

## 25Gb/s SFP+ AOC

### APCO02-BBCxxx

#### ■ Product Features

- ✓ Supports 25Gbps data rate
- ✓ Support hot-pluggable
- ✓ Maximum link length of 70m on OM3 MMF and 100m on OM4 MMF
- ✓ Excellent ESD protection
- ✓ Single 3.3V power supply
- ✓ Power dissipation < 1.0W (Per side)
- ✓ RoHS Compliant and Lead-Free



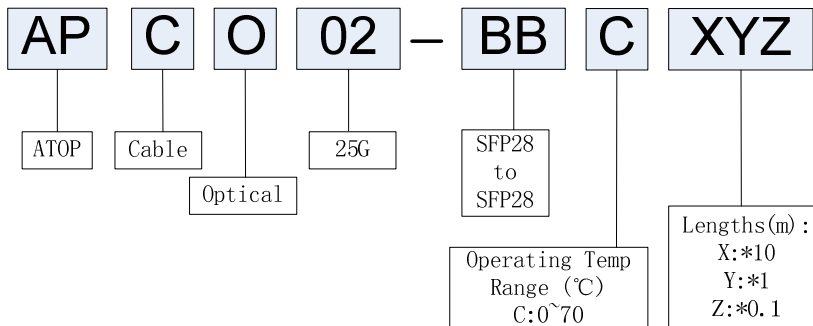
#### ■ Applications

- ✓ 25GBASE-SR Ethernet
- ✓ Data Center

#### ■ General

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

#### ■ Product Selection



Part Number	Lengths
APCO02-BBC010	1m
APCO02-BBC020	2m
APCO02-BBC030	3m



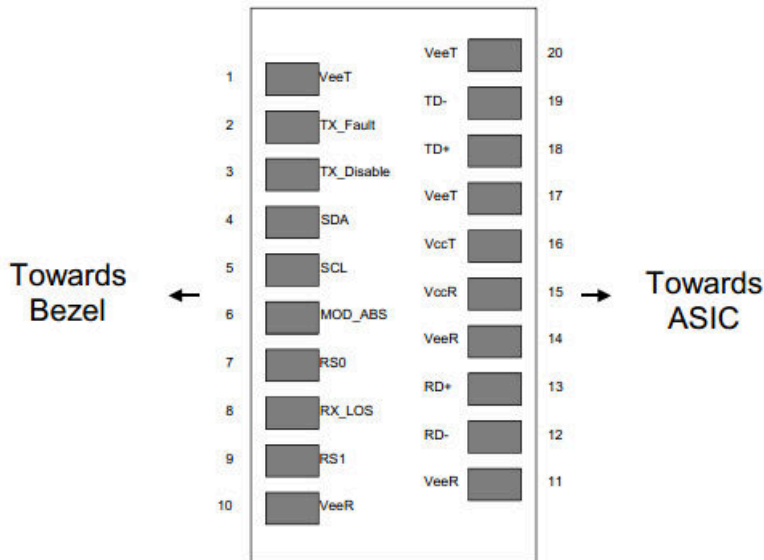
APCO02-BBC050	5m
APCO02-BBC070	7m
APCO02-BBC100	10m
APCO02-BBC150	15m
APCO02-BBC200	20m
APCO02-BBC250	25m
APCO02-BBC300	30m
APCO02-BBC400	40m
APCO02-BBC500	50m

\*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. LVTTTL-O	
9	RS1	Rate Select 1, optionally controls SFP+ module transmitter. LVTTTL-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	-5		+75	°C	
Case Operating Temperature	Tc	0		+70	°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			300	mA	Per side

