High Performance GPS Tracking   RF Series

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.
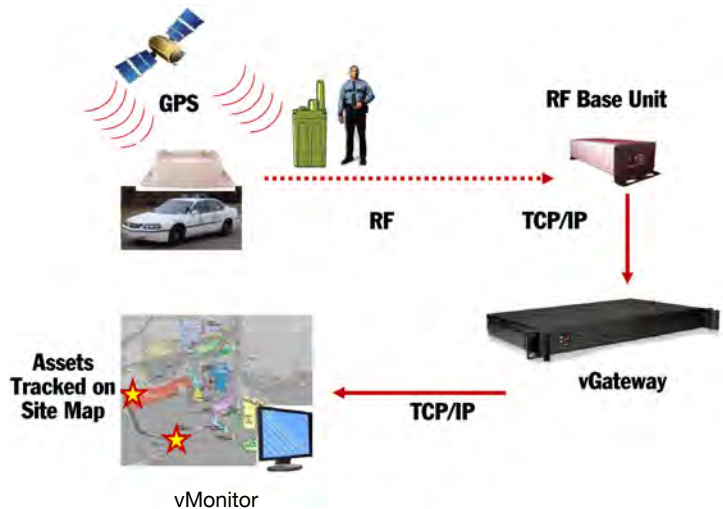
RF Base Unit   *Vehicle Tracking Unit*

Personnel Tracking Unit   *Repeater Unit*

vMonitor

FEATURES	BENEFITS
• Single and eight channel receiver units	• System capacity and performance options
• Monitoring capability for thousands of units	• Comprehensive, expandable
• Up to 10 miles line of sight unrepeated	• Wide area coverage
• Repeater option	• Removes distance limitations
• GPS accuracy to within 3 feet	• Precise location of people and assets
• Specific solutions for personnel, vehicles, assets	• Application-based solution
• Command and control display interface	• Graphical visibility of location of remote units
• Encryption, hardening options	• Solutions appropriate for varied environments
• Integrates with RTS RFID and GSM solutions	• Indoor, outdoor, worldwide coverage
• Third party integration options	• PSIM integration

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, HDOP
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 51mm)
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

ORDERING INFORMATION

Product	Part #	Description	Notes
Base Transceiver Unit	RF-BTU	Base Transceiver Unit with Ethernet (XML) and RS-232	(1) (2) (3) (4)
	RF-BTU-8	8 channel Base Transceiver Unit	(1) (2) (3) (4)
Remote Field Tracking Units	RF-PTU	Personnel Tracking Unit with Charging Station	(1) (5)
	RF-VTU	Vehicle Tracking Unit	(1) (3)
Repeater Unit	RF-RPR	Data Repeater Unit	
Compact Display	RTS-CDU	Compact Display Unit. 12-24V Power Input with 10.4 LCD Display and touch screen	
vGateway Server	RTS-VGW	Middleware hosted on Dedicated Linux Server with full database	
vMonitor Software	RTS-VMON	Geo-spatial graphing and display software	

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"