

10.3 Gb/s SFP+ AOC

APCO01-SSCxxx

■ Product Features

- ✓ Truly broadband - operates from 1 to 10.5 Gb/s
- ✓ Support hot-pluggable
- ✓ Available in lengths from 1m to 50m
- ✓ 360 degree cable braid crimp and enhanced EMI skirt
- ✓ Excellent ESD protection
- ✓ Single 3.3V power supply
- ✓ RoHS Compliant and Lead-Free
- ✓ Compliant with SFF-8472 Rev 11.1
- ✓ Compliant with SFP+ MSA: SFF-8431 Rev4.1



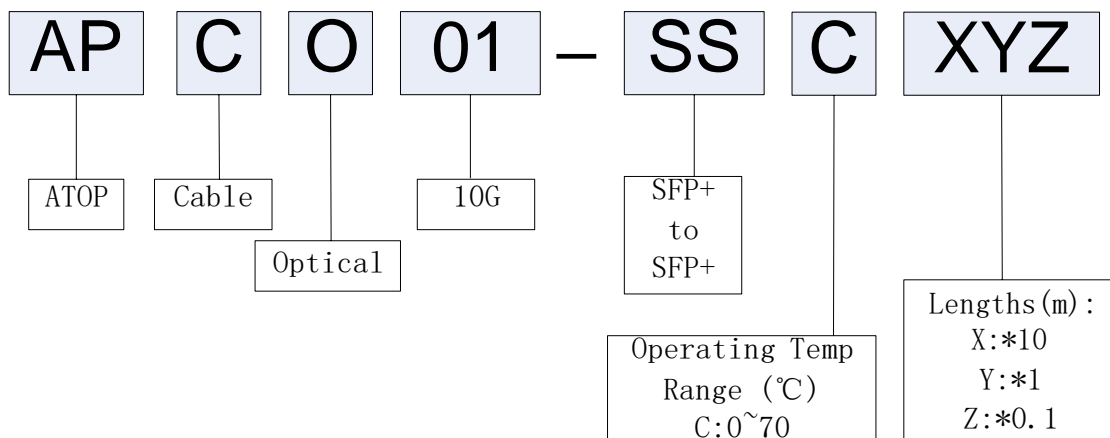
■ Applications

- ✓ 1/10GbE
- ✓ 1/2/4/8x FC
- ✓ Infiniband 1X SDR DDR QDR
- ✓ Proprietary Interconnects

■ General

Passive cables may require host pre-emphasis and equalization to reach at the longer lengths.

■ Product Selection





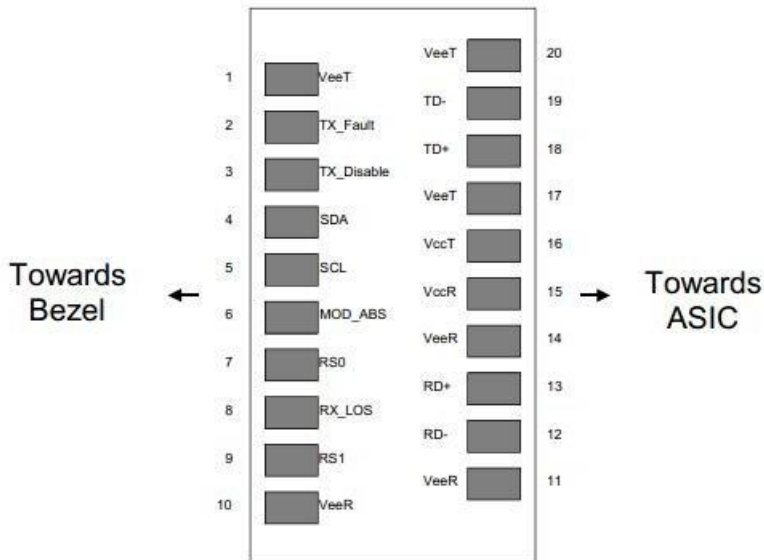
Part Number	Lengths
APCO01-SSC010	1m
APCO01-SSC020	2m
APCO01-SSC030	3m
APCO01-SSC050	5m
APCO01-SSC070	7m
APCO01-SSC100	10m
APCO01-SSC150	15m
APCO01-SSC200	20m
APCO01-SSC250	25m
APCO01-SSC300	30m
APCO01-SSC400	40m
APCO01-SSC500	50m

*For availability of additional cable lengths, please contact ATOP.

■ Pin Descriptions

Pin	Symbol	Name/Description	Ref.
1	VeeT	Transmitter Ground (Common with Receiver Ground)	
2	TX Fault	Transmitter Fault. LVTTTL-O	
3	TX Disable	Transmitter Disable. Laser output disabled on high or open. LVTTTL-I	
4	SDA	2-Wire Serial Interface Data Line(Same as MOD-DEF2 in INF-8074i). LVTTTL-I/O	
5	SCL	2-Wire Serial Interface Data Line(Same as MOD-DEF2 in INF-8074i). LVTTTL-I	
6	Mod_ABS	Module Absent, Connect to VeeT or VeeR in Module.	
7	RS0	Rate Select 0, optionally controls SFP+ module receiver LVTTTL-I	
8	LOS	Loss of Signal indication. Logic 0 indicates normal operation.	

