800GbE to 800GbE (OSFP to OSFP) Direct Attach Cable
P/N: GOS-PC801-XXXC

Features

- ✓ Hot-plug OSFP form factor with close top heat sink
- ✓ Support 8x 50/100Gb/s PAM4 modulation
- ✓ Commercial case temperature range of 0℃ to 70℃
- ✓ 25 AWG ~30 AWG support up to 2m length
- ✓ Contain EEPROM & programmable to customized

Applications

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

STANDARDS COMPLIANCE

- ✓ IEEE P802.3ck D3.0
- ✓ OSFP MSA HW Rev 4.1
- ✓ ROHS

Description

Gigalight's GOS-PC801-xxC cable assemblies are effective alternatives to fiber optics. The cable 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 100Gb/s, each OSFP port can be addressed by EEPROM to provide product information, which can be read or write by I2C interface.

Gigalight's GOS-PC801-xxC cable assemblies is compliant with the OSFP-MSA and IEEE 802.3ck, it's a high performance & cost effective I/O solutions for LAN, HPC and SAN. The high speed cable assemblies meet and exceed 800Gigabit Ethernet, InfiniBand EDR /HDR and temperature requirements for performance and reliability.

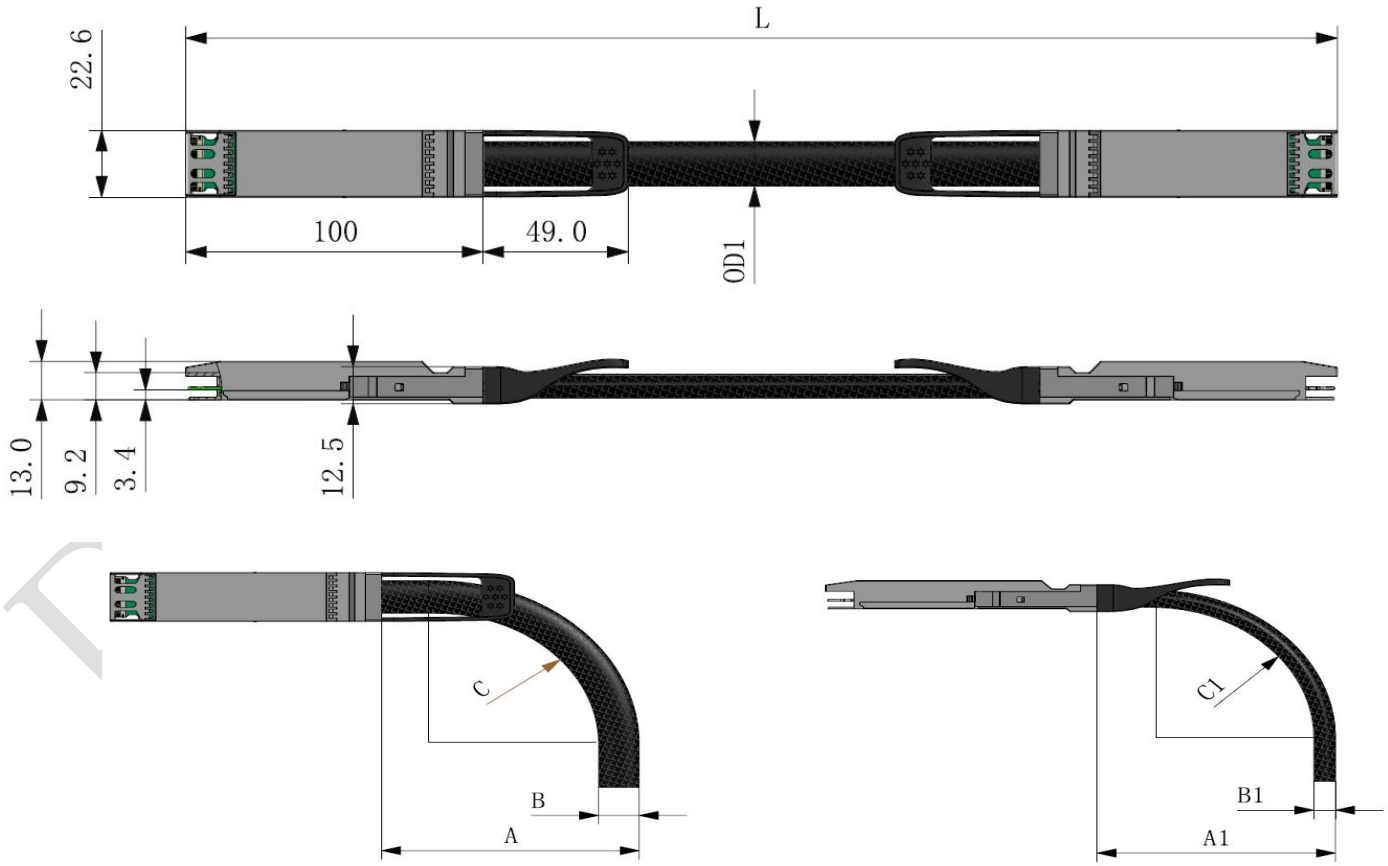
Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage Temperature	T_s	-20	85	℃
Case Operating Temperature	T_c	0	70	℃
Humidity (non-condensing)	Rh	5	95	%

