



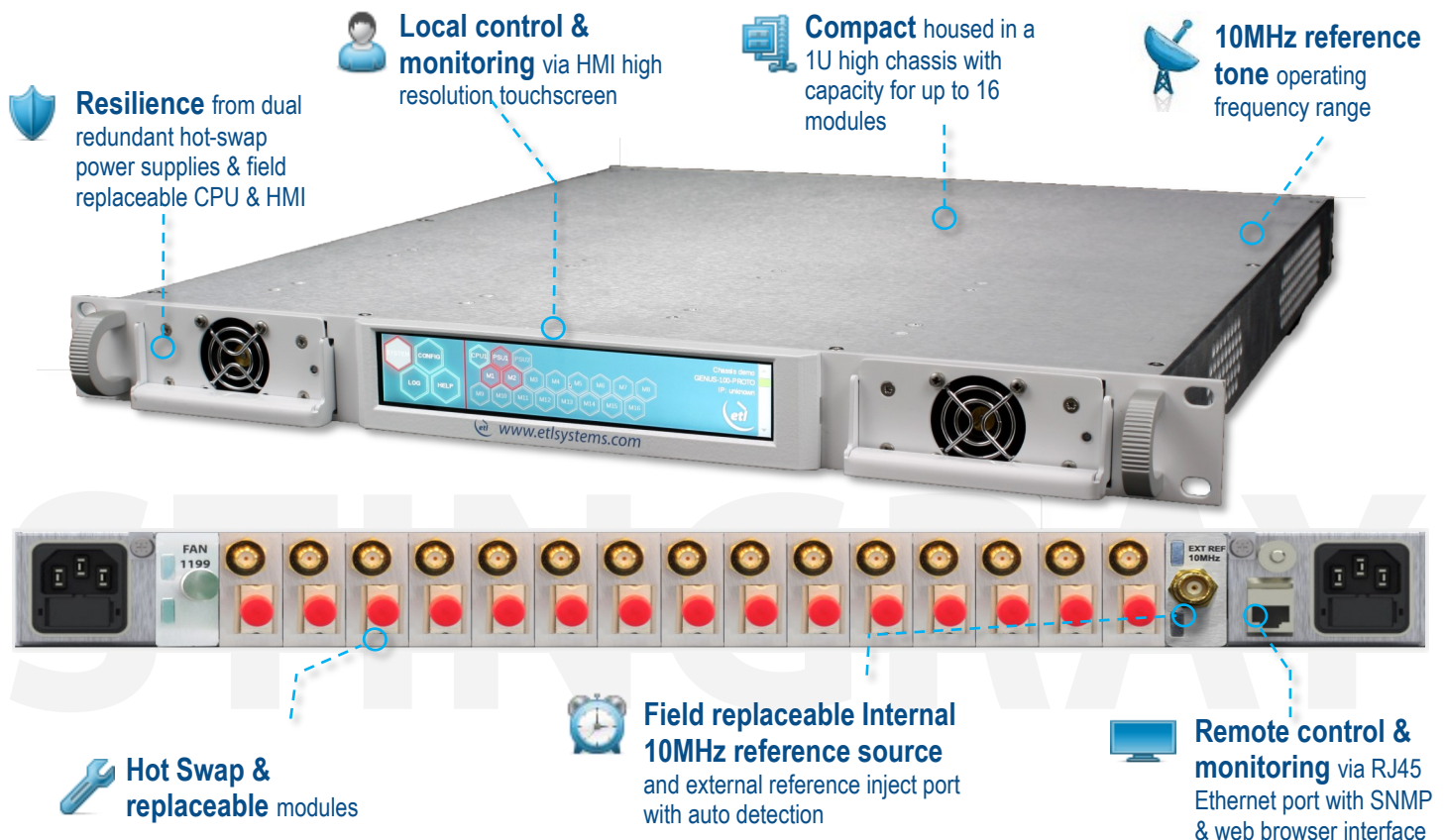
StingRay RF Over Fibre Genus Modules

10MHz modules with ultra low phase noise and 10km nominal range

Typical applications:

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

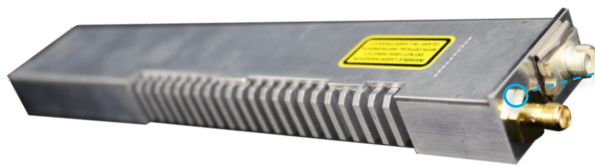
StingRay 10MHz Transmit and Receive RF Over Fibre Genus Modules to fit Genus 1U chassis. With ultra low phase noise and 10km nominal range.



Chassis - Specification

Dimensions / Weight / Colour	1U high x 550mm deep x 19" wide / <10 kg / RAL9003—White (Semi-matte)
Capacity	Total of 17 module slots. Note that 1 slot may be used for fan (if required) and 1 slot may be used for 10 MHz EXT inject module (if required). Note actual modules may require >1 slot. Refer to required module spec table.
Temperature	Operating: 0°C to +45°C / Storage: -20°C to +75°C
Location / Humidity / Altitude	Indoor use only / 20 to 90% non-condensing / 10,000 feet AMSL (Operational) 30,000 feet AMSL (Storage) Above Mean Sea Level
Control & Monitoring	Local: HMI touch screen Remote: Ethernet via RJ45, 10BaseT/100 BaseTx. TCP/IP, SNMP V3 & HTTPS & Web browser interface HMI and CPU field replaceable. Each module independently monitored and reported.
MTTR	20 minutes (15 minutes to retrieve spare part and 5 mins to replace) Applies to LRUs only and assumed in house stock
AC Input / Consumption	85-264Vac 50/60Hz / 150W
PSU Redundancy	Dual redundant and alarmed Diode OR. Hot swappable
Input & Output ports	Dependant upon module fitted





StingRay Module

Compact form factor allowing multiple modules to be housed in 1U chassis. Each module uses 1 slot in the chassis.

StingRay TX & RX Module - RF Parameters		
Model Numbers	SRY-GT-Y-163	SRY-GR-Y-164
Frequency Range	10 MHz	
Input ports	50Ω SMA, BNC. 75Ω not available.	
Connectors & impedances	50Ω SMA	50Ω BNC
Input return loss (dB)	Typ. 20dB. Min 15 dB	N/A
Output return loss (dB)	N/A	Typ. 16dB. Min 12 dB
Input AGC level Max (dBm)	+12 dBm. Levels total power including noise	
Input AGC level Min (dBm)	0 dBm Min I/P for max O/P	
Output AGC level Max (dBm)	+12 dBm. Levels total power including noise	
Output AGC level Min (dBm)	0. dBm	
Max Input RF Power (dBm)	+16 dBm. Damage level	
Frequency Offset (Hz)	Phase Noise Typ (dBc/Hz)	Phase Noise Max (dBc/Hz)
0.1	-120	-110
1	-132	-120
10	-144	-130
100	-149	-140
1000	-150	-145
10000	-151	-147
100000	-152	-147
1000000	-152	-147
Laser Type	DFB	-
Optical Wavelength	1310 ± 10 nm	1100 to 1650nm. Optimized for 1310nm and 1550 nm
Optical Power output/input	Output: 5.5 ± 2 dBm.	0 to 7dBm. Max 10 dBm
Optical Connectors	FC/APC , SC/APC Single mode fibre.	
Gain Setting Modes	Manual Gain Control (MGC) Automatic Gain Control (AGC) Fixed Gain (FG)	
Module Dimensions	19x38x253mm. 0.2kg. Genus 1U series mountable.	
Module Swap	Hot swap	
Spec Version	1.0	1.0

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.