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Positioning Universal TM94 Tracker Vehicle Recovery and Fleet Management Instructions

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Positioning Universal TM94 Tracker Vehicle Recovery and Fleet Management

Product Information

Specifications

- **CELLULAR**
  - LTE Cat-M
  - LTE-FDD Bands: 1/2/3/4/5/8/12/13/17/20/25/28/66
  - Integrated high-performance antenna
- **GNSS**
  - GPS, GLONASS, Beidou & Galileo
  - Tracking Sensitivity: -161 dBm
  - Acquisition Sensitivity: -146 dBm
  - Location Accuracy: < 2.5CEP
- **BATTERY INFORMATION**
  - Type: Li-ION
  - Capacity: 400mAh @ 3.7V
  - Battery Life: Up to 4 hours @ hibernation mode, 1 report per hour (depends on LTE signal strength)
- **PHYSICAL**
  - Dimensions: 93.0 x 51.0 x 15.3 mm
  - Internal Cellular and GPS Antennas
  - Weight: ~80g
- **INTERFACE CONNECTORS**
  - Cable Harness: 4-pin built-in flat Cable
  - PWR, GND (*2)
  - I/Os: input*1 and output*1 (*2)
- **APPROVALS**
  - FCC 47
  - PTCRB & Carrier Approved

Product Usage Instructions

Installation

1. Locate a suitable location for the TM94 tracker with power access and a clear sky view for GNSS reception.
2. Connect the TM94 to the power supply using the provided Cable Harness.
3. Ensure proper connection of the interface connectors for power, ground, and I/Os.

Configuration

No programming skills are required for configuration.

Follow these steps:

1. Access the easy-to-configure application software provided with the TM94.
2. Use the extended AT command set for flexible configuration options.
3. Set up reports based on events like motion, speeding, geo-fence violations, etc.

Usage

The TM94 tracker offers real-time vehicle tracking and monitoring capabilities. Here's how to use it:

1. Monitor vehicle location and status through the application software.
2. Receive notifications for events like harsh acceleration, battery status, or geo-fence breaches.
3. Utilize the built-in accelerometer for motion detection and driver behavior monitoring.

Frequently Asked Questions (FAQ)

Q: Can the TM94 tracker be customized for specific server compatibility?

A: Yes, the application firmware can be customized to be compatible with your existing server upon special request.

Q: How long does the backup battery last when disconnected from the main power?

A: The internal Lithium-Ion backup battery allows continuous operation for up to 20 hours when the device is disconnected from the main power.

Usage Instructions

- The TM94 tracker is a real-time vehicle tracking system designed for vehicle recovery, fleet management, and more.

IT'S RELIABLE

- The ultra-thin yet durable TM94 is a high-performance cellular tracking device designed for vehicle financing, vehicle tracking, lot management, theft recovery, or other fleet applications.
- With an integrated GNSS receiver, the TM94 includes an LTE Cat-1 modem for wireless data communication.
- The built-in high-performance antennas for both cellular radio and GNSS receivers make installation easy.

IT'S SIMPLE

- No programming skills are required; the TM94 comes with easy-to-configure application software and an extended AT command set.
- Reports can be triggered periodically or in response to events such as motion, speeding, harsh acceleration and braking, geo-fence violations, and battery status.
- Notifications can be sent for vehicle towing, battery removal, and more.

IT'S FUNCTIONAL

- The TM94 interface supports the main power supply uart can input/output.
- A built-in 3-axis accelerometer enables motion detection and monitoring of driver behavior.
- An internal Lithium-Ion backup battery allows continuous operation for up to 20 hours when the device is

disconnected from the main power. An optional buzzer alert system for driver warnings is available inside the unit.

- The application firmware is flexible and can be customized to be compatible with your existing server at special request.

HIGHLIGHT

- LTE Cat-M
- Integrated cellular and GNSS antenna
- LED status indicators for GNSS and network registration
- Integrated accelerometer for monitoring vehicle status & driver behavior
- I/O options for starter inhibit, ignition
- Rechargeable backup battery
- SMS, UDP, TCP, FTP & MQTT
- Up to 16 Geo-fences (polygon and circles)
- Over-the-air configuration and firmware update
- Extended AT Command set for flexible and easy configuration
- Small size and easy installation
- OPTIONAL FEATURES
- The application firmware is flexible and can be customized to be compatible with your existing server at special request.

Specifications

- **CELLULAR**
  - **LTE** Cat-M,
  - **LTE-FDD Bands** : 1/2/3/4/5/8/12/13/17/20/25/28/66
  - **Integrated high-performance** antenna
- **GNSS**
  - **GPS, GLONASS,** Beidou & Galileo
  - **Tracking Sensitivity:** -161 dBm
  - **Acquisition Sensitivity:** -146 dBm
  - **Location Accuracy:** < 2.5CEP
- **BATTERY INFORMATION**
  - **Type:** Li-ION
  - **Capacity:** 400mAh @ 3.7V
  - **Battery Life:** Up to 4 hours @ hibernation mode, 1 report per hour. (depends on the LTE signal strength and how many reports per hour)
- **ENVIRONMENTAL**
  - **Operation Temperature:** -30°C to +75°C without Battery
  - **Operation Temperature:** -20°C to +60°C
  - **With** Battery
  - **Storage Temperature:** -40°C to +85°C
- **ELECTRICAL**

- - **Operating Voltage**: 7V – 36V
  - **Over voltage** protected
  - **Over current protected** with resettable fuse
- **Power Consumption:**
  - **GPS Acquisition :** ~ 48mA @ 12V
  - **GPS Tracking**/**Reporting:** ~ 74mA @ 12V
  - **Sleep mode:** < 1mA @12V
- **PHYSICAL**
  - **Dimensions:** 93.0 x 51.0 x 15.3 mm
  - **Internal Cellular** and GPS Antennas
  - **Weight** : ~80g
- **INTERFACE CONNECTORS**
  - **Cable Harness:** 4- Pin built-in flat Cable
  - **PWR,** GND (*2)
  - **I/Os** : input*1 and output*1 (*2)
- **APPROVALS**
- FCC 47
- PTCRB & Carrier Approved

Asiatelco Technologies Inc. (ATEL)

- Asiatelco is the leading provider of wireless terminal products to its valued customers worldwide.
- Its innovative products and solutions are widely used for reliable broadband access, IoT/M2M applications, and voice communication with 4G LTE, 3G & 2G wireless technologies.
- ATEL's sales and marketing are globally positioned. It has become a globally well-known company in the wireless industry due to its excellent products, solutions, and services.
- For more information, contact Asiatelco Technologies Inc.

FCC Statement

FCC Regulations

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,
2. this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, under part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used under the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. To comply with FCC RF Exposure compliance requirements, this grant applies to only Mobile Configurations. The antennas used for the transmitter must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

IC STATEMENT

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. this device may not cause interference,
2. this device must accept any interference, including interference that may cause undesired operation of the device.

To avoid the possibility of exceeding the IC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation.
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Documents / Resources

	Positioning Universal TM94 Tracker Vehicle Recovery and Fleet Management [pdf] Instructions TM94 Tracker Vehicle Recovery and Fleet Management, TM94, Tracker Vehicle Recovery and Fleet Management, Vehicle Recovery and Fleet Management, Recovery and Fleet Management, Fleet Management, Management

References

- **User Manual**