

## **C-Band IBUC – High Power Intelligent Block Upconverter**

### **IBUC Advantages**

Integrated BUC/SSPA packaging for higher performance and reliability.

All models available with integral AC power supply or separate DC power supply.

Low phase noise exceeds IESS308/309 requirements by a minimum of 10 dB.

NMS-friendly interfaces enable remote management of your earth station RF.

Embedded Web pages provide management for small networks using any Web browser.

AGC or ALC circuits hold gain or output level constant.

16 dB User-adjustable gain in 0.1 dB steps preserves modem dynamic range.

Advanced customer interfaces:

- TCP/IP HTTP with embedded Web pages
- SNMP
- TELNET through TCP/IP
- FSK through TX IFL cable
- RS232/485 serial port
- Hand-held terminal

1+1 switching logic and drivers built into the IBUC eliminate expensive external switching controller.

Extensive diagnostics displayed as Web pages for faster setup and troubleshooting.

Output sample port included.



The revolutionary **IBUC** has advanced features to take your network to new heights.

**IBUC** offers significant benefits:

- Low terminal cost
- Simple design and installation
- Superior RF performance
- Simplified 1+1 configuration

New interfaces connect you to the **IBUC**'s extensive M&C facilities for network management or local access. This powerful new M&C enables:

- **Trouble-free commissioning** with easy, point-and-click installation/configuration
- Continuous **verification** of performance with alarm history
- Simplified **troubleshooting** of terminal faults

**IBUC** comes with a complete set of diagnostic tools including:

- 10 MHz input detector
- Input voltage and current monitoring
- Transmit L-band input level detector
- Transmit RF output level detector
- Alarm history

Unique to the **IBUC** are internal AGC and ALC functions that satisfy demanding applications with stringent specifications.

**For additional information contact Terrasat Sales at +1 408-782-5911 or by Email:  
Sales@Terrasatinc.com.  
235 Vineyard Court, Morgan Hill, CA 95037 www.terrasatinc.com**

# C-Band IBUC – High Power Block Upconverter Specifications

<b>L-Band Input</b>	Frequency range	Power reading accuracy	+/- 1.0 dB max.
Band 1	950 to 1525 MHz	Spurious	Complies with EN 301 443
Band 2	975 to 1275 MHz	Harmonics	-50 dBc max
Band 3	1150 to 1450 MHz	<b>SSB Phase Noise</b>	
Band 4	950 to 1750 MHz	Offset	External reference      IBUC
Band 5	975 to 1850 MHz	10 Hz	-120 dBc/Hz      -35 dBc/Hz
VSWR / Impedance	1.5:1 max / 50 ohms	100 Hz	-130 dBc/Hz      -70 dBc/Hz
Connector	Type N female	1 kHz	-143 dBc/Hz      -80 dBc/Hz
Input power detector	-55 to -20 dBm	10 kHz	-152 dBc/Hz      -90 dBc/Hz
<b>Gain</b>		100 kHz	-155 dBc/Hz      -100 dBc/Hz
Small Signal Gain (L-band to RF) with attenuator set to 0 dB.		1 MHz	-155 dBc/Hz      -110 dBc/Hz
100 W	81 dB min	<b>External Reference</b> (multiplexed on TX IFL)	
125 W	82 dB min	Frequency	10 MHz
150 W	83 dB min	Level	-12 to +5 dBm
175 W	83 dB min	<b>Local Oscillator Frequency</b>	
200 W	84 dB min	Band 1	7375 MHz
Attenuator range	16 dB variable in 0.1 dB steps	Band 2	7700 MHz
Gain flatness		Band 3	8175 MHz
Full band	4dB p-p max	Band 4	7600 MHz
36 MHz	1.5 dB p-p max	Band 5	7700 MHz
1 MHz	0.25 dB p-p	Sense	Inverting
Gain variation over temperature		<b>IBUC Power Supply</b>	
Open loop	4 dB p-p max	Voltage / Current	100 to 240 VAC for 100 W to 125 W
With AGC	1 dB p-p max		200 to 240 VAC for 150 W to 200 W, or
<b>RF Output</b>			48 VDC nom. (42 V min. / 60 V max.)
	Frequency range	<b>Power Consumption</b>	
Band 1 Std C-Band	5850 to 6425 MHz	100 W	739 W
Band 2 Palapa/ST-1	6425 to 6725 MHz	125 W	898 W
Band 3 Insat	6725 to 7025 MHz	150 W	1056 W
Band 4 Extended C	5850 to 6650 MHz	175 W	1109 W
Band 5 Full C-band	5850 to 6725 MHz	200 W	1162 W
Interface	CPR-137G	<b>Monitor and Control</b>	
VSWR	1.5:1 max	<b>FSK</b> (multiplexed on TX IFL)	
Rated output power (P1dB)		<b>RS232/485, Hand-held Terminal</b>	
100 W	+50 dBm min	<b>TCP / IP</b>	Telnet, HTTP
125 W	+51 dBm min	<b>UDP</b>	SNMP
150 W	+51.8 dBm min	<b>Environmental</b>	
175 W	+52.4 dBm min	Operating temperature	-40 °C to +55 °C
200 W	+53 dBm min	Relative humidity	100% condensing
Note: Output power in bands 4 & 5 is reduced by 0.5 dB		Altitude	10,000 ft., (3,000m) ASL
IMD3 (2 carriers, 30 kHz apart, 9 dB BO/carrier)	-32 dBc max	<b>Mechanical</b>	
Level stability with ALC	± 0.5 dB	Size	Weight
Output power detector range	Rated power to -20 dB	19.5”(L) x 10.0”(W) x 8.4”(H)	32 lbs
		495 mm x 254 mm x 213 mm	14.5 kg

Specifications are subject to change without notice



235 Vineyard Court  
Morgan Hill, CA 95037  
Tel. +1 408.782.5911  
Fax: +1 408.782.5912  
www.terrasatinc.com

C-Band IBUC Hi Pwr Data Sheet 07/31/09