



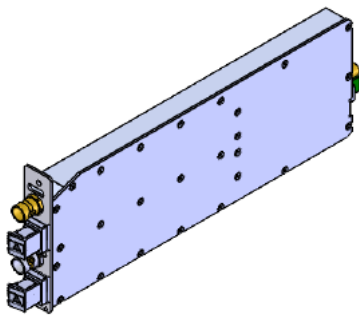
## StingRay RF Over Fibre Genus Module Dual S-band modules with 22KHz and 13V/18V switchable LNB power (TX only)

### Typical applications:

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

SRY-G2S-TS6-313 & SRY-G2S-RS6-314 are S-Band Dual Transmit and Receive RF Over Fibre modules to fit Genus 2U chassis. The transmit module can provide LNB power 13/18VDC, 22kHz tone up to 500 mA. When fitted with a 10 MHz distributing module the module can inject an external or internal 10 MHz tone onto the S-Band feed.

### 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.



#### 500 - 3150 MHz

operating frequency range



#### Hot Swap &

replaceable RF module



**LNB Powering** 13/18V on TX  
modules only



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

### 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



Indoor Chassis



Outdoor Unit



StingRay TX & RX Module - RF Parameters				
Model Numbers		SRY-G2S-TS6-313		SRY-G2S-RS6-314
Frequency Range		500-3150 MHz		
Flatness (dB)	850 to 2150 MHz	±1.5 dB, Fixed gain mode, input -10 dBm, output -10 dBm.		
	500 to 3150 MHz	±2.0 dB, Fixed gain mode, input -10 dBm, output -10 dBm.		
	any 36 MHz	±0.25 dB, Fixed gain mode, input -10 dBm, output -10 dBm.		
	Output AGC Flatness	-		
Return Loss (dB)	50 ohm SMA	18 dB typ., 14 dB min	8dB above 2450MHz (for 75ohm only)	18 dB typ., 14 dB min
	50 ohm BNC	18 dB typ., 14 dB min		18 dB typ., 14 dB min
	75ohm 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)	MGC has 60dB gain setting range. AGC keeps optimum link performance for varying input levels. FG can be set after AGC mode	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)		
OIP3		850 to 2150 MHz: 23 dBm typical, 20 dBm min 500 to 3150 MHz: 20 dBm typical, 17 dBm min <b>Test condition:</b> 1m fibre, 10 dB gain, -22 dBm tones at 2150 and 2152 MHz		
CNR (in any 36 MHz)		Typical -50 dB, Worst Case -45 dB <b>Test condition:</b> 1m fibre, -10 dBm RF i/p power, -10 dBm RF o/p total power.		
Noise Figure		Typical 9 dB, Worst Case 12 dB <b>Test condition:</b> 1 m fibre, -50 dBm RF i/p power, -10 dBm o/p power		
Group Delay Variation		2 ns over full band. 1ns over any 36 MHz.		
SFDR		850 to 2150 MHz: 107 dB/Hz <sup>2/3</sup> typical, 102 dB/Hz <sup>2/3</sup> min 500 to 3150 MHz: 103 dB/Hz <sup>2/3</sup> typical, 98 dB/Hz <sup>2/3</sup> min <b>Test condition:</b> 1 m fibre, 10 dB gain, -22 dBm tones at 2150 and 2152 MHz		
IMD3		-64 dBc typ., -58 dBc min. <b>Test condition:</b> 1 m fibre, 10 dB gain, -22 dBm tones at 2150 and 2152 MHz		
RF Signal Range		<b>Input:</b> -70 to -10 dBm (total power) Operational i/p range (Note that all Specifications are only 'typical' between -60 & -70 dBm unless otherwise detailed).		<b>Output:</b> -70 dBm 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.		
10 MHz level at output		-10 to +10 dBm. User settable level via the chassis. each channel level can be set separately. Accuracy ±1 dB		-10 to +0 dBm. User settable level via the chassis. Accuracy ±1 dB (Same level on both RF Output ports)
10 MHz isolation		-40 dB. Between the two ports on one module or between adjacent modules in same chassis		
Laser Type		DFB. Optical isolator for improved performance		
Optical Wavelength		1310 ± 10 nm		1100 to 1650 nm. Optimised for 1310 nm and 1550 nm
Optical Power		<b>Output:</b> 4.5 ±2.5 dBm. 3.8 dBm typical		<b>Input:</b> 0 to 4.5 dBm. Max 10 dBm
LNB Power		18/13V ± 5%, 500 mA max per channel		
Optical Connectors		FC/APC, SC/APC, Single mode fibre. Use angle polish connectors only		
Power Consumption		30W Typical. With 18V 500 mA LNB Power.		8W Typical
Module Swap		Hot swap		
MTBF		>200,000 hours.		>250,000 hours.
LNB Power				
Number of Dual modules fitted		Total Power Available for LNB powering @ 18V		
16		83 W		
14		93 W		
12		102 W		
10		112 W		
8		122 W		
≤ 7		Limited by module specifications		
Spec Version		0.5		0.6

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.