

# 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

## 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)

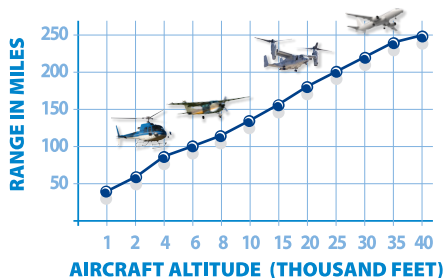
## Additional Certifications

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

# URC-300™ Transceiver

## 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**



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 (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:**
  - $\pm 1$  PPM
- **20 Channel Presets: Independently programmable transmit and receive**

## Receiver Characteristics

- **Sensitivity:**
  - AM PT: -102 dBm (-103.5 dBm typical)
  - Dynamic range:  $\geq 115$  dB
- **Cross modulation  $\geq 80$  dB**
- **Audio noise (S + N) / N:  $\geq 40$  dB**
- **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**
- **Adjacent channel rejection:**
  - 25 kHz:  $\geq 60$  dB; 8.33 kHz:  $\geq 60$  dB
- **FM Broadcast Intermod Immunity:  $\geq 95$  dB**

## Transmitter Characteristics

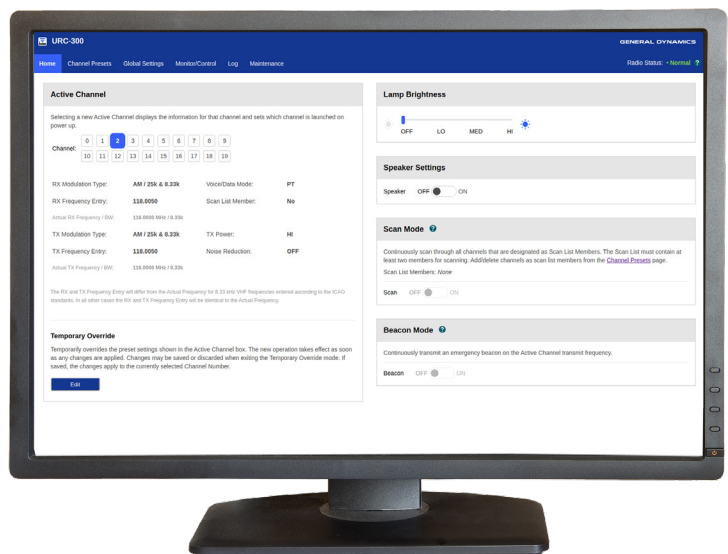
- **Output power:**
  - 1 to 7 Watts (CW) user adjustable in 0.2 Watt steps; 10 Watts avg  $\pm 1$  dB @ 90% AM
- **Modulation: 0 - 95% user adjustable**
- **Distortion:  $< 10\%$**
- **Spurious output:  $< -85$  dBc**
- **Harmonic output:  $< -75$  dBc**
- **Adjacent Channel Power:**
  - 25 kHz:  $\leq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

## Physical Characteristics

- **Weight:**
  - 10.9 lbs. (less battery)
- **Dimensions:**
  - 10.6" L x 8.5" W x 3.5" H (without battery and 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:**
  - -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



Web-based provisioning tool for maintainers.

**GENERAL DYNAMICS**  
Mission Systems

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