

IRPH2150

'CW' Pilot Generator



The **IRPH2150** is a rack mounted 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 **IRPH2150** generator is designed as a versatile and easy to use unit incorporating a graphics display module, membrane keyboard and features a clear and intuitive control and configuration menu, fully utilising the unique graphics display.

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 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



IRPH2150 – Typical Specification

L-Band Output

Frequency range	850-2,150MHz
Step size	125kHz
Connector	SMA (f), 50Ω
Option 1b;	N-Type (f), 50Ω
Output return loss	15dB
Level	-50dBm to -80dBm, stepped 0.1dB
<i>Note; other level ranges available.</i>	
Temperature stability	0.01dB/°C

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°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°C

External Reference Input (with automatic detection)

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

L-Band Monitor (Option 2)

L-Band monitor ports, front or rear panel mounted	
Connector	SMA (f), 50Ω
<i>Note; other connector styles available, please consult the factory</i>	
Level	-20dBc ±3dB

Mechanical

Width	19" standard rack mountable
Height	1U (1.75")
Depth	~400mm (15.7"), plus connectors
Construction	Aluminium chassis
Weight	4-6kgs (9-13lbs) approx.

Environmental

Operating temp	0°C to +50°C
EMC	EN 55022, part B & EN 50082-1
Safety	EN 60950

Power Supply

Voltage	90-264VAC
Frequency	47-63Hz
Power	50 Watts max.
Option 7;	Redundant PSU; provides a 1+1 redundant PSU configuration with separate prime power inputs

Control System Interface

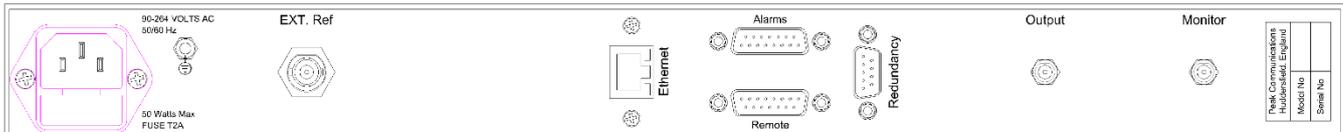
Remote control	RS232/ 485 port
Option 9;	Ethernet; embedded web server & SNMP network management support
Discrete 'alarms interface'	Summary failure alarm (relay form C) Out of lock alarm (relay form C)
Alarms (other)	LO lock failure PSU failure External alarm inputs

Options

- 1b) N-Type(f), 50Ω L-Band interface connection
- 2a) -20dBc L-band monitor on rear panel (SMA)
- 2b) -20dBc L-band monitor on front panel (SMA)
- 7) Redundant power supply
- 8) High stability internal reference option
- 9) Ethernet interface with embedded web server & SNMP

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.

Rear panel view (sample)



Peak Communications reserves the right to alter the specifications of this equipment without prior notice. IRPH2150-170718.

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