

10/100/1000BASE-T Copper SFP

SERS-00HJ2CH Product Specification

FEATURES

- Up to 1.25Gb/s bi-directional data links
- Hot-pluggable SFP footprint
- TX Disable and RX Los/without Los function
- Fully metallic enclosure for low EMI
- +3.3V single power supply
- Low power dissipation (1.05 W typical)
- Operating Case Temperature: 0°C~70°C
- Compact RJ-45 connector assembly
- Access to physical layer IC via 2-wire serial bus
- 1000 BASE-T operation in host systems with SERDES interface
- 10/100/1000Mbps compliant in host systems with SGMII interface

APPLICATIONS

- 1.25 Gigabit Ethernet over Cat 5 cable

ORDERING INFORMATION

Part Number	Form Factor	Data Rate	Media	Distance (km)	Wavelength	Temperature (°C)
SERS-00HJ2CH	SFP	-	-	0.1	-	0~70

1. ABSOLUTE MAXIMUM RATINGS

Exceeding the limits below may damage the transceiver permanently.

Parameter	Symbol	Min.	Typ.	Max.	Unit.	Note
Storage Temperature	TSTG	-40	-	85	°C	
Storage Relative Humidity	RHS	5	-	95	%	
Operating Relative Humidity	RHO	0		85	%	
Supply Voltage	VCC	0		3.6	V	

2. RECOMMENDED OPERATING CONDITIONS

Parameter	Symbol	Min.	Typ.	Max.	Unit.	Note
Operating Case Temperature	Tc	0	-	+70	°C	
Supply Voltage	VCC3	3.15	3.3	3.45	V	
Supply Current	ICC3		320	375	mA	+3.3V Supply

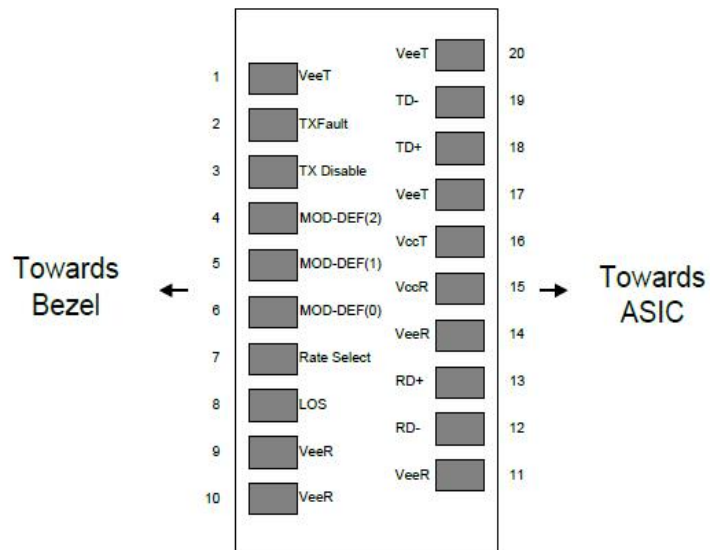
3. ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Min.	Typ.	Max.	Unit.	Note
Low-Speed Signals						
SFP Output LOW	VOL	0		0.5	V	Note 1
SFP Output HIGH	VOH	Vcc-0.5		Vcc+0.3	V	Note 1
SFP Input LOW	VIL	0		0.8	V	Note 2
SFP Input HIGH	VIH	2	-	Vcc+0.3	V	Note 2
High-Speed Electrical Interface, Transmission Line-SFP						
Tx Output Impedance	Zout, TX		100		Ω	
Rx Input Impedance	Zin, RX		100		Ω	
High-Speed Electrical Interface, Host-SFP						
Single ended data input swing	Vin p-p	250		1200	mV	
Input Differential Impedance	Zin		100		Ω	
Single ended data output swing	Vout p-p	350		800	mV	
Output Differential Impedance	Zout		100		Ω	

Notes:

1. 4.7k to 10k pull-up to host_Vcc, measured at host side of connector
2. 4.7k to 10k pull-up to Vcc, measured at SFP side of connector

