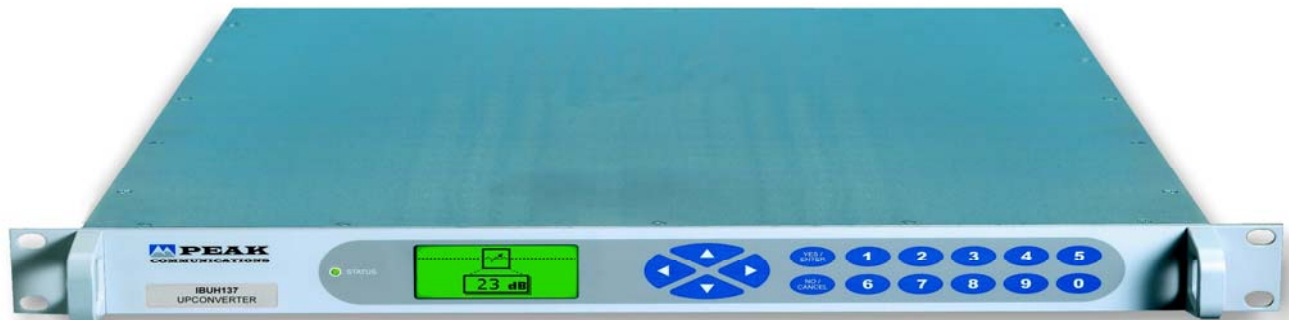


IBUH(A) Series

Single range, Rack Mounted Block UpConverters with User Interface



High Grade UpConverter Products;

IBUH600	C-Band (5.85-6.425GHz)
IBUH665	Extended C-Band (5.85-6.65GHz)
IBUH6725	Super Extended C-Band (5.85-6.725GHz)
IBUH7025	INSAT C-Band (6.70-7.025GHz)
IBUH710	INSAT C-Band (6.70-7.10GHz)
IBUH790	X-Band (7.90-8.40GHz)
IBUH1275	Ku-Band (12.75-13.50GHz)
IBUH130	Ku-Band (13.00-13.75GHz)
IBUH137	Ku-Band (13.75-14.50GHz)
IBUH140	Ku-Band (14.00-14.50GHz)
IBUH180	DBS-Band (17.30-18.10GHz)
IBUH184	DBS-Band (17.30-18.40GHz)

For other 'non-standard' frequency requirements, please contact the factory.

For multiple-channel units in a single chassis (Dual, Triple, Quad), please consult the factory.

For multiple-range Block UpConverters please see IBUH(B) series datasheet.

For equivalent lower cost units without the full user interface please see IBU(A) series datasheet.

For equivalent remote mount units, please see PBU(A) series datasheet.







The 19 inch 1U rack mounted **IBUH(A) series** of Block Frequency UpConverter units from Peak Communications are designed to take the output of an UpConverter or modem at L-Band and produce an output at SHF.

The **IBUH(A) series** of units are mains powered and are constructed of high grade components to give the ultimate performance. They utilise Externally Phase Locked Dielectric Resonator Oscillators (XPDR Os) and are far superior in stability and phase noise to Voltage Controlled Oscillators (VCOs), as commonly used in other BUC designs.

For redundancy the **IBUH(A)** uses a simple CANBUS® interface and has an integral redundancy controller for 1+1 & 2+1 operation (for use with external **T1000HH**, **T2000HH** switch units), for N+1 systems a separate external control and switch unit is provided (**RCU1002 series**).

The unit incorporates a graphics display module, membrane keyboard and features a clear and intuitive control and configuration menu fully utilising the unique graphics display.

Peak Features

-  High stability, low ripple and excellent phase noise, using PDRO technology
-  10MHz External Reference option fitted as standard with automatic internal reference back-up
-  Electronically Variable Attenuator options for both local & remote control of Gain
-  Integral 1+1 & 2+1 CANBUS® redundancy control & N+1 switch systems available
-  Integral Test Loop Translator option available for TX signal path monitoring
-  L-Band monitor, RF Mute and Fibre Optic L-Band interface options available



IBUH(A) series - Typical Specification

SHF Output

Frequency

IBUH600	5.85-6.425GHz
IBUH665	5.85-6.65GHz
IBUH6725	5.85-6.725GHz
IBUH7025	6.70-7.025GHz
IBUH710	6.70-7.10GHz
IBUH790	7.90-8.40GHz
IBUH1275	12.75-13.50GHz
IBUH130	13.00-13.75GHz
IBUH137	13.75-14.50GHz
IBUH140	14.00-14.50GHz
IBUH180	17.30-18.10GHz
IBUH184	17.30-18.40GHz

Connector	50Ω, SMA (Option 1a; N-Type)
Return loss	>15dB
1dB GCP	+8dBm (Option 5; +18dBm)

L-Band Input

Frequency	950 up to 2050MHz, depending on model
Connector	50Ω, SMA (Option 1b; N-Type) (Option 3; 75Ω, BNC)
Return loss	>15dB

Transfer Characteristics

Conversion gain	17dB ±1dB at band centre (Option 4; 27dB ±1dB)
Gain stability	±0.5dB from 0 to 40°C
Gain flatness	±1dB full band
	±0.5dB across any 40MHz in band.
LO Frequency	dependant on model

Electronically Variable L-Band Attenuation (Option 10)

Attenuation range	30dB nominal
Step size	1dB (Option 10a), 0.1dB (Option 10b)
Control	Local & remote

RF Performance

Note; for IBUH180, IBUH184 phase noise & spurious performance please consult the factory.

