

# EXTENDED C-BAND VSAT TRANSCEIVER SERIES

100 Watts



AnaSat® 100EC

EC 100

## GENERAL DESCRIPTION

AnaCom's series of Extended C-band VSAT transceivers are available in several transmitter output levels up to 100 Watts, in single or redundant configurations. Output: Waveguide. These transceivers are ruggedly built for continuous outdoor duty in all types of environments. They are especially suitable for SCPC, MCPC, and DAMA applications.

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 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.

## FEATURES

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

## FLEXIBLE APPLICATIONS

- Rural telecommunications expansion
  - Data distribution and collection
  - 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

A powerful Monitor & Control 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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**100 WATTS**

<b>TRANSMIT CHARACTERISTICS</b>	1 dB COMPRESSION POINT	50 dBm
	TX GAIN	81 dB
	TX GAIN ADJUSTMENT RANGE	+6 to -20 dB M&C controlled
	TX LEVEL FLATNESS	±1.5 dB / 36 MHz
	TX GAIN VARIATION	±1.5 dB over frequency and temperature
	TX INPUT IF FREQUENCY	52 to 88 MHz
	TX INPUT IF IMPEDANCE	50 ohms (75 ohms optional)
	TX INPUT IF LEVEL	-30 dBm ±10 dB (+20 dBm MAX)
	TX OUTPUT FREQUENCY	5.850 to 6.425 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	-33 dBc (2 carriers @ 9 dB back-off)	
TX INSTANTANEOUS BANDWIDTH	±18 MHz	

<b>RECEIVER CHARACTERISTICS</b>	RX INPUT FREQUENCY	3.625 – 4.200 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 frequency and temperature
	RX NOISE FIGURE	0.9 dB (65K) MAX / Optional 0.63 dB (45K) and 0.49 dB (35K)
	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)

<b>SYSTEM</b>	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

<b>ENVIRONMENTAL</b>	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

<b>OTHER</b>	TYPICAL POWER CONSUMPTION	762VA
	PRIME POWER RECOMMENDATION	1620W
	WEIGHT	75 lbs (34.1 kg)
	TRANSCIVER SIZE — 100W	21.6" x 13" x 14" (549 x 330 x 356 mm)
LNC SIZE / WEIGHT	3.7" x 2.8" x 3.9" (91 x 71 x 99 mm) / 0.7 lbs (0.32 kg) max.	