CFP 10 km transceiver | 100G LR4 Ethernet

Datasheet

CFP Optical Transceiver Product Features

- **100GBASE-LR4 100G Ethernet 6.3dB CFP**
- **10 km LR4 CFP for SMF @ 100Gb/s**
- **1310nm DFB+PIN Laser 10 km CFP**
- **0°C - 70°C Temperature - Extended/Industrial Available**
- **MDIO interface with integrated Digital Diagnostic Monitoring**
- **Hot-swappable for CFP LC ports**
- **OptoSpan 1 year standard warranty**
- **Use with Finisar, Avago, JDSU & networks not requiring OEM compatibility**
- **Compliant with CFP MSA**
- **RoHS compliant**

*** For OEM Compatibility, use Platinum Series Part# PCFP-100T31K010**

CFP-100-K010T31

Applications

- **100GBASE-LR4 100G Ethernet**

Description

OptoSpan CFP-100-K010T31 is a Duplex 100GBASE-LR4 100G Ethernet CFP transceiver designed for long distance optical communications up to 10 km with signaling rates up to 100Gb/s.

OptoSpan 100Gb 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# PCFP-100T31K010.

All OptoSpan long-reach CFP 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 10 km CFP Optical Transceiver

CFP-100-K010T31	**Distance:** 10 km				**Fiber:** 1310nm SMF	
	Tx Min dBm	**Tx Max dBm**	**Rx Min dBm**	**Rx Max dBm**	**Link Attenuation dB**	**Power Budget dB**
Product Specifications	**-4.3**	**4.5**	**-10.6**	**4.5**		
Optical Calculation Results			**-10.7**	**-1.4**	**3.7**	**6.3**

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	-10		+75
Recommended Operating Condition				
Supply Voltage	V	3.2	3.3	3.4
Supply Current	mA		4000	
Data Rate	Gbps		100	

Electrical Characteristics

Parameter	Unit	Min.	Typ.	Max
Transmitter				
Differential Input Voltage Swing	mVpp			1050
Input Differential Impedance	ohm	80	100	120
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	360		770
Differential Output Impedance	ohms	80	100	120
LOS Output Voltage - High	V			
LOS Output Voltage - Low	V			

