ETL Systems

Excelling in RF Engineering

Model Number: SRY-DIV-L1-289 & SRY-SW-L1-271

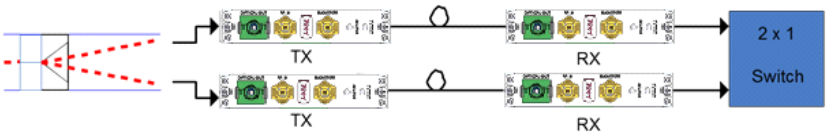
Typical applications:

- 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

StingRay RF over Fibre

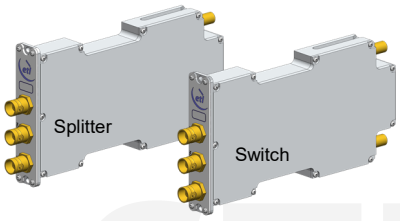
Passive 1+1 Redundancy

The StingRay 200 Series of RF over fibre chassis are designed to give compact fibre links of up to 10 km (Link budget 4 dB). 1+1 redundancy provides additional resilience for uplink and downlink transmissions over fibre. If one fibre link is broken, the signal is automatically switched to the redundant path.



ETL's 1+1 redundant fibre link comprises a passive 2-way splitter module with a pair of Tx modules at the transmit end, and a high reliability 2x1 switch module with a pair of Rx modules at the receive end.

1+1 Fibre Modules



850 - 2450 MHz operating frequency range

Splitter module with DC pass

Switch module triggered by RF detection at the input ports if level is outside the predefined user set threshold.

Chassis Options

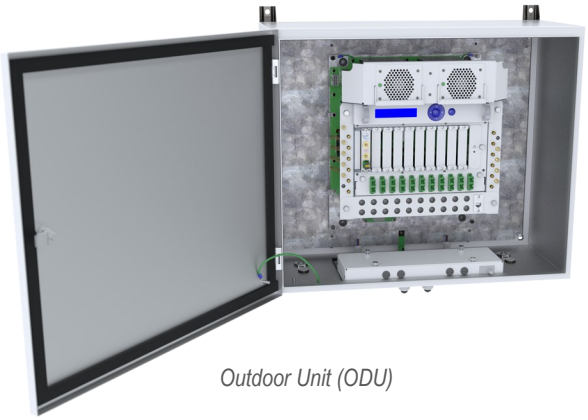
Compact indoor & outdoor chassis options - which can be part populated

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 (ODU)

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Technical specifications and operating parameters

RF Parameters (Splitter and Switch Modules)			
Model Number		SRY-DIV-L1-289-xxxx	SRY-SW-L1-271-xxxx
Frequency Range		850 to 2450 MHz (Extended L-band)	
Insertion Loss		7 dB ± 0.5 dB	12.5 dB ± 1 dB
Flatness	950-1950MHz	± 0.5dB	± 0.5dB
	Any 500MHz (950-1950MHz)	± 0.3dB	N/A
	850-2450MHz	± 0.6dB	± 0.8dB
	Any 36MHz (950-1950MHz)	± 0.1dB	± 0.2dB
	Any 36MHz (850-2450MHz)	± 0.2dB	± 0.2dB
Return Loss	50 ohm SMA	20 dB typical, 14 dB minimum (at common port, all RF connectors are female, all RF ports are DC blocked)	
	50 ohm BNC	20 dB typical, 14 dB minimum (at common port, all RF connectors are female, all RF ports are DC blocked)	
Isolation		-	-40 dB (-10dBm tone across 950 - 1950MHz unselected input to output)
1dB Gain Compression Point		+20 dBm minimum (output power at 1950 MHz)	+20 dBm (output power at 1950 MHz)
OIP3		-	+20 dBm (-22 dBm tones at 2150 MHz and 2152 MHz)
Noise Figure		7 dB typical. 9 dB maximum.	14 dB typical. 16 dB maximum.
Group Delay Variation		2ns over full band, 1ns over any 36MHz	
Max RF Input		30 dBm total power (Damage level, NOT operational)	30 dBm total power (Damage level, NOT operational)
RF Connectors		BNC 50 Ω - B5 / SMA 50 Ω - S5	

Non-RF Parameters (Splitter and Switch Modules)		
Model Number	SRY-DIV-L1-289-xxxx	SRY-SW-L1-271-xxxx
Module Swap	Hot Swap	
Power Consumption	<1W	<3W
MTBF	>250,000 hours, Module MTBF	>202,000 hours, Module MTBF
Control	Local and Remote (Local front panel control. See chassis spec. Remote control via Ethernet. 10/100Base T. TCP/IP, SNMP, web browser)	
Temperature Monitors	Each module monitored (All are independently monitored and reported)	
Monitoring	Supply Voltage, Temperature (in each module)	RF input power, +5 to –65 dBm RF Output power
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 (operational), 30,000 ft AMSL (storage/transport)	
Mass	0.35 kg typical	
Size	87.8 x 18 x 150 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.

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