

CWDM L-Band GENUS StingRay RF over Fibre module

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

The StingRay CWDM Genus 2U 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.

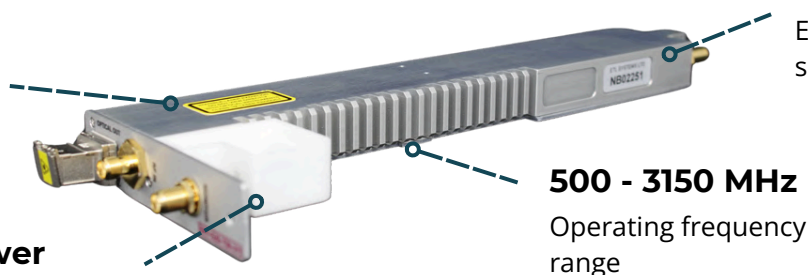
Module

Tx & Rx

module options for transmit and receive chains up to 50km

LNB Power

13/18V on Tx modules



Compact

Each module occupies 1 slot in GENUS chassis

500 - 3150 MHz

Operating frequency range

Chassis

Resilience

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

Local Control & Monitoring

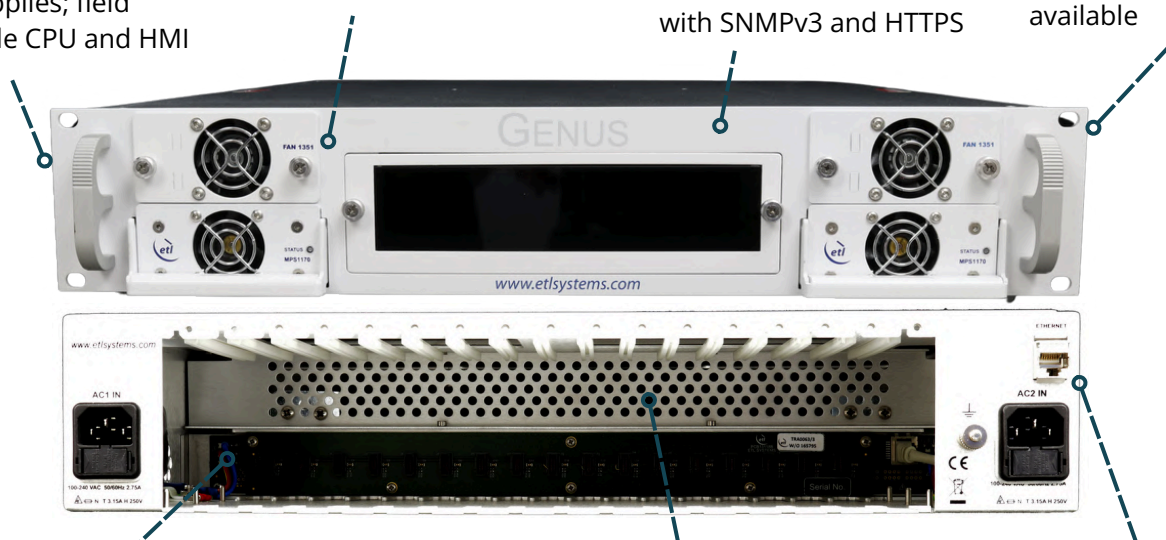
Front panel capacitive HMI touchscreen

Secure Protocols

with SNMPv3 and HTTPS

Compact

2U 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-G2S-TxxS6-321 CWDM L-band Transmit Fibre Module xx is wavelength denominator please contact ETL	SRY-G2S-RS6-322 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
Output AGC Flatness		±2.0dB over full band with Input -10 to -40 dBm
Return Loss (db)	50 ohm SMA	18 dB typ., 14 dB min
	50 ohm BNC	18 dB typ., 14 dB min
	75 ohm BNC	14 dB typ., 10 dB min
	75 ohm F-type	14 dB typ., 10 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) (The MGC gain mode allows link optimisation for better Noise or Distortion performance)	
Monitor Port (SMA 50 Ohm Connector)	-20dBc +/-3dB	
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, -22dBm 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 ±1 dB	
10MHz Isolation	-40 dB, between adjacent modules in same chassis.	
Laser Type	DFB. Optical isolator for improved performance	
Optical Wavelength	1470 to 1610 nm	1100 to 1650nm. Optimised for 1310nm and 1550 nm
Optical Power	Output: 4.5 ±2.5 dBm. 3.8 dBm typical	Input: -8 to 4.5dBm. Max 10 dBm
Optical Connectors	FC/APC , SC/APC, E2000/APC, Single mode fibre. Use angle polish connectors only	
Module Dimensions	39 x 87 x 238 mm . 0.2kg. Genus 2U 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	0.1	

Optical Parameters (Multiplexer)	
Model Number	SRY-G2S-OCM-08-YY-203-SA 8 channel CWDM Mux Module
Operating wavelength	1470/ 1490 / 1510 / 1530 / 1550 / 1570 / 1590/ 1610 nm
Insertion Loss	2.5 dB
Isolation	>30 dB
Return Loss	>45 dB
Maximum optical power	250 mW
Power Consumption	0W
Module Dimensions	2 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.