

1.25Gbps Copper SFP Transceiver CLSFPGETX3

Product Features:

- Up to 1.25Gbps bi-directional data links
- RJ45 Max 100m
- Fully metallic enclosure for low EMI
- Compact RJ-45 Connector assembly
- Hot-pluggable SFP footprint
- Low power dissipation
- RoHS compliant and Lead Free
- Access to physical layer IC via 2-wire serial bus
- Operating temperature: 0°C ~ 70°C
- 1000BASE-T operation in host systems with SERDES interface
- Support Rx_LOS function

Applications:

- 1000BASE-T

Functional Characteristics (Electrical)

The following tables list the performance specifications for the various functional blocks of the module.

Table 1 – Electrical Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
3.3V Power Interface						
Supply Current	Is	300	325	345	mA	1.2W max power over full range of voltage and temperature
Power Supply Voltage	Vcc	3.13	3.3	3.47	V	Referenced to GND
Maximum Voltage	Vmax			3.5	V	
Surge Current	Isurge			345	mA	Hot plug above steady state current
Low-Speed Signals						
SFP Output LOW	VOL	0		0.5	V	4.7k to 10k pull-up to host Vcc, measured at host side
SFP Output HIGH	VOH	Vcc -0.5		Vcc +0.3	V	4.7k to 10k pull-up to host Vcc, measured at host side
SFP Input LOW	VIL	0		0.8	V	4.7k to 10k pull-up to Vcc, measured at SFP side
SFP Input HIGH	VIH	Vcc -0.5		Vcc +0.3	V	4.7k to 10k pull-up to Vcc, measured at SFP side
Serial Bus						
I2C Clock Rate		0		250000	Hz	

Table 2 – High-Speed Electrical Interface

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
SerDes Differential Transmitter Characteristics						
Unit Interval	UI	799.94	800	800.06	ps	800ps ±75ppm
Eye Mask	T_X1			0.1875	UI	
Eye Mask	T_X2			0.4	UI	
Eye Mask	T_Y1	0.4*AVDDL			mV	
Eye Mask	T_Y2			0.6*AVDDL	mV	
Output Differential Voltage	VTX-DIFFp-p	0.8*AVDDL	AVDDL	1.2*AVDDL	mV	
Minimum TX Eye Width	TTX-EYE	0.625			UI	
Output Jitter	TTX-JITTER			0.375	UI	TTX-JITTER-MAX = 1 - TTX-EYE-MIN = 0.375UI
Differential Resistance	RTX	80	100	120	ohm	
AC Coupling Capacitor	CTX	75	100	200	nF	
Transmit Length in PCB	LTX			10	inch	
SerDes Differential Receiver Characteristics						
Unit Interval	UI	799.94	800	800.06	ps	800ps ±75ppm
Eye Mask	R_X1			0.3125	UI	
Eye Mask	R_Y1	50			mV	
Eye Mask	R_Y2			0.6*AVDDL	mV	
Input Differential Voltage	VRX-DIFFp-p	100		1.2*AVDDL	mV	
Minimum RX Eye Width	TRX-EYE	0.375			UI	
Input Jitter Tolerance	TRX-JITTER			0.625	UI	TRX-JITTER-MAX = 1 - TRX-EYE-MIN = 0.625UI
Differential Resistance	RRX	80	100	120	ohm	

Ordering Information

Table 3 - Ordering Information

Part No.	Data Rate	Operating Temp.	Distance	Optical Interface
CLSFPGETX3	1000Mbps	0°C ~ 70°C	100m	RJ45

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