iLocate User's Manual

AutoTracker

Model AT850218

March 2018

Produced by
Integrated M2M Technologies, LLC

www.gps.LenderSystems.com

Document Revisions

Date	Version	Document changes	Author	Approvals
3/27/2018	1.15	Original release	C. Cochran	F. Simon

Table of Contents

1.0   Introduction

The iLocate tracking product is a fully integrated electronic device for providing location and status information of things by way of cellular radio network connection to the internet. This iLocate tracking device includes a CAT-M1 cellular radio, GNSS GPS receiver, Bluetooth 5.0 BLE transceiver, three axis accelerometer, indicator lights, external data connection, and an ARM Cortex M4 host controller.

2.0   Hardware

The device is powered by external direct current voltage and an internal back up battery. The external voltage is also used to charge the internal battery.

The host controller manages all setups and communication with the integrated components as well as providing user data cable connection for external controls, indicator lights and sensor input/output.

The cellular radio is a shielded module with internal firmware for managing the CAT-M1 network connection, internet protocol data transfers, accessory features, and communication with the application host controller. The cellular module transceiver uses and on board impedance matched ceramic antenna.

The GPS receiver is a shielded module with internal circuitry for receiving satellite positioning data. An internal controller parses the GNSS receiver data and converts the location information to industry standard NMEA messages. The host processor collects the required data from the GPS module and formats the location data to be sent over the cellular network to a server computer.

The accelerometer is a +/-2g, +/-4g, +/-8g, +/-16g, 3 axis sensor. The movement and orientation data is available in up to 14 bit resolution. Interface with the host controller is by standard two wire interface.

LED indicators are provide to show status of the operation of the device components. There are 4 green LEDs and 4 red LEDs.

The external connection is provide with a 6 pin connector. This connection is configured to receive and transmit serial data. Other pins can be configured as input or output as required by specific application requirements.

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3.0   Operation

Connect the power cord to the +V supply of the vehicle.   This will charge the internal system battery when necessary.   This iLocate GPS AutoTracker is designed to operate with or without the DC power connected running on the internal battery when no +V power is available. Allow the unit to charge several hours if it has not been charged recently. The units will power up with the radio off, in standby state. The iLocate AutoTracker will send a location data packet to the selected internet IP address and port number. The IP address and port number will be set by an authorized service technician.

4.0   Connections

An external connection is provide with a 6 pin connector. This connection is configured to receive and transmit data to an accessory device as required for specific use applications. The connector pins can are configured as input or output as required by specific application requirements. The settings are adjusted only by an authorized service technician prior to delivery to the end user.
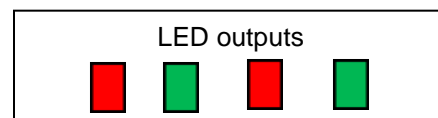
5.0   Configuration Settings

Configurations and settings are set for each application. These configurations are set by an authorized service technician prior to delivery. No user adjustments are required.

6.0   LED light indicators

LED indicators are provide to show status of the operation of the device.
There are 4 green LEDs and 4 red LEDs.

