COPPER SFP

MODEL: GLC-T

Product description

The ZHT industry-standard 1000BASE-T Small Form-factor Pluggable (SFP) gigabit interface converter (GBIC) is a hot-swappable input/output device that plugs into a Gigabit Ethernet port or slot, linking the port with the network. The ZHT SFP provides full-duplex Gigabit Ethernet connectivity to high-end workstations and between wiring closets over existing copper network infrastructure

GLC-T

1000Base-T SFP RJ45 100m optical transceiver
High quality with ISO9001, TUV, CE, FCC, UL and R_0HS certificates
Manufacturer: ZHT
Compatibility: Fully compatible with Cisco

Feature

- Up to 1.25Gb/s bi-directional data links
- Hot-pluggable SFP footprint
- Compact RJ-45 connector assembly
- Extended case temperature range (0°C to +70°C) Fully metallic enclosure for low EMI
- Low power dissipation
- Access to physical layer IC via 2-wire serial bus
- 100 BASE-T and 1000 BASE-T operation in host systems with SERDES interface
- 10/100/1000Mbps compliant in host systems with SGMII interface
- Operating case temperature range :0 ~ +70° C

Absolute Maximum Ratings

Table 1- Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Supply Voltage	Vcc	-0.5	-	+3.6	V	
Storage Temperature	TS	-40	-	85	°C	
Operating CaseTemperature	Tc	0	-	70	°C	
Operating Relative Humidity	RH	+5	-	+95	%	

Recommended Operating Conditions

Table 2- Recommended operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Units	Notes
Operating Case Temperature	TC	0	-	70	°C	
Power Supply Voltage	VCC	3.14	3.3	3.46	V	
Power Supply Current	ICC	-	-	370	mA	
Power Dissipation	PD	-	-	1.2	W	
Data Rate		-	-	1250	Mbps	
Cable Length		-	100	-	M	

Low Speed Signal Electrical Characteristics

Table 3- Low Speed Signal Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Units	Notes
SFP output high	VOH	2.0	-	VCC+0.5	V	
SFP output low	VOL	GND	-	GND+0.8	V	
SFP input high	VIH	2.0	-	VCC+0.5	V	
SFP input low	VIL	GND	-	GND+0.8	V	

High Speed Signal Electrical Characteristics

Table 4- High Speed Signal Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Units	Notes
Line Frequency	FL	-	125	-	MHZ	1
Single ended data input swing	Vin	500		1150	mV	
Single ended data output swing	Vout	500		1050	mV	
Tx Output Impedance	Zout,TX	-	100	-	ohm	2
Rx Input Impedance	Zin,RX	-	100	-	ohm	
Rise/Fall Time	Tr,Tf	100	-	200	ps	3
Tx Input Impedance	Zin	-	100	-	ohm	2
Rx Output Impedance	Zout	-	100	-	ohm	

Note:
1. 5-level encoding, per IEEE 802.3.
2. differential impedance
3. Vod rise/fall time (20%-80%).

Pin arrangement

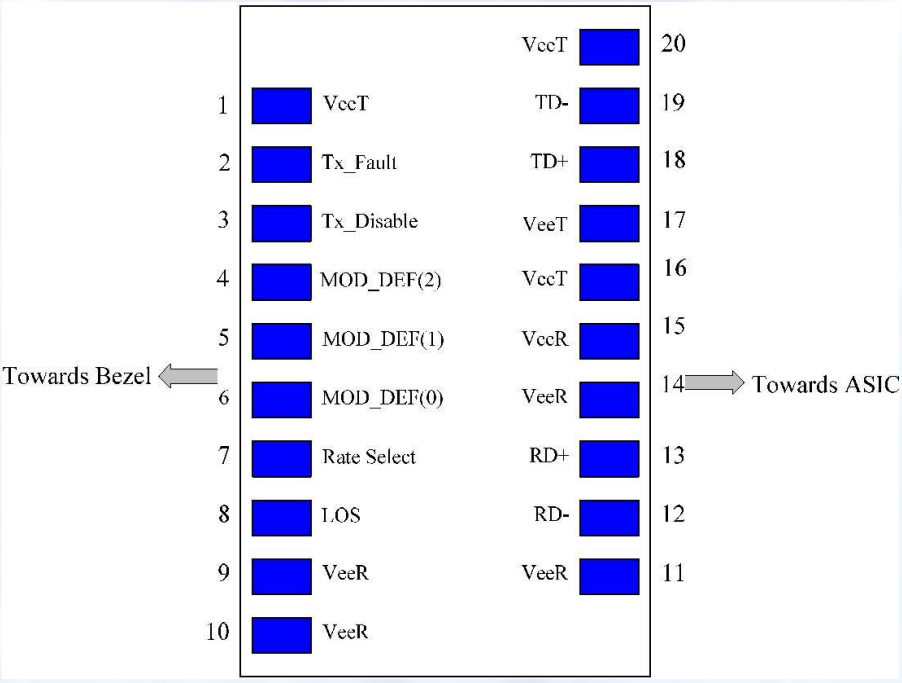

Figure 1, Pin View

Table 5-Pin Function Definitions

Pin	Name	FUNCTION	Plug Seq.	Notes
1	VeeT	Transmitter Ground	1	
2	TX Fault	Transmitter Fault Indication	3	1
3	TX Disable	Transmitter Disable	3	2
4	MOD-DEF2	Module Definition 2	3	3
5	MOD-DEF1	Module Definition 1	3	3
6	MOD-DEF0	Module Definition 0	3	3
7	Rate Select	Not Connect	3	
8	LOS	Loss of Signal	3	4
9	VeeR	Receiver Ground	1	
10	VeeR	Receiver Ground	1	
11	VeeR	Receiver Ground	1	
12	RD-	Inv. Received Data Out	3	
13	RD+	Received Data Out	3	
14	VeeR	Receiver Ground	1	
15	VccR	Receiver Power	2	3.3V ± 5%

