

RoHS compliant

AIM Electronics 1000BASE-T Copper Transceiver

Small Form Factor Pluggable (SFP), 3.3V

1.25 Gbps Gigabit Ethernet

Features

- Compatible with IEEE 802.3 : 2002
- SFP MSA compliant
- Hot-pluggable SFP footprint
- RJ-45 connector
- Support for bail type ejector latch mechanism
- Unshielded cable support
- 1000Base-T, full duplex default operating mode
- Auto MDI/MDIX
- Support 10/100/1000BASE-T operation in host systems with SGMII interface
- Links of 100m at 1.25Gbps with
 - four pair



Application

- 1.25 Gbps Giga Ethernet (IEEE 802.3)

Ordering Information

PART NUMBER	INPUT/OUTPUT	SIGNAL DETECT	VOLTAGE	OPERATING TEMPERATURE
CFORTH-SFP-T-GR	AC/AC	TTL	3.3V	0°C to 70°C

General Specifications

PARAMETER	SYMBOL	MIN	MAX	UNITS	NOTE
Data Rate	<i>DR</i>	10	1000	Mb/sec	
Bit Error Rate	<i>BER</i>		10^{-12}		
Operating Temperature	<i>T_{OP}</i>	0	70	°C	CFORTH-SFP-T-GR
Storage Temperature	<i>T_{OP}</i>	-40	85	°C	
Supply Current	<i>I_S</i>	---	375	mA	
Input Voltage	<i>V_{CC}</i>	3.13	3.47	V	
Maximum Voltage	<i>V_{MAX}</i>	---	4	V	
Surge Current	<i>I_{surge}</i>	---	30	mA	

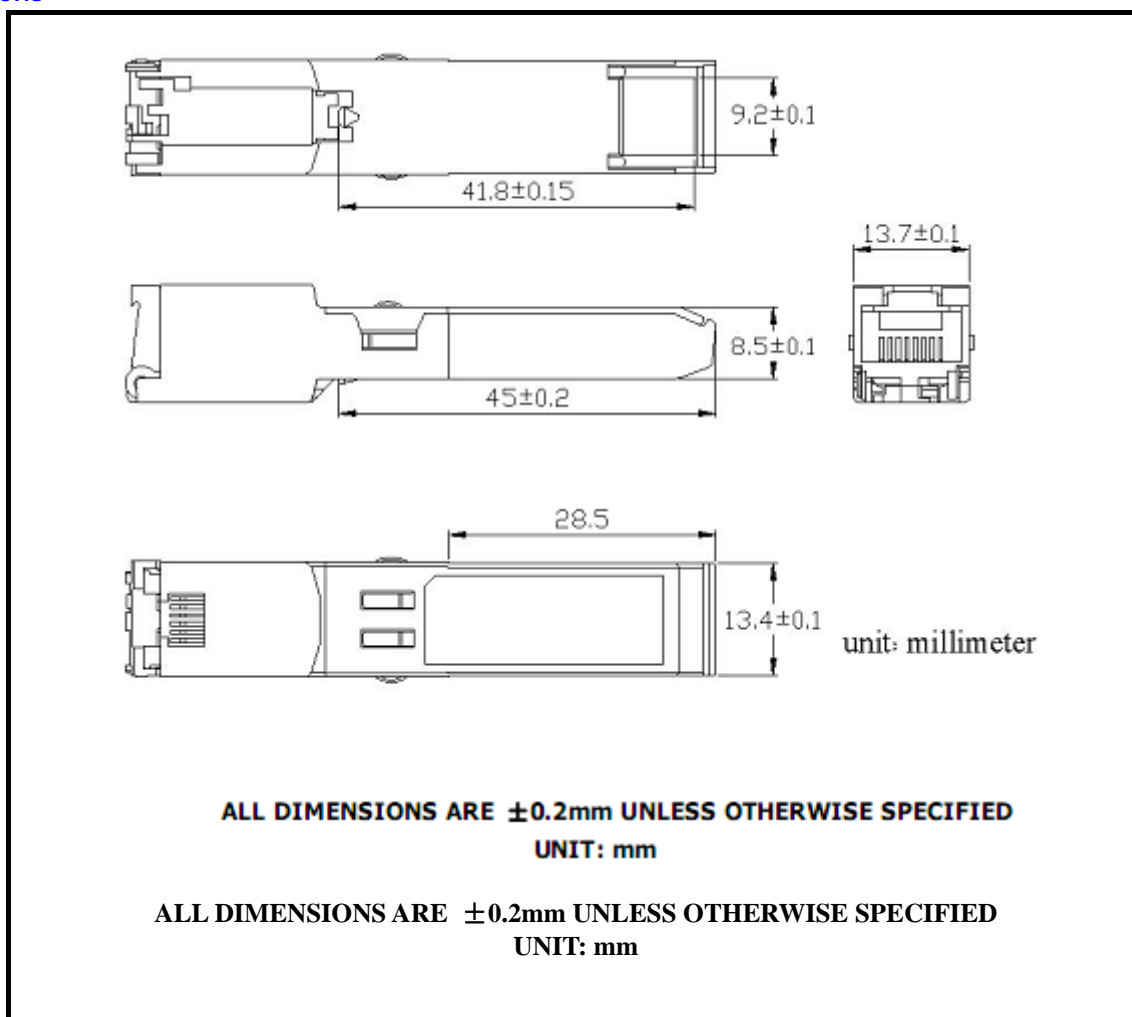
High Speed Electrical Interface Host-SFP

