

AnaCom's series of Ku-band ELSAT[®] Block-Upconverters (BUC) are available in transmitter output levels up to 125 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 off (*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-

Serial protocols:

- ✓ RS-232
- ✓ RS-485
- ✓ FSK
- ✓ Supervisor 9

Ethernet protocols:

- ✓ HTTP
- ✓ Telnet
- ✓ SNMP
- ✓ Supervisor 9

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

	8W	16W	20W	23W	25W	32W	40W	50W	60W	80W	100W	125W
1 dB COMPRESSION POINT (dBm)	39	42	43	43.6	44	45	46	47	47.8	49	50	51
TX GAIN	65	68	69	69.6	70	71	72	73	73.8	75	76	77
TX GAIN RANGE	10 dB variable in 1 dB steps via M&C											
TX LEVEL FLATNESS	6 dBp-p max / 500 MHz											
TX GAIN OVER TEMPERATURE	+/- 2dB 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 GHz				EKu = 12.800 GHz				SEKu = 12.800 GHz			
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 PHASE NOISE	-60 dBc/Hz max @ 100Hz				-70 dBc/Hz max @ 1KHz				-80 dBc/Hz max @ 10KHz			
	-90 dBc/Hz max @ 100KHz				-100 dBc/Hz max @ 1MHz							
INTERMOD	-33 dBc max (2 carriers, each 9dB backoff from P1dB rating)											
SPURIOUS	-55 dBc max out of band											

Requirements	Provided on TXIF line by L-band modem
FREQUENCY	10 MHz (sine-wave)
INPUT POWER	-5 to +5 dBm (at input port)
PHASE NOISE	-125 dBc/Hz max @ 100Hz -135 dBc/Hz max @ 1KHz -140 dBc/Hz max @ 10KHz
INTERNAL REFERENCE OPTION	10 ⁻⁸ over rated temperature

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, FSK

TEMPERATURE	-50 to +55°C operational -50 to +75°C storage
HUMIDITY	95% at 45C
ALTITUDE	6,500 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

TYPICAL POWER CONSUMPTION (VA)	160	270	294	300	300	340	770	800	850	1430	1600	1640
PRIME POWER RECOMMENDATION	400	690	700	710	720	850	1700	1800	1900	3100	3500	3600
WEIGHT (lbs.)	25	35	41	41	41	38	64	64	64	120	129	142
(kg.)	11	16	19	19	19	17	29	29	29	54	59	64
BUC SIZE:	- 0W, 2W, 4W 21.6" x 9.0" x 7" (549 x 229 x 178 mm) - 8W 21.6" x 9.0" x 9.4" (549 x 229 x 239 mm) - 16W, 20W, 23W, 25W 21.6" x 9.0" x 10.8" (549 x 229 x 274 mm) - 32W 21.6" x 9.0" x 12.5" (549 x 229 x 317 mm) - 40W, 50W, 60W 21.6" x 13.0" x 11.2" (549 x 330 x 345 mm) - 80W, 100W, 125W 38.0" x 12.75" x 12.4" (965 x 330 x 318 mm)											

*all specifications subject to change

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