

## Copper SFP Transceiver Series 1000BASE-T AND 10/100/1000BASE-T

### APPLICATIONS:

- Switched Backplane Applications
- Gigabit Ethernet Over CAT 5 Cable
- Switch to Switch SERDES Interface
- Switch to Switch SGMII Interface



### GENERAL INFORMATION:

- Small Form Factor Pluggable
- 10/100/1000BASE-T Operation on Host System With SGMII Interface
- Compatible with 1000BASE-X and 1000BASE-T auto negotiation
- SFP MSA Compliant – SERDES MAC Interface
- Auto Detect MCI/MDI-X – Operating Temperature 0- 70 C
- Link Length up to 100m at 1.25Gbps with four pair- Category 5 UTP cabling
- Single 3.3V power supply operation and low power dissipation
- Internal PHY IC is configurable by host system via PC Interface
- Product # Ordering Information – XSFP-T-RJ12-0101-DLL

	Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Absolute Maximum Ratings	Storage Temperature	T <sub>st</sub>	-40		+85	°C	
	Supply Voltage	V <sub>cc</sub>	-0.5		4.0	V	
	Relative Humidity	RH	5		95	%	
	Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Recommended Operating Conditions	Case Operating Temperature	Top	0		70	°C	Refer to ordering information
			-40		85		
	Supply Voltage		3.15	3.3	3.45	V	
	Supply Current	I <sub>s</sub>		330	385	MA	
	Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
General Specifications	Data Rate	DR	10		1000	Mb/sec	1
	Bit Error Rate	BER			10 <sup>-10</sup>		
	Notes: 1. 10/100/1000 BASE-T operation requires an SGMII interface with no clocks in the host system. With a SERDES interface that does not support SGMII, the module will operate at 1000BASE-T only.						

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### 1000BASE-T AND 10/100/1000BASE-T

#### GENERAL INFORMATION:

	Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
High-Speed Electrical Interface, Host to SFP	TD+, TD- Input Voltage Swing	Vin+ Vin-	250		1200	mV	2
	RD+, RD- Output Voltage Swing	Vout+ Vout-	250		800	mV	2
	Rise Time (Receiver)	tr		180	250	ps	1
	Fall Time (Receiver)	tf		180	250	ps	1
	Tx Input Impedance	Zin		50		Ohm	2
	Rx Output Impedance	Zout		50		Ohm	2
Notes: 1. 20% to 80% value 2. Single ended							
	Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
High-Speed Electrical Interface, Cable to SFP	Transmission Frequency	fT		125		MHz	1
	Tx Output Impedance	Zout.Tx		100		Ohm	2
	Rx Output Impedance	Zin.Rx		100		Ohm	2
	Notes: 1. 4D-PAM-5 encoding per IEEE802.3: 2002 2. Differential for frequencies ranging from 1MHz to 125MHz						