



## The IBUC Advantage

All IBUCs are equipped with cutting-edge intelligent technology:

- Highest quality & exacting performance guaranteed through individual unit testing over temperature
- Superior linearity for maximum useable output power
- Amplifier overdrive protection
- User-selectable AGC/ALC for optimal performance & compatibility with modem adaptive coding
- New high capacity microprocessor & extended M&C functions

### ULTIMATE MANAGEMENT & CONTROL

- » Local Web Interface & NMS-Friendly SNMP «
- » 70+ User Configurable Thresholds & Alarms «
- » Upgraded Event Log with 1,000 Sensor Readings «
- » Performance Trend Analysis Tools & Statistical logs «
- » Embedded Web Pages for Universal Web Browser Access «

## Ku-Band **IBUC 2e**

Low Energy Consumption Model



4W  
to  
16W

GaAs  
Tech  
Amplifier

3  
Year  
Warranty

## Applications

When the requirement calls for a full-featured Block Upconverter that is powered by the modem, the **IBUC 2e** is an excellent fit. The **IBUC 2e** draws less power from the modem ODU power supply than the **IBUC 2** model. Auto-ranging DC input power is supplied via the IFL coaxial cable only. There is no external power connector.

Compatibility with a specific model modem is based on the ODU power supply capacity of that modem. It is also important to take into consideration voltage drop over the IFL cable.

### Options

- High Stability Internal 10 MHz Reference with Auto-Detection
- Three Factory Select Bands
- Mounting Brackets
- Optional Type N or F-Type Input Connectors
- Handheld Terminal

## Ku-Band IBUC 2e

Frequency Range	RF	IF
Band 1 Std Ku	14.0 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 / 50 Ohm
Input Connector	Type N Female (50 Ohm)
Input Connector Options	Type F (75 Ohm), TNC (50 Ohm)
Input Power Detector Range	-55 to -20 dBm

### Gain

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

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

Attenuator Range 30 dB variable in 0.1 dB steps

Gain Flatness	Bands 1 & 3	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 max	0.25 dB p-p max

Gain Variation Over Temperature

Open Loop	3 dB p-p max	4 dB p-p max
With AGC	1 dB p-p max	1 dB p-p max

### RF Output

Interface WR75 Cover with Groove  
VSWR 1.5:1 max

Rated Output Power

	P <sub>1dB</sub>
4W	+36 dBm min
8W	+39 dBm min
12W	+40.8 dBm min
16W	+42 dBm min

P<sub>lin</sub> is the maximum linear power as defined by MIL STD 188-164B

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 max
Spurious	
	In Band -65 dBc
	Out Band Complies with EN 301 428/430 & MIL STD 188-164B.
Harmonics	-50 dBc max
Output Noise Power Density	
	TX <- 84 dBm/Hz
	RX <- 145 dBm/Hz

### SSB Phase Noise

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 & Level 10 MHz -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

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

Power Consumption

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

### Monitor & Control

Ethernet (HTTP, Telnet, SNMPv2c) via RJ45 Connector

RS232/485, Handheld 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. 267 x 152 x 97 mm
	9.3 lbs (4.2 kgs)
12W, 16W	10.5 x 6 x 5.2 in. 267 x 152 x 132 mm
	10.8 lbs (4.9 kgs)

Specifications subject to change without notice.

Updated 11/30/2020