Optospan

SFP 100m transceiver | 1G 10/100/1000 BASE-T

Datasheet

SFP Optical Transceiver Product Features

SFP-CPR-M100BXX

- 10/100/1000 BASE-T SFP
- 100m Duplex SFP for Copper @ 1.25Gbps
- Laser 100m SFP
- 0°C - 70°C Temperature - Extended/Industrial Available
- 2-Wire Interface Digital Diagnostic Monitoring (SFF-8724)
- Hot-swappable for SFP LC ports
- OptoSpan 1 year standard warranty
- Use with Finisar, Avago, JDSU & networks not requiring OEM compatibility
- SFP MSA / IEEE Std 802.3
- RoHS compliant

* For OEM Compatibility, use Platinum Series Part# PSFP-CPRBXXM100

Applications
- 1.25Gbps Gigabit Ethernet
- 10/100/1000Base-T
- SGMII Interface
- Router/Server Interface

Description

OptoSpan SFP-CPR-M100BXX is a Duplex 10/100/1000 BASE-T SFP transceiver designed for long distance optical communications up to 100m with signaling rates up to 1.25Gbps.

OptoSpan 1Gb 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# PSFP-CPRBXXM100.

All OptoSpan long-reach SFP 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 100m SFP Optical Transceiver

SFP-CPR-M100BXX	Distance: 100m				Fiber: Copper	
	Tx Min dBm	Tx Max dBm	Rx Min dBm	Rx Max dBm	Link Attenuation dB	Power Budget dB
Product Specifications						
Optical Calculation Results						

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General Specifications

Parameter	Unit	Min.	Typ.	Max
Absolute Maximum Ratings				
Maximum Supply Voltage	V	-0.5		4.0
Storage Temperature	ºC	-40		85
Case Operating Temperature	ºC	0		70
Recommended Operating Condition				
Supply Voltage	V	3.15	3.3	3.45
Supply Current	mA			350
Data Rate	Gbps			1.25

Electrical Characteristics

Parameter	Unit	Min.	Typ.	Max
Transmitter				
Differential Input Voltage Swing	mVpp	250		1200
Input Differential Impedance	ohm		50	
Transmit Disable Voltage - High	V			
Transmit Disable Voltage - Low	V			
Transmit Fault Voltage - High	V			
Transmit Fault Voltage - Low	V			
Receiver				
Differential Output Voltage Swing	mVpp	350		800
Differential Output Impedance	ohms		50	
LOS Output Voltage - High	V			
LOS Output Voltage - Low	V			

Optical Characteristics

Parameter	Unit	Min.	Typ.	Max
Transmitter				
Output Optical Power	dBm			
Optical Extinction Ratio	dB			
Optical Wavelength	nm			
Spectral Width	nm			
Side Mode Suppression Ratio	dB			
Receiver				
Optical Center Wavelength	nm			
LOS DE-Assert	dBm			
LOS Assert	dBm			

