URC-300™ Transceiver

Maximized RF Performance - Redefining Software Defined

Improved Ground-to-Air-Communications
The new software-defined URC-300 Transceiver improves ground-to-air communications with an architecture that enables users to upgrade fielded radios as new technology becomes available. The URC-300 retains a familiar user-friendly interface from the URC-200 (V2) as well as many of the legacy accessories.

- UHF / VHF AM Voice; ETSI EN 300 676-1 compliant for both 8.33kHz and 25kHz
- Separate DC input powers radio and charges battery
- Optional accessories to power from AC or DC source
- Built-in power conditioning replaces external filter accessories
- Smaller size and less weight than the URC-200 (V2); ideal for emergency grab-and-go
- Side-by-side radios fit into a 19” rack for rackmount applications
- Web-based configuration and monitoring tool for maintainers
- Redesigned user interface with large, user-friendly display

Future, Field-Upgradeable Enhancements
- FM voice
- 50W power amplifier
- Additional accessories for vehicular, shipboard, backpack and rackmount applications
- Cipher text (data)
- 30 - 90 MHz frequency band
- Remote Control Unit
- ED-137 VoIP Gateway Adapter
- Frequency agile cosite filter
- Adaptive Noise Reduction (ANR)

Additional Certifications
- MIL-461G EMI/EMC
- CE / RoHS / REACH / Radio Equipment Directive
- FCC

Significant RF improvement over the URC-200 (V2) LOS Transceiver

8.33kHz ETSI EN 300 676-1 Compliance and CE marking for global operations

Designed to meet stringent FAA requirements

Customizable, software-defined platform enables future field-upgradeable enhancements

Compatible with many legacy URC-200 family accessories
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Features
- Highly Versatile
  - VHF and UHF AM capability provides interoperability with a variety of RF systems
  - Adaptable to many applications, including manpack, rackmount, vehicular and intercom
- Remote Control
  - SNMP V3 command / control / BIT
- Intuitive Front Panel Control
  - All parameters are easy to set and access via the front-panel control and web-based GUI
- Web-based provisioning tool for maintainers

Receiver Characteristics
- Sensitivity:
  - AM PT: -102 dBm (-103.5 dBm typical)
  - Dynamic range: ≥ 115 dB
- Cross modulation: ≥ 80 dB
- Audio noise (S + N) / N: ≥ 40 dB
- Image response: ≥ 80 dB
- Spurious response: ≥ 70 dB (≥ 80 dB typical)
- Squelch range: Operator adjustable from below sensitivity to above -80 dBm
- Adjacent channel rejection:
  - 25 kHz: ≥ 60 dB, 8.33 kHz: ≥ 60 dB
- FM Broadcast Intermod Immunity: ≥ 95 dB

Transmitter Characteristics
- Output power:
  - 1 to 7 Watts (CW) user adjustable in 0.2 Watt steps; 10 Watts avg ± 1 dB @ 90% AM
- Modulation: 0 - 95% user adjustable
- Distortion: <10%
- Spurious output: < -85 dBc
- Harmonic output: < -75 dBc
- Adjacent Channel Power:
  - 25 kHz: ≤ 60 dB
  - 8.33 kHz: ≤ 50 dB

Physical Characteristics
- Weight:
  - 10.9 lbs. (less battery)
- Dimensions:
  - 10.6” x 8.5” x 3.5”H (without battery and handles)
- Environmental:
  - Ruggedized. Environmentally tested for humidity, vibration, shock/drop, rain/drip-proof, temperature and altitude. Meets relevant sections of MIL-STD-810H and is rated IP65 for ingress protection
- Temperature:
  - -20˚C to +55˚C (operating)
  - -50˚C to +70˚C (non operating)

Power Supply
- Battery:
  - BB-2590 (rechargeable)
- AC:
  - 90 – 260 VAC, 47 – 63 Hz
- DC:
  - 10.7 – 34 VDC
- Battery case dimensions:
  - 5.2”L x 10.3”W x 2.8”H
- Current drain (+28 VDC):
  - Transmit: <2.5 amps
  - Receive: <360 mA

Technical Specifications

General
- Frequency range:
  - VHF: 115 MHz to 150 MHz (AM)
  - VHF: 115 MHz to 173.995 MHz (Future FM)
  - UHF: 225 MHz to 399.995 MHz
- Tuning increments:
  - 25 kHz, 12.5 kHz, 5 kHz and 8.33 kHz
- Channel Spacing:
  - 25 kHz, 8.33 kHz, ETSI EN 300 676-1 Compliant
- Frequency stability:
  - <± 1 PPM
- 20 Channel Presets: Independently programmable transmit and receive

Graph: Optimal Line-of-Sight (LOS) transmission distances relative to aircraft altitude

Optimal Line-of-Sight (LOS) transmission distances relative to aircraft altitude

WEB-BASED PROVISIONING TOOL FOR MAINTAINERS