SFP25-SR-SP-AOC4M-OPC

QLogic® SFP25-SR-SP-AOC4M Compatible TAA Compliant 25GBase-AOC SFP28 Active Optical Cable (850nm, MMF, 4m)

Features

- Hot-pluggable SFP28 form factor
- Supports 25Gbps data rate
- 850nm VCSEL laser and PIN photo-detector
- Internal CDR on both Transmitter and receiver channel
- Single 3.3V power supply
- Power dissipation < 1W
- Digital diagnostics functions are available via the I2C interface
- Operating Case temperature: 0 to 70 Celsius
- RoHS Compliant and Lead-Free

Applications:

- 25Gbase-SR Ethernet

Product Description

This is a QLogic® SFP25-SR-SP-AOC4M compatible 25GBase-AOC SFP28 to SFP28 active optical cable that operates over multi-mode fiber with a maximum reach of 4.0m (13.1ft). 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
Storage Temperature		-40		85	°C
Operating Case Temperature	Tc	0		70	°C
Power Supply Voltage	Vcc	3.13	3.3	3.47	V
Supply Voltage	Vcc	0		3.6	V
Storage Temperature	Tstg	-40		85	°C
Operating Humidity		5		85	%

Optical Characteristics

Parameter		Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter							
Data Rate		BR		25.78		Gbps	
Centre Wavelength		λc	840	850	860	nm	
Spectral Width (-20dB)		σ			0.6	nm	
Average Output Power		Pavg	-8.4		2.4	dBm	
Optical Power OMA		P_{OMA}	-6.4		3	dBm	
Extinction Ratio		ER	2			dB	
Differential data input swing		$V_{IN,PP}$	40		1000	mV	
Input Differential Impedance		ZIN	90	100	110	Ω	
TX Disable	**Disable**		2.0		Vcc	V	
	Enable		0		0.8	V	
TX Fault	**Fault**		2.0		Vcc	V	
	Normal		0		0.8	V	
Receiver							
Data Rate		BR		25.78		Gbps	
Centre Wavelength		λc	840	850	860	nm	
Receiver Sensitivity (OMA)		Psens			-10	dBm	
Stressed Sensitivity (OMA)					-5.2	dBm	
Receiver Power (OMA)					3	dBm	
LOS De-Assert		LOS_D			-13	dBm	
LOS Assert		LOS_A	-30			dBm	
LOS Hysteresis			0.5			dB	
Differential data output swing		Vout,PP	500		1130	mV	
LOS	**High**		2.0		Vcc	V	
	Low				0.8	V	

