XFP 300m transceiver | 10G SR Ethernet

Datasheet

XFP Optical Transceiver

XFP-10G-M300T85

Product Features

- 10GBASE-SR/SW Ethernet 6.2dB XFP
- 300m SR XFP for MMF @ 10Gbps
- 850nm VCSEL+PIN Laser 300m XFP
- 0°C - 70°C Temperature - Extended/Industrial Available
- 2-Wire Interface Digital Diagnostic Monitoring (SFF-8724)
- Hot-swappable for XFP LC ports
- OptoSpan 1 year standard warranty
- Use with Finisar, Avago, JDSU & networks not requiring OEM compatibility
- XFP MSA, IEEE 802.3ae
- RoHS compliant

*** For OEM Compatibility, use Platinum Series Part# PXFP-10GT85M300**

Applications

- 10GBASE-SR @ 10.31Gbps
- 10 Gigabit Ethernet
- Fibre Channel 8x
- Fibre Channel 4x

Description

OptoSpan XFP-10G-M300T85 is a Duplex 10GBASE-SR/SW Ethernet 10G Ethernet / 8G FC XFP transceiver designed for long distance optical communications up to 300m with signaling rates up to 10Gbps.

OptoSpan 10Gb 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# PXFP-10GT85M300.

All OptoSpan long-reach XFP 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 300m XFP Optical Transceiver

XFP-10G-M300T85	Distance: 300m				Fiber: 850nm MMF	
	Tx Min dBm	Tx Max dBm	Rx Min dBm	Rx Max dBm	Link Attenuation dB	Power Budget dB
Product Specifications	-7.3	-1	-13.5	-7.5		
Optical Calculation Results			-9.29	-2.98	1.98	6.2

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	3.13	3.3	3.46
Supply Current	mA		325	600
Data Rate	Gbps	9.95		10.71

