10GBASE-T SFP+ Copper Transceiver

Product Features

- Up to 10Gb/s bi-directional data links
- Supports 1Gb/s, 2.5Gb/s & 5Gb/s
- Hot-pluggable SFP+ footprint
- Fully metallic enclosure for low EMI
- Low power dissipation
- Compact RJ-45 connector assembly
- Access to physical layer IC via 2-wire serial bus
- Supports Links up to 30m using Cat 6a/7 Cable
- RoHS Compliant
- Operating case temperature: 0℃ to 70℃

Applications

- 1.25G/2.5G/5G/10 Gigabit Ethernet

Axiom's Copper SFP+ transceivers are based on 10 Gigabit Ethernet IEEE 802.3az standard. The 10GBASE-T physical layer PHY can be accessed via I2C, allowing access to all PHY setting and features.

Ordering Information

Part Number	Description
AC-SFPPT10-xx	1Gb/2.5Gb/5Gb/10GBASE-T SFP+ Copper RJ-45 Connector 30m

Regulatory Compliance

Feature	Standard	Performance
Electromagnetic Interference (EMI)	FCC Part 15 Class B EN 55022:2010, Class B	Compatible with standards
Electromagnetic susceptibility (EMS)	EN 55024:2010	Compatible with standards

Environmental Specifications

Parameter	Symbol	Min	Max	Unit	Notes
Storage Temperature	TS	-40	85	°C	
Operating Case Temperature	TOP	0	70	°C	

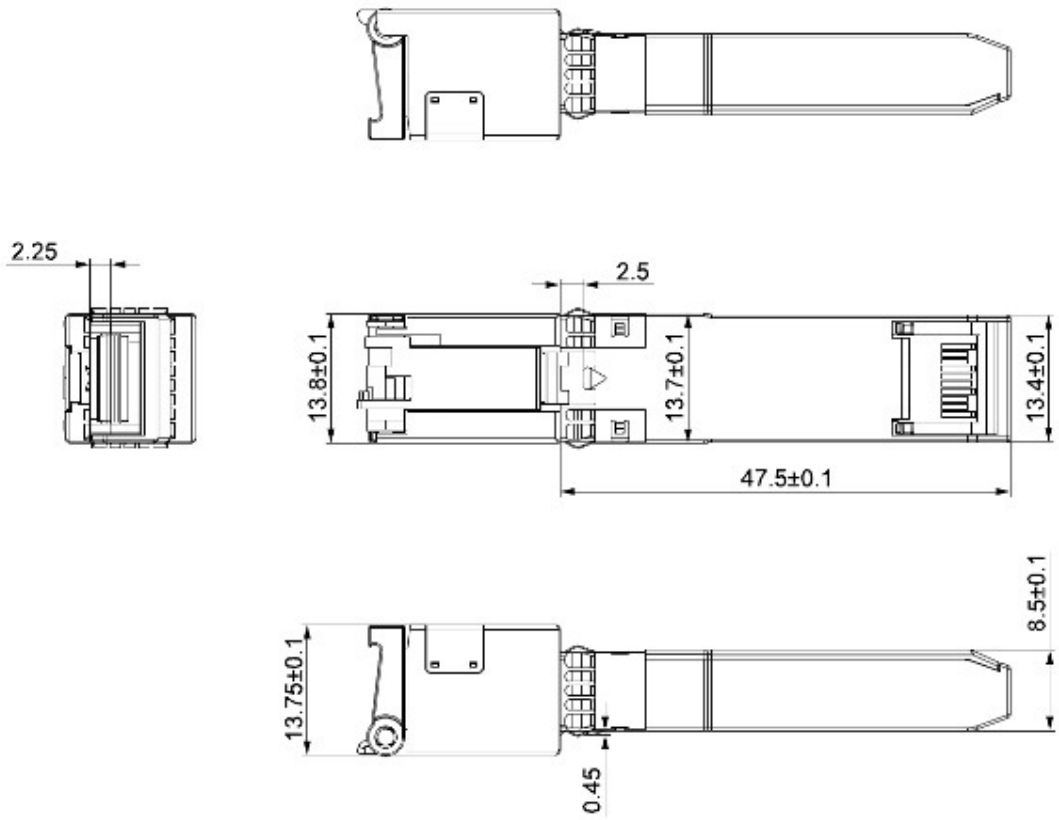
General Specifications

Parameter	Test Point	Min	Typical	Max	Unit	Notes
Data Rate1	DR		10.3		Gb/sec	IEEE 802.3
Cable Length	CL		30		m	Category 6a/7 UTP

