AnaCom, Inc.

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ELSAT® BUC

C Band

10W to 400W

EC SEC LMI-EC PC RC XC

AnaCom's series of C-band ELSAT® Block-Upconverters (BUCs) are designed for high-powered applications, featuring transmitter output levels up to 400 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 equipmentl
- 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 lost power *(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
C-Band Series

SPECIFICATIONS

		10W	20W	30W	40W	50W	60W	70W	80W	100W	125W	150W	180W	200W	300W	350W	400W
TRANSMIT CHARACTERISTICS	1 dB COMPRESSION POINT (dBm)	40	43	44.8	46	47	47.8	48.5	49	50	51	51.8	52.6	53	54.8	55.4	56
	TX GAIN	66	69	70.8	71	73	73.8	74.5	75	76	77	77.8	78.6	79	80.4	81.4	82
	TX GAIN RANGE	25 dB varible in 0.1 dB steps via M&C															
	TX LEVEL FLATNESS	±0.75 dB max at constant temperature over any 40 MHz ±1.5 dB max at constant temperature over full band															
	TX GAIN OVER TEMPERATURE	+/- 1.5 dB over full band															
	TX INPUT IF FREQUENCY	EC = 950 to 1525 MHz					SEC = 950 to 1825 MHz					LMI-EC = 950 to 1650 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.	EC = 4.9 GHz					SEC = 4.9 GHz					LMI-EC = 4.775 GHz					
	TX OUTPUT FREQUENCY	EC = 5.850 to 6.425 GHz PC = 6.425 to 6.725 GHz					SEC = 5.850 to 6.725 GHz RC = 5.975 to 6.475 GHz					LMI-EC = 5.725 to 6.425 GHz XC = 6.725 to 7.025 GHz					
	TX FREQUENCY STEP SIZE	1 MHz M&C controlled					(XC Band 500 KHz step size)										
	TX PHASE NOISE	-63 dBc/Hz max @ 100Hz -93 dBc/Hz max @ 100KHz					-73 dBc/Hz max @ 1KHz -103 dBc/Hz max @ 1MHz					-83 dBc/Hz max @ 10KHz					
	INTERMOD	-25 dBc max (2 carriers, each 6dB backoff from P1dB rating)															
	SPURIOUS	-55 dBc max out of band															

REFERENCE	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

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

		10W	20W	30W	40W	50W	60W	70W	80W	100W	125W	150W	180W	200W	300W	350W	400W
POWER & DIMENSIONS	TYPICAL POWER CONSUMPTION (VA)	125	229	280	390	394	398	570	572	762	1179	1179	1539	2832	2832	2832	2832
	PRIME POWER RECOMMENDATION	340	600	730	870	880	890	1200	1200	1600	2400	2400	3100	6200	620	6200	6200
	WEIGHT (lbs.)	31	37	40	42	54	64	64	64	64	120	142	140	140	207	207	207
	(kg.)	14	17	18	19	24	29	29	29	29	54	64	64	64	94	94	94

BUC SIZE: - 10W	21.6" x 9.0" x 9.4" (549 x 229 x 238 mm)
- 20W, 30W	21.6" x 9.0" x 10.3" (549 x 229 x 262 mm)
- 40W	21.6" x 9.0" x 11.4" (549 x 229 x 289 mm)
- 50W, 60W	21.6" x 9.0" x 12.5" (549 x 229 x 317 mm)
- 70W, 80W, 100W	21.6" x 13" x 11.2" (549 x 330 x 284 mm)
- 125W, 150W, 180W, 200W	34.5" x 12.75" x 12.4" (876 x 324 x 315 mm)
- 300W, 350W, 400W	34.5" x 25.5" x 12.36" (876 x 648 x 314 mm)

*all specifications subject to change 06/09/19 3887913

ANACOM, INC.
Phone: +1 408 519 2062 Fax: +1 408 519 2063
www.anacominc.com