



# GSatTrack

## SHOUT nano

### Handheld Tracker Messaging Device

The SHOUT nano is a handheld, global, two-way satellite messaging and personal tracking device. It utilizes Iridium's short burst data (SBD) service to provide location information determined by a GPS receiver, two-way inbound and outbound status, text messaging, and emergency/alert notifications. The nano measures 4.0" x 2.2" x 0.8" and weighs ~6.5 ounces.

The nano is designed with ultra-low power consumption electronics drawing less than 35µA during sleep. With an internal 1.95 A-Hr rechargeable Li-Ion battery, it can send a position report every hour for up to two months (about 1,200 reports). The nano is equipped with a high resolution color LCD and on-screen keyboards supporting transmission of free-text, canned messages and a combination of free-text and canned messages. The menu options are displayed as icons for quick access. The device can periodically wake up from sleep to send its position report to a command center. A 911 button is used for immediate emergency/alert notification. Data are packaged in either standard or 256-bit AES encrypted format. Data can also be sent in encrypted PECOS formats to include Brevity codes.

The nano offers a variety of services including:

- **Normal Tracking** - programmed to automatically wake up and send a position report at a set interval ranging from continuous to once every seven days.
- **Emergency Alert** - sends alerts to a designated monitoring center using a 911 button. The monitoring center and the user can then communicate to define further specifics of the emergency.
- **Free-Text Messaging** - sends free-text via three different sets of on-screen keyboards.
- **Canned Text Messaging** - sends canned (pre-defined) messages in short codes to save bandwidth instead of the entire message body.
- **Waypoint Tracking** - sends and/or saves waypoints (interested landmarks) for later retrieval.
- **Check-In** - allows a quick check-in message to be sent using a single soft key.



Low-cost tracker and messaging device

Programmed for either DoD or commercial Iridium gateway

Ultra-low power consumption

Automatic location reports (>1200 reports)

Guarded 911 alert switch

Waypoint soft key

Check-in soft key

Free-text, canned messages or combined free-text and canned messages

Date logging (waypoints and tracking reports)

256-bit AES encryption

Real-time, pole-to-pole coverage

Weights ~6.5 ounces

Volume of 4.0" x 2.2" x 0.8"

Internal rechargeable battery using AC adapter, computer USB port or solar charger

Integrated motion sensor

USB interface

50-channel GPS receiver with -160 dBm sensitivity



- Pocket-size, self-contained satellite tracker
- Ultra-low power consumption
- AES 256-bit encryption both transmit/receive
- Two-way communications
- Real-time reporting
- Truly global coverage

## Specifications

### Mechanical

Dimensions:	4.0"L x 2.2"W x 0.8"D
Weight:	~6.5 Oz
I/O Interface:	USB
Cooling:	Convection
Enclosure:	Hard-Anodized Aluminum

### Electrical

Input Voltage Range:	2.7VDC to 5.5VDC
Input Nominal Voltage:	4.0VDC
Power consumption during standby:	less than 35 $\mu$ A @ 5.0VDC
Power Input Type:	External DC power or internal battery

### Iridium RF Board

Operating Frequency:	1616 to 1626.g MHz
Link Margin Downlink:	13 dB average
Link Margin Uplink:	7 dB average
Average Power Transmission:	1.0 W

### GPS Receiver

Receiver Type:	1575.42 MHz (L1), 50-channel, C/A code
Accuracy:	2.5 m CEP
Update Rate:	4 Hz
Start-up Times:	< 1 sec hot start, 29 sec warm start and 29 sec cold start
Sensitivity:	-160 dBm

### Environmental

Operating Temperature:	-40°F to +185°F (-40°C to +85°C)
Operating Humidity:	< 75% RH



- ① Power/Enter: 1. Turns device ON/OFF when hold down for two seconds or  
2. Used to select highlighted item on the menu.
- ② Arrow Up/Down/Right: Used to navigate the cursor.  
② Arrow Left: 1. Used to navigate the cursor or  
2. Used to go back to the previous menu.
- ③ Check-In Soft Key: Used to access the Check-In feature.
- ④ Way Point Soft Key: Used to access the Way Point features.
- ⑤ USB Port: Used to charge the battery, update firmware or setup operating parameters using a computer.
- ⑥ Emergency: Used to send an emergency alert/notification.
- ⑦ Guard: Protects emergency button from being accidentally activated.
- ⑧ LED: Displays tracking and emergency statuses.
- ⑨ Antenna: GPS antenna.
- ⑩ Antenna: Iridium antenna.