High Performance GPS Tracking

DESCRIPTION

The RTS RF Series is a high performance long range tracking system using high frequency license free radio to communicate the position of people, vehicles, and other remote assets. Remote tracking units report their position to an RF base unit which in turn communicates with a Command and Control System (CCS). The CCS integrates the tracking data with data from Google Earth and Google Maps to display real-time tracking unit location and status data.

The system can simultaneously track thousands of remote units, each transmitting ID and status data, GPS position and satellite count, heading, and speed.

The standard line of site distance of 10 miles for vehicles and other assets can be extended in 15 mile increments with RF-RPR repeater units. An eight channel Base Transceiver Unit allows remote units to report in on different frequencies for added system capacity.

Options are available for data encryption, IP67 hardening, man-down and distress signaling, and Compact Display Unit for vehicles.

The system may be integrated with local RFID systems and far-flung remote systems communicating via global cellular technology to provide a comprehensive picture of an organization’s people and assets.

FEATURES

• Single and eight channel receiver units
• Monitoring capability for thousands of units
• Up to 10 miles line of sight unrepeated
• Repeater option
• GPS accuracy to within 3 feet
• Specific solutions for personnel, vehicles, assets
• Command and control display interface
• Encryption, hardening options
• Integrates with RTS RFID and GSM solutions
• Third party integration options

BENEFITS

• System capacity and performance options
• Comprehensive, expandable
• Wide area coverage
• Removes distance limitations
• Precise location of people and assets
• Application-based solution
• Graphical visibility of location of remote units
• Solutions appropriate for varied environments
• Indoor, outdoor, worldwide coverage
• PSIM integration
Radio Frequency Tracking System

SPECIFICATIONS

GENERAL RADIO SPECIFICATIONS

Frequency
U.S. - civilian 902 - 928 MHz
Output Power 1 Watt
Transmission Type Spread Spectrum
Encryption (optional)
U.S. - civilian 256 bit AES (128 bit exportable)

BASE TRANSCEIVER UNIT

GPS Data
Unit ID, Latitude, Longitude, Heading, Speed, Active Satellite Count, Unit Status
Antenna 6 dB omni-directional
Local interfaces RS-232 (9-pin D-shell), Ethernet (RJ-45), USB
Input power 2A @ 5V
Dimensions
Standard enclosure 6.3 in x 3.0 in x 1.7 in
(160 mm x 76 mm x 42 mm)
IP67 enclosure 3.3 in x 2.1 in x 1.2 in
(85 mm x 54 mm x 30 mm)
RF-BTU-8 8.66 in x 6.5 in x 2.1 in.
(220 mm x 165 mm x 53 mm)
Weight 32 ounces (907 g)
Operating temperature -40 °C - +85 °C

REPEATER UNIT

Antenna 6 dB omni-directional
Input power 12 or 24 VDC
Current draw 500 mA maximum
Dimensions 3.5 in x 2.5 in x 2.0 in
(89 mm x 64 mm x 51 mm)
Weight 8 ounces (226 g)
Operating temperature -40 °C - +85 °C

REMOTE FIELD TRACKING UNITS

GPS Data
Unit ID, Latitude, Longitude, Heading, Speed, Active Satellite Count, Unit Status
GPS Receiver
# channels 32
Circular error probability 3.3 meters (optional 1m)
Standard update rate 1 second (adjustable)

Personnel Tracking Unit
Input power Lithium ion battery
Usage time 24 hours maximum
Charge time 4 hours typical (from 110/220 VAC)
Dimensions 3.3 in x 2.1 in x 1.4 in
(85 mm x 54 mm x 35 mm)
Alarms Panic, Mandown, Low Battery
Weight 8 ounces (226 g)
Operating temperature -40 °C - +75 °C

Vehicle Tracking Unit
Input power Standalone unit 12 or 24 VDC
Compact display unit 12 or 24 VDC or 110/220 VAC
Current draw Standalone unit 500 mA @ 12 VDC
Compact display unit 3A @ 12 VDC
Dimensions
Standalone unit 3.5 in x 2.5 in x 2.0 in
(89 mm x 64 mm x 51 mm)
Compact display unit 10.7 in x 8.3 in x 2.5 in
(273 mm x 210 mm x 63.5 mm)
Weight Standard enclosure 8 ounces (226 g)
Compact display unit 6 lbs. (2.7 kg)
Operating temperature Standard enclosure
-40 °C - +85 °C
Compact display unit -20 °C - +70 °C

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NOTES:
(1) For encryption option, add "-AES"
(2) For IP67 hardening, add "-H"
(3) For high-gain antenna, add "-HG"
(4) For solar power, add "-Sol"
(5) Man-down/distress, add "-MD"