



MC220731V-020-OPC

Mellanox® MC220731V-020 Compatible TAA Compliant 56GBase-AOC QSFP+ Active Optical Cable (850nm, MMF, 20m)

Features

- Complies with QSFP MSA high- density form factor
- Multi-rate capability: 1.06Gbps to 14.025Gbps per channel
- Four-channel full-duplex active optical cable
- Single 3.3V power supply
- Round, riser-rated (OFNR)
- Built-in digital diagnostic functions
- Hot Pluggable
- Commercial Temperature 0 to 70 Celsius
- Metal with lower EMI
- RoHS Compliant and Lead-Free



Applications:

- x

Product Description

This is a Mellanox® MC220731V-020 compatible 56GBase-AOC QSFP+ to QSFP+ active optical cable that operates over multi-mode fiber with a maximum reach of 20.0m (65.6ft). At a wavelength of 850nm, it has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. This active optical 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
Supply Voltage	Vcc	3.13	3.3	3.47	V
Storage Temperature	Tstg	-20		+85	°C
Operating Case Temperature	Tc	0		70	°C
Data Rate per Channel	DR	1		14.0645	Gbps
Bit Error Rate	BER			<10 ⁻¹²	
Data Speed Tolerance	ΔDR	-100		100	ppm
Link Distance with OM3 fiber	D	0		20	m

Electrical Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Power Supply Voltage	Vcc	3.13	3.3	3.47	V	
Power Consumption		-		1.5	W	
Supply Current			230		mA	Per End Typical
Differential Input Impedance	ZIN	90	100	110	Ω	
Differential Output Impedance	ZOUT	90	100	110	Ω	
Differential Input Voltage Amplitude	ΔVIN	300		1100	mVp-p	
Differential Output Voltage Amplitude	ΔVOUT	500		800	mVp-p	
Bit Error Rate	BR			E-12		
Input Logic Level - High	VIH	2.0		Vcc	V	
Input Logic Level - Low	VIL	0		0.8	V	
Output Logic Level - High	VOH	Vcc-0.5		Vcc	V	
Output Logic Level - Low	VOL	0		0.4	V	

