



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 «

X-Band IBUC 2

Smaller, lighter models with RJ45 interface.



5W
to
60W

GaAs
Tech
Amplifier

3
Year
Warranty

Applications

The **IBUC 2** is a compact integrated BUC/GaAs SSPA designed for higher performance & reliability. Block Upconverters based on linear GaAs amplifier technology require minimal output power backoff. 24-48-hour environmental chamber testing guarantees $P_{1\text{dB}}$ output power over frequency and temperature range.

Multiple sensors & a new, high-capacity microprocessor provide tools to optimize terminal performance. The **IBUC 2** is a popular choice for mid-power mobile & fixed defense terminals operating in demanding environments.

Options

- 1+1 Transmit Redundancy
- High Stability Internal 10 MHz Reference with Auto-Detection
- AC or DC Input Models
- Mounting Brackets
- Optional Type N or F-Type Input Connectors
- Waveguide or Type N Output
- Handheld Terminal

X-Band IBUC 2

Frequency Range	RF (MHz)	IF (MHz)
	7900 to 8400	950 to 1450

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 10 dB

5W	68 dB min
10W	71 dB min
20W	74 dB min
25W	75 dB min
40W	77 dB min
50W	78 dB min
60W	79 dB min

Attenuator Range 30 dB variable in 0.1 dB steps

Gain Flatness

Full Band	3 dB p-p max
36 MHz	1 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	CPR-112G
VSWR	1.5:1 max

Rated Output Power

	P_{1dB}	P_{Lin}
5W	+37 dBm min	36.5 dBm
10W	+40 dBm min	39.5 dBm
20W	+43 dBm min	42.5 dBm
25W	+44 dBm min	43.5 dBm
40W	+46 dBm min	45 dBm
50W	+47 dBm min	46 dBm
60W	+47.8 dBm min	46.8 dBm

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

IMD3 (2 Carriers, 3 dB TOBO)	-27 dBc max
Level Stability with ALC	± 0.5 dB
Output Power Detector Range	Rated Power to -20 dB
Power Reading Accuracy	± 1.0 max
Spurious	

In Band	-65 dBc
Out Band	Complies with MIL STD 188-164B.

Harmonics -60 dBc max

Output Noise Power Density

TX <- 79 dBm/Hz
RX w/o RX Reject Filter <- 79 dBm/Hz

Mute	-70 dBc Max.
AM-PM Conversion	< 3.0 deg/dB @ Rated Power
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 2
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
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Internal Reference- Optional

Local Oscillator Frequency

Sense	6950 MHz	Non-Inverting
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IBUC Power Supply

Voltage	DC	48 ± 11 VDC
	AC	100 to 240 VAC
Options for 5W, 10W		24 ± 4 VDC

DC via coax available on 5W-20W

Power Consumption

	5W-40W	50W/60W
5W	60W	75 VA
10W	90W	130 VA
20W	160W	200 VA
25W	175W	220 VA
40W	300W	350 VA
50W	350W	400 VA
60W	400W	430 VA

Monitor & Control

Ethernet (HTTP, Telnet, SNMPv2c) via RJ45 Connector

RS232/485, Handheld Terminal via MS-Type Connector, FSK multiplexed on TX IFL.

Environmental

	5W-40W	50W/60W
Operating Temperature	-40°C to +60°C	-40°C to +55°C
Relative Humidity	100% Condensing	
Altitude	10,000 ft (3,000 m) ASL	

Mechanical

	DC Powered	AC Powered
5W-10W	10.5 x 6 x 3.8 in. 267 x 152 x 97 mm	10.5 x 6 x 4.2 in. 267 x 15 x 107 mm
	9.3 lbs (4.2 kgs)	10.5 lbs (4.8 kgs)
20W-25W	10.5 x 6 x 5.2 in. 267 x 152 x 132 mm	10.5 x 6 x 5.6 in. 267 x 152 x 142 mm
	10.8 lbs (4.9 kgs)	11.7 lbs (5.3 kgs)
40W-60W	10.5 x 6 x 5.7 in. 267 x 152 x 145 mm	10.5 x 6 x 6.1 in. 267 x 152 x 155 mm
	11.5 lbs (5.2 kgs)	12.4 lbs (5.6 kgs)

Specifications subject to change without notice.

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