QSFP+ 150m transceiver | 40G SR4 Ethernet

Datasheet

QSFP+ Optical Transceiver

QSP-40G-M150T85

Product Features

- 40GBASE-SR4 40G Ethernet 2.2dB QSFP+
- 150m SR4 QSFP+ for MMF @ 40Gbps
- 850nm VCSEL+PIN Laser 150m QSFP+
- 0°C - 70°C Temperature - Extended/Industrial Available
- 2-Wire Interface Digital Diagnostic Monitoring (SFF-8724)
- Hot-swappable for QSFP+ LC ports
- OptoSpan 1 year standard warranty
- Use with Finisar, Avago, JDSU & networks not requiring OEM compatibility
- Compliant with QSFP+ MSA
- RoHS compliant

*** For OEM Compatibility, use Platinum Series Part# PQSP-40GT85M150**

Applications

- 40GBASE-SR4 Ethernet
- 40GBE and 10GBE interconnects
- 40G Telecom connections

Description

OptoSpan QSP-40G-M150T85 is a Duplex 40GBASE-SR4 40G Ethernet QSFP+ transceiver designed for long distance optical communications up to 150m with signaling rates up to 40Gbps.

OptoSpan 40Gb Standard optical transceivers are compatible with many brands such as Finisar, Avago, JDSU and network environments that do not require any special compatibility. For networks that require special OEM compatibility, such as CISCO, BROCADE, JUNIPER, ALCATEL, HP, NORTEL, EMC, QLOGIC and other OEMs, consider OptoSpan Platinum OEM Series transceiver model# PQSP-40GT85M150.

All OptoSpan long-reach QSFP+ s are ROHS compliant, allow for real-time diagnostic monitoring as per SFF-8472 and designed to meet Multi-Source Agreement (MSA) standards for Duplex transceivers with LC interface.

Optical Budget Calculation for 150m QSFP+ Optical Transceiver

QSP-40G-M150T85	**Distance:** 150m				**Fiber:** 850nm MMF	
	Tx Min dBm	**Tx Max dBm**	**Rx Min dBm**	**Rx Max dBm**	**Link Attenuation dB**	**Power Budget dB**
Product Specifications	**-7.6**	**2.4**	**-5.4**	**2.4**		
Optical Calculation Results						**2.2**

General Specifications

Parameter	Unit	Min.	Typ.	Max
Absolute Maximum Ratings				
Maximum Supply Voltage	V	-0.5		3.6
Storage Temperature	°C	-40		+85
Case Operating Temperature	°C	0		+70
Recommended Operating Condition				
Supply Voltage	V	3.15	3.3	3.465
Supply Current	mA			475
Data Rate	Gbps		41.25	

Electrical Characteristics

Parameter	Unit	Min.	Typ.	Max
Transmitter				
Differential Input Voltage Swing	mVpp			
Input Differential Impedance	ohm	85	100	115
Transmit Disable Voltage - High	V	2.0		Vcc+0.3
Transmit Disable Voltage - Low	V	0		0.8
Transmit Fault Voltage - High	V	2.4		Vcc+0.3
Transmit Fault Voltage - Low	V	0		0.8
Receiver				
Differential Output Voltage Swing	mVpp			
Differential Output Impedance	ohms	85	100	115
LOS Output Voltage - High	V	2.4		Vcc+0.3
LOS Output Voltage - Low	V	0		0.8