16	VccT	Transmitter Power	2	3.3V ± 5%
17	VeeT	Transmitter Ground	1	
18	TD+	Transmit Data In	3	
19	TD-	Inv. Transmit Data In	3	
20	VeeT	Transmitter Ground	1	

Note:

1. TX Fault not supported and is always connected to ground
2. TX Disable is an input used to reset the transceiver module. It is pulled up within the module with a 4.7~ 10K resistor.
   - Low (0- 0.8V): Transceiver on
   - Between (0.8V and 2V): Undefined
   - High (2.0 – VccT): Transceiver Rest state
   - Open: Transceiver Rest state
3. MOD-DEF 0, 1, 2. These are the module definition pins. They should be pulled up with a 4.7~10K resistor on the host board to supply less than VccT+0.3V or VccR+0.3V.
   - MOD-DEF 0 is grounded by the module to indicate that the module is present.
   - MOD-DEF 1 is clock line of two wire serial interface for optional serial ID.
   - MOD-DEF 2 is data line of two wire serial interface for optional serial ID.
4. LOS (Loss of signal) is an open collector output, which should be pulled up with a 4.7k~10kΩ resistor on the host board to a voltage between 2.0V and Vcc+0.3V. Logic 0 indicates normal operation.
5.

Mechanical Diagram

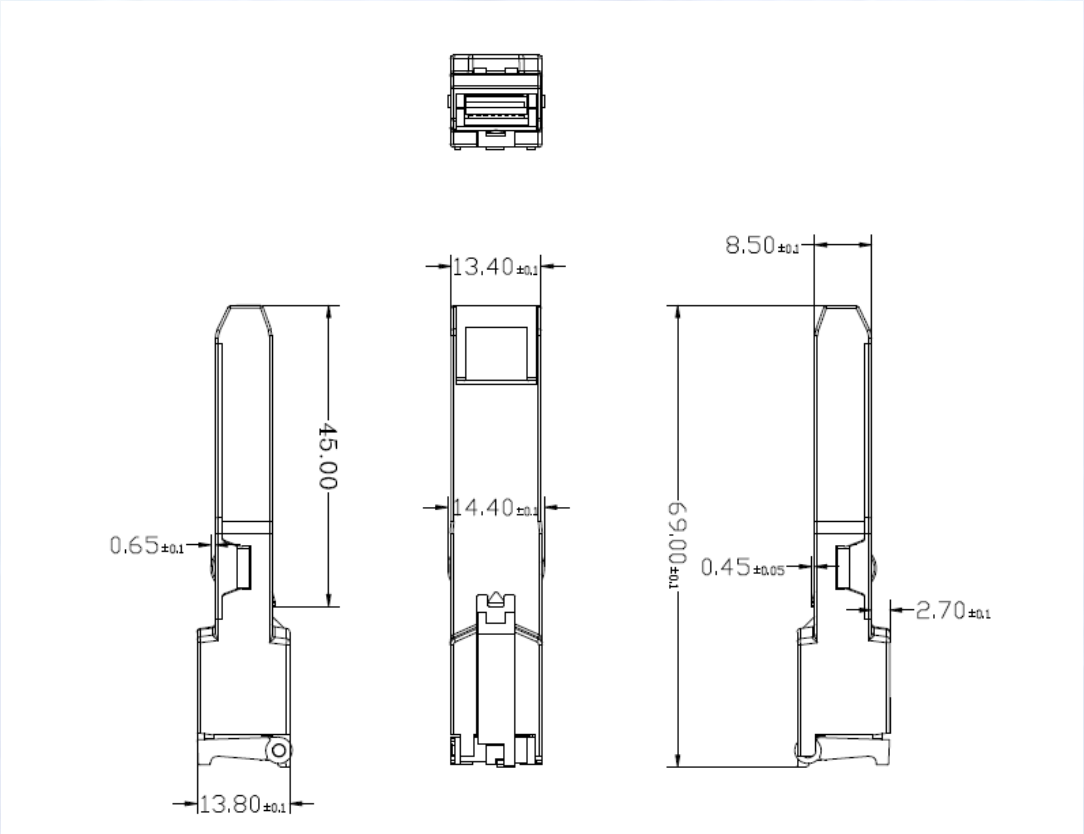

Figure 2, mechanical diagram

Ordering information

Table 6 Ordering information

Part number	Operating Case temperature
GLC-T	1000Mbps only, SERDES interface, Copper SFP with spring latch

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