LO Phase noise (typical with good phase noise ext. 10MHz ref)	-55dBc/Hz at 10Hz -75dBc/Hz at 100Hz -92dBc/Hz at 1kHz -100dBc/Hz at 10kHz -107dBc/Hz at 100kHz -125dBc/Hz at 1MHz
Harmonics	Better than -50dBc
Spurious	<-80dBm (in band non-carrier related) <-75dBc (in band carrier related)
3rd Order Intercept	>+18dBm (standard unit)
LO leakage	-80dBm (always out of band)

L-Band Monitor (Option 2)

Connector	Option 2; 50Ω, SMA (f) on rear panel Option 2a; 50Ω, BNC (f) on rear panel
Level	-20dBc ±3dB

Integral Test Loop Translator (Option 12)

TX sample Input	50Ω, SMA (f) on rear panel, 0dBm max.
L-Band Output	50Ω, SMA (f) on rear panel
Translation Loss	15dB

RF Mute (Option 13)

Isolation	60dB min.
-----------	-----------

Internal Reference Stability

Stability	<1 x 10 ⁻¹⁰ per second
Temp. Stability	<±5 x 10 ⁻⁸ (0 to +50°C)
Ageing	<±5 x 10 ⁻⁹ per day

High stability (Option 8)

Stability	<2 x 10 ⁻¹² over 1s, <2 x 10 ⁻¹⁰ per day
Ageing	<2 x 10 ⁻⁸ per year
Temp. stability	<2 x 10 ⁻⁹ over 0 to 50°C

External Reference Input

Frequency	10MHz (5MHz factory settable)
Connector	50Ω, BNC
Level	0dBm ±3dB
Required phase noise	Better than 50dBc/Hz of output Phase Noise
Locking delay	<2 mins to stabilise from cold

Mechanical

Width	19" standard rack mount
Height	1U (1.75")
Depth	~400mm (15.7"), plus connectors
Construction	Aluminium chassis
Weight	5.5kgs (12lbs)

Environmental

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

Power Supply

Voltage	115/230VAC±10%, selectable, Linear power supply
Frequency	50/60Hz
Power	50 Watts max.

Control System Interface

Remote Control	RS232/ 485 port Ethernet option; Embedded web server & SNMP network management support (option 9)
Redundancy	CANBUS® interface for N+1 systems In-built 1+1 & 2+1 controller
Discrete 'Alarms Interface'	LO lock fail alarm PSU fail alarm Amplifier Fail alarm Mute input control (Option 13)

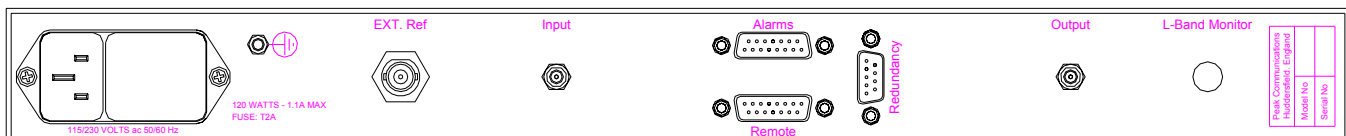
Options

- 1a) N-Type (f) SHF Interface connection
- 1b) N-Type (f) L-Band Interface connection
- 2) -20dBc L-band monitor on rear panel (SMA)
- 2a) -20dBc L-band monitor on rear panel (BNC)
- 3) 75Ω interface at L-band (6dB gain loss)
- 4) Extra 10db increase in gain, to +27dB
- 5) 1dB GCP increase to +18dBm (includes extra 10dB Gain option)
- 6) Fibre optic L-band interface connection
- 8) High Stability Internal reference option
- 9) Ethernet interface with embedded web server & SNMP
- 10a) Attenuator with local & remote control, 30dB stepped 1dB
- 10b) Attenuator with local & remote control, 30dB stepped 0.1dB
- 12) Integral TLT for TX signal monitoring
- 13) RF Mute option

Note; The addition of options can modify the typical specification, for details please consult the factory.



Rear panel View



Peak Communications reserves the right to alter the specifications of this equipment without prior notice. IBUH(A)series-281209.

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