



Optical Fibre to Broadband Receive Module

1100nm-1650nm
optical input
converted to L-Band
50-2450MHz

Settings
Controlled by 5
position switch
with power &
status indicator
lights

Compact
EMC sealed
standalone housing
with RF monitoring
port

Flexible Mounting
Tapped screw &
through hole mounting
options

- Single mode optical receiver for RF over Fibre (RoF)
- For links up to 10km

Designed to work with ETL's transmit modules :

- SRY-TX-B2-403,
- SRY-TX-B2-407

Available with Optical Connectors:

- FC/APC
 - SC/APC
- or RF Connectors:
- 50 Ω SMA
 - 50 Ω BNC
 - 75 Ω F-type.
 - 75 Ω BNC



StingRay

RF Parameters		
Frequency Range	50 to 2450 MHz	
Flatness	±2.0 dB 50 to 200 MHz ±2.0 dB 850 to 2450 MHz ±0.25 dB, any 36MHz i/p > -50dBm ±0.5 dB, any 36MHz i/p < -50dBm	Full TX &RX link with 10km fibre link using SRY-TX-B2-404 Fixed gain mode Any 36 MHz Applies only 850-2450 MHz
Output AGC flatness	±2.0 dB over 2 bands above	Input -10 to -40 dBm
Return Loss:		
50 ohm SMA	18 dB typ., 12dB min	All RF connectors are female.
50 ohm BNC	18 dB typ., 12dB min	All RF ports are DC blocked
75ohm BNC	16 dB typ, 12 dB min to 2150 MHz, 10 dB min to 2450 MHz	
75 ohm F-type	16 dB typ, 12 dB min to 2150 MHz, 10 dB min to 2450 MHz	
Monitor port	-20dB ±3dB	Mounted on module
OIP3	Typical 17 dBm Worst Case 14 dBm	Test condition: 1m fibre, 10 dB gain, -22 dBm tones at 2150 and 2152 MHz
CNR (in any 36MHz)	Typical -50 dB Worst Case -45 dB	Test condition: 1m fibre, -10 dBm RF i/p power, -10 dBm RF o/p total power.
NF	Typical 12dB Worst Case 15dB	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} typ., 100 dB/Hz ^{2/3} min.	Test condition: 1m fibre, 10 dB gain, -22 dBm tones at 2150 and 2152MHz
IMD3	-65 dBc typ., -60 dBc min.	Test condition: As SFDR above
AGC/MSG	Factory Set Once AGC Level set	Settable output power level, can be fixed
RF Output Signal Range	-30dBm to -10dBm (total power)	o/p range available under all i/p conditions

Broadcast



Marine Oil & Gas



SNG & VSAT



Satellite Teleport





Technical specifications and operating parameters

Optical Parameters		
Optical Wavelength	1100 to 1650nm	Optimised for 1310nm and 1550 nm
Optical power in	0 to 4.5dBm	Max 10 dBm
Optical Connectors	FC/APC SC/APC	Single mode fibre Use angle polish connectors only
Non RF Parameters		
Module swap	Hot swap	
Power supply voltage	12V ±1V	Single or dual redundant power
Power consumption	4W typical	
MTBF	> 250,000 hours	Module MTBF

Environmental conditions		
Operating Temperature	-20°C to +65°C	Mount away from sources of heat. Forced air cooling may be required dependant on application.
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 AMSL operational 30,000 ft AMSL storage/ transport	Above mean sea level

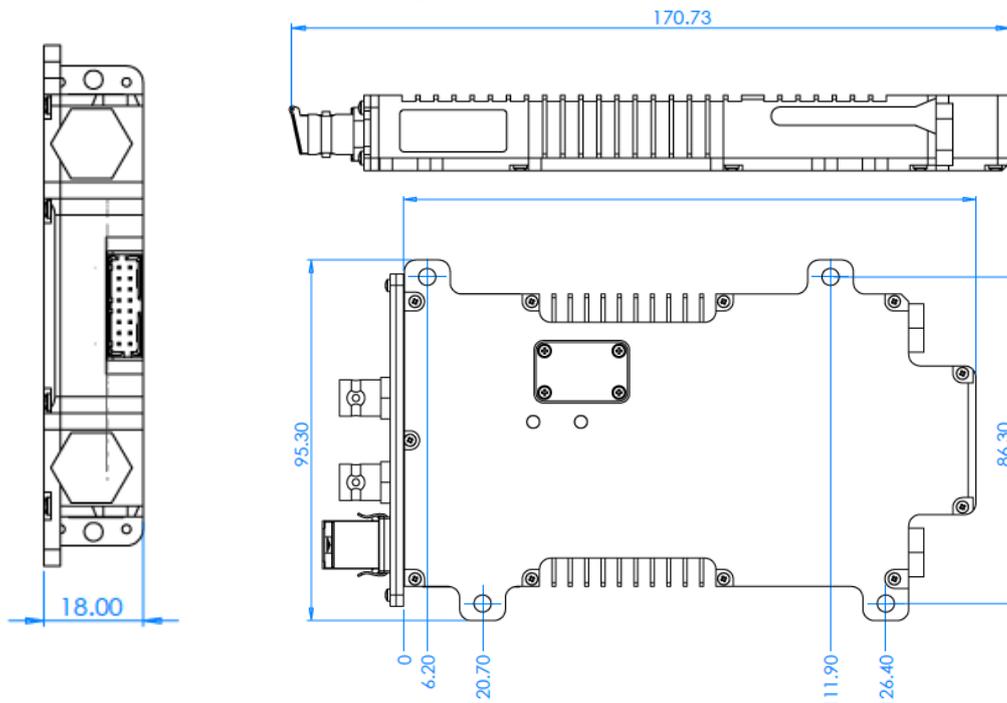
Control, Monitoring & Alarms			
Control	1	Reserved	Remove cover to access DIP switch. Output power settable -30 to -10 dBm in 3 dBm steps.
DIP Switch	2	Output power bit 3	
Position	3	Output power bit 2	
	4	Output power bit 1	
	5	AGC on/Gain fixed	
	6	Reserved	
Indicator lights	Power Status Green		Module powered Module OK
Monitoring includes	Status of amplifier stages Module temperature		Monitored in each module
AGC	Settable output power level		Once AGC level set, gain can be fixed

Position marked on switch			Output
2	3	4	Power/dBm
0	0	0	-31
0	0	1	-28
0	1	0	-25
0	1	1	-22
1	0	0	-19
1	0	1	-16
1	1	0	-13
1	1	1	-10

* 1 = switch is in ON position
0 = switch is in OFF position

! Operation beyond these limits may cause instantaneous and permanent damage.

Physical Dimensions



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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