



Block Up Converter L to Ku-Band N-Type Female Connector, 10MHz Ext Reference, 4 to 50Watts Options, Redundant 1+1 Option Available



RADITEK can also supply:

- LNB (PLL)
- LNA
- Advanced Modem family with IP/Ethernet and other options.

Options include:

- Bands:
(Standard) 14.00-14.5GHz
(Extended) 13.75-14.5GHz
- L band interface: Type "N"
- Output power options:
4, 8, 12-50 Watts
- Input power options:
48VDC, 240VAC

BUC offers significant benefits:

- Low terminal cost
 - Simple design and installation
 - Superior RF performance
 - Simplified 1+1 configuration
- New interfaces connect you to the BUC'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 BUC 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

Raditek's range of Ku band BUCs (Block Up Converter) come in output powers from 4, 8, 12-50 watts in a single unit, permitting quick and straight forward Antenna mounting. Other models are available to 500W.

Available in standard (14-14.5GHz) and extended (13.75 to 14.5GHz) bands, and is designed to interface directly to the antenna feed or OMT.

The IF cable transports the L Band Signal, 10MHz External reference, and FSK signal (optional), M&C signal (optional) as well DC Power (24V). All these signals are multiplexed from the Modem to the BUC via the IFL cable.

All models available with integral AC power supply or separate DC power supply.

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

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

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

AGC or ALC circuits hold gain or output level constant.

16 dB 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
- RS232/485 serial port
- Hand-held terminal

1+1 switching logic built into BUC eliminates expensive external controller.

Order Examples: RBUC-L(950-1450M) to Ku(14.00-14.50)-Nf-ER10M-20W-1+1-t5

Description: (Block Up Converter, L Band(950-1450MHz) to Ku(14.00-14.50GHz), N-Type Female Connector, 10MHz External Reference, 20 Watts, Redundancy 1+1)

Additional Options: **L(950-1700M)** **Ku(13.75-14.50)** **Output Power (See Table Below)** **Redundant 1+1**

RBUC-LBand-Ku-Nf-ER10M-4-50W-1+1-t5

Specifications may be subject to change

11/18/12

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Ku-Band BUC Block Up Converter Specifications

L-Band Input

Frequency range		
Band 1	950 to 1450 MHz	
Band 2	950 to 1700 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		
4 W	67 dB min	
8 W	70 dB min	
12 W	72 dB min	
16 W	73 dB min	
20 W	74 dB min	
25 W	75 dB min	
30 W	76 dB min	
40 W	77 dB min	
50 W	78 dB min	
Attenuator range	16 dB variable in 0.1dB steps	
Gain flatness	4 W to 25 W	30 W to 50 W
Full band	3 dB p-p max	4 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	4 dB p-p max
With AGC	1 dB p-p max	1 dB p-p max
RF Output		
Frequency range		
Band 1	14.00 to 14.50 GHz	
Band 2	13.75 to 14.50 GHz	
Interface	WR75 UG cover with groove	
VSWR	1.5:1 max	
Rated output power (P1dB across temperature range and frequency 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 301 428	
Harmonics	-50 dBc max.	

SSB Phase Noise

Offset	External reference	IBUC
10 Hz	-120 dBc/Hz	-35 dBc/Hz
100 Hz	-130 dBc/Hz	-65 dBc/Hz
1 kHz	-143 dBc/Hz	-75 dBc/Hz
10 kHz	-152 dBc/Hz	-85 dBc/Hz
100 kHz	-155 dBc/Hz	-95 dBc/Hz
1 MHz	-155 dBc/Hz	-110 dBc/Hz

External Reference (multiplexed on TX IFL)

Frequency	10 MHz
Level	-12 to +5 dBm

Local Oscillator

LO Frequency	
Band 1	13050 MHz
Band 2	12800 MHz
Sense	Non-inverting

IBUC Power Supply

Voltage / Current	100 to 240 VAC or 48 ± 11 VDC
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Power Consumption

4 W	76.8 W
8 W	120 W
12 W	144 W
16 W	168 W
20 W	250 W
25 W	270 W
30 W	400 W
40 W	456 W
50 W	576 W

Monitor and Control

FSK (multiplexed on TX IFL)	
RS232/485	

Hand-held Terminal

TCP / IP	Telnet, HTTP
UDP	SNMP

Environmental	4 W to 25 W	30 W to 50 W
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) 310 mm x 183 mm x 107mm	13 lbs 5.8 kg
12-50W	12.2"(L) x 7.2"(W) x 7"(H) 310 mm x 183 mm x 178 mm	18 lbs. 8 kg

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Redundancy Kit Options

Transmit Redundancy Configuration –

Tx Redundancy Kit Includes 1:1 BUC Interface Unit, Waveguide Switch, 3 Waveguide Elbows, Termination, Mounting Plates to Support BUCs, Power Supplies and Switch System, Cabling between protection unit and BUCs, and TCP/IP Test Cable

Receive Redundancy Configuration –

Receive Redundant Kit Includes 1:1 Rx Interface with Mounting Bracket, Waveguide Switch, Waveguide Termination, Cables (2 RF & 1 Control) between interface unit and LNBs (10 ft), DC Y-Cables (2) for connecting the power supplies to the RX Interface unit (10 ft) and the BUCs (5 ft).

