



QSFP112-400GB-AOC-5M-SKY

MSA Compliant 400GBase-AOC QSFP112 to QSFP112 Active Optical Cable (850nm, MMF, 5m, CMIS 5.0)

Product Description

This is a MSA compliant 400GBase-AOC QSFP112 to QSFP112 active optical cable that operates over multi-mode fiber with a maximum reach of 5.0m (16.4ft). 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 built to comply with MSA (Multi-Source Agreement) standards. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

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

Features:

- 4 Independent Parallel Optical Channels
- Hot-Pluggable
- Each Channel Data Rate Up to 53.12GBaud
- QSFP112 MSA Compliant
- CMIS 5.0 Compliant
- Up to 50m Link Over OM4 Multi-Mode
- Operating Temperature: 15 to 70 Celsius
- LSZH Jacket
- RoHS Compliant and Lead-Free



Applications:

- 400GBase Ethernet

For your product safety, please read the following information carefully before any manipulation of the transceiver:



ESD

This transceiver is specified as ESD threshold 1kV for SFI pins and 2kV for all others electrical input pins, tested per MIL-STD-883G, Method 3015.4 / JESD22-A114-A (HBM). However, normal ESD precautions are still required during the handling of this module.



LASER SAFETY

This is a Class1 Laser Product according to IEC 60825-1:2007. This product complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated (June 24, 2007).

The optical ports of the module need to be terminated with an optical connector or with a dust plug in order to avoid contamination.

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Storage Ambient Temperature	Tstg	-40	+85	°C
Relative Humidity – Storage	RHs	0	85	%
Relative Humidity – Operating	RHo	0	85	%
Module Supply Voltage	Vcc	-0.5	3.6	V

Notes:

1. Exceeding the Absolute Maximum Ratings may cause irreversible damage to the device. The device is not intended to be operated under the condition of simultaneous Absolute Maximum Ratings, a condition which may cause irreversible damage to the device. RH is a non-condensing condition.

Recommended Operating Conditions

Parameter	Symbol	Min	Typ.	Max.	Unit
Case Operating Temperature	Tc	+15	+35	+70	°C
Module Supply Voltage	Vcc	3.14	3.3	3.46	V
Single Module Supply Current	I _{IN}		2350		mA
Signaling Speed Per Channel	S		53.12		GBaud

Cable Specifications

Parameter	Symbol
Minimum Bend Radius (mm)	30
Cable Diameter (mm)	3.0 ± 0.5

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Tx_Data Differential Input Voltage	VIN	750			mV	
Tx_Data Differential Input Impedance	ZIN		100		Ω	
Receiver						
Rx_Data Differential Output Voltage	VOUT			845	mV	
Rx_Data Differential Output Impedance	ZOUT	90	100	110	Ω	
Link BER	BER			$24E^{-4}$		1

Notes:

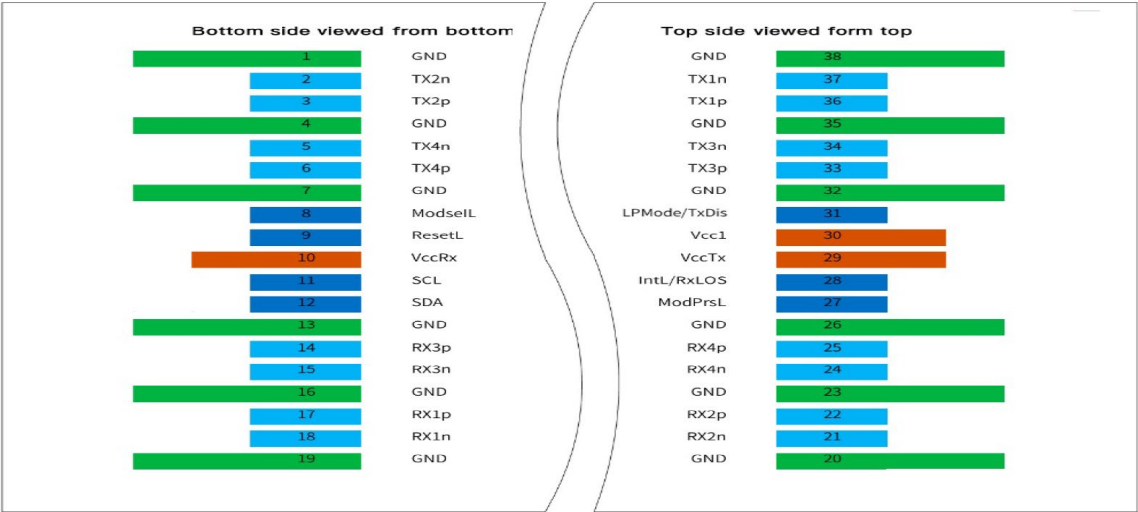
1. Better than $2.4E^{-4}$ @53.12GBaud PRBS31Q.

