

# URC-300<sup>®</sup> 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

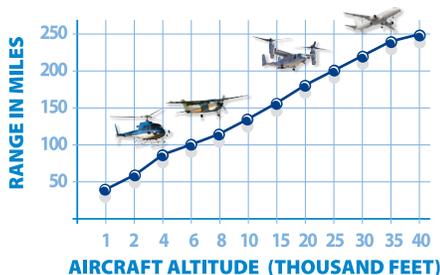
## Accessories

- 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

# URC-300<sup>®</sup> Transceiver

## 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

- **Image response:**  $\geq 80$  dB
- **Spurious response:**  $\geq 70$  dB ( $\geq 80$  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:  $\geq 60$  dB
  - 8.33 kHz (AM VHF only):  $\geq 60$  dB
- **FM Broadcast Intermod Immunity:**  $\geq 95$  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  $\pm 1$  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:  $\leq 60$  dB
  - 8.33 kHz (AM VHF only):  $\leq 50$  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:**
  - $-25^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$  (operating)
  - $-40^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$  (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

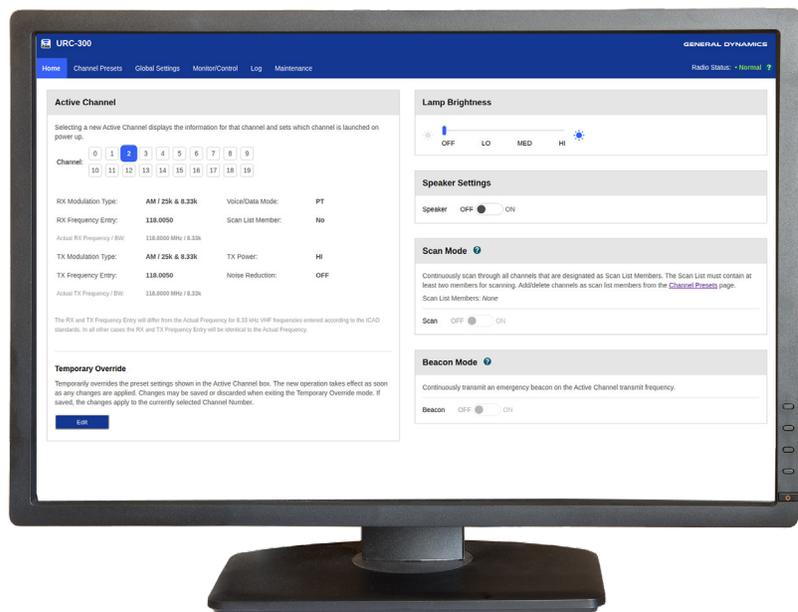
## Technical Specifications

### 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:**  $\geq 80$  dB
- **Audio noise (S + N) / N:**  $\geq 40$  dB



Web-based provisioning tool for maintainers.

## GENERAL DYNAMICS

Mission Systems

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PRI-1908-0008  
D-URC-300-12-0822