

# WCDMA VEHICLE TRACKER

## Users Manual

June, 2014  
ACT613, V0.3

**AnyDATA**

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*AnyTime AnyPlace Any Wireless Data Solutions™*

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|  | <p><b>RF Exposure Warning:</b></p> <p>The radiated output power of this device is below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact during normal operation is minimized. In order to avoid the possibility of exceeding the FCC radio frequency exposure limit, human proximity to the antenna should not be less than 20 Cm.</p> <p><b>Information to user (FCC Part 15.21):</b></p> <p>Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.</p> <p><b>Statement according to FCC part15.19</b></p> <p>This device complies with part 15 of the FCC Rules.<br/>                 Operation is subject to the following two conditions :</p> <ul style="list-style-type: none"> <li>(1) This device may not cause harmful interference, and</li> <li>(2) This device must accept any interference received, including interference that may cause undesired operation.</li> </ul> <p><b>Information to user</b></p> <p>The radiated output power of this device is below the IC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact during normal operation is minimized. In order to avoid the possibility of exceeding the IC radio frequency exposure limit, human proximity to the antenna should not be less than 20 Cm.</p> |
|---|--|



|   |
|---|
| <p>La puissance de sortie rayonnée de cet appareil est inférieure aux limites d'exposition de radio de fréquence IC. Néanmoins, le dispositif doit être utilisé de telle manière que le potentiel de contact humain pendant l'utilisation normale soit minimisé. Afin d'éviter la possibilité de dépasser la limite d'exposition de fréquence radio de la IC, la proximité humaine à l'antenne ne doit pas être inférieure à 20 cm.</p> |
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## 1 INTRODUCTION

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### 1.1 PURPOSE

This manual discusses the purpose and usage of the Vehicle GPS Locator (ACT613).

### 1.2 TECHNICAL DETAIL

Please refer to [Technical Manual.pdf](#) for a more detailed description of the ACT613.

### 1.3 REVISION HISTORY

The revision history for this manual is shown in Table 1.1.

**Table 1.1: Revision History**

| Version | Date     | Description              |
|---------|----------|--------------------------|
| V 0.1   | JAN 2014 | Initial Release - ACT613 |
| V 0.2   | APR 2014 | Added French statements  |
|         |          |                          |

## 2 PHYSICAL CONTENTS



**Figure 2.1: Package Contents**

The box should contain:

- **One ACT613 Vehicle GPS Tracker**
- **One User Guide**

### **3 DESCRIPTION: VEHICLE GPS LOCATOR (ACT613)**

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#### **3.1 THE LATEST VEHICLE TRACKER IN GPS TECHNOLOGY**

Utilizing both assisted and standalone GPS, ACT613 is able to determine your location via a combination of cell triangulation and the greatest number of GPS satellites available.

##### **Alerts & Messages**

ACT613 has no button for user-set alert functions; the LBS (Location based server) can only know the device location and alerts including the vehicle information.

#### **3.2 TRACKING REPORTS**

The ACT613 can be configured to report its location on a sw scenario based chronological interval. The interval is remotely configurable and can be set via appropriate web and mobile software platforms. In addition to interval tracking, the ACT613 is capable of servicing single location requests on demand via one-time-fix requests made through the web/mobile platforms.

#### **3.3 VEHICLE DOOR LOCK/UNLOCK WITH REMOTE CONTROL**

The ACT613 has the door lock or unlock function, which is controlled by several methods; a cellular data radio, a Bluetooth radio for short-range communications, a UHF radio with short-range vehicle-based receivers. This device adapted the BT2.1+EDR function to detect the Smartphone presence/identification and RKE (Remote Keyless Entry) function to access the UHF receiver of vehicle.





**Figure 3.1: External Interface**

### **3.4 VEHICLE DOOR LOCK/UNLOCK WITH REMOTE CONTROL FROM CLOUD SERVER**

The ACT613 equipped a replacement remote for original equipment and aftermarket automotive keyless entry systems (RKE). The features and functions associated with each of the six channels of the RKE are dependent on the year, make and model of the vehicle. Such functions include remote control operation of the vehicle's lock, unlock, horn, trunk, dome light, rear hatch, remote start and power side door functions. The functions are activated by command on the remote control from the cloud server. Selection from a variety of appropriately controlled command which correspond to the features of the vehicle shall be used for function identification. The remote control may be configured to operate more than one receiver. A user may toggle between receivers as often as necessary.

