

# INSAT C-BAND VSAT TRANSCEIVER SERIES

40, 50, 60 and 100 Watts



AnaSat® 50XC

XC 40-100

## GENERAL DESCRIPTION

AnaCom's series of INSAT C-band VSAT transceivers are available in transmitter output levels up to 100 Watts, in single or redundant configurations. Type N for 40W, Waveguide for 50-100W. 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
- Industrial networking
- LAN and WAN extensions
- Data distribution and collection
- 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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	40 WATTS	50 WATTS	60 WATTS	100 WATTS	
TRANSMIT CHARACTERISTICS	1 dB COMPRESSION POINT	46 dBm	47 dBm	47.8 dBm	50 dbm
	TX GAIN	77 dB	78 dB	78.8 dB	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	6.725 to 7.025 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				

RECEIVER (w/LNC) CHARACTERISTICS	RX INPUT FREQUENCY	4.500 – 4.800 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)				

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				

	870W	880W	890W	1620W	
OTHER	PRIME POWER REQUIREMENT	870W	880W	890W	1620W
	WEIGHT	45 lbs (20.5 kg)	57 lbs (25.9 kg)	57 lbs (25.9 kg)	75 lbs (34.1 kg)
	TRANSCEIVER SIZE — 40W	21.6" x 9.0" x 14" (549 x 229 x 356 mm)			
	— 50W, 60W	21.6" x 9.0" x 15" (549 x 229 x 381 mm)			
	— 100W	21.6" x 13.0" 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) / 2.0 lbs. (0.9 kg.) max.				