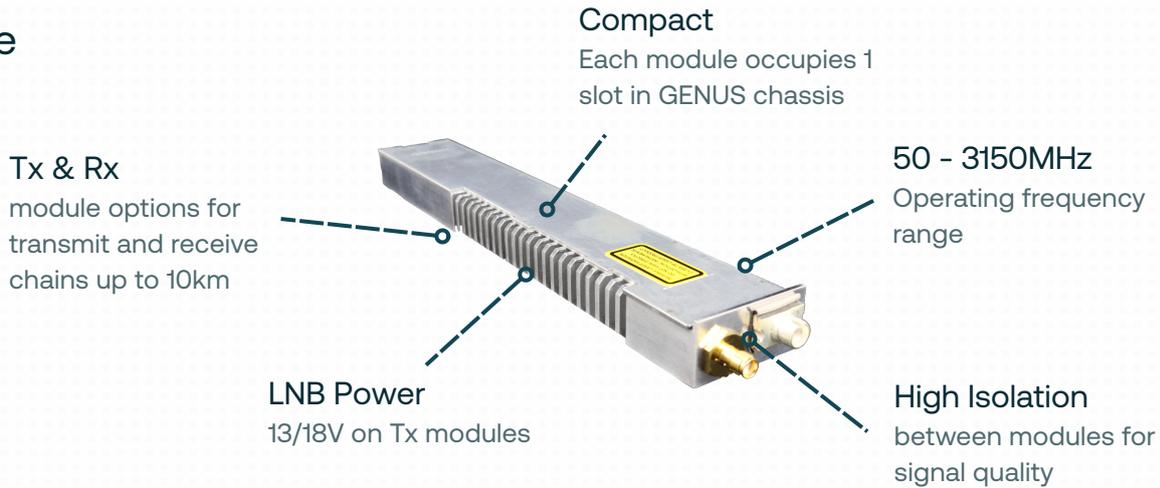


# Broadband GENUS StingRay RF over Fibre Module

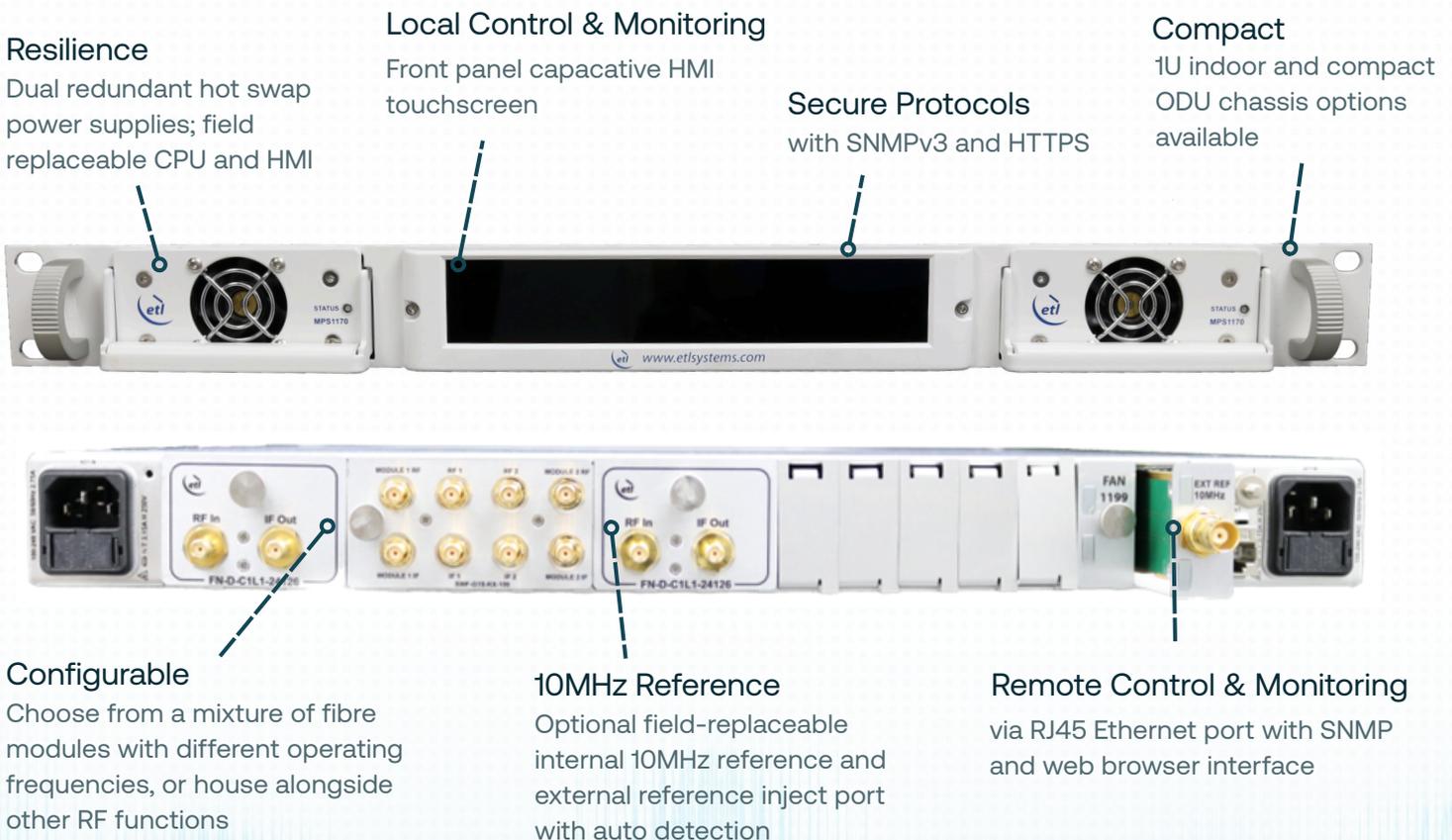
with 22KHz tone and 13V/18V switchable LNB power

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



## Chassis





| RF Parameters  |                |   |  |   |                            |
|--|----------------|---|--|---|----------------------------|
| Model Numbers  |                | SRY-G1S-TB3-171-XXXX  |  | SRY-G1S-RB3-172-XXXX  |                            |
| 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   |  |   |                            |
| Output AGC   | 200 - 2450MHz  | ±2.0  |  |   |                            |
| Flatness (dB)<br>(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<br>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<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, -50dBm 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/Hz <sup>2/3</sup> typical<br>102 dB/Hz <sup>2/3</sup> minimum  |  |   |                            |
|  | 50 - 3150MHz   | 103 dB/Hz <sup>2/3</sup> typical<br>98 dB/Hz <sup>2/3</sup> minimum   |  |   |                            |
| RF Signal Range  |                | Input: 70 to -10dBm (total power) operational i/p range<br>(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<br>(Specifications are only 'typical' between -60 & -70dBm unless otherwise detailed) |                            |
| Max RF Input   |                | 16dBm total power<br>Damage level, NOT operational.   |  | -   |                            |
| 10MHz Level at Output  |                | -10 to +6 dBm, user settable via the chassis.<br>Accuracy ±2.0 dB   |  | -10 to +4 dBm, user settable via the chassis.<br>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<br>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<br>(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.