SFP-H10GB-CU4M-OPC

Cisco® SFP-H10GB-CU4M Compatible TAA Compliant 10GBase-CU SFP+ to SFP+ Direct Attach Cable (Passive Twinax, 4m)

Features

- Up to 10 Gbps bi-directional data links
- Compliant with 10GFC
- Compliant with SFF-8431
- AC coupled inputs and outputs
- 100 Ohm differential impedance
- Enhanced EMI design
- Single 3.3V power supply
- Operating Temperature Range: 0 to 70 Celsius
- RoHS Compliant and Lead-Free

Applications:

- 10G Ethernet
- 10G Fibre Channel
- Serial Data Transmission

Product Description

This is a Cisco® compatible 10GBase-CU SFP+ to SFP+ direct attach cable that operates over passive copper with a maximum reach of 4.0m (13.1ft). It has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. This direct attach cable is TAA (Trade Agreements Act) compliant, and is built to comply with MSA (Multi-Source Agreement) standards. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

OptioConnect's transceivers are RoHS compliant and lead-free.

General Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Data Rate	DR		10.3125		Gbps	1
Bit Error Rate	BER			10^{-12}		
Operating Temperature	Tc	0		70	°C	2
Storage Temperature	Tstg	-40		85	°C	3
Power Supply Voltage	Vcc	3.14	3.30	3.46	V	4

Notes:

1. IEEE 802.3ae.
2. Case Temperature.
3. Ambient Temperature.
4. For the electrical power interface.

Cable Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit
Wire Gauge			24AWG		AWG
Cable Impedance	Z	90	100	110	Ω
Cable Diameter	OD		6.0		mm
Minimum Bending Radius	R		28		mm
Tolerance Range ±			6		cm

Pin Descriptions

Pin	Symbol	Name/Description	Notes
1	VeeT	Transmitter Ground (Common with Receiver Ground).	1
2	Tx_Fault	Transmitter Failure Alarm. Not Used.	
3	Tx_Disable	Not Used. The signal turns off the module transmitter when it is "high" or "open."	
4	SDA	Data Line for Serial ID.	2
5	SCL	Clock Line for Serial ID.	2
6	MOD_ABS	Module Absent. Grounded within the module.	2
7	RS0	No Connection Required.	
8	LOS	Loss of Signal Indication. "Logic 0" indicates normal operation.	
9	RS1	No Connection Required.	
10	VeeR	Receiver Ground (Common with Transmitter Ground).	1
11	VeeR	Receiver Ground (Common with Transmitter Ground).	1
12	RD-	Receiver Inverted Data Out. AC Coupled.	
13	RD+	Receiver Non-Inverted Data Out. AC Coupled.	
14	VeeR	Receiver Ground (Common with Transmitter Ground).	1
15	VccR	Receiver Power Supply.	
16	VccT	Transmitter Power Supply.	
17	VeeT	Transmitter Ground (Common with Receiver Ground).	1
18	TD+	Transmitter Non-Inverted Data In. AC Coupled.	
19	TD-	Transmitter Inverted Data In. AC Coupled.	
20	VeeT	Transmitter Ground (Common with Receiver Ground).	1

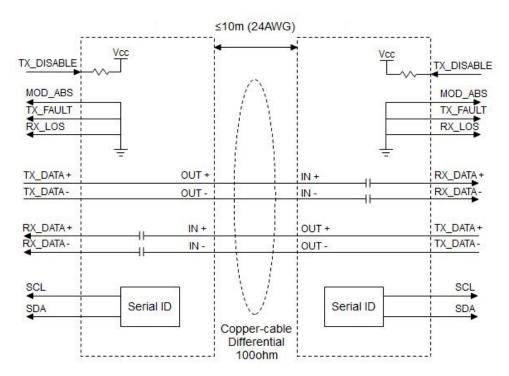**Notes:**
1. The circuit ground is isolated from the chassis ground.
2. Should be pulled up with 4.7kΩ to 10kΩ on the host board to a voltage between 2V and 3.6V.

Electrical Pad Layout

Top of Board		Bottom of Board	
20 →	V_{EET}	1 →	V_{EET}
19 →	TD-	2 →	TX_FAULT
18 →	TD+	3 →	TX_DISABLE
17 →	V_{EET}	4 →	SDA
16 →	V_{CCT}	5 →	SCL
15 →	V_{CCR}	6 →	MOD_ABS
14 →	V_{EER}	7 →	RS0
13 →	RD+	8 →	LOS
12 →	RD-	9 →	RS1
11 →	V_{EER}	10 →	V_{EER}

Top of Board

Bottom of Board

Top

Bottom

Block Diagram of Transceiver

≤10m (24AWG)

TX_DISABLE   Vcc

MOD_ABS
TX_FAULT
RX_LOS

TX_DATA +   OUT +   IN +   RX_DATA +
TX_DATA -   OUT -   IN -   RX_DATA-

RX_DATA+   IN +   OUT +   TX_DATA +
RX_DATA-   IN -   OUT -   TX_DATA-

SCL   SCL
SDA   Serial ID   Serial ID SDA

Vcc   TX_DISABLE
MOD_ABS
TX_FAULT
RX_LOS

Copper-cable
Differential
100ohm

Weight

Parameter	Symbol	Typ.	Unit	Notes
24AWG Product Weight	GD24	96	g/PCS	1
24AWG Cable Weight	GC24	50	g/M	
Dust Cap Weight	GS	0.80	g/PCS	

Notes:

1. For example, the weight of a 6m cable with 24AWG is 96+50*(6-1) + 0.80*2=347.6g.

Mechanical Specifications

All Dimensions are ±0.2mm Unless Otherwise Specified

Unit: mm

OptioConnect
Innovation for the Future of High-Speed Networking

Who We Are

OptioConnect is reshaping the landscape of communication and high-speed networking through intelligent technology. With a core focus on cutting edge technology, we deliver smarter fiber optic solutions for enterprise networks, data centers, and next-gen telecom infrastructures.

What We Do

At OptioConnect, we fuse advanced engineering with intelligent automation to drive the future of networking. Our AI-integrated solutions are designed to optimize performance and streamline operations with:

- Superior Performance
- Network and traffic optimization
- Intelligent energy management
- Seamless OEM compatibility
- Scalable cost-efficiency

Smarter Networks by Design

Innovation isn't just a goal—it's our process. We embed AI and machine learning across our R&D and product lines, enabling adaptive performance, automated tuning, and faster deployment cycles. The result? Networks that don't just work—they learn, evolve, and outperform.

Our Team

Our engineers, data scientists, and network architects bring decades of experience and a future-focused mindset. We provide hands-on support with intelligent insights that turn complex challenges into simple solutions.

Our Mission

To deliver AI-enhanced connectivity that reduces cost, increases speed, and maximizes efficiency—empowering our partners to operate at the forefront of a rapidly evolving digital world.

Let's Connect

Discover how OptioConnect's intelligent infrastructure solutions can power your network's next leap forward.
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