PRP2150

‘CW’ Pilot Generator

The **PRP2150** is a remote mount pilot generator module, designed specifically for AUPC or beacon tracking applications when a stable CW beacon is not available from the satellite.

In use, the CW pilot signal is applied to the uplink signal (after AUPC compensation) and subsequently received on the downlink instead of the normal satellite beacon signal.

The **PRP2150** generator is designed as a versatile and easy to use unit utilising a remote only control system that can display all user controllable functions. Ethernet is standard along with optional RS232/485 protocol.

The pilot generator center frequency can be set accurately using the 125kHz step size synthesiser. The unit uses a highly stable ovenised crystal oscillator as a reference, which can be optionally locked to an external 10MHz source if required.

The output level is designed to be extremely stable over temperature and time, as required for the application.

Peak Features

- High stability
- Wide level control
- Extended L-Band coverage
- Rugged weatherproof housing

PRP2150 – Typical Specification

L-Band Output

Frequency range	850-2,150MHz
Step size	125kHz
Connector	N-type(f), 50Ω
Output return loss	15dB
Level	-50dBm to -80dBm, stepped 0.1dB
Note; other level ranges available.	
Temperature stability	0.01dB/ºC

Internal Reference

Frequency	10MHz
Adjustment	±1.0ppm, stepped 0.02ppm
Stability	
Allan deviation	5 x 10^{-11} over 1s
Ageing	<5 x 10^{-9} per day, <5 x 10-7 per year
Temp stability	<5 x 10^{-8} over 0 to 50^{0}C
High stability (Option 8)	
Allan deviation	3 x 10^{-12} over 1s
Ageing	<2 x 10^{-10} per day, <2 x 10^{-8} per year
Temp stability	<3 x 10^{-9} over 0 to 50^{0}C

External Reference Input (option 4) with automatic detection

Frequency	10MHz (5MHz, factory settable)
Level	0dBm ±3dB
Connector	TNC(f), 50Ohm
Locking delay	<2minutes to stabilise from cold

Mechanical

Dimensions	290 x 230 x 95mm (11.4 x 9.1 x 3.7inch)
Construction	Die-cast Aluminium, weatherproof, IP66 rated
Weight	Approx. 1.4kgs (3lbs)

Environmental

Operating temp	-25°C to +55°C (less solar gain)
Option 12;	-40°C to +55°C (less solar gain), with extended warm-up time for cold start operation & higher current
Humidity	0-100% condensing
EMC	EN 55022-part B & EN 50082-1
Safety	EN 60950

Power Supply

Voltage	+11.5 to +12.5VDC
Current	1A max (configuration dependant)
Connection	Multi-pin circular, weatherproof (mating part supplied)

Control System Interface

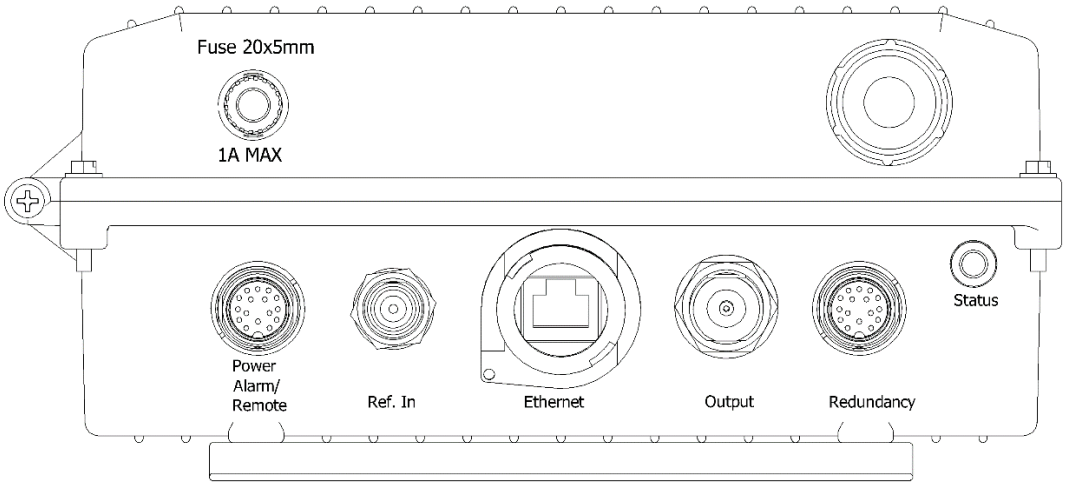
Remote control	Ethernet; embedded web server & SNMP network management support
Connection	RJ45 weatherproof (mating part supplied)
Option 9 ;	RS232/RS485 port, via multi-pin circular, weatherproof connection (mating part supplied)
Alarms	Summary failure alarm (relay form C) Out of lock alarm (relay form C)
Connection	Multi-pin circular, weatherproof (mating part supplied)
Alarms (other)	LO lock failure PSU failure External alarm inputs

Options

4)	External reference input
8)	High stability internal reference option
9)	RS232/RS485 interface
12)	Low temperature operation to -40°C

Note; some of the above options have an impact on the general performance specifications, factory guidance should be sought if this is thought to be critical.

Connector panel view (sample)



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