

10GBASE-LR XFP Optical Transceiver

JXP Series



Key Features

- 1310 nm
- Compliant at 10.31 Gb/s (Ethernet) and 10.52 Gb/s (Fibre Channel)
- Positive power supply operation (3.3 V, 5.0 V)
- Typical power dissipation of 2.0 W
- Power-down capability to less than 50 mW
- Digital Diagnostic Monitoring (DDM) support
- No reference clock required
- XFI AC-coupled electrical interface
- XFI loopback implemented
- Integrated electrical equalization on transceiver transmit side
- Integrated Clock and Data Recovery (CDR) for receive and transmit data path
- Bail latch for easy removal
- Bit error rate $<10^{-12}$
- RoHS with lead in solder exemption

Applications

- Storage Area Networks (SAN)
- Local Area Networks (LAN)
- Ethernet switches and applications
- Fibre channel switches and applications
- Client/Server environments

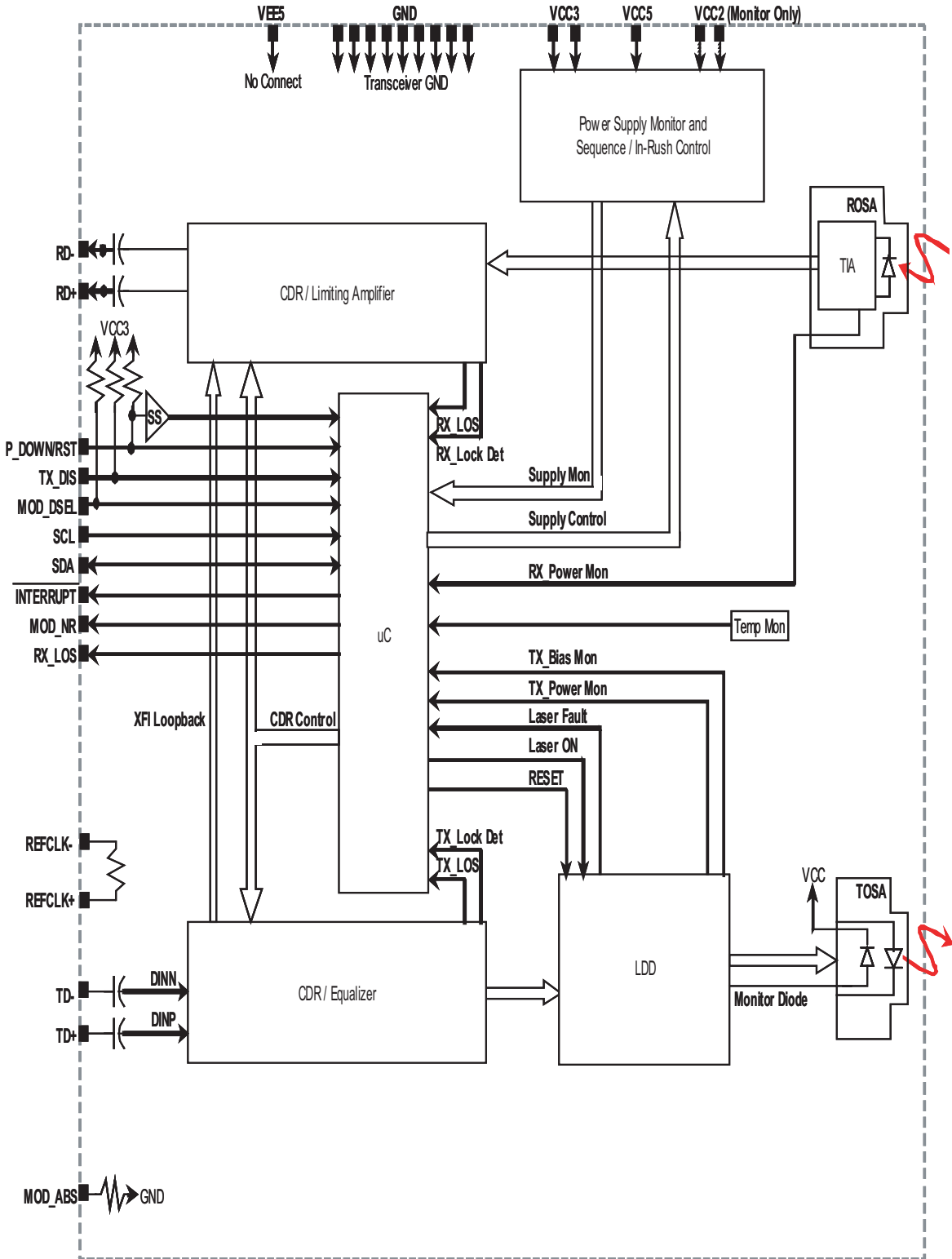
Compliance

- IEEE 802.3ae standard
- 10 GFC 1200-MX-SN-I standard
- Class 1 Laser Safety
- UL and TUV certified
- Tested in accordance with Telcordia GR-468

The JDSU 10 Gb/s 1310 nm Optical XFP Transceiver is an integrated fiberoptic transceiver that provides a high-speed serial link at signaling rates from 9.95 Gb/s to 11.10 Gb/s. The module complies with the IEEE 802.3ae 10GBASE-LR standard, the 10GFC standard, and the 10 Gigabit Small Form Factor Pluggable (XFP) Multi-Source Agreement (MSA).

The 10 Gb/s 1310nm Optical XFP Transceiver integrates the receive and transmit paths in one package. On the transmit side, the 10 Gb/s serial data stream is recovered, retimed, and passed to a laser driver. The laser driver biases and modulates a 1310 nm distributed feedback (DFB) laser, enabling data transmission over single-mode fiber through an industry-standard LC connector. On the receive side, the 10 Gb/s optical data stream is recovered from a PIN photodetector/transimpedance amplifier, retimed, and passed to an output driver. This module features a hot-pluggable XFI-compliant electrical interface.

