

Low Ku-Band IBUC Intelligent Block Upconverter

IBUC Advantages

Special low Ku frequency band supports 12.75 to 13.25 GHz band.

Low profile fan shroud on 12W and above.

DC power can be supplied via IFL coax or separate DC connector for 4W through 16W.

Integrated BUC/SSPA packaging for higher performance and reliability.

Guaranteed rated output power across the entire operating temperature range and frequency band.

Low phase noise exceeds IESS308/309 requirements by a minimum of 10dB.

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

AGC or ALC circuits hold gain or output level constant.

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

Advanced customer interfaces:

- TCP/IP HTTP with embedded web pages.
- SNMP
- TELNET through TCP/IP
- FSK through TX IFL cable.
- RS232/485 serial port.
- Handheld terminal

1+1 switching logic built into IBUC.



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 the **IBUC's** 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 alarm history.
- Simplified **troubleshooting** of terminal faults.

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
- Alarm history

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

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Low Ku-Band IBUC Block Upconverter Specifications

L-Band Input

Frequency range	950 to 1450 MHz
VSWR / Impedance	1.5:1 max / 50 ohms
Connector	Type N female
Input power detector range	-55 to -20 dBm

Gain

Small Signal Gain (L-band to RF) with attenuator set to 0 dB		
4W	67 dB min	
8W	70 dB min	
12W	72 dB min	
16W	73 dB min	
20W	74 dB min	
25W	75 dB min	
30W	76 dB min	
40W	77 dB min	
50W	78 dB min	
Attenuator range	16 dB variable in 0.1dB steps	
Gain flatness	<u>4W to 25W</u>	<u>30W to 50W</u>
Full band	3 dB p-p max	4dB p-p max
36 MHz	1dB p-p max	1dB p-p max
1 MHz	0.25 dB p-p	0.25 dB p-p
Gain variation over temperature		
Open loop	3 dB p-p max	4 dB p-p max
With AGC	1 dB p-p max	1 dB p-p max

RF Output

Frequency range	12.75 to 13.25 GHz	
Interface	WR75 UG cover with groove	
VSWR	1.5:1 max	
Rated output power (P1dB across temperature range and freq. band)		
4W	+36 dBm min	
8W	+39 dBm min	
12W	+40.8 dBm min	
16W	+42 dBm min	
20W	+43 dBm min	
25W	+44 dBm min	
30W	+44.8 dBm min	
40W	+46 dBm min	
50W	+47 dBm min	
IMD3 (2 carriers, 30 kHz apart, 9dB BO/carrier)	-30 dBc max	
Level stability with ALC	± 0.5 dB	
Output power detector range	Rated power to -20 dB	
Power reading accuracy	± 1.0 dB max.	
Spurious	Complies with EN 301 430	
SSB Phase Noise		
Offset	External refer-	IBUC
10Hz	-120 dBc/Hz	-35 dBc/Hz
100Hz	-130 dBc/Hz	-65 dBc/Hz
1 kHz	-143 dBc/Hz	-75 dBc/Hz
10 kHz	-152 dBc/Hz	-85 dBc/Hz
100kHz	-155 dBc/Hz	-95 dBc/Hz
1MHz	-155 dBc/Hz	-110 dBc/Hz

External Reference (multiplexed on TX IFL)

Frequency	10 MHz
Level	-12 to +5 dBm

Local Oscillator

LO Frequency	14200 MHz
Sense	Inverting

IBUC DC Supply

Multiplexed on TX IFL	4W, 8W, 12W, 16W		
Connector	ACS02E14S-6P(553)		
Voltage / Current			
	+24 ± 4 VDC	+48 ± 11 VDC	
4W	3.2A @ 24VDC	1.6A @ 48VDC	76.8W
8W	5.0A @ 24VDC	2.5A @ 48VDC	120W
12W	na	3.0A @ 48VDC	144W
16W	na	3.5A @ 48VDC	168W
20W	na	6.0A @ 48VDC	288W
25W	na	6.5A @ 48VDC	312W
30W	na	9.0A @ 48VDC	432W
40W	na	10.0A @ 48VDC	480W
50W	na	11.0A @ 48VDC	528W

Monitor and Control

FSK (multiplexed on TX IFL)

RS232/485

Handheld Terminal

TCP / IP	Telnet, HTTP
UDP	SNMP

Environmental

	<u>4W to 25W</u>	<u>30W to 50W</u>
Operating temperature	-40°C to +60°C	-40°C to +55°C
Relative humidity	100% condensing	
Altitude	10,000 ft (3,000m) ASL	

Mechanical

	Size	Weight
4W/8W	12.2"(L)x7.2"(W)x4.2"(H)	13 lbs
	310mm x 183mm x 107mm	5.8 kg
12-50W	12.2"(L)x7.2"(W)x7"(H)	17 lbs.
	310mm x 183mm x 178mm	8 kg

Specifications are subject to change without notice



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