



StingRay GPS Over Fibre

Standalone Receive Module

850MHz to 2450MHz



Flexible Mounting
Tapped screw & through hole mounting options

850-2450 MHz
Operating frequency range

Compact
EMC sealed standalone housing with RF monitoring port

RF Parameters		
Frequency Range	850MHz to 2450MHz	Use Tx with tuned antenna to select required GNSS signal.
Capacity	One GNSS over Fibre Receive Unit	
Output Port	50Ω BNC, SMA	
Monitor Port	50Ω BNC, SMA	Output level -20 dB (Typical, for indication only)
Conector & Impedances	50Ω SMA	50Ω BNC
Link Gain (dB)	50±3 (Max across band and link)	
Gain Flatness (dB)	Any 500MHz	±2.0
	Any 36Mhz	±0.5
Output Return Loss (dB)	Typical	18
	Minimum	12
Input AGC level (dBm)	Maximum	-10
	Minimum	-60
Output AGC level Max (dBm)	Maximum	-40
	Minimum	-60
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)	-30 TBC	
1dB Gain Compression point	-19 TBC	
OIP3 (dBm)	-19 TBC	
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	25 mA current sink switched out
Local Monitoring	Monitoring of module and signal from Tx Via LED. LED is GREEN if optical power is between -6.2dBm & +9dBm and RED if out of this range. Contact ETL if remote monitoring and control is required.	
MTBF	> 120,000 hours	Module MTBF TBC

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	SC/APC FC/APC	Single mode fibre Use angle polish connectors only

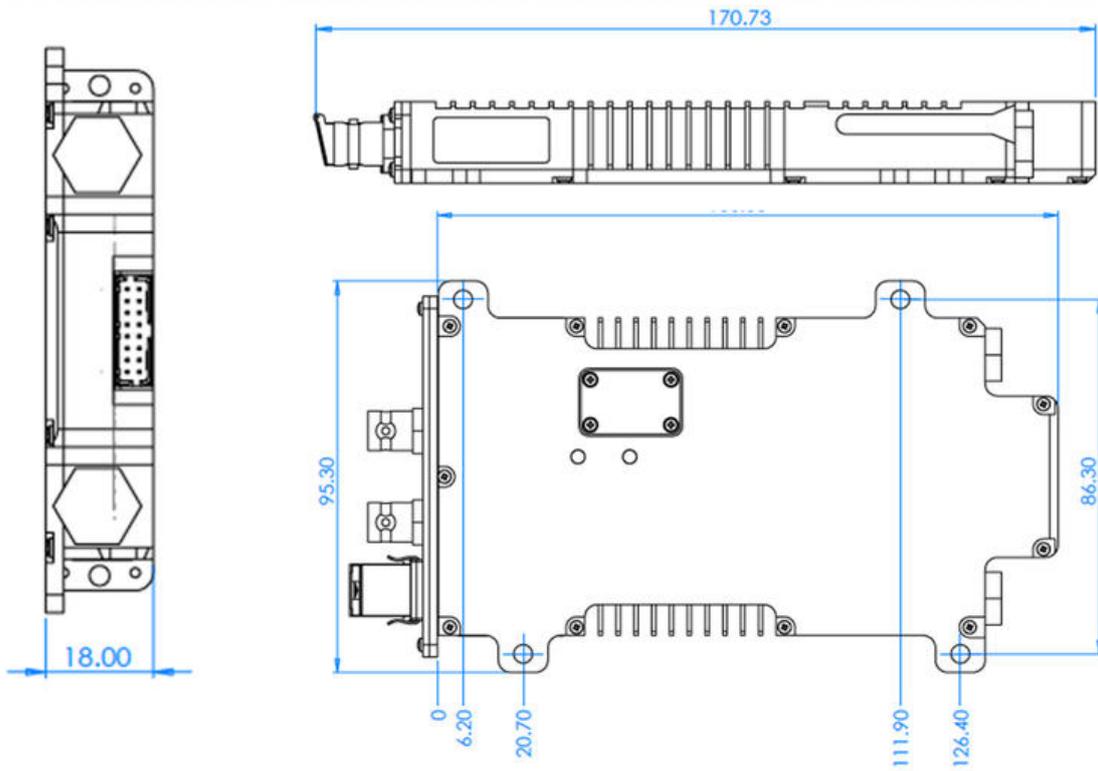
Control, Monitoring & Alarms			
Control DIP Switch Position	1	Reserved	Remove cover to access DIP switch. Output power settable -30 to -10 dBm in 3 dBm steps.
	2	Output power bit 3	
	3	Output power bit 2	
	4	Output power bit 1	
	5	AGC on/Gain fixed	
	6	Reserved	
Indicator lights Power Status Green		Module 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 +55°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 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		-61
0	0	1		-58
0	1	0		-55
0	1	1		-52
1	0	0		-49
1	0	1		-46
1	1	0		-43
1	1	1		-40

* 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.