PARAMETER	SYMBOL	MIN	TYP.	MAX	UNITS	NOTE
Differential Input Voltage	V_{INDIFF}	250	---	1200	mV	Differential peak-peak
Differential Output Voltage	$V_{OUTDIFF}$	350	---	800	mV	Differential peak-peak
Rise/fall time (20% – 80%)	T_{R-F}	---	175	---	psec	
Tx Input impedance	Z_{IN}	---	50	---	ohm	Single ended
Rx Output impedance	Z_{OUT}	---	50	---	ohm	Single ended

High Speed Electrical Interface Transmission Line-SFP

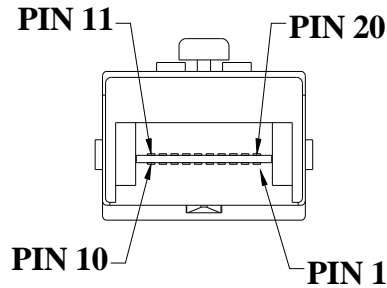
PARAMETER	SYMBOL	MIN	TYP.	MAX	UNITS	NOTE
Line Frequency	F_L	---	125	---	MHz	5-level encoding
Tx Output Impedance-Differential	$Z_{OUT,T}$	250	100	---	ohm	
Rx Input Impedance-Differential	$Z_{IN,RX}$	$V_{CC}-1.3$	100	---	ohm	

Dimensions



Pin Assignment

Pin-Out



Pin	Signal Name	Description
1	T_{GND}	Transmit Ground
2	TX_FAULT	Transmit Fault
3	$TX_DISABLE$	Transmit Disable
4	$MOD_DEF (2)$	SDA Serial Data Signal
5	$MOD_DEF (1)$	SCL Serial Clock Signal
6	$MOD_DEF (0)$	TTL Low
7	$RATE_SELECT$	Open Circuit
8	RX_LOS	Receiver Loss of Signal, TTL High, open collector
9	R_{GND}	Receiver Ground
10	R_{GND}	Receiver Ground
11	R_{GND}	Receiver Ground
12	$RX-$	Receive Data Bar, Differential PECL, AC coupled
13	$RX+$	Receive Data, Differential PECL, AC coupled
14	R_{GND}	Receiver Ground
15	V_{CCR}	Receiver Power Supply
16	V_{CCT}	Transmitter Power Supply
17	T_{GND}	Transmitter Ground
18	$TX+$	Transmit Data, Differential PCEL, AC coupled
19	$TX-$	Transmit Data Bar, Differential PCEL, AC coupled
20	T_{GND}	Transmitter Ground