



## IBUC $\pi$

### Ku-Band Intelligent Block Upconverter

#### IBUC Advantages

Integrated BUC/SSPA for higher performance and reliability.

Upgraded with a weatherized RJ45 M&C interface connector for simplified cable installation.

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.

30 dB Use adjustable gain in 0.1 dB steps preserves modem dynamic range.

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 **IBUC  $\pi$**  has all of the advanced **IBUC** features and the upgraded RJ45 M&C connector.

**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.

# IBUC R

## 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
<b>Input</b>					<b>External Reference</b> (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			<b>Local Oscillator Frequency</b>	
<b>Gain</b>					Sense Non-Inverting	
Small Signal Gain (L-band to RF) with attenuator set to 0 dB					Band 1 13050 MHz	
					Band 2 12800 MHz	
					Band 3 11800 MHz	
60 W		79 dB min				
80 W		80 dB min				
100 W		81 dB min				
125W (Band 3)		82 dB min				
Attenuator range		30 dB variable in 0.1 dB steps				
Gain flatness						
Full band		4 dB p-p max				
36 MHz		1.5 dB p-p max				
1 MHz		0.25 dB p-p				
Gain variation over temperature						
Open loop		3 dB p-p max				
With AGC		1 dB p-p max				
<b>RF Output</b>					<b>IBUC Power Supply</b>	
Interface		WR75 cover with groove			DC AC	
VSWR		1.5:1 max			Voltage 42VDC min, 60VDC max 100 to 240 VAC	
Rated output power (P1dB)		Band 1 & 3	Band 2	Power Consumption		
60 W		+47.8 dBm min	+47.5 dBm min	60 W 750 W 850 VA		
80 W		+49.0 dBm min	+48.5 dBm min	80 W 780 W 900 VA		
100 W		+50.0 dBm min	+49.5 dBm min	100 W (band 3) 830 W 950 VA		
125 W (Band 3)		+51.0 dBm min		100 W (bands 1&2) 1150 VA		
				125 W (band 3) 1200 VA		
				<b>Monitor and Control</b>		
				<b>Ethernet</b> (HTTP, Telnet, SNMP), via RJ45 connector,		
				<b>RS232/485, Hand-held Terminal</b> via MS-type connector,		
				<b>FSK</b> multiplexed on TX IFL.		
				<b>Environmental</b>		
				Operating temperature -40°C to +55°C		
				Relative humidity 100% condensing		
				Altitude 10,000 ft., (3,000 m) ASL		
				<b>Mechanical</b>		
				DC powered AC powered		
				60-80 W 16.2 x 10 x 7.2 in. 16.2 x 10 x 7.4in.		
				& 100W Band 3 32 lbs 33 lbs		
				100 W Bands 1 & 2 23 x 10 x 7.4 in.		
				& 125 W Band3 37 lbs		
				(dimensions do not include isolators:		
				60-80W and 100W Band 3)		

Specifications are subject to change without notice.

IBUC R Ku-Band Data Sheet 11/28/17