

CWDM L-Band GENUS StingRay RF over Fibre module

up to 50 km distance, with LNB powering (on TX module)

The StingRay CWDM Genus 1U Series of L-band RF over fibre units are designed to provide compact fibre links, with eight wavelengths (up to 16 wavelengths contact ETL) on a single fibre cable, with an optical budget of 12 dB. The transmit modules benefit from a high and wide dynamic range with automatic link optimisation ensuring high quality L-band transmission.

The StingRay CWDM system comprises of transmit modules and a multiplexer module to combine up to 8 wavelengths on to a single fibre cable at the transmit end. A demultiplexer module and receive modules are then used at the receive end to split the separate wavelengths.

Module

Tx & Rx

module options to transmit and receive signals up to 50 km

Compact

Each module occupies 1 slot in GENUS chassis

500 - 3150 MHz

Operating frequency range

LNB Power

13/18V on Tx modules

High Isolation

between modules for signal quality

Chassis

Resilience

Dual redundant hot swap power supplies; field replaceable CPU and HMI

Local Control & Monitoring

Front panel capacitive HMI touchscreen

Secure Protocols

with SNMPv3 and HTTPS

Compact

1U indoor and compact ODU chassis options available



Configurable

Choose from a mixture of fibre modules with different operating frequencies, or house alongside other RF functions

10MHz Reference

Optional field-replaceable internal 10MHz reference and external reference inject port with auto detection

Remote Control & Monitoring

via RJ45 Ethernet port with SNMP and web browser interface

RF Parameters			
Model Numbers		SRY-G1S-TxxS6-173 CWDM L-band Transmit Fibre Module xx is wavelength denominator please contact ETL	SRY-G1S-RS6-174 CWDM L-band Receive Fibre Module
Frequency Range		500-3150 MHz	
Flatness (dB)	850 - 2150MHz	±1.5 dB, Fixed gain mode	
	500 to 3150 MHz	±2.0 dB, Fixed gain mode	
	Any 36MHz	±0.25 dB, Fixed gain mode	
Return Loss (db)	50 ohm SMA	18 dB typ., 14 dB min	18 dB typ., 14 dB min
	50 ohm BNC	18 dB typ., 14 dB min	18 dB typ., 14 dB min
	75 ohm BNC	14 dB typ., 10 dB min	16 dB typ., 12 dB min
	75 ohm F-type	14 dB typ., 10 dB min	16 dB typ., 12 dB min
Gain Setting Modes		Manual Gain Control (MGC), Automatic Gain Control (AGC), Fixed Gain (FG)	
Manual Gain Range		60 dB (in 0.5 dB steps)	
OIP3 Test condition: 1m fibre, 10dB gain, -22dBm tone levels	850 - 2150MHz	23 dBm typical, 20 dBm worst case	
	500 to 3150 MHz	20 dBm typical, 17 dBm worst case	
CNR (in any 36MHz) Test condition: 1m fibre, -10dBm RF i/p power, -10dBm RF o/p total power		-50 dB typical, -45 dB worst case	
Noise Figure Test condition: 1m fibre, -50dBm RF i/p power, -10dBm o/p power		9 dB typical, 12 dB worst case	
Group Delay Variation		2ns over full band. 1ns over any 36MHz	
SFDR Test condition: 1m fibre, 10dB gain, -23dBm tone levels	850 - 2150MHz	107 dB/Hz ^{2/3} typ., 102 dB/Hz ^{2/3} min	
	500 to 3150 MHz	103 dB/Hz ^{2/3} typ., 98 dB/Hz ^{2/3} min	
RF Signal Range		Input: -70 to -10 dBm (total power) Operational i/p range Output: -70 to -10 dBm (total power) o/p range available under all i/p conditions. (Note that all Specifications are only 'typical' between -60 & -70 dBm unless otherwise detailed).	
Max RF Input		+16 dBm total power. Damage level, NOT operational.	
10MHz Level at Output		-10 to +10 dBm. User settable level via the chassis. Accuracy ±2 dB	
10MHz Isolation		-40 dB, between adjacent modules in same chassis.	
Laser Type		DFB. Optical isolator for improved performance	
Optical Wavelength		1471 to 1611 nm	1100 to 1650nm
Optical Power		Output: 5 ±1.0 dBm	Input: -8 to 5dBm. Max 10 dBm
Optical Connectors		FC/APC , SC/APC Single mode fibre. Use angle polish connectors only	
Module Dimensions		19mm x 38mm x 250mm. 0.2kg. Genus 1U series mountable. 1 Chassis slot per module	
Power Consumption		15W Typical. With 18V 500 mA LNB Power.	4 W Typical
LNB Power		18/13V ±5 %, 500 mA max	
Module Swap		Hot swap	
MTBF		>200,000 hours.	



Spec Version	0.2
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Optical Parameters (Multiplexer)	
Model Number	SRY-G1S-OCM-08-YY-201-SA 8 channel CWDM Mux/Demux Module
Operating wavelength	1471/ 1491 / 1511 / 1531 / 1551 / 1571 / 1591/ 1611 nm
Insertion Loss	2.0 dB
Isolation	>30 dB
Return Loss	>45 dB
Maximum optical power	300 mW
Power Consumption	0W
Module Dimensions	5 Chassis slots per Mux module
Connector Options	Optical connectors: FA - FC/APC or SA - SC/APC

Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.
Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.