Pin Descriptions

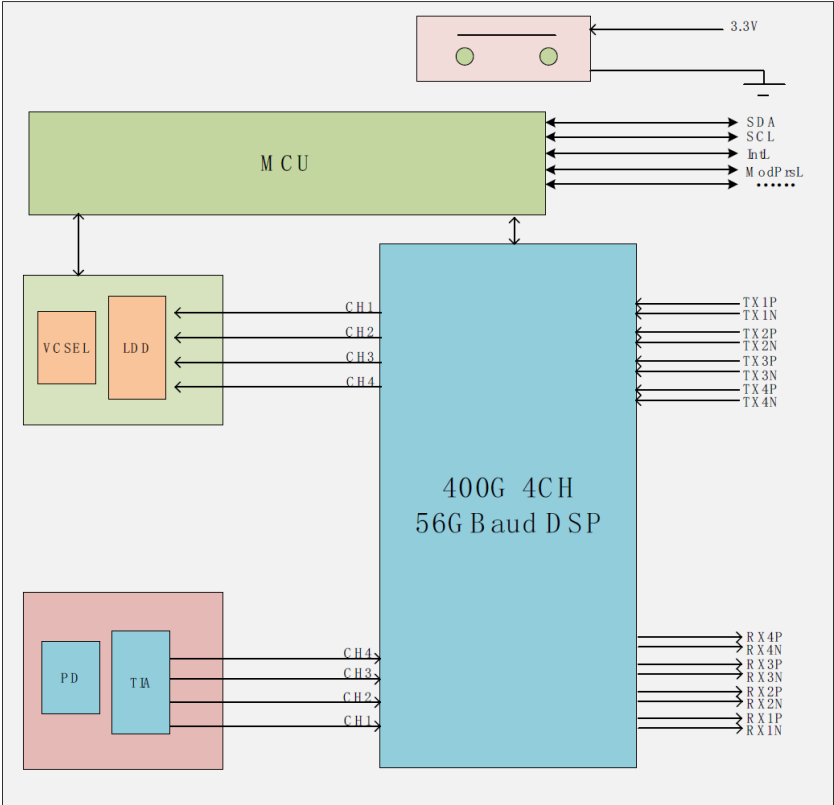
Pin	Symbol	Name/Description	Notes
1	GND	Module Ground.	
2	Tx2n	Transmitter Inverted Data Input.	
3	Tx2p	Transmitter Non-Inverted Data Input.	
4	GND	Module Ground.	
5	Tx4n	Transmitter Inverted Data Input.	
6	Tx4p	Transmitter Non-Inverted Data Input.	
7	GND	Module Ground.	
8	ModSelL	Module Select.	
9	ResetL	Module Reset.	
10	VccRx	+3.3V DC Receiver Power Supply.	
11	SCL	2-Wire Serial Clock.	
12	SDA	2-Wire Serial Data.	
13	GND	Module Ground.	
14	Rx3p	Receiver Non-Inverted Data Output.	
15	Rx3n	Receiver Inverted Data Output.	
16	GND	Module Ground.	
17	Rx1p	Receiver Non-Inverted Data Output.	
18	Rx1n	Receiver Inverted Data Output.	
19	GND	Module Ground.	
20	GND	Module Ground.	
21	Rx2n	Receiver Inverted Data Output.	
22	Rx2p	Receiver Non-Inverted Data Output.	
23	GND	Module Ground.	
24	Rx4n	Receiver Inverted Data Output.	
25	Rx4p	Receiver Non-Inverted Data Output.	
26	GND	Module Ground.	
27	ModPrsL	Module Present.	
28	IntL/RxLOS	Interrupt/Optional RxLOS.	
29	VccTx	+3.3V DC Transmitter Power Supply.	
30	Vcc1	+3.3V DC Power Supply.	
31	LPMoDe/TxDis	Low-Power Mode/Optional TxDisable.	
32	GND	Module Ground.	
33	Tx3p	Transmitter Non-Inverted Data Input.	
34	Tx3n	Transmitter Inverted Data Input.	
35	GND	Module Ground.	

