



StingRay RF Over Fibre

100 series Broadband modules with 18V LNB powering (on TX module)

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 with automatic link optimisation ensuring high quality broadband signals. 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 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



High isolation between modules for signal quality



LNB Powering 18V on TX modules only

Chassis Options



Compact chassis options, which can be part populated



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



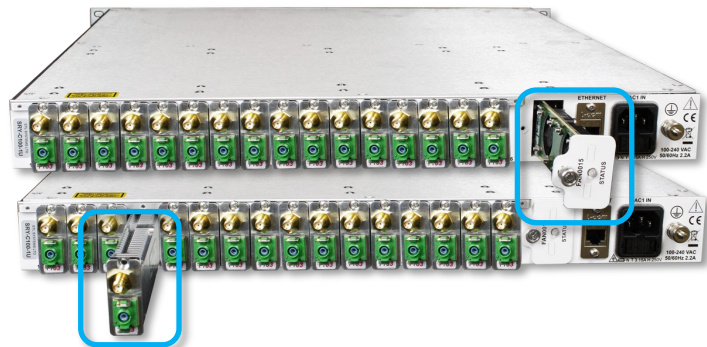
Remote control & monitoring via RJ45 Ethernet port with SNMP & web browser interface



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 Modules)				
Model Number	SRY-TX-B2-105 (transmit)		SRY-RX-B2-106 (receive)	
Frequency Range	50-2450 MHz (Broadband)			
Flatness (Fixed gain mode)	850-2450MHz	±2.0 dB		
	200-850MHz	±2.0 dB		
	50-200MHz	±2.0 dB		
	Any 36MHz i/p >-50dBm	±0.25 dB		
	Any 36MHz i/p <-50dBm	±0.5 dB		
Return Loss	Typical	18 dB 50Ω SMA	18 dB 50Ω BNC	16 dB 75Ω BNC 16 dB 75Ω F-type
	Minimum	12 dB 50Ω SMA	12 dB 50Ω BNC	12 dB 75Ω BNC 12 dB 75Ω F-type
Output AGC Flatness	-		±2.0 dB over two bands above (Input -10 to -40 dBm)	
OIP3	18 dBm typical, 14 dBm minimum (Test conditions: 1m fibre, 10 dB gain, -23 dBm tones at 2150 and 2152 MHz)			
CNR (in any 36 MHz)	-38 dB typical, -35 dB minimum (Test conditions: 1m fibre, -10 dBm RF i/p power, -10 dBm RF o/p total power)			
Group Delay Variation	±2ns over each band, Bands 50 to 200 MHz and 850 to 2450 MHz			
	±0.5ns any 36MHz 850 to 2450MHz, Any 36 MHz applies only 850 to 2450 MHz			
SFDR	105 dB/Hz ^{2/3} typ., 100 dB/Hz ^{2/3} min (Test condition: 1m fibre, 10 dB gain, -23 dBm tones at 2150 and 2152 MHz)			
IMD3	-65 dBc typ., -60 dBc min. (Test condition: 1m fibre, 10 dB gain, -23 dBm tones at 2150 and 2152 MHz)			
RF Signal Range	Input: -60 dBm to -10 dBm (total power) Operational I/P range		Output: -30 dBm to -10 dBm (total power)	
Max RF Input	16 dBm total power (Damage level, NOT operational)		-	
Gain Control	-		AGC -30 dBm - 10 dBm	
AGC / MSG	Factory set. Once AGC level set gain can be fixed.		Settable output power level. Once AGC level set gain can be fixed.	
Noise Figure	10 dB typical, 12 dB maximum (Test conditions: 1m fibre, -50 dBm RF i/p power, -10dBm o/p power)			
Laser Type	DFB (Optical isolator for improved performance)		-	
Optical Wavelength	1310 ± 10 nm	1100 to 1650 nm	Optimised for 1310 nm and 1550 nm	
Optical Power	Output: 4.5 ± 2.5 dBm		Input: 0 to -4.5 dBm, Max 10 dBm	
Power Consumption	3.5W		2W	
LNB Power	Dependant on chassis - see chassis specifications.		None	
MTBF	211,600 hours		292,550 hours	
RF Connectors	BNC 50 Ω - B5 / BNC 75 Ω - B7 / F-type 75 Ω - F7 / SMA 50 Ω			
Optical Connectors	S5/ FA - FC/APC or SA - SC/APC			
Environmental Conditions				
Operating Temperature	0 to 50°C			
Storage Temperature	-20°C to +75°C			
Location	Indoor use only			
Humidity	20 to 90% non-condensing (relative humidity)			
Altitude	10,000 ft AMSL (above mean sea level)			
Mass	0.18kg			
Size	43.5 x 18 x 209.5 mm			

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.

Please see separate datasheet for 100 series chassis options.

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