StingRay GPS over Fibre

RX Indoor Module

Single channel GNSS (Global Navigation Satellite System) over single mode fibre receive module for StingRay 200 Series chassis. The unit features full monitoring of both the Rx and signal from the Tx, including antenna fail alarm pass through on the RF output.
For use with ETL's GNSS transmit outdoors unit SRY-TX-L1-911-xxxx. .

Typical applications:
- GPS & GNSS applications ,
- GNSS band defined by selective antenna
- Small DC current sunk by RF output mimicking directly attached antenna
- If antenna or link fails no current is taken, signalling failure to connected equipment (antenna spoofing)
- For general L-band use SRY-RX-L1-202

Fibre Modules

850 - 2450 MHz
operating frequency range

-20dB Monitor port to measure input signal levels

RX indoor module for use with ETL's GNSS TX outdoor model SRY-TX-L1-911

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

Local control & monitoring via front panel push buttons & display

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

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RF Parameters				
Capacity	One GNSS over Fibre Receive Unit			
Output port	50Ω BNC, SMA			
Monitor port	50Ω BNC, SMA			Output level -20 dB
Frequency	850MHz to 2450MHz			Use Tx with tuned antenna to select required GNSS signal.
Connector & impedances	50Ω SMA	50Ω N-type	50Ω BNC	
Link Gain (dB)	50±3	50±3	50±3	Typical, mean across band and link
Gain flatness (dB) Any 500MHz	±2.0	±2.0	±2.0	
Any 36MHz	±0.5	±0.5	±0.5	
Input Return Loss (dB) Typ.	18	18	18	
Min	12	12	12	
Output Return Loss (dB) Typ.	NA	NA	NA	
Min				
Input AGC level Max (dBm)	-10			At transmitter
Input AGC level Min (dBm)	-60			At transmitter
Output AGC level Max (dBm)	-40			Set at receiver
Output AGC level Min (dBm)	-60			Set at receiver
Noise Figure (dB)	16 TBC			Typ. link 1.5GHz, -50dBm in & out
CNR (in any 4 MHz) (dB)	60 TBC			Typ. link 1.5GHz, -50dBm in & out, gain fixed
1dB GCP (dBm) 1dB Gain Compression point	-30 TBC			Typ. link 1.5GHz, -50dBm in & out, gain fixed
OIP3 (dBm)	-19 TBC			Typ. link 1.5GHz, -50dBm in & out, gain fixed
SFDR (dB/Hz$^{2/3}$)	105 TBC			Typ. link 1.5GHz, -50dBm in & out
DC consumption	4W			Max. consumption at steady state
Alarms	Antenna fail			200 Ohm load switched out
Local Monitoring	Full monitoring of module and remote Tx, PSU voltage, RF amp current, temperature, laser power, RF modulation power, receive optical power.			Contact ETL if remote monitoring and control is required.
MTBF	> 120,000 hours			Module MTBF TBC
Optical Paremeters				
Optical Wavelength	1100 to 1650nm			Optimised for 1310nm and 1550 nm
Optical power in	0 to 4.5dBm			Max 10 dBm
Optical Connectors	SC/APC FC/APC			Single mode fibre Use angle polish connectors only
Environmental Conditions				
Operating Temperature (°C)	-20°C to +55°C			
Storage Temperature (°C)	-40°C to +85°C			
Location	Indoor use only			Mount out of direct sunlight
Humidity	20 to 90% non-condensing			Relative Humidity
Altitude	10,000 ft AMSL operational 30,000 ft AMSL storage/transport			Above Mean Sea Level
Physical Dimensions & Parameters				
Weight	0.35 Kg			
Dimensions	43mm high x 205mm deep x 18mm wide			Mounting flanges provided
Front Panel Colour	RAL9003 – White (Semi-Matte)			

Chassis Options - Technical Specifications	
Model Numbers	SRY-C200-1U
Capacity	Up to 4 2xx series modules
Redundancy options	1+1 redundancy configuration available with modules SRY-L1-DIV213 & SRY-L1-SW214
Dimensions	1U high x 450 mm deep x 19" wide
Local Control & Monitoring	Front panel LCD and keypad
Remote Control & Monitoring	Ethernet via RJ45, 10baseT/100BaseTx
	ETL protocol over TCP/IP, SNMP, built in web server. Serial port. Dry contact alarm summary.
Module Features Monitored	Includes: Temperature, RF Power, Optical Power, PSU status & Individual fans
LNB Power	Up to 0.5A per channel, not exceeding 2.8A total
PSU Power	100-240 VAC 50/60Hz (Fused 6A, Dual IEC)
PSU Redundancy	Dual Hot-Swap Modules, Diode OR
AC Power Consumption	< 150 W all channels
Heat Load	< 65 W, 222 BTU/hr
Operating/Storage Temperature	Operating: 0 to 50˚C / Storage: -20˚C to +75˚C
Humidity	20 to 90% non-condensing
Weight	TBD kg
Front Panel Colour	RAL9003 White semi-matte

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RoHS COMPLIANT

Pb Pb-Free

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