

# KU-BAND VSAT TRANSCEIVER SERIES

0 dBm, 2 and 4 Watts



AnaSat® 0Ku

## GENERAL DESCRIPTION

AnaCom's 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
  - Point-of-Sales systems
  - Video teleconferencing
  - Conventional voice traffic

## 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

KU 0.4



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an evolution in communication

	0 dBm	2 WATTS	4 WATTS	
TRANSMIT CHARACTERISTICS	1 dB COMPRESSION POINT	0 dBm	33 dBm	36 dBm
	TX GAIN	30 dB	64 dB	67 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	14.0 to 14.5 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 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		

	41VA	69VA	91VA	
OTHER	PRIME POWER REQUIREMENT	100VA	175VA	225VA
	TYPICAL POWER CONSUMPTION	22 lbs (10 kg)	26 lbs (11.8 kg)	27 lbs (12.3 kg)
	TRANSCEIVER SIZE — 0 dBm, 2W, 4W	21.6" x 9.0" x 7.0" (549 x 229 x 178 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.		