

# RV-ATLAS—PORTABLE VHF GPS TRACKING

## Features

- ◆ Rapid, Real-Time Position and Status Updates
- ◆ Complete. No Secondary Services Required
- ◆ No Monthly Charges
- ◆ Totally Portable—16 ounces
- ◆ Rugged and water tight - IP67 Rated
- ◆ Works Everywhere/Anytime
- ◆ Long-Range Operation
- ◆ High Speed and High Efficiency
- ◆ Flexible Reporting
- ◆ Easy To Use
- ◆ Safety Features
- ◆ Proximity Alerts
- ◆ Remote Management
- ◆ Long Battery Life
- ◆ Simple to Interface to Visual Displays
- ◆ Visual Mapping Tracking Software
- ◆ Secure, 128-bit AES Encrypted

Report Rate	Battery Life 0°C—40°C	Battery Life 25°C—50°C
30 Seconds	30 Hours	24 Hours
90 Seconds	60 Hours	48 Hours
4 Minutes	7 Days	7 Days
15 Minutes	1 Month	1 Month



The RV-ATLAS is a Personnel Tracking System that provides immediate location, tracking, and alerting while engaged in critical activities. This tracker is ideal for mission critical personal observation, especially in Mining, Forest, Border Patrol, Fire Fighters, SWAT teams and Airport Tarmac, to list a few of the applications.

The RV-ATLAS is equipped with an “Emergency Alert” button as well as a “man down” tilt sensor. The tracker helps you focus and protect your highly trained professionals in whatever mission critical operations you may face. The real-time situational awareness provided by the personal tracker system allows you to orchestrate personnel efforts for optimal operations, and helps you bring your team home safely.

The RV-ATLAS is the fastest completely-integrated real-time GPS tracking transponder available. It uses VHF radio channels with no service fees or monthly charges, and works virtually anywhere.

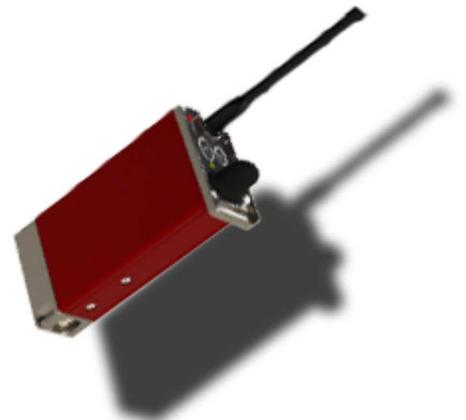
The RV-ATLAS is fully compatible with the CES POWER-trak3 PC/ Server/Cloud series of vehicle tracking devices and software, allowing complete real-time tracking of personnel, vehicles, and other vital assets in one system.



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## RV-ATLAS—PORTABLE GPS TRACKING

- ◆ **Power Real-Time.** Position and status updates are available as quickly as every second. Coupled with the rapid update capabilities the extremely short assures you that any position reports and alerts sent will post to your display(s) very quickly.
- ◆ **Complete.** Everything needed to track a vehicle or asset is provided. No secondary services like Internet, cell-service, GPRS, Edge, SMS, or satellite service is needed. The RV-ATLAS allows you complete control over your infrastructure.
- ◆ **No Monthly Charges.** Because no external services are required, there are no recurring costs for a CES system.
- ◆ **Totally Portable.** The RV-ATLAS is completely self-contained and portable. Meant to be worn by personnel in a variety of activities, it weighs just 16 ounces even with the built-in rechargeable batteries. Simple to operate, just “turn it on and go”. Furthermore, the RV-ATLAS has some of the lowest power-consumption in the industry. The transponder features flexible reporting options, while a remote controlled sleep mode allows it to be active and consume almost no power at all.
- ◆ **Rugged and water tight.** Integrated into an IP67 rated watertight enclosure all models include protection against damage from water, over-temperature, high VSWR, and overcharge.
- ◆ **Works Everywhere/Anytime.** The RV-ATLAS does not rely on public wireless services, so your systems work in rural areas, forests, mines, mountains, deserts, foreign countries, and even open water. This is especially critical in disaster situations when cellular services are easily overwhelmed.
- ◆ **Long-Range Operation.** Using narrow-band VHF radio channels, the RV-ATLAS can communicate as far as 30 miles (depending upon terrain). All devices can also store-and-forward repeat for wide-area coverage, and fully inter-operate with other GPS enabled radio, cellular, satellite and Wi-Fi devices in the CES family.
- ◆ **High Speed and High Efficiency.** The RV-ATLAS operates with fast over the air data rates. Its fast-switching radio enables it to send up to 20 position-transmissions per second.
- ◆ **Flexible Reporting.** The RV-ATLAS may be configured to transmit position and status reports at pre-set time intervals (programmable), when it has moved a certain distance (programmable), when an I/O changes, when it has stopped moving, is laid-down, or a combination of these.
- ◆ **Easy To Use.** The ATLAS Personal Locator is very simple to use. Turn it on, and once GPS signal is acquired, it begins sending its position. Power-Off may be disabled so that only the command-center can turn it off.
- ◆ **Safety Features.** On the top of the RV-ATLAS is a dual-function user-activated alert button. Pressing sends an “Alert”, and when held down for 2 seconds, causes the unit to transmit a “Critical Alert” code indicating the alert condition. Using the internal position sensor, position transmissions and man-down alerts may be triggered by position, motion, or lack-of motion.



