



DSFP-100GB-AOC1M-SKY

MSA Compliant 100GBase-AOC DSFP Active Optical Cable (850nm, MMF, 1m, CMIS 4.0)

Product Description

This MSA compliant DSFP to DSFP transceiver provides 100GBase-AOC throughput up to over Fiber using a wavelength of 850nm via a DSFP connector. All of our transceivers are built to comply with Multi-Source Agreement (MSA) standards and are uniquely serialized and tested for data-traffic and application to ensure seamless network integration. 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:

- Compliant with IEEE 802.3-2018
- Compliant to the DSFP MSA Transceiver Specifications
- 2x26.5625GBD PAM4 Active Optical Cable
- Hot-Pluggable
- Operating Temperature: 0 to 70 Celsius
- Low Power Dissipation: 2.5W Per Cable End
- RoHS Compliant and Lead-Free



Applications:

- 100GBase 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.	Typ.	Max.	Unit	Notes
Supply Voltage	V _{CC}	-0.5		3.6	V	
Storage Temperature	T _{stg}	-40		85	°C	
Operating Case Temperature	T _c	0		70	°C	
Relative Humidity	RH	15		85	%	
Data Rate	DR		26.5625		GBd	±100ppm
Bit Error Rate	BER				1E ⁻⁸	

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Power Dissipation	P _{DISS}			2.5	W	
Module Supply Voltage	V _{CC}	3.13	3.3	3.47	V	
Supply Current	I _{CC}			796	mA	
Receiver						
AC Common-Mode Input Voltage				17.5	mV	RMS
Differential Peak-to-Peak Input Voltage				900	mV	
FEC Symbol Error				5		

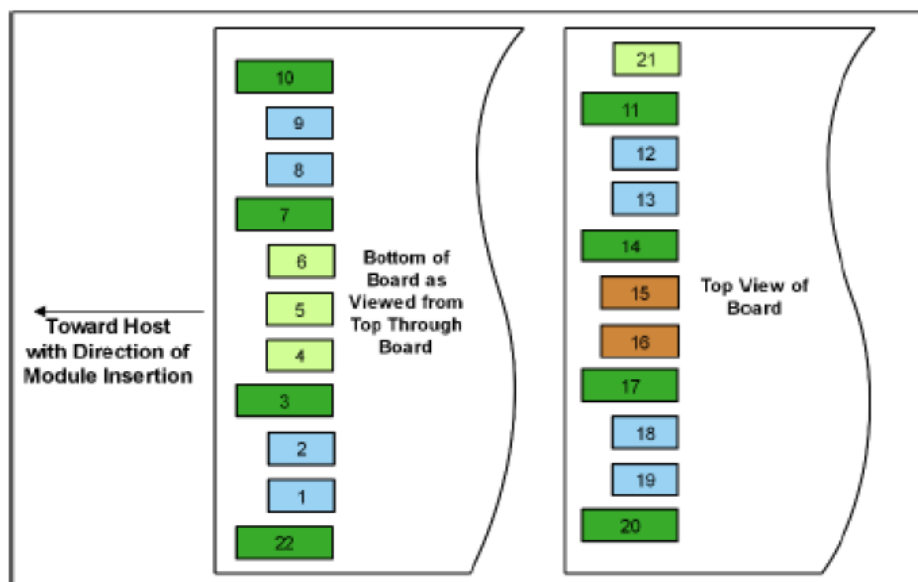
Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Center Wavelength	λ _C	840		860	nm	
Optical Power Output	P _O	-6.5		4	dBm	
Spectral Width	Δλ ₂₀			0.6	nm	
Extinction Ratio	ER	3			dB	
Receiver						
Near-End ESMW	EW		0.265		UI	
Near-End Eye Height	EH	70		mV		
Far-End ESMW			0.2			
Far-End Eye Height		30		UI		
Far-End Pre-Cursor ISI Ratio		-4.5		3.5	%	

