

Preliminary DATA SHEET

CFORTH-SFP+ -10G-T
10GBASE-T SFP (Small Form Pluggable) Copper Transceiver
10 Gigabit Ethernet

CFORTH-SFP+ -10G-T Overview

CFORTH-SFP+-10G-T SFP+ 10GBASE-T is high performance and high speed copper transceiver module over Cat 6a/7 cable with a link of 30 m. It is specifically designed for 10 Gigabit Ethernet bidirectional communication. The benefit is that it uses standard-based technology with the familiar RJ45 connector and provides backward compatibility with legacy networks.

Product Features

- Supports Links up to 30m using Cat 6a/7 Cable
- Compliant with IEEE 802.3az
- Compliant with SFF-8431 and SFF-8432 MSA
- Low Power Consumption (2.5W MAX @ 30m)
- Auto-negotiates with other 10GBase-T PHYs
- I2C 2-Wire Interface for Serial ID and PHY Register Access
- Auto-sense MDI/MDIX
- RoHS Compliance
- Operating temperature range: 0°C to 70°C

Applications

- 10 Gigabit Ethernet

Ordering Information

Part Number	Description
CFORTH-SFP+-10G-T	10GBASE-T SFP+ Copper RJ-45 Connector 30m using Cat 6a/7 cable

