



# ACR500 MKIIs

V/UHF TACTICAL  
AIRBORNE TRANSCEIVER

## AIRBORNE TRANSCEIVER

The LANDSEC™ ACR500MKIIs offers highly reliable airborne combat net & data centric operations with autonomous COMSEC and TRANSEC in Voice & Data for military operations. The versatile data networking capability includes TDMA and CSMA waveforms providing data link functionality similar to LINK 16/22. All standard waveforms are user configurable enabling the user to define waveform functionality and optimise performance based on operational and mission requirements while the SDR architecture further provides for user downloadable waveforms ensuring future upgradeability. As a drop in replacement for the legacy ACR500 of all variants the ACR500MKIIs provides improved SWaP with enhanced radio capabilities in both Data & Voice.

The ACR500MKIIs is RTCA DO178B/DO254 level C certified and qualified for combat and utility roles on rotary and fixed wing platforms with reliable Doppler correction for supersonic operation.

---

# REUTECH

COMMUNICATIONS

a Reuert company

*tomorrow's solutions today*

## FEATURES

- Embedded Tactical Data Link for tactical data networking
- Innovative security module allows easy indigenising of Comsec and Transec features for full autonomy
- User configurable waveforms
- Seamless interoperability between all LANDSEC™ Tactical Radios (Base station, Vehicle, Manpack)
- Multiple digital form factors allows integration versatility Secure Automatic Own Position reporting (Internal GPS) Rebroadcast / Relay Capability
- Software downloadable Waveforms
- Modular design
- "Drop in" replacement for ACR500-L Light weight and compact
- Excellent co-location & EMC performance
- Sealed construction for water exposure and harsh environment protection
- Robust emergency power operation
- Qualified for super sonic jet, propeller aircraft and helicopter operations
- Homing Interface
- ATU Interface for tuned antenna support Extensive self test diagnostics
- RTCA DO178B/DO254 Level C certified Lightning protection

## GUARD RECEIVER CHARACTERISTICS

Operation independent of main receiver	
Frequencies	40.5 MHz, 121.5 MHz, 156.8 MHz and 243 MHz

## ENVIRONMENTAL CHARACTERISTICS

Operating Temperature	-40 to + 71 °C
Environmental standard	MIL-STD-810F
Supply variations	MIL-STD-704D
EMC	MIL-STD-461F
Altitude	60 000 ft
Lightning Protection	RTCA / DO-160E

## PHYSICAL CHARACTERISTICS

Size	384 x 206 x 142 including mounting tray
Weight	<9 Kg including mounting tray

Ground support equipment



AC500 Airborne Controller



## GENERAL CHARACTERISTICS

Frequency Range	30 to 407 MHz
Channel Spacing	8.33 kHz, 12.5 kHz and 25 kHz
Modulation Formats	AM (A3E), FM (F3E), NBFM, π/4 DQPSK
Voice Capabilities	Analog Voice, High Quality VOCODERS
Data Capabilities	High Speed Tactical Data Link with TDMA & CSMA
Data Rate	32 kbit/s and 64 kbit/s
ECCM	Fast Frequency Hopping, User Downloadable Algorithm Direct Sequence Spread Spectrum
Hop Bandwidth	Full Band, User Definable hop tables
Encryption	Embedded(Digital) or Downloadable Indigenous Algorithm
Power Supply	+28V DC Nominal
Control	MIL-STD-1553B / RS485 / RS422 / ARINC 429 (optional)
Preset Channels	100
Channel Selection Time	20 ms Typically
GPS Receiver	Internal or External

Wideband Airborne Blade Antenna with ATU



## RECEIVER CHARACTERISTICS

Sensitivity (10 dB SINAD)	< -109 dBm (FM), < -111 dBm (NBFM) < -101 dBm (30% AM)
Squelch	Noise Resistant SW based (Auto sensing)
IF/Image Rejection	> 90 dB
Co-location Rejection	+ 5 dBm PEP Unwanted 10% off Frequency

## TRANSMITTER CHARACTERISTICS

RF Output Power	32.4 W (PEP 80% AM), 20 W (CARRIER FM, NBFM)
Harmonics	< - 55 dBc
Spurious Emissions	Below 20 MHz < -110 dBc and above 450 MHz < -130 dBc, > 600 kHz from carrier < -75 dBc/Hz up to fc plus minus 10%
Noise Floor	30 MHz to 88 MHz, < -113 dBm/Hz (> 10 % off Frequency) 118 MHz to 400 MHz, < -120 dBm/Hz (> 10 % off Frequency)
Duty Cycle	1:5 (1 min TX, 4 min RX)
Protection	VSWR ∞:1, Power Reduction (Automatic), Over Temperature

REUTECH COMMUNICATIONS, A DIVISION OF REUTECH (PTY) LTD

PO Box 285  
New Germany 3610  
KwaZulu Natal  
South Africa

9 Valley View Road  
New Germany 3610  
KwaZulu Natal  
South Africa

+27 31 719 5700  
communications@reutech.com  
reutechcomms.com



**REUTECH**  
COMMUNICATIONS

a Reunert company

Reutech reserves the right to amend the characteristics of its products at any time.