

**SFP+ SONET/SDH CWDM 10 km transceiver | Cisco Compatible 10G LR SONET OC-192 / STM-64**  
**Designed for OEM networks such as Cisco, HP, Juniper, Brocade, Alcatel etc.**

### Datasheet

## SONET/SDH SFP+ Optical Transceiver

### Product Features

- Exclusive Japanese OSAs for Ultimate Reliability
- SONET OC-192 / STM-64 w/ CDR 10dB SONET/SDH SFP+
- 10 km LR SONET/SDH SFP+ for SMF @ 10Gbps
- 1270nm - 1610nm DFB+PIN Laser 10 km SONET/SDH SFP+
- 0°C - 70°C Temperature - Extended/Industrial Available
- 2-Wire Interface Digital Diagnostic Monitoring (SFF-8724)
- Hot-swappable for SONET/SDH SFP+ LC ports
- Extended 2 Years Warranty
- Tested and Certified in Brand Specific Networks and Target Applications
- Assembled Using Highest Quality Raw Components
- Compliant with SFF-8431, SFF-8432 & ROHS

## PSPS-81DCXXK010



### Applications

- SONET OC-192 / SDH STM-64
- OTN ITU-T G.709
- 10GBASE-LR @ 10.31Gbps
- 10GbE & 10Gb/s FC w/FEC

## Description

Platinum OEM Series PSPS-81DCXXK010 is a Cisco Compatible CWDM SONET OC-192 / STM-64 w/ CDR SONET/SDH SFP+ with CDR, FEC & OTN G.709 transceiver designed for long distance optical communications up to 10 km with signaling rates up to 10Gbps.

OptoSpan Platinum OEM Series 10Gbps CWDM optical transceivers have undergone rigorous qualification and certification testing to provide End-to-End Compatibility using switching equipment from CISCO, BROCADE, JUNIPER, ALCATEL, HP (select models), NORTEL, EMC, QLOGIC and other OEMs.

All OptoSpan Platinum OEM Series long-reach SONET/SDH 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 CWDM transceivers with LC interface.

### Optical Budget Calculation for 10 km Platinum OEM SONET/SDH SFP+ Optical Transceiver

PSPS-81DCXXK010	Distance: 10 km				Fiber: 1270nm - 1610nm	
	Tx Min dBm	Tx Max dBm	Rx Min dBm	Rx Max dBm	Link Attenuation dB	Power Budget dB
Product Specifications	-5	0	-15	.5		
Optical Calculation Results			-9.2	-4.2	4.2	10

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## General Specifications

Parameter	Unit	Min.	Typ.	Max
<b>Absolute Maximum Ratings</b>				
Maximum Supply Voltage	V	-0.5		4.0
Storage Temperature	°C	-40		85
Case Operating Temperature	°C	0		70
<b>Recommended Operating Condition</b>				
Supply Voltage	V	3.13	3.3	3.45
Supply Current	mA			350
Data Rate	Gbps	9.95		11.1

## Electrical Characteristics

Parameter	Unit	Min.	Typ.	Max
<b>Transmitter</b>				
Differential Input Voltage Swing	mVpp	150		1200
Input Differential Impedance	ohm	85	100	115
Transmit Disable Voltage - High	V	2		Vcc+0.3
Transmit Disable Voltage - Low	V	0		0.8
Transmit Fault Voltage - High	V	2		Vcc+0.3
Transmit Fault Voltage - Low	V	0		0.8
<b>Receiver</b>				
Differential Output Voltage Swing	mVpp	350		700
Differential Output Impedance	ohms	85	100	115
LOS Output Voltage - High	V	2		Vcc+0.3
LOS Output Voltage - Low	V	0		0.8

