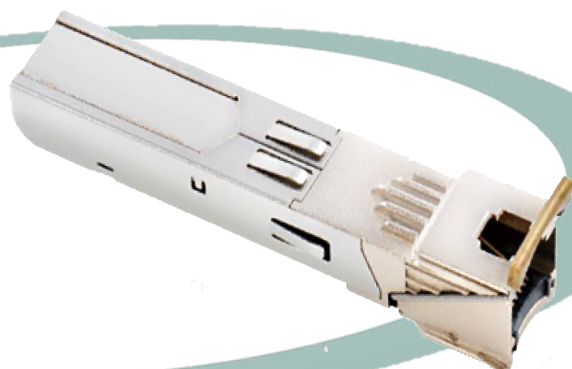


TRANSCEIVER SERIES

1000BASE-T and 10/100/1000BASE-T Copper SFP Transceiver



FEATURES AND BENEFITS

- Small Form Factor Pluggable (SFP) MSA Compliant
- Compatible with IEEE 802.3:2002
- Compatible with 1000BASE-X and 1000BASE-T auto-negotiation
- Auto-detect MDI/MDI-X
- 10/100/1000BASE-T operation in host system with SGMII interface
- Link length up to 100m at 1.25Gbps with four pair Category 5 UTP cabling
- Internal PHY IC is configurable by host system via I²C interface
- Single 3.3V power supply operation and low power dissipation

APPLICATIONS

GIGABIT ETHERNET OVER CAT 5 CABLE, SWITCH TO SWITCH SERDES INTERFACE, SWITCH TO SWITCH SGMII INTERFACE, SWITCHED BACKPLANE APPLICATION.

GENERAL SPECIFICATION

	Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Absolute Maximum Ratings	Storage Temperature	T _{st}	-40		+85	°C	
	Supply Voltage	V _{cc}	-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 _s		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 ⁻¹⁰		
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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GENERAL SPECIFICATION

	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						

ORDER INFORMATION

Part No.	Speed Mode	MAC Interface	Auto-Negotiation Enable by default (1000 BASE -X) *2	Link Indicator on RX_LOS pin	Temp.
KSFP-T-RJ12-0101-DLL	1000Mbps *1	SERDES	Yes	No	0~70°C