



StingRay RF Over Fibre

100 series Broadband modules with fixed gain & high linearity

The StingRay 100 Series broadband RF over fibre chassis are designed to give compact fibre links of up to 10 km (Link budget 4 dB). The transmit modules benefit from a high and wide dynamic range. Resilience is provided by a full hot-swap, modular design.

Other options in the StingRay series: The StingRay range is also available with additional features such as RF monitoring ports, high linearity, switchable 13/18V & 22KHz tone LNB powering, redundancy systems and 10 MHz injection.

Typical applications:

- Ku-band and Ka-band ready for HTS applications
- Distribution of comms traffic across site with minimal loss
- General satcoms– teleports, video head-ends, TVRO
- Compact solution for small quantity links such as tactical HQ
- A resilient solution for satellite teleports with transition distances up to 10km

Fibre Modules



50-2450 MHz operating frequency range



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



Fixed Gain 0 dB, 0 dBm link



High isolation between modules for signal quality



High Linearity with high 1 dB Gain Compression

Chassis Options



Compact chassis options, which can be part populated



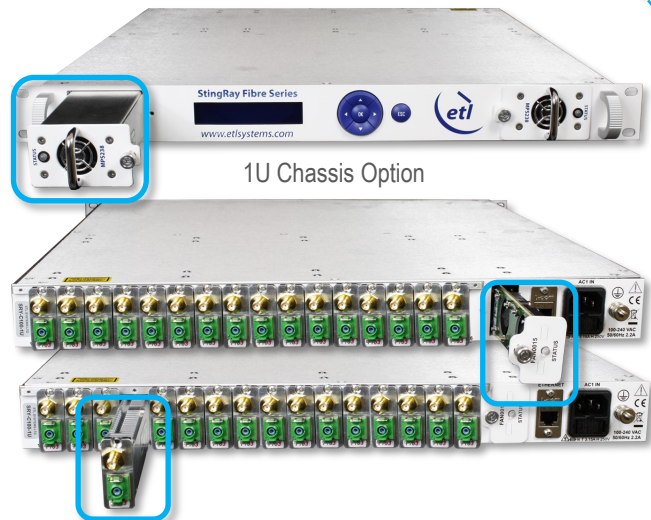
Resilience from dual redundant hot-swap power supplies, hot-swap fibre modules & fans



Remote control & monitoring via RJ45 Ethernet port with SNMP & web browser interface



Local control & monitoring via front panel push buttons & display



1U Chassis Option

Hot-swap Power Supply (available on some chassis options), Fan & Fibre Module





RF Parameters (TX & RX Fibre Modules)

Model Number		SRY-TX-B2-111 (Transmit / TX)								SRY-RX-B2-112 (Receive / RX)							
Frequency Range		50-2450 MHz (Broadband)															
Output MGC		-															
Flatness (Fixed gain mode)	850-2150MHz	±1.0 dB															
	850-2450 MHz	±1.5 dB															
	200-850 MHz	±2.0 dB															
	50-200 MHz	±2.0 dB															
	Any 36 MHz i/p >-50 dBm	±0.25 dB															
	Any 36 MHz i/p <-50 dBm	±0.5 dB															
Return Loss	Typical	50Ω SMA	18 dB	50Ω BNC	18 dB	75Ω BNC	16 dB	75 Ω F-Type	16 dB	50Ω SMA	18 dB	50Ω BNC	18 dB	75Ω BNC	16 dB	75 Ω F-Type	16 dB
	Minimum		12 dB		12 dB		12 dB		12 dB		14 dB		14 dB		13 dB		13 dB
Link Gain		+4 to 0 dB															
1dB Gain Compression		+6 dBm															
OIP3	Typical	17 dBm (Test conditions: 1m fibre, 10 dB gain, -22 dBm tones at 2150 and 2152 MHz)								24 dBm (Test conditions: 1m fibre, 0 dBm RF i/p power, 0 dBm o/p power, -3 dBm tones at 2150 and 2152 MHz)							
	Worst Case	14 dBm (Test conditions: 1m fibre, 10 dB gain, -22 dBm tones at 2150 and 2152 MHz)								22 dBm (Test conditions: 1m fibre, 0 dBm RF i/p power, 0 dBm o/p power, -3 dBm tones at 2150 and 2152 MHz)							
CNR	Typical	-51 dB (Test conditions: 1m fibre, 0 dB RF i/p power, 0 dBm o/p power)															
	Worst Case	-45 dB (Test conditions: 1m fibre, 0 dB RF i/p power, 0 dBm o/p power)															
Group Delay Variation	Full Band	±2ns (Test conditions: 1m fibre, 0 dBm RF i/p power, 0 dBm RF o/p total power)															
	Any 36 MHz	±1ns (Test conditions: 1m fibre, 0 dBm RF i/p power, 0 dBm RF o/p total power)															
SFDR	Typical	113 dB/Hz ^{2/3} (Test conditions: 1m fibre, 0 dB gain, -22 dBm tones at 2150 and 2152 MHz)															
	Minimum	108 dB/Hz ^{2/3} (Test conditions: 1m fibre, 0 dB gain, -22 dBm tones at 2150 and 2152 MHz)															
RF Signal Range		Input: <0 dBm (total power) Operational I/P range								Output: 0 dBm maximum							
Max RF Input		16 dBm total power (Damage level, NOT operational)															
AGC/MSG		AGC factory set. Once AGC level set gain can be fixed.								MSG: Settable gain							
Noise Figure	Typical	18 dB typical, (Test conditions: 1 m fibre, 0 dBm RF i/p power, 0 dBm o/p power)								24 dB typical, (Test conditions: 1 m fibre, 0 dBm RF i/p power, 0 dBm o/p power)							
	Worst case	21 dB worst case (Test conditions: As above)								26 dB worst case (Test conditions: As above)							
Noise Floor		-156 dBm/Hz typical (Test conditions: 1 m fibre, 0 dBm RF i/p power, 0 dBm o/p power)								-							
Laser Type		DFB (Optical isolator for improved performance)															
Optical Wavelength		1310 ± 10 nm								1120 to 1650 nm				Optimised for 1310 nm and 1550 nm			
Optical Power		Output: +6 ± 2.5 dBm															
Power Consumption		3.5W								2W							
LNB Power		-															
MTBF		211,600 hours								292,550 hours							
RF Connectors		BNC 50 Ω - B5 / SMA 50 Ω - S5 (contact ETL for 75 Ω connectors)															
Optical Connectors		FA - FC/APC or SA - SC/APC															
Module Swap		Hot swap															

Please see separate datasheet for 100 series chassis options.

