

IRG Series

Rack Mounted, Reference Generation Units.



High Reference Generator Products;

- IRG04** 4-way output
- IRG08** 8-way output
- IRG12** 12-way output
- IRG16** 16-way output





For equivalent remote mount units, please contact the factory.

The 19 inch, 1U rack mounted **IRG series** of Reference Generator units from Peak Communications are designed to provide highly stable reference generation, primarily for satellite Earth station applications.

The **IRG series** units are mains powered and are constructed of high grade components to give the ultimate in stability.

These units can be provided to give reference signals of 5, 10, 50 or 100MHz and are supplied with an external reference input to synchronise to the station clock, in which case the internal reference generation circuitry provides a back-up which automatically detects the absence (in the event of a station clock failure or disconnection of the external reference) of the station clock and switches to the internal reference system.

Peak Features

-  High stability
-  Compact with up to 16-way outputs in a single 1RU chassis
-  Optional BUC/ BDC/ LNB powering
-  Customising available



IRG series – Typical Specification

Performance (IRGxx)

Ways (xx)	04, 08, 12 & 16-way available
Frequency	10MHz
	Option 3a; 5MHz
	Option 3b; 50MHz
	Option 3c; 100MHz
Stability	$<5 \times 10^{-10}$ over 1s, $<5 \times 10^{-9}$ per day
Ageing	$<5 \times 10^{-7}$ per year
Temp stability	$<5 \times 10^{-8}$ over 0 to 50°C
Phase noise	-110dBc/Hz at 10Hz -130dBc/Hz at 100Hz -145dBc/Hz at 1kHz -150dBc/Hz at ≥ 10 kHz
Output level	0dBm nominal
	Note: for higher GCP options please contact the factory
Output Connections	BNC (f), 50Ω

High stability (Option 4)

Stability	$<2 \times 10^{-12}$ over 1s, $<2 \times 10^{-10}$ per day
Ageing	$<2 \times 10^{-8}$ per year
Temp stability	$<2 \times 10^{-9}$ over 0 to 50°C
Phase noise	-130dBc/Hz at 10Hz -140dBc/Hz at 100Hz -155dBc/Hz at 1kHz -160dBc/Hz at ≥ 10 kHz

Reference 'Monitor' (Option 2a, 2b)

Level	-20dBm ± 3 dB
Connector	BNC (f), 50Ω
	Option 2a; Front panel monitor port
	Option 2b; Rear panel monitor port

External Reference Input

Frequency	10MHz (5MHz factory settable)
Level	0dBm ± 3 dB
Connector	SMA (f), 50Ω

BUC/ BDC/ LNB DC drive (Option 5)

Provides switchable power to BUC/ BDC/ LNB via D-Type connection	
Voltage	+17 to +24VDC (factory settable)
Current	500mA typical
Control	Rear panel manual switching
Connection	9-way, D-Type

Note: for other power connection, power or level configurations, please consult the factory.

Mechanical

Width	19", standard rack mount
Height	1U (1.75")
Depth	250mm, plus connectors
Construction	Aluminium chassis
Weight	Approx. 2kgs (4.5lbs)

Environmental

Operating temp	-10°C to +50°C
EMC	EN55022 part B & EN50082-1
Safety	EN60950

Power supply

Voltage	90-264VAC
Frequency	47-63Hz
Power	30 Watts max.
Redundancy (Option 7)	provides a redundant power supply configuration with separate prime power inputs

Control System Interface

Discrete 'alarms interface'	PSU fail External reference failure
Connection	D-Type, 15-way

Options

- 2a) Reference front panel monitor port
- 2b) Reference rear panel monitor port
- 3a) 5MHz reference system
- 3b) 50MHz reference system
- 3c) 100MHz reference system
- 4) High Stability internal reference
- 5) BUC/ BDC/ LNB DC drive, switchable, via D-Type connection
- 7) Redundant power supplies

Note: the addition of options can modify the typical specification, for details please consult the factory

Rear Panel View (16-way output version shown)

