



## IBUC 2e

### Ku-Band Intelligent Block Upconverter Low Energy Consumption Model

#### IBUC Advantages

Integrated BUC/SSPA for higher performance and reliability.

Low energy consumption for use with Modems equipped with limited capacity BUC power supplies. DC power supplied via IFL coax.

High linearity.

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

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 via RJ-45 connector
- SNMP
- TELNET through TCP/IP
- FSK through TX IFL cable
- RS232/485 serial port
- Hand-held terminal



**IBUC 2e** offers significant benefits:

- High performance in a compact, cost effective package
- Simple design and installation
- Simplified 1+1 configuration

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

**IBUC 2e** 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](mailto:Sales@Terrasatinc.com).  
315 Digital Drive, Morgan Hill, CA 95037 [www.terrasatinc.com](http://www.terrasatinc.com)

## IBUC 2e

### Ku-Band Intelligent Block Upconverter Low Energy Consumption Model

Frequency range	RF	IF	SSB Phase Noise	External refer-	IBUC
Band 1 Std Ku	14.00 to 14.50 GHz	950 to 1450 MHz	10 Hz	-115 dBc/Hz	-50 dBc/Hz
Band 2 Full Ku	13.75 to 14.50 GHz	950 to 1700 MHz	100 Hz	-140 dBc/Hz	-75 dBc/Hz
Band 3 Low Ku	12.75 to 13.25 GHz	950 to 1450 MHz	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
<b>Input</b>			<b>External Reference</b> (multiplexed on TX IFL)		
VSWR / Impedance	1.5:1 max / 50 Ohm		Frequency	10 MHz	
Input Connector	Type N female (50 Ohm)		Level	-12 to +5 dBm	
Input Connector options	Type F (75 Ohm), TNC (50 Ohm)		Internal Reference - optional		
Input power detector	-55 to -20 dBm		<b>Local Oscillator Frequency</b>		
<b>Gain</b>			Sense	Non-Inverting	
Small Signal Gain (L-band to RF) with attenuator set to 0 dB			Band 1	13050 MHz	
4 W	67 dB min		Band 2	12800 MHz	
8 W	70 dB min		Band 3	11800 MHz	
12 W	72 dB min		<b>IBUC Power Supply</b>		
16 W	73 dB min		Voltage	4W, 8W	18 to 75 VDC
Attenuator range				12W, 16W	37 to 60 VDC
30 dB variable in 0.1 dB steps			DC via coax only		
Gain flatness			Power Consumption		
	<u>Band 1 &amp; 3</u>	<u>Band 2</u>	4 W	55 W	
Full band	3 dB p-p max	4 dB p-p max	8 W	65 W	
36 MHz	1 dB p-p max	1.5 dB p-p max	12 W	110 W	
1 MHz	0.25 dB p-p	0.25 dB p-p	16 W	120 W	
Gain variation over temperature			<b>Monitor and Control</b>		
Open loop	3 dB p-p max		<b>Ethernet</b> (HTTP, Telnet, SNMP) via RJ-45 connector,		
With AGC	1 dB p-p max		<b>RS232/485, Hand-held Terminal</b> , via MS-type connector,		
<b>RF Output</b>			<b>FSK</b> multiplexed on TX IFL.		
Interface	WR75 cover with groove		<b>Environmental</b>		
VSWR	1.5:1 max		Operating temperature		
Rated output power	P <sub>1dB</sub>		-40°C to +60°C		
4 W	+36 dBm min		Relative humidity		
8 W	+39 dBm min		100% condensing		
12 W	+40.8 dBm min		Altitude		
16 W	+42 dBm min		10,000 ft., (3,000 m) ASL		
IMD3 (2 carriers, 3 dB TOBO)			<b>Mechanical</b>		
-25 dBc max			4W, 8W		
Level stability with ALC			10.5 x 6 x 3.8 in.		
±0.5 dB			9.3 lbs		
Output power detector range			12W, 16W		
Rated power to -20 dB			10.5 x 6 x 5.2 in.		
Power reading accuracy			10.8 lbs		
±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 < -83 dBm/Hz					
RX < -145 dBm/Hz					

Specifications are subject to change without notice.

IBUC 2e Ku-Band Data Sheet 4/26/16



315 Digital Drive, Morgan Hill, CA 95037  
Tel. +1 408-782-5911 Fax +1 408-782-5912  
www.terrasatinc.com