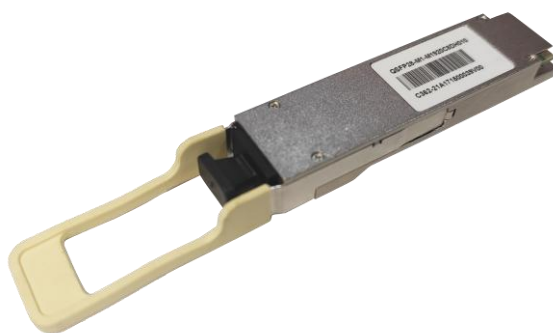


Maipu 100G QSFP28 SR4 100M Transceiver

QSFP28-M1-M1920C8D

Overview

Maipu QSFP28-M1-M1920C8D Transceiver is an integrated transceiver module containing a micro-optic component and semiconductor material and can implement optical-electrical conversion and electrical-optical conversion. The module is designed as a four-channel, pluggable, parallel, QSFP28 transceiver for 100Gbps fiber-communication. Each channel can operate at 25Gbps up to 70m on OM3 fiber. And the operating wavelength is 850nm. The optical interface uses a 12 fiber MTP(MPO) connector, and the electrical interface uses a 38-contact edge type connector. This product is compliant to 100GBASE-SR4 of IEEE802.3bm standard and SFF-8436 specification, and provides reliable long life, high performance, and consistent service.



Key Features

- Compliant with 100G Ethernet IEEE 802.3bm 100GBASE
- Duplex MPO optical connector
- 4*25Gb/s 850nm VCSEL laser transmitter
- RoHS compliant and Lead Free
- Distance up to 70m(OM3) and 100m(OM4) on multi-mode fiber
- Metal enclosure for lower EMI
- Low Power Consumption <3.0W
- Operating case temperature: 0°C to 70°C

Absolute Maximum Ratings

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Maximum Supply Voltage	Vc	-0.5		+3.6	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	
Module total power	P			3.0	W	
Case Operating Temperature	Tc	0		70	°C	
Bit Rate Each Lane	BR		25.78		Gbps	1
Link distance on OM3 MMF	Lmax			70	m	2
Link distance on OM4 MMF	Lmax			100	m	2
Bit Error Ratio (pre-FEC)	BER			5*10 ⁻⁵		3

Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Transmitter						
Input differential impedance	Rin	85	100	115	Ω	1
Differential data input swing	Vin, pp			900	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						
Output differential impedance	Rin	85	100	115	Ω	1
Differential data output swing	Vin, pp	300		900	mV	2
LOS-High		Vcc-0.8		Vcc	V	
LOS-Low		Vee		Vee+0.8	V	

Optical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Transmitter						
Center Wavelength	λ_t	840	850	860	nm	
RMS Spectral Width	Pm			0.6	nm	
Average Optical Power, each Lane	Pavg	-8.4		+2.4	dBm	
Optical Modulation Amplitude, each Lane	Poma	-6.4		3	dBm	
Transmitter and dispersion eye closure(TDEC), each lane	TDEC			4.3	dBm	
Extinction Ratio	ER	2			dB	
Average launch power of OFF transmitter, each lane	Toff			-30	dBm	
Transmitter Eye mask definition {X1, X2, X3, Y1, Y2, Y3}		{0.3,0.38, 0.45, 0.35, 0.41, 0.5}				1
Receiver						
Center Wavelength	λ_r	840		860	nm	
Average power at receiver input,each lane	Rin	-10.3		2.4	dBm	2
Damage threshold		3.4			dBm	
Optical Modulation Amplitude(OMA),each lane				3	dBm	
Stressed receiver sensitivity in OMA,each lane				-5.2	dBm	3
Receiver Reflectance				-12	dB	
Los Assert	LosA	-30			dBm	
Los Dessert	LosD			-10	dBm	
Los Hysteresis	LosH	0.5			dB	

Order Information

Model	Description
QSFP28-M1-M1920C8D	100G QSFP28, 850nm, 100m, MPO, DDM, Multi-mode

All rights reserved. Printed in the People's Republic of China.

No part of this document may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual or otherwise without the prior written consent of Maipu Communication Technology Co., Ltd.

Maipu makes no representations or warranties with respect to this document contents and specifically disclaims any implied warranties of merchantability or fitness for any specific purpose. Further, Maipu reserves the right to revise this document and to make changes from time to time in its content without being obligated to notify any person of such revisions or changes.

Maipu values and appreciates comments you may have concerning our products or this document. Please address comments to:

Maipu Communication Technology Co., Ltd
Maipu Mansion, No.16, Jiuxing Avenue
Hi-Tech Zone
Chengdu, Sichuan Province
P. R. China
610041
Tel: (86) 28-65544850,
Fax: (86) 28-65544948,
URL: [http:// www.maipu.com](http://www.maipu.com)
Email: overseas@maipu.com

All other products or services mentioned herein may be registered trademarks, trademarks, or service marks of their respective manufacturers, companies, or organizations.