TERRASAT Communications, Inc.
Engineered to Endure

Ku-Band IBUC 2G
50 Watt to 80 Watt

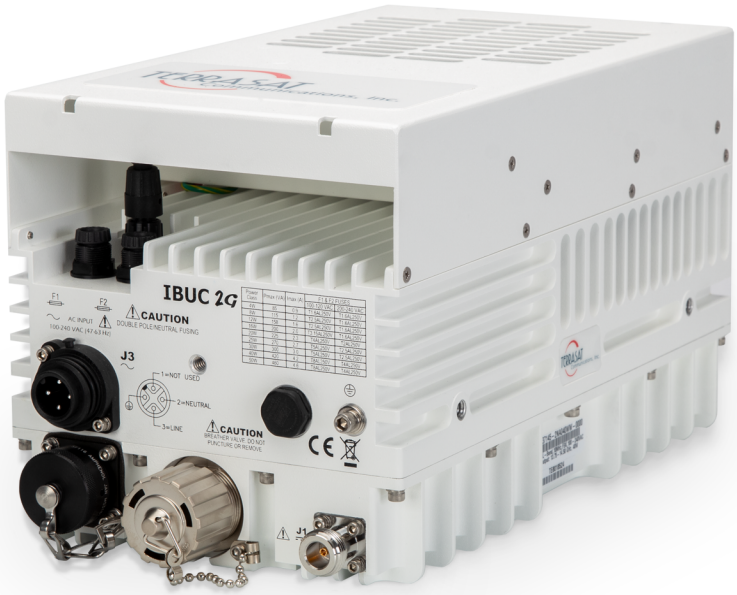
STEP ELECTRONICS
A Division of Av-Comm

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

Ku-Band
IBUC 2G
50W | 80W Compact GaN IBUC



50W P_{Lin} 28W & 80W P_{Lin} 50W

GaN Tech Amplifier

3 Year Warranty

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 2G** is a full-featured Intelligent Block Upconverter with Gallium Nitride amplifier technology. GaN advantages include higher power in a smaller outdoor enclosure and low power consumption. Terrasat's unique implementation maximizes useable output power requiring only 2 dB for 80W & 2.5 dB for 50W of output power backoff from P_{Sat} to P_{Linear}. Designed for long lifetime performance in demanding environments.

Multiple sensors & a new, high-capacity microprocessor provide tools to optimize remote terminal performance. The **IBUC 2G** is a popular choice for satcom uplinks for telecom, government, defense and other demanding applications.

Options

- 1+1 Transmit Redundancy
- High Stability Internal 10 MHz Reference with Auto-Detection
- Three Factory Select Bands
- Mounting Brackets
- Type N or F-Type Input Connectors
- Handheld Terminal

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Ku-Band **IBUC 2G**

Frequency Range	RF	IF
Band 1 Std Ku-Band	14.00 to 14.50 GHz	950 to 1450 MHz
Band 2 Full Ku-Band	13.75 to 14.50 GHz	950 to 1700 MHz
Band 3 Low Ku-Band	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

50W (Bands 1 & 2) 78 dB min

80W (All Bands) 80 dB min

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

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

	Bands 1 & 2 50W	All Bands 80W
P_{Sat} (typ)	+47 dBm	+49 dBm
P_{Lin} (min)	+44.5 dBm	+47 dBm

P_{Lin} is the maximum linear power as defined by MIL STD 188-164B

Level stability with ALC ± 0.5 dB

Output power detector range Rated power to -20 dB

Power reading accuracy ± 1.0 dB max.

Spurious @P_{Lin}

In Band -65 dBc

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

Harmonics @ P_{Lin} -60 dBc max.

Output Noise Power Density

Tx < - 76 dBm/Hz

Rx <- 145 dBm/Hz

SSB Phase Noise	External Reference	**IBUC 2G**
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	AC	DC
	48 ± 11V	100 to 240 VAC

Power Consumption	@P_{Sat} / P_{Lin}	P_{Sat} / P_{Lin}
50W (Bands 1 & 2)	310W / 270W	340 VA / 290 VA
80W (All Bands)	N/A	580 VA / 520 VA

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 +55°C

Relative Humidity 100% Condensing

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

Mechanical

Size 10.5 x 6 x 6.1 x in.
267 x 152 x 155 mm

Weight *13.5 lbs*
6.1 kg

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