ShenZhen Ipolex Co.,Ltd

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10/100/1000/2500/5000/10GBase-T SFP+

Copper RJ-45 Connector

ASF-10G-T

Product Features

- Supports 10GBase-T using 30m Cat 6a/7 Cable

- Supports 5000Base-T using 50m Cat 5e cable or better

- Supports 2500Base-T using 75m Cat 5e cable or better

- Supports 10/100/1000Base-T using 100m Cat 5e cable or better

- 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 Compliant

- Operating temperature range: 0℃ to 70℃

Applications

- 10 Gigabit Ethernet

Overview

ASF-10G-T SFP+ 10GBASE-T is high performance and high speed copper transceiver module over Cat 6a/7 cable with a link of 30m, and it also supports 10/100/1000/2500/5000Base-T application. The benefit is that it uses standard-based technology with the familiar RJ45 connector and provides backward compatibility with legacy networks.
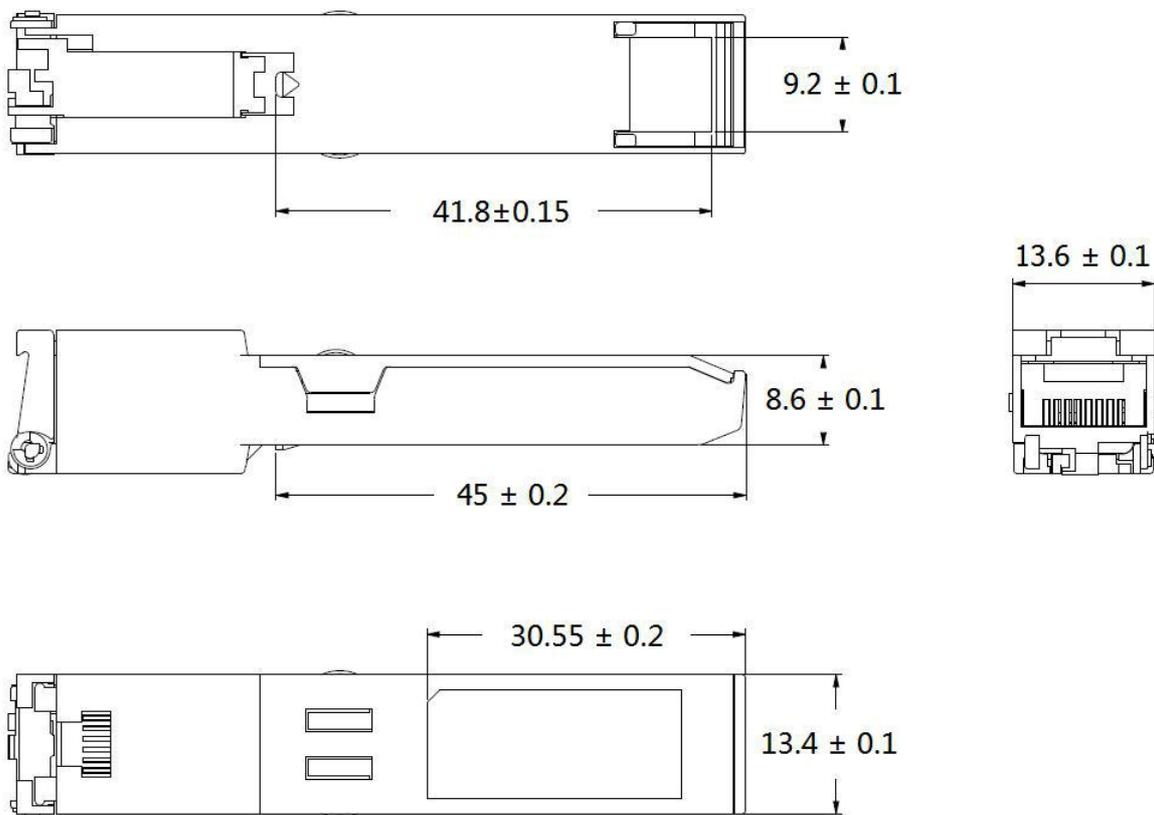
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General Specifications

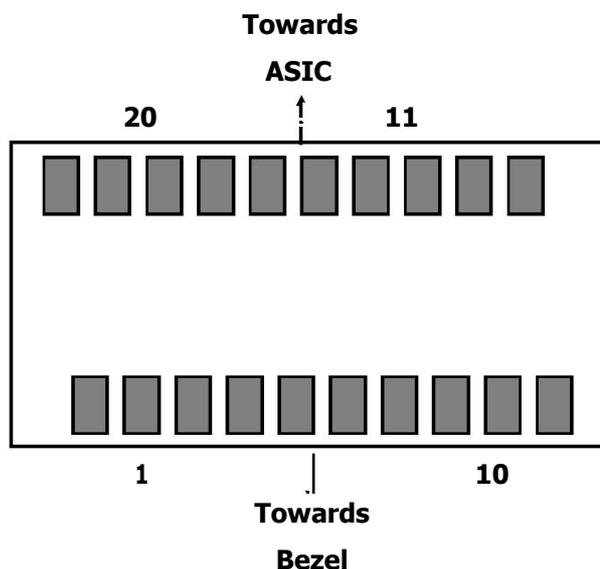| Parameter	Symbol	Min	TYP	Max	Unit	Remarks
Data Rate	DR		10		Gb/s	1
Bit Error Rate	BER			10^{-12}		
Operating Temperature	Top	0		70	℃	2
Storage Temperature	TSTO	-40		85	℃	3
Supply Current	Is		700	750	mA	4
Input Voltage	Vcc	3.14	3.3	3.46	V	5
Maximum Voltage	VMAX			4	V	4
Surge Current	Isurge			30	mA	6

Notes:

1. IEEE 802.3

2. Case temperature 3.Ambient temperature

3. For electrical power interface 5.Referenced to GND

4. Hot Plug above steady state current

Dimensions

9.2 ± 0.1

41.8±0.15

13.6 ± 0.1

8.6 ± 0.1

45 ± 0.2

30.55 ± 0.2

13.4 ± 0.1

UNIT: mm

Electrical Pad Layout

Towards

ASIC

20   **11**

1   **10**

Towards

Bezel

Pin Assignment

PIN #	Symbol	Description	Remarks
1	V$_{EET}$	Transmitter ground (common with receiver ground)	1
2	TX_FAUL	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+	ransmitter 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:

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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

Ordering Information

Part Number	Description
ASF-10G-T	10/100/1000/2500/5000/10GBase-T SFP+ Copper RJ-45 Connector

Revision History

Revision	Initiated	Approved	content	Release Date
Ver1.0	HT.HUANG	Nicky	Released	Oct/2017
Ver1.1	HT.HUANG	Nicky	Released	Apr/2018
Ver1.2	HT.HUANG	Nicky	Released	May/2018

Further Information

For further information, please contact www.ipolex.com

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