ETL Systems

Excelling in RF Engineering

Model number: SRY-TX-B2-269 & SRY-RX-B2-270

StingRay RF Over Fibre

200 series Broadband modules with fixed gain & high linearity

The StingRay 200 Series broadband RF over fibre chassis are designed to give compact fibre links of up to 10 km (up to 300 km with a DWDM system). 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 10 km (up to 300 km with DWDM)

Fibre Modules

50-2450 MHz operating frequency range

TX & RX module options to transmit and receive signals up

Fixed Gain 0 dB, 0 dBm link

High isolation between modules for signal quality

High Linearity with high 1dB Gain Compression

Chassis Options

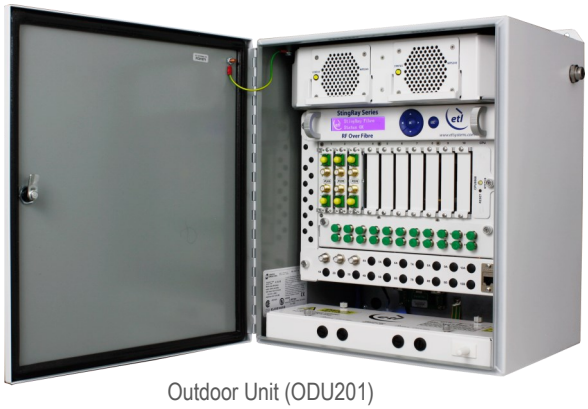
Compact indoor & outdoor chassis options, which can be part populated

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

Local control & monitoring via front panel push buttons & display

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



Outdoor Unit (ODU201)

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RF Parameters (TX & RX Fibre Modules)									
Model Number		SRY-TX-B2-269 (Transmit / TX)				SRY-RX-B2-270 (Receive / RX)			
Frequency Range		50-2450 MHz (Extended L-band)							
Flatness	850-2150MHz	±1.5 dB							
	850-2450 MHz	±2.0 dB							
	200-850 MHz	±1.5 dB							
	50-200 MHz	±1.5 dB							
	Any 36MHz i/p >-50dBm	±0.25 dB							
	Any 36MHz i/p <-50dBm	±0.5 dB							
Return Loss	Typical	50Ω SMA	18 dB	50Ω BNC	18 dB	50Ω SMA	16 dB	50Ω BNC	16 dB
	Minimum		12 dB		12 dB		12 dB		12 dB
Monitor Port		-20 dB ± 3 dB							
Link Gain		+4 to 0 dB							
P1dB Input	Typical	+4 dBm 1dB Gain Compression							
	Minimum	+1 dBm 1dB Gain Compression							
OIP3	Typical	17 dBm (**Test conditions:** 1m fibre, 10 dB gain, -22 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)							
CNR (in any 36 MHz)	Typical	-51 dB (**Test conditions:** 1m fibre, 0 dBm RF i/p power, 0 dBm RF o/p power)							
	Worst case	-45 dB (**Test conditions:** 1m fibre, 0 dBm RF i/p power, 0 dBm RF 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$^{2/3}$ minimum (**Test conditions:** 1m fibre, 0 dB gain, -22 dBm tones at 2150 and 2152 MHz)							
RF Signal Range		Input: <0 dBm (total power)				Output: < 0 dBm (total power)			
Maximum RF Input		16 dBm total power (Damage level, NOT operational)							
MSG		-				0 to - 4 dB No AGC			
Noise Figure		18 dB typical, 22 dB worst case (**Test conditions:** 1m fibre, 0 dBm RF i/p power, 0 dBm o/p power)							
Noise Floor		-156 dBm/Hz typical (**Test conditions:** 1m 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				1100 to 1650 nm		Optimised for 1310 nm and 1550 nm	
Optical Power		Output: +6 ± 2.5 dBm				Input: +2 to +6 dBm, Max 10 dBm			
Power Consumption		6W				4W typical			
LNB Power		None							
MTBF		>200,000 hours				>250,000 hours			
RF Connectors		BNC 50 Ω - B5 / BNC 75 Ω - B7 / F-type 75 Ω - F7 / SMA 50 Ω - S5							
Optical Connectors		FA - FC/APC or SA - SC/APC Single mode fibre. Use angle polish connectors only.							

Please see separate datasheet for 200 series chassis options

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