Please visit to <http://www.keylessride.com/> for more details on RKE.

### **3.5 VEHICLE DOOR LOCK/UNLOCK WITH REMOTE CONTROL THROUGH BLUETOOTH**

Bluetooth can be used for vehicle door lock/unlock control. Bluetooth available smart phone can be paired to the device. Once paired user can lock/unlock the vehicle using the application on the smart phone. Please visit to <http://delphi.com/> for more details on Bluetooth use cases.

## 4 HANDING THE VEHICLE GPS LOCATOR

### 4.1 SET-UP

1. Most of vehicle has an OBD-II (On Board Diagnostics) connector, which is located within 2 feet of the steering wheel.
2. The installation is very easy, just put the ACT613 to the OBD-II connector in user vehicle.
3. The ACT613 will power on automatically from vehicle battery and start initiation for WCDMA network access.
4. After install of device to vehicle, all services are served by server.



Figure 4.1: Installation of ACT613 in vehicle

### 4.2 POWER SUPPLY FROM VEHICLE (TYPICAL 13.5V)

1. After insertion of ACT613 to OBD-II connector, the device has automatically power-on with the car battery, typically 9~18V.
2. If the engine has off, then the device decide to power off the OBD interface circuit, and run the WCDMA RF with GPS for the unauthorized movement function.
3. If the engine has on, then the device work on the OBD interface circuit, which is charge of gathering the vehicle information such as fuel gauge, speed, engine RPM, and so on to report it to LBS server via the WCDMA network.

## 5 POWERING ON/OFF THE VEHICLE GPS LOCATOR

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### 5.1 POWERING ON/OFF

To Power ON:

1. Insert the device to OBD-II connector.
2. Then, the device has automatically powered on according to vehicle condition.
3. There is no visual way to confirm whether device has power-on or not.
4. But, user can make sure the location from web-server, or application.

To Power OFF:

1. If the device is needed for totally power-off, then just remove it from the OBD-II connector.
2. In case of the car has engine off with ACT613, and passed several days, the device has automatically power-off to protect the battery drain fully.
3. The device will stay power-off until the car ignition-on again.
4. If the device detects the battery level over 13.5V, then start the powering on.

## 6 VEHICLE GPS LOCATOR SPECIFICATIONS

### 6.1 FORM FACTOR

- Dimensions : 80 x 45 mm, 22mm in Height
- Weight 66.5g

### 6.2 HARDWARE SPECIFICATIONS

- Assisted & Standalone GPS
- Operating Voltage 9 ~ 18V, (internally 3.5V for WCDMA RF)
- Max Output Power 0.3W
- Current Consumption Idle mode (50mA @ 12V)
- Light Sleep Mode (20mA @ 12V)
- Deep Sleep Mode (4mA @ 12V)
- Sensitivity Less than -104dBm
- Receive Frequency 1930 ~ 1990MHz for B2, 869 ~ 894MHz for B5.
- Transmit Frequency 1850 ~ 1910MHz for B2, 824 ~ 849MHz for B5
- Bluetooth (2.1+EDR) : 2402MHz ~ 2480MHz
- RKE (Remote Keyless Entry) : 300MHz, 319MHz, and 433.92MHz

### 6.3 SPECIFICATIONS

- 3GPP R5: WCDMA protocol
- IS-801 & TIA-801-A: Position determination Built-in TCP/IP service standard for Dual-Mode spread spectrum systems

### 6.4 EXTERNAL INTERFACE

- OBD-II
- Micro USB (Type B)

### 6.5 ENVIRONMENTAL

- Operating Temperature : -30 ~ +70C
- Storage Temperature : -40 ~ +85C
- Humidity (Operating) 5% ~ 95% non-condensing, (50C)

## **7 LIMITATIONS OF LIABILITY**

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