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 «

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

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

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

Ku-Band IBUC R
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[1]**	**WGS Version[2]**
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[1]	**WGS Version[2]**
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	73 dB min

[1]Terrasats Standard Version has a higher gain to reduce the need for line amplifiers in long cable runs (IFL).
[2]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 (P1dB)

	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

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 188-164C

Harmonics -50 dBc Max

Output Noise Power Density TX <- 73 dBm/Hz

RX <- 145 dBm/Hz

SSB Phase Noise

	External Reference	IBUC R
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

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

Power Consumption	**DC**	**AC**
60W	550 W	600 VA
80W	750 W	850VA
100W (Band 3)	800 W	900 VA
100W (Bands 1 & 2)		1150 VA
125W (Band 3)		900 VA
200W		1900 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/ or at the Cyber Hardened webpage on https://www.terrasatinc.com/terrasat-communications-launches-new-cyber-hardened-intelligent-bucs/

Environmental

Operating Temperature -40°C to +55°C

Relative Humidity 100% Condensing

Altitude 10,000 ft (3,000 m) ASL

Mechanical

	DC Powered	**AC Powered**
60 W	*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 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: April 9th 2024

TERRASAT Communications, Inc. Engineered to Endure

Questions? Contact Us

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