



Terrasat **IBUC** - High Power Ku-Band Intelligent Block Upconverter

IBUC Advantages

Integrated BUC/SSPA for higher performance and reliability.

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

Internal 10MHz reference option automatically switches to internal reference when external reference is not detected.

Low phase noise better than IESS308/309 requirements by a minimum of 5 dB.

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

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

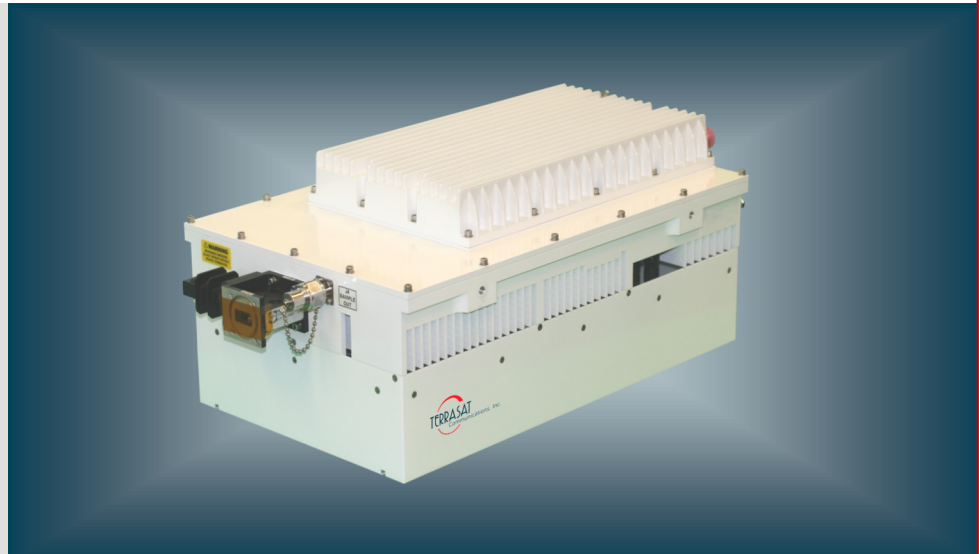
AGC or ALC circuits hold gain or output level constant.

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

Output sample port included.

Advanced user 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



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 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 time-stamped alarm history
- Simplified **monitoring** of terminal status

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
- User configurable thresholds and alarms

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

Terrasat **IBUC - High Power**

Ku-Band Intelligent Block Upconverter

Frequency range	RF	IF	SSB Phase Noise	External reference	IBUC
Band 1 Std Ku	14.00 to 14.50 GHz	950 to 1450 MHz	10 Hz	-115 dBc/Hz	-50 dBc/Hz
Band 2 Full Ku	13.75 to 14.50 GHz	950 to 1700 MHz	100 Hz	-140 dBc/Hz	-75 dBc/Hz
Band 3 Low Ku	12.75 to 13.25 GHz	950 to 1450 MHz	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
Input			External Reference (multiplexed on TX IFL)		
VSWR / Impedance	1.5:1 max / 50 Ohm		Frequency	10 MHz	
Input Connector	Type N female (50 Ohm)		Level	-12 to +5 dBm	
Input Connector options	Type F (75 Ohm), TNC (50 Ohm)		Internal Reference - optional		
Input power detector	-55 to -20 dBm		Local Oscillator Frequency		
Gain			Sense	Non-Inverting	
Small Signal Gain (L-band to RF) with attenuator set to 0 dB			Band 1	13050 MHz	
60 W	79 dB min		Band 2	12800 MHz	
80 W	80 dB min		Band 3	11800 MHz	
Attenuator range	16 dB variable in 0.1 dB steps		IBUC Power Supply		
Gain flatness			DC	AC	
Full band	4 dB p-p max		Voltage	42V min, 60V max 100 to 240 VAC	
36 MHz	1.5 dB p-p max		Power Consumption		
1 MHz	0.25 dB p-p		60 W	750 W	850 VA
Gain variation over temperature			80 W	780 W	900 VA
Open loop	3 dB p-p max		Monitor and Control		
With AGC	1 dB p-p max		Ethernet (HTTP, Telnet, SNMP),		
RF Output			RS232/485, Hand-held Terminal via MS-type connector,		
Interface	WR75 cover with groove		FSK multiplexed on TX IFL.		
VSWR	1.3:1 max		Environmental		
Rated output power (P1dB)			Operating temperature	-40°C to +55°C	
	Band 1 & 3	Band 2	Relative humidity	100% condensing	
60 W	+47.8 dBm min	+47.5 dBm min	Altitude	10,000 ft., (3,000 m) ASL	
80 W	+49.0 dBm min	+48.5 dBm min	Mechanical		
IMD3 (2 carriers, 3 dB TOBO)	-24 dBc max		Size	19.5 x 10 x 7.8 in.	
Level stability with ALC	±0.5 dB			495 x 254 x 198 mm	
Output power detector range	Rated power to -20 dB		Weight	32 lbs, 14.5 kg DC powered	
Power reading accuracy	±1.0 dB max.			33 lbs, 15 kg AC powered	
Spurious	In Band	-65 dBc			
	Out of Band	Complies with EN 301 428/430 and MIL-STD 188-164B			
Harmonics	-50 dBc max.				
Output Noise Power Density					
	TX < -78 dBm/Hz				
	RX < -145 dBm/Hz				

Specifications are subject to change without notice.

IBUC Hi Power Ku-Band Data Sheet 9/29/14