



X-Band **IBUC R**

Mid-High power multi-carrier BUC unit.



80W
to
175W

GaAs
Tech
Amplifier

3
Year
Warranty

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 «

Applications

The **IBUC R** is an integrated BUC/GaAs SSPA designed for higher performance & reliability. Block Upconverters based on GaAs amplifier technology deliver superior performance in terminals transmitting multiple carriers due to their inherent high linearity & minimal backoff requirements.

Multiple sensors & a new, high-capacity microprocessor provide tools to optimize terminal performance. The **IBUC R** is an excellent choice for higher power defense Satcom terminals operating in demanding applications.

Options

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

X-Band IBUC 7

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

Input

VSWR/Impedance	1.5:1 max/ 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 0 dB

80W	80 dB min
100W	81 dB min
125W	82 dB min
150W	83 dB min
175W	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 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	P1dB
80W	+49 dBm min
100W	+50 dBm min
125W	+51 dBm min
150W	+51.8 dBm min
175W	+52.4 dBm min

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 dB max

Spurious

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

Harmonics -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 @ 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

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

IBUC 7

External Reference (multiplexed on TX IFL)

Frequency	10 MHz
Level	-12 to +5 dBm

Internal Reference- Optional

Local Oscillator Frequency	6950 MHz
Sense	Non-Inverting

IBUC Power Supply

Voltage	DC	42 V min, 60 V max	
	AC	100 to 240 VAC	80W to 125W
		200 to 240 VAC	150W to 175W

Power Consumption	DC	AC
80W	576 W	656 VA
100W	770 W	850 VA
125W	880 W	950 VA
150W	1100 W	1250 VA
175W	1200 W	1300 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

	DC Powered	AC Powered
80W	12.2 x 7.2 x 6.5 in. 310 x 183 x 165 mm.	12.2 x 7.2 x 6.8 in. 310 x 183 x 173 mm.
	18.5 lbs	19.5 lbs
	8.4 kgs	8.9 kgs
100W-175W	16.2 x 10 x 7.2 in. 412 x 254 x 183 mm.	16.2 x 10 x 7.4 in. 412 x 254 x 188 mm.
	32 lbs	33 lbs
	14.5 kgs	14.9 kgs

(Dimensions not including isolators)

Specifications subject to change without notice.

Updated 1/10/2020