

Maipu SFP-GET Series Copper Transceiver

SFP-GETA/B

Overview

Maipu SFP-GET series Copper Small Form Pluggable (SFP) transceivers is high-performance, cost-effective module compliant with the Gigabit Ethernet and 1000BASE-T standards as specified in IEEE 802.3-2002 and IEEE 802.3ab, which supporting 1000Mbps data-rate up to 100 meters reach over unshielded twisted-pair category 5 cable. The module supports 1000Mbps full duplex data links with 5-level Pulse Amplitude Modulation (PAM) signals. All four pairs in the cable are used with symbol rate at 250Mbps on each pair.



SFP-GETA transceiver



SFP-GETB transceiver

Key Features

- Up to 1.25Gb/s bi-directional data links
- 1.25G 10/100/1000M Ethernet over Cat5 cable
- Hot-pluggable SFP footprint
- Fully metallic enclosure for low EMI
- Low power dissipation (1.05 W typical)
- Compact RJ-45 connector assembly
- 10/100/1000Mbps compliant in host systems with SGMII or SerDes interface
- Case temperature range of 0°C to +70°C(Commercial)

Electrical Power Interface

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Supply Current	I _{cc}		320	375	mA	1
Input Voltage	V _{cc}	3.13	3.30	3.47	V	2
Maximum Voltage	V _{max}			4	V	
Surge Current	I _{surge}			30	mA	3

Low-Speed Signals

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
SFP Output LOW	VOL	0		0.5	V	1
SFP Output HIGH	VOH	V _{cc} -0.5		V _{cc} +0.3	V	1
SFP Input LOW	VIL	0		0.8	V	2
SFP Input HIGH	VIH	2.0		V _{cc} +0.3	V	2

High-Speed Electrical Interface

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Line Frequency			125		MHz	1
Tx Output Impedance			100		Ohm	2
Rx Input Impedance			100		Ohm	2

High-Speed Electrical Interface-Host SFP

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Single ended data input swing	V _{in}	250		1200	mV	1
Single ended data output swing	V _{out}	350		800	mV	1
Rise/Fall Time	T _r /T _f		175		ps	20%-80%
Tx Input Impedance	Z _{in}		50		Ohm	1
Rx Output Impedance	Z _{out}		50		Ohm	1

General Specifications

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Data Rate		10		1000	Mb/sec	1,3,4,5
Cable Length				100	m	2

Environmental Specifications

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Operating Temperature		0		+70	□	Commercial
Storage Temperature		-40		+85	□	Temperature

Order Information

Model	Description
SFP-GETA	V2 Version: 10/100/1000M Base-T, RJ45 interface, Serders
SFP-GETB	V1 Version: 10/100/1000M Base-T, RJ45 interface, SGMII

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