Features:

- Up to 10Gb/s bi-directional data links
- Hot-pluggable SFP+ footprint
- Commercial case temperature range (0°C to +70°C)
- Fully metallic enclosure for low EMI
- Power dissipation≤2.5W
- Compact RJ-45 connector assembly
- +3.3V single power supply
- Access to physical layer IC via 2-wire serial bus
- 10GBASE-T operation in host systems with XGMII interface
- Smaller Form Factor: Interoperable with any SFP+ cage and connector system
- SFF-8431 and SFF-8432 MSA Compliant
- Compliant with IEEE Std 802.3an-2006
- Compliant with FCC 47 CFR Part 15, Class B
- Lower EMI Emissions
- RoHS Compliant Products

Applications:

- 10 Gigabit Ethernet over Cat 6a/7 cable
- Legacy Networks
- Switch/Router with 10GBASE-T SFP+
- Other Rack to Rack connections

Description:

BSD-10G-T10GBASE-T copper SFP+ transceiver is a high performance, cost effective integrated duplex device compliant with the 10GBASE-T standards as specified in IEEE 802. 3-2006 and IEEE 802.3an for bi-directional communication up to 30 meters reach over cat 6a/7 cable.All four pairs in the cable are used with symbol rate at 2500Mbps on each pair.

General Specifications:

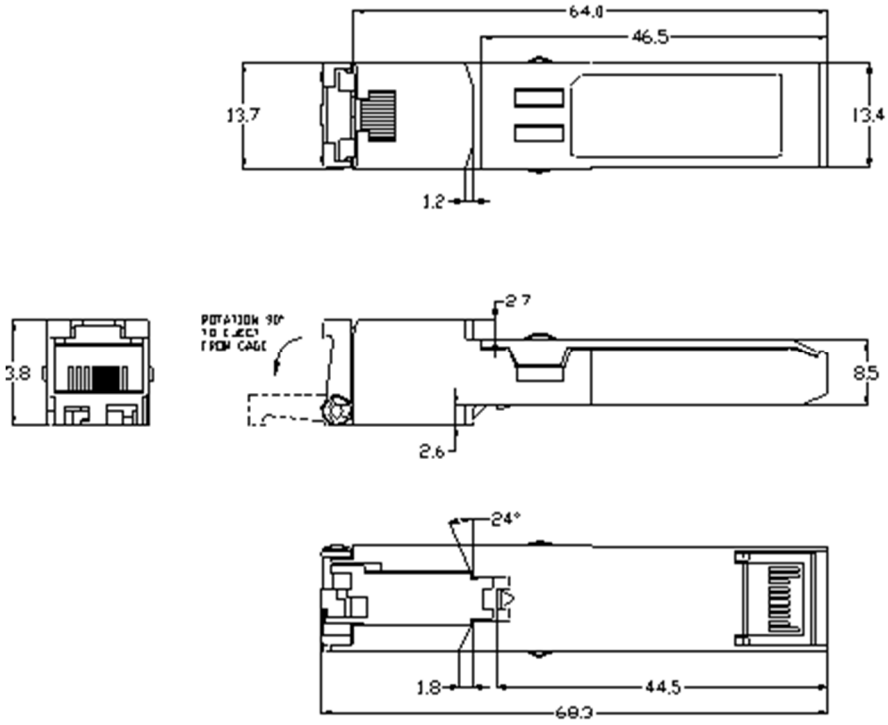
Parameter	Symbol	Min.	Typical	Max.	Units	Notes/Conditions
Data Rate	BR	100		10,000	Mb/s	IEEE 802.3an compatible.
Cable Length	L			30	m	Category 6a/7 UTP. BER <10^{-12}

Environmental Specifications:

The BSD-10G-Thas an extended range from 0°C to +70°C case temperature as specified in Table 7.

Parameter	Symbol	Min.	Typical	Max.	Units	Notes/Conditions
Operating Temperature	Top	0		70	°C	Case temperature
Storage Temperature	Tsto	-40		85	°C	Ambient temperature

Mechanical drawing:



Mechanical Dimensions of Transceiver

Safe Use Recommendations:

10G copper SFP+ has a power draw from 2.0W up to 2.5W dependent upon cable length and SFP+ case temperature. Due to the unique power usage from this module, BSD Networks offer these recommendations for safe use:

1.Do not fill any more than 30% of the allotted switch ports to the 10G Copper SFP+

2. Where possible, leave the adjacent SFP+ port empty

3. The 10G Copper SFP+ can get hot to the touch due to the higher power consumption. This will not damage the SFP+ or the SFP+ port. However, care should be taken when handling a part when it is removed from a switch after time in operation.

Compliance	10GBASE-KR	10GBASE-T	10GBASE-SR
Connector Type	Integrated/None	RJ-45	LC (Typical)
Medium Type	Copper Twin Coaxial	Twisted Pair	Optical Fiber
Reach	UP to 10m	UP to 30m	UP to 300m and over
Application Feild	Switch to Switch connections(In one Rack)	Rack to Rack Connections(In one Room)	Building to Building Connections, City to City
Unit Cost	Low	Moderate	Moderate
Power dissipation	0.5W Max	2.5W Max	1.5W Max
Extra Infrastructure	None	Copper Infrastructure	Fiber Infrastructure
Solution Cost	Moderate	Moderate	Moderate