

Optical Fibre to Broadband Receive Module

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

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

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

Flexible Mounting
Tapped screw &
through hole mounting
options

Compact
EMC sealed standalone
housing with RF
monitoring port



RF Parameters

Frequency Range	50 to 2450 MHz	
RF Connectors	50 ohm SMA / 75 ohm BNC / 75 ohm F-type	
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 75 ohm BNC 75 ohm F-type	18 dB typ., 12dB min 16 dB typ, 12 dB min to 2150 MHz, 10 dB min to 2450 MHz 16 dB typ, 12 dB min to 2150 MHz, 10 dB min to 2450 MHz	All RF connectors are female. All RF ports are DC blocked
Monitor port	-20dB ± 3 dB	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

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

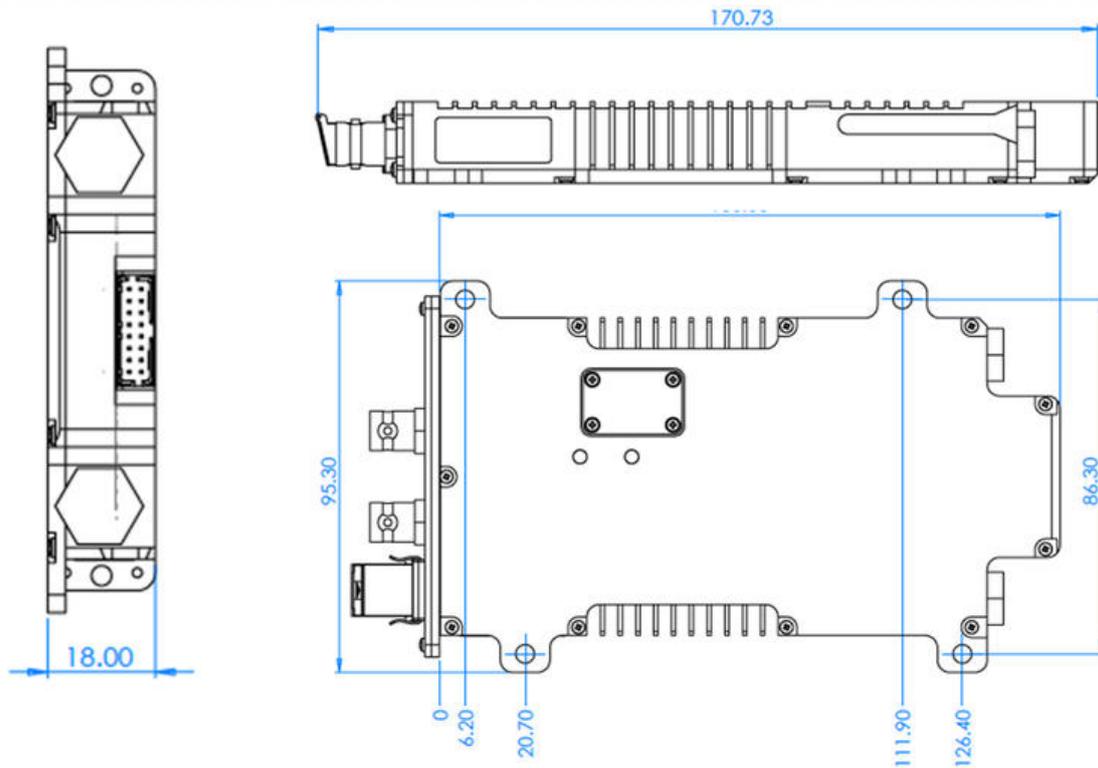
Control, Monitoring & Alarms			
Control DIP Switch Position	1	Reserved	Remove cover to access DIP switch. Output power settable -30 to -10 dBm in 3 dBm steps.
	2	Output power bit 3	
	3	Output power bit 2	
	4	Output power bit 1	
	5	AGC on/Gain fixed	
	6	Reserved	
Indicator lights Power Status Green	Module 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	

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

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 on OFF position

Physical Dimensions (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.