

## 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
- Weatherized RJ45 Ethernet interface for simplified connection

### 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 «

## Applications

The **IBUC R** is an integrated Intelligent BUC/GaAs SSPA designed for higher performance & reliability. Block Upconverters based on GaAs amplifier technology deliver superior performance in terminals transmitting multiple carriers due to their inherent high linearity & minimal backoff requirements.

Multiple sensors & a new, high-capacity microprocessor provide tools to optimize terminal performance. The **IBUC R** is an excellent choice for higher power Satcom terminals in telecom, defense, maritime, broadcast, & other demanding applications.

### Options

- 1+1 Transmit Redundancy with Eco-Mode
- High Stability Internal 10 MHz Reference with Auto-Detection
- Three Factory Select Bands (Low, Std, and Full Ku-Bands)
- AC or DC Input Models
- Mounting Brackets
- Optional Type N, F-Type, or TNC Input Connectors
- Handheld Terminal
- Cyber Hardened Core M&C
- WGS (Wideband Global SATCOM) compatible

## Ku-Band **IBUC R**

Mid-High power multi-carrier IBUC unit | 60W to 200W



New Cyber  
Hardened  
version  
available

Multicarrier  
Application

60W  
to  
200W

GaAs  
Tech  
Amplifier

3  
Year  
Warranty

**Note:** Since not all the optional features can be combined, please, contact our sales team for further info at: [Sales@Terrasatinc.com](mailto:Sales@Terrasatinc.com)

# Ku-Band IBUC 7

60W to 200W

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	Standard Version <sup>1</sup>	WGS Version <sup>2</sup>
Range Options:	-55 to -20 dBm	-35 to 0 dBm

## Gain

Small Signal Gain (L-band to RF) with Attenuator Set to 0 dB	Standard Version <sup>1</sup>	WGS Version <sup>2</sup>
60W	79 dB min	68 dB min
80W	80 dB min	69 dB min
100W	81 dB min	70 dB min
125W (band 3)	82 dB min	71 dB min
200W	83 dB min	72 dB min

<sup>1</sup>Terrasats Standard Version has a higher gain to reduce the need for line amplifiers in long cable runs (IFL).

<sup>2</sup>WGS Compatible Versions have lower gain allowing operations to drive the IF signal up to 0 dBm.

**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 max

## 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	1.3:1 max

## Output Power

	Band 1 & 3	Band 2
60W	+47.8 dBm min	+47.5 dBm min
80W	+49.0 dBm min	+48.5 dBm min
100W	+50.0 dBm min	+49.5 dBm min
125W (Band 3)	+51.0 dBm min	
200W	+53 dBm min	+52.5 dBm min

$P_{lin}$  is the maximum linear power as defined by MIL STD 188-164C

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 Band	Complies with EN 301 428/430 & MIL-STD 188-164B.

**Harmonics** -50 dBc Max

Output Noise Power Density	TX <- 73 dBm/Hz
	RX <- 145 dBm/Hz

SSB Phase Noise	External Reference	IBUC 7
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 feature includes auto-detection of External Reference

## Local Oscillator Frequency

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

## IBUC Power Supply

Voltage	AC	DC	AC
		42 V min, 60 V max	
		100 to 240 VAC	60W to 125W   50Hz /60Hz
		200 to 240 VAC	200W

## Power Consumption

Power Consumption	DC	AC
60W (Bands 1 & 2)	600 W	700 VA
60W (Band 3)	750 W	850 VA
80W	780 W	900 VA
100W (Band 3)	950 W	1050 VA
100W (Bands 1 & 2)		1250 VA
125W (Band 3)		1250 VA
200W		2150 VA

## Monitor & Control

**Ethernet** (HTTP, Telnet, SNMP) via RJ45 Connector

**RS232/485, Handheld Terminal** via MS-Type Connector

**FSK** multiplexed on TX IFL.

## Monitor & Control - For Cyber Hardened Versions

**Ethernet** (HTTPS,SSHv2, SNMPv3 with USM and VACM) via RJ45 Connector

**RS232** via MS-Type Connector

**XSS** (Cross Site Scripting)

Two **NTP Servers** Providing Redundancy

## FIPS 140-2 Compatible

The Cyber Hardened versions have embedded new high-end cyber security features, from hardware to software, including a new controller board and the new firmware. For further details, refer to the Cyber Hardened IBUCs' datasheet at [www.terrasatinc.com/products/](http://www.terrasatinc.com/products/)

## Environmental

<b>Operating Temperature</b>	-40°C to +55°C
<b>Relative Humidity</b>	100% Condensing
<b>Altitude</b>	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. 310 x 183 x 165 mm. 18.5 lbs 8.4 kgs	12.2 x 7.2 x 6.8 in. 310 x 183 x 173 mm. 19.5 lbs 8.8 kgs
80 W (All Bands) 60 W & 100 W (Band 3)	16.2 x 10 x 7.4 in. 411 x 254 x 188 mm. 32 lbs 14.5 kgs	16.2 x 10 x 7.6 in. 411 x 254 x 193 mm. 33 lbs 15 kgs
100 W (Bands 1 & 2) & 125 W (Band 3)		23 x 10 x 7.4 in. 584 x 254 x 188 mm. 37 lbs 16.8 kgs
200 W		29 x 15 x 10.1 in. 737 x 381 x 257 mm. 83 lbs 38 kgs

Dimensions not including isolators for 60W & 80W (all bands) & 100W (band 3)

Specifications subject to change without notice.

Updated: October 4th 2023

## Questions? Contact Us

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