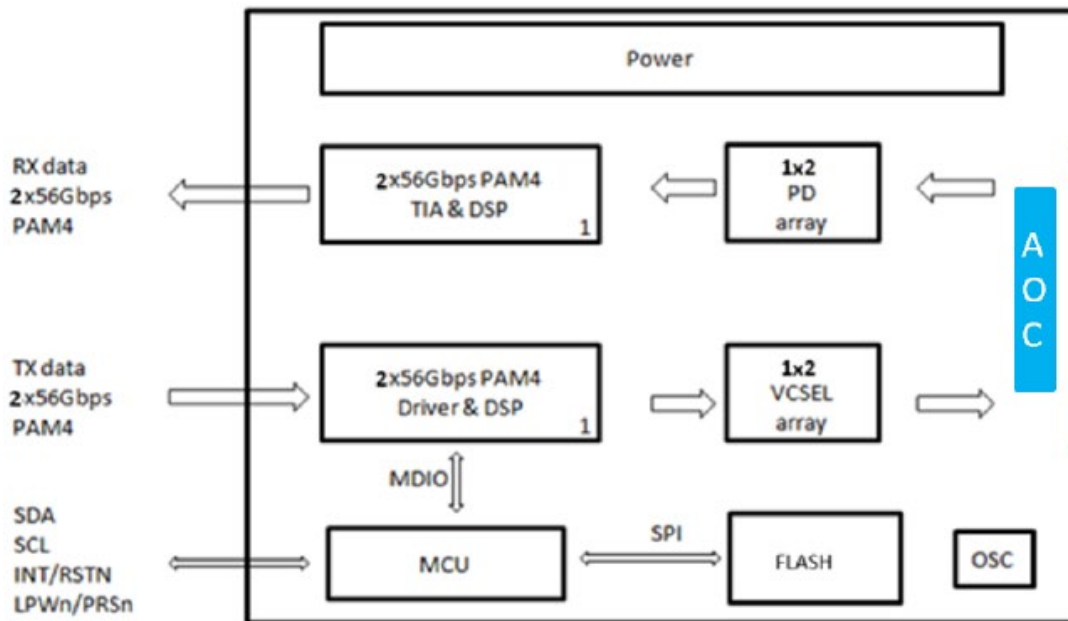
Pin Descriptions

Pin	Logic	Symbol	Sequence	Name/Description	Notes
1	CML-I	TD2-	3	Transmitter Inverted Data Input Lane 2.	
2	CML-I	TD2+	3	Transmitter Non-Inverted Data Input Lane 2.	
3		GND	1	Module Ground.	
4	LVTTL-I/O	SDA	3	2-Wire Serial Interface Data.	
5	LVTTL-I/O	SCL	3	2-Wire Serial Interface Clock.	
6	Multi-Level-I/O	LPWn/PRSn	3	Low-Power Mode/Module Present (MOD_ABS).	
7		GND	1	Module Ground.	
8	CML-O	RD2+	3	Receiver Non-Inverted Data Output Lane 2.	
9	CML-O	RD2-	3	Receiver Inverted Data Output Lane 2.	
10		GND	1	Module Ground.	
11		GND	1	Module Ground.	
12	CML-O	RD1-	3	Receiver Inverted Data Output Lane 1.	
13	CML-O	RD1+	3	Receiver Non-Inverted Data Output Lane 1.	
14		GND	1	Module Ground.	
15		Vcc	2	Module +3.3V Power Supply.	
16		Vcc	2	Module +3.3V Power Supply.	
17		GND	1	Module Ground.	
18		TD1+	3	Transmitter Non-Inverted Data Input Lane 1.	
19		TD1-	3	Transmitter Inverted Data Input Lane 1.	
20		GND	1	Module Ground.	
21	Multi-Level-I/O	INT/RSTn	3	Dual-Function Module Interrupt and Reset Pin.	
22		GND	1	Module Ground.	

