4G Vehicle Tracker with Hotspot

Users Manual

APRIL, 2013
ACT233L, V1.0

AnyDATA
AnyTime AnyPlace Any Wireless Data Solutions™

AnyDATA ACT233L

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RF Exposure Warning:

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.

Information to user (FCC Part 15.21):

Changes or modifications not expressively approved by the party responsible for compliance could void the user's authority to operate the equipment.

Information to user (Industry Canada license-exempt RSS standards)

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, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

1 INTRODUCTION

1.1 PURPOSE

This manual discusses the purpose and usage of the 4G Vehicle Tracker with Hotspot(ACT233L).

1.2 TECHNICAL DETAIL

Please refer to Operation Description.pdf for a more detailed description of the ACT233L.

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 1.0	APR 2013	Initial Release – ACT233L

2 PHYSICAL CONTENTS

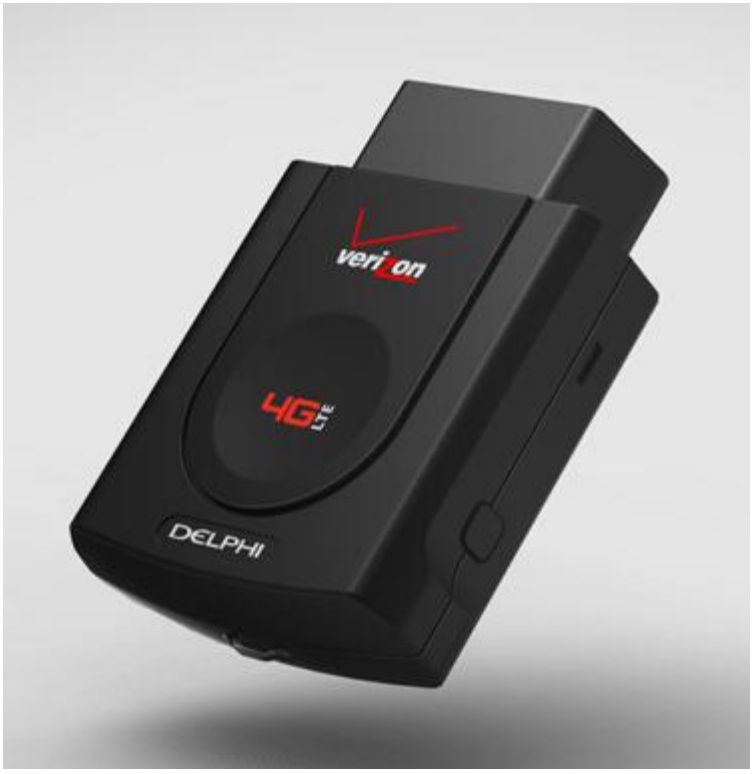

Figure 2.1: Package Contents

The box should contain:

- **One ACT233L 4G Vehicle Tracker with Hotspot**
- **One User Guide**

3 DESCRIPTION: 4G VEHICLE TRACKER WITH HOTSPOT

3.1 THE LATEST VEHICLE TRACKER IN GPS TECHNOLOGY

Utilizing both assisted and standalone GPS, ACT233L is able to determine your location via a combination of cell triangulation and the greatest number of GPS satellites available.

3.2 ALERTS & MESSAGES

ACT233L 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.

3.3 TRACKING REPORTS

The ACT233L 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 ACT233L is capable of servicing single location requests on demand via one-time-fix requests made through the web/mobile platforms.

3.4 VEHICLE DOOR LOCK/UNLOCK WITH REMOTE CONTROL

The ACT233L 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 BT4.0+LE function to detect the Smartphone presence/identification and RKE (Remote Keyless Entry) function to access the UHF receiver of vehicle.

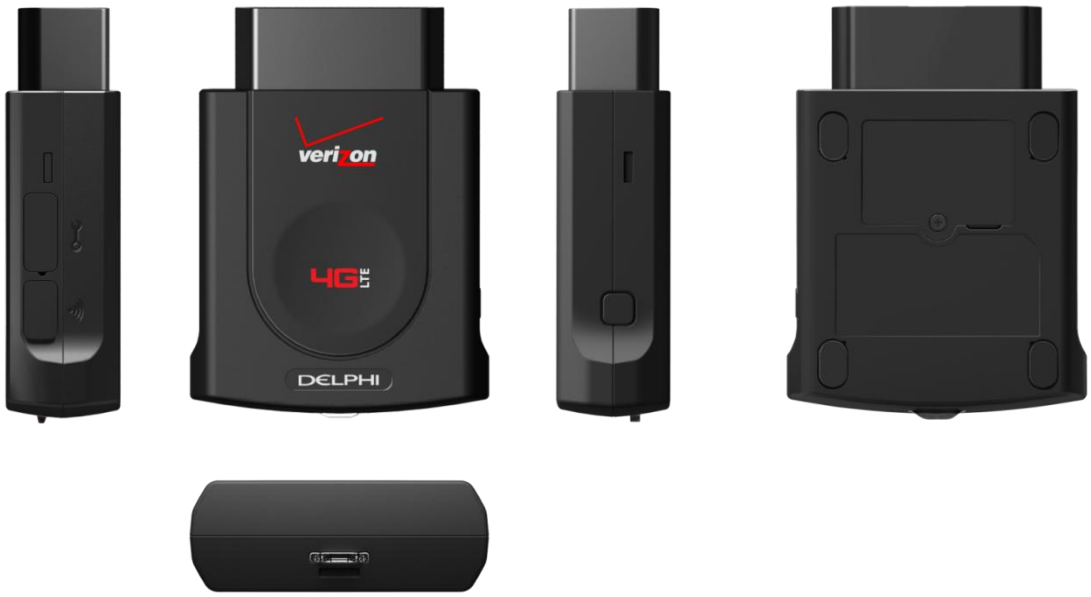

Figure 3.1: External Interface

3.5 VEHICLE DOOR LOOK/UNLOCK WITH REMOTE CONTROL FROM CLOUD SERVER

The ACT233L 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.

