



ETL Systems

New technologies
in RF distribution
www.etlsystems.com

Model Number:
SRY-G1S-TCX-167-xxxx
SRY-G1S-RCX-168-xxxx

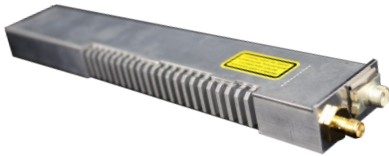
StingRay RF Over Fibre Genus Module C-band modules with 22KHz and 13V/18V LNB power

Typical applications:

- Teleports & Earth Stations
- Satellite Operations
- Government & Defence applications
- Telemetry, Tracking & Command
- High Resilience applications

StingRay C-band Transmit and Receive RF Over Fibre modules to fit Genus 1U chassis. The transmit module can provide LNB power 13/18VDC, 22kHz tone up to 500 mA. When installed in a 10 MHz distributing chassis, the TX module can inject a user-settable and switchable 10 MHz tone of between -10 and +10 dBm.

Fibre Module



Fibre Module

Compact form factor allowing multiple modules to be housed in the Genus chassis. Each module occupies 1 slot in the chassis.



TX & RX module options to transmit and receive signals up to 10 km



500 - 6725 MHz

operating frequency range



Hot Swap & replaceable RF module



LNB Powering 13/18V on TX modules only



High isolation between modules for signal quality

Chassis Options



Local control & monitoring via HMI high resolution touchscreen



Flexible Module Configurations choose from a mixture of fibre modules with different operating frequencies.



Resilience from dual redundant hot -swap power supplies & field replaceable CPU & HMI



Remote control & monitoring via RJ45 Ethernet port with SNMP & web browser interface



Compact indoor & outdoor chassis options, which can be part populated



Field replaceable Internal 10MHz reference source and external reference inject port with auto detection (optional)



Secure protocols with SNMPv3 and HTTPS



Indoor Chassis



Outdoor Unit





ETL Systems

New technologies
in RF distribution
www.etlsystems.com

Model Number:
SRY-G1S-TCX-167-xxxx
SRY-G1S-RCX-168-xxxx

StingRay TX & RX Module - RF Parameters		
Model Numbers	SRY-G1S-TCX-167-xxxx	SRY-G1S-RCX-168-xxxx
Flatness (dB) Full TX &RX link with 10km fibre link, Fixed gain mode, input -10 dBm, output -10 dBm.	850 to 2150 MHz	±1.5dB
	500 to 3150 MHz	±2.0 dB
	3150 to 6725 MHz	±3.0 dB
	3400 to 4200 MHz	±1.5dB
	5725 to 6725 MHz	±2.0 dB
	any 36MHz	±0.25 dB (500 to 3150MHz) ±0.30 dB (3150 to 6725MHz)
Return Loss (dB)	500 to 3150 MHz	18 dB typical, 14 dB minimum
	3150 to 6725 MHz	14 dB typical, 10 dB minimum
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, -22 dBm tone levels	500 to 3150 MHz	Typical 20 dBm Worst Case 17 dBm
	3150 to 6725 MHz	Typical 15 dBm Worst Case 12 dBm
CNR (in any 36 MHz) Test condition: 1m fibre, -10 dBm RF i/p power, -10 dBm RF o/p total power.	500 to 3150 MHz	Typical -50 dB Worst Case -45 dB
	3150 to 6725 MHz	Typical -45 dB Worst Case -40 dB
Noise Figure Test condition: 1m fibre, -50 dBm RF i/p power, -10 dBm o/p power	500 to 3150 MHz	Typical 9 dB Worst Case 12 dB
	3150 to 6725 MHz	Typical 11 dB Worst Case 14 dB
Group Delay Variation	500 to 3150 MHz	2ns over full band 1ns over any 36MHz.
	3150 to 6725 MHz	3ns over full band 1.5ns over any 36MHz.
SFDR Test condition: 1m fibre, 10dB gain, -22 dBm tone levels	500 to 3150 MHz	107 dB/Hz2/3 typical 102 dB/Hz2/3 minimum
	3150 to 6725 MHz	100 dB/Hz2/3 typical 95 dB/Hz2/3 minimum
RF Signal Range	-60 to -10dBm (total power) Operational range	
Max RF input	16dBm total power. Damage level, NOT operational.	-
10 MHz level at output	-10 to +10 dBm, User settable via the chassis. Accuracy ±1.0 dB	
10MHz isolation	-40 dB, Between adjacent modules in same chassis.	

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.

ETL SYSTEMS LIMITED
Coldwell Radio Station
Madley
Hereford
England HR2 9NE

TELEPHONE
+44 (0)1981 259020

EMAIL
info@etlsystems.com

FACSIMILE
+44 (0)1981 259021

WEB
www.etlsystems.com





ETL Systems

New technologies
in RF distribution
www.etlsystems.com

Model Number:
SRY-G1S-TCX-167-xxxx
SRY-G1S-RCX-168-xxxx

Optical Parameters		
Laser Type	DFB	-
Optical Wavelength	1310 ± 10 nm	1100 to 1650nm. Optimised for 1310nm and 1550 nm
Optical Power	Output: 4.5 ± 2.5 dBm (3.8 dBm typical)	Input: 0 to 4.5dBm (Max 10 dBm)
Optical Connectors	FC/APC , SC/APC Single mode fibre. Use angle polish connectors only	
Module Dimensions	19 x 38 x 253 mm. 0.2kg. Genus 1U series mountable.	
Power Consumption	15W typical, With 18V 500 mA LNB power	4W typical
Module Swap	Hot swap	Hot swap
MTBF	TBC	TBC
LNB Power		
Number of Single modules fitted	Total Power Available for LNB powering @ 18V	
16	115 W	
14	120 W	
≤ 13	Limited by module specifications	
Spec Version	0.2	0.2

