



## 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 3G

25W | 30W | 40W Compact GaN IBUC for multicarrier application



Multicarrier  
Application

25W  $P_{in, 12.5W}$   
30W  $P_{in, 15W}$   
40W  $P_{in, 20W}$

GaN  
Tech  
Amplifier

3  
Year  
Warranty

## Applications

The new GaN **IBUC 3G** versions support multicarrier transmission across the entire Ku-band spectrum. Gallium Nitride amplifier technology facilitates higher power in a smaller outdoor enclosure – just what is needed for the **IBUC 3G**. Specially designed for mobility, the **IBUC 3G** is a full-featured IBUC in a new, smaller & lighter package. An excellent fit with very small aperture or flat panel antennas where size & weight are key considerations.

Yet, all of the IBUC performance & manageability advantages remain. The included web interface enables terminal optimization during installation & provides a suite of trouble-shooting tools. An auto-ranging DC power supply is accessed via external power connector or IFL cable.

### 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
- WGS (Wideband Global SATCOM) compatible.

# Ku-Band 25W | 30W | 40W IBUC 3G 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 Range options:

Standard Version	-55 to -20 dBm	WGS Version	-35 to 0 dBm
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## Gain

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

	Standard Version	WGS Version
25W	75 dB min	64 dB min
30W	76 dB min	65 dB min
40W	77 dB min	66 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 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

	25W	30W	40W
at $P_{Sat}$ (typ)	44 dBm	45 dBm	46 dBm
at $P_{Lin}$ (min)	41 dBm (12.5W)	42 dBm (15W)	43 dBm (20W)
19 dB min of NPR (Noise Power Ratio) at:	38 dBm	39 dBm	40 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 <	-79 dBm/Hz
Rx <	-145 dBm/Hz

SSB Phase Noise	External Reference	IBUC 3G
10 Hz	-125 dBc/Hz	-45 dBc/Hz
100 Hz	-145 dBc/Hz	-65 dBc/Hz
1 KHz	-160 dBc/Hz	-80 dBc/Hz
10 KHz	-165 dBc/Hz	-85 dBc/Hz
100 KHz	N/A	-90 dBc/Hz
1 MHz	N/A	-115 dBc/Hz

## External Reference (Multiplexed on TX IFL)

Frequency & Level	10 MHz	-12 to +5 dBm
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## 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	DC
	38 to 76 VDC
Power Consumption	at $P_{Lin}$ / $P_{Sat}$
25 W	150 W / 205 W
30 W	180 W / 235 W
40 W	205 W / 265 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 +55°C
Relative Humidity	100% Condensing
Altitude	10,000 ft (3,000 m) ASL

## Mechanical

Weight	6.5 lbs
	2.9 kg
Size	7 x 5 x 4 in.
	178 x 127 x 102 mm

(Dimensions not including isolators)