

DATA SHEET

MODULETEK – DAC-SFP10-P-x-xxAWG-aa.aaM-C0C0B

SFP+ Direct Attach Copper Cable Assembly

DAC-SFP10-P-x-xxAWG-aa.aaM-C0C0B Overview

ModuleTek's DAC-SFP10-P-x-xxAWG-aa.aaM-C0C0B SFP+ Direct Attach Copper Cable Assembly are based on 10G Ethernet IEEE 802.3ae standard, Fiber Channel and SFF-8431 standard, and the passive SFP+ Cable is a low cost alternative for short reach applications. The passive design has no signal amplification in the cable assembly. Electronic Dispersion Compensation (EDC) is typically used on the host board designs when passive copper cable assemblies are utilized.

Product Features

- Up to 11 Gb/s bi-directional data links
- Compliant with 10GFC
- Compliant with SFF-8431
- AC coupled inputs and outputs
- 100 Ohm differential impedance
- Enhanced EMI design
- Single power supply 3.3V
- RoHS Compliant
- Operating temperature range: 0°C to 70°C

Applications

- 10G Ethernet
- 10G Fiber Channel
- Serial Data Transmission

Ordering Information

Part Number	Description	Gauge	Length
DAC-SFP10-P-E-30AWG-aa.aaM-C0C0B	SFP+ Direct Attach Copper Cable Assembly,without MCU, aa.aa≤3	30AWG	≤3m
DAC-SFP10-P-E-24AWG-aa.aaM-C0C0B	SFP+ Direct Attach Copper Cable Assembly,without MCU, aa.aa>3	24AWG	>3m
DAC-SFP10-P-M-30AWG-aa.aaM-C0C0B	SFP+ Direct Attach Copper Cable Assembly,with MCU, aa.aa≤3	30AWG	≤3m

DAC-SFP10-P-M-24AWG-aa.aaM-C0C0B	SFP+ Direct Attach Copper Cable Assembly,with MCU, aa.aa>3	24AWG	>3m
<p>Note:</p> <ol style="list-style-type: none"> 1. "aa.aa" indicates the cable length in meters. 2. The wire diameter of the products in the above list is the default value under different lengths. We can also provide other wire products to customers with special requirements. 			
<p>For More Information: ModuleTek Limited Unit 4A, B Building, Shenfubao S&T Industrial Park, No. 3 Huang Huai Road, Futian Free Trade Zone, Shenzhen, China. 518038. Email: sales@moduletek.com</p>			

General Specifications

Parameter	Symbol	Min	Typ	Max	Unit	Remarks
Data Rate	DR		10.3125		Gb/s	1
Bit Error Rate	BER			10^{-12}		
Operating Temperature	T _{OP}	0		70	°C	2
Storage Temperature	T _{STO}	-40		85	°C	3
Input Voltage	V _{CC}	3.14	3.3	3.46	V	4
Maximum Voltage	V _{MAX}	-0.5		4	V	4

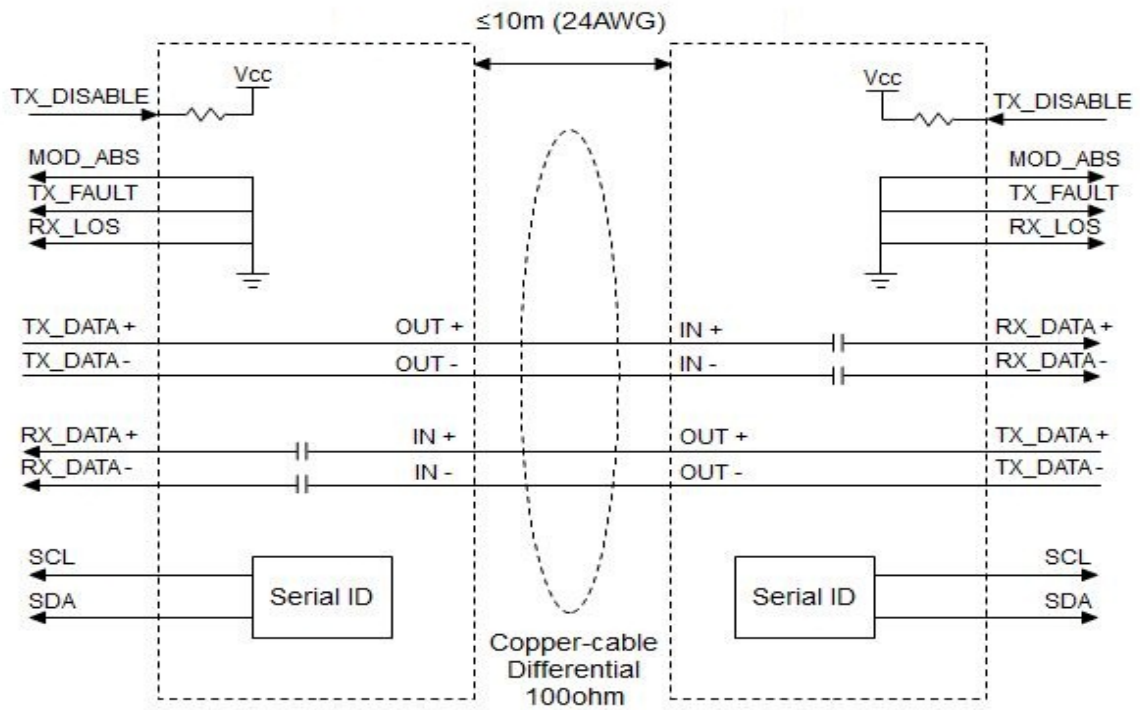
Notes:

