

IBUC Advantages

DC power can be supplied via IFL coax or separate DC connector for 5W through 25 W models.

Full C-band option (Band 5) offers 5850 to 6725 MHz frequency range in a single BUC.

Integrated BUC/SSPA packaging for higher performance and reliability.

Guaranteed rated output power across the entire operating temperature range and frequency band.

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

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

AGC or ALC circuits hold gain or output level constant.

16dB 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.
- Handheld terminal.

1+1 switching logic built into IBUC eliminates ex-



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.

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

For additional information contact Terrasat Sales at +1 408-782-5911 or by Email: Sales@Terrasatinc.com.

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C-Band IBUC Block Upconverter Specifications

L-Band Input

Frequency range	
Band 1	950 to 1525 MHz
Band 2	975 to 1275 MHz
Band 3	1150 to 1450 MHz
Band 4	950 to 1750 MHz
Band 5	975 to 1850 MHz
VSWR / Impedance	1.5:1 max / 50 ohms
Connector	Type N female
Input power detector range	-55 to -20 dBm

Gain

Small Signal Gain (L-band to RF) with attenuator set to 0 dB

5W	68 dB min
10W	71 dB min
20W	74 dB min
25W	75 dB min
40W	77 dB min
50W	78 dB min
60W	79 dB min
80W	80 dB min

Attenuator range 16 dB variable in 0.1dB steps

Gain flatness 5 W to 50 W 60W to 80W & Band 4&5

Full band	3 dB p-p max	4dB p-p max
36 MHz	1dB p-p max	1 dB p-p max
1 MHz	0.25 dB p-p	0.25 dB p-p

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

Frequency range	
Band 1 Standard C-Band	5850 to 6425 MHz
Band 2 Palapa/ST-1	6425 to 6725 MHz
Band 3 Insat	6725 to 7025 MHz
Band 4 Extended C-Band	5850 to 6650 MHz
Band 5 Full C-Band	5850 to 6725 MHz
Interface	CPR-137G or N-f
VSWR	1.5:1 max
Rated output power (P1dB across temperature range and freq. band)	
5W	+37 dBm min
10W	+40 dBm min
20W	+43 dBm min
25W	+44 dBm min
40W	+46 dBm min
50W	+47 dBm min
60W	+47.8 dBm min
80W	+49 dBm min

Note: For 40W and above, Output power in bands 4 & 5 is reduced by 0.5 dBm

IMD3 (2 carriers, 30 kHz apart, 9dB BO/carrier) -32 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	Complies with EN 301 443

SSB Phase Noise

	External reference	IBUC
10Hz	-120 dBc/Hz	-35 dBc/Hz
100Hz	-130 dBc/Hz	-70 dBc/Hz
1 kHz	-143 dBc/Hz	-80 dBc/Hz
10 kHz	-152 dBc/Hz	-90 dBc/Hz
100kHz	-155 dBc/Hz	-100 dBc/Hz
1MHz	-155 dBc/Hz	-110 dBc/Hz

External Reference (multiplexed on TX IFL)

Frequency	10 MHz
Level	-12 to +5 dBm

Local Oscillator

LO Frequency	
Band 1	7375 MHz
Band 2	7700 MHz
Band 3	8175 MHz
Band 4	7600 MHz
Band 5	7700 MHz

Sense Inverting

IBUC DC Supply

Multiplexed on TX IFL	5W, 10W, 20W, 25W
Connector	ACS02E14S-6P(553) or equivalent

Voltage / Current

	+24 ± 4 VDC	+48 ± 11 VDC	
5W	3.0A @ 24VDC	1.5A @ 48VDC	72W
10W	4.0A @ 24VDC	2.0A @ 48VDC	96W
20W	na	3.2A @ 48VDC	154W
25W	na	3.5A @ 48VDC	168W
40W	na	7.5A @ 48VDC	360W
50W	na	8.5A @ 48VDC	408W
60W	na	9.0A @ 48VDC	432W
80W	na	11.5A @ 48VDC	552W

Note: Option is available for floating 48VDC or for -48VDC. DC via coax is not available with these options installed.

Monitor and Control

FSK (multiplexed on TX IFL)

RS232/485

Handheld Terminal

TCP / IP Telnet, HTTP

UDP SNMP

Environmental

	<u>5 W to 40 W</u>	<u>50W to 80W</u>
Operating temperature	-40°C to +60°C	-40°C to +55°C
Relative humidity	100% condensing	
Altitude	10,000 ft., (3,000m) ASL	

Mechanical

	Size	Weight
5W, 10W	12.2"(L)x7.2"(W)x4.2"(H)	13 lbs
	310mm x 183mm x 107mm	5.8 kg
20-80W	12.2"(L)x7.2"(W)x7"(H)	18 lbs
	310mm x 183mm x 178mm	8 kg



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Specifications are subject to change without notice

C-Band IBUC Data Sheet 03/01/08