



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.

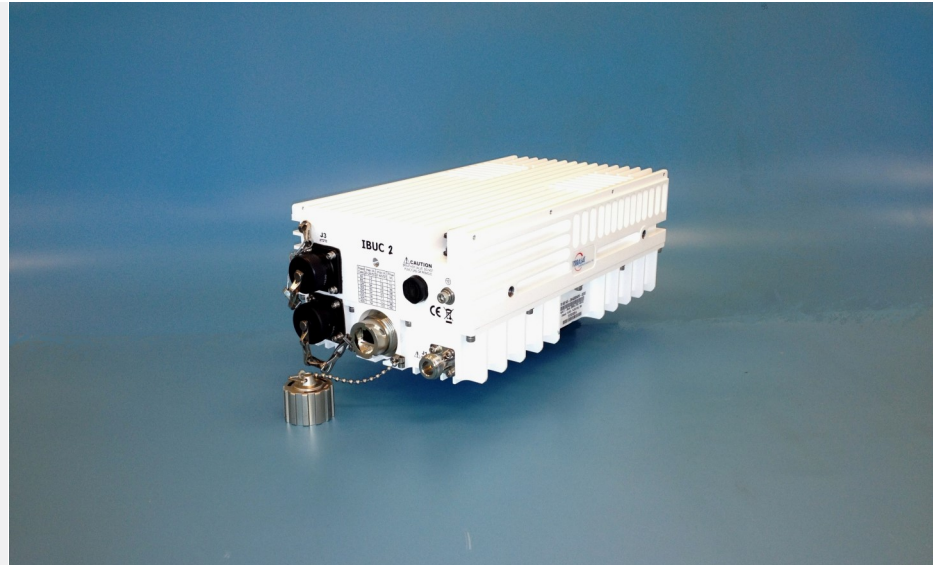
Embedded Web pages provide management for small networks using any Web browser.

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.
315 Digital Drive, Morgan Hill, CA 95037 www.terrasatinc.com

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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
Input			External Reference (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		Local Oscillator Frequency		
Gain			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				
16 W	73 dB min				
Attenuator range	30 dB variable in 0.1 dB steps				
Gain flatness	<u>Band 1 & 3</u>	<u>Band 2</u>			
Full band	3 dB p-p max	4 dB p-p max			
36 MHz	1 dB p-p max	1.5 dB p-p max			
1 MHz	0.25 dB p-p	0.25 dB p-p			
Gain variation over temperature			IBUC Power Supply		
Open loop	3 dB p-p max		Voltage	4W, 8W	18 to 75 VDC
With AGC	1 dB p-p max			12W, 16W	37 to 60 VDC
			DC via coax only		
RF Output			Power Consumption		
Interface	WR75 cover with groove		4 W	55 W	
VSWR	1.5:1 max		8 W	65 W	
Rated output power	P _{1dB}		12 W	110 W	
4 W	+36 dBm min		16 W	120 W	
8 W	+39 dBm min				
12 W	+40.8 dBm min				
16 W	+42 dBm min				
IMD3 (2 carriers, 3 dB TOBO)			Monitor and Control		
-25 dBc max			Ethernet (HTTP, Telnet, SNMP) via RJ-45 connector,		
Level stability with ALC			RS232/485, Hand-held Terminal , via MS-type connector,		
±0.5 dB			FSK multiplexed on TX IFL.		
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			Environmental		
-50 dBc max			Operating temperature		
			-40°C to +60°C		
Output Noise Power Density			Relative humidity		
			100% condensing		
TX < -83 dBm/Hz			Altitude		
RX < -145 dBm/Hz			10,000 ft., (3,000 m) ASL		
			Mechanical		
			4W, 8W		
			10.5 x 6 x 3.8 in.		
			9.3 lbs		
			12W, 16W		
			10.5 x 6 x 5.2 in.		
			10.8 lbs		

Specifications are subject to change without notice.

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



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