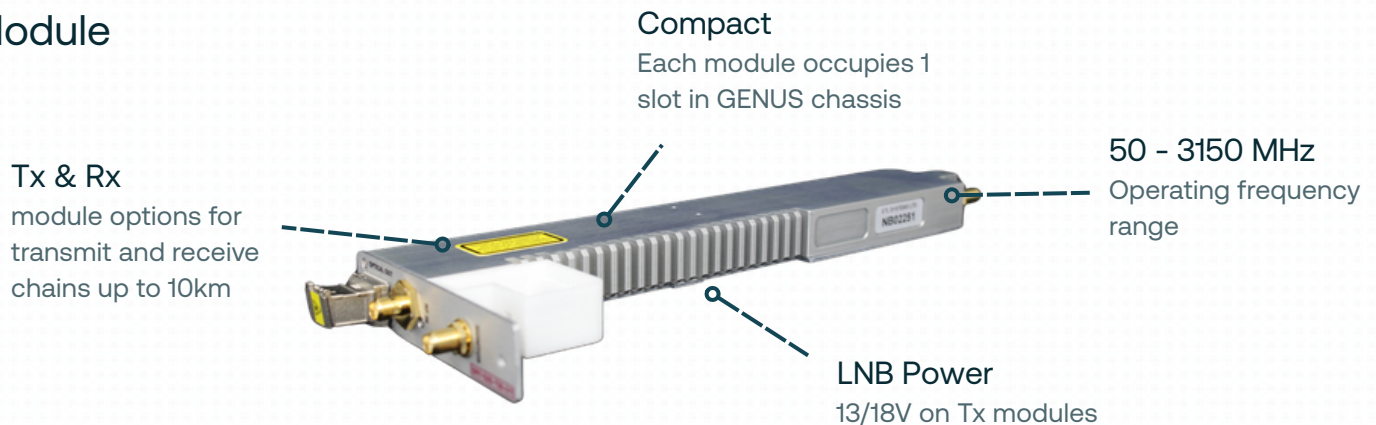


# Broadband GENUS StingRay RF over Fibre Module

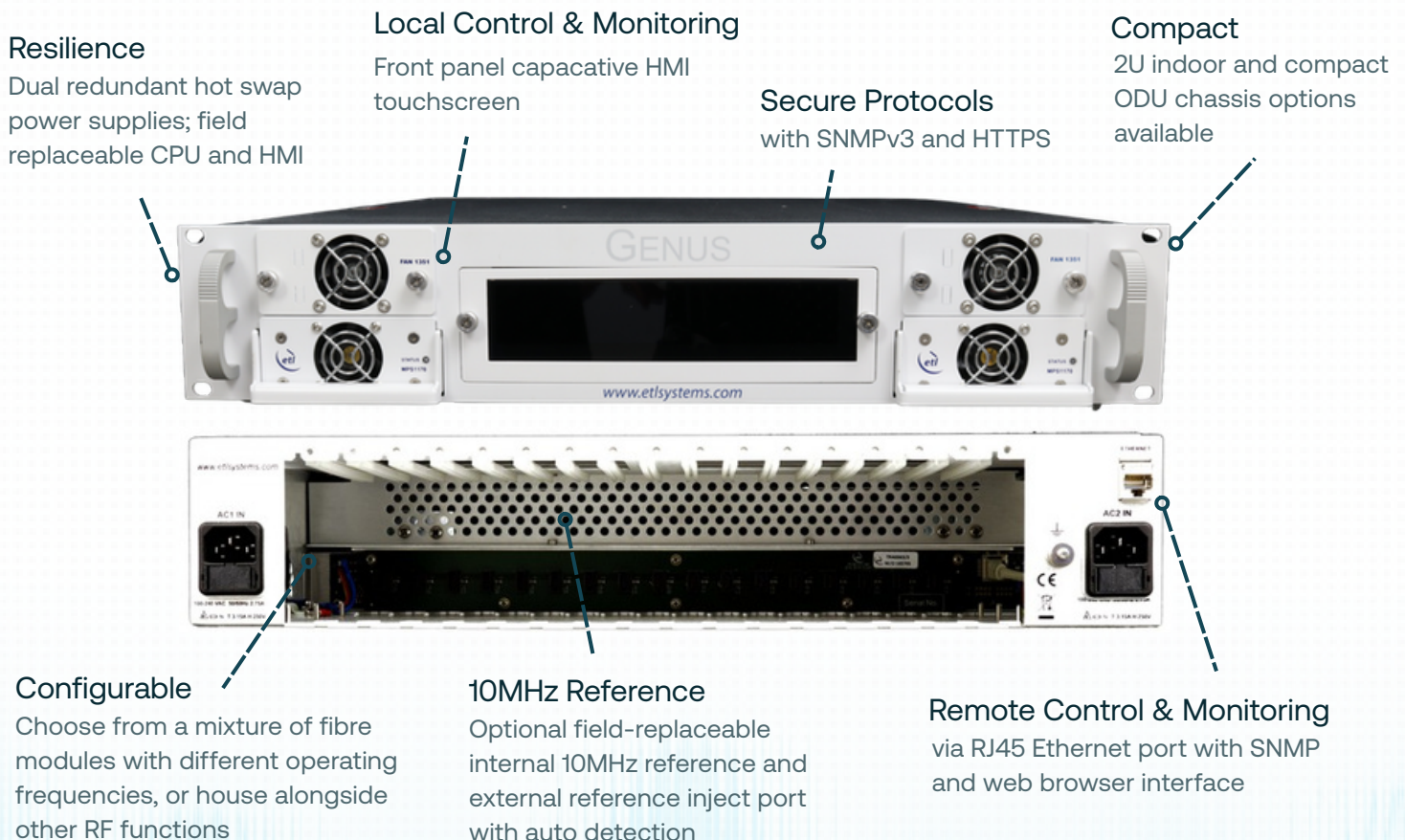
## with 22KHz tone and 13V/18V switchable LNB power

