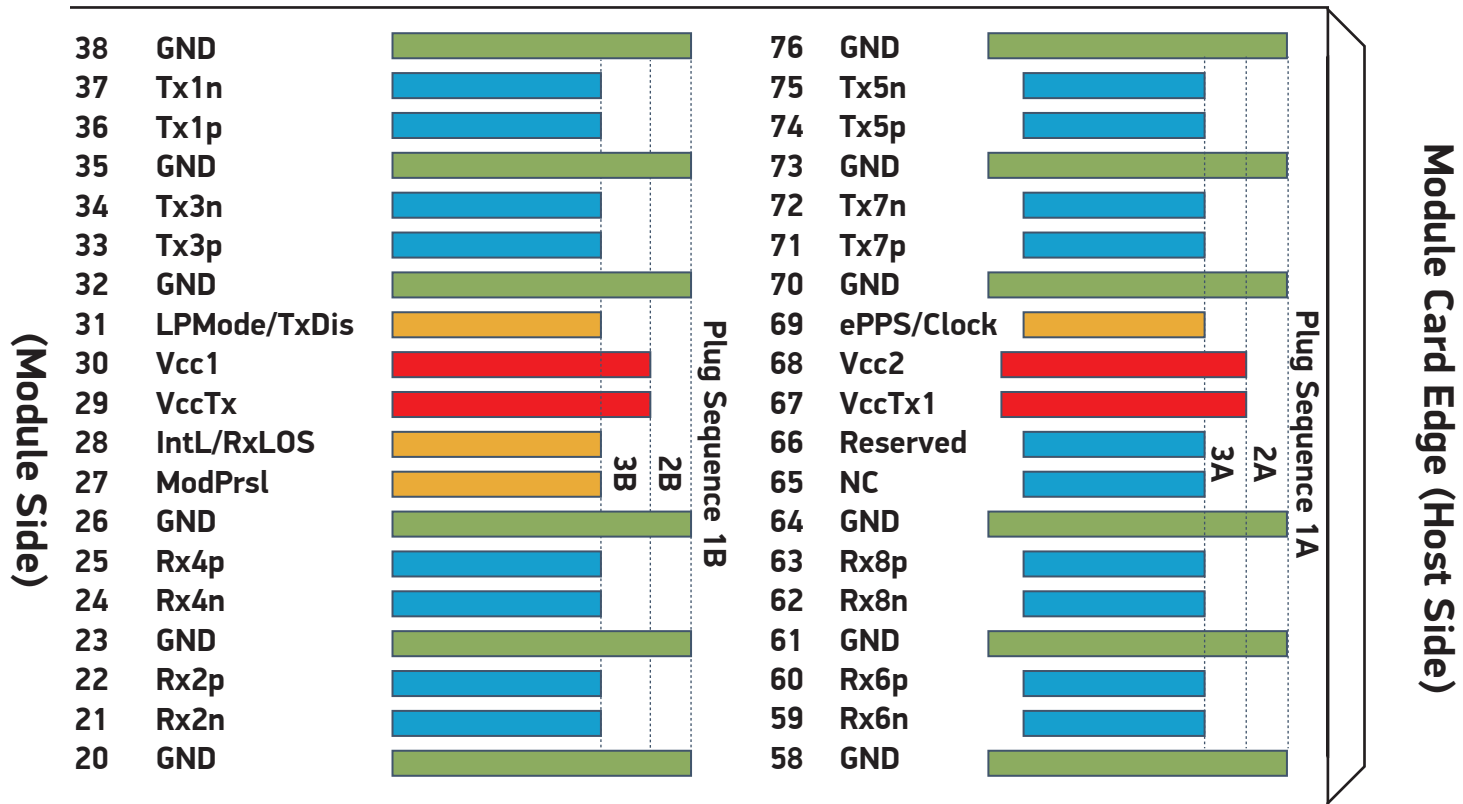
Applications

- Data center cabling infrastructure
- High capacity I/O in storage area networks, network attached storage, and storage servers
- High-density connections between networking equipment
- Switched fabric I/O such as ultra high-bandwidth switches and routers

