TERRASAT Communications, Inc.

IBUC R

Ku-Band Intelligent Block Upconverter

IBUC Advantages

Integrated BUC/SSPA for higher performance and reliability.

Upgraded with a weatherized RJ45 M&C interface connector for simplified cable installation.

All models available with integral AC power supply or separate DC power supply.

Internal 10MHz reference option automatically switches to internal reference when external reference is not detected.

Low phase noise better than IESS308/309 requirements by a minimum of 5 dB.

NMS-friendly interfaces enable remote management of your earth station RF.

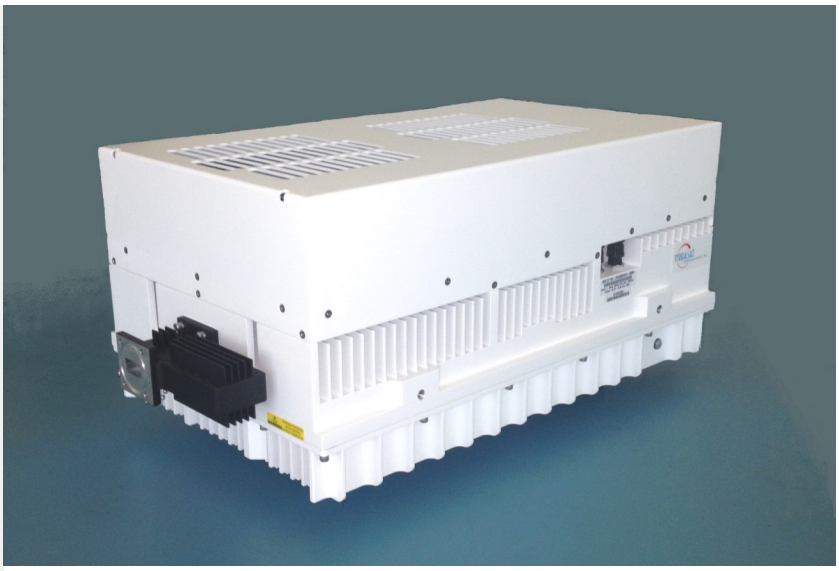
Embedded Web pages provide management for small networks using any Web browser.

AGC or ALC circuits hold gain or output level constant.

30 dB User-adjustable gain in 0.1 dB steps preserves modem dynamic range.

Advanced user interfaces:

- TCP/IP HTTP with embedded Web pages
- SNMP
- TELNET through TCP/IP
- FSK through TX IFL cable
- RS232/485 serial port
- Hand-held terminal



The **IBUC R** has all of the advanced IBUC features and the upgraded RJ45 M&C connector.

IBUC R offers significant benefits:

- Low terminal cost
- Simple design and installation
- Superior RF performance
- Simplified 1+1 configuration

New interfaces connect you to extensive M&C facilities for network management or local access. This powerful new M&C enables:

- ***Trouble-free commissioning*** with easy, point-and-click installation/configuration
- Continuous ***verification*** of performance with time-stamped alarm history
- Simplified ***monitoring*** of terminal status

The **IBUC R** comes with a complete set of diagnostic tools including:

- 10 MHz input detector
- Input voltage and current monitoring
- Transmit L-band input level detector
- Transmit RF output level detector
- User configurable thresholds and alarms

Unique to the **IBUC** are internal AGC and ALC functions that satisfy demanding applications with stringent specifications.

For additional information contact Terrasat Sales at +1 408-782-5911 or by Email: Sales@Terrasatinc.com.
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IBUC R

Ku-Band Intelligent Block Upconverter

Frequency range	RF	IF
Band 1 Std Ku	14.00 to 14.50 GHz	950 to 1450 MHz
Band 2 Full Ku	13.75 to 14.50 GHz	950 to 1700 MHz
Band 3 Low Ku	12.75 to 13.25 GHz	950 to 1450 MHz

Input

VSWR / Impedance	1.5:1 max / 50 Ohm
Input Connector	Type N female (50 Ohm)
Input Connector options	Type F (75 Ohm), TNC (50 Ohm)
Input power detector	-55 to –20 dBm

Gain

Small Signal Gain (L-band to RF) with attenuator set to 0 dB

60 W	79 dB min
80 W	80 dB min
100 W	81 dB min
125W (Band 3)	82 dB min

Attenuator range	30 dB variable in 0.1 dB steps
Gain flatness	
Full band	4 dB p-p max
36 MHz	1.5 dB p-p max
1 MHz	0.25 dB p-p
Gain variation over temperature	
Open loop	3 dB p-p max
With AGC	1 dB p-p max

RF Output

Interface	WR75 cover with groove	
VSWR	1.5:1 max	
Rated output power (P1dB)	Band 1 & 3	Band 2
60 W	+47.8 dBm min	+47.5 dBm min
80 W	+49.0 dBm min	+48.5 dBm min
100 W	+50.0 dBm min	+49.5 dBm min
125 W (Band 3)	+51.0 dBm min	

IMD3 (2 carriers, 3 dB TOBO)		-24 dBc max
Level stability with ALC		±0.5 dB
Output power detector range		Rated power to –20 dB
Power reading accuracy		±1.0 dB max.
Spurious	In Band	-65 dBc
	Out of Band	Complies with EN 301 428/430 and MIL-STD 188-164B
Harmonics		-50 dBc max.
Output Noise Power Density		
	TX	< -74 dBm/Hz
	RX	< -145 dBm/Hz

SSB Phase Noise	External Reference	**IBUC R**
10 Hz	-115 dBc/Hz	-50 dBc/Hz
100 Hz	-140 dBc/Hz	-75 dBc/Hz
1 kHz	-150 dBc/Hz	-85 dBc/Hz
10 kHz	-155 dBc/Hz	-90 dBc/Hz
100 kHz	n/a	-95 dBc/Hz
1 MHz	n/a	-110 dBc/Hz

External Reference (multiplexed on TX IFL)

Frequency	10 MHz
Level	-12 to +5 dBm

Internal Reference - optional

Local Oscillator Frequency

Sense	Non-Inverting
Band 1	13050 MHz
Band 2	12800 MHz
Band 3	11800 MHz

IBUC Power Supply	DC	AC
Voltage	42VDC min, 60VDC max	100 to 240 VAC
Power Consumption		
60 W (Bands 1 & 2)	600 W	700 VA
60 W (Band 3)	750 W	850 VA
80 W	780 W	900 VA
100 W (band 3)	830 W	950 VA
100 W (bands 1&2)		1150 VA
125 W (band 3)		1200 VA

Monitor and Control

Ethernet (HTTP, Telnet, SNMP), via RJ45 connector,

RS232/485, Hand-held Terminal via MS-type connector,

FSK multiplexed on TX IFL.

Environmental

Operating temperature	-40°C to +55°C
Relative humidity	100% condensing
Altitude	10,000 ft., (3,000 m) ASL

Mechanical	DC powered	AC powered
60 W (Bands 1 & 2)	12.2 x 7.2 x 6.5 in. 18.5 lbs	12.2 x 7.2 x 6.8 in. 19.5 lbs
80 W (all Bands)	16.2 x 10 x 7.2 in.	16.2 x 10 x 7.4in.
60 W & 100 W (Band 3)	32 lbs	33 lbs
100 W Bands 1 & 2 & 125 W Band3		23 x 10 x 7.4 in. 37 lbs

(dimensions do not include isolators: 60-80W and 100W Band 3)

Specifications are subject to change without notice.

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