

1.6T OSFP to 1.6T OSFP Active Copper Cable

P/N: GOS-AC901-XXXC

Features

- ✓ 1600Gb/s data rate
- ✓ Support 8x 200Gb/s PAM4 modulation with 16 pairs
- ✓ Hot-plug OSFP IHS(Integrated Heat Sink)form factor
- ✓ Support up to 2m length
- ✓ 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 Rev 5.2
- ✓ CMIS 5.0
- ✓ RoHS

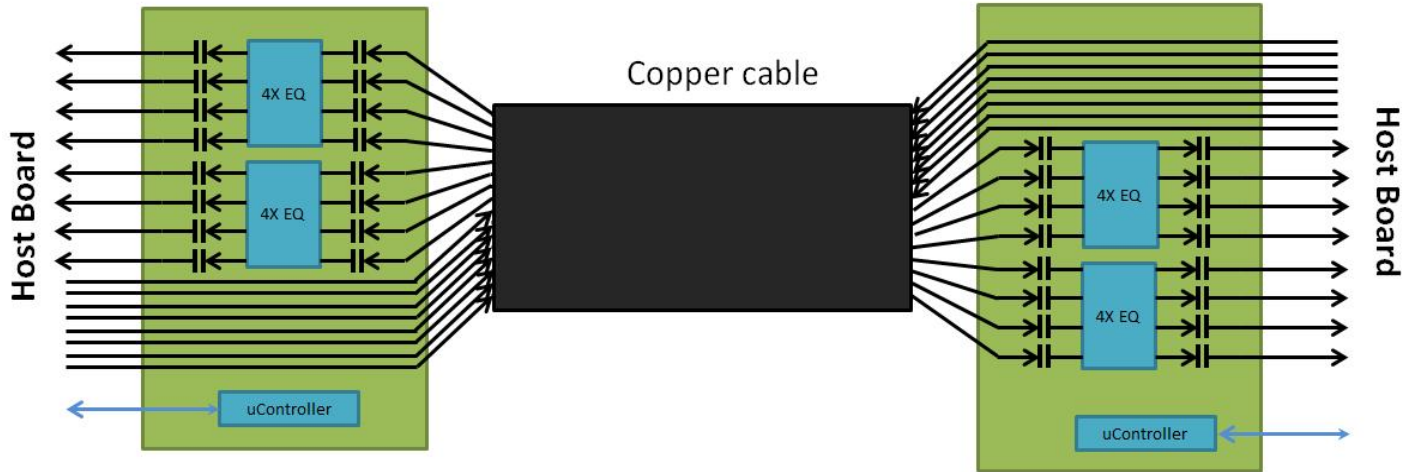
Description

Gigalight's OSFP 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 end to the other OSFP 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 and exceed 1.6T Ethernet, Infiniband XDR 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	%
Supply Voltage	Vcc	-0.3	3.6	V

