

URC-300[®] Transceiver

Maximized RF Performance - Redefining Software Defined



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

Remote Control Unit and VoIP Gateway Adapter for long-distance operation over IP Networks

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 8.33 and 25 kHz
- UHF/VHF FM Voice with optional 30-90 MHz frequency band extension
- Separate DC input powers radio and charges battery
- 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
- Built-in web server for maintainer configuration and monitoring
- Redesigned user interface with large, user-friendly display

Future, Field-Upgradeable Enhancements

- Additional accessories for vehicular, shipboard, backpack and rackmount applications
- Cipher text (data)
- Frequency agile cosite filter
- Adaptive Noise Reduction (ANR)

Additional Certifications

- MIL-STD-461G EMI/EMC
- CE / RoHS / REACH / Radio Equipment Directive
- NSN 5820-01-695-9351
- J/F 12: 13243

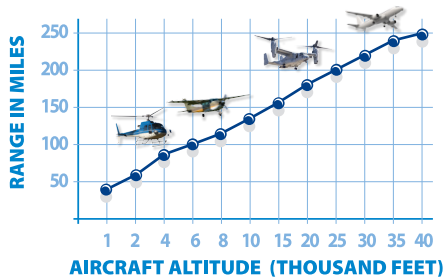
Accessories

- Two-channel Remote Control Unit
- ED-137 VoIP Gateway Adapter
- 50W power amplifier
- Additional accessories for vehicular, shipboard, backpack and rackmount applications
- Optional accessories to power from AC or DC source

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Features

- **Highly Versatile**
 - VHF/UHF AM and FM capability provides interoperability with a variety of RF systems
 - Adaptable to many applications including man-pack, rackmount, vehicular and shipboard
- **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**



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

Technical Specifications

General

- **Frequency range:**
 - VHF: 115 MHz to 150 MHz (AM)
 - VHF: 115 MHz to 173.995 MHz (FM)
 - UHF: 225 MHz to 399.995 MHz (AM and FM)
 - LVHF: 30 MHz to 90 MHz (FM)
- **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:**
 - $\leq \pm 1$ PPM
- **20 Channel Presets: Independently programmable transmit and receive**

Receiver Characteristics

- **Sensitivity:**
 - AM Voice: -103 dBm
 - FM Voice: -114 dBm
- **Receiver dynamic range: 118 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**
- **Distortion:**
 - AM: 4% (1-2 % typical)
 - FM: 6.5% (3.5 % typical)
- **Adjacent channel rejection:**
 - 25 kHz: ≥ 60 dB
 - 8.33 kHz (AM VHF only): ≥ 60 dB
- **FM Broadcast Intermod Immunity: ≥ 95 dB (applies to AM channels only)**

Transmitter Characteristics

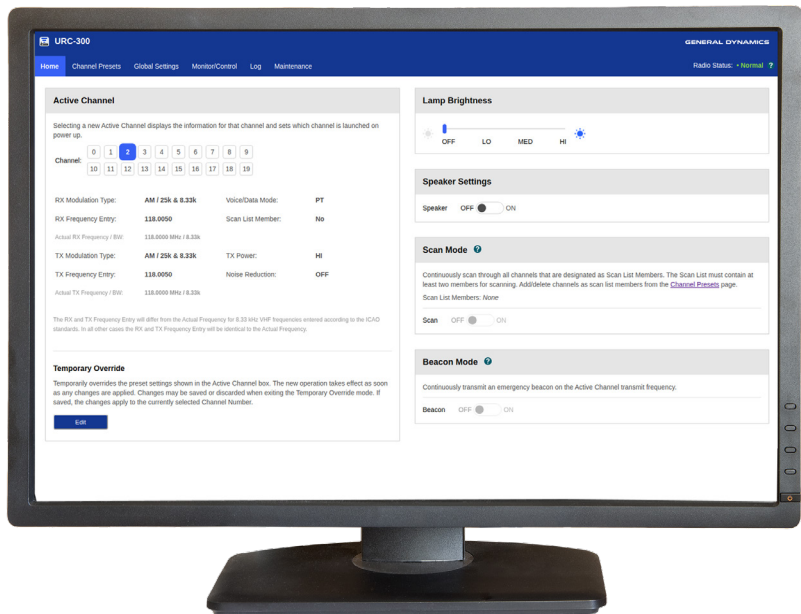
- **Output power:**
 - AM: 1 to 7 Watts (CW) user adjustable in 0.2 Watt steps; 10 Watts avg ± 1 dB @ 90% AM
 - FM: 1 to 10 Watts user adjustable in 0.2 Watt steps
- **AM Modulation: 0 to 95% user adjustable**
- **Distortion: $<10\%$ ($<2\%$ typical in AM)**
- **Spurious output: < -85 dBc**
- **Harmonic output: < -75 dBc**
- **Adjacent Channel Power:**
 - 25 kHz: ≤ 60 dB
 - 8.33 kHz (AM VHF only): ≤ 50 dB

Physical Characteristics

- **Weight:**
 - 10.9 lbs. (radio only)
- **Dimensions:**
 - 11.1" L x 8.4" W x 3.4" H (radio only without handles)
- **Environmental:**
 - Ruggedized. Environmentally tested for humidity, vibration, shock/drop, rain/drip-proof, temperature and altitude. Complies with sections of MIL-STD-810H and is rated IP65 for ingress protection
- **Temperature:**
 - -25°C to +55°C (operating)
 - -40°C to +70°C (non operating)

Power Supply

- **Battery:**
 - BB-2590 (rechargeable)
- **AC:**
 - 108 – 253 VAC, 47 – 63 Hz
- **DC:**
 - 10.7 – 34 VDC
- **Battery case dimensions:**
 - 5.2" L x 7.3" W x 2.8" H
- **Current drain (+28 VDC):**
 - Transmit: <2.5 amps
 - Receive: <360 mA



Web-based provisioning tool for maintainers.

GENERAL DYNAMICS
Mission Systems

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