

GPS-denied tracking and locating of equipment, vehicles and personnel

Track and locate equipment, vehicles, personnel and other assets in GPS denied environments. The TriLoc Beacon uses available cellular networks to precisely determine position information which is then encrypted and transmitted. Energy Smart power management provides months of field-use without recharging. The TriLoc Beacon's rugged design ensures reliable use under the harshest of conditions.

The TriLoc Beacon is instantly attached to vehicles and equipment using the powerful integrated magnets. Its small size and weight make it the perfect location beacon for soldiers in the field. Low Power Wide Area (LPWA) cellular connectivity provides accurate position triangulation information when GPS is denied. GPS is used when available.

Two models available, identical in all features, but with different battery capacities:

- RCLB0001 with a 5200mAh rechargeable battery
- RCLB0002 with a 10400mAh rechargeable battery

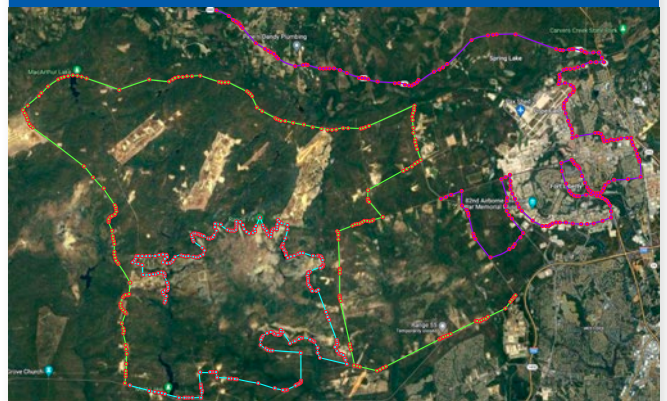


Highlights



- Cellular triangulation technology for reliable position information in GPS denied environments, using available cellular networks
- Track vehicles, equipment, and personnel under all field conditions with the TriLoc Beacon's rugged design and Energy Smart power management.
- Field operation of up to 6 months on a single charge (RCLB0002)
- Energy Smart battery management uses dedicated internal sensors to determine if the asset is in motion or at rest, saving battery life when the asset is not moving.
- RSA-based encryption protects position information transmissions
- Powerful magnets for immediate, no-hassle installation. Tie anchor points included as well.
- Server application available along with rich API for easy integration with any monitoring system.
- Small size and rugged design make the TriLoc Beacon the perfect tracking solution for any asset under all conditions.

Real time and historical tracking information



- Each beacon is color-coded.
- Display beacons based on their unique identifiers, or in a chosen area over a selected time period.

Product Specification

Main Features	
Size & Weight	<ul style="list-style-type: none"> RCLB0001 - 145x86.5x31mm (5.7x3.4x1.2 in) 245gr (0.54 lbs) RCLB0002 - 145x91x57.8mm (5.7x3.6x2.3 in) 343gr (0.75 lbs)
Energy Use	<ul style="list-style-type: none"> Less than 350µW in sleep mode ~300mW/30Sec with GPS active ~650mW/2Sec during transmit
Interfaces	<ul style="list-style-type: none"> USB Type C Charging 5V/9V/15V (23W) Nano-SIM slot for cellular use
Built-in Cellular Modem	<ul style="list-style-type: none"> LPWA modem, 4G compatible LTE CAT M1/NB Maximum transmission speed for LTE FDD CAT M1: Download 588Kbps, upload 1119Kbps LTDE FDD CAT NB1: Download 32Kbps, upload 70Kbps LTE FDD CAT NB2: Download 127Kbps, upload 158.5Kbps Operating Frequencies: LTE-FDD: B1/2/3/4/5/8/12/13/18/19/20/25/26 (CAT M1 only)/ 27/(CAT M1 only) 28/66/71 (CAT NB2 only)/ 85 Bandwidth: CAT M1: 1.4MHz, CAT NB: 200KHz Cellular Reception Sensitivity: CAT M1 - 106dBm, NB - 115dBm Maximum transmission power under LTE FDD: 21dBm +1.7/-3 dB
Battery Life	<ul style="list-style-type: none"> RCLB0001 - 5200mAh, three months typical operation RCLB0002 - 10,400mAh, six months typical operation
Position Capture	<ul style="list-style-type: none"> Receive sensitivity when acquiring position -145dBm Receive sensitivity when tracking -158dBm Cold boot: 31 seconds Warm boot: 1.5 seconds
Antenna	<ul style="list-style-type: none"> Primary cellular internal antenna: -2dBi Active ceramic GNSS internal antenna: 17dBi GPS Active Antenna: Peak Gain-4.5 dBic LNA- 28dB
Management	
Local Management	<ul style="list-style-type: none"> Transmit/Fault 2-color LED On/Off switch Local monitoring and configuration Internal log download and software updates via serial interface

Environmental	
Temperature	<ul style="list-style-type: none"> Operating: -20°C - +58°C Storage: -20°C - +71°C
Standards	
Shock	MIL-STD-810G Method 516.6, Procedure I with a peak amplitude of 40 ± 4.0g and 7.5 ± 1.5 ms duration in each direction of three mutually perpendicular axes. Total of 18 shock pulses (3 for each of the 6 axes), and Method 516.6 Procedure IV - transit drop 26 drops, 122 cm height.
Solar Radiation	MIL-STD-810G Method 505.5. Procedure I, Duration - 7 (seven) 24-hour cycles
Vibration	MIL-STD-810G, Method 514.6 Procedure I - Tracked and Wheeled vehicles, Procedure II -Loose cargo
Humidity	MIL-STD-810G Method 507.5, Procedure II, Aggravated Cycle, Temperature: +60°C. Humidity: 95 ± 4% RH. Duration - 10 days
Waterproofing	IEC 60529, IPX6, Water Protection, can withstand water projected at all angles through a 12.5 mm nozzle at a flow rate of 100 liters per minute, at a pressure of 100 kN/m2, for 3 minutes, and at a distance of 3 meters
Sand	MIL-STD-810G, Method 510.5 Procedure II, Blowing Sand with 10.6 to 17.7 g/m ³ blowing silica sand from 0.01mm to 1mm in diameter, at a velocity of no less than 1.5 ±0.2 m/s. With a testing duration of 90 minutes on each face.
Dust	IEC 60529, IP6X, Solid Particle Protection, Test powder - Talcum. Air pressure - Maximum 2 kPa depression.
EMI	MIL-STD-461G, Tests CS118, RS103, RE102.
Reliability	MTBF 10 YEARS
How to order	
Standard TriLoc Beacon	RCLB0001
High Capacity TriLoc Beacon	RCLB0002

For more information, please contact info@highseclabs.com