Recommended Operating Conditions

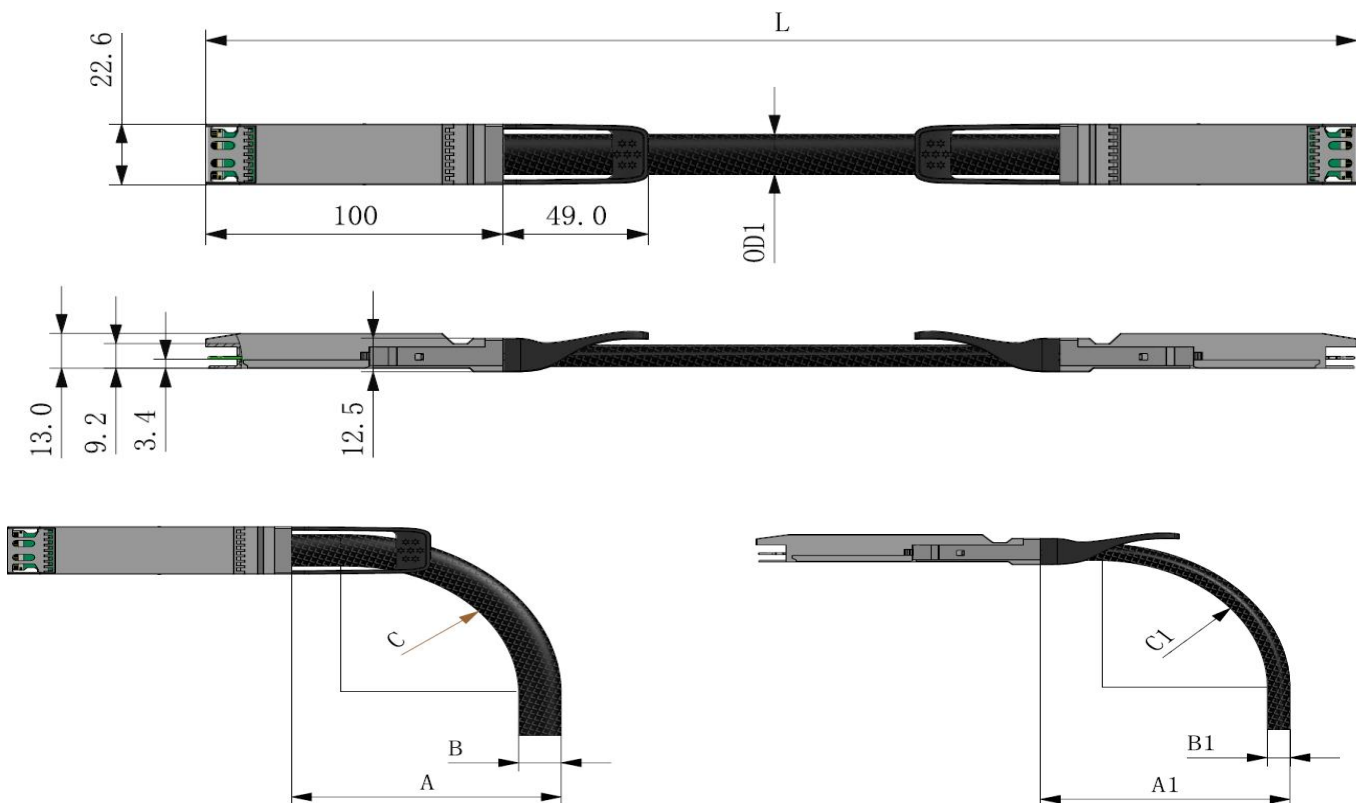
Parameter	Symbol	Min	Typical	Max	Unit
Operating Case Temperature	T_c	0		70	°C
Supply Voltage	Vcc	3.13	3.3	3.47	V
Power consumption	Pd		2.5		W
Data Rate per lane(PAM4)	Fd1		106.25	113.5	GBaud/s
Humidity	Rh	5		85	%

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Raw cable impedance	Zca		92	100	ohm
Mated connector impedance	Zcon		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 GAUGE	DIAMETER"B"	MIN BEND RADIUS"C"	MIN BEND RADIUS"A"
26AWG	11MM	55MM	65MM
25AWG	12MM	60MM	70MM

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

Electrical pinout

Top Side (viewed from top)

60	GND	
59	TX1p	
58	TX1n	
57	GND	
56	TX3p	
55	TX3n	
54	GND	
53	TX5p	
52	TX5n	
51	GND	
50	TX7p	
49	TX7n	
48	GND	
47	SDA	
46	VCC	
45	VCC	
44	INT/RSTn	
43	GND	
42	RX8n	
41	RX8p	
40	GND	
39	RX6n	
38	RX6p	
37	GND	
36	RX4n	
35	RX4p	
34	GND	
33	RX2n	
32	RX2p	
31	GND	

----- Module Card Edge -----

Bottom Side (viewed from bottom)

	GND	1
	TX2p	2
	TX2n	3
	GND	4
	TX4p	5
	TX4n	6
	GND	7
	TX6p	8
	TX6n	9
	GND	10
	TX8p	11
	TX8n	12
	GND	13
	SCL	14
	VCC	15
	VCC	16
	LPWn/PRSn	17
	GND	18
	RX7n	19
	RX7p	20
	GND	21
	RX5n	22
	RX5p	23
	GND	24
	RX3n	25
	RX3p	26
	GND	27
	RX1n	28
	RX1p	29
	GND	30

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	GOS-AC901-XXXC
Length (meter)	0.5~2M
Wire gauge (AWG)	25/26AWG

The PN shall be in the format GOS-AC901-XXXC. Associated products are determined by the required length and the Gigalight 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 Gigalight before they become applicable to any particular order or contract. In accordance with the Gigalight policy of continuous improvement specifications may change without notice.

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Revision History

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