



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 «

X-Band IBUC G

400W GaN IBUC



400W

GaN
Tech
Amplifier

3
Year
Warranty

Applications

The **IBUC G** delivers the highest available output power, making it an ideal solution for high data rate applications such as network hubs. The 400W model produces +53 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

X-Band IBUC G

Frequency Range	RF (MHz)	IF (MHz)
	7900 to 8400 MHz	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 -15 dBm

Gain

Small Signal Gain (L-band to RF) with attenuator set to 0 dB 82 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	CPR-112G
VSWR	1.3:1 max

Output Power

at P_{Sat} (typ)	+56 dBm
at P_{Lin} (min)	+53 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 MIL-STD 188-164B

Harmonics @ P_{Lin} -60 dBc max.

Output Noise Power Density

Tx < -75 dBm/Hz

Rx (with RX Reject Filter) <- 165 dBm/Hz

Mute -70 dBc max

AM-PM Conversion < 3.0 deg/dB @ P_{Lin}

Group Delay

Linear	0.03 ns/MHz
Parabolic	0.003 ns/MHz ²
Ripple	1 ns p-p Over Any 36 MHz

SSB Phase Noise

	External Reference	IBUC G
10 Hz	-115 dBc/Hz	-55 dBc/Hz
100 Hz	-140 dBc/Hz	-80 dBc/Hz
1 KHz	-150 dBc/Hz	-90 dBc/Hz
10 KHz	-155 dBc/Hz	-95 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

Internal Reference- Optional

Local Oscillator Frequency

	6950 MHz
Sense	Non-Inverting

IBUC Power Supply

Voltage 200 to 240 VAC

Power Consumption

at P_{Sat}	2200 VA
at P_{Lin}	1800 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 18 kg

(Dimensions not including isolators)

Specifications subject to change without notice.

Updated 11/30/2020