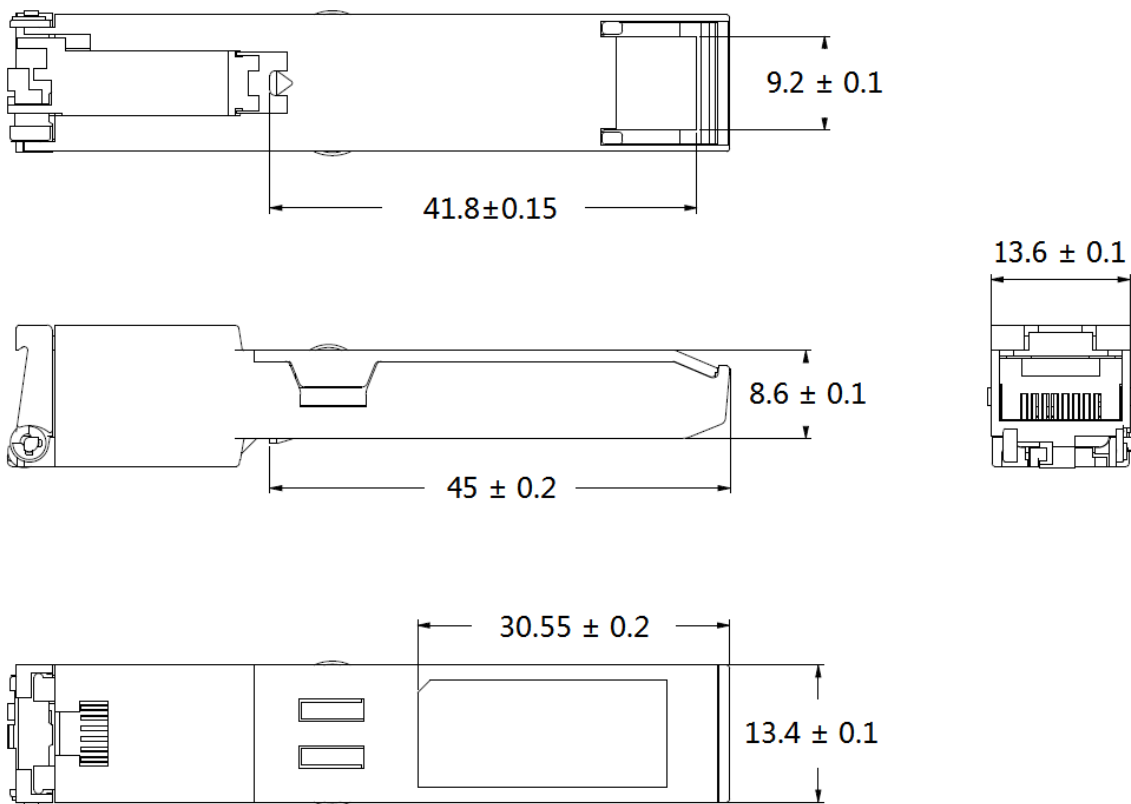
General Specifications

Parameter	Symbol	Min	Typ	Max	Unit	Remarks
Data Rate	DR		10		Gb/sec	1
Cable Length	CL		30		m	2
Bit Error Rate	BER			10^{-12}		
Operating Temperature	T _{OP}	0		70	°C	3
Storage Temperature	T _{STO}	-40		85	°C	4
Supply Current	I _S		700	750	mA	5
Input Voltage	V _{CC}	3.13	3.3	3.47	V	6
Maximum Voltage	V _{MAX}			4	V	5
Surge Current	I _{surge}			30	mA	7

Notes:

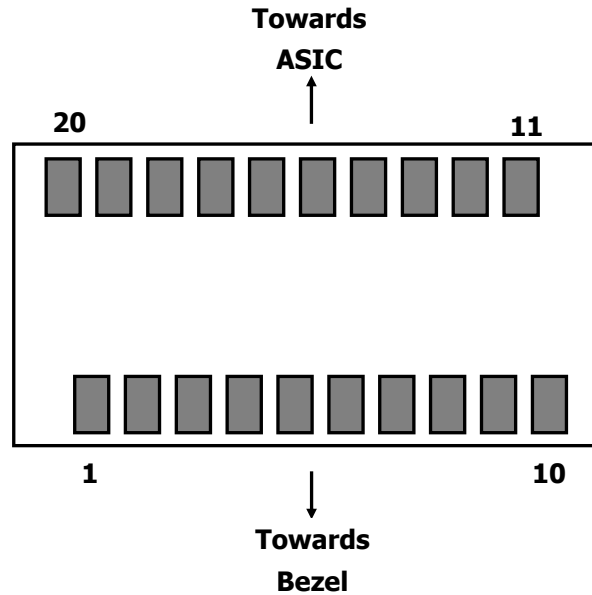
- 1.IEEE 802.3
- 2.Cat 6a/7 UTP
- 3.Case temperature
- 4.Ambient temperature
- 5.For electrical power interface
- 6.Referenced to GND
- 7.Hot Plug above steady state current

Dimensions



UNIT: mm

Electrical Pad Layout



Pin Assignment

PIN #	Symbol	Description	Remarks
1	V _{EET}	Transmitter ground (common with receiver ground)	1
2	TX_FAULT	Transmitter Fault. Not supported	
3	TX_DISABLE	Transmitter Disable. PHY disabled on high or open	2
4	SDA	2-wire Serial Interface Data Line	3
5	SCL	2-wire Serial Interface Clock Line	3
6	MOD_ABS	Module Absent. Grounded within the module	3
7	RS0	No Connection Required	
8	RX_LOS	Loss of Signal indication. Logic 0 indicates normal operation.	
9	RS1	No Connection Required	
10	V _{EER}	Receiver ground (common with transmitter ground)	1
11	V _{EER}	Receiver ground (common with transmitter ground)	1
12	RD-	Receiver Inverted DATA out. AC coupled	
13	RD+	Receiver Non-inverted DATA out. AC coupled	
14	V _{EER}	Receiver ground (common with receiver ground)	1
15	V _{CCR}	Receiver power supply	
16	V _{CCT}	Transmitter power supply	
17	V _{EET}	Transmitter ground (common with receiver ground)	1
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)	1

Notes:

1. Circuit ground is connected to chassis ground
2. Disabled: TX_DISABLE > 2V or open, Enabled: TX_DISABLE < 0.8V
3. Should Be pulled up with 4.7k – 10k ohm on host board to a voltage between 2V and 3.6V