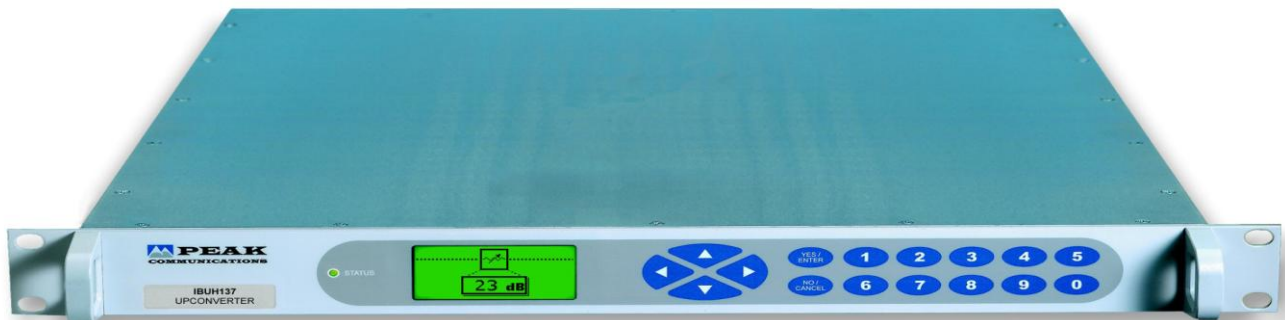


IBUH(A) Series

Single range, Single & Multi-Channel, Rack Mounted Block UpConverters with full user interface and remote control



High Grade Single & Multi-Channel UpConverter Products;

IBUH600, IBUH602 (Dual), IBUH604 (Quad)	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, IBUH142 (Dual), IBUH144 (Quad)	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 or multi-channel units, please contact 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 (XPDRs) 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 series** switch units), also compatible with the **RCUH100/ RCUH200 series** 1+1/ 2+1 'stand alone' redundancy controllers. For N+1 systems the **RCU1002 series** is offered.

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. With optional input power monitoring 'built-in test' enhancement features, compression warning alarms and attenuation control, this product series offers the user the ultimate in controllability.

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
-  Optional input signal power detector with user settable input & 'compression alarm' threshold levels
-  Available in Dual, Triple & Quad-Channel versions

IBUH(A) series - Typical Specification

SHF Output

Frequency	Model dependant (see front page)
Connector	SMA (f), 50Ω
Option 1a;	N-Type (f), 50Ω
<i>Note; for multi-channel version, multiple connectors are provided</i>	
Return loss	>15dB
1dB GCP	+8dBm
Option 5;	+18dBm

L-Band Input

Frequency	950 up to 2050MHz, model dependant
Connector	SMA (f), 50Ω
Option 1b;	N-Type (f), 50Ω
Option 3;	BNC (f), 75Ω
<i>Note; for multi-channel version, multiple connectors are provided</i>	
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 (±1.5dB for IBUH184)
	±0.5dB across any 40MHz in-band
LO Frequency	Model dependant

Electronically Variable L-Band Attenuation (Option 10)

Attenuation range	30dB nominal
Step size	
Option 10a;	0.5dB
Option 10b;	0.1dB
Control	Local & remote

RF Performance

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

LO Phase noise	-55dBc/Hz at 10Hz
(typical with good phase noise	-75dBc/Hz at 100Hz
ext. 10MHz ref)	-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)
Channel Isolation	-65dBc (for multi-channel versions only)

SHF & L-Band Monitor (Option 2)

Connector	
Option 2a;	L-Band monitor, SMA (f), 50Ω on rear panel
Option 2b;	SHF monitor, SMA (f), 50Ω on rear panel
<i>Note; other connector styles available, please consult the factory</i>	
Level	-20dBc ±3dB

Integral Test Loop Translator (Option 12)

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

Input Power Detector & Alarms (Option 14)

Detection range	0 to -50dBm
Display	Actual input and calculated output power, graphical via front panel and available via remote control
Low input power Alarm	User settable via front panel interface
Compression Alarm	Automatic 'preset' warning alarm for input/output compression point. User settable via front panel interface

RF Mute (Option 13)

Isolation	60dB min
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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 (f)
Level	0dBm ±3dB
Required phase noise	better than 50dBc/Hz of output Phase Noise
Locking delay	<2min to stabilise from cold

Mechanical

Width	19" standard rack mountable
Height	1U (1.75")
Depth	~400mm (15.7"), plus connectors
<i>Note; for multi-channel versions, a longer ~534mm (21") chassis may be provided, depending upon options selected.</i>	
Construction	Aluminium chassis
Weight	4-6kgs (9-13lbs) approx., unit and option dependent

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.

Control System Interface

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

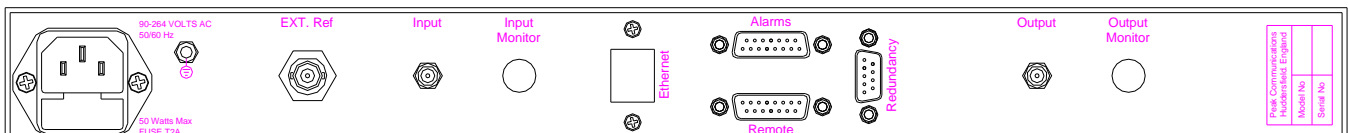
Options

- 1a) N-Type (f) SHF Interface connection
- 1b) N-Type (f) L-Band Interface connection
- 2a) -20dBc L-band monitor on rear panel
- 2b) -20dBc SHF monitor on rear panel
- 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 0.5dB
- 10b) Attenuator with local & remote control, 30dB stepped 0.1dB
- 12) Integral TLT for TX signal monitoring
- 13) RF Mute option
- 14) Input signal power detector and alarms.

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-260112.

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