

1.6T OSFP-RHS to OSFP-RHS Active Copper Cable

FZR-1600xxM02C

Features

- ✓ 1600Gb/s data rate
- ✓ Support 8x200Gb/s PAM4 modulations with 16 pairs
- ✓ Hot-plug OSFP RHS(Riding Heat Sink) form factor
- ✓ Support up to 2m length
- ✓ 100Ohm differential impedance system
- ✓ 3.3V power supply & typical power consumption 2.5W
- ✓ Commercial case temperature range of 0°C to 70°C
- ✓ I2C management by MCU

Applications

- ✓ Infiniband XDR
- ✓ Switch / router / HBA
- ✓ Enterprise network
- ✓ Data Center Network
- ✓ Data storage and communication industry



STANDARDS COMPLIANCE

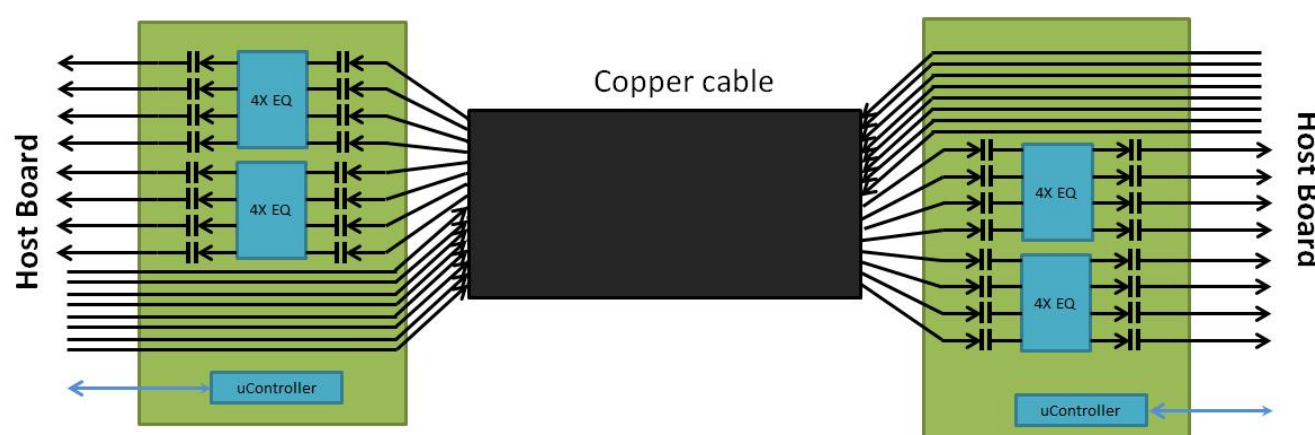
- ✓ IEEE P802.3dj D2.0
- ✓ OSFP MSA R4.1
- ✓ CMIS 5.0
- ✓ RoHS

Description

FIBERSTAMP's OSFP RHS ACC(Active Copper Cable) assembly series product provide superior signal integrity performance and reliability, comparing to PCC and AOC, ACC is a re-drive solution which built-in linear equalizer to compensate transmission loss, it is an effective solution with low power, low latency, low cost to help high-speed data centers even AI high-computational applications.

The cable of this product connects data signals from each of the 16 pairs on the single OSFP RHS end to the other OSFP RHS end, each pair operates at data rates of up to 200Gb/s and can be adaptive downward compatibility. The product operates 3.3V power supply and comply with OSFP MSA and IEEE802.3dj ,it's high performance & cost effective I/O solutions for LAN, HPC and SAN. The high speed cable assemblies meet 1.6T Ethernet, XDR Infiniband requirements for performance and reliability.

Block Diagram



Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage Temperature	T _s	-40	85	°C
Humidity(non-condensing)	Rh	5	95	°C
Supply Voltage	V _{cc}	-0.3	3.6	%

