Extended Ku-Band VSAT Transceiver Series

40 and 50 Watts

AnaSat® 40EKu

EKu 40-50

General Description

AnaCom's Extended Ku-Band VSAT transceivers integrate all necessary functions into a small, highly integrated out-door package which provides excellent reliability in a wide range of environments and functions. The up converter, down converter, power amplifier, monitor and control and power supply are included in a single enclosure and the only cabling required to the indoor equipment are the IF cables. The LNC connects to the transceiver with a single coaxial cable.

An ovenized, high stability crystal oscillator is used to lock the TX and RX synthesizers. The onboard microprocessor is used to give additional temperature and aging compensation. These transceivers are ruggedly built for continuous outdoor duty in all types of environments. They are especially suitable for SCPC, MCPC, and DAMA applications.

Features

- No indoor equipment is needed
- Built in test facilities for improved maintainability and reduced dependence on external test equipment
- Frequency agile radio equipment. Completely independent TX and RX frequency selection
- Superior phase noise
- Flexible and universal power supply

Flexible Applications

- Data distribution and collection
- Rural telecommunications
- Industrial networking
- LAN and WAN extensions
- Emergency link restoration
- Remote surveillance
- Broadcast
- Conventional voice traffic
- Point-of-Sales systems
- Video teleconferencing

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/RX IF input level
- Power supply voltages
- TX/RX synthesizer loop voltages
- Internal Temperature
- Alarm Details

Controllable Functions From The Terminal

- TX frequency and gain *(ON / OFF feature)*
- RX frequency and gain *(independent from TX)*

Comprehensive Monitor & Control

This powerful feature allows you to monitor and control the transceiver 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.

Benefits

- A family of products with significant commonality minimizes demands for spares and training
- "Last Touch" controls allow for remote configuration or local *(manual)* configuration
- Flash memory means that the transceiver 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

AnaCom, Inc.

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SPECIFICATIONS

		40 Watts	50 Watts
TRANSMIT CHARACTERISTICS	1 dB COMPRESSION POINT	46 dBm	47 dBm
	TX GAIN	79 dB	80 dB
	TX GAIN ADJUSTMENT RANGE	+6 to -20 dB M&C controlled	
	TX LEVEL FLATNESS	±1.5 dB / 36 MHz	
	TX GAIN STABILITY	±1.5 dB over temperature and frequency	
	TX INPUT IF FREQUENCY	52 to 88 MHz (optional 140 MHz)	
	TX INPUT IF IMPEDANCE	50 ohms (75 ohms optional)	
	TX INPUT IF LEVEL	-30 dBm ±10 dB (+20 dBm MAX)	
	TX OUTPUT FREQUENCY	13.75 to 14.25 GHz	
	TX FREQUENCY STEP SIZE	1 MHz M&C controlled	
	TX PHASE NOISE	100 Hz: -60 dBc, 1 KHz: -70 dBc 10 KHz: -80 dBc, 100 KHz: -90 dBc	
	TX LINEARITY	-30 dBc (2 carriers @ 9 dB back-off)	
	TX INSTANTANEOUS BANDWIDTH	±18 MHz	
RECEIVER (w/LNC) 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 INSTANTANEOUS BANDWIDTH	±18 MHz	
	RX GAIN	85 to 100 dB M&C controlled	
	RX GAIN VARIATION	±1.5 dB over temperature and frequency	
	RX NOISE FIGURE	1.9 dB (160°K), 1.4 dB (110°K) Optional	
	RX LINEARITY	-35 dBc intermod, MAX	
	RX PHASE NOISE	100 Hz: -60 dBc, 1 KHz: -70 dBc 10 KHz: -80 dBc, 100 KHz: -90 dBc	
	RX OUTPUT IMPEDANCE	50 ohms (75 ohms optional)	
SYSTEM	PORTS	1 RS-232, and 1 RS-485/RS-232 configurable	
	PROTOCOL	RS-232 port supports any "dumb terminal" or ASCII interface RS-485 port supports addressed packetized data per ANACOM Supervisor™ software specifications	
	ALARM RELAYS	FORM C for MAJOR and MINOR alarms; isolated	
	VISUAL INDICATORS	GREEN LED (flashing) indicates power is active RED LED indicates a summary alarm	
	POWER	100 to 242 VAC; 47 to 63 Hz	
ENVIRONMENTAL	TEMPERATURE	-40 to +50°C operational -60 to +75°C storage	
	ALTITUDE	15,000 ft (5,000 meters) 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	
	REUSABLE CUSTOM DESIGNED PACKAGING	Exceeds 1 meter 10 point drop method	
OTHER	TYPICAL POWER CONSUMPTION	767VA	910VA
	PRIME POWER RECOMMENDATION	1690VA	2000VA
	WEIGHT	67 lbs (30.5 kg)	67 lbs (30.5 kg)
	TRANSCEIVER SIZE — 40W, 50W	21.6" x 13" x 13.6" (549 x 330 x 353 mm)	
	LNC SIZE / WEIGHT	8.4" x 2.9" x 1.8" (213 x 74 x 46 mm) / 1.75 lbs (0.80 kg) max.	

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