



Personal Contingency Communicator & Tracker

What is ClearWatch™?

ClearWatch™ is a powerful, small, customizable, self-contained Iridium tracker. It transmits real-time positioning information, SOS emergency alerts and other specialized information.

These capabilities are enabled through its industry-leading satellite antenna and electronics technology. Configuration capabilities enable the support of any asset and type of information, allowing ClearWatch™ to be used in many different applications.

Truly Global Operation

By utilizing the Iridium network, ClearWatch™ can track any asset, anywhere on Earth - it offers truly 100% global coverage and low latency through its LEO (Low Earth Orbit) configuration.

Small & Powerful

ClearWatch™ is not much larger than a golf ball! Its state-of-the-art technology create one of the world's most powerful satellite trackers.

LUA Scripting

The ClearWatch™ takes advantage of advanced, customizable behaviors through the power of LUA scripting. LUA provides controls over hardware functions and its software integration with other products.



Markets

- Broadcasting
- Emergency Relief
- Government
- Maritime
- Military
- Personnel
- SCADA
- Security

Includes

- LUA Scripting Language
- Bluetooth 4.0 (BLE)
- AES 256-bit Encryption
- Latest SiRf 4 GPS
- USB & RS232 Interface
- Internal 2.5Ah Battery



Specification Overview

Features

- 32 bit ARM processor with a user customizable LUA scripting language
- Internal dimensions 1.77 x 1.77 x 1.34 inches (45 x 45 x 34mm)
 - Including battery, modem & antenna
- SiRFstarIV GPS with an amazing -163dBm sensitivity
- AES 256-bit encryption
- Bluetooth 4.0 (BLE)
- Built in 2.5Ah Lithium Polymer battery & charger
- Accelerometer and Magnetic Compass
- Battery Fuel Gauge
- Integrated high gain ceramic antenna dual tuned for Iridium and GPS
- Over the air configuration of the terminal
- Truly global coverage with the Iridium satellite network



LUA Scripting

LUA scripting provides powerful and customizable behaviors for the ClearWatch™. So what does “scripting” mean for me?

Examples:

- Behavior monitoring and transmission using accelerometer
- External interfaces to additional equipment
- Data logging and queued transmissions
- Lone worker monitoring and lack of movement monitoring
- Customized control of LED's
- Customized software applications over Bluetooth
- Custom message formats and full protocol control
- Geofencing behavior and alarm management

Interfaces

DC Power (4.5V to 40V DC) @ 1A max
 USB Interface
 RS232 Interface
 2 Relay Outputs @ 2A
 2 Analog Inputs (0V to 30V DC)
 Optional SMA antenna connector

Communication

UART - NMEA (Default)

NMEA message Switchable

GGA, RMC, GSA, GSV, VTG, GLL, ZDA

Channels

48

Correlators

~ 400,000

Frequency

LI - 1,575 MHz

Sensitivity

Tracking: - 163 dBm
 Navigation: - 160 dBm
 Acquisition (cold start): - 148 dBm

Position Accuracy

< 2.5 m CEP (autonomous)
 < 2.0 m CEP SBAS (horizontal)

Time To First Fix

Hot Start: < 1 s, Warm Start: < 32 s
 Cold Start: < 35 s