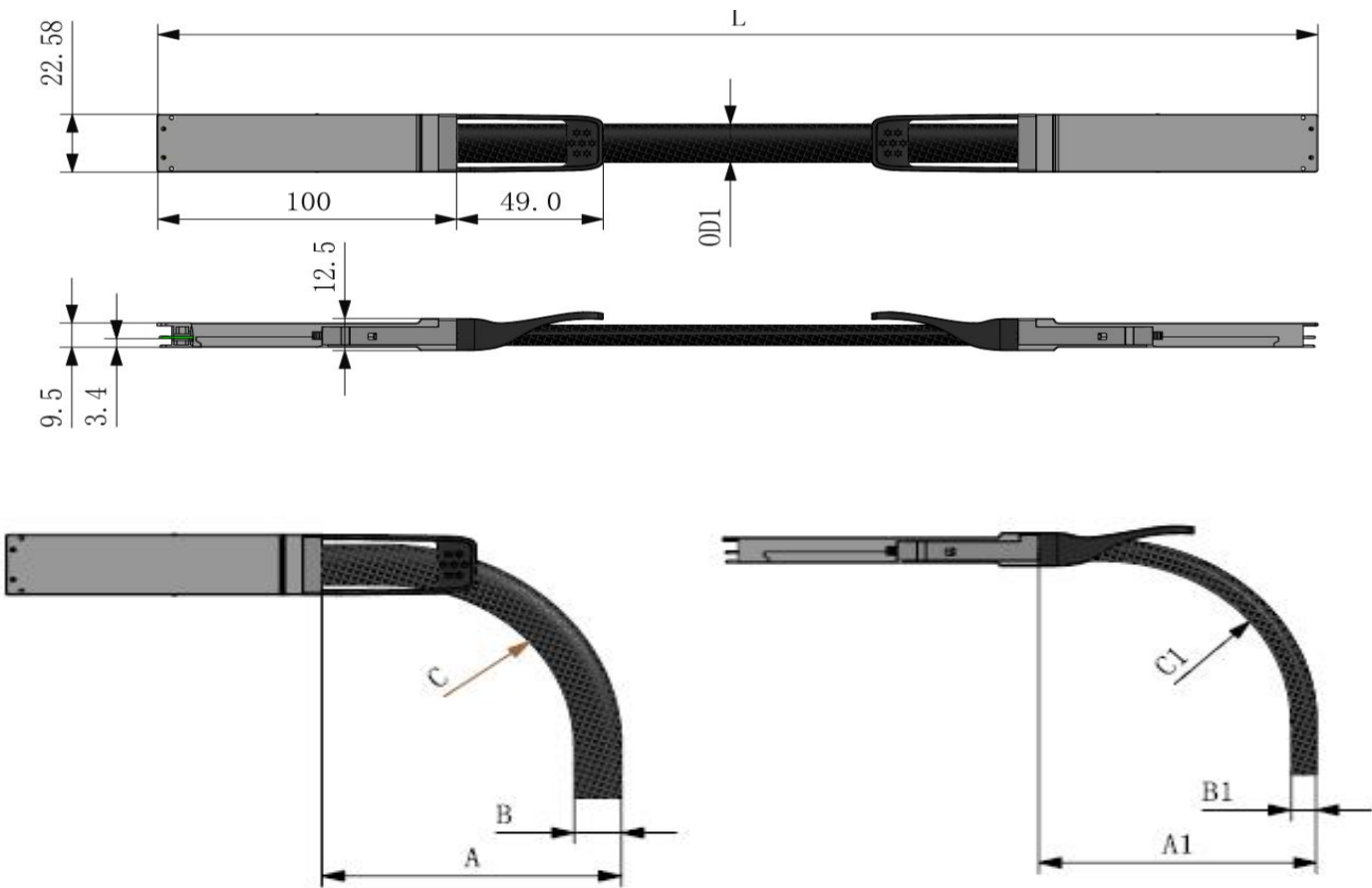
Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Operating Temperature	T _c	0		70	°C
Supply Voltage	V _{cc}	3.13	3.3	3.47	V
Power Consumption	PD		2.5		W
Data Rate per Lane (PAM4)	Fd1		106.25		GBaud/s
Humidity	Rh	5		85	%

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Raw cable impedance	Z _{ca}		92	100	ohm
Mated connector impedance	Z _{con}		92		ohm
Data Rate per lane(PAM4)	Fd1		106.25	113.5	GBaud/s
Max SDD21 @53.125GHz	CA-A			19	dB
	CA-B			24	dB
	CA-C			29	dB
	CA-D			34	dB
Post-FEC BER				1E-15	
Humidity	Rh	5		85	%

