

## 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 «

## Ku-Band IBUC 2e

Low Energy Consumption Model | 8W & 16W



New **Cyber  
Hardened**  
version  
available

Multicarrier  
Application

8W  
&  
16W

GaAs  
Tech  
Amplifier

3  
Year  
Warranty

## Applications

When the requirement calls for a full-featured Block Upconverter that is powered by the modem, the **IBUC 2e** is an excellent fit. The **IBUC 2e** draws less power from the modem ODU power supply than the **IBUC 2** model. Auto-ranging DC input power is supplied via the IFL coaxial cable only. There is no external power connector.

Compatibility with a specific model modem is based on the ODU power supply capacity of that modem. It is also important to take into consideration voltage drop over the IFL cable.

### Options

- 2+1 Transmit Redundancy
- 1+1 Transmit Redundancy with Eco-mode
- High Stability Internal 10 MHz Reference with Auto-Detection
- Three Factory Select Bands (Low, Std, and Full Ku-Bands)
- AC or DC Input Models
- Mounting Brackets
- Type N or F-Type Input Connectors
- Cyber Hardened Core M&C
- Handheld Terminal
- WGS (Wideband Global SATCOM) compatible
- Load Switch Kit

**Note:** Since not all the optional features can be combined, please, contact our sales team for further info at: [Sales@Terrasatinc.com](mailto:Sales@Terrasatinc.com)

# Ku-Band IBUC 2e

## 8W & 16W

| Frequency Range                                                                                                            | RF                                              | IF                       |
|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------|
| Band 1 Std Ku                                                                                                              | 14.0 to 14.50 GHz                               | 950 to 1450 MHz          |
| Band 2 Full Ku                                                                                                             | 13.75 to 14.50 GHz                              | 950 to 1700 MHz          |
| Band 3 Low Ku                                                                                                              | 12.75 to 13.25 GHz                              | 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)                                 |                          |
| Input Power Detector                                                                                                       | Standard Version <sup>1</sup>                   | WGS Version <sup>2</sup> |
| Range Options:                                                                                                             | -55 to -20 dBm                                  | -35 to 0 dBm             |
| Gain                                                                                                                       |                                                 |                          |
| Small Signal Gain (L-band to RF) with attenuator set to 0 dB                                                               | Standard Version <sup>1</sup>                   | WGS Version <sup>2</sup> |
| 8W                                                                                                                         | 70 dB min                                       | 59 dB min                |
| 16W                                                                                                                        | 73 dB min                                       | 62 dB min                |
| Attenuator Range                                                                                                           | 30 dB variable in 0.1 dB steps                  |                          |
| <sup>1</sup> Terrasats Standard Version has a higher gain to reduce the need for line amplifiers in long cable runs (IFL). |                                                 |                          |
| <sup>2</sup> WGS Compatible Versions have lower gain allowing operations to drive the IF signal up to 0 dBm.               |                                                 |                          |
| Gain Flatness                                                                                                              | Bands 1 & 3                                     | Band 2                   |
| 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                                                                                                                  | WR75 Cover with Groove                          |                          |
| VSWR                                                                                                                       | 1.5:1 max                                       |                          |
| Output Power                                                                                                               |                                                 |                          |
|                                                                                                                            | P <sub>1dB</sub>                                |                          |
| 8W                                                                                                                         | +39 dBm min                                     |                          |
| 16W                                                                                                                        | +42 dBm min                                     |                          |
| IMD3 (2 Carriers, 3 dB TOBO)                                                                                               | -25 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 301 428/430 & MIL STD 188-164C |                          |
| Harmonics                                                                                                                  |                                                 |                          |
| Output Noise Power Density                                                                                                 | TX <- 84 dBm/Hz<br>RX <- 145 dBm/Hz             |                          |

| SSB Phase Noise | External Reference | IBUC 2e     |
|-----------------|--------------------|-------------|
| 10 Hz           | -115 dBc/Hz        | -50 dBc/Hz  |
| 100 Hz          | -140 dBc/Hz        | -75 dBc/Hz  |
| 1 KHz           | -150 dBc/Hz        | -85 dBc/Hz  |
| 10 KHz          | -155 dBc/Hz        | -90 dBc/Hz  |
| 100 KHz         | N/A                | -95 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 feature includes auto-detection of External Reference

### Local Oscillator Frequency

| Sense  | Non-Inverting |
|--------|---------------|
| Band 1 | 13050 MHz     |
| Band 2 | 12800 MHz     |
| Band 3 | 11800 MHz     |

### IBUC Power Supply

|                   |     |                  |
|-------------------|-----|------------------|
| Voltage           | 8W  | 18 to 75 VDC     |
|                   | 16W | 37 to 60 VDC     |
|                   |     | DC via coax only |
| Power Consumption |     |                  |
| 8W                |     | 65 W             |
| 16W               |     | 120 W            |

### Monitor & Control

Ethernet (HTTP, Telnet, SNMPv2c) via RJ45 Connector

RS232/485, Handheld Terminal via MS-Type Connector

FSK multiplexed on TX IFL

### Monitor & Control - For Cyber Hardened Versions

Ethernet (HTTPS, SSHv2, SNMPv3 with USM and VACM) via RJ45 Connector

RS232 via MS-Type Connector

XSS (Cross Site Scripting)

Two NTP Servers Providing Redundancy

### FIPS 140-2 Compatible

The Cyber Hardened versions have embedded new high-end Cyber Security features, from hardware to software, including a new controller board and the new firmware.

