

WaveReady®

Tunable SFP+ C-Band DWDM Transceiver, 0.125 to 11.3 Gbps, 80 km WRT-SFPPT015SC



Benefits

- Supports DWDM applications with reach up to 80 km (1600 ps/nm)
- Supports line rates from 1 Gbps to 11.3 Gbps
- Tunable in C-Band wavelengths 1528 nm to 1568 nm, 50 GHz ITU channel spacing
- Operates in temperature range of -5°C to 70°C
- 2 W maximum power dissipation
- Limiting SFI (SerDes Framing Interface) electrical output interface
- Supports DDM (Digital Diagnostic Monitoring)

Applications

- Wide Area Network (WAN)
- Local Area Network (LAN)
- Storage Area Network (SAN)
- Ethernet switches and applications
- Fibre Channel switches and applications

Compliance

- IEEE 802.3-2012 Clause 52 standard
- 10 G Fibre Channel standard
- SFF 8431 Rev 4.1
- SFF 8432 Rev 5.0
- SFF 8472 Rev 11.0
- SFF 8690 Rev 1.4
- Class 1 Laser Safety
- Tested in accordance with Telcordia GR-468
- RoHS 6/6

The JDSU Tunable SFP+ Optical Transceiver is an integrated fiber optic transceiver that provides a high-speed serial link at signaling rates from 1 Gb/s to 11.3 Gb/s. The module complies with the Enhanced Small Form Factor Pluggable Module (SFP+) Multi-Source Agreement (MSA) SFF-8431 Rev. 4.1.

The Tunable SFP+ Optical Transceiver complies with IEEE 802.3-2005 Clause 52 for 80 km reach applications.

The JDSU Tunable SFP+ Optical Transceiver integrates the receive and transmit path on one module. In the transmit side, the 10 Gb/s serial data stream is passed to a modulator driver. The modulator drivers biases and modulates a C-Band cooled tunable transmitter, enabling data transmission over single-mode fiber through an industry standard LC connector. In the receive side, the 10 Gb/s optical data stream is recovered from a APD (Avalanche photodetector) and transimpedance amplifier.

This module also features a hot-pluggable SFI compliant electrical interface.

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Specifications

General

Supported WaveReady modules	WRT-780, WRT-781, WRM-782 Client and Network Ports
Fiber type	9/125 SMF
Reach	80 km
Supported bit rates	FC100 (1.062 Gbps), CPRI2 (1.228 Gbps), GigE (1.250 Gbps), FC200 (2.125 Gbps), CPRI3 (2.457 Gbps), OC48/STM16 (2.488 Gbps), OC48 FEC/G709 (2.666 Gbps), CPRI4 (3.072 Gbps), FC400 (4.250 Gbps), CPRI5 (4.915 Gbps), CPRI6 (6.144 Gbps), CPRI7 (9.830 Gbps), OC-192/STM-64/10GbE WAN/10 GbE WAN PHY (9.953 Gbps), 10 GbE LAN PHY (10.312 Gbps), 10G FC (10.520 Gbps), OC-192/STM-64/10GbE WAN with FEC (10.709 Gbps), 10 GbE LAN with FEC/10GbE over OTN (11.095 Gbps), 10 G FC with FEC/over OTN (11.300 Gbps)

Transmitter

	Minimum	Maximum
Wavelength C-Band tunable , 50 GHz channel spacing	1528.38 nm (191.1 THz)	1568.77 nm (196.15 THz)
Wavelength accuracy, End-of-Life (EOL)	$\lambda_c - 2.5$ GHz	$\lambda_c + 2.5$ GHz
Output power ¹	-1.0 dBm	3 dBm
Extinction ratio ²	9 dB	—
Side mode suppression ratio	35 dB	—
Return loss tolerance	—	27 dB

Receiver

	Minimum	Maximum
Wavelength	1290 nm	1568 nm
Dispersion tolerance, 10G	-400 ps/nm	1600 ps/nm
Sensitivity ³	—	-24 dBm
Dispersion penalty ⁴	—	2 dB
Overload Level ⁵	—	-7 dBm
OSNR		
Non-FEC 9.95, 10.3, 10.5 Gbps: -400 ps/nm to +1600 ps/nm, BER 10^{-12} , -7 dBm to -19 dBm	—	26 dB
FEC 10.709 Gbps: -400 ps/nm to +1600 ps/nm, BER 10^{-4} , -7 dBm to -24 dBm	—	18.5 dB
FEC 11.09 Gbps: -400 ps/nm to +1600 ps/nm, BER 10^{-4} , -7 dBm to -24 dBm	—	19.5 dB

1. Optical power and wavelength range is only guaranteed when electrical input is applied to TD+ and TD-.

2. Tested with PRBS $2^{31} - 1$ pattern.

3. Measured with worst error rate; BER $< 10^{-12}$; PRBS $2^{31} - 1$ pattern; back-to-back; 10.709 Gbps.

4. Measured with worst error rate; BER $< 10^{-12}$; PRBS $2^{31} - 1$ pattern; -400 ps/nm to +1600 ps/nm dispersion; 10.709 Gbps.

5. Guaranteed up to 10.709 Gbps.

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 sales@jdsu.com.

Product

Code	Description
WRT-SFPPT0155C	Tunable SFP+ C-Band DWDM Transceiver, 0.125 to 11.3 Gbps, 80 km (1600ps/nm)