

AnaCom's series of Ku-band ELSAT[®] Block-Upconverters (BUC) are designed for high-powered applications, featuring transmitter output levels up to 200 Watts in single or redundant configurations. These BUCs are ruggedly built for continuous outdoor duty in all types of environments. They are especially suitable for SCPC, MCPC, and DAMA applications.

The upconverter, power amplifier, monitor and control and power supply are included in a single enclosure and the only cabling required to the indoor equipment are IF cables. An ovenized, high stability crystal oscillator is used to lock the TX synthesizer. Additional temperature and aging compensation are provided by an onboard microprocessor.

Features

- ✓ Built in test facilities for improved maintainability and reduced dependence on external test equipment
- ✓ No indoor equipment is needed
- ✓ Frequency agile radio equipment
- ✓ Superior phase noise
- ✓ Flexible, universal power supply

Built In Test Equipment

To improve and simplify maintenance routines, an external terminal (or computer) can be connected to monitor a number of critical parameters without use of additional test equipment. These include:

- ✓ Transmitter power output level
- ✓ TX IF level
- ✓ Power supply voltages
- ✓ TX synthesizer loop voltages
- ✓ Internal Temperature
- ✓ Alarm Details

Controllable functions from the terminal include:

- ✓ TX frequency and gain (*ON/OFF feature*)

Benefits

- ✓ "Last Touch" controls allow for remote configuration or local (*manual*) configuration
- ✓ Flash memory means that the BUC always powers up with exactly the same operating conditions as when it last powered (*or was turned off*)
- ✓ Comprehensive maintenance features for operational effectiveness and minimum outages.
- ✓ Simple installation.

Comprehensive Monitor & Control

The ELSAT[®] BUC's Monitor & Control feature allows you to monitor and control the BUC on the same M&C bus with most indoor equipment such as modems and multiplexers. The Monitor & Control system can be used in combination with the unit's internal metering function to monitor operational parameters.

The M&C can be accessed remotely via-

Ethernet protocols:

- ✓ Internal Webpage
- ✓ Telnet
- ✓ SNMP
- ✓ AnaCom Supervisor 10

Serial protocols:

- ✓ RS-232
- ✓ RS-485
- ✓ AnaCom Supervisor 10

Compact, Functional Design

The upconverter, power amplifier, monitor and control and power supply are included in a single enclosure. The only cabling required to the indoor equipment are IF and power. An optional ovenized, high stability crystal oscillator can be used to lock the TX synthesizer. Additional temperature and aging compensation are provided by an onboard microprocessor.



ELSAT BUC®

Ku-Band Series

SPECIFICATIONS

	60W	80W	100W	125W	150W	200W	
TRANSMIT CHARACTERISTICS	1 dB COMPRESSION POINT (dBm)	47.8	49	50	51	51.8	53
	TX GAIN	78.8	80	81	82	82.8	84
	TX GAIN RANGE	20 dB variable in 1 dB steps via M&C					
	TX LEVEL FLATNESS	3 dBp-p max / 500 MHz					
	TX GAIN OVER TEMPERATURE	+/- 2 dB max					
	TX INPUT IF FREQUENCY	Ku = 950 to 1450 MHz		EKu = 950 to 1450 MHz		SEKu = 950 to 1,700 MHz	
	TX INPUT IF IMPEDANCE	50 ohms (75 ohms optional)					
	TX INPUT IF LEVEL	-25 dBm for rated output with nominal gain					
	TX L.O.	Ku = 13.050		Eku = 12.800		SEKu = 12.800	
	TX OUTPUT FREQUENCY	Ku = 14.0 to 14.50 GHz		Eku = 13.75 to 14.25 GHz		SEKu = 13.75 to 14.50 GHz	
	TX FREQUENCY STEP SIZE	1 MHz M&C controlled					
	TX PHASE NOISE	-60 dBc/Hz max @ 100Hz -90 dBc/Hz max @ 100KHz		-70 dBc/Hz max @ 1KHz -100 dBc/Hz max @ 1MHz		-80 dBc/Hz max @ 10KHz	
	INTERMOD	-25 dBc max (2 carriers, each 6dB backoff from P1dB rating)					
SPURIOUS	-55 dBc max out of band						

RECEIVE CHARACTERISTICS	RX INPUT FREQUENCY	10.95 - 12.75 GHz					
	RX FREQUENCY STEP SIZE	1 MHz M&C controlled					
	RX OUTPUT FREQUENCY	52 to 88 MHz					
	RX GAIN	75 to 100 dB M&C controlled					
	RX NOISE FIGURE	2.0 dB (160K) MAX / Optional 1.4 dB (110K), 1.2 dB (90K), and 1.0 dB (80K)					
	RX LINEARITY	-35 dBc intermod, MAX					
	RX PHASE NOISE	-60 dBc/Hz max @ 100Hz -90 dBc/Hz max @ 100KHz		70 dBc/Hz max @ 1KHz -100 dBc/Hz max @ 1MHz		-80 dBc/Hz max @ 10KHz	
	RX OUTPUT IMPEDANCE	50 ohms (75 ohms optional)					

SYSTEM	ALARM RELAYS	FORM C for Summary Alarm; Isolated					
	POWER	100 to 250 VAC; 47 to 63 Hz optional 48V DC					
	M&C	SNMP, HTTP, Telnet		Ethernet, RS-232, RS-485			

ENVIRONMENTAL	TEMPERATURE	-50 to +55°C operational -50 to +75°C storage					
	HUMIDITY	95% at 45C					
	ALTITUDE	6500 meters (21,500 ft) max					
	RAIN	20 inches per hour					
	WIND	150 miles per hour					
	VIBRATION	1.0 g random operational, 2.5 g random survival					
	SHOCK	10 g operational, 40 g survival					

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POWER & DIMENSIONS	TYPICAL POWER CONSUMPTION (VA)	762	1179	1179	1539	1539	2832
	PRIME POWER RECOMMENDATION	1600	2400	2400	3100	3100	6200
	WEIGHT (lbs.) (kg.)	67 30	74 34	89 40	132 60	132 60	145 66
BUC SIZE	21.6" x 13.0" x 11.2" (549 x 330 x 285 mm)	21.6" x 13.0" x 12.2" (549 x 330 x 310 mm)		38.0" x 12.75" x 12.4" (965 x 330 x 318 mm)			

*all specifications subject to change

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