LR XFP Module Block Diagram



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Specifications

Parameter		Specification
Electrical		
Transmit signal input differential swing		120/820 mV _{p-p}
Receive signal output differential swing		340/850 mV _{p-p}
Control I/O signals		Low voltage TTL (3.3 V)
Optical		
Wavelength		1310 nm
Data rate		Compliant at 10.31 Gb/s (Ethernet) and 10.52 Gb/s (Fibre Channel)
Minimum launch power into fiber (average)		-8.2 dBm
Maximum launch power into fiber (average)		0.5 dBm
Transmitter and dispersion penalty (TDP)	Maximum	3.2 dB
Optical modulation amplitude (OMA)	Minimum	-5.2 dBm
Stressed receiver sensitivity (OMA)	Maximum	-10.3 dBm
Maximum bit error rate at minimum receiver sensitivity		<10 ⁻¹²
Power		
Transceiver power	Typical	2.0 W (2.5 W maximum)
Voltage		3.3 V, 5.0 V
Voltage tolerance		±5%
Current	Typical	375 mA (3.3 V), 150 mA (5.0 V)
Environmental		
Operating temperature, case	Maximum	0 to 75 °C
Operating humidity		8 to 80%
Mechanical		
Dimensions (W x D x H)		XFP MSA compliant
Form factor		XFP, LC connector
Digital Diagnostic Monitoring		
Base		XFP DDM
Enhance options		XFP DDM
Laser Safety		
US		21 CFR 1040.10 except for deviations pursuant to Laser Notice 50 (2001); UL approved for US and Canada
International		IEC 60825:Am.2 (2001) and IEC 60950 (CB Scheme)



Ordering Information

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at customer.service@jdsu.com.

Sample: JXP-01LWAA1

Product Code	Description
JXP-01LWAA1	10GBASE-LR XFP Optical Transceiver

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