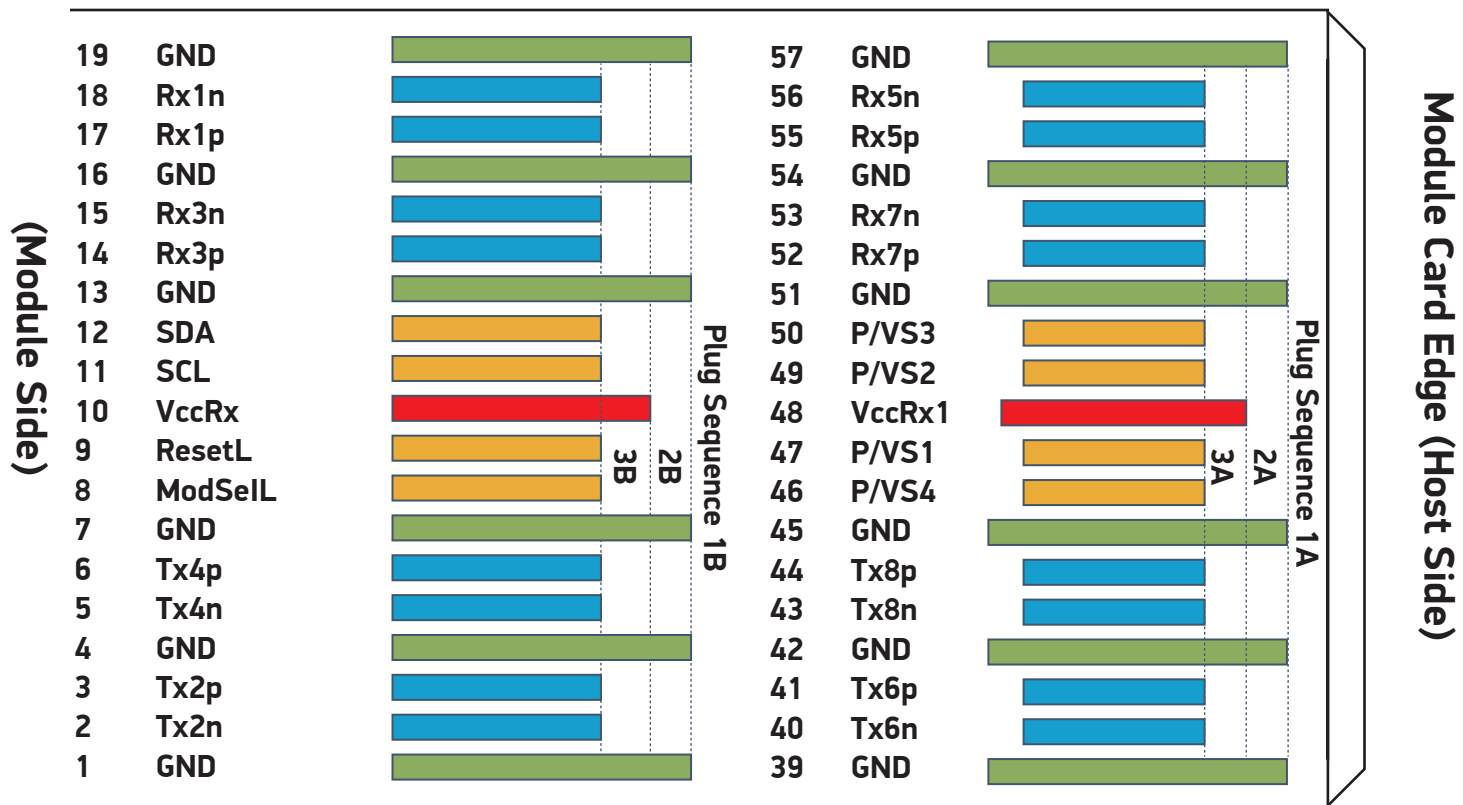
Recommended Operating Conditions

Parameter	Symbol	Minimum	Maximum	Unit
Storage Temperature	Tst	0	80	°C
Case Operating Temperature	Topc	0	70	°C
Supply Voltage	Vcc3	3.14	3.47	V
Relative Humidity	RH	5	80	%

