

## 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 «



5W  
to  
80W

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 medium-high power Satcom terminals in telecom, defense, air traffic control, government & other demanding network applications.

## Options

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

## C-Band IBUC 2

| 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 | -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   |
| 15W | 72.8 dB min |
| 20W | 74 dB min   |
| 25W | 75 dB min   |
| 30W | 75.8 dB min |
| 40W | 77 dB min   |
| 50W | 78 dB min   |
| 60W | 79 dB min   |
| 80W | 80 dB min   |

Attenuator Range 30 dB variable in 0.1 dB steps

| Gain Flatness | Bands 1/2/3     | Bands 4/5       |
|---------------|-----------------|-----------------|
| Full Band     | 3 dB p-p max    | 4 dB p-p max    |
| 36 MHz        | 1 dB p-p max    | 1.5 dB p-p max  |
| 1 MHz         | 0.25 dB p-p max | 0.25 dB p-p max |

Gain Variation Over Temperature

|           |              |              |
|-----------|--------------|--------------|
| 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 or N(f) |
| VSWR               | 1.5:1 max        |
| Rated Output Power |                  |

|     | P <sub>1dB</sub> | P <sub>Lin</sub> |
|-----|------------------|------------------|
| 5W  | +37 dBm min      | 35.5 dBm         |
| 10W | +40 dBm min      | 38.5 dBm         |
| 15W | +41.8 dBm min    | 40.3 dBm         |
| 20W | +43 dBm min      | 41.5 dBm         |
| 25W | +44 dBm min      | 42.5 dBm         |
| 30W | +44.8 dBm min    | 43.3 dBm         |
| 40W | +46 dBm min      | 44.5 dBm         |
| 50W | +47 dBm min      | 45.5 dBm         |
| 60W | +47.8 dBm min    | 46.3 dBm         |
| 80W | +49 dBm min      | 47.5 dBm         |

Note: For 40W & Above, Output Power in Bands 4 & 5 is Reduced by 0.5 dB.  
P<sub>Lin</sub> 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 EN 301 443 & MIL STD 188-164B. |
| Harmonics                    | -50 dBc max                                  |
| Output Noise Power Density   |                                              |
|                              | TX <- 78 dBm/Hz                              |
|                              | RX <- 145 dBm/Hz                             |

### SSB Phase Noise

| External Reference | IBUC 2      |
|--------------------|-------------|
| 10 Hz              | -115 dBc/Hz |
| 100 Hz             | -140 dBc/Hz |
| 1 KHz              | -150 dBc/Hz |
| 10 KHz             | -155 dBc/Hz |
| 100 KHz            | N/A         |
| 1 MHz              | N/A         |

### External Reference (Multiplexed on TX IFL)

|                   |        |               |
|-------------------|--------|---------------|
| Frequency & Level | 10 MHz | -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 | 48 ± 11 VDC    |
|         | AC | 100 to 240 VAC |

Options for 5W, 10W 24 ± 4 VDC

DC via coax available on 5W-25W

Power Consumption

|     |      |        |
|-----|------|--------|
| 5W  | 60W  | 75 VA  |
| 10W | 85W  | 120 VA |
| 15W | 125W | 150 VA |
| 20W | 154W | 200 VA |
| 25W | 168W | 210 VA |
| 30W | 188W | 220 VA |
| 40W | 300W | 330 VA |
| 50W | 320W | 350 VA |
| 60W | 360W | 400 VA |
| 80W | N/A  | 540 VA |

### Monitor & Control

Ethernet (HTTP, Telnet, SNMPv2e) via RJ45 Connector

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

### Environmental

|                       | 5W-50W                  | 60W/80W        |
|-----------------------|-------------------------|----------------|
| 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.<br>267 x 152 x 97 mm  | 10.5 x 6 x 4.2 in.<br>267 x 152 x 107 mm |
|         | 9.3 lbs (4.2 kgs)                        | 10.5 lbs (4.8 kgs)                       |
| 15W-30W | 10.5 x 6 x 5.2 in.<br>267 x 152 x 132 mm | 10.5 x 6 x 5.6 in.<br>267 x 152 x 142 mm |
|         | 10.8 lbs (4.9 kgs)                       | 11.7 lbs (5.3 kgs)                       |
| 40W-80W | 10.5 x 6 x 5.7 in.<br>267 x 152 x 145 mm | 10.5 x 6 x 6.1 in.<br>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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## Questions? Contact Us

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