

Broadband GENUS StingRay RF over Fibre Module

with 22KHz tone and 13V/18V switchable LNB power

StingRay Broadband 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 fitted with a 10 MHz distributing module the TX/RX module can inject an external or internal 10 MHz tone onto the L-band feed.

Module

Tx & Rx
module options for transmit and receive chains up to 10km

Compact
Each module occupies 1 slot in GENUS chassis

500 - 3150MHz
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-TB3-171-XXXX		SRY-G1S-RB3-172-XXXX	
Frequency Range		50 - 3150 MHz			
Flatness (dB) (Fixed gain mode, input -10dBm, output -10dBm with 1m fibre link)	850 - 2150MHz	±1.5			
	500 - 3150MHz	±2.0			
	Any 36MHz	±0.25			
Output AGC	200 - 2450MHz	±2.0			
Flatness (dB) (With input -10 to -40dBm)	50 - 200MHz	±3.0			
	2450 - 3150MHz	±2.5			
Return Loss (dB)	50ohm SMA	14 typical, 10 minimum (50 - 200MHz)	18 typical, 14 minimum (200 - 3150MHz)	18 typical, 14 minimum	
	50ohm BNC	14 typical, 10 minimum (50 - 200MHz)	18 typical, 14 minimum (200 - 3150MHz)	18 typical, 14 minimum	
	75ohm BNC	14 typical, 10 minimum (50 - 2450MHz)	8 minimum (2450 - 3150MHz)	16 typical, 12 minimum (50 - 2450MHz)	8 minimum (2450 - 3150MHz)
	75ohm F-type	14 typical, 10 minimum (50 - 2450MHz)	8 minimum (2450 - 3150MHz)	16 typical, 12 minimum (50 - 2450MHz)	8 minimum (2450 - 3150MHz)
Gain Setting Modes		Manual Gain Control (MGC), Automatic Gain Control (AGC), Fixed Gain (FG)			
Manual Gain Range		60dB, in 0.5dB steps			
OIP3 Test condition: 1m fibre, 10dB gain, -23dBm tones, -10dBm RF o/p total power	850 - 2150MHz	23 dBm typical, 20 dBm worst case			
	50 - 3150MHz	20 dBm typical, 17 dBm worst case			
CNR (in any 36MHz)		-50 dB typical, -45 dB worst case Test condition: 1m fibre, 10dB gain, -23dBm tones, -10dBm RF o/p total power			
Noise Figure		9 dB typical, 12 dB worst case Test condition: 1m fibre, -10dBm RF i/p power, -10dBm RF o/p total power			
Group Delay Variation		<2ns over full band <0.5ns over any 36MHz			
SFDR Test condition: 1m fibre, 10dB gain, -23dBm tones, -10dBm RF o/p total power	850 - 2150MHz	107 dB/Hz ^{2/3} typical 102 dB/Hz ^{2/3} minimum			
	50 - 3150MHz	103 dB/Hz ^{2/3} typical 98 dB/Hz ^{2/3} minimum			
RF Signal Range		Input: 70 to -10dBm (total power) operational i/p range (Specifications are only 'typical' between -60 & -70dBm unless otherwise detailed)		Output: -70dBm to -10dBm (total power) o/p range available under all i/p conditions (Specifications are only 'typical' between -60 & -70dBm unless otherwise detailed)	
Max RF Input		16dBm total power Damage level, NOT operational.		-	
10MHz Level at Output		-10 to +6 dBm, user settable via the chassis. Accuracy ±2.0 dB		-10 to +4 dBm, user settable via the chassis. Accuracy ±2.0 dB	
10MHz Isolation		-40 dB, between modules in same chassis.			

Optical Parameters		
Model Numbers	SRY-G1S-TB3-171-XXXX	SRY-G1S-RB3-172-XXXX
Laser Type	DFB	-
Optical Wavelength	1310 ± 10 nm	1100 to 1650nm. (Optimised for 1310nm and 1550nm)
Optical Power	Output: 4.5 ±2.5 dBm (3.8 dBm typical)	Input: 0 to 4.5dBm (10 dBm max.)
Optical Connectors	FC/APC , SC/APC Single mode fibre. Use angle polish connectors only.	
Module Dimensions	19 x 38 x 250 mm. 0.2kg. GENUS 1U series mountable.	
LNB Power	18/13V ±5%, 500 mA maximum (Short circuit current 750 mA maximum)	-
Power Consumption	15W typical (with 18V 500mA LNB power)	4W typical
Module Swap	Hot swap	
MTBF	>200,000 hours	
LNB Power		
Number of Modules Fitted	Total Power Available for LNB Powering at 18V	
16	115W	
14	120W	
≤13	Limited by module specifications	
Spec. Version	1.1	

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.