# 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

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# SPECIFICATIONS

| | 40 Watts | 50 Watts |
|---|---|---|
| 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<br>10 KHz: -80 dBc, 100 KHz: -90 dBc | |
| TX LINEARITY | -30 dBc (2 carriers @ 9 dB back-off) | |
| TX INSTANTANEOUS BANDWIDTH | ±18 MHz | |

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|---|---|
| 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<br>10 KHz: -80 dBc, 100 KHz: -90 dBc |
| RX OUTPUT IMPEDANCE | 50 ohms (75 ohms optional) |

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| PORTS | 1 RS-232, and 1 RS-485/RS-232 configurable |
| PROTOCOL | RS-232 port supports any "dumb terminal" or ASCII interface<br>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<br>RED LED indicates a summary alarm |
| POWER | 100 to 242 VAC; 47 to 63 Hz |

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| TEMPERATURE | -40 to +50°C operational<br>-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 |

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|---|---|---|
| TYPICAL POWER CONSUMPTION | 767VA | 910VA |
| PRIME POWER RECOMMENDATION | 1690VA | 2000VA |
| WEIGHT | 67 lbs<br>(30.5 kg) | 67 lbs<br>(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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SATCOM SERVICES

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