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.
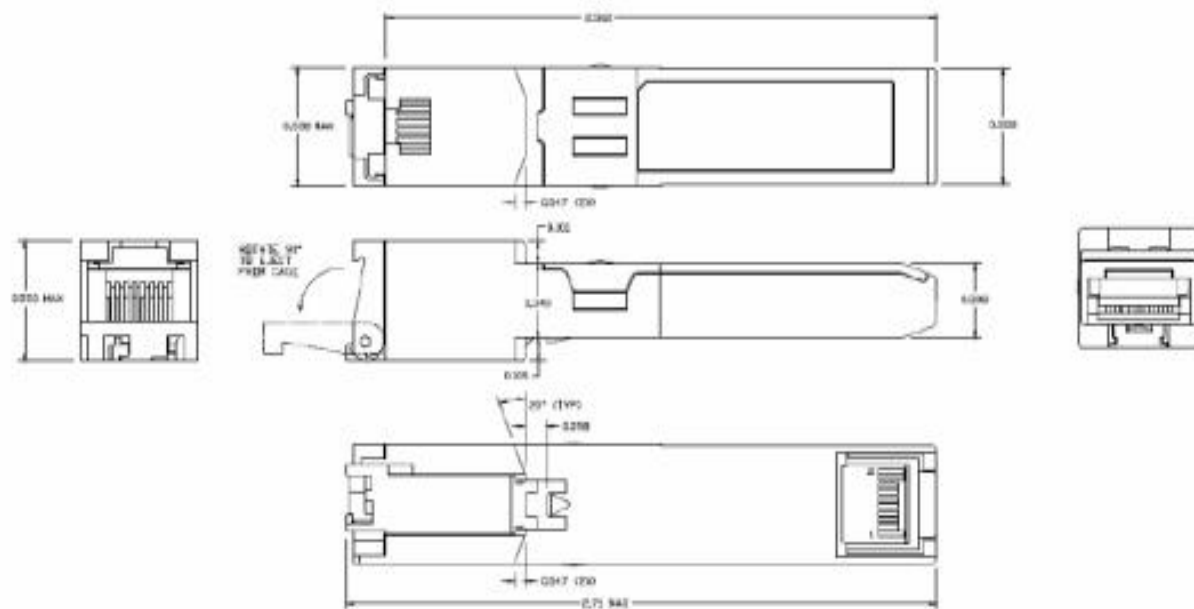
PIN Layout

Pin	Name
1	VeeT
2	Tx_Fault
3	Tx_Disable
4	MOD_DEF(2)
5	MOD_DEF(1)
6	MOD_DEF(0)
7	Rate Select
8	LOS
9	VeeR
10	VeeR
20	VeeT
19	TD-
18	TD+
17	VeeT
16	VccT
15	VccR
14	VeeR
13	RD+
12	RD-
11	VeeR