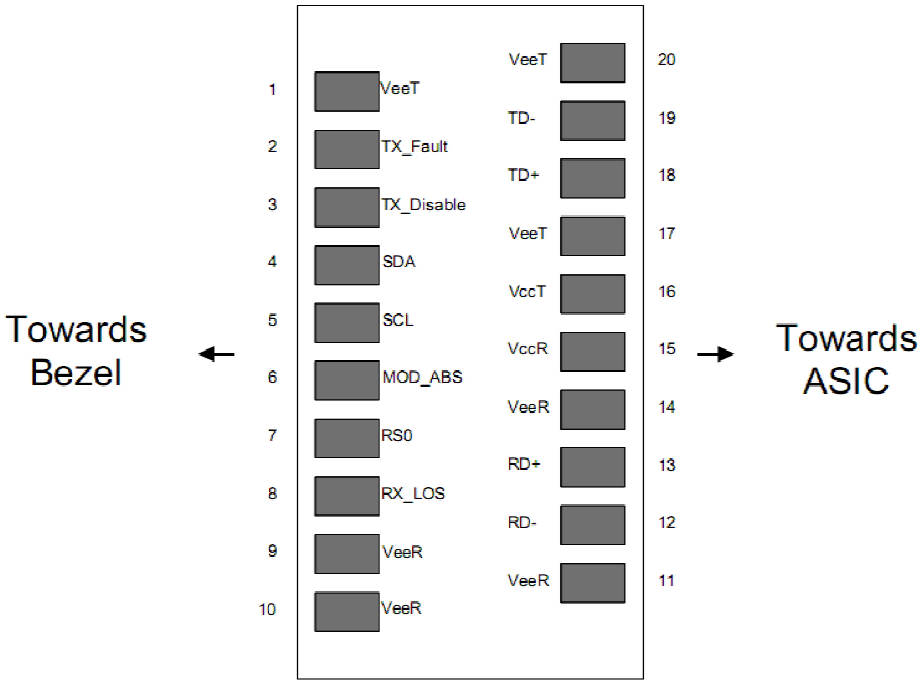
Electrical Power Interface

Parameter	Test Point	Min	Typical	Max	Unit	Notes
Supply Current	Is		700	750	mA	2.5W max power over full range of voltage and temperature. See caution note below
Input Voltage	Vcc	3.13	3.3	3.47	V	Referenced to GND
Maximum Voltage	Vmax			4	V	
Surge Current	Isurge			30	mA	Hot plug above steady state current. See caution note below

Mechanical Dimensions



Pin Assignment and Description



Pin Assignment

PIN #	Symbol	Description	Notes
1	V_{EET}	Transmitter Ground	
2	TX FAULT	Transmitter Fault Indication	Not supported
3	TX DISABLE	Transmitter Disable	
4	SDA	SDA Serial Data Signal	
5	SCL	SCL Serial Clock Signal	
6	MOD_ABS	Module Absent. Grounded within the module	
7	RS0	Not Connected	
8	LOS	Loss of Signal	
9	V_{EER}	Receiver ground	
10	V_{EER}	Receiver ground	
11	V_{EER}	Receiver ground	
12	RD-	Inv. Received Data Out	
13	RD+	Received Data Out	
14	V_{EER}	Receiver ground	
15	V_{CCR}	Receiver Power Supply	
16	V_{CCT}	Transmitter Power Supply	
17	V_{EET}	Transmitter Ground	
18	TD+	Transmit Data In	
19	TD-	Inv. Transmit Data In	
20	V_{EET}	Transmitter Ground	