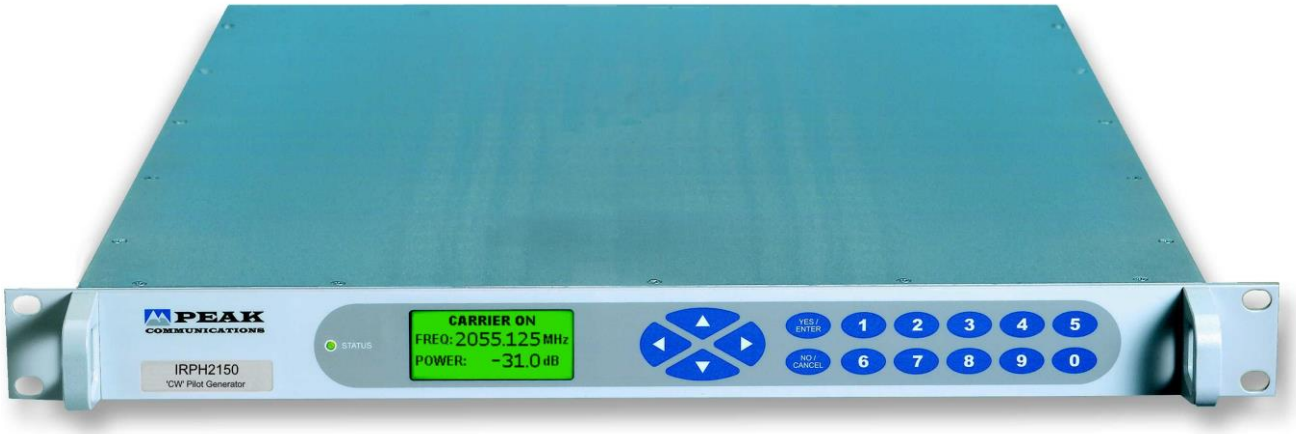
IRPH2150

‘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.

For redundancy the **IRPH2150** units are fully compatible with the Peak **G1000L** (1+1) system.

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
Level & control range	-50dBm to -80dBm, stepped 0.5dB
Note: Other level ranges available.	
Temperature stability	0.01dB/ºC
Output return loss	15dB
Connector	SMA (f), 50Ω
Option 1b;	N-Type (f), 50Ω

Internal Reference

Frequency	10MHz
Adjustment	±0.45ppm, stepped 0.01ppm
Stability;	
Allan deviation	<5 x 10^{-12} over 1s
Ageing	<±3 x 10^{-10}/day, <±3 x 10^{-9}/month, <±3 x 10^{-8}/year
Temp stability	<±2 x 10^{-9} over operating range
High stability (Option 8)	
Allan deviation	<2 x 10^{-12} over 1s
Ageing	<±2 x 10^{-10}/day, <±2 x 10^{-9}/month, <±2 x 10^{-8}/year
Temp stability	<±1.5 x 10^{-9} over operating range

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
Note: Other connector styles available, please consult the factory	
Level	-20dBc ±3dB

Mechanical

Width	19” standard rack mountable
Height	1U (1.75”)
Depth	534mm (21”), plus connectors
Construction	Stainless steel chassis
Weight	Approx. 9.5kgs (21lbs)

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 input

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)