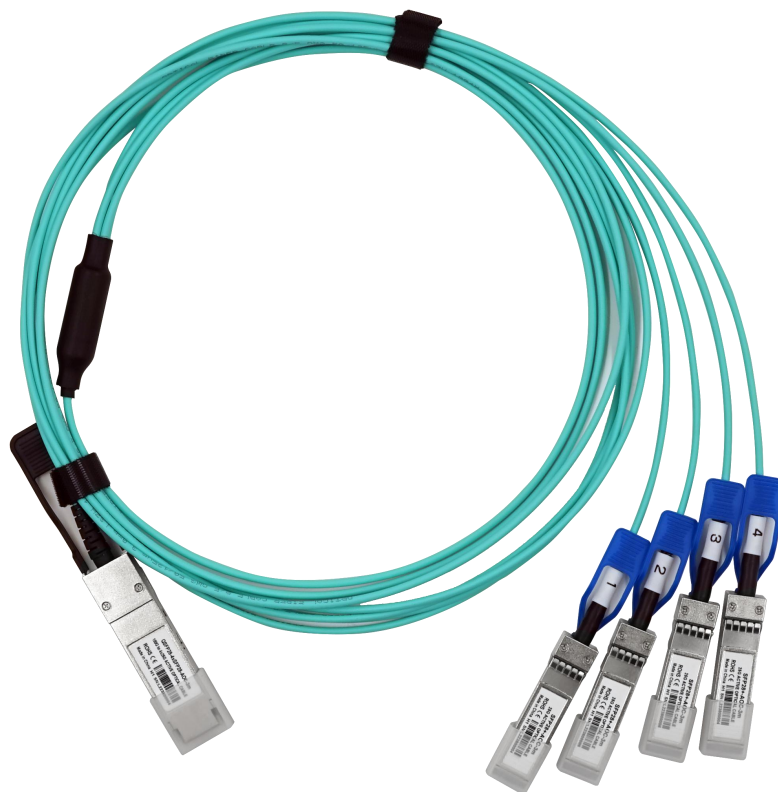


QSFP28-4xSFP28-AOC-3m

— 100G QSFP28 to 4x25G SFP28 breakout Active Optical Cables

LR-LINK
Link your world to everywhere

Overview



LR-LINK QSFP28-4xSFP28-AOC-3m uses OM3 multimode fiber, which is suitable for merging 100G QSFP28 and 25G SFP28 enabled host adapters, switches and servers. For typical applications, users can install this breakout or splitter cable between an available QSFP28 port on 100Gbps switch and feed up to 4 upstream SFP28 enabled 25Gbps switches. Each cable features a single SFF-8436 compliant QSFP28 connector rated for 103Gb/s on one end and 4 SFF-8431 compliant SFP28 connectors rated for 25.78Gb/s each on the other end.

The QSFP28-4xSFP28-AOC-3m active optical cable can be used as a drop-in replacement for traditional cable (DAC), with lighter weight and smaller diameter. QSFP28-4xSFP28-AOC-3m provides a standard length of 3m, which is suitable for application scenarios such as 100G Ethernet application.

Application

- § IEEE 802.3bm 100GBASE-SR4
- § IEEE 802.3by 25GBASE-SR
- § InfiniBand SDR/DDR/QDR
- § High-Performance Computing (HPC) clusters
- § Servers, switches, storage and host card adapters

Sales : service@lr-link.com
Support: support@lr-link.com

Key Features

- § Single power supply +3.3V;
- § Hot-pluggable electrical interface;
- § 850nm VCSEL laser transmitter and PIN receiver;
- § 4 duplex lanes active optical cable at 25.7Gbps;
- § SFF-8436 compliant QSFP28 connector
- § 4x SFF-8431 compliant SFP28 connectors
- § RoHS Compliant;
- § Operating Case Temperature: 0°C~+70°C;
- § Storage Temperature: -20°C~+85°C;