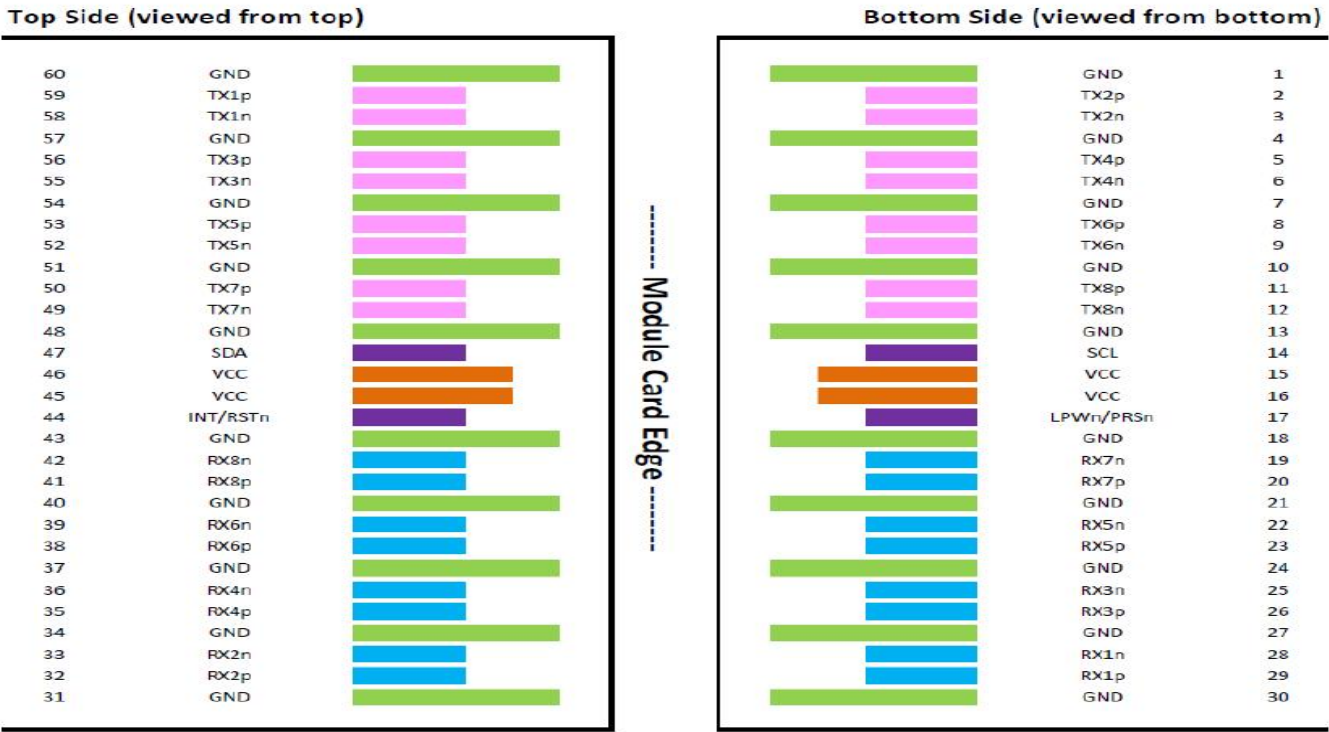
Mechanical Dimensions



OSFP Horizontal Direction			
CABLE GUAGE	DIAMETER"B"	MIN BEND RADIUS"C"	MIN BEND RADIUS"A"
26AWG	11MM	55MM	65MM
25AWG	12MM	60MM	70MM

OSFP Vertical Direction			
CABLE GUAGE	DIAMETER"B1"	MIN BEND RADIUS"C1"	MIN BEND RADIUS"A1"
26AWG	8MM	40MM	50MM
25AWG	9MM	45MM	55MM