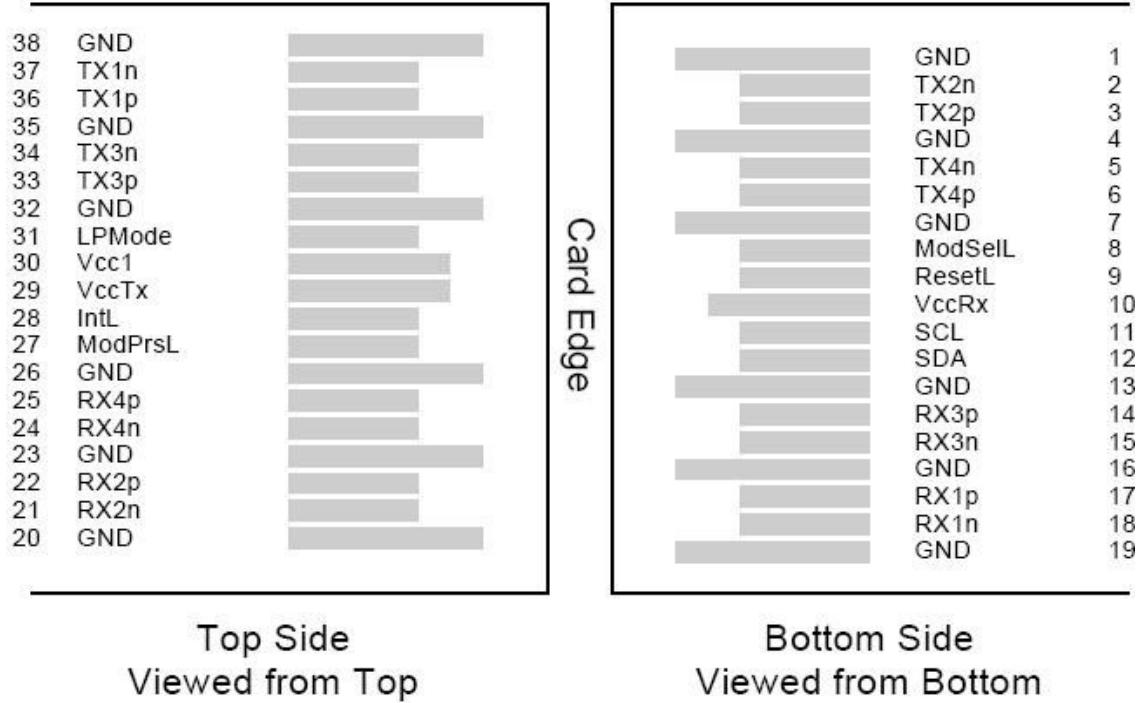
Pin Descriptions

Pin	Logic	Symbol	Name/Description	Note
1		GND	Module Ground.	1
2	CML-I	Tx2n	Transmitter Inverted Data Input.	
3	CML-I	Tx2p	Transmitter Non-Inverted Data Output.	
4		GND	Module Ground.	1
5	CML-I	Tx4n	Transmitter Inverted Data Input.	
6	CML-I	Tx4p	Transmitter Non-Inverted Data Output.	
7		GND	Module Ground.	1
8	LVTLL-I	ModSelL	Module Select.	
9	LVTLL-I	ResetL	Module Reset.	
10		VccRx	+ 3.3V Receiver Power Supply.	2
11	LVC MOS-I/O	SCL	2-Wire Serial Interface Clock.	
12	LVC MOS-I/O	SDA	2-Wire Serial Interface Data.	
13		GND	Module Ground.	
14	CML-O	Rx3p	Receiver Non-Inverted Data Output.	
15	CML-O	Rx3n	Receiver Inverted Data Output.	
16		GND	Module Ground.	1
17	CML-O	Rx1p	Receiver Non-Inverted Data Output.	
18	CML-O	Rx1n	Receiver Inverted Data Output.	
19		GND	Module Ground.	1
20		GND	Module Ground.	1
21	CML-O	Rx2n	Receiver Inverted Data Output.	
22	CML-O	Rx2p	Receiver Non-Inverted Data Output.	
23		GND	Module Ground.	1
24	CML-O	Rx4n	Receiver Inverted Data Output.	1
25	CML-O	Rx4p	Receiver Non-Inverted Data Output.	
26		GND	Module Ground.	1
27	LVTTL-O	ModPrsL	Module Present.	
28	LVTTL-O	IntL	Interrupt.	
29		VccTx	+3.3 V Transmitter Power Supply.	2
30		Vcc1	+3.3 V Power Supply.	2
31	LVTTL-I	LPMODE	Low-Power Mode.	
32		GND	Module Ground.	1
33	CML-I	Tx3p	Transmitter Non-Inverted Data Input.	
34	CML-I	Tx3n	Transmitter Inverted Data Output.	
35		GND	Module Ground.	1
36	CML-I	Tx1p	Transmitter Non-Inverted Data Input.	
37	CML-I	Tx1n	Transmitter Inverted Data Output.	
38		GND	Module Ground.	1

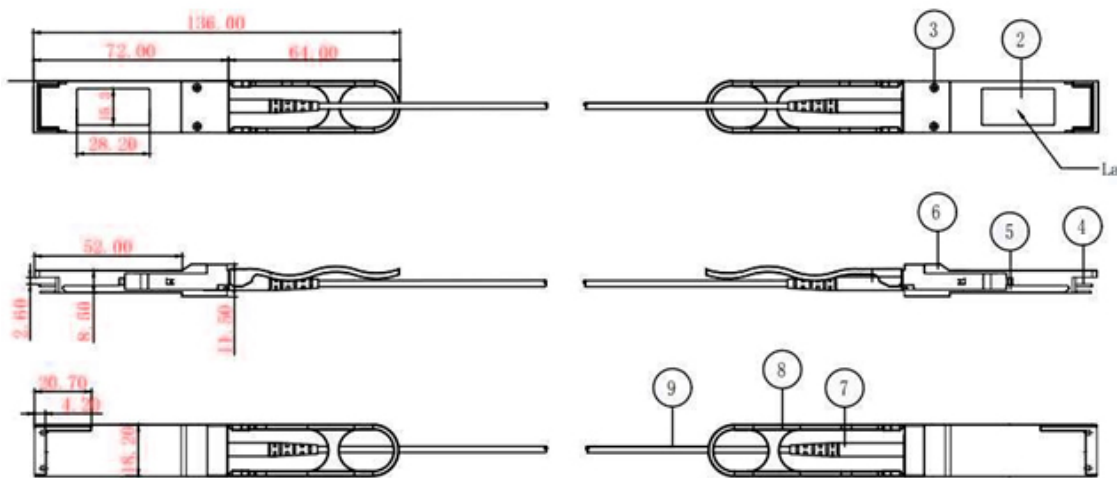
Notes:

1. Module circuit ground is isolated from module chassis ground within the module. GND is the symbol for signal and supply (power) common for QSFP modules.
2. The connector pins are each rated for a maximum current of 500mA.

Electrical Pin-Out Details



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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