3.6 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 one the smart phone. Please visit to http://delphi.com/ for more details on Bluetooth use cases.

4 HANDING THE 4G VEHICLE TRACKER WITH HOTSPOT

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 ACT233L to the OBD-II connector in user vehicle.
3. The ACT233L will power on automatically from vehicle battery and start initiation for CDMA or LTE network access.
4. After install of device to vehicle, all services are served by server.

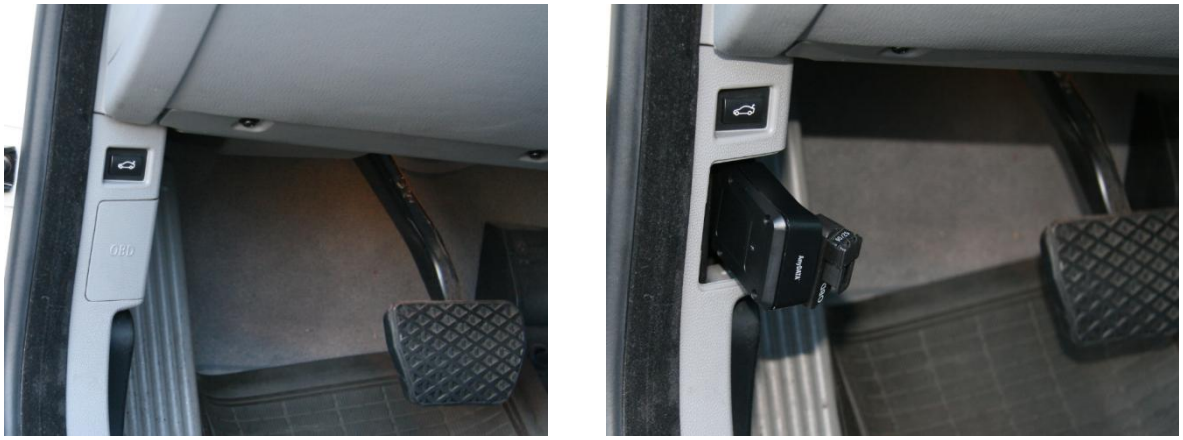

Figure 4.1: Installation of ACT233L in vehicle

4.2 POWER SUPPLY FROM VEHICLE (TYPICAL 13.5V)

1. After insertion of ACT233L 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 CDMA/LTE 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 RMP, and so on to report it to LBS

server via the CDMA or LTE network.

5 POWERING ON/OFF THE 4G VEHICLE TRACKER WITH HOTSPOT

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 ACT233L, 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 4G VEHICLE TRACKER WITH HOTSPOT SPECIFICATIONS

6.1 FORM FACTOR

- Dimensions : 80 x 55 mm, 22mm in Height
- Weight 78.4g

6.2 HARDWARE SPECIFICATIONS

- Full TIA/EIA/IS-98D/3GPP R8 LTE Compliance Assisted & Standalone GPS
- Operating Voltage 9 ~ 18V, (internally 3.5V for CDMA RF)
- Max Output Power 0.3W
- Light Sleep Mode (4mA @ 13.5V)
- Deep Sleep Mode (2mA @ 13.5V)
- Sensitivity Less than -104dBm for CDMA, -97dBm for LTE B4, -94dBm for LTE B13(10MHz BW for LTE).
- Receive Frequency 869.04 ~ 893.97MHz for BC0, 1931.25 ~ 1988.75MHz for BC1, 746 ~ 756MHz for B13, 2110 ~ 2155MHz for B4.
- Transmit Frequency 824.04 ~848.97MHz for BC0, 1851.25 ~ 1908.75MHz for BC1, 777 ~ 787MHz for B13, 1710 ~ 1755MHz for B4.
- Wi-Fi/Bluetooth (4.0+LE) : 2402MHz ~ 2480MHz
- RKE (Remote Keyless Entry) : 300MHz, 319MHz, and 433.92MHz

6.3 SOFTWARE SPECIFICATIONS

- CDMA2000: CDMA2000 protocol IS-707-A.5: Packet Data Service for Mobile and Base Station
- CDMA2000 1x EVDO r0, rA: EVDO protocol IS-856
- IS-95A/B: CDMA protocol TIA/EIA-637: Short Message Service for Mobile and Base Station
- IS-801 & TIA-801-A: Position determination Built-in TCP/IP service standard for Dual-Mode spread spectrum systems
- LTE: LTE protocol TS36.521, 3GPP R8 Cat3

6.4 EXTERNAL INTERFACE

- OBD-II
- Micro USB (Type B)

6.5 ENVIRONMENTAL

- Operating Temperature : -20 ~ +70C
- Storage Temperature : -40 ~ +85C
- Humidity (Operating) 5% ~ 95% non-condensing, (50C)

7 LIMITATIONS OF LIABILITY

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