Green LED 1 ON indicates the Cellular radio is in operation.
Green LED 2 Blink ON indicates the GPS has received a fix.
Green LED 3 TBA (To Be Assigned)
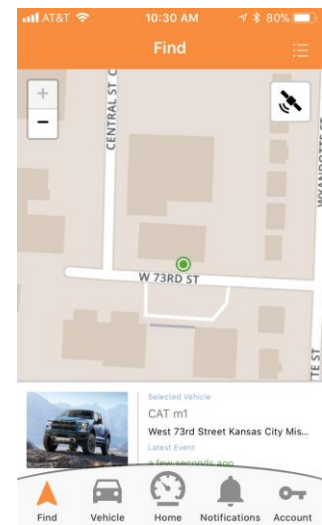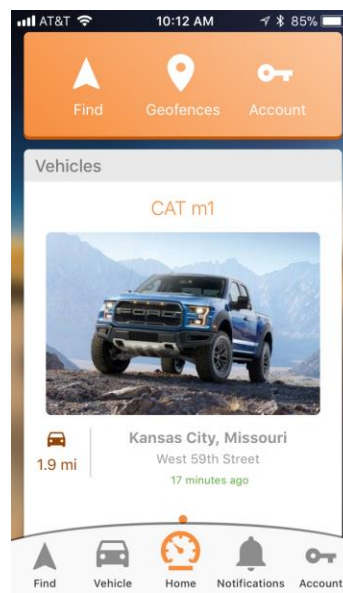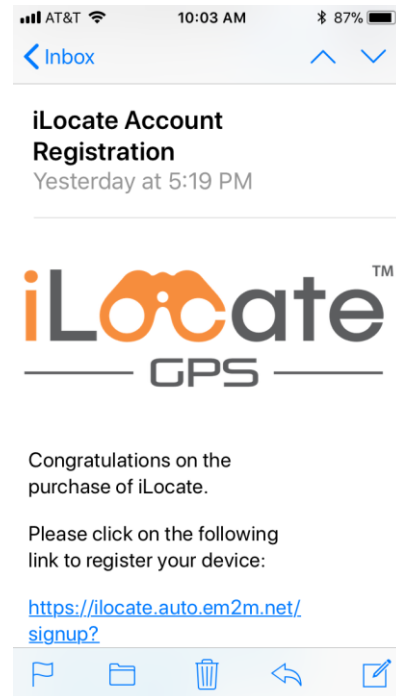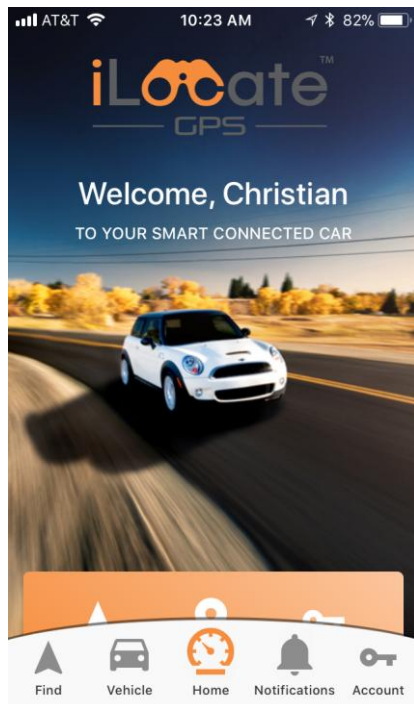Green LED 4 TBA
Red LED 1 TBA
Red LED 2 TBA
Red LED 3 Blink ON indicates the motion sensor detected movement.
Red LED 4 TBA

Assignment of the LED functions is subject to change as application requirements are refined.

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7.0   User Account – Tracking Events

User accounts are set up by the iLocate GPS customer service staff. Each user will be assigned an account and provided with an account registration notification by email. Download and install the app to a smartphone. The user will select a password and

Follow the instructions in the email to set up the account and add the vehicle that is associated with this account. The vehicle location and event status will now be available in the App.

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8.0   Specifications

iLocate GPS Specifications
Model: AT850218

Electrical Specifications

Input rating: 8.0 – 20.0 VDC, resettable fuse, protected front end
Bands Supported: LTE cellular radio, CATM1 bands 4 and 13
    DL/UL max: 300 kbps / 375 kbps
    TCP, UDP, SMS, embedded SIM
Embedded CPU: 32 bit processor ARM Cortex M4
 with Bluetooth 5.0 BLE transceiver
Embedded GPS Module: GNSS Receiver -160 to -167 dBm sensitivity
Embedded SIM: Gemalto MFF2
Accelerometer: 2g to 16g Tri-Axis

Mechanical Specifications

Operation Temperature: - 40 to + 85⁰ Celsius
85% R.H. @ 50⁰ C non-condensing
Dimensions: 2.25 x 5.0 x 0.95 in. (56 x 125 x 24mm)
Board dimensions 2.0 x 3.95 x 0.60in. (53.0 x 96.0 x 15.0mm)
Weight: 120 oz.

iLocate GPS Device

Trademark   - iLocate GPS
User Manual   - iLocate User guide
Label drawing   - see here
Label Location - see below

iLocate
━ GPS ━
Integrated M2M Technologies LLC
Model: AT850218
FCC ID: 2AO7F2733AT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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