

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

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 «

C-Band IBUC G

400W/500W GaN IBUC for multicarrier application.



Multicarrier
Application

400W
 P_{Lin} 200W
&
500W
 P_{Lin} 250W

GaN
Tech
Amplifier

3
Year
Warranty

Applications

The new IBUC **G** now supports multicarrier transmission across the full C-band spectrum. The **IBUC G** delivers the highest available output power, making it an ideal solution for high data rate multicarrier applications such as maritime, broadband, broadcast and network hubs. The 400W model produces +53 dBm of linear output power, and the 500W model produces +54 dBm of linear output power.

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
- Mounting Brackets
- Type N or F-Type Input Connectors
- Handheld Terminal

C-Band 400W/500W IBUC for Multicarrier Application

Frequency Range	RF (MHz)	IF (MHz)	
Sense		Inverting	Non-Inverting
Band 1 Std C	5850 to 6425	950 to 1525	950 to 1525
Band 2 Palapa	6425 to 6725	975 to 1275	1125 to 1425
Band 3 Insat	6725 to 7025	1150 to 1450	965 to 1265
Band 4 Ext C	5850 to 6650	950 to 1750	950 to 1750
Band 5 Full C	5850 to 6725	975 to 1850	950 to 1825

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	-50 to -15 dBm

Gain	
Small Signal Gain (L-band to RF) with attenuator set to 0 dB	400W 82 dB min 500W 83 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	
	Bands 1/2/3 Bands 4/5
Open Loop	3 dB p-p max 4 dB p-p max
With AGC	1 dB p-p max 1 dB p-p max

RF Output	
Interface	CPR-137G
VSWR	1.3:1 max


Output Power	<u>400W</u>		<u>500W</u>	
	Band 1	Bands 2/3/4/5	Band 1	Bands 2/3/4/5
at P _{Sat} (typ)	+56 dBm	+55.5 dBm	+57 dBm	+56.5 dBm
at P _{Lin} (min)	+53 dBm	+52.5 dBm	+54 dBm	+53.5 dBm

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

Two tone measured @ 5MHz and 150 MHz Spacing

19 dB min of Noise Power Ratio (NPR) @:	<u>400W</u>		<u>500W</u>	
	Band 1	Bands 2/3/4/5	Band 1	Bands 2/3/4/5
	50.5 dBm	50 dBm	51.5 dBm	51 dBm

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	-70 dBc
Out of Band	Complies with EN 301 443 & MIL-STD 188-164B
Harmonics @ P _{Lin}	-50 dBc max.
Output Noise Power Density	
	Tx < - 75 dBm/Hz
	Rx < - 145 dBm/Hz

SSB Phase Noise	External Reference	IBUC 
10 Hz	-115 dBc/Hz	-54 dBc/Hz
100 Hz	-140 dBc/Hz	-79 dBc/Hz
1 KHz	-150 dBc/Hz	-89 dBc/Hz
10 KHz	-155 dBc/Hz	-94 dBc/Hz
100 KHz	N/A	-100 dBc/Hz
1 MHz	N/A	-110 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	Inverting	Non-Inverting
Band 1	7375 MHz	4900 MHz
Band 2	7700 MHz	5300 MHz
Band 3	8175 MHz	5760 MHz
Band 4	7600 MHz	4900 MHz
Band 5	7700 MHz	4900 MHz

IBUC Power Supply

Voltage	200 to 240 VAC			
Power Consumption	Band 1		Bands 2/3/4/5	
	<u>400W</u>	<u>500W</u>	<u>400W</u>	<u>500W</u>
at P _{Lin}	1500 VA	1650 VA	1750 VA	1550 VA
at P _{Sat}	1900 VA	2100 VA	1850 VA	2000 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	24 x 10 x 7.4 x in. 610 x 254 x 188 mm
Weight	40 lbs