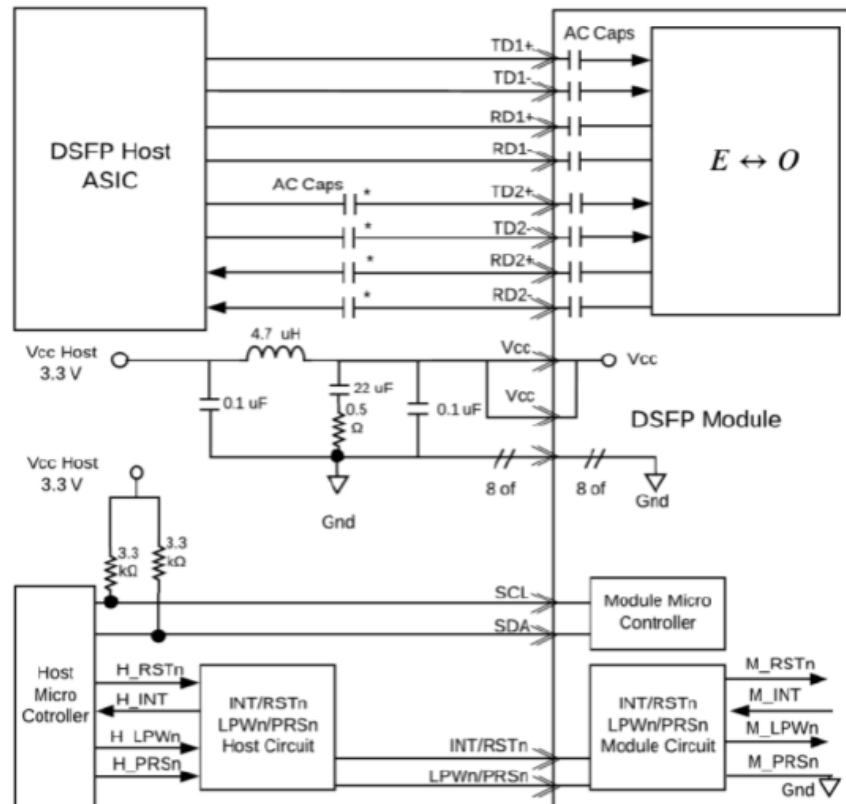
Electrical Pin-Out Details



Block Diagram

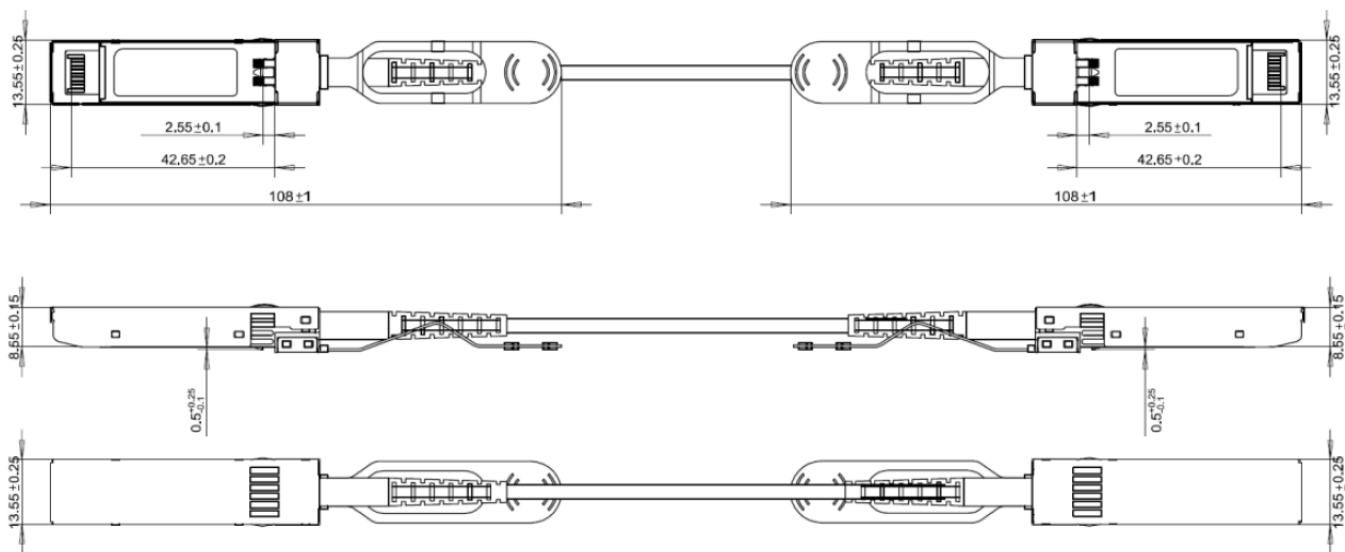


Recommended Interface Circuit



Notes: Host AC caps allow SFP+ backward compatibility. If SFP+ modules will never be plugged in, the host AC caps can be omitted.

Mechanical Specifications



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.

