



# IBUC G

## GaN 150W / 200W / 200W+

### Ku-Band Intelligent Block Upconverter

#### IBUC Advantages

Integrated BUC/SSPA for higher performance and reliability.

Integral AC power supply.

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

Low phase noise exceeds 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.

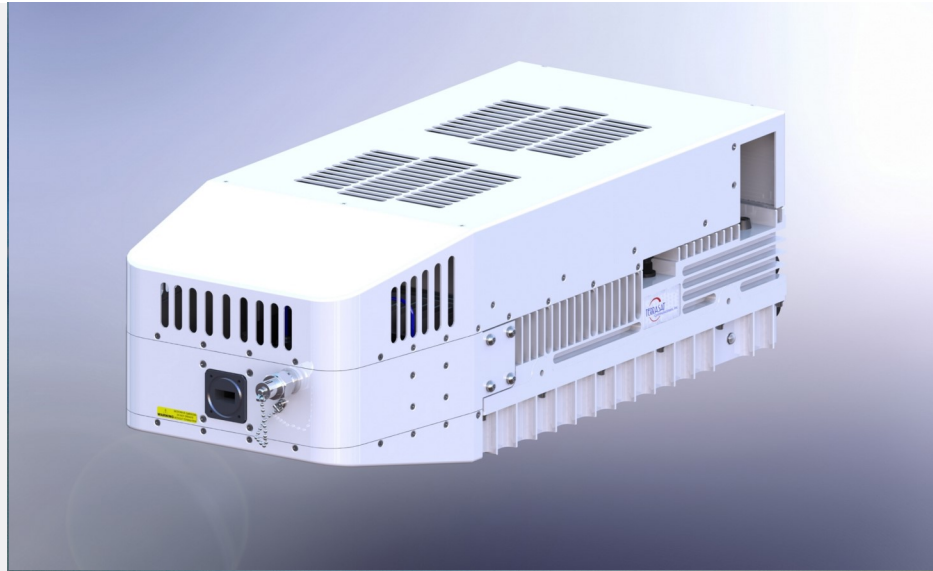
AGC or ALC circuits hold gain or output level constant.

30 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 via RJ45 user interface connector
- SNMP
- TELNET through TCP/IP
- FSK through TX IFL cable
- RS232/485 serial port
- Hand-held terminal



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

**IBUC G** 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 G** 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](mailto:Sales@Terrasatinc.com).  
315 Digital Drive, Morgan Hill, CA 95037 [www.terrasatinc.com](http://www.terrasatinc.com)

## IBUC G - GaN 150W / 200W / 200W+ Ku-Band Intelligent Block Upconverter

Frequency range	RF	IF	SSB Phase Noise	External reference	IBUC		
Band 1 Std Ku-Band	14.00 to 14.50 GHz	950 to 1450 MHz	10 Hz	-115 dBc/Hz	-50 dBc/Hz		
Band 2 Full Ku-Band	13.75 to 14.50 GHz	950 to 1700 MHz	100 Hz	-140 dBc/Hz	-75 dBc/Hz		
Band 3 Low Ku-Band	12.75 to 13.25 GHz	950 to 1450 MHz	1 kHz	-150 dBc/Hz	-85dBc/Hz		
<b>Input</b>			10 kHz	-155 dBc/Hz	-90 dBc/Hz		
VSWR / Impedance	1.5:1 max / 50 Ohm		100 kHz	n/a	-95 dBc/Hz		
Input Connector	Type N female (50 Ohm)		1 MHz	n/a	-110 dBc/Hz		
Input Connector options	Type F (75 Ohm), TNC (50 Ohm)						
Input power detector	-55 to -20 dBm						
<b>Gain</b>			<b>External Reference</b> (multiplexed on TX IFL)				
Small Signal Gain (L-band to RF) with attenuator set to 0 dB			Frequency	10 MHz			
150W / 200W / 200W+	83 dB min		Level	-12 to +5 dBm			
Attenuator range	30 dB variable in 0.1 dB steps		Internal Reference - optional				
Gain flatness			<b>Local Oscillator Frequency</b>				
Full band	4 dB p-p max		Sense	Non-Inverting			
36 MHz	1.5 dB p-p max		Band 1	13050 MHz			
1 MHz	0.25 dB p-p		Band 2	12800 MHz			
Gain variation over temperature			Band 3	11800 MHz			
Open loop	3 dB p-p max		<b>IBUC Power Supply</b>				
With AGC	1 dB p-p max		Voltage	AC	200 to 240 VAC		
<b>RF Output</b>			<b>Power Consumption</b>				
Interface	WR75 cover with groove			<u>150W</u>	<u>200W</u>	<u>200W+</u>	
VSWR	1.3:1 max			Bands 1&2	Bands 1&2	Band 3	
Output power	<u>150W</u>	<u>200W</u>	<u>200W+</u>				
	Bands 1 & 2	All Bands	Bands 1 & 2				
$P_{sat}$ (typ)	+51.8 dBm	+53 dBm	+53 dBm	at $P_{lin}$	1150 VA	1300VA 1200VA	1400 VA
$P_{lin}$ (min)	+50 dBm	+51 dBm	+52 dBm	at $P_{sat}$	1300 VA	1500VA 1400VA	1500 VA
	(100 W)	(125W)	(160W)				
$P_{lin}$ is the maximum linear power as defined by MIL STD 188-164B							
Level stability with ALC	±0.5 dB		<b>Monitor and Control</b>				
Output power detector range	Rated power to -20 dB		<b>Ethernet</b> (HTTP, Telnet, SNMP) via RJ45 connector,				
Power reading accuracy	±1.0 dB max.		<b>RS232/485, Hand-held Terminal</b> via MS-type connector,				
Spurious @ $P_{lin}$			<b>FSK</b> multiplexed on TX IFL.				
In Band	-65 dBc		<b>Environmental</b>				
Out of Band	Complies with EN 301 428/430 and MIL-STD 188-164B		Operating temperature				
Harmonics @ $P_{lin}$	-60 dBc max.		-40°C to +55°C				
Output Noise Power Density			Relative humidity				
TX	< -73 dBm/Hz		100% condensing				
RX	< -150 dBm/Hz		Altitude				
			10,000 ft., (3,000 m) ASL				
			<b>Mechanical</b>				
			Size	23 x 10 x 7.4 in.			
				584 x 254 x 188 mm.			
			Weight	37 lbs, 17 kg.			

Specifications are subject to change without notice.

IBUC G Ku-Band Data Sheet 150/200W/200W+ 08/21/17



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