4. PIN DIAGRAM



5. PIN DESCRIPTIONS

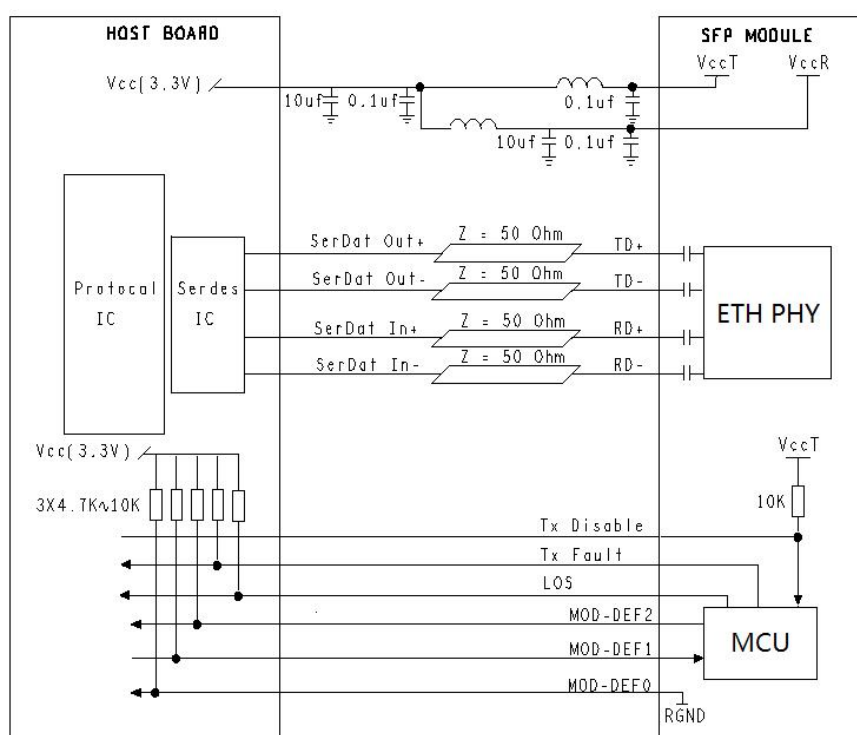
Pin	Symbol	Name/Description	Notes
1	VeeT	Transmitter Ground (Common with Receiver Ground)	1
2	TX Fault	Transmitter Fault. Not supported.	
3	TX Disable	Transmitter Disable. Laser output disabled on high or open.	2
4	MOD_DEF(2)	Module Definition 2. Data line for Serial ID.	3
5	MOD_DEF(1)	Module Definition 1. Clock line for Serial ID.	3
6	MOD_DEF(0)	Module Definition 0. Grounded within the module.	3
7	Rate Select	No connection required	
8	LOS	High indicates no linked. low indicates linked.	
9	VeeR	Receiver Ground (Common with Transmitter Ground)	1
10	VeeR	Receiver Ground (Common with Transmitter Ground)	1
11	VeeR	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 _{EE} R	Receiver Ground (Common with Transmitter Ground)	1
15	VccR	Receiver Power Supply	
16	VccT	Transmitter Power Supply	
17	VeeT	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	VeeT	Transmitter Ground (Common with Receiver Ground)	1

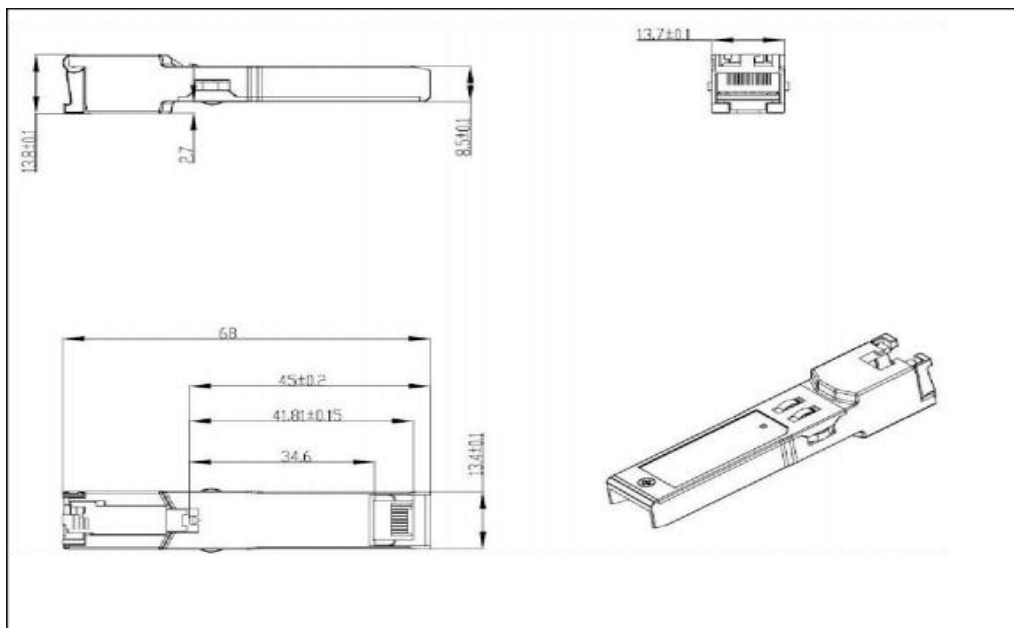
Notes:

1. Circuit ground is connected to chassis ground
 2. PHY disabled on $T_{DIS} > 2.0V$ or open, enabled on $T_{DIS} < 0.8V$
 3. Should be pulled up with 4.7k - 10k Ohms on host board to a voltage between 2.0 V and 3.6 V.
- MOD_DEF(0) pulls line low to indicate module is plugged in.

6. RCOMMENDED INTERFACE CIRCUIT



7. MECHANICAL SPECIFICATION



8. LABEL DIAGRAM



SERS-00HJ2CH

10/100/1000BASE-T Copper SFP

MADE IN CHINA

S/N: ?????????



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