PCB Viewed From Top



PCB Viewed From Bottom



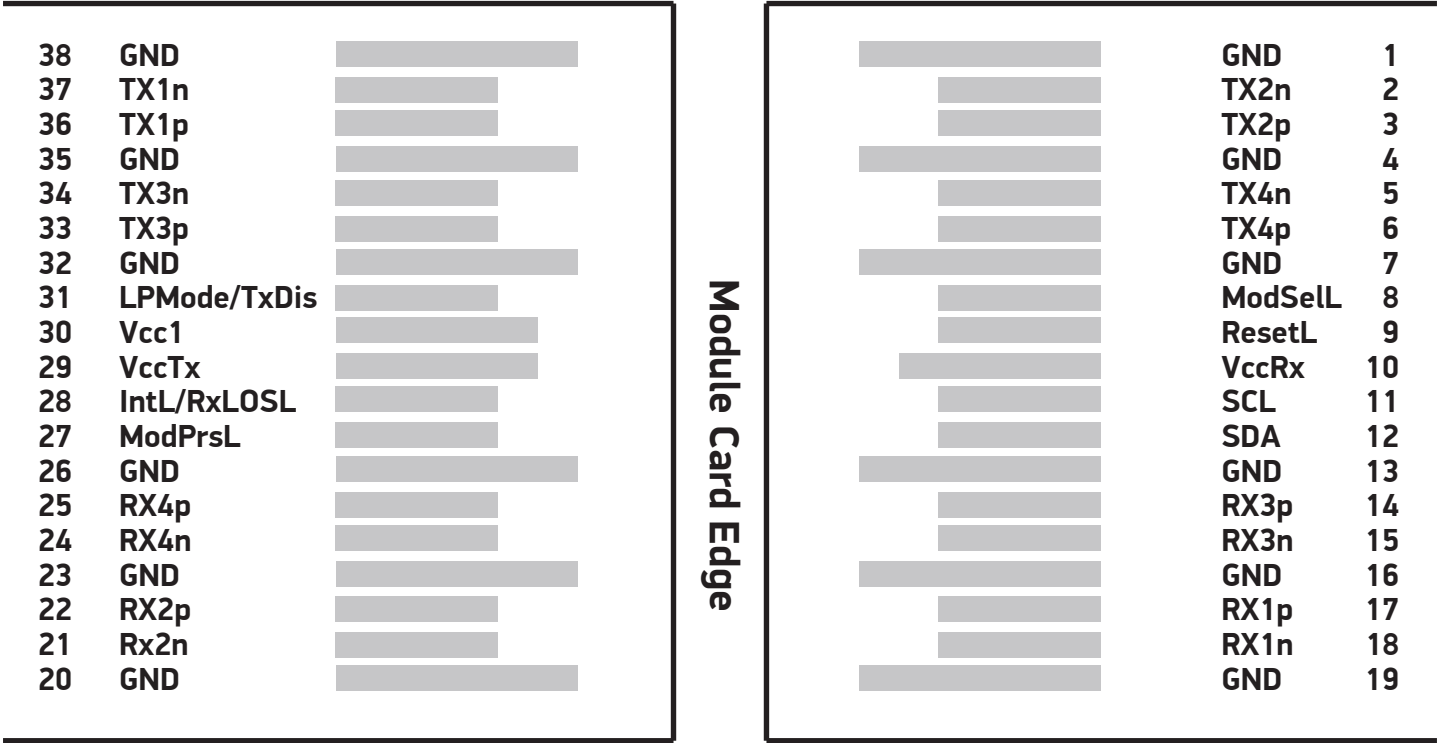
Electrical Pin-out Details for QSFP-DD

Pad	Logic	Symbol	Description	Plug Sequence
1		GND	Ground	1B
2	CML-I	Tx2n	Transmitter Inverted Data Input	3B
3	CML-I	Tx2p	Transmitter Non-Inverted Data Input	3B
4		GND	Ground	1B
5	CML-I	Tx4n	Transmitter Inverted Data Input	3B
6	CML-I	Tx4p	Transmitter Non-Inverted Data Input	3B
7		GND	Ground	1B
8	LVTTL-I	ModSelL	Module Select	3B
9	LVTTL-I	ResetL	Module Reset	3B
10		VccRx	+3.3V Power Supply Receiver	2B
11	LVC MOS-I/O	SCL	TWI Serial Interface Clock	3B
12	LVC MOS-I/O	SDA	TWI Serial Interface Data	3B
13		GND	Ground	1B
14	CML-O	Rx3p	Receiver Non-Inverted Data Output	3B
15	CML-O	Rx3n	Receiver Inverted Data Output	3B
16		GND	Ground	1B
17	CML-O	Rx1p	Receiver Non-Inverted Data Output	3B
18	CML-O	Rx1n	Receiver Inverted Data Output	3B
19		GND	Ground	1B
20		GND	Ground	1B
21	CML-O	Rx2n	Receiver Inverted Data Output	3B
22	CML-O	Rx2p	Receiver Non-Inverted Data Output	3B
23		GND	Ground	1B
24	CML-O	Rx4n	Receiver Inverted Data Output	3B
25	CML-O	Rx4p	Receiver Non-Inverted Data Output	3B
26		GND	Ground	1B
27	LVTTL-O	ModPrsL	Module Present	3B
28	LVTTL-O	IntL/RxLOS	Interrupt/Optional RxLOS	3B
29		VccTx	+3.3 V Power Supply Transmitter	2B
30		Vcc1	+3.3 V Power Supply	2B
31	LVTTL-I	LPMode/TxDis	Low Power Mode/Optional TX Disable	3B
32		GND	Ground	1B
33	CML-I	Tx3p	Transmitter Non-Inverted Data Input	3B
34	CML-I	Tx3n	Transmitter Inverted Data Input	3B
35		GND	Ground	1B
36	CML-I	Tx1p	Transmitter Non-Inverted Data Input	3B
37	CML-I	Tx1n	Transmitter Inverted Data Input	3B
