



TOPSTAR TECHNOLOGY INDUSTRIAL CO., LIMITED

产品规格书

Product Specification Sheet

TOP-QSFP+-40G-LR4

RoHS Compliant 40Gb/s 4*10GB QSFP+ 1310nm 10km Optical Transceiver



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PRODUCT FEATURES

- Higher port density
- Lower power consumption
- Supports 40 Gbps data rate links of up to 10 km
- QSFP+ footprint (Quad small form-factor, pluggable)
- Hot pluggable electrical interface
- Compliant with:
 - - 40GE IEEE 802.3ba 40GBASE-LR4
 - - 40G OTN
 - - QDR Infiniband
- QSFP+ form factor

APPLICATIONS

- 40G Ethernet LR links
- Infiniband QDR long
- inter connects
- Client-side 40G OTN

PRODUCT DESCRIPTIONS

- 40Gbps hot pluggable transceiver in QSFP+ form factor
- Optical connectivity based on two SMF LC connectors
- Four 10GBps CWDM channels in the 1300nm band

Product Specifications

General Specifications

Parameter	Min	Max	Units
Storage Temperature	-20	85	0C



Operating Case Temperature	-5	70	0C
Supply Voltage	3.1	3.5	V
Power consumption		3.5	W

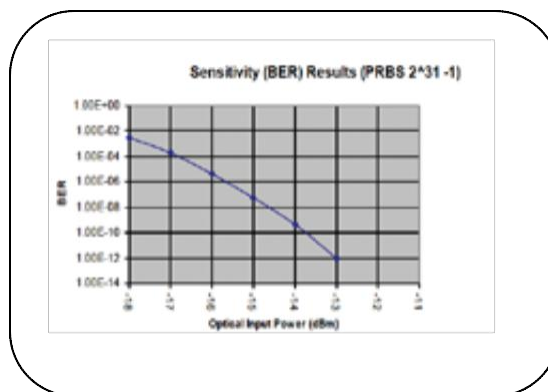
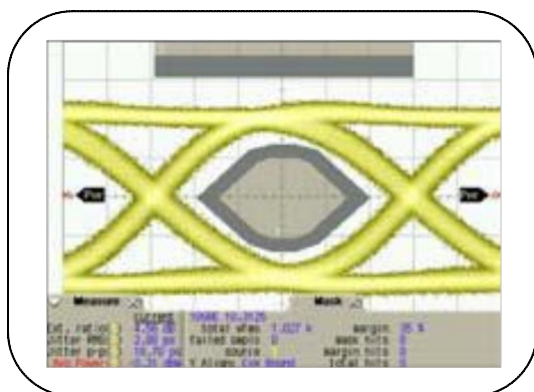
Transmitter Characteristics

Parameter	Min	Typical	Max	Units
Channels wavelength			1270 1290 1310 1330	nm
Extinction Ratio	3.5			db
Data rate per lane		10		Gb/s
Av optical power per lane	-7		2.3	dbm
Optical Modulation Amplitude per lane	-4		3.5	dbm

Receiver Characteristics

Parameter	Min	Typical	Max	Units
Channels wavelength		1270 1290 1310 1330		nm
Data rate per lane		10		Gb/s
Stressed Receiver Sensitivity per			-9.5	dbm

Typical Performance



1. Typical Transmitter eye diagram features over 20% error free margin
2. Typical Receiver performance, -13dbm OMA @ BER 10⁻¹²



Pin Descriptions

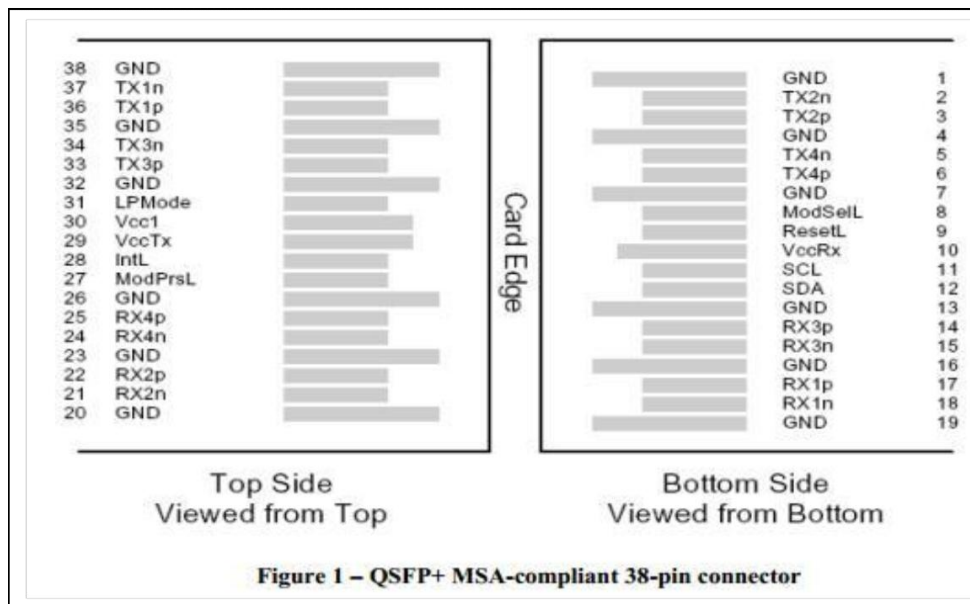


Figure 1 – QSFP+ MSA-compliant 38-pin connector

Pin	Symbol	Name/Description	Notes
1	GND	Ground	1
2	Tx2n	Transmitter Inverted Data Input	
3	Tx2p	Transmitter Non-Inverted Data Input	
4	GND	Ground	1
5	Tx4n	Transmitter Inverted Data Input	
6	Tx4p	Transmitter Non-Inverted Data Input	
7	GND	Ground	1
8	ModSelL	Module Select	1
9	ResetL	Module Reset	
10	Vcc Rx	+3.3 V Power supply receiver	
11	SCL	2-wire serial interface clock	
12	SDA	2-wire serial interface data	
13	GND	Ground	1
14	Rx3p	Receiver Non-Inverted Data Output	
15	Rx3n	Receiver Inverted Data Output	
16	GND	Ground	1
17	Rx1p	Receiver Non-Inverted Data Output	
18	Rx1n	Receiver Inverted Data Output	
19	GND	Ground	1
20	GND	Ground	1



21	Rx2n	Receiver Inverted Data Output	
22	Rx2p	Receiver Non-Inverted Data Output	
23	GND	Ground	1
24	Rx4n	Receiver Inverted Data Output	
25	Rx4p	Receiver Non-Inverted Data Output	
26	GND	Ground	1
27	ModPrsL	Module Present	
28	IntL	Interrupt	
29	Vcc Tx	+3.3 V Power supply transmitter	
30	Vcc1	+3.3 V Power Supply	
31	LPMode	Low Power Mode	
32	GND	Ground	1
33	Tx3p	Transmitter Non-Inverted Data Input	
34	Tx3n	Transmitter Inverted Data Input	
35	GND	Ground	1
36	Tx1p	Transmitter Non-Inverted Data Input	
37	Tx1n	Transmitter Inverted Data Input	
38	GND	Ground	1

Notes

1. Circuit ground is internally isolated from chassis ground.

ORDERING INFORMATION

Part Number	Description
TOP-QSFP+-40G-LR4	QSFP+ 40Gbps, 1310nm, 10KM, 0~70°C



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