



C-Band **IBUC R**

Mid-High power multi-carrier BUC unit.



100W
to
400W

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 Satcom terminals in telecom, defense, maritime, broadcast, & other demanding applications.

Options

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

C-Band IBUC π

| 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 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 (80W - 200W) -50 to -15 dBm (400W) |

Gain

Small Signal Gain (L-band to RF) with Attenuator Set to 0 dB

| | |
|---------------------------------|--|
| 100W | 81 dB min |
| 125W | 82 dB min |
| 150W | 83 dB min |
| 175W | 83 dB min |
| 200W | 84 dB min |
| 400W | 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 max |
| 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 |
| Rated Output Power | P1dB |
| 100W | +50 dBm min |
| 125W | +51 dBm min |
| 150W | +51.8 dBm min |
| 175W | +52.4 dBm min |
| 200W | +53 dBm min |
| 400W | +56 dBm min |
| Note: Output Power in Bands 4 & 5 is reduced by 0.5 dB. | |
| IMD3 (2 Carriers, 3 dB TOBO) | -26 dBc max (80W-200W) -25 dBc max (400W) |
| 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 | -70 dBc |
| Out Band | Complies with EN 301 443 & MIL-STD 188-164B. |
| Harmonics | -50 dBc max. |
| Output Noise Power Density | TX <- 74 dBm/Hz RX <- 145 dBm/Hz |

SSB Phase Noise

| | | |
|---------|-------------|-------------|
| 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 | 10 MHz |
| Level | -12 to +5 dBm |

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 | DC | 42 V min, 60 V max | |
| | AC | 100 to 240 VAC | 100W, 125W |
| | | 200 to 240 VAC | 150W to 400W |

| Power Consumption | DC | AC |
|-------------------|--------|---------|
| 100W | 700 W | 800 VA |
| 125W | 800 W | 900 VA |
| 150W | 1056 W | 1200 VA |
| 175W | 1100 W | 1250 VA |
| 200W | 1150 W | 1300 VA |
| 400W | N/A | 2600 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 |
|-----------|--|--|
| 100W-200W | 16.2 x 10 x 7.4 in. 411 x 254 x 188 mm. | 16.2 x 10 x 7.6 in. 411 x 254 x 193 mm. |
| | 32 lbs 14.5 kgs | 33 lbs 14.9 kgs |
| 400W | N/A | 29 x 15 x 10.1 in 737 x 381 x 257 mm. |
| | | 83 lbs 37.6 kgs |

(Dimensions not including isolators for 100W to 200W models)

Specifications subject to change without notice.

Updated 9/21/2020