

IBUC 2 DBS-Band Intelligent Block Upconverter

IBUC Advantages

Integrated BUC/SSPA for higher performance and reliability.

DC power can be supplied via IFL coax or separate DC connector for 5 W through 8 W models.

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.

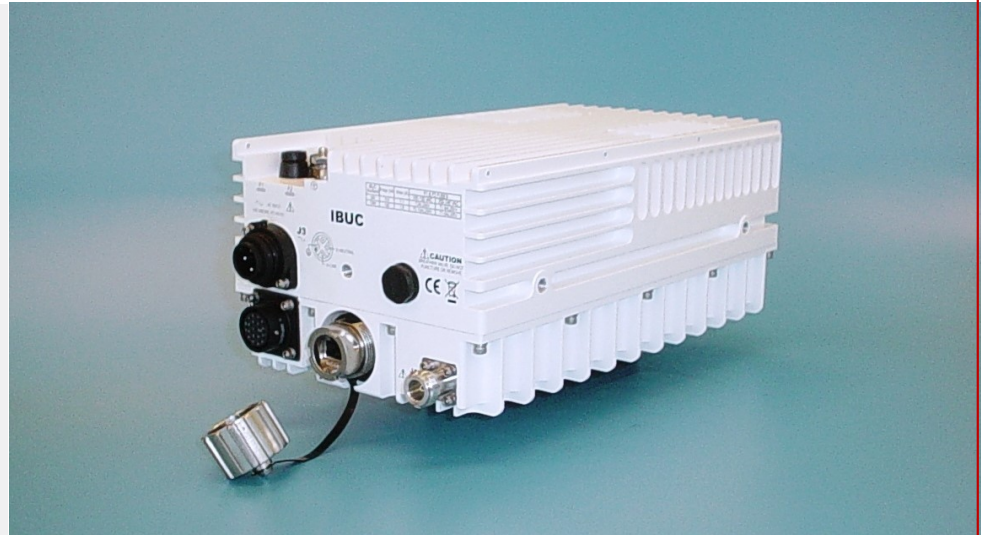
Embedded Web pages provide management for small networks using any Web browser.

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 via RJ-45 connector.
- SNMP
- TELNET through TCP/IP
- FSK through TX IFL cable
- RS232/485 serial port
- Hand-held terminal



The latest evolution of the **IBUC** has all of the advanced features and reliability of the original **IBUC** in a new, more compact package.

IBUC 2 offers significant benefits:

- High performance in a compact, cost effective package
- Simple design and installation
- Simplified 1+1 configuration

New interfaces connect you to extensive M&C facilities for network management or local access. This powerful 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 2** 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 2** are internal AGC and ALC functions that satisfy demanding applications with stringent specifications.

IBUC 2 DBS-Band Intelligent Block Upconverter

Frequency range	RF	IF
Band 1	17.3 to 18.1 GHz	950 to 1750 MHz
Band 2	18.1 to 18.4 GHz	1150 to 1450 MHz

Input

VSWR / Impedance	1.5:1 max / 50 Ohm
Input Connector	Type N female (50 Ohm)
Input Connector options	Type F (75 Ohm), TNC (50 Ohm)
Input power detector	-55 to -20 dBm

Gain

Small Signal Gain (L-band to RF) with attenuator set to 0 dB

3 W	66 dB min
5 W	68 dB min
8 W	70 dB min
10 W	71 dB min
20 W	74 dB min
25 W	75 dB min

Attenuator range 30 dB variable in 0.1 dB steps

Gain flatness	Band 1	Band 2
Full band	4 dB p-p max	3 dB p-p max
36 MHz	1 dB p-p max	1 dB 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
With AGC	1 dB p-p max

RF Output

Interface	WR62 cover with groove
VSWR	1.5:1 max

Rated output power (P_{1dB})

3 W	+34.8 dBm min
5 W	+37 dBm min
8 W	+39 dBm min
10 W	+40 dBm min
20 W	+43 dBm min
25 W	+44 dBm min

IMD3 (2 carriers, 3 dB TOBO)	-23 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	-60 dBc max.
Harmonics	-50 dBc max
Output Noise Power Density	
	TX < -81 dBm/Hz
	RX < -150 dBm/Hz

SSB Phase Noise	External refer-	IBUC
10 Hz	-115 dBc/Hz	-47 dBc/Hz
100 Hz	-140 dBc/Hz	-72 dBc/Hz
1 kHz	-150 dBc/Hz	-82 dBc/Hz
10 kHz	-155 dBc/Hz	-87 dBc/Hz
100 kHz	n/a	-92 dBc/Hz
1 MHz	n/a	-110 dBc/Hz

External Reference (multiplexed on TX IFL)

Frequency	10 MHz
Level	-12 to +5 dBm
Internal Reference - optional	

Local Oscillator Frequency

Sense	Non-Inverting
Band 1	16350 MHz
Band 2	16950 MHz

IBUC Power Supply

	DC	AC
Voltage	48 ± 11 VDC	100 to 240 VAC

DC via coax available on 5 W and 8 W

Power Consumption

3 W	60 W	75 VA
5 W	95 W	120VA
8 W	130 W	150 VA
10 W	150 W	170 VA
20 W	280 W	320 VA
25 W	310 W	350 VA

Monitor and Control

Ethernet (HTTP, Telnet, SNMP) via RJ-45 connector,

RS232/485, Hand-held Terminal via MS-type connector,

FSK multiplexed on TX IFL.

Environmental

Operating temperature	-40°C to +55°C
Relative humidity	100% condensing
Altitude	10,000 ft., (3,000 m) ASL

Mechanical	DC powered	AC powered
3 W - 5 W	10.5 x 6 x 3.8 in. 9.3 lbs	10.5 x 6 x 4.2 in. 10.5 lbs
8 W - 20 W	10.5 x 6 x 5.2 in. 10.9 lbs	10.5 x 6 x 5.6 in. 11.9 lbs
25 W	10.5 x 6 x 5.7 in. 10.9 lbs	10.5 x 6 x 6.1 in. 11.9 lbs

Specifications are subject to change without notice.

IBUC2 DBS-Band Data Sheet 8/1/16



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