- 1.IEEE 802.3ae
- 2.Case temperature
- 3.Ambient temperature
- 4.For electrical power interface

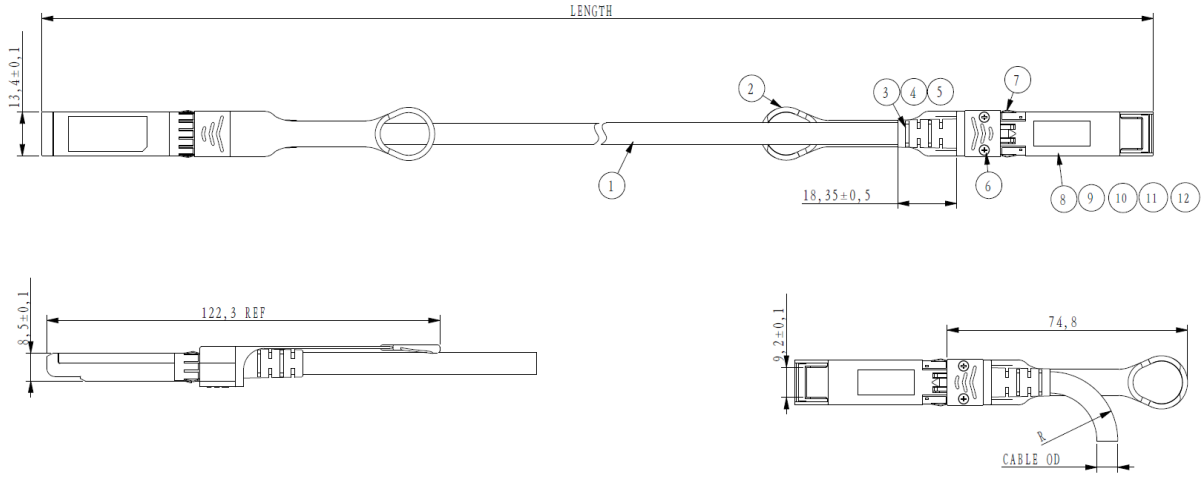
Cable Mechanical Specifications

Parameter	Symbol	Min	Typ	Max	Unit	Remarks
Wire Gauge		30AWG		24AWG		
Cable Impedance	Z	95	100	105	Ohm	

