Ku-Band VSAT Transceiver Series

8, 16, 20, 23 and 25 Watts

AnaSat® 8Ku

Ku 8-25

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

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AnaSat® Ku

SPECIFICATIONS

		8 Watts	16 Watts	20 Watts	23 Watts	25 Watts
TRANSMIT CHARACTERISTICS	1 dB COMPRESSION POINT	39 dBm	42 dBm	43 dBm	43.6 dBm	44 dBm
	TX GAIN	70 dB	73 dB	76 dB	77 dB	77 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 (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	PRIME POWER REQUIREMENT	400W	690W	700W	710W	720W
	WEIGHT	28 lbs (12.7 kg)	37 lbs (16.8 kg)	40 lbs (18 kg)	40 lbs (18 kg)	40 lbs (18 kg)
	TRANSCEIVER SIZE — 8W	21.6" x 9.0" x 11.6" (549 x 229 x 295 mm)				
	— 16W, 20W, 23W, 25W	21.6" x 12.9" x 13" (549 x 328 x 330 mm)				
	LNC SIZE / WEIGHT	8.4" x 2.9" x 1.8" (213 x 74 x 46 mm) / 1.2 lbs (0.54 kg) max.				

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