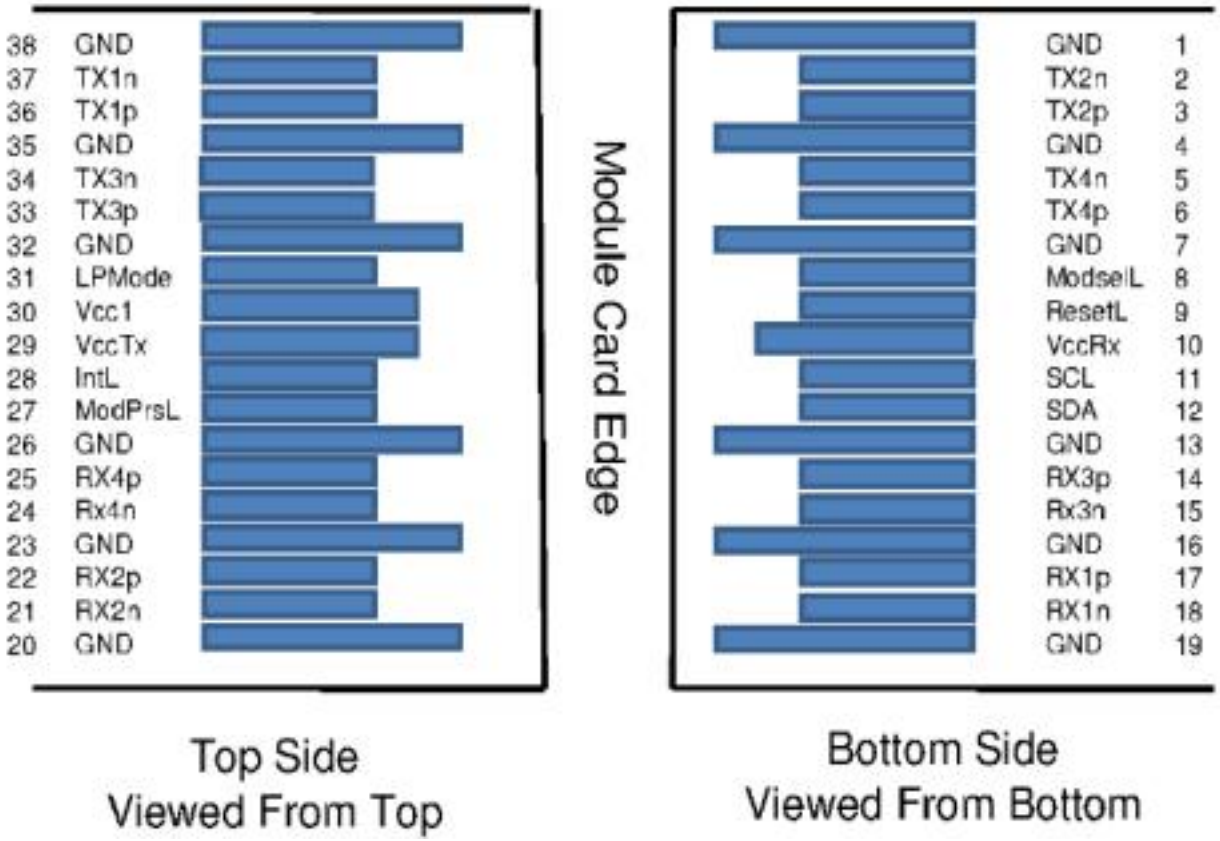
Optical Characteristics

Parameter	Unit	Min.	Typ.	Max
Transmitter				
Output Optical Power	dBm	-7.6		2.4
Optical Extinction Ratio	dB	3		
Optical Wavelength	nm	840	850	860
Spectral Width	nm			
Side Mode Suppression Ratio	dB			
Receiver				
Optical Center Wavelength	nm	840	850	860
Receiver Sensitivity @	dBm	-5.4		2.4
LOS DE-Assert	dBm			-7.5
LOS Assert	dBm	-30		

Laser Safety

This is a class 1 Laser Product according to IEC 60825-1:1993:+A1:1997+A2:2001. This product complies with 21 CFR 1040.10 and 1040 except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001.

PIN Layout


38 GND
37 TX1n
36 TX1p
35 GND
34 TX3n
33 TX3p
32 GND
31 LPMode
30 Vcc1
29 VccTx
28 IntL
27 ModPrsL
26 GND
25 RX4p
24 Rx4n
23 GND
22 RX2p
21 RX2n
20 GND
Module Card Edge
GND 1
TX2n 2
TX2p 3
GND 4
TX4n 5
TX4p 6
GND 7
ModselL 8
ResetL 9
VccRx 10
SCL 11
SDA 12
GND 13
RX3p 14
Rx3n 15
GND 16
RX1p 17
RX1n 18
GND 19
Top Side
Viewed From Top
Bottom Side
Viewed From Bottom

PIN Functions

Pin #	Name - Description
1	Contact OptoSpan for detailed pin layout.
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Mechanical Layouts