



ETL Systems
New technologies
in RF distribution

Model Number:
SRY-G1S-TS6-161-xxxx
SRY-G1S-RS6-162-xxxx

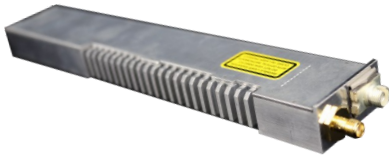
StingRay RF Over Fibre Genus Module S-band modules with 22KHz and 13V/18V switchable LNB power

Typical applications:

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

StingRay S-band 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.

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.



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



500 - 3150 MHz operating frequency range



Hot Swap & replaceable RF module



LNB Powering 13/18V on TX modules only



High isolation between modules for signal quality

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 and HTTPS



Indoor Chassis



Outdoor Unit





| StingRay TX & RX Module - RF Parameters | | |
|---|--|---|
| Model Numbers | SRY-G1S-TS6-161 | SRY-G1S-RS6-162 |
| 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 36MHz | ±0.25 dB, Fixed gain mode, input -10 dBm, output -10 dBm. |
| Return Loss (dB) | 50 ohm SMA | 18 dB typ., 14 dB min |
| | 50 ohm BNC | 18 dB typ., 14 dB min |
| | 75ohm BNC | 14 dB typ., 10 dB min (8 dB min >2450 MHz) |
| | 75 ohm F-type | 14 dB typ., 10 dB min (8 dB min >2450 MHz) |
| Gain Setting Modes | Manual Gain Control (MGC) Automatic Gain Control (AGC) Fixed Gain (FG) | |
| Manual Gain Range | 60dB in 0.5dB steps | |
| OIP3 | 850 to 2150MHz | Typical 23 dBm, Worst Case 20 dBm Test condition: 1m fibre, 10dB gain, -23 dBm tones |
| | 500 to 3150MHz | Typical 20 dBm, Worst Case 17 dBm Test condition: 1m fibre, 10dB gain, -23 dBm tones |
| CNR (in any 36 MHz) | Typical -50 dB, Worst Case -45 dB Test condition: 1m fibre, -10 dBm RF i/p power, -10 dBm RF o/p total power. | |
| Noise Figure | Typical 9 dB, Worst Case 12 dB Test condition: 1m fibre, -50 dB RF i/p power, -10 dBm o/p power | |
| Group Delay Variation | 2ns over full band. 1ns over any 36MHz. | |
| SFDR | 850 to 2150MHz | 107 dB/Hz ^{2/3} typ., 102 dB/Hz ^{2/3} min Test condition: 1m fibre, 10dB gain, -23 dBm tones |
| | 500 to 3150MHz | 103 dB/Hz ^{2/3} typ., 98 dB/Hz ^{2/3} min Test condition: 1m fibre, 10dB gain, -23 dBm tones |
| RF Signal Range | Input: -70 to -10dBm (total power) Operational i/p range (Note that all 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. (Note that all Specifications are only 'typical' between -60 & -70dBm unless otherwise detailed). |
| Max RF input | 16dBm total power. Damage level, NOT operational. | - |
| 10 MHz level at output | -10 to +10 dBm. User settable level via the chassis. Accuracy ±1dB | 10 to +10 dBm. User settable level via the chassis. Accuracy ±1dB |
| 10MHz isolation | -40 dB. Between adjacent modules in same chassis | |
| Laser Type | DFB. Optical isolator for improved performance | |
| Optical Wavelength | 1310 ± 10 nm | 1100 to 1650nm. Optimised for 1310nm and 1550 nm |
| Optical Power | Output: 4.5 ±2.5 dBm. 3.8 dBm typical | Input: 0 to 4.5dBm. Max 10 dBm |
| Optical Connectors | FC/APC , SC/APC Single mode fibre. Use angle polish connectors only | |
| Module Dimensions | 19mm x 38mm x 253mm. 0.2kg. Genus 1U series mountable. | |
| Power Consumption | 15W Typical. With 18V 500 mA LNB Power. | 4 W Typical |
| LNB Power | 18/13V ±5 %, 500 mA max | - |
| Module Swap | Hot swap | |
| MTBF | >200,000 hours. | |
| LNB Power | | |
| Number of Single modules fitted | Total Power Available for LNB powering @ 18V | |
| 16 | 115 W | |
| 14 | 120 W | |
| ≤ 13 | Limited by module specifications | |
| Spec Version | 1.5 | 1.5 |

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.