Block Diagram of Transceiver



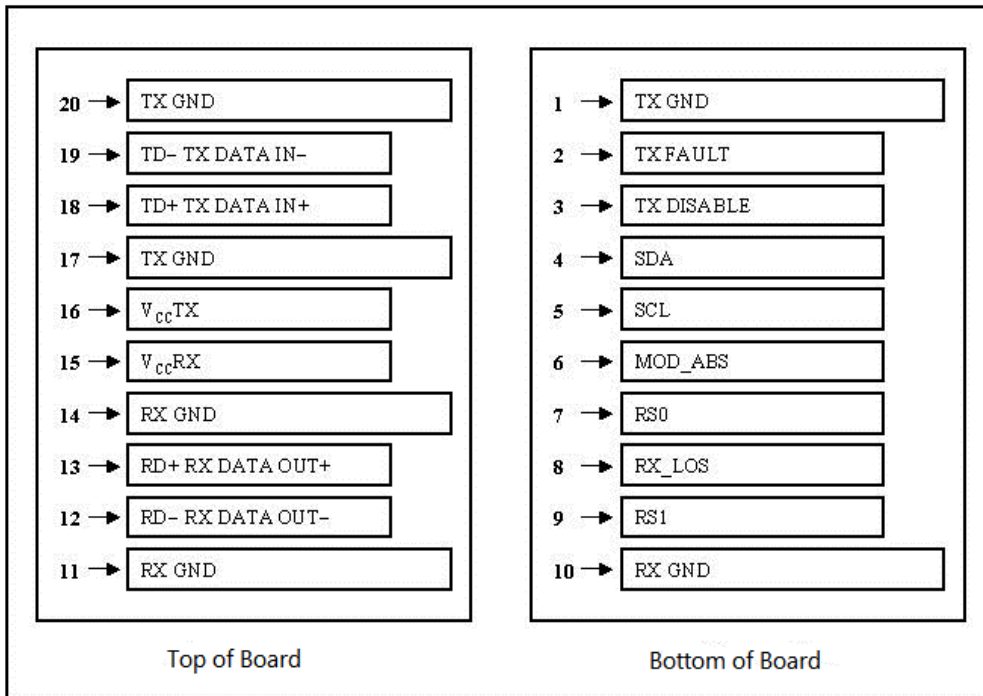
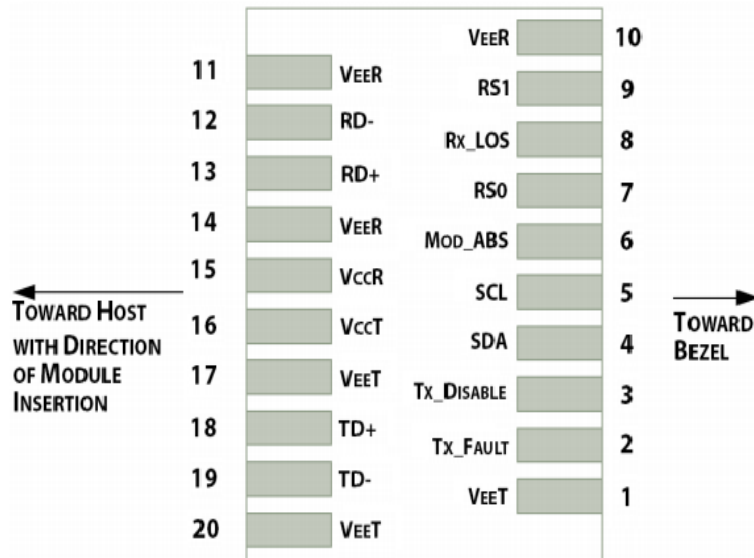
Dimensions



ITEM	NAME	DESCRIPTION	Q'TY
1	RAW CABLE	2PAIRS BLACK,ROTHS2.0	A/R
2	PULL TAB	PA66, BLUE 300C	2
3	PLASTIC BOOT	PVC, BLACK	2
4	COPPER RING	COPPER	2
5	ALUMINUM RING	ALUMINIUM ALLOY	2
6	SCREW	MILD STEEL	4
7	GROUNDING SPRINGS	SUS303	2
8	BOTTOM SHELL	Zn ALLOY,PLATED Ni OVER Cu	2
9	TOP SHELL	Zn ALLOY,PLATED Ni OVER Cu	2
10	PCB ASSEMBLY	SFP PCB,20P,Au 30u"Min	2
11	SPRING	HANDED ROTATION,SWPB	4
12	PULL ROD	SUS316	4

ALL DIMENSIONS ARE 0.2mm UNLESS OTHERWISE SPECIFIED
UNIT: mm

Electrical Pad Layout



Pin Assignment

PIN #	Symbol	Description	Remarks
1	VEET	Transmitter ground (common with receiver ground)	
2	T _{FAULT}	Transmitter Fault.	
3	T _{DIS}	Transmitter Disable. Laser output disabled on high or open	
4	SDA	Data line for serial ID	
5	SCL	Clock line for serial ID	
6	MOD_ABS	Module Absent. Grounded within the module	
7	RS0	No connection required	
8	LOS	Loss of Signal indication. Logic 0 indicates normal operation	
9	RS1	No connection required	
10	V _{EEER}	Receiver ground (common with transmitter ground)	
11	V _{EEER}	Receiver ground (common with transmitter ground)	
12	RD-	Receiver Inverted DATA out. AC coupled	
13	RD+	Receiver Non-inverted DATA out. AC coupled	
14	V _{EEER}	Receiver ground (common with transmitter ground)	
15	V _{CCR}	Receiver power supply	
16	V _{CCT}	Transmitter power supply	
17	V _{EET}	Transmitter ground (common with receiver ground)	
18	TD+	Transmitter Non-Inverted DATA in. AC coupled	
19	TD-	Transmitter Inverted DATA in. AC coupled	
20	V _{EET}	Transmitter ground (common with receiver ground)	

References

1. IEEE standard 802.3ae. IEEE Standard Department, 2005.
2. Enhanced 8.5 and 10 Gigabit Small Form Factor Pluggable Module SFP+ SFF-8431.