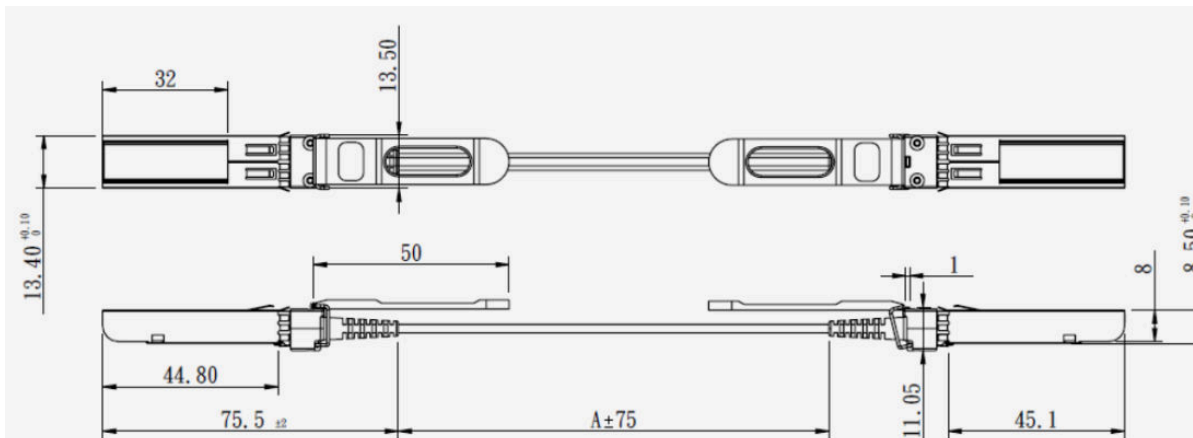
■ **Electrical Characteristics (TOP=25°C, Vcc=3.3Volts)**

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Data Rate	BR		25.78		Gb/s	
Bit Error Ratio	BER			10 <sup>-8</sup>		1
<b>Transmitter</b>						
Input differential impedance	Rin	90	100	110	Ω	
Differential data input swing	Vin, pp	150		700	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	
<b>Receiver</b>						
Differential data output swing	Vout, pp	300		850	mV	
Rx Output Diff Impedance	Zo	90	100	110	Ω	
LOS-High		2		Vcc+0.3	V	
LOS-Low		Vee		Vee+0.8	V	

Notes:

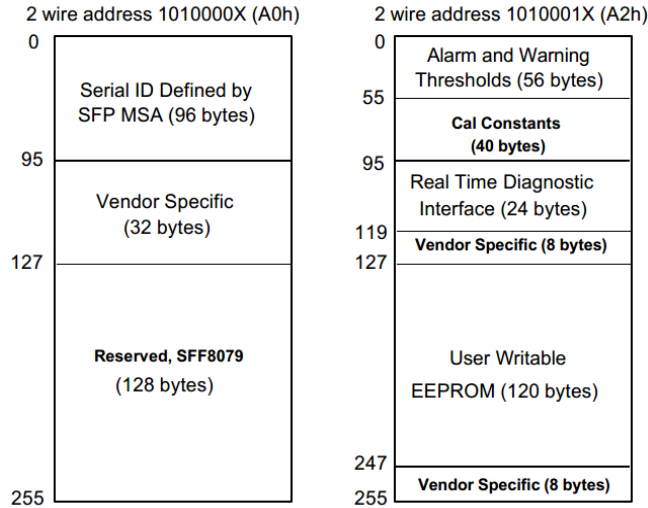
1. Pre-FEC, tested with a PRBS 231 – 1.

■ **Mechanical Specifications**



## ■ 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
V1.0	Chuck.Chen	Tang.Zhiqing	Dingzheng	New Released.	Dec 18, 2017
V1.1	Litao	Tangzhiqiang	Dingzheng	update the consumption、ICC、input/output swing、storage temp and BER test standard	Nov.15.2018
V1.2	Litao	Tangzhiqiang	Dingzheng	update Cable Mechanical Specifications	Jan.28.2019



Connects fiber to your home

**ATOP Corporation**

25Gb/s SFP28 Active Optical Cables Assembly

**APCO02-BBCxxx**

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■ **For More Information**

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