38		GND	Ground	1B

Electrical Pin-out Details for QSFP-DD

Pad	Logic	Symbol	Description	Plug Sequence
39		GND	Ground	1A
40	CML-I	Tx6n	Transmitter Inverted Data Input	3A
41	CML-I	Tx6p	Transmitter Non-Inverted Data Input	3A
42		GND	Ground	1A
43	CML-I	Tx8n	Transmitter Inverted Data Input	3A
44	CML-I	Tx8p	Transmitter Non-Inverted Data Input	3A
45		GND	Ground	1A
46	LVC MOS/CML-I	P/VS4	Programmable/Module Vendor Specific 4	3A
47	LVC MOS/CML-I	P/VS1	Programmable/Module Vendor Specific 1	3A
48		VccRx1	3.3V Power Supply	2A
49	LVC MOS/CML-O	P/VS2	Programmable/Module Vendor Specific 2	3A
50	LVC MOS/CML-O	P/VS3	Programmable/Module Vendor Specific 3	3A
51		GND	Ground	1A
52	CML-O	Rx7p	Receiver Non-Inverted Data Output	3A
53	CML-O	Rx7n	Receiver Inverted Data Output	3A
54		GND	Ground	1A
55	CML-O	Rx5p	Receiver Non-Inverted Data Output	3A
56	CML-O	Rx5n	Receiver Inverted Data Output	3A
57		GND	Ground	1A
58		GND	Ground	1A
59	CML-O	Rx6n	Receiver Inverted Data Output	3A
60	CML-O	Rx6p	Receiver Non-Inverted Data Output	3A
61		GND	Ground	1A
62	CML-O	Rx8n	Receiver Inverted Data Output	3A
63	CML-O	Rx8p	Receiver Non-Inverted Data Output	3A
64		GND	Ground	1A
65		NC	No Connect	3A
66		Reserved	For Future Use	3A
67		VccTx1	3.3 V Power Supply	2A
68		Vcc2	3.3 V Power Supply	2A
69	LVC MOS-I	ePPS/Clock	1PPS PTP Clock or Reference Clock Input	3A
70		GND	Ground	1A
71	CML-I	Tx7p	Transmitter Non-Inverted Data Input	3A
72	CML-I	Tx7n	Transmitter Inverted Data Input	3A
73		GND	Ground	1A
74	CML-I	Tx5p	Transmitter Non-Inverted Data Input	3A
75	CML-I	Tx5n	Transmitter Inverted Data Input	3A
76		GND	Ground	1A

