

## C4D-4GMUSAA\_V6 - INSTALLATION GUIDE

V 1.1

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## Preface

The information contained in this installation guide is subject to changes in order to improve the reliability, design or features without prior notice. Mobile Devices Ingénierie reserves the right to make changes in the content without obligation to notify any person or organisation of such changes or improvements. Mobile Devices Ingénierie can in no event be held liable for technical or editorial errors or omissions herein, nor for incidental, special or consequential damages from the furnishing, performance or use of this installation guide.

Please contact our technical support for current updates and supplemental information concerning the use and operation of this or other Mobile Devices Ingénierie products.

## Warnings and notices



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Please read the installation guidelines, as well as the safety and operating instructions before operating your device. Follow all instructions and heed all warnings in the installation guide.

There is a risk of explosion if the battery is replaced by a wrong battery type. Please discard empty battery according to local regulations.

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

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to 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 radiated radio frequency energy and, if not installed and used in accordance with 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 receiver.
- Connect the equipment into 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.

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

## FCC RF Exposure Information (SAR)

This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the United States.

During SAR testing, this device is set to transmit at its highest certified power level in all tested frequency bands, and placed in positions that simulate RF exposure in usage **near the body with the separation of xx mm**. Although the SAR is determined at the highest certified power level, the actual SAR level of the while operating can be well below the maximum value. This is because the device is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

The exposure standard for wireless employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg.

The FCC has granted an Equipment Authorization for this model device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model device is on file with the FCC and can be found under the Display Grant section of [www.fcc.gov/oet/ea/fccid](http://www.fcc.gov/oet/ea/fccid) after searching on FCC ID: **XXX-XXXXXXX**.

For this device, the highest reported SAR value for usage near the body is **X.XXX** W/kg.

While there may be differences between the SAR levels of various devices and at various positions, they all meet the government requirement.

SAR compliance for body operation is based on a separation distance of **XXmm** between the unit and the human body.

## 1. Hardware features

OBD Dongle		
Performance	Processor	Cortex A5 - 500MHz
	RAM	128 Mbytes
	NAND Flash	256 Mbytes
Power supply	External power supply range	8-18V
	External voltage measurement	•
	Li-pol battery*	450mA.h
Communication	Modem	4G Cat-M1data module (ME910C1-NA)
	Modem antenna	Internal
Positioning	GNSS receiver	U-blox M8 (GPS, GLONASS, BeiDou)
	GNSS antenna	Internal
Interface & Telematics features	USB (2.0 Host)	powered (100mA on 5V minimum) optional
	3D Accelerometer	± 2g, ± 4g, ± 6g, ± 8g, ± 16g
	OBD protocols	CAN, KWP2000, VPW, PWM
	Additional CAN interface	•
	OBD pin multiplexer	•
Environmental	Connectors	OBD connector
		Micro USB**
	Operating temperature *	-25/+ 60°C
	Dimensions	With OBD connector: 27x60,5x49,5 mm Without OBD connector: 27x48x49,5 mm
	SIM card	slot

\* Please read warnings section at the beginning of the installation guide

\*\* Please see note on "3.3. Install the OBD Dongle"

## 2. Hardware description

### 2.1. External view

1. ODB connector
2. microUSB connector
3. LED



### 2.2. Internal view

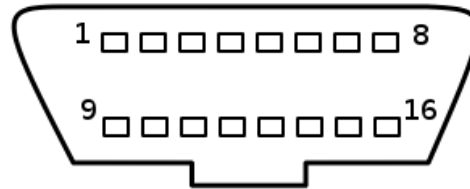
4. Modem antenna
5. GNSS antenna
6. SIM holder
7. Internal battery\*



\* Please read warnings section at the beginning of the installation guide

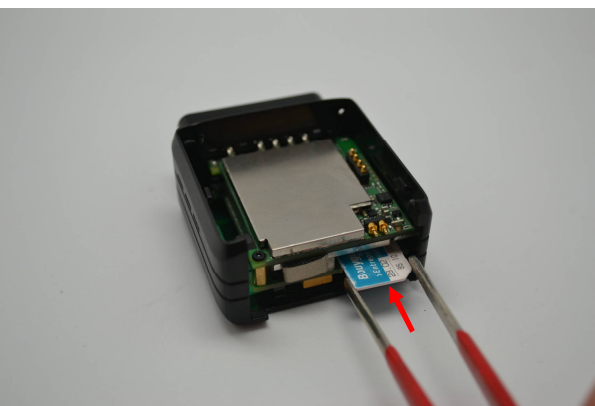
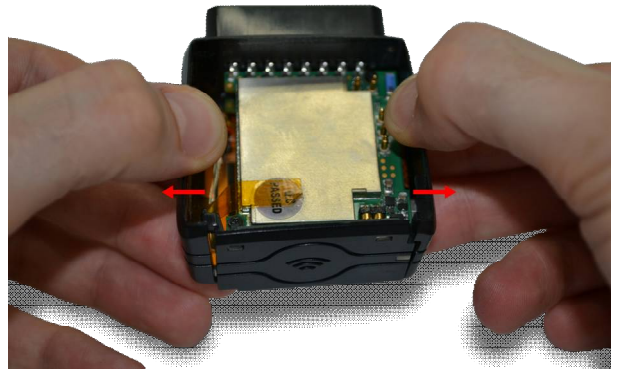
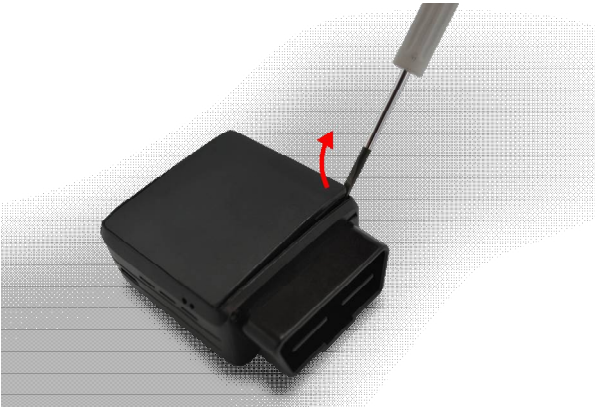