## Optical Characteristics

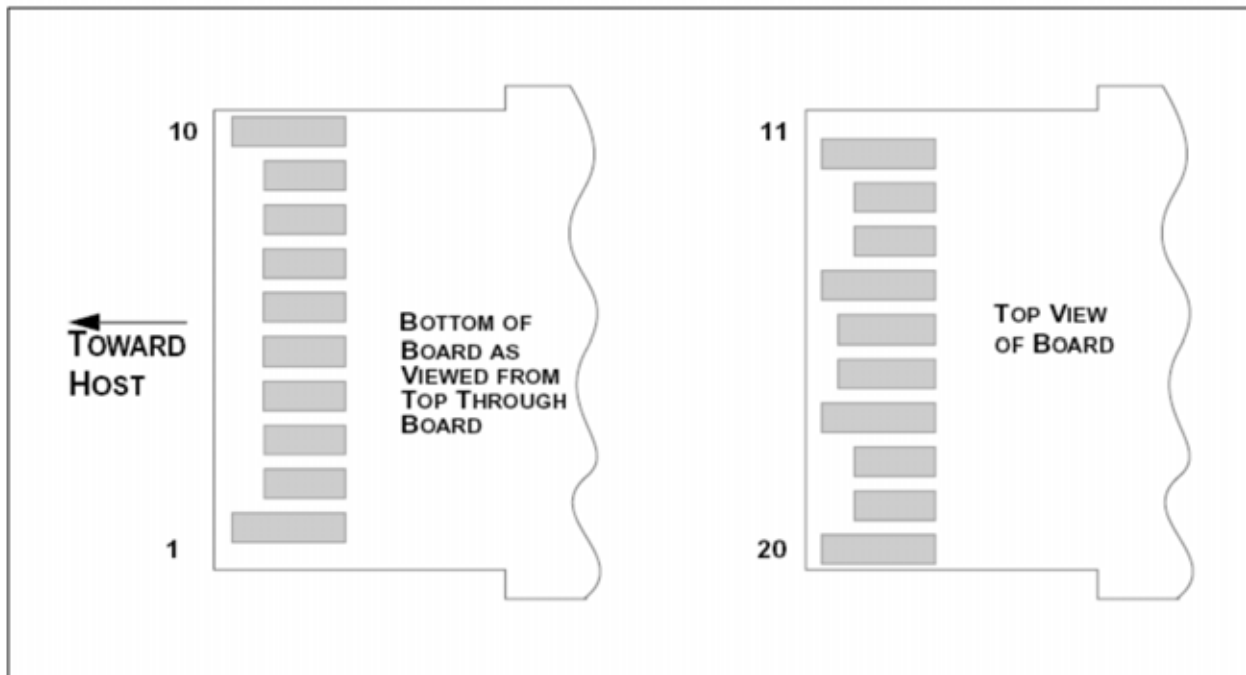
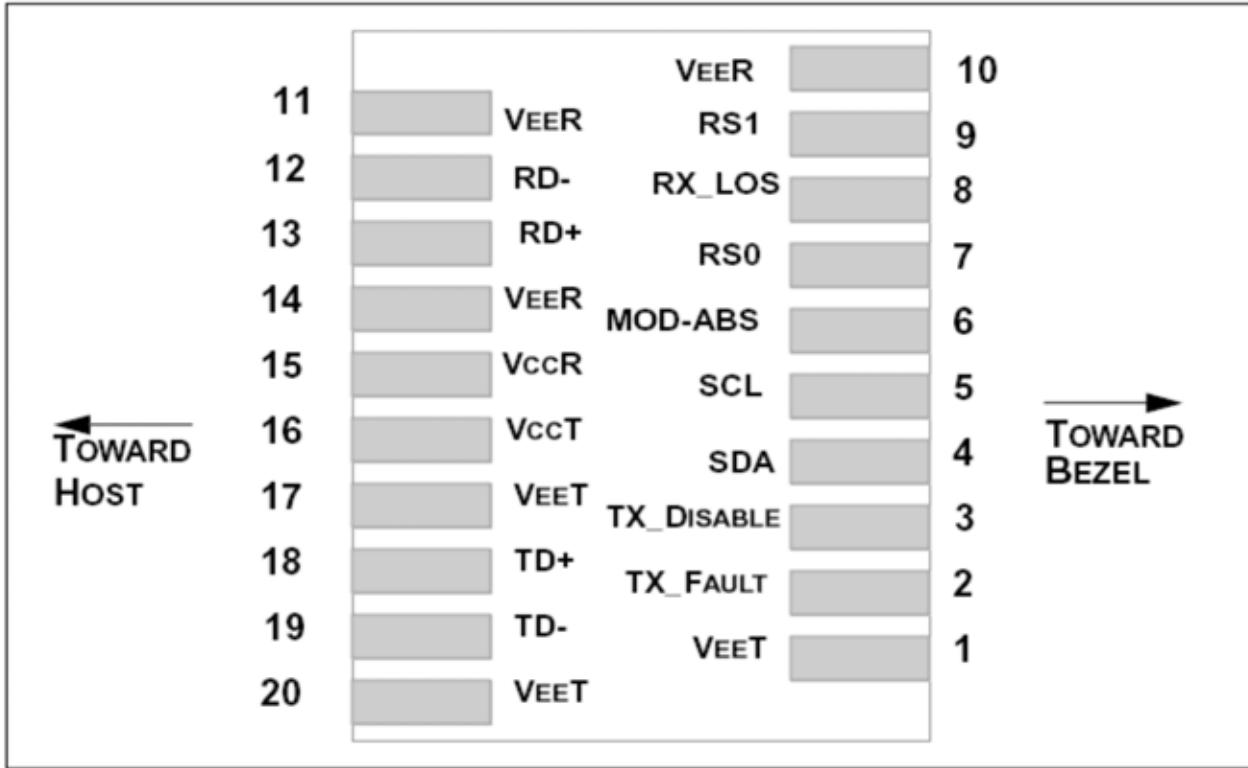
Parameter	Unit	Min.	Typ.	Max
<b>Transmitter</b>				
Output Optical Power	dBm	-5		0
Optical Extinction Ratio	dB	3.5		
Optical Wavelength	nm	$\lambda_c - 6$	$\lambda_c$	$\lambda_c + 7.5$
Spectral Width	nm			1
Side Mode Suppression Ratio	dB	30		
<b>Receiver</b>				
Optical Center Wavelength	nm	1260		1620
Receiver Sensitivity @ 10.7Gb/s	dBm	-15		.5
LOS DE-Assert	dBm			-16
LOS Assert	dBm	-28		