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- ◆ Proximity Alerts. Each RV-ATLAS may be configured to transmit an alert, as well as signal an output circuit whenever it is in proximity of another RV series GPS enabled radio. This feature is useful for collision avoidance, theft security, or other applications.
- ◆ Remote Management. Commands may be sent over-the-air to the RV-ATLAS to interrogate it, modify its reporting rate, and modify certain parameters in it.
- ◆ Long Battery Life. Operating as a GPS transponder with the receiver off 95% of the time, the expected operation duration from a full charge is:

Report Rate	Battery Life 0°C—40°C	Battery Life 25°C—50°C
30 Seconds	30 Hours	24 Hours
90 Seconds	60 Hours	48 Hours
4 Minutes	7 Days	7 Days
15 Minutes	1 Month	1 Month

- ◆ Simple to Interface. RV-ATLAS is very simple to use and is designed to integrate with a variety of software plotters, GPS displays, and external devices including:
  - Lowrance GPS displays and navigation
  - Garmin hand-held GPSs
  - Any GPS with an RS-232 NMEA interface
  - POWER-trak3 software by CES
  - Marine Radar Displays
  - Biotelemetry sensors
  - Laser range finders
  - Custom application(Note: Custom cables may be required, all features may not be supported, contact CES to discuss)
- ◆ Visual Mapping. The activities of all units are easily visualized by a number of mapping applications, including CES POWER-trak3 Software.
- ◆ Secure. All position reports are 128-bit AES encrypted for secure communications. No other radio modem, from CES or otherwise, will be able to listen in or monitor positions without knowing the security key.



## GX Base Modem

Connects with a PC/Server or a Navigation Display/Plotter

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## General Specifications

General Specifications

Model: RV-ATLAS (b=V or U) (x=band)

Size: 145mm X 70mm X35mm

Weight: 0.46kg (16 oz)

Input Voltage: 11 – 16 VDC

Current draw:

Charging Battery: <1.5A

Not-charging: <1mA

Supported Frequency Bands: 136-155

## Operating Mode

Simplex or Half-duplex

## Operating Temperature range

-30°C to +60°C Operational

0°C - 45°C for charging

## Internal Battery Charger:

<4-hours for standard LiION 2200mAh pack

## Front Panel LEDs

Power

Status (Carrier Detect, TX/RX, GPS Status)

Alert (Active and response)

## RF I/O Connector

SMA (Male)

## Power Cable

CES P/N: 1C738-1

## Addressing

Individual address: 65,536

## Interface Specifications

Serial Interface Port

Connector Type IP67 rated circular

RS232 IO Voltage Levels TXD, RXD

Format Programmable

Modem handshake signals None

NMEA messages: TTL, GLL, WPL, RMC

## Transmitter Specifications

RF Power Output, fully charged.. 500mW – 5.0 W

RF Power Output, 90% discharged.. 0.3W – 3.0 W

Maximum Duty Cycle..... 25% @ 2W to 40C,  
10% @5W

RF Bandwidth..... 20MHz no-tune

TX Spurious outputs..... < -70dBc

Occupied Bandwidth..... Per FCC

FCC Emissions Designator..... 11K0F1D (-N)

15K0F1d (-W)

Frequency Stability..... Better than ±1.5ppm

## Receiver Specifications

RX sensitivity (1% PER)..... 9600bps < -106dBm

4800bps < -114dB

RF No-tune bandwidth..... 20MHz

Alternate Channel Selectivity..... -65dB

Blocking and spurious rejection..... -75dB

## User Configurable Parameters (overview)

Channel Number and Operating Frequency

Baud Rate, parity, stop bits

GPS Update Rate: 1 – 9999 Seconds

GPS report on movement: 0 – 9999 Meters

GPS report on digital in Enable/disable

GPS Report on motion Yes

GPS Report on man-down Yes

Store-and-forward Repeating configuration

128 bit AES

LEDs operation or disabled

Read DC voltage, current, and statistics

Event triggers (Speed, proximity, I/O, Motion)

Alert Button operation

## Accessories

RAWC - mobile base station

External Lithium battery

Carrying pouch (4N330-X)

Vehicle charging cable (4C900-Y-6)

USB cable (4C901-1-6)

## Warranty

One Year

## Dealer/Distributor: