



# StingRay RF Over Fibre

## 200 Series Broadband Dual Modules with 13/18V LNB Powering & 22kHz tone (on TX module)

The StingRay 200 Series of 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 L-band transmission. Resilience is provided by a full hot-swap, modular design.

### 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



**LNB Powering** 13/18V on TX modules only



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



**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 and RX)		
Model Number	SRY-TX-B2-207-xxxx (Transmit)	SRY-RX-B2-208-xxxx (Receive)
Frequency Range	50 to 2450 MHz (Broadband)	
Flatness	850-2150MHz	± 1.5 dB
	50-2450 MHz	± 2.4 dB
	Any 36MHz	± 0.25 dB
Output AGC Flatness	50 to 2450 MHz	± 2.0 dB (Input -10 to -40 dBm)
Return Loss	50 ohm SMA / BNC	18 dB typical, 12 dB minimum
	75 ohm BNC / F-type	16 dB typical, 12 dB minimum
Isolation	Typical -40dB, -35 worst case (Between 2 links in dual RX & TX modules)	
Noise Figure	10 dB typical, 12 dB worst case (Test condition: 1m fibre, -50 dBm RF i/p power, -10 dBm o/p power)	
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)	
Group Delay Variation	±2 ns over full band (Bands 50 to 200 MHz and 850 to 2450 MHz)	
	±0.5ns any 36 MHz 850 to 2450 MHz (Any 36 MHz applies only 850 to 2450 MHz)	
SFDR	105 dB/Hz <sup>23</sup> typical, 100 dB/Hz <sup>23</sup> worst case (Test condition: 1m fibre, 10 dB gain, -22 dBm tones at 2150 and 2152 MHz)	
Optical Wavelength	1310 ± 10 nm	1100 to 1650 nm (Optimised for 1310 nm and 1550 nm)
Optical Power	Out: 4.5 ± 2.5 dBm (3.8 dBm typical)	In: 0 to 4.5 dBm (Max 10 dBm)
Laser Type	DFB (Optical isolator for improved performance)	-
AGC / MSG	Factory Set Once AGC level set, gain can be fixed	Settable output power level, gain can be fixed
RF Signal Range	Input: -60 dBm to -10 dBm (total power)	Output: -30 dBm to -10 dBm (total power) o/p range available under all i/p conditions
LNB Power	18/13V ± 5%, 500mA max (Short circuit current 750mA max)	-
Maximum RF Input Power	16 dBm total power (NB. Damage level )	-
Power Consumption	28W (with 2x 18V 500 mA LNB power)	7W typical
MTBF	>120,000 hours	>150,000 hours

Please see separate datasheet for 200 series chassis options.