

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 User-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 \mathcal{R}** 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

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		
Small Signal Gain (L-band to RF) with attenuator set to 0 dB			Non-Inverting		
60 W	79 dB min		Band 1	13050 MHz	
80 W	80 dB min		Band 2	12800 MHz	
100 W	81 dB min		Band 3	11800 MHz	
125W (Band 3)	82 dB min		IBUC Power Supply		
Attenuator range	30 dB variable in 0.1 dB steps		DC		
Gain flatness			AC		
Full band	4 dB p-p max		Voltage	42VDC min, 60VDC max	
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		100 W (band 3)	830 W	950 VA
With AGC	1 dB p-p max		100 W (bands 1&2)	1150 VA	
RF Output			125 W (band 3)	1200 VA	
Interface	WR75 cover with groove		Monitor and Control		
VSWR	1.5:1 max		Ethernet (HTTP, Telnet, SNMP), via RJ45 connector,		
Rated output power (P1dB)	Band 1 & 3	Band 2	RS232/485, Hand-held Terminal via MS-type connector,		
60 W	+47.8 dBm min	+47.5 dBm min	FSK multiplexed on TX IFL.		
80 W	+49.0 dBm min	+48.5 dBm min	Environmental		
100 W	+50.0 dBm min	+49.5 dBm min	Operating temperature		
125 W (Band 3)	+51.0 dBm min		-40°C to +55°C		
IMD3 (2 carriers, 3 dB TOBO)	-24 dBc max		Relative humidity		
Level stability with ALC	±0.5 dB		100% condensing		
Output power detector range	Rated power to -20 dB		Altitude		
Power reading accuracy	±1.0 dB max.		10,000 ft., (3,000 m) ASL		
Spurious	In Band	-65 dBc	Mechanical		
	Out of Band	Complies with EN 301 428/430 and MIL-STD 188-164B	DC powered		
Harmonics	-50 dBc max.		AC powered		
Output Noise Power Density			60-80 W	16.2 x 10 x 7.2 in.	16.2 x 10 x 7.4 in.
	TX	< -74 dBm/Hz	& 100W Band 3	32 lbs	33 lbs
	RX	< -145 dBm/Hz	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



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