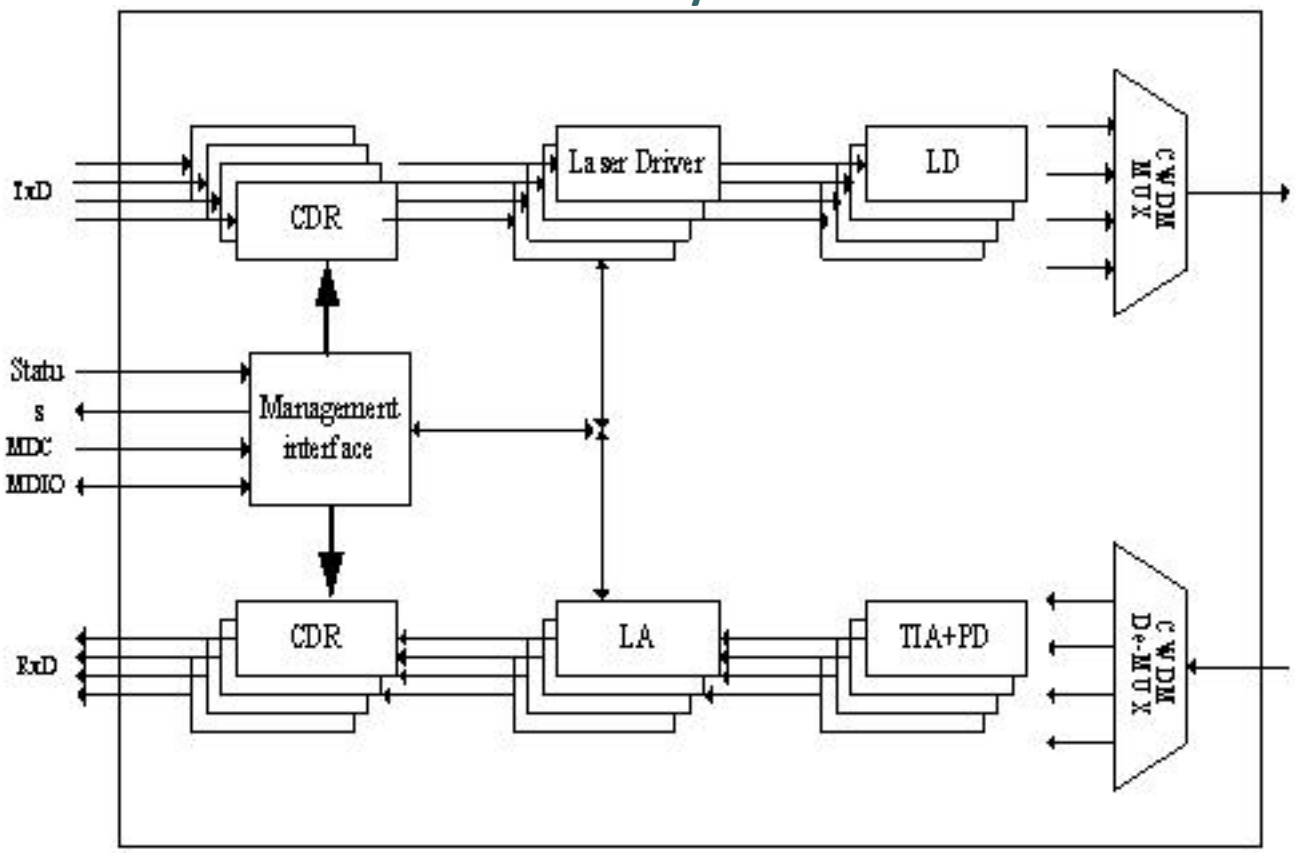
Optical Characteristics

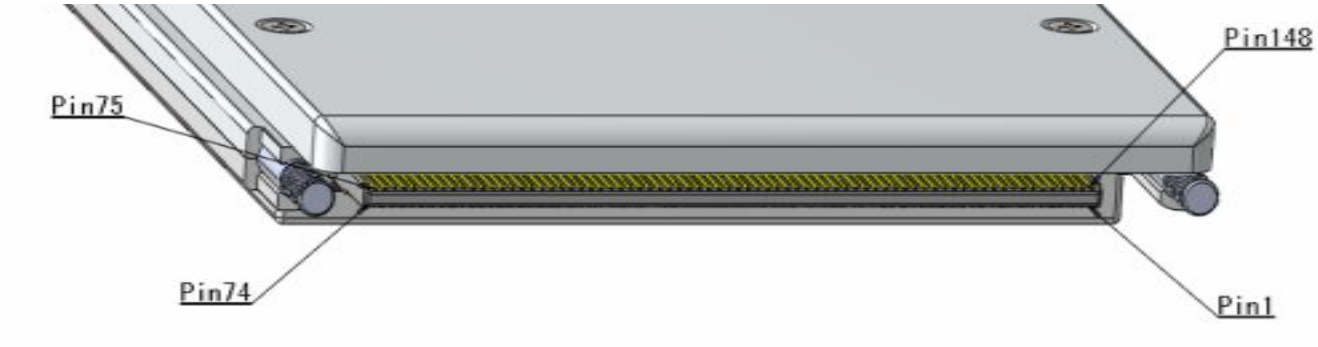
Parameter	Unit	Min.	Typ.	Max
Transmitter				
Output Optical Power	dBm	-4.3		4.5
Optical Extinction Ratio	dB	4		
Optical Wavelength	nm	Var		Var
Spectral Width	nm			
Side Mode Suppression Ratio	dB	30		
Receiver				
Optical Center Wavelength	nm	Var		Var
Receiver Sensitivity @ 100G LR4	dBm	-10.6		4.5
LOS DE-Assert	dBm			-12
LOS Assert	dBm	-22		

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


TxD
CDR
Laser Driver
LD
CWDM MUX
Statu
s
MDC
MDIO
Management interface
RxD
CDR
LA
TIA+PD
CWDM DeMUX


Pin148
Pin75
Pin74
Pin1

PIN Functions

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