



RoHS compliant
10 Gb/s 850nm Multimode X2 Transponder
XAUI electrical interface 4x 3.125 Gb/s Ethernet
SC connector, multimode fiber, Full duplex transmission mode



Features

- XAUI Electrical Interface: 4 Lanes @ 3.125Gbit/s
- Hot Z-Pluggable
- SC-Duplex Optical Receptacle
- MDIO, DOM Support
- 850 nm wavelength VCSEL
- PIN Photo-detector
- Operating Case Temperature: 0 to 70 °C
- Compliant to IEEE 802.3ae 10GBASE-SR Application
- Compliant to X2 MSA
- Mechanical Footprint: 91mm L x 36mm W x 13.46* H [*Other heights available]

Description

Carelink's 10GbE X2 transceiver module CL-X2-SR-300 is a hot pluggable in the Z-direction module that is usable in typical router line card applications, Storage, IP network and LAN and compliant to X2 MSA. The CL-X2-SR-300 is a fully integrated 10.3Gbit/s optical transceiver module that consists of a 10.3Gbit/s optical transmitter and receiver, XAUI interface, Mux and Demux with clock and data recovery(CDR). This version of Carelink Inc. transceiver line uses an 850nm VCSEL Laser Diode to achieve 300m over multi-mode fiber as 10GBASE-SR of the IEEE 802.3ae.

Ordering Information

PART NUMBER	INPUT/OUTPUT	SIGNAL DETECT	VOLTAGE	TEMPERATURE
CL-X2-SR-300	AC/AC	TTL	3.3V/5V	0°C to 70 °C



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Absolute Maximum Ratings

Stresses in excess of the Absolute Maximum Ratings can cause permanent damage to the transceiver.

Table 1. Absolute Maximum Ratings

No.	Parameter	Symbol	Min.	Max.	Unit	Remarks
1	Supply Voltage	VCC1	0	+5.5	V	+5V
2	Supply Voltage	VCC2	0	+3.6	V	+3.3V
3	Supply Voltage	VCC3	0	+1.5	V	APS
4	Optical Receiver Input	PIMAX	-	+1.5	dBm	Average
5	Case Temperature	Tc	0	+70	° C	Figure 1
6	Storage Temperature	TSTR	-40	+85	° C	

Operating Environment

Electrical and optical characteristics below are defined under this operating environment, unless otherwise specified.

Table 2. Operating Environment

No.	Parameter	Symbol	Min.	Typ	Max	Unit	Remarks
1	Supply Voltage	VCC1	4.75	5	5.25	V	+5V
2	Supply Voltage	VCC2	3.135	3.3	3.465	V	+3.3V
3	Supply Voltage	VCC3	1.152	1.2	1.248	V	APS
3	Case Temperature	Tc	0	25	70	° C	Figure 1