Electrical Characteristics

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

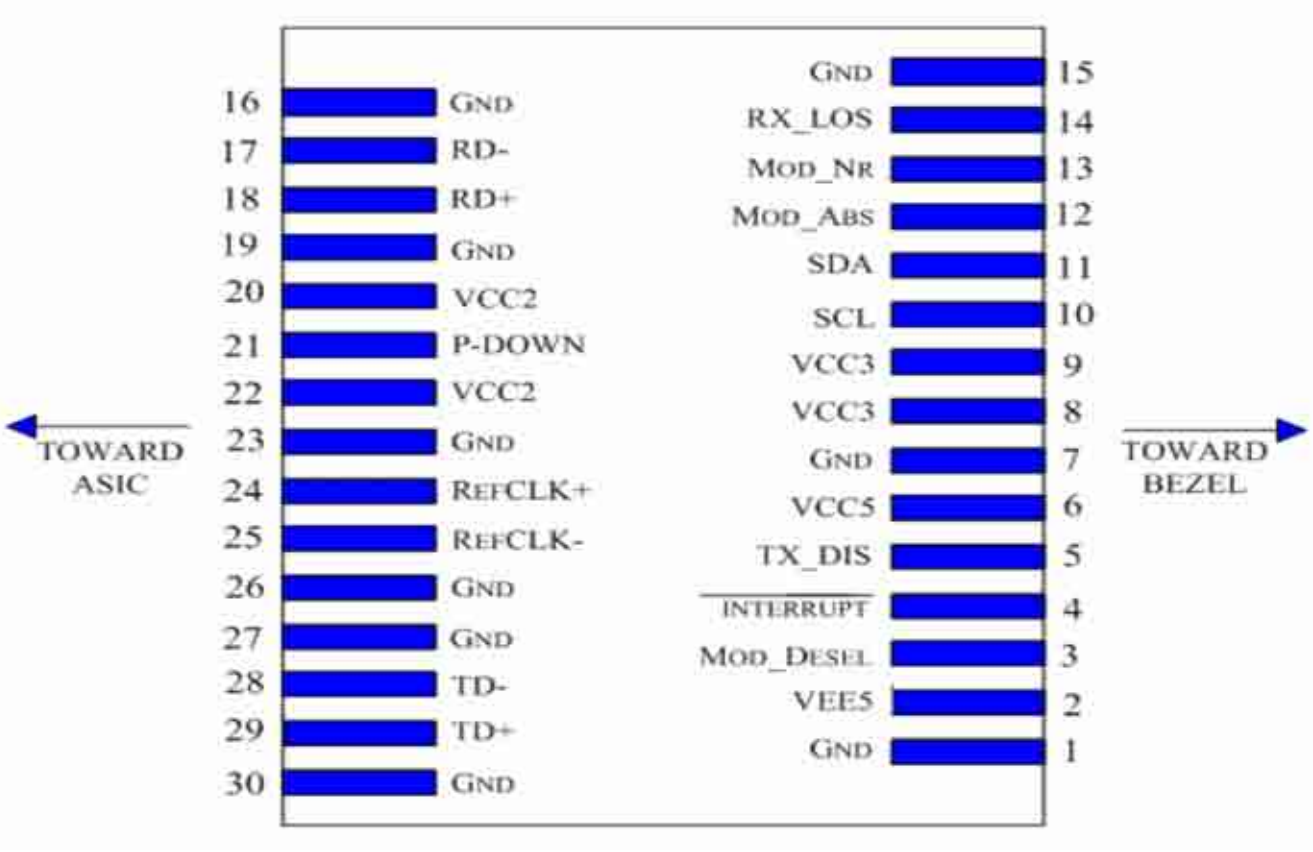
Optical Characteristics

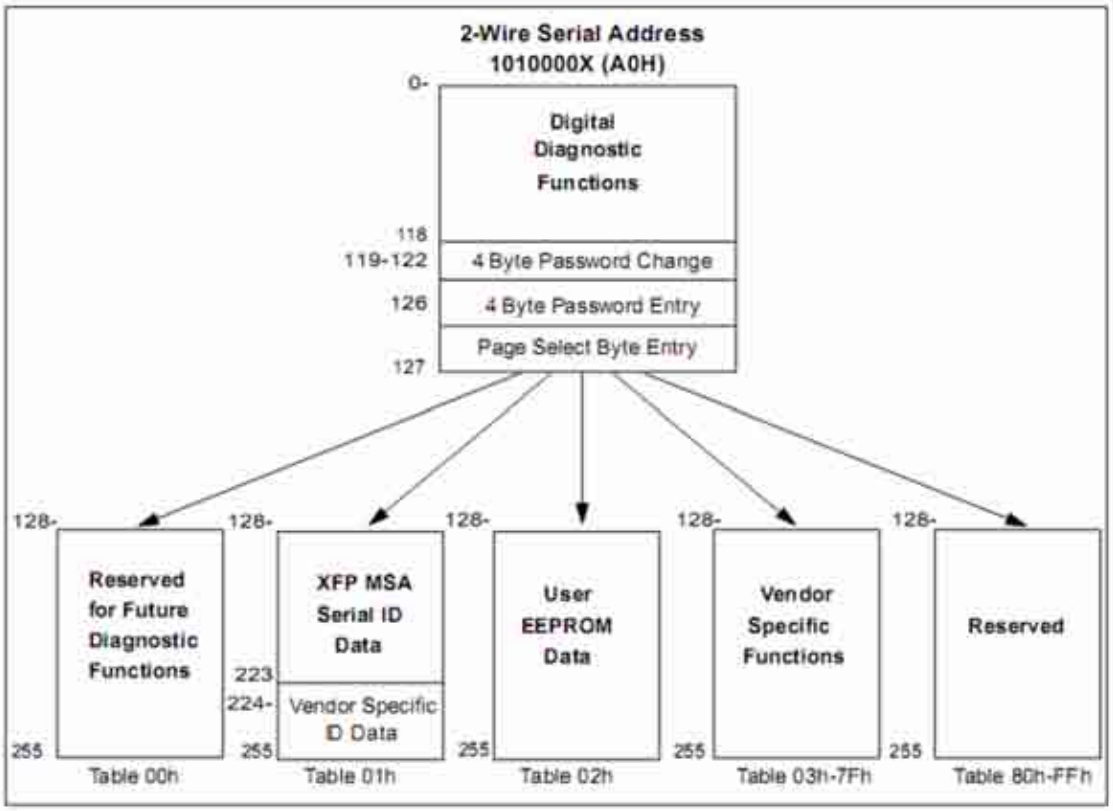
Parameter	Unit	Min.	Typ.	Max
Transmitter				
Output Optical Power	dBm	-7.3	-2.6	-1
Optical Extinction Ratio	dB	3.5	5.5	
Optical Wavelength	nm	840	850	860
Spectral Width	nm		0.4	0.45
Side Mode Suppression Ratio	dB			
Receiver				
Optical Center Wavelength	nm	840	850	860
Receiver Sensitivity @ 10.3125G	dBm	-13.5		-7.5
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


TOWARD ASIC
16 GND
17 RD-
18 RD+
19 GND
20 VCC2
21 P-DOWN
22 VCC2
23 GND
24 REFCLK+
25 REFCLK-
26 GND
27 GND
28 TD-
29 TD+
30 GND
GND 15
RX_LOS 14
MOD_NR 13
MOD_ABS 12
SDA 11
SCL 10
VCC3 9
VCC3 8
GND 7
VCC5 6
TX_DIS 5
INTERRUPT 4
MOD_DESEL 3
VEE5 2
GND 1
TOWARD BEZEL


2-Wire Serial Address
1010000X (A0H)
0-
Digital Diagnostic Functions
118
119-122
4 Byte Password Change
126
4 Byte Password Entry
127
Page Select Byte Entry
128-
255
Reserved for Future Diagnostic Functions
Table 00h
128-
223
224-
255
XFP MSA Serial ID Data
Vendor Specific ID Data
Table 01h
128-
255
User EEPROM Data
Table 02h
128-
255
Vendor Specific Functions
Table 03h-7Fh
128-
255
Reserved
Table 80h-FFh

PIN Functions

Pin #	Name - Description
1	Module Ground
2	Optional-5.2V Power Supply
3	Mode De-select; When held low allows module to 2-wire serial interface commands
4	Interrupt(inverted)
5	Transmitter Disable; Turns off transmitter laser output
6	+5V Power Supply
7	Module Ground
8	+3.3VPower Supply
9	+3.3VPower Supply
10	2-Wire Serial Interface Clock
11	2-Wire Serial Interface Data Line
12	Indicates Module is not present. Grounded in the module
13	Module Not Ready; Indicating module operational fault
14	Receiver Loss Of Signal Indicator
15	Module Ground
16	Module Ground
17	Receiver Inverted Data Output
18	Receiver Non-Inverted Data Output
19	Module Ground
20	+1.8V Power Supply
21	Power Down
22	+1.8V Power Supply
23	Module Ground
24	Reference Clock Non-Inverted Input; AC coupled on the host board
25	Reference Clock Non-Inverted Input
26	Module Ground
27	Module Ground
28	Transmitter Inverted Data Input
29	Transmitter Non-Inverted Data Input
30	Module Ground

Mechanical Layouts