Pin Description



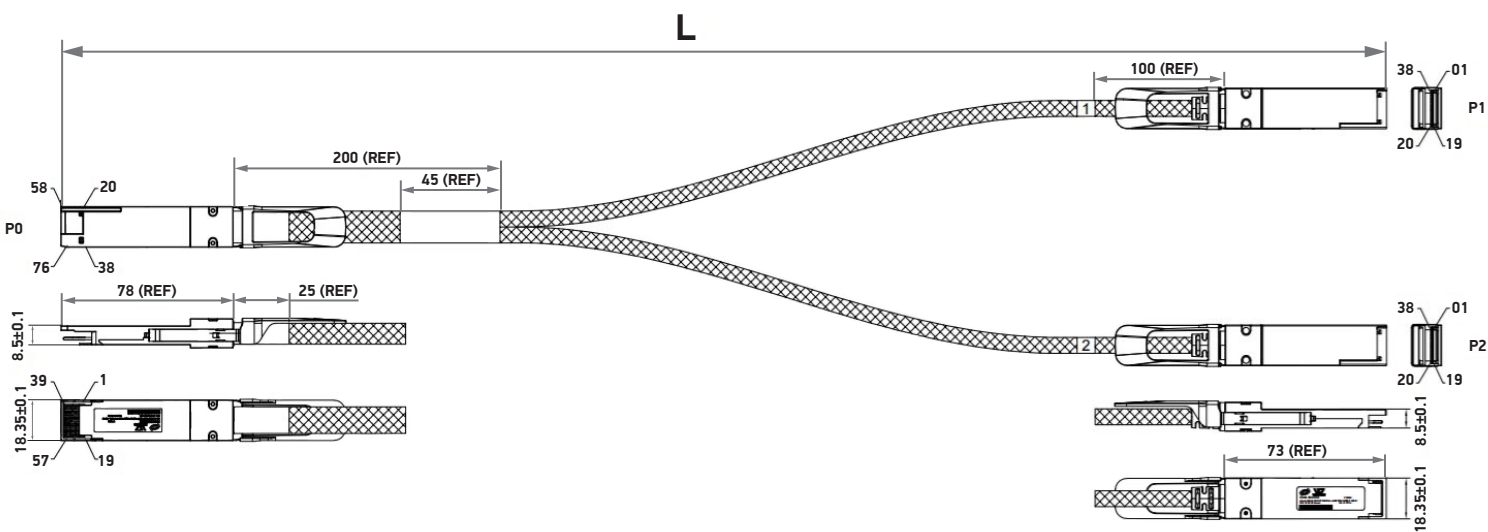
Top Side
Viewed From Top

Bottom Side
Viewed From Bottom

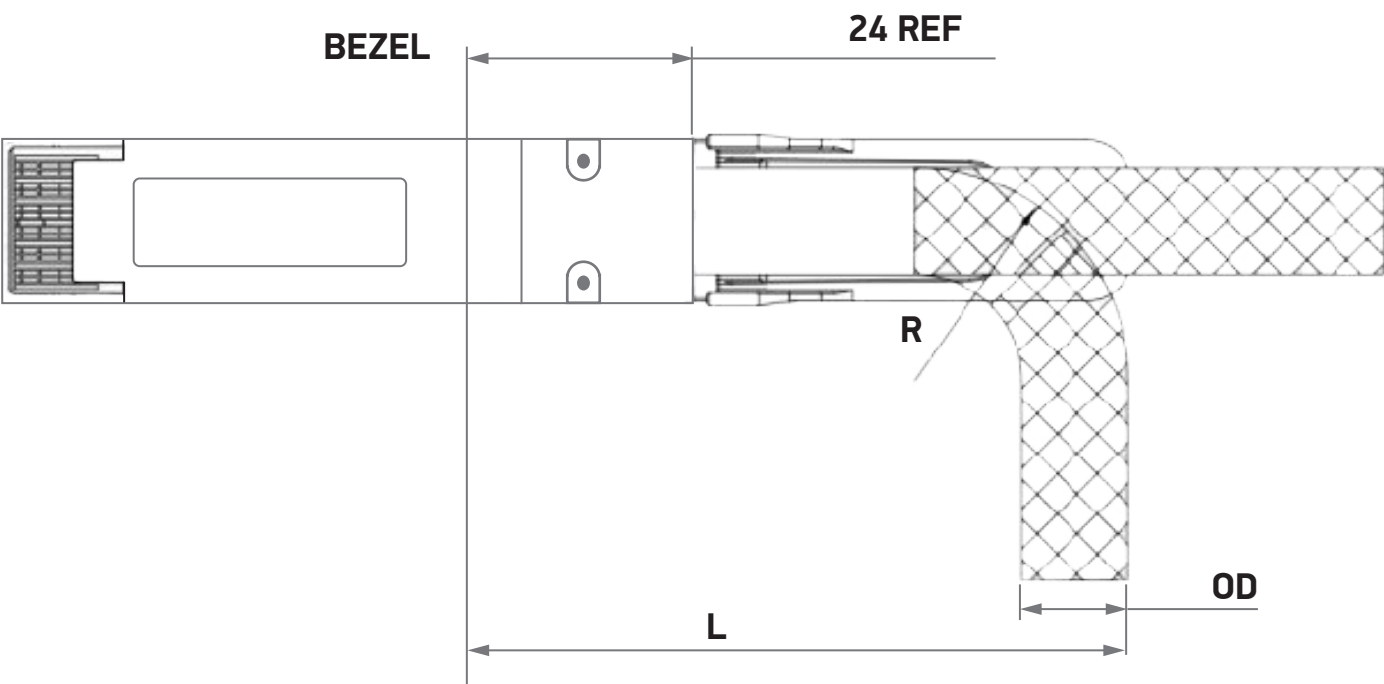
Electrical Pin-out Details for QSFP56

Pad	Logic	Symbol	Description	Plug Sequence
1		GND	Ground	1
2	CML-I	Tx2n	Transmitter Inverted Data Input	3
3	CML-I	Tx2p	Transmitter Non-Inverted Data Input	3
4		GND	Ground	1
5	CML-I	Tx4n	Transmitter Inverted Data Input	3
6	CML-I	Tx4p	Transmitter Non-Inverted Data Input	3
7		GND	Ground	1
8	LVTTL-I	ModSelL	Module Select	3
9	LVTTL-I	ResetL	Module Reset	3
10		VccRx	+3.3V Power Supply Receiver	2
11	LVC MOS-I/O	SCL	2-wire Serial Interface Clock	3
12	LVC MOS-I/O	SDA	2-wire Serial Interface Data	3
13		GND	Ground	1
14	CML-O	Rx3p	Receiver Non-Inverted Data Output	3
15	CML-O	Rx3n	Receiver Inverted Data Output	3
16		GND	Ground	1
17	CML-O	Rx1p	Receiver Non-Inverted Data Output	3
18	CML-O	Rx1n	Receiver Inverted Data Output	3
19		GND	Ground	1
20		GND	Ground	1
21	CML-O	Rx2n	Receiver Inverted Data Output	3
22	CML-O	Rx2p	Receiver Non-Inverted Data Output	3
23		GND	Ground	1
24	CML-O	Rx4n	Receiver Inverted Data Output	3
25	CML-O	Rx4p	Receiver Non-Inverted Data Output	3
26		GND	Ground	1
27	LVTTL-O	ModPrsL	Module Present	3
28	LVTTL-O	IntL	Interrupt	3
29		VccTx	+3.3 V Power Supply Transmitter	2
30		Vcc1	+3.3 V Power Supply	2
31	LVTTL-I	LPMode	Low Power Mode	3
32		GND	Ground	1
33	CML-I	Tx3p	Transmitter Non-Inverted Data Input	3
34	CML-I	Tx3n	Transmitter Inverted Data Input	3
35		GND	Ground	1
36	CML-I	Tx1p	Transmitter Non-Inverted Data Input	3
37	CML-I	Tx1n	Transmitter Inverted Data Input	3
38		GND	Ground	1