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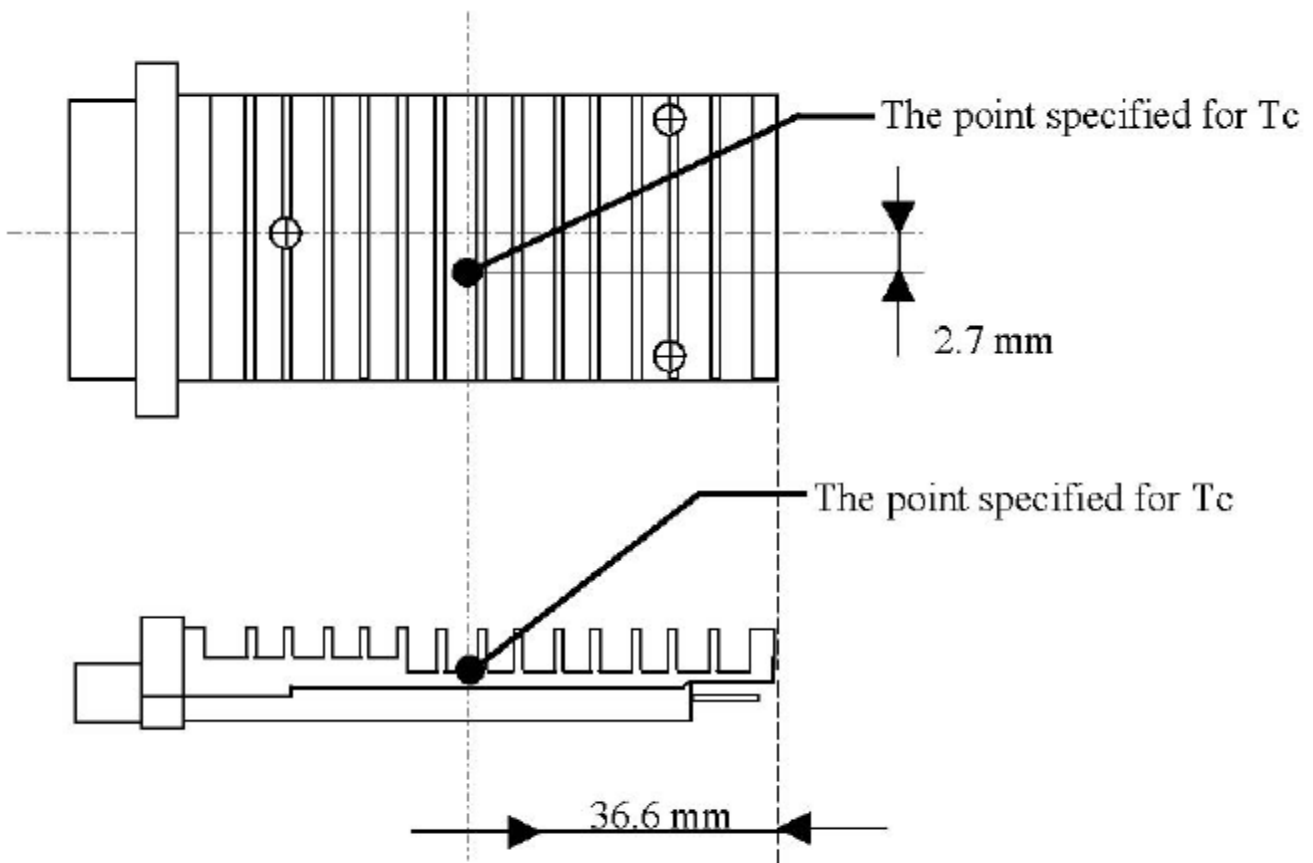


Figure 1 The Point Specified for Case Temperature (Tc)



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Table 3. Optical Characteristics

No.	Parameters	Symbols	Min.	Typ.	Max.	Unit	Remarks
1	Center Wavelength	λ_c	840	850	860	nm	
2	Signaling speed		-	10.3125	-	Gbit/s	
3	Signaling speed variation from nominal		-100	-	+100	ppm	
4	Optical modulation amplitude	OMA	-5.2	-	-	dBm	
5	Optical Output Power	P_f	-	-	+0.5	dBm	Average
6	Optical Waveform	-				-	
7	Side Mode Suppression Ratio	S_r	30	-	-	dB	Average
8	Extinction Ratio	E_r	3.5	-	-	dB	
9	Off Transmit Power	P_{off}	-	-	-28	dBm	Average
11	Receiver Sensitivity in OMA	OMArmin	-	-	-9.9	dBm	
12	Receiver Overload	R_{ro}	+0.5	-	-	dBm	Average
13	Receiver Return Loss	R_L	12	-	-	dB	Average

Table 4. Power Supply Characteristics

No.	Parameter	Symbol	Min.	Typ.	Max.	Unit	Remarks
1	Supply Voltage	V_{cc1}	4.75	5.00	5.25	V	
2	Supply Voltage	V_{cc2}	3.135	3.300	3.465	V	
3	Supply Voltage	V_{cc3}	1.15	1.20	1.25	V	
4	Supply Current	I_{cc1}	-	-	1.4	A	+3.3 V
5	Supply Current	I_{cc2}	-	-	1.2	A	APS
6	Power Consumption	P_{Ds}	-	-	3.3	W	



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Eye Safety Mark

The LM2 series multi-mode transceiver is a class 1 laser product. It complies with EN 60825-1 and FDA 21 CFR 1040.10 and 1040.11. In order to meet laser safety requirements the transceiver shall be operated within the Absolute Maximum Ratings.

Caution

All adjustments have been done at the factory before the shipment of the devices. No maintenance and user serviceable part is required. Tampering with and modifying the performance of the device will result in voided product warranty.

Required Mark

**Class 1 Laser Product
Complies with
21 CFR 1040.10 and 1040.11**

Note : All information contained in this document is subject to change without notice.

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