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Operating Case Temperature	T_c	0		70	℃
Baud Rate per Lane (PAM4)	fd		53.125		GBaud/s
Humidity	Rh	5		85	%

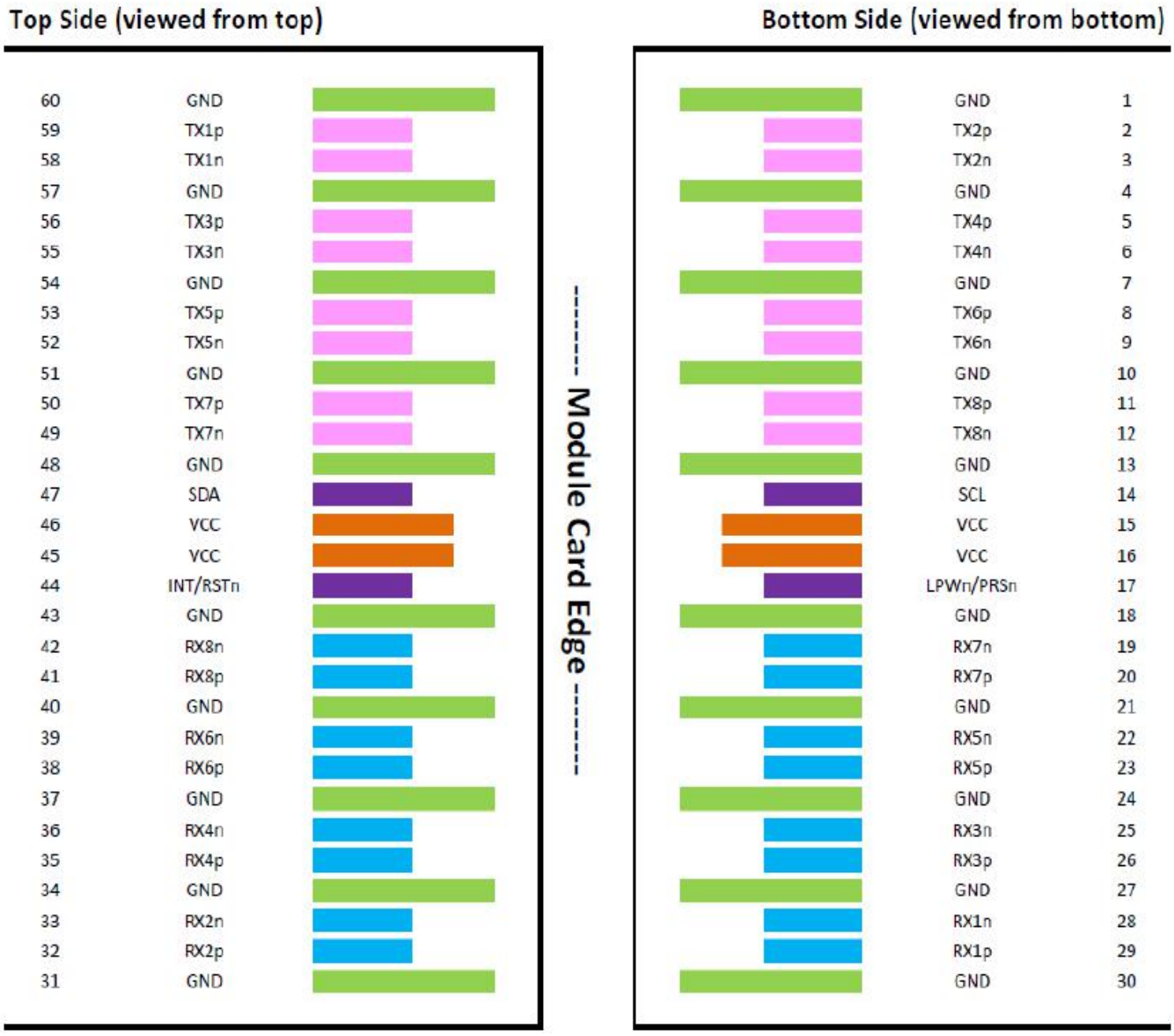
Mechanical Dimensions



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	LVCMOS-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	LVCMOS-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	GQD-PC801-XXXC		
Length (meter)	0.5	1	2
Wire gauge (AWG)	30	30	26/25

If length(meter) is decimal, PN should be as GOS-PC801-DXXC.

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.

The publication of information in this data sheet does not imply freedom from patent or other protective rights of Gigalight or others. Further details are available from any Gigalight sales representative.

E-mail: sales@gigalight.com
Official Site: www.gigalight.com

Revision History

Revision	Date	Description
V0	Oct-12-2023	Advance Release.