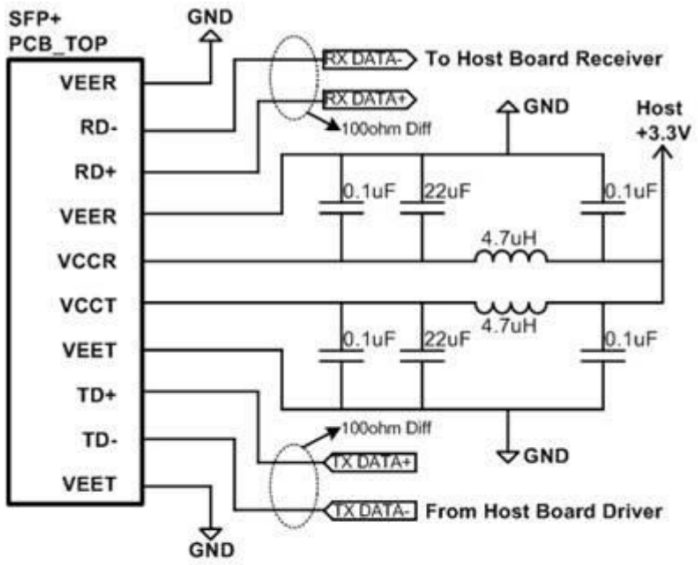
Pin Descriptions

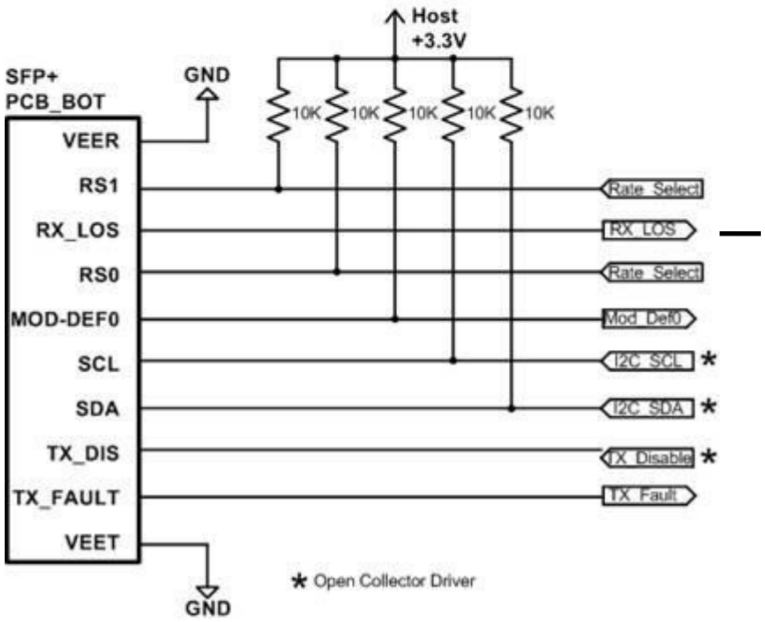
Pin	Logic	Symbol	Name/Description	Notes
1		VeeT	Transmitter Ground.	
2	LV-TTL-O	TX_Fault	N/A	1
3	LV-TTL-I	TX_DIS	Transmitter Disable.	
4	LV-TTL-I/O	SDA	2-Wire Serial Data.	
5	LV-TTL-I	SCL	2-Wire Serial Clock.	
6		MOD_DEF0	Module present, connect to VeeT.	
7	LV-TTL-I	RS0	N/A	1
8	LV-TTL-O	LOS	LOS of Signal.	
9	LV-TTL-I	RS1	N/A	1
10		VeeR	Receiver Ground.	
11		VeeR	Receiver Ground.	
12	CML-O	RD-	Receiver Data Inverted.	
13	CML-O	RD+	Receiver Data Non-inverted.	
14		VeeR	Receiver Ground.	
15		VccR	Receiver Supply +3.3V.	
16		VccT	Transmitter Supply +3.3V.	
17		VeeT	Transmitter Ground.	
18	CML-I	TD+	Transmitter Data Non-Inverted.	
19	CML_I	TD-	Transmitter Data Inverted.	
20		VeeT	Transmitter Ground.	

Note:

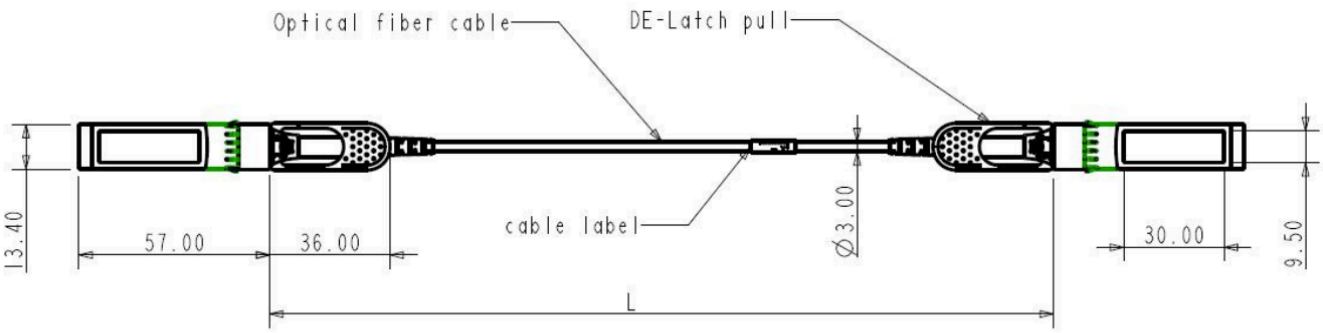
1. Signals not supported in SFP28 Copper pulled-down to VeeT with 30kΩ resistor.

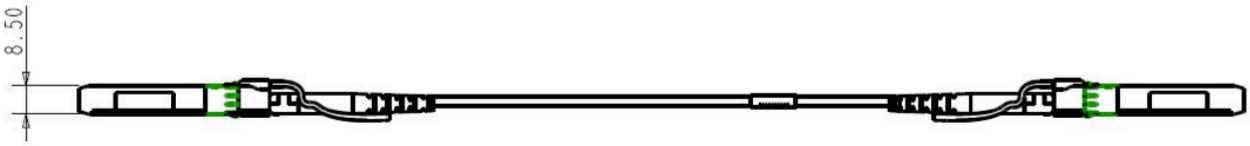
Host Board


SFP+
PCB_TOP
GND
VEER
RD-
RD+
VEER
VCCR
VCCT
VEET
TD+
TD-
VEET
GND
RX DATA-
To Host Board Receiver
RX DATA+
100ohm Diff
GND
Host
+3.3V
0.1uF
22uF
0.1uF
4.7uH
4.7uH
0.1uF
22uF
0.1uF
100ohm Diff
TX DATA+
GND
TX DATA-
From Host Board Driver


SFP+
PCB_BOT
GND
Host
+3.3V
10K
10K
10K
10K
10K
VEER
RS1
RX_LOS
RS0
MOD-DEF0
SCL
SDA
TX_DIS
TX_FAULT
VEET
GND
Rate_Select
RX_LOS
Rate_Select
Mod_Def0
I2C_SCL
I2C_SDA
TX_Disable
TX_Fault
* Open Collector Driver

Mechanical Specification





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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