



IBUC - High Power X-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.

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

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

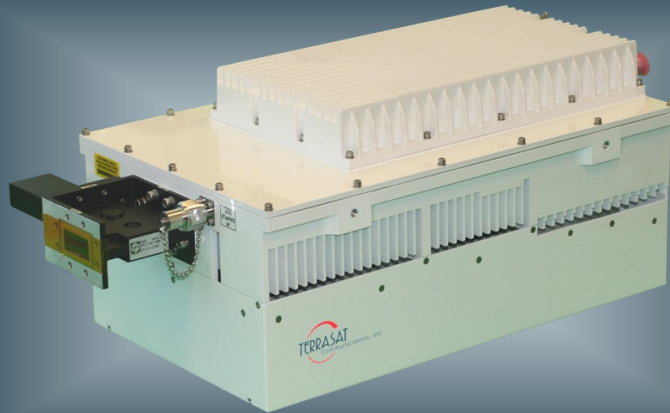
AGC or ALC circuits hold gain or output level constant.

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.

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

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Frequency range	RF	IF	SSB Phase Noise	External refer-	IBUC
	7900 to 8400 MHz	950 to 1450 MHz	10 Hz	-115 dBc/Hz	-55 dBc/Hz
Input			100 Hz	-140 dBc/Hz	-80 dBc/Hz
VSWR / Impedance	1.5:1 max / 50 Ohm		1 kHz	-150 dBc/Hz	-90 dBc/Hz
Input Connector	Type N female (50 Ohm)		10 kHz	-155 dBc/Hz	-95 dBc/Hz
Input Connector options	Type F (75 Ohm), TNC (50 Ohm)		100 kHz	N/A	-100 dBc/Hz
Input power detector range	-55 to -20 dBm		1 MHz	N/A	-110 dBc/Hz
Gain			External Reference (multiplexed on TX IFL)		
Small Signal Gain (L-band to RF) with attenuator set to 0 dB			Frequency	10 MHz	
100 W	81 dB min		Level	-12 to +5 dBm	
125 W	82 dB min		Internal Reference - optional		
150 W	83 dB min		Local Oscillator Frequency	6950 MHz	
175 W	83 dB min		Sense	Non-inverting	
Attenuator range	16 dB variable in 0.1 dB steps		IBUC Power Supply		
Gain flatness			Voltage	DC	42 V min, 60 V max
Full band	4 dB p-p max			AC	100 to 240 VAC , 100W to 125W
36 MHz	1.5 dB p-p max				200 to 240 VAC , 150W to 175W
1 MHz	0.25 dB p-p		Power Consumption	DC	AC
Gain variation over temperature			100 W	770 W	850 VA
Open loop	3 dB p-p max		125 W	880 W	950 VA
With AGC	1 dB p-p max		150 W	1100 W	1250 VA
			175 W	1200 W	1300 VA
RF Output			Monitor and Control		
Interface	CPR-112G		Ethernet (HTTP, Telnet, SNMP),		
VSWR	< 1.3:1 max		RS232/485, Hand-held Terminal via MS-type connector,		
Rated output power (P1dB)			FSK multiplexed on TX IFL.		
100 W	+50 dBm min		Environmental		
125 W	+51 dBm min		Operating temperature	-40°C to +55°C	
150 W	+51.8 dBm min		Relative humidity	100% condensing	
175 W	+52.4 dBm min		Altitude	10,000 ft., (3,000 m) ASL	
IMD3 (2 carriers, 3 dB TOBO)	-27 dBc max		Mechanical		
Level stability with ALC	±0.5 dB		Size	19.5x10x7.8 in.	
Output power detector range	Rated power to -20 dB			495x254x198 mm	
Power reading accuracy	± 1.0 dB max.		Weight	32 lbs, 14.5 kg DC powered	
Spurious	In Band	-65 dBc		33 lbs, 15 kg AC powered	
	Out of Band	Complies with MIL-STD 188-164B			
Harmonics	-60 dBc max.				
Output Noise Power Density					
	TX Band	< -75 dBm/Hz			
	RX Band (with RX reject filter)	< -165 dBm/Hz			
Mute	-70 dBc max.				
AM-PM Conversion	< 3.0 deg/dB @ rated power				
Group Delay					
Linear	0.03 ns/MHz				
Parabolic	0.003 ns/MHz ²				
Ripple	1 ns p-p over any 36 MHz				

Specifications are subject to change without notice.

IBUC Hi Power X-Band Data Sheet 2/29/16



315 Digital Drive, Morgan Hill, CA 95037
Tel. +1 408-782-5911 Fax +1 408-782-5912
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