ETL Systems

Excelling in RF Engineering

Model Number:
SRY-TX-L1-291 & SRY-RX-L1-292

StingRay RF over Fibre

200 series L-band modules with -20dB monitor ports & 13/18V LNB powering & 22kHz tone (on TX module)

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.

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

850 - 2450 MHz operating frequency range

-20dB Monitor port to measure input signal levels

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

LNB Powering 13/18V on TX modules only

High isolation between modules for signal quality

Chassis Options

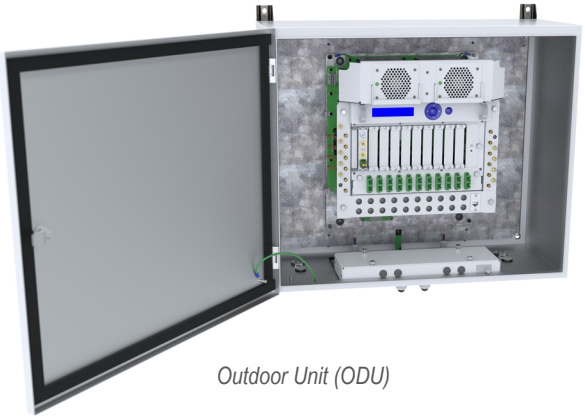
Compact indoor & outdoor chassis options - **Models SRY-C209-2U & SRY-ODU209 only**

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 (ODU)

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RF Parameters (TX & RX Modules)			
Model Number		SRY-TX-L1-291-xxxx	SRY-RX-L1-292-xxxx
Frequency Range		850 to 2450 MHz (Extended L-band)	
Flatness	850-2150 MHz	± 1.2 dB (**Test condition:** 10km fibre, fixed gain mode, -10 dBm RF i/p power,-10 dBm RF o/p total power)	
	850-2450 MHz	± 1.7 dB (**Test condition:** as above)	
	Any 36 MHz i/p >-50 dBm	± 0.25 dB (**Test condition:** as above)	
	Any 36 MHz i/p <-50 dBm	± 0.5 dB (**Test condition:** as above)	
Output AGC Flatness		-	± 2.0 dB full band (Input -10 to -40 dBm)
AGC		AGC: Factory set (Fixed gain operation not available)	AGC: Factory set (Fixed gain operation not available)
Return Loss	Typical	18 dB 50 Ω SMA	
	Minimum	12 dB 50 Ω SMA	
Monitor Port		-20 dB ± 3 dB	
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)	-38 dB typical, -35 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, -22dBm tones at 2150 and 2152 MHz)	
RF Input Signal Range		Input: -60 to -10 dBm (total power)	Output: -30 dBm to -10dBm (total power)
10 MHz level at output		N/A	-
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 (3.8 dBm typical)	In: 0 to 4.5 dBm (Max. 10 dBm)
Power Consumption		6W typical	4W typical
LNB Power		N/A	-
MTBF (module)		>200,000 hours	>250,000 hours
Connector Options		RF connectors: SMA 50 Ω - S5	Optical connectors: FA - FC/APC or SA - SC/APC
Operating Temperature		-20°C to +60°C	
Storage Temperature		-40°C to +90°C	
Location		Indoor use—outdoor use as part of ETL ODU only	
Humidity		20 to 90% non-condensing. Relative humidity	
Altitude		10,000 ft Above Mean Sea Level (AMSL) operational, 30,000 ft AMSL storage/transport	
Weight		0.35kg typical	
Dimensions		87.8 x 18 x 150mm	

These module can only be housed in indoor chassis Model SRY-C209-2U and outdoor chassis Model ODU209.
Please see separate datasheet for 200 series chassis options.

ETL SYSTEMS LIMITED
Coldwell Radio Station
Madley
Hereford
England HR2 9NE

TELEPHONE
+44 (0)1981 259020

EMAIL
info@etlsystems.com

FACSIMILE
+44 (0)1981 259021

WEB
www.etlsystems.com

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