

F1200





Combined Fixed Frequency Up and Down Converter



The **F1200** is a fixed frequency, fixed gain, combined L-Band Up and Downconverter. The **F1200** provides a low-cost solution for systems requiring conversion between 70MHz \pm 20MHz (or 140MHz \pm 40MHz) and L-Band. The unit can be used to interface L-Band modems with 70/140MHz transceivers or 70/140MHz modems to L-band transceivers.

The standard F1200 L-band frequency is fixed at 1200MHz, for different frequencies please contact the factory.

Peak Features

-  Compliant with IESS 306 and IESS 309 requirements.
-  Used for 8PSK and 16QAM modulations in excess of 50Mbits/sec.
-  Fully compatible with **RCU102** & **RCU202** 1+1 & 2+1 redundancy switch units.
-  Customising available.



F1200 – Typical Specification

UpConverter

IF Input

Frequency 70 ±18MHz (Option 1a; 140 ±36MHz)
 Connection 50Ω, BNC (f) (Option 3a; 75Ω)

L-Band Output

Frequency 1200 ±18MHz fixed (Option 1a; ±36MHz).
 For other frequencies please contact the factory.
 Connection 50Ω, N-Type (f)

Transfer Characteristics

Conversion gain Zero
 1 dB GCP 0dBm
 Gain flatness ±0.5dB across 40MHz

RF Performance

Phase noise -80dBc/Hz at 100Hz
 -90dBc/Hz at 1kHz
 -95dBc/Hz at 10kHz
 -100dBc/Hz at 100kHz
 -120dBc/Hz at 1MHz
 Spurious <-60dBm (in band, non-carrier related)
 <-60dBc (in band, carrier related)
 Group delay Linear 0.025nS
 Ripple 1nS p-p
 Parabolic 0.015nS/MHz²

DownConverter

L-Band Input

Frequency 1200 ±18MHz fixed (Option 1a; ±36MHz).
 For other frequencies please contact the factory.
 Connection 50Ω, N-type (f)

IF Output

Frequency 70 ±18MHz (Option 1b; 140 ±36MHz)
 Connection 50Ω, BNC (f) (Option 3b; 75Ω)

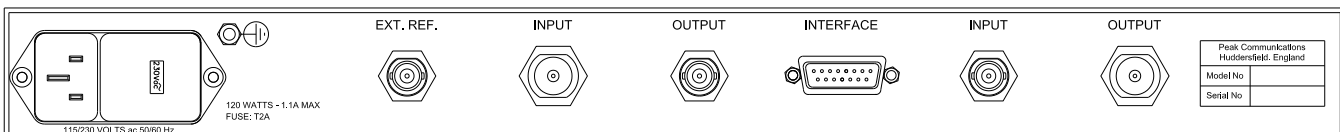
Transfer Characteristics

Conversion gain Zero
 1 dB GPC 0dBm
 Gain flatness ±0.5dB across 40MHz

RF Performance

Phase noise -80dBc/Hz at 100Hz
 -90dBc/Hz at 1kHz
 -95dBc/Hz at 10kHz
 -100dBc/Hz at 100kHz
 -120dBc/Hz at 1MHz
 Spurious <-60dBm (in band, non-carrier related)
 <-60dBc (in band, carrier related)
 Group delay Linear 0.025nS
 Ripple 1nS p-p
 Parabolic 0.015nS/MHz²

Rear Panel View



General

External Reference Input

Frequency Factory selectable 5 or 10MHz
 Connector 50Ω, BNC
 Level 0dBm ±3dB

Internal Reference

Frequency 10MHz

Stability

Stability <5 x 10⁻¹⁰ over 1s, <5 x 10⁻⁹ per day
 Ageing <5 x 10⁻⁷ per year
 Temp. stability <5 x 10⁻⁸ over 0 to 50°C

Mechanical

Width 19", standard rack mount
 Height 1U (1.75")
 Depth 400mm (15.7"), plus connectors
 Construction Aluminium chassis
 Weight Approx. 4.5kgs (10lbs)

Environmental

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

Power supply

Voltage 100-120/200-240VAC, auto-switching
 Frequency 50/60Hz
 Power 100 Watts max.

Control System

Alarms Summary failure relay (form C)

Options

- 1a) 140MHz IF Input.
- 1b) 140MHz IF Output.
- 2) Front panel with custom logo and colours
- 3a) 75Ω IF Input.
- 3b) 75Ω IF Output.

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



Peak Communications reserves the right to alter the specifications of this equipment without prior notice. F1200-230511.

Peak Communications Ltd, 22 West Park Street, Brighouse, HD6 1DU, England

Tel; +44 (0)1484 714200 Sales; +44 (0)1484 714229 Fax; +44 (0)1484 723666 Email; sales@peakcom.co.uk Web; www.peakcom.co.uk