Technical parameter

Absolute Maximum Ratings					
Parameter	Symbol	Min.	Typical	Max.	Unit
Supply Voltage	V _{CC}	-0.5	-	4	V
Storage Temperature	T _{ST}	-20	-	85	°C
Operating temperature	T _{OPC}	0	-	70	°C
Relative Humidity (non-condensing)	R _H	0	-	85	%
Bit Error Rate	BER	-	-	5x10 ⁻⁵	-
Fiber Bend Radius	R _b	30	-	-	mm
Recommended work environment					
Parameter	Symbol	Min.	Typical	Max.	Unit
Operating Case Temperature	T _A	0	-	70	°C
Power Supply Voltage	V _{CC}	3.15	3.3	3.46	V

Photoelectric properties

Transmitter Electrical Specifications					
Parameter	Symbol	Min.	Typical	Max.	Unit
data rate per channel	DR	-	25.78	-	Gb/s
Differential data input swing(SFP28)	V _{in PP}	180	-	700	mV
Differential data input swing(QSFP28)	V _{in PP}	-	-	900	mV

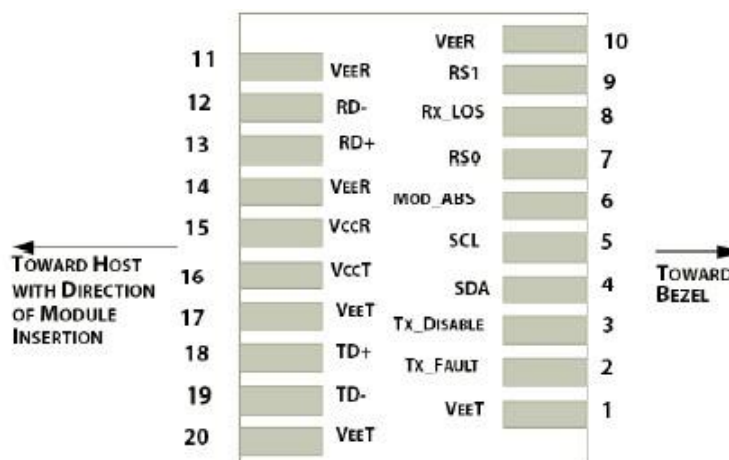
Input differential impedance(SFP28)	R _{in}	-	100	-	Ω
Input differential impedance(QSFP28)	R _{in}	90	100	110	Ω
Transmit Disable Voltage(SFP28)	V _D	2.0	-	V _{CC}	V
Transmit Enable Voltage(SFP28)	V _{EN}	V _{EE}	-	V _{EE} +0.8	V
Receiver Electrical Specifications					
Parameter	Symbol	Min.	Typical	Max.	Unit
data rate per channel	DR	-	25.78	-	Gb/s
Differential data output swing(SFP28)	V _{OUT PP}	300	-	850	mV
Differential data output swing(QSFP28)	V _{OUT PP}	400	600	800	mV
Output signal rise/fall time (20%-80%)(SFP28)	R _{in}	-	100	-	Ω
Output signal rise/fall time (20%-80%)(QSFP28)	R _{in}	90	100	110	Ω
Transmit Disable Voltage(SFP28)	V _D	2.0	-	V _{CC}	V
Transmit Enable Voltage(SFP28)	V _{EN}	V _{EE}	-	V _{EE} +0.8	V

Order Information

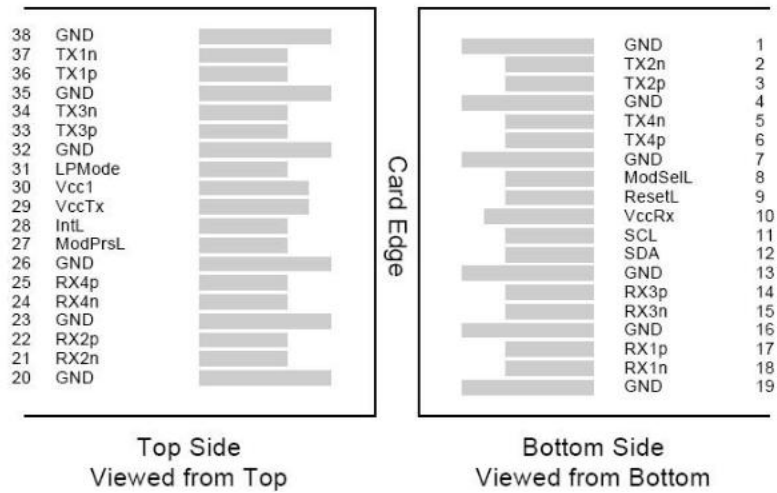
P/N	Description	PS
QSFP28-4xSFP28-AOC-3m	100G QSFP28 to 4x25G SFP28 breakout Active Optical Cables	Length: 3 meters