Mechanical Drawing



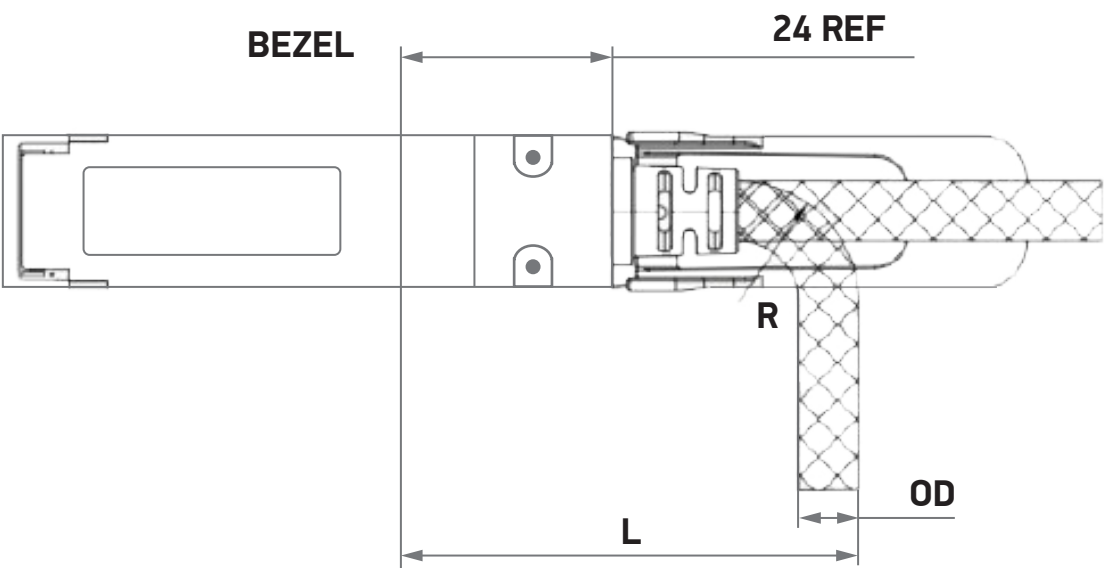
800G QSFP-DD Bending Radius



800G QSFP-DD

Gauge	OD	Bend Radius "R"	Bend Radius "L"
30 AWG	9.5 mm	19 mm	64 mm
27 AWG	10.7 mm	22 mm	66 mm

QSFP112 Bending Radius



QSFP112

Gauge	OD	Bend Radius "R"	Bend Radius "L"
30 AWG	5.7 mm	12 mm	46 mm
27 AWG	7.6 mm	16 mm	53 mm

Ordering Information

Model Number	Length	AWG	Region
ET7502-B2D-0.5M	0.5 M	30	All
ET7502-B2D-1M	1 M	30	All
ET7502-B2D-1.5M	1.5 M	30	All
ET7502-B2D-2M	2 M	30	All
ET7502-B2D-2.5M	2.5 M	27	All
ET7502-B2D-3M	3 M	27	All

Warranty

Please check www.edge-core.com for the warranty terms in your country.

For More Information

To find out more about Edgecore Networks Corporation products and solutions, visit www.edge-core.com.

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