## 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.

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### PIN Layout

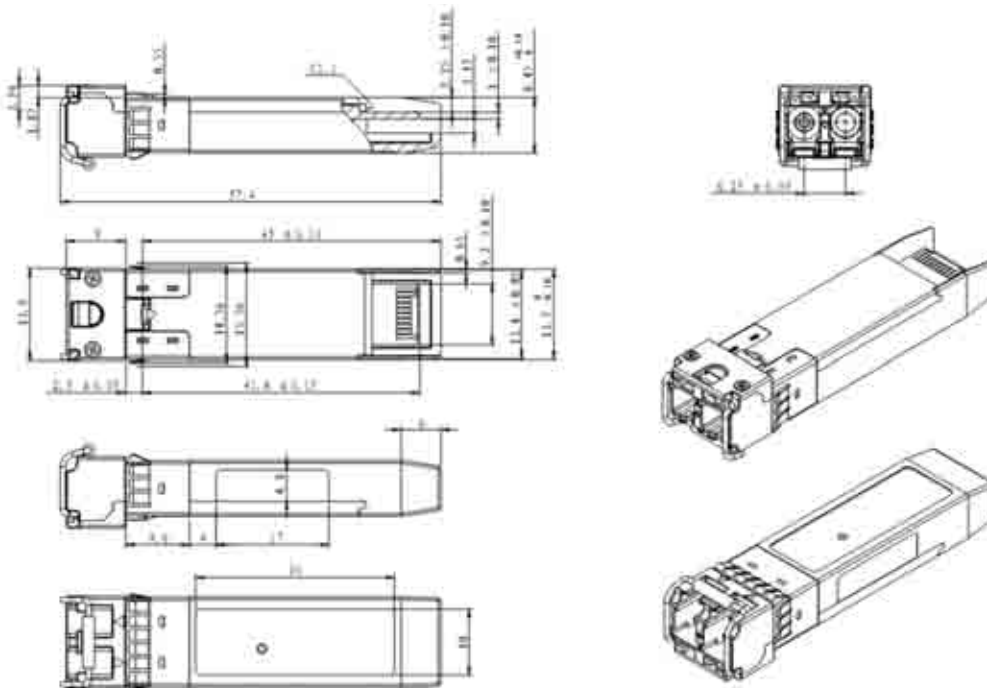
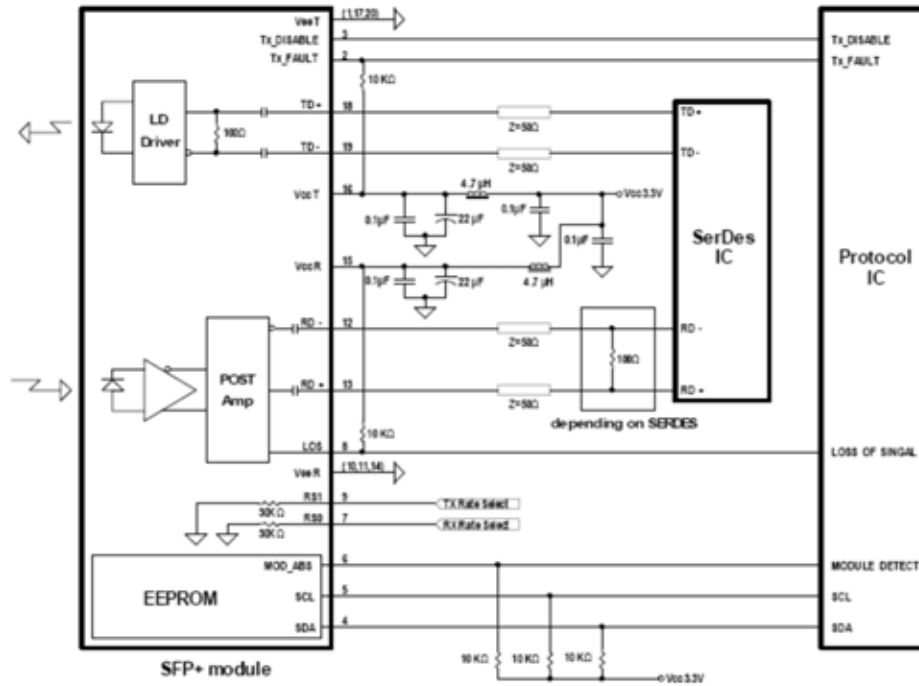


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**PIN Functions**

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	RX Rate Select (LVTTL)
8	Loss of Signal
9	TX Rate Select (LVTTL)
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	
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#### Mechanical Layouts



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