Towards Bezel ⇐

Towards ASIC ⇒

PIN 11

PIN 20

PIN 10

PIN 1
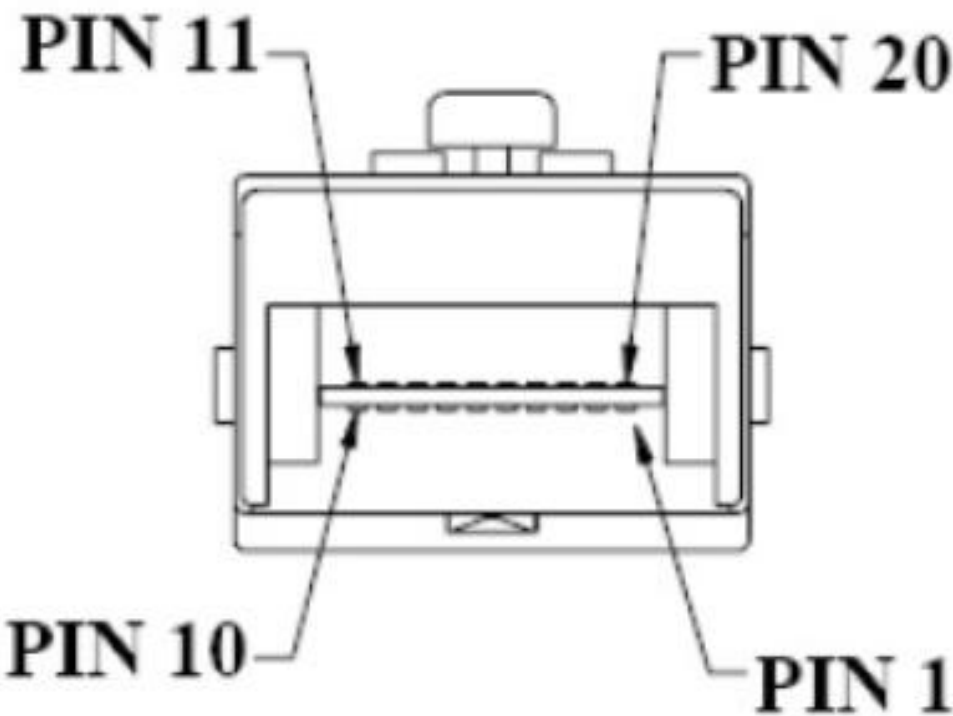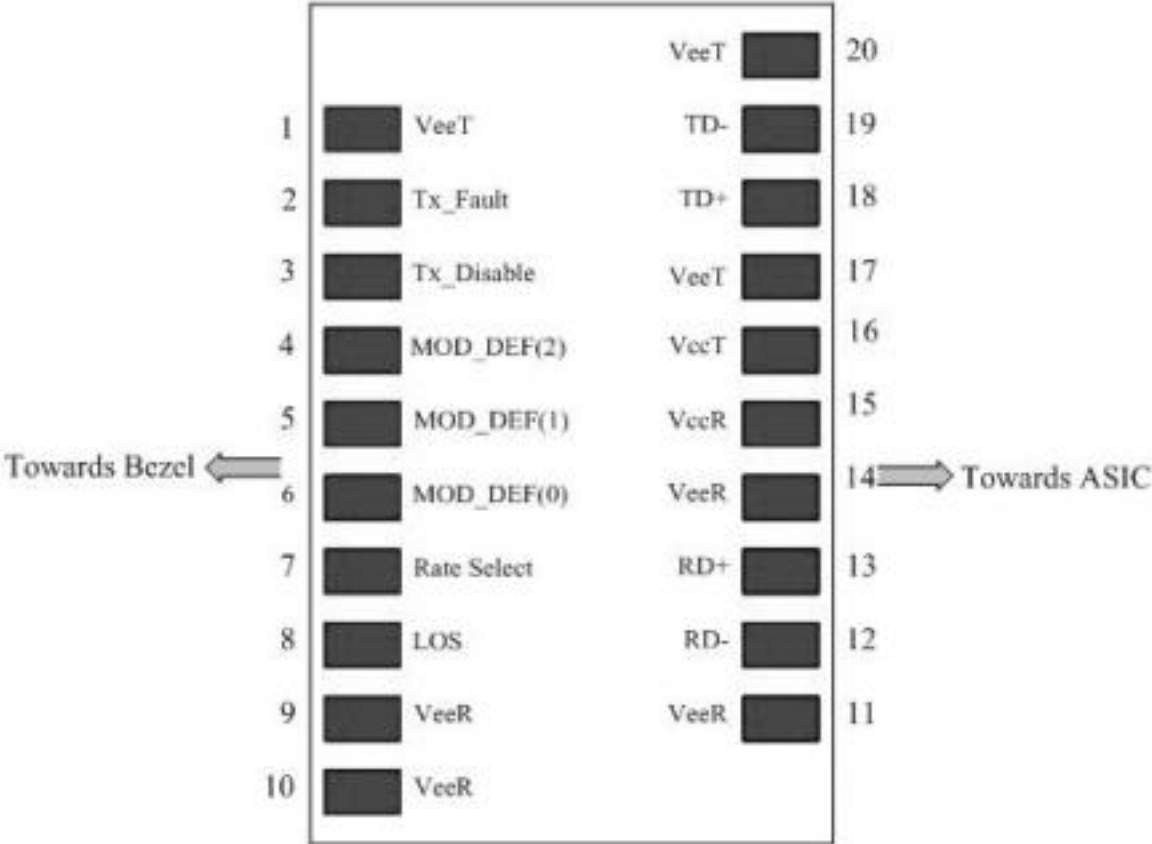
PIN Functions

Pin #	Name - Description
1	Transmitter Ground
2	Transmitter Fault Indication
3	Transmitter Disable
4	Module Definition 2
5	Module Definition 1
6	Module Definition 0
7	Not Connected
8	Loss of Signal
9	Receiver Ground
10	Receiver Ground
11	Receiver Ground
12	Inv. Received Data Out
13	Received Data Out
14	Receiver Ground
15	Receiver Power
16	Transmitter Power
17	Transmitter Ground
18	Transmit Data In
19	Inv. Transmit Data In
20	Transmitter Ground
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Mechanical Layouts