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.

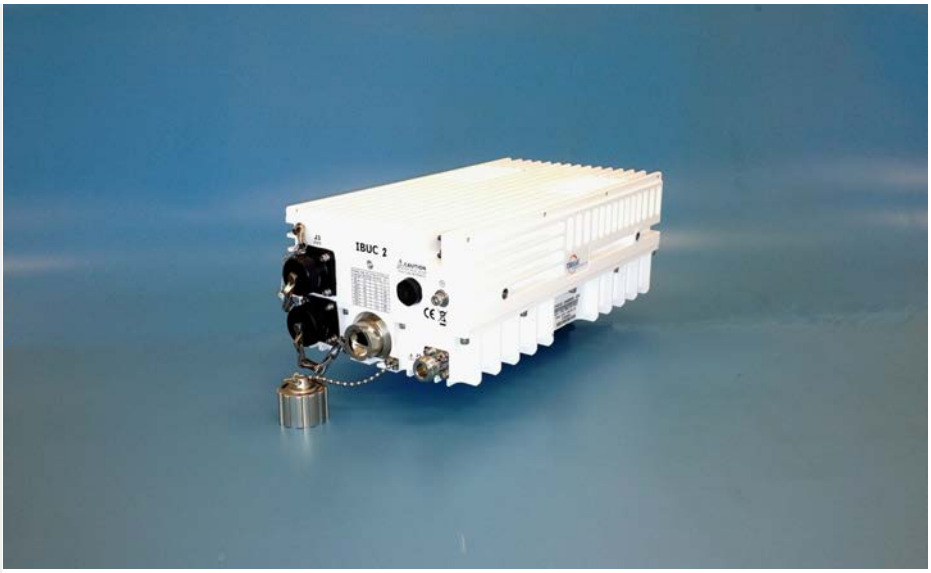
Embedded Web pages provide management for small networks using any Web browser.

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.
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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

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

4 W	67 dB min
8 W	70 dB min
12 W	72 dB min
16 W	73 dB min

Attenuator range	30 dB variable in 0.1 dB steps	
Gain flatness	Band 1	Band 2
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

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	P_{1dB}
4 W	+36 dBm min
8 W	+39 dBm min
12 W	+40.8 dBm min
16 W	+42 dBm min

IMD3 (2 carriers, 3 dB TOBO)		-25 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	< -83 dBm/Hz
RX	< -145 dBm/Hz

SSB Phase Noise	External reference	**IBUC 2e**
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

IBUC Power Supply

Voltage	4W, 8W	18 to 75 VDC
	12W, 16W	37 to 60 VDC
		DC via coax only

Power Consumption

4 W	55 W
8 W	65 W
12 W	110 W
16 W	120 W

Monitor and Control

Ethernet (HTTP, Telnet, SNMP) via RJ-45 connector,

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

FSK multiplexed on TX IFL.

Environmental

Operating temperature	-40°C to +60°C
Relative humidity	100% condensing
Altitude	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

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