Electrical pinout



Electrical pin list and description

Pin#	Symbol	Description	Logic	Direction	Plug Sequence	Notes
1	GND	Ground			1	
2	TX2p	Transmitter Data Non-Inverted	CML-I	Input from Host	3	
3	TX2n	Transmitter Data Inverted	CML-I	Input from Host	3	
4	GND	Ground			1	
5	TX4p	Transmitter Data Non-Inverted	CML-I	Input from Host	3	
6	TX4n	Transmitter Data Inverted	CML-I	Input from Host	3	
7	GND	Ground			1	
8	TX6p	Transmitter Data Non-Inverted	CML-I	Input from Host	3	
9	TX6n	Transmitter Data Inverted	CML-I	Input from Host	3	
10	GND	Ground			1	
11	TX8p	Transmitter Data Non-Inverted	CML-I	Input from Host	3	
12	TX8n	Transmitter Data Inverted	CML-I	Input from Host	3	
13	GND	Ground			1	
14	SCL	2-wire Serial interface clock	LVC MOS-I/O	Bi-directional	3	Open-Drain with pull-up resistor on Host
15	VCC	+3.3V Power		Power from Host	2	
16	VCC	+3.3V Power		Power from Host	2	
17	LPWn/PRSn	Low-Power Mode / Module Present	Multi-Level	Bi-directional	3	See pin description for required circuit
18	GND	Ground			1	
19	RX7n	Receiver Data Inverted	CML-O	Output to Host	3	
20	RX7p	Receiver Data Non-Inverted	CML-O	Output to Host	3	
21	GND	Ground			1	
22	RX5n	Receiver Data Inverted	CML-O	Output to Host	3	
23	RX5p	Receiver Data Non-Inverted	CML-O	Output to Host	3	
24	GND	Ground			1	
25	RX3n	Receiver Data Inverted	CML-O	Output to Host	3	
26	RX3p	Receiver Data Non-Inverted	CML-O	Output to Host	3	
27	GND	Ground			1	
28	RX1n	Receiver Data Inverted	CML-O	Output to Host	3	
29	RX1p	Receiver Data Non-Inverted	CML-O	Output to Host	3	
30	GND	Ground			1	
31	GND	Ground			1	
32	RX2p	Receiver Data Non-Inverted	CML-O	Output to Host	3	



Pin#	Symbol	Description	Logic	Direction	Plug Sequence	Notes
33	RX2n	Receiver Data Inverted	CML-O	Output to Host	3	
34	GND	Ground			1	
35	RX4p	Receiver Data Non-Inverted	CML-O	Output to Host	3	
36	RX4n	Receiver Data Inverted	CML-O	Output to Host	3	
37	GND	Ground			1	
38	RX6p	Receiver Data Non-Inverted	CML-O	Output to Host	3	
39	RX6n	Receiver Data Inverted	CML-O	Output to Host	3	
40	GND	Ground			1	
41	RX8p	Receiver Data Non-Inverted	CML-O	Output to Host	3	
42	RX8n	Receiver Data Inverted	CML-O	Output to Host	3	
43	GND	Ground			1	
44	INT/RSTn	Module Interrupt / Module Reset	Multi-Level	Bi-directional	3	See pin description for required circuit
45	VCC	+3.3V Power		Power from Host	2	
46	VCC	+3.3V Power		Power from Host	2	
47	SDA	2-wire Serial interface data	LVC MOS-I/O	Bi-directional	3	Open-Drain with pull-up resistor on Host
48	GND	Ground			1	
49	TX7n	Transmitter Data Inverted	CML-I	Input from Host	3	
50	TX7p	Transmitter Data Non-Inverted	CML-I	Input from Host	3	
51	GND	Ground			1	
52	TX5n	Transmitter Data Inverted	CML-I	Input from Host	3	
53	TX5p	Transmitter Data Non-Inverted	CML-I	Input from Host	3	
54	GND	Ground			1	
55	TX3n	Transmitter Data Inverted	CML-I	Input from Host	3	
56	TX3p	Transmitter Data Non-Inverted	CML-I	Input from Host	3	
57	GND	Ground			1	
58	TX1n	Transmitter Data Inverted	CML-I	Input from Host	3	
59	TX1p	Transmitter Data Non-Inverted	CML-I	Input from Host	3	
60	GND	Ground			1	

Ordering information

Part Number	FZR-160026M02C
Length (meter)	0.5~2M
Wire gauge (AWG)	25/26AWG

The PN shall be in the format FZR-160026M02C.Associated products are determined by the required length and the FIBERSTAMP ERP code; the wire gauge is also customizable.

Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by FIBERSTAMP before they become applicable to any particular order or contract. In accordance with the FIBERSTAMP policy of continuous improvement specifications may change without notice.

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Revision History

Revision	Date	Description
Preliminary	Aug-21-2026	Advance Release.

