RO®
TACTICAL RADIO
WHEN INSTANT COMMUNICATIONS ARE REQUIRED

HARRIS® TECHNOLOGY TO CONNECT, INFORM AND PROTECT™

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GATEWAY

RO® TACTICAL RADIO

True global push-to-talk

Simple to use

Small and light weight

The RO tactical radio, based on Harris AssuredReach™ technology, goes to extremes to provide on-the-move (OTM), over-the-horizon (OTH) secure voice, data, and position location information in a ruggedized, field-proven handheld communications device.

The RO® tactical radio utilizes the Distributed Tactical Communications System (DTCS) provided by the Defense Information Systems Agency's (DISA) Enhanced Mobile Satellite Service (EMSS) office.

Its design is simple for operators to use and is similar to a secure "walkie-talkie" in that it does not require ground infrastructure. The "talker" can reach thousands of other RO tactical radios within a 100-250 mile range anywhere in the world with line-of-site to the sky.

Communication occurs over a distribution of secure nets. Each radio may be a registered member of up to ten nets. Secure voice communication is available to any registered RO tactical radio in the net that is also within the 100-250 mile range of the "talker". The talker selects the net using the band knob and secure voice communications occur when a talker joins the selected net via the push-to-talk (PTT) button. Pressing the PTT button

establishes a control and broadcast channel for the selected net. The channel setup occurs and crystal clear voice communications can be heard in less than two seconds from PTT and is indicated by a single audible tone. The call is ended and channel resources are released when the PTT button is released. Three short tones indicate the end of the transmission. Secondary nets may be monitored simultaneously while maintaining the ability to talk on a selected net.

Equipped with an embedded GPS receiver, each radio transmits and receives voice and GPS over a single antenna. encrypted position location information (PLI) is transmitted with flexible configurable options to meet operational requirements. PLI can be sent upon release of the PTT as well as configured for time intervals (e.g. every five minutes) or movement intervals (e.g. 1 kilometer). These settings are available for two types of PLI transmissions: global PLI and

regional PLI. The global PLI type transmits the PLI data from anywhere in the world securely over the satellite constellation to the DoD gateway. The encrypted data is then sent from the DoD gateway to the Mission Management Center (MMC) and into a format compatible with the Global Command and Control System (GCCS).

Regional PLI is transmitted and may be collected locally with a RO tactical radio configured to operate in data collector mode. This feature provides local personnel awareness of friendly force positions within the operating range and enables the radio to initiate and receive voice communications. The collector also receives PLI data from other RO tactical radios on the nets it is monitoring and is registered to. RO tactical radio registration includes net assignments, encryption keys and PLI settings and data collector operation is managed by a DTCS Net Manager.

PERIPHERALS

RO TACTICAL RADIO
Conveniently located connectors

ANTENNAS
Compact antenna to attach directly to the radio
Vehicle antenna with magnetic mount and 16 foot (4.8 m) cable

POUCH
Tan or black with battery door

BATTERIES
Four CR123 or RCR123 batteries

VEHICLE MOUNT
The vehicle mount provides a vehicle mounted platform for the radio. It includes a lever-lock, ball arm and pivoting base stand.

HEADSETS
Urban tactical headset with PTT button

CABLES
Data cable, AC power cable, 5590 battery cable and vehicle power adapter

RO-MOBILE AWARENESS PLATFORM (RO-MAP) PDA
The RO-MAP utilizes a rugged PDA and the RO tactical radio to provide friendly force tracking (FFT), text messaging and RO tactical radio remote control.

HANDSETS
Noise cancelling handset

SPECIFICATIONS FOR: **RO® TACTICAL RADIO**

ENVIRONMENTAL

Operating temperature: -30˚C to +71˚C (-22˚F to +160˚F)

Meets IP67 and MIL-STD-810G: Temperature shock, humidity, salt fog, sand and dust, immersion, vibration and shock

PHYSICAL CHARACTERISTICS WITHOUT ANTENNA

Length with connectors: 5.6 in (142.2 mm)

Width 3.0 in, Depth 1.7 in, Weight 18 oz
(Width 76.2 mm, Depth 43.2 mm, Weight .51 kg)

FUNCTION MODES

Manual registration

Signal strength

Battery level

Broadcast PLI collector state

LED brightness

Secondary net monitoring and configuration

Field application tool to specify networks

Configuring the tone volume

Zeroizing the radio

COVERAGE

100% - Pole to pole with any line of sight to the sky (no need to locate a geostationary satellite)

On-the-move

100-250 mile (160.9-402.3 km) range

Immune to solar flux and ionospheric propagation

POSITION LOCATION INFORMATION (PLI)

Built-in commercial GPS receiver (utilizes same small antenna as voice communications)

Completely transparent to the user (simultaneous voice and data)

Modes of Transmitting: Time, Distance and PTT

Modes of Receiving
- Regional, a RO tactical radio can be connected to a PC to collect the location of all the radios in the same satellite beam
- Global, the position of all radios can be located from anywhere in the world via the MMC

VOICE QUALITY

Crystal clear voice communications

Fast real-time connections without noticeable delays

SIMPLE

PTT with one to many

Automatic walkover protection

Simultaneous voice and position

Off-the-shelf headsets, handsets and batteries

SECURE

NIST certified AES 256 voice and data encryption (can be used by coalition troops)

Local zerioizing

MULTI-CHANNEL OPERATION

Up to ten unique nets

Prioritization with primary and secondary nets

SMALL AND RUGGED

Handheld and lightweight

18 oz (.51 kg)

Compact 5.8 in (147.3 mm) long antenna

Aluminum enclosure

Immersion and dust protection

INTERFACES

RS-232 for data

Built-in speaker, up to 84 dBA

Built-in microphone

LED with variable brightness

NO GROUND INFRASTRUCTURE NEEDED

No central antennas needed

No backup power needed

Interoperability with terrestrial networks and equipment

About Harris Corporation

Harris Corporation is a leading technology innovator, solving customers' toughest mission-critical challenges by providing solutions that connect, inform and protect. Harris supports government and commercial customers in more than 100 countries and has approximately $6 billion in annual revenue. The company is organized into three business segments: Communication Systems, Space and Intelligence Systems and Electronic Systems. Learn more at harris.com.

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