

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 new **IBUC G** now supports multicarrier transmission across the entire Ku-band spectrum. The **IBUC G** delivers the highest available output power, making it an ideal solution for high data rate applications such as maritime, broadcast and network hubs. Terrasat's unique implementation is designed for long lifetime performance in demanding environments.

Gallium Nitride amplifier technology enables smaller packaging for antenna mounting, eliminating the losses in long waveguide runs. And the greater power efficiency translates to an appreciable reduction in power consumption. Comparing favorably with earlier technology TWTAs, the GaN **IBUC G** delivers maximum linear output power with the reliability of solid state.

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)
- Mounting Brackets
- N-Type, F-Type, or TNC Input Connectors
- Handheld Terminal
- Cyber Hardened Core M&C
- WGS (Wideband Global SATCOM) compatible.

Ku-Band **IBUC G**

150W & 200W GaN **IBUC** for multicarrier application



New **Cyber Hardened** version available

Multicarrier Application

150W $P_{Lin, 75W}$ & 200W $P_{Lin, 100W}$

GaN 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

Ku-Band 150W | 200W IBUC

for Multicarrier Application

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	Standard Version¹	WGS Version²
Range options:	-55 to -20 dBm	-35 to 0 dBm

Gain

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

	Standard Version ¹	WGS Version ²
150W	83 dB min	72 dB min
200W	83 dB min	73 dB min

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

²WGS 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

Gain Variation Over Temperature

Open Loop	4 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

	150W	200W
at P_{Sat} (typ)	51.8 dBm	53.0 dBm
at P_{Lin} (min)	48.8 dBm (75W)	50.0 dBm (100W)
19 dB min of NPR (Noise Power Ratio) at:	45.8 dBm	47 dBm

P_{Lin} is the maximum linear power as defined by MIL STD 188-164C
Two-tone measured at 5MHz and 150 MHz spacing .

Level stability with ALC	± 0.5 dB
Output power detector range	Rated power to -20 dB
Power reading accuracy	± 1.0 dB max.
Spurious at P_{Lin}	
In Band	-65 dBc
Out of Band	Complies with ETSI EN 301 428/430 & MIL-STD 188-164C
Harmonics at P_{Lin}	-60 dBc max.
Output Noise Power Density	
Tx <	-73 dBm/Hz
Rx <	-145 dBm/Hz

SSB Phase Noise	External Reference	IBUC
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	200 to 240 VAC		50Hz / 60Hz
----------------	----	----------------	--	-------------

Power Consumption

at P_{Lin} / P_{Sat} **150W/200W**
1150 VA / 1350 VA

Monitor & Control - For Standard Versions

Ethernet (HTTP, Telnet, SNMPv2c) 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 on the [Cyber Hardened Page](#).

Environmental

Operating Temperature	-40°C to +55°C
Relative Humidity	100% Condensing
Altitude	10,000 ft (3,000 m) ASL

Mechanical

Weight	37 lbs 17 kg
Size	23 x 10 x 7.4 x in. 584 x 254 x 188 mm

Specifications subject to change without notice.

Updated: November 18th 2024



PART NUMBER CONFIGURATION | OPTIONS AVAILABLE FOR:

Ku-Band 150W & 200W GaN IBUC

Cyber Hardened Option Part Number

Example/Std Offer: IBB137145-2NA200CKWW-0000

IBB XXXXXX - X X A XXX C K W W - XXXX

		Power Output		Optional Specs & Features	
	150	150W		0000	Std Options and Std Specs
	200	200W		0218	WGS Compatibility Option
		Power Supply		Color	
	A	AC Powered		W	Std Terrasat Inc Color (White)
				X	Other Colors (Please, Provide Color Specs)
		IF Input Connector			
	N	N-Type IF Input Connector			
	F	F-Type IF Input Connector			
		Spectral Sense and 10MHz Reference			
	0	Non-Inverting + External 10MHz			
	2	Non-Inverting + Internal 10MHz Std (30ppb stability)			
	4	Non-Inverting + Internal 10MHz High Stability (5ppb)			
		RF Frequency Plan			
140145	14.000-14.500 GHz (Std Ku-Band)				
137145	13.750-14.500 GHz (Full Ku-Band)				
127132	12.750-13.250 GHz (Low Ku-Band)				

Std M&C Option Part Number

Example/Std Offer: IBR137145-2NA201WW-0019

IBR XXXXXX - X X A XXX W W - XXXX

		Power Output		Optional Specs & Features	
	151	150W		0019	Std product with Multicarrier compatibility only
	201	200W		2018	WGS Compatibility Option + Multicarrier
		Power Supply		Color	
	A	AC Powered		W	Std Terrasat Inc Color (White)
				X	Other Colors (Please Provide Color Specs)
		IF Input Connector			
	N	N-Type IF Input Connector			
	F	F-Type IF Input Connector			
		Spectral Sense and 10MHz Reference			
	0	Non-Inverting + External 10MHz			
	2	Non-Inverting + Internal 10MHz Std (30ppb stability)			
	4	Non-Inverting + Internal 10MHz High Stability (5ppb)			
		RF Frequency Plan			
140145	14.000-14.500 GHz (Std Ku-Band)				
137145	13.750-14.500 GHz (Full Ku-Band)				
127132	12.750-13.250 GHz (Low Ku-Band)				

Note: Consult Terrasat Communications Inc for more options.