



StingRay RF over Fibre

200 series L-band modules with -20dB monitor port & 13/18V LNB powering, 22kHz tone (on TX module) & dual RF output (RX module only)

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

The StingRay 200 Series of L-band 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 L-band transmission.

Fibre Modules



850 - 2450 MHz
operating frequency range



-20dB Monitor port to measure input signal levels on TX module only



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



LNB Powering 13/18V on TX modules only



Dual RF Output on receive module only



High isolation between modules for signal quality

Chassis Options



Compact indoor & outdoor 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



10MHz Inject from an external source chassis option



Local control & monitoring via front panel push buttons & display



Indoor chassis showing hot-swap power supply modules, fibre modules and fans



Outdoor Unit (ODU)



RF Parameters (TX & RX Modules)									
Model Number		SRY-TX-L1-201-xxxx				SRY-RX-L1-306-xxxx			
Frequency Range		850 to 2450 MHz (Extended L-band)							
Flatness	850-2150MHz	± 1.2 dB				± 1.2 dB			
	850-2450MHz	± 1.7 dB				± 1.7 dB			
	Any 36MHz i/p >-50dBm	± 0.25 dB							
	Any 36MHz i/p <-50dBm	± 0.5 dB							
Output AGC Flatness		-				± 2.0 dB full band (Input -10 to -40 dBm)			
AGC		AGC: Factory set (once AGC level set, gain can be fixed)				AGC / MSG: Settable output power level (once AGC level set, gain can be fixed)			
Return Loss	Typical	18 dB 50 Ω SMA	18 dB 50 Ω BNC	12 dB 75 Ω BNC	12 dB 75 Ω F-type	18 dB 50 Ω SMA	18 dB 50 Ω BNC	16 dB 75 Ω BNC	16 dB 75 Ω F-type
	Minimum	12 dB 50 Ω SMA	12 dB 50 Ω BNC	10 dB 75 Ω BNC	10 dB 75 Ω F-type	12 dB 50 Ω SMA	12 dB 50 Ω BNC	12 dB 75 Ω BNC	12 dB 75 Ω F-type
Monitor Port		-20 dB ± 3 dB (Mounted on module)				-			
OIP3		17 dBm typical, 14 dBm worst case (Test condition: 1m fibre 10 dB gain, -22 dBm tones at 2150 and 2152 MHz)							
CNR (in any 36 MHz)		-50 dB typical, -45 dB worst case (Test condition: 1m fibre, -10 dBm RF i/p power, -10 dBm RF o/p total power)				-50 dB typical, -45 dB worst case (Test condition: 1m fibre, -10 dBm RF i/p power, -10 dBm RF o/p total power)			
Noise Figure		12 dB typical, 15 dB worst case (Test condition: 1m fibre, -50 dBm RF i/p power, -10 dBm o/p power)							
Group Delay Variation		2ns over full band, 1ns over any 36MHz							
SFDR		105 dB/Hz ^{2/3} typical, 100 dB/Hz ^{2/3} minimum (Test condition: 1m fibre, 10 dB gain, -22 dBm tones at 2150 and 2152 MHz)							
IMD3		-58 dBc typ., -52 dBc min. (Test condition: As SFDR above)							
RF Signal Range		Input: -60 to -10 dBm (total power) - Operational i/p range				Output: -30 dBm to -10dBm (total power) o/p range available under all i/p conditions			
10 MHz level at output		-10 to +5 dBm (User settable range in chassis SRY-C205-2U, SRY-C207-1U, SRY-ODU201 + SRY-OPT16-10M Accuracy ±1dB)				-			
10 MHz Isolation		-40 dB		Between adjacent modules in same chassis		-			
Max RF Input		16 dBm total power (Damage level, NOT operational)							
Laser Type		DFB	Optical isolator for improved performance			-			
Optical Wavelength		1310 ± 10 nm				1100 ± 1650 nm (optimised for 1310 nm & 1550 nm)			
Optical Power		Output: 4.5 ± 2.5 dBm (3.8dBm typical)				Input: 0 to 4.5 dBm (Max. 10 dBm)			
Power Consumption		15W typical (with 18V 500mA LNB power)				4W typical			
LNB Power		13/18V ± 5%, 500mA max (Short circuit current 750 mA max)				-			
MTBF		>200,000 hours				>250,000 hours			
Connector Options		RF connectors: BNC 50 Ω - B5 / SMA 50 Ω - S5 / SMA 50 Ω - S5 / Optical connectors: FA - FC/APC / SA - SC/APC / E2000 (RX only)							
Spec Version		1.2				1.0			

Please see separate datasheet for 200 series chassis options.