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



### Chassis





| RF Parameters                                                                        |                |                                                                                                                                                                                                                                      |                                        |                                       |                            |
|--------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------|----------------------------|
| Model Numbers                                                                        |                | SRY-G2S-TB3-317                                                                                                                                                                                                                      |                                        | SRY-G2S-RB3-318                       |                            |
| Frequency Range                                                                      |                | 50 - 3150 MHz                                                                                                                                                                                                                        |                                        |                                       |                            |
| Flatness (dB)<br>(Fixed gain mode, input -10dBm, output -10dBm with 1m fibre link)   | 850 - 2150MHz  | ±1.5                                                                                                                                                                                                                                 |                                        |                                       |                            |
|                                                                                      | 500 - 3150MHz  | ±2.0                                                                                                                                                                                                                                 |                                        |                                       |                            |
|                                                                                      | Any 36MHz      | ±0.25                                                                                                                                                                                                                                |                                        |                                       |                            |
| Monitor Port                                                                         |                | -20dBc +/-3dB (50R)                                                                                                                                                                                                                  | -20dBc +/-4dB (75R)                    | (Mounted on the module)               |                            |
| Output AGC Flatness (dB)<br>(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<br>(The MGC gain mode allows link optimisation for better Noise or Distortion performance)                                                                                                                      |                                        |                                       |                            |
| Monitor Port SMA 50 Ohm Connector                                                    |                | -20dBc +/-3dB                                                                                                                                                                                                                        |                                        |                                       |                            |
| OIP3<br>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<br>Test condition: 1m fibre, 10dB gain, -23dBm tones, -10dBm RF o/p total power                                                                                                                    |                                        |                                       |                            |
| Noise Figure                                                                         |                | 9 dB typical, 12 dB worst case<br>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<br>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<br>Output: -70dBm to -10dBm (total power) o/p range available under all i/p conditions<br>(Specifications are only ‘typical’ between -60 & -70dBm unless otherwise detailed) |                                        |                                       |                            |
| Max RF Input                                                                         |                | 16dBm total power. Damage level, NOT operational.                                                                                                                                                                                    |                                        | -                                     |                            |
| 10MHz Level at Output                                                                |                | -16 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-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      | 1.0                                                                             | 1.1                                               |

| 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.

Part number configurator:

SRY-G2S-TB3-317-XXXXXX

SRY-G2S-RB3-318-XXXXXX

Fiber Connector options:

SA - SC/APC

FA - FC/APC

EA - E2000/APC

S5 - SMA 50 ohm

B5 - BNC 50 ohm

F7 - F-type 75 ohm

B7 - BNC 75 ohm