Broadband GENUS StingRay RF over Fibre Module

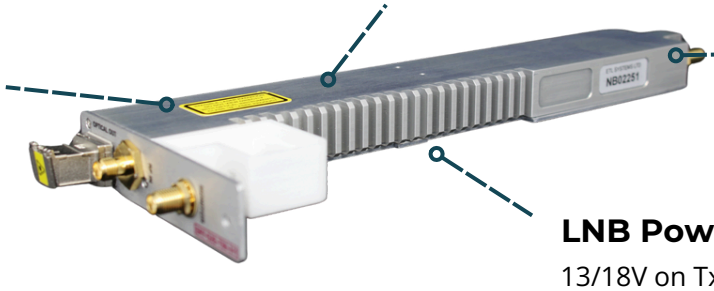
with 22KHz tone and 13V/18V switchable LNB power

StingRay Broadband Transmit and Receive RF Over Fibre modules to fit Genus 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 TX/RX module can inject an external or internal 10 MHz tone onto the broadband feed.

Module

Compact
Each module occupies 1 slot in GENUS chassis

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



50 - 3150 MHz
Operating frequency range

LNB Power
13/18V on Tx modules

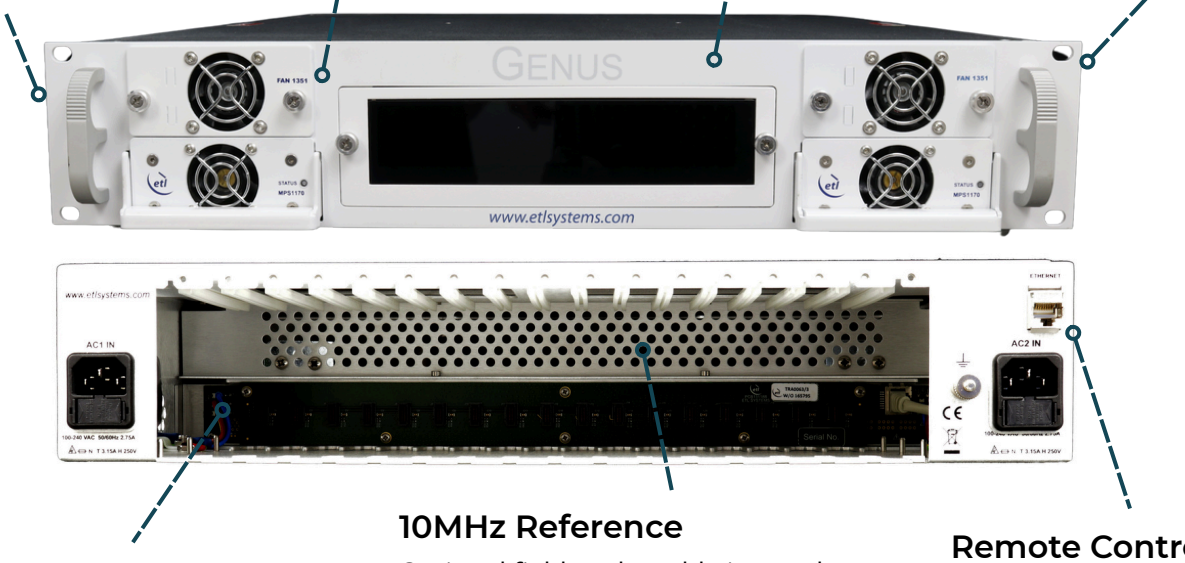
Chassis

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

Local Control & Monitoring
Front panel capacative 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-TB3-317		SRY-G2S-RB3-318	
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 Flatness (dB) (With input -10 to -40dBm)	200 - 2450MHz	±2.0			
	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 (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 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/Hz2/3 typical. 102 dB/Hz2/3 minimum.			
	50 - 3150MHz	103 dB/Hz2/3 typical. 98 dB/Hz2/3 minimum.			
RF Signal Range		**Input:** 70 to -10dBm (total power) operational i/p range **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			
10MHz Isolation		-40 dB, between modules in same chassis.			

Optical Parameters		
Model Numbers	SRY-G2S-TB3-317	SRY-G2S-RB3-318
Laser Type	DFB. Optical isolator for improved performance	-
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, E2000/APC, Single mode fibre. Use angle polish connectors only	
Module Dimensions	19 x 38 x 250 mm. 0.2kg. GENUS 2U series mountable.	
LNB Power	18/13V ± 5%, 500mA max	-
Power Consumption	15W typical (with 18V 500mA LNB power)	4W typical
Module Swap	Hot swap	
MTBF	>200,000 hours	
Spec. Version	0.3	1.0

LNB Power	
Number of Modules Fitted	Total Power Available for LNB Powering at 18V
16	115W
14	120W
≤13	Limited by module specifications

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.