		LVTTL-O	
9	RS1	Rate Select 1, optionally controls SFP+ module transmitter. LVTTL-I	
10	VeeR	Receiver Ground (Common with Transmitter Ground)	
11	VeeR	Receiver Ground (Common with Transmitter Ground)	
12	RD-	Receiver Inverted DATA out. AC Coupled. CML-O	
13	RD+	Receiver Non-inverted DATA out. AC Coupled. CML-O	
14	VeeR	Receiver Ground (Common with Transmitter Ground)	
15	VccR	Receiver Power Supply	
16	VccT	Transmitter Power Supply	
17	VeeT	Transmitter Ground (Common with Receiver Ground)	
18	TD+	Transmitter Non-Inverted DATA in. AC Coupled. CML- I	
19	TD-	Transmitter Inverted DATA in. AC Coupled. CML- I	
20	VeeT	Transmitter Ground (Common with Receiver Ground)	



Pin-out of Connector Block on Host Board

Absolute Maximum Ratings

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Maximum Supply Voltage	Vcc	-0.5		+4.0	V	

Storage Temperature	TS	-40		+85	°C	
Operating Humidity	RH	0		85	%	

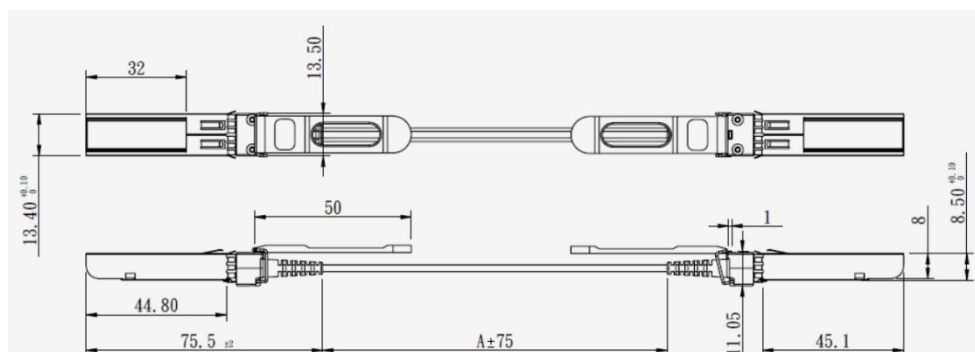
■ **Recommended Operating Conditions**

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Power Supply Voltage	Vcc	3.13	3.30	3.47	V	
Power Supply Current	Icc			140	mA	One side
Case Operating Temperature	Tc	0		+70	°C	

■ **Electrical Characteristics (TOP=25°C, Vcc=3.3Volts)**

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Data Rate	BR	1	10.3	10.5	Gbps	
Transmitter						
Input differential impedance	Rin	90	100	110	Ω	
Differential data input swing	Vin, pp	100		1000	mV	
TX Disable-High		2		Vcc+0.3	V	
TX Disable-Low		Vee		Vee+ 0.8	V	
TX Fault-High		2		Vcc+0.3	V	
TX Fault-Low		Vee		Vee+0.8	V	
Receiver						
Rx Output Diff Voltage	Vout, pp	-	600	800	mV	
Rx Output Diff Impedance	Zo	90	100	110	Ω	
LOS-High		2		Vcc+0.3	V	
LOS-Low		Vee		Vee+0.8	V	

■ **Mechanical Specifications**

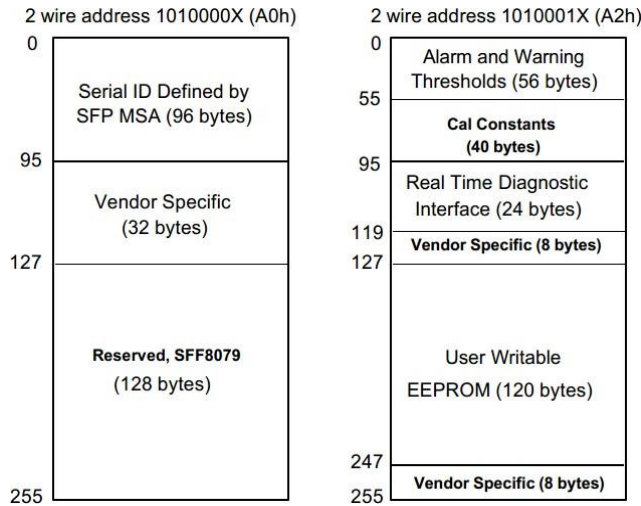




Cable Mechanical Specifications	Min	Typical	Max	Units
Minimum bend radius	60			mm
Minimum bend radius within 100 mm of a module end	105			mm
Diameter of cable jacket	1.8	2.0	2.2	mm

EEPROM Information

EEPROM memory map specific data field description is as below:



Regulatory Compliance

- ESD to the Electrical PINs: compatible with MIL-STD-883E Method 3015.7
- Immunity compatible with IEC 61000-4-3
- EMI compatible with FCC Part 15 Class B EN55022 Class B
- ROHS compliant with ROHS 2 (2011/65/EU)

Revision History

Revision	Initiated	Reviewed	Approved	DCN	Release Date
V1.a	xiaoiyou	wanggang		New Released.	July 28, 2016

For More Information

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Connects fiber to your home

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10.3Gb/s SFP+ Active Optical Cables Assembly

APCO01-SSCxxx