For further details, refer to the Cyber Hardened IBUCs' datasheet at [www.terrasatinc.com/products/](http://www.terrasatinc.com/products/) or at the [Cyber Hardened webpage on https://www.terrasatinc.com/terrasat-communications-launches-new-cyber-hardened-intelligent-bucs/](https://www.terrasatinc.com/terrasat-communications-launches-new-cyber-hardened-intelligent-bucs/)

### Environmental

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

### Mechanical

|     |                                                                |
|-----|----------------------------------------------------------------|
| 8W  | 10.5 x 6 x 3.8 in.<br>267 x 152 x 97 mm<br>9.3 lbs (4.2 kgs)   |
| 16W | 10.5 x 6 x 5.2 in.<br>267 x 152 x 132 mm<br>10.8 lbs (4.9 kgs) |

Specifications subject to change without notice.

Updated: June 26th 2026



PART NUMBER CONFIGURATION | OPTIONS AVAILABLE FOR:  
Ku-Band 4W to 16W GaAs IBUC **20** Low consumption - Power Through Coax

Cyber Hardened Option Part Number

Example/Std Offer: IBB137145-2N7016DSWW-0000

[illegible]

Std M&amp;C Option Part Number

Example/Std Offer: IBR137145-2N7016WW-0402

| IBR    | XXXXXX                           | - | X | X | X | XXX                                       | W                                                                                                    | - | XXXX                                                  |
|--------|----------------------------------|---|---|---|---|-------------------------------------------|------------------------------------------------------------------------------------------------------|---|-------------------------------------------------------|
|        |                                  |   |   |   |   | <b>Power Output</b>                       |                                                                                                      |   | <b>Optional Specs &amp; Features</b>                  |
|        |                                  |   |   |   |   | 008                                       | 8W                                                                                                   |   | 0402 Std product with Multicarrier compatibility only |
|        |                                  |   |   |   |   | 016                                       | 16W                                                                                                  |   | 2018 WGS Compatibility Option + Multicarrier          |
|        |                                  |   |   |   |   |                                           |                                                                                                      |   | <b>Color</b>                                          |
|        |                                  |   |   |   |   |                                           |                                                                                                      |   | W Std Terrasat Inc Color (White)                      |
|        |                                  |   |   |   |   |                                           |                                                                                                      |   | X Other Colors (Please Provide Color Specs)           |
|        |                                  |   |   |   |   | <b>Power Supply</b>                       |                                                                                                      |   |                                                       |
|        |                                  |   |   |   |   | 6                                         | DC Powered, With Power Thru Coax, 24V/48V (18 to 75 VDC wide range) - Valid for 4W and 8W IBUCs only |   |                                                       |
|        |                                  |   |   |   |   | 7                                         | DC Powered, With Power Thru Coax, 48 ± 11 VDC (37 to 60 VDC) - Valid for 12W and 16W IBUCs only      |   |                                                       |
|        |                                  |   |   |   |   | <b>IF Input Connector</b>                 |                                                                                                      |   |                                                       |
|        |                                  |   |   |   |   | N                                         | N-Type IF Input Connector                                                                            |   |                                                       |
|        |                                  |   |   |   |   | F                                         | F-Type IF Input Connector                                                                            |   |                                                       |
|        |                                  |   |   |   |   | <b>Spectral Sense and 10MHz Reference</b> |                                                                                                      |   |                                                       |
|        |                                  |   |   |   |   | 0                                         | Non-Inverting + External 10MHz                                                                       |   |                                                       |
|        |                                  |   |   |   |   | 2                                         | Non-Inverting + Internal 10MHz Std (30ppb stability)                                                 |   |                                                       |
|        |                                  |   |   |   |   | 4                                         | Non-Inverting + Internal 10MHz High Stability (5ppb)                                                 |   |                                                       |
|        |                                  |   |   |   |   | <b>RF Frequency Plan</b>                  |                                                                                                      |   |                                                       |
| 140145 | 14.000-14.500 GHz (Std Ku-Band)  |   |   |   |   |                                           |                                                                                                      |   |                                                       |
| 137145 | 13.750-14.500 GHz (Full Ku-Band) |   |   |   |   |                                           |                                                                                                      |   |                                                       |
| 127132 | 12.750-13.250 GHz (Low Ku-Band)  |   |   |   |   |                                           |                                                                                                      |   |                                                       |

Note: Consult Terrasat Communications Inc for more options.