

# DAOSSxxx100D – SFP+ Active Optical Cable

1 to 100m / 10x Gigabit Ethernet

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



#### ESD

This cable 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).

## 1. Overview

DAOSSxxx100D is a high performance Active Optical Cable (AOC) for 10x Gigabit Ethernet data links. Several cable lengths between 1 to 100m are available.

This cable is compliant with the Small Form-factor Pluggable (SFP+) Multisource Agreement (MSA) and is hot pluggable. Always contact Skylane Optics' commercial agents for compatibility with different equipment platforms.

## 2. Features

- SFP+ Multi-Source Agreement compliant (SFF-8431 and SFF-8432)
- Hot pluggable SFP+ footprint
- Serial ID functionality supported according to SFF-8472
- Link Length up to 100m
- Operating Temperature Range: 0°C to 70°C
- Low power dissipation (<0.7 W each terminal)
- Digital Diagnostic Monitoring (DDM)
- RoHS Compliant



## 3. Applications

- 10x Gigabit Ethernet

## 4. Technical Parameters

### 4.1. Recommended Operating Conditions

Parameter	Min	Typ	Max	Unit	Notes
Storage temperature	-40		85	°C	
Operating Case Temperature	0		70	°C	
Relative Humidity	5		95	%	Non condensing
Power Supply Voltage	3.135	3.3	3.465	V	
Power Supply Current			215	mA	Each terminal
Power Dissipation			700	mW	Each terminal

### 4.2. General Specifications

Parameter	Min	Typ	Max	Unit	Notes
Data Rate		10.3125		Gbps	

### 4.3. High-speed Electrical Interface

Parameter	Min	Typ	Max	Unit	Notes
Transmitter Single Ended Input Voltage Tolerance	-0.3		4	V	
Transmitter Differential Input Voltage Swing	180		700	mV <sub>pp</sub>	CML-I
Receiver Single Ended Output Voltage Tolerance	-0.3		4	V	
Receiver Differential Output Voltage Swing	300		850	mV <sub>pp</sub>	CML-O

## 5. Transceiver Electrical Pad Layout

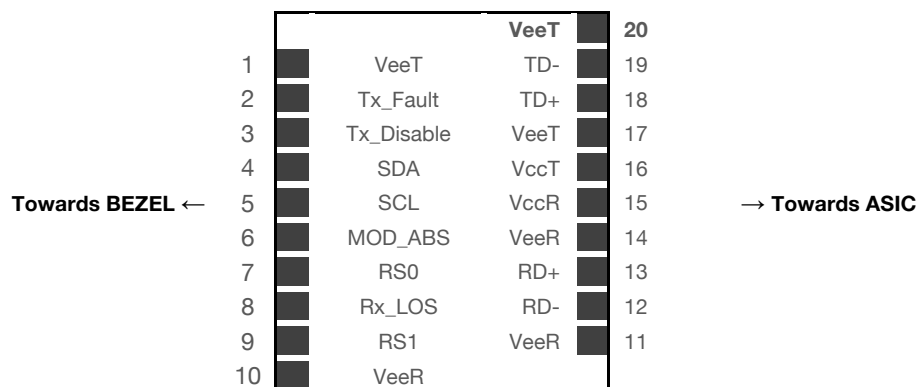


Figure 2. Transceiver Electrical Pad Layout

## 6. Module Electrical Pin Definition

SFP+ MSA (SFF-8431)

Pin Number	Name	Function
1	VeeT	Module Transmitter Ground
2	Tx_Fault	Module Transmitter Fault
3	Tx_Disable	Transmitter Disable
4	SDA	2-Wire Serial Interface Data
5	SCL	2-Wire Serial Interface Clock
6	Mod_ABS	Module Absent
7	RS0	Not Used
8	Rx_LOS	Receiver Loss of Signal
9	RS1	Not Used
10	VeeR	Module Receiver Ground
11	VeeR	Module Receiver Ground
12	RD-	Receiver Inverted Data Output
13	RD+	Receiver Non-Inverted Data Output
14	VeeR	Module Receiver Ground
15	VccR	Module Receiver 3.3V Supply
16	VccT	Module Transmitter 3.3V Supply
17	VeeT	Module Transmitter Ground
18	TD+	Transmitter Non-Inverted Data Input
19	TD-	Transmitter Inverted Data Input
20	VeeT	Module Transmitter Ground

## 7. EEPROM

SFP+ MSA (SFF-8472)

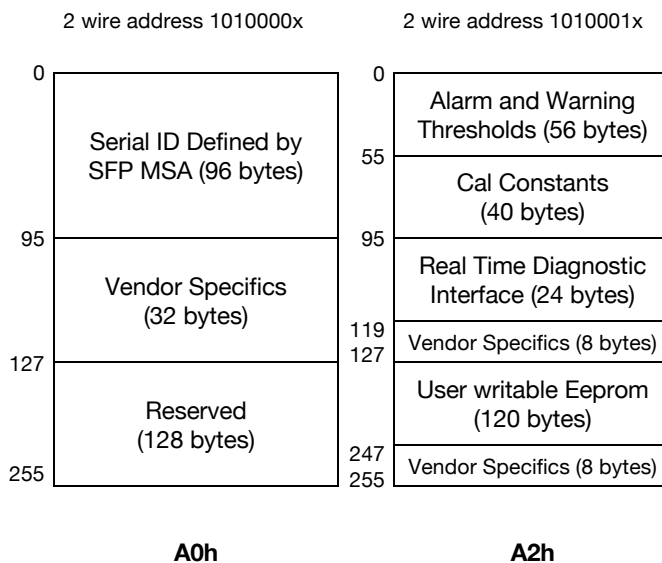


Figure 3. EEPROM of a SFP +

## 8. Ordering Information

Part Number	Description
DAOSSM01100D	SFP+ to SFP+ AOC, 10GBASE, <b>1m</b> , 0°C to 70°C, DDM
DAOSSM03100D	SFP+ to SFP+ AOC 10GBASE, <b>3m</b> , 0°C to 70°C, DDM
DAOSSM05100D	SFP+ to SFP+ AOC 10GBASE, <b>5m</b> , 0°C to 70°C, DDM
DAOSSM07100D	SFP+ to SFP+ AOC 10GBASE, <b>7m</b> , 0°C to 70°C, DDM
DAOSSM10100D	SFP+ to SFP+ AOC 10GBASE, <b>10m</b> , 0°C to 70°C, DDM
DAOSSM15100D	SFP+ to SFP+ AOC 10GBASE, <b>15m</b> , 0°C to 70°C, DDM
DAOSSM20100D	SFP+ to SFP+ AOC 10GBASE, <b>20m</b> , 0°C to 70°C, DDM
DAOSSM25100D	SFP+ to SFP+ AOC 10GBASE, <b>25m</b> , 0°C to 70°C, DDM
DAOSSM30100D	SFP+ to SFP+ AOC 10GBASE, <b>30m</b> , 0°C to 70°C, DDM
DAOSSM40100D	SFP+ to SFP+ AOC 10GBASE, <b>40m</b> , 0°C to 70°C, DDM
DAOSSM50100D	SFP+ to SFP+ AOC 10GBASE, <b>50m</b> , 0°C to 70°C, DDM
DAOSSP10100D	SFP+ to SFP+ AOC 10GBASE, <b>100m</b> , 0°C to 70°C, DDM

Skylane Optics supplies a broad range of optical transceivers. Our engineers work closely with our customers to find the best solutions for every application. We are committed to provide high quality products and services to our customers.

For questions on this product please contact:  
[support@skylaneoptics.com](mailto:support@skylaneoptics.com)

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