OPTIO CONNECT

QFX-SFP-DAC-7MA-OPC

Juniper Networks® QFX-SFP-DAC-7MA Compatible TAA Compliant 10GBase-CU SFP+ Direct Attach Cable (Active Twinax, 7m)

Features

- Up to 10Gbps bi-directional data links
- Dual SFP Connectors
- Industry Standard small form pluggable
- Hot Pluggable
- Single Power Supply 3.3V
- Operating Temperature: 0 to 70 Celsius
- RoHS Compliant and Lead-Free

Applications:

- 10G Ethernet
- 10G Fibre Channel

Product Description

This is a Juniper Networks® QFX-SFP-DAC-7MA compatible 10GBase-CU SFP+ to SFP+ direct attach cable that operates over active copper with a maximum reach of 7.0m (23.0ft). 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 Case Temperature	Tc	0		70	°C	2
Storage Temperature	Tstg	-40		85	°C	3
Input Voltage	Vcc	3.14	3.3	3.46	V	4
Supply Current	Icc		100	300	mA	4
Cable Impedance	Z	90	100	110	Ω	
Product Weight	GD		72		g/PCS	
Cable Weight	GC		26		G/M	
Dust Cap Weight	GS		0.80		g/PCS	
Wire Gauge			30		AWG	
Tolerance Range			8		±cm	

Notes:

1. IEEE 802.3ae compatible.
2. Case temperature.
3. Ambient temperature.
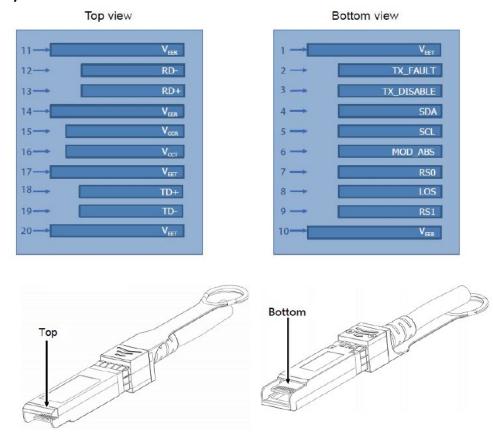4. For electrical power interface.

Pin Descriptions

Pin	Symbol	Name/Description	Notes
1	VeeT	Transmitter ground. Common with receiver ground.	1
2	Tx_Fault	Transmitter Fault.	
3	Tx_Disable	Transmitter Disable. Laser output disabled on "high" or "open."	2
4	SDA	Data line for Serial ID.	3
5	SCL	Clock line for Serial ID.	3
6	MOD_ABS	Module absent. Grounded within the module.	3
7	RS0	No connection required.	
8	LOS	Loss of Signal. Logic 0 indicated normal operation.	4
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 Non0inverted 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

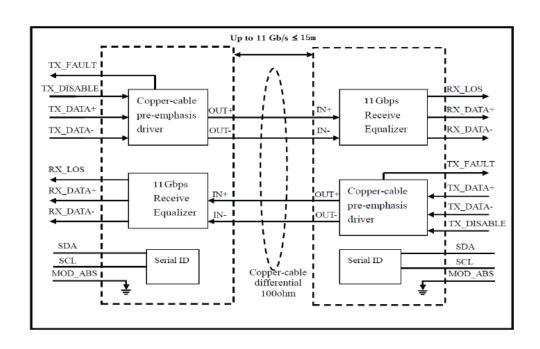**Notes:**

1. Circuit ground is isolated from chassis ground.
2. Disabled: Tdis>2V or open, Enabled Tdis<0.8V.
3. Should be pulled up with 4.7kΩ-10kΩ on host board to a voltage between 2V and 3.6V.
4. LOS is open collector output.

Electrical Pad Layout
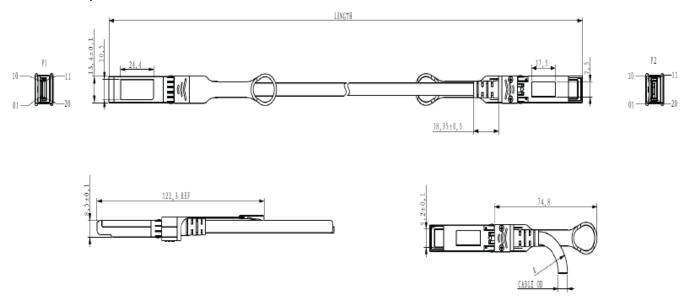
Top view

11 →	V_{EER}
12 →	RD-
13 →	RD+
14 →	V_{EER}
15 →	V_{CCR}
16 →	V_{CCT}
17 →	V_{EET}
18 →	TD+
19 →	TD-
20 →	V_{EET}

Bottom view

1 →	V_{EET}
2 →	TX_FAULT
3 →	TX_DISABLE
4 →	SDA
5 →	SCL
6 →	MOD_ABS
7 →	RS0
8 →	LOS
9 →	RS1
10 →	V_{EER}

Top

Bottom

Block Diagram

Up to 11 Gb/s ≤ 15m

TX_FAULT
TX_DISABLE
TX_DATA+
TX_DATA-

Copper-cable pre-emphasis driver

OUT+
OUT-

IN+
IN-

11 Gbps Receive Equalizer

RX_LOS
RX_DATA+
RX_DATA-

RX_LOS
RX_DATA+
RX_DATA-

11 Gbps Receive Equalizer

IN+
IN-

OUT+
OUT-

Copper-cable pre-emphasis driver

TX_FAULT
TX_DATA+
TX_DATA-
TX_DISABLE

SDA
SCL
MOD_ABS

Serial ID

Copper-cable differential 100ohm

Serial ID

SDA
SCL
MOD_ABS

Mechanical Specifications

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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