36	Tx1p	Transmitter Non-Inverted Data Input.	
37	Tx1n	Transmitter Inverted Data Input.	
38	GND	Module Ground.	

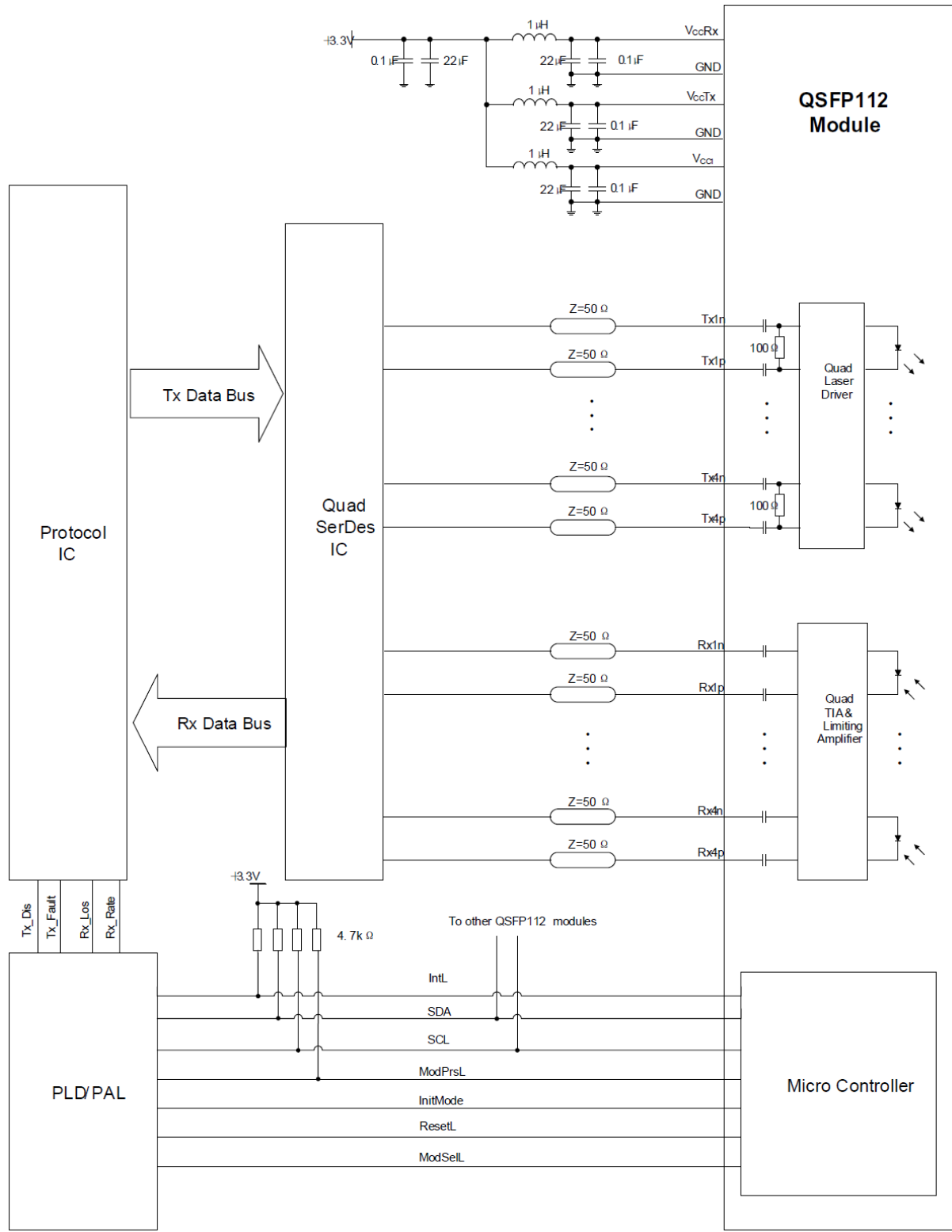
Pin Assignments



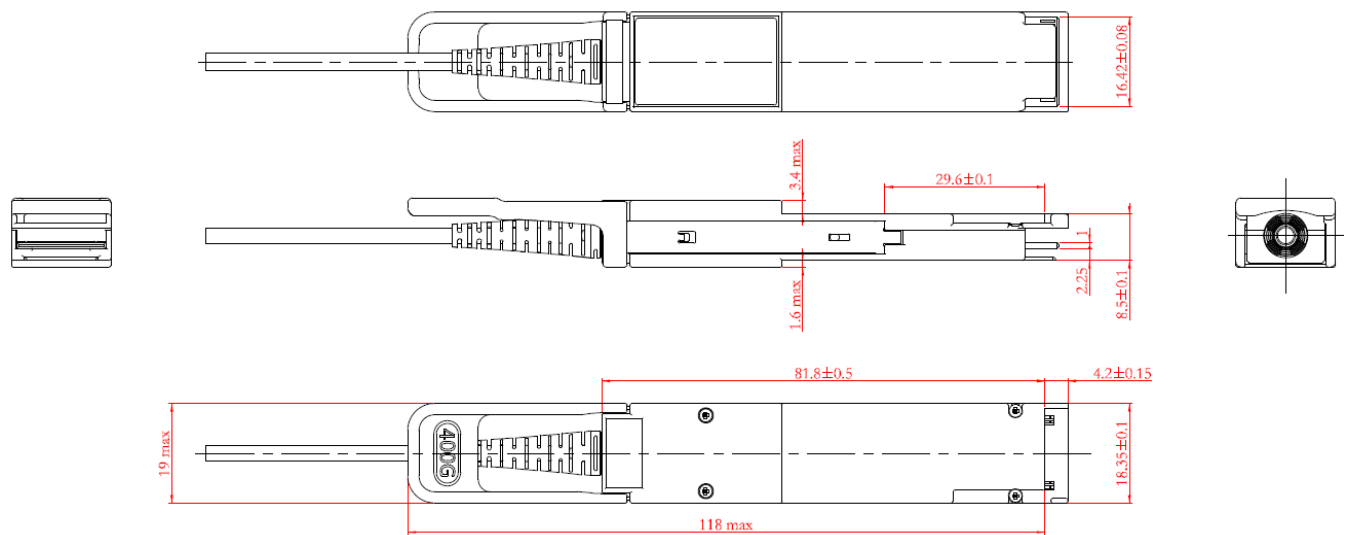
Block Diagram



Electrical Interface

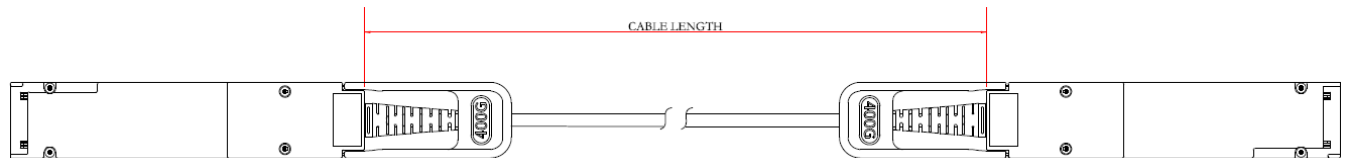


Mechanical Specifications



Notes:

- 1. Tolerance: ± 0.1mm.
- 2. Others according to QSFP112 MSA or customer specifications.
- 3. Light port according to fiber connector specifications.



Notes:

- 1. Cable tolerance: +4%/-0%.

About Skylane Optics

Skylane is a leading provider of transceivers for optical communication.

We offer an extensive portfolio for the enterprise, access, datacenter and metropolitan fiber optical market as well as for smart home applications and home networks.

We cover the European, South American and North American market with a strong partner network and have offices in Belgium, Brazil, Sweden and USA.

Our offerings are characterized by high quality and performance. In combination with our strong technical support, we enable our customers to build cost optimized network solutions.

We offer an extensive range of high-quality products including transceivers (Optical and copper), Active Optical Cable (AOC), Direct Attach Cable (DAC), Mux/Demux, Coding Box.