PS: Above details are only for reference, if there is any change, no prior notice.

SFP28 Module Pad Layout



QSFP28 Module Pad Layout



SFP28 Pin Definitions

Pin	Name	Function/Description
1	VeeT	Transmitter Ground
2	Tx_Fault	Transmitter Fault - High indicates a fault condition
3	Tx_Disable	Transmitter Disable – High or open disables the transmitter
4	SDA	Two wire serial interface Data Line
5	SCL	Two wire serial interface Clock Line
6	MOD_ABS	Module Absent (Output), connected to VeeT or VeeR in the module
7	RS0	Rx Rate Select,not used
8	RX_LOS	Loss of Signal indication. Logic 0 indicates normal operation
9	RS1	Tx Rate Select,not used
10	VeeR	Receiver Ground
11	VeeR	Receiver Ground
12	RD-	Receiver Inverted DATA out
13	RD+	Receiver Non-inverted DATA out
14	VeeR	Receiver Ground
15	VccR	Receiver Power Supply
16	VccT	Transmitter Power Supply

17	VeeT	Transmitter Ground
18	TD+	Transmitter Non-Inverted DATA in
19	TD-	Transmitter Inverted DATA in
20	VeeT	Transmitter Ground

QSFP28 Pin Definitions

Pin	Name	Function/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
10	Vcc Rx	+3.3V 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	Vcc Tx	+3.3V Power supply transmitter
30	Vcc1	+3.3V Power supply
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

Companion Products

Fiber NIC

- § LR-LINK PCI 100FX Desktop Adapter
- § LR-LINK PCIe 100FX Desktop Adapter
- § LR-LINK PCI 1000BASE-SX/LX Desktop Adapter
- § LR-LINK PCIe 1000BASE-SX/LX Desktop Adapter
- § LR-LINK PCIe 1000BASE-SX/LX Server Adapter
- § LR-LINK PCIe 10GBASE-SX/LX Server Adapter
- § LR-LINK PCIe 25GBASE-SX/LX Server Adapter
- § LR-LINK PCIe 40GBASE-SX/LX Server Adapter
- § LR-LINK PCIe 100GBASE-SX/LX Server Adapter

Copper NIC

- § LR-LINK PCI 10/100Mbps Desktop Adapter
- § LR-LINK PCIe 10/100Mbps Desktop Adapter
- § LR-LINK PCI 10/100/1000Mbps Desktop Adapter
- § LR-LINK PCIe 10/100/1000Mbps Desktop Adapter
- § LR-LINK PCIe 10/100/1000Mbps Server Adapter
- § LR-LINK PCIe 100/1G/10Gbps Server Adapter
- § LR-LINK PCIe 1G/2.5G/5G/10Gbps Server Adapter

Download Drivers

To get the drivers, please visit us at: <http://www.lr-link.com/support/driver.html>.

Product Quick Guide

To know the network card basic knowledge to choose the suitable NIC you need, please visit us at: <http://www.lr-link.com/productchoose.html>.

Customer Support

LR-LINK customer Support Services offers a broad selection of programs including phone support and warranty service. For more information, contact us at Service and availability.

<http://www.lr-link.com/contactus.html>

Shenzhen Lianrui Electronics Co.,LTD.

Shenzhen Lianrui Electronics Co.,Ltd is an efficient Ethernet adapter design company with independent research and development,using Intel,Net-swift,Tehuite,Broadcom,Realtek and other manufacturers Ethernet controller, developed by our company's independent R&D design team, manufactured by our company workshop, and then sell.

Declaration

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