

Maipu 10G SFP+ 300M Transceiver

SFP-M1-L192P8

Overview

Maipu SFP-M1-L192P8 Small Form Factor Pluggable (SFP+) transceivers are compatible with SFF-8431, SFF-8432 and support 10G Ethernet SR and 10G Fiber Channel. It is designed for use in 10G-Gigabit multi-rate links up to 300m of OM3. Digital diagnostics functions are available via a 2-wire serial interface, as specified in SFF-8472.

Key Features

- Operating data rate up to 10.3Gb/s
- Duplex LC optical connector
- 850nm VCSEL laser transmitter
- RoHS compliant and Lead Free
- Distance up to 300m on multi-mode fiber
- Metal enclosure for lower EMI
- Low power dissipation <1.0W
- Operating case temperature: -20°C~+70°C

Absolute Maximum Ratings

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Maximum Supply Voltage	Vcc	-0.5		+4.0	V	
Storage Temperature	TS	-40		+85	°C	
Operating Humidity	RH	0		85	%	

Recommended Operating Conditions

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Power Supply Voltage	Vcc	3.13	3.30	3.47	V	
Power Supply Current	Icc			300	mA	
Case Operating Temperature	TI	-20		+70	°C	
50/125um OM3 MMF	Lmax			300	m	
Data Rate			10.3		Gbps	

Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Transmitter						
Input differential impedance	Rin	80	100	120	Ω	1
Differential data input swing	Vin, pp	120		850	mV	
TX Disable-High		Vcc-0.8		Vcc	V	
TX Disable-Low		Vee		Vee+0.8	V	
TX Fault-High		Vcc-0.8		Vcc	V	
TX Fault-Low		Vee		Vee+0.8	V	
Receiver						
Differential data output swing	Vout, pp	300		850	mV	2
Data output rise time	Tr	30			ps	3
Data output fall time	Tf	30			ps	3
LOS-High		Vcc-0.8		Vcc	V	
LOS-Low		Vee		Vee+0.8	V	

Optical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Transmitter						
Output Opt. Power	PO	-7.3		-1	dBm	
Optical Wavelength	λ	840	850	860	nm	
RMS Spectral Width	$\Delta\lambda$			0.45	nm	
Optical Extinction Ratio	ER	3.5			dB	
Transmitter and Dispersion Penalty	TDP			3.9	dB	
Receiver						
RX Sensitivity @10.3Gb/s	SENS1			-9.9	dBm	1,2
Receiver Sensitivity (OMA) @ 10.3Gb/s	SENS2			-11.1	dBm	
Receiver Overload		-1			dBm	
Optical Center Wavelength	λ_C	840		860	nm	
LOS De-Assert	LOSD			-13	dBm	
LOS Assert	LOSA	-30			dBm	
LOS Hysteresis		0.5		5	dB	

Order Information

Model	Description
SFP-M1-L192P8	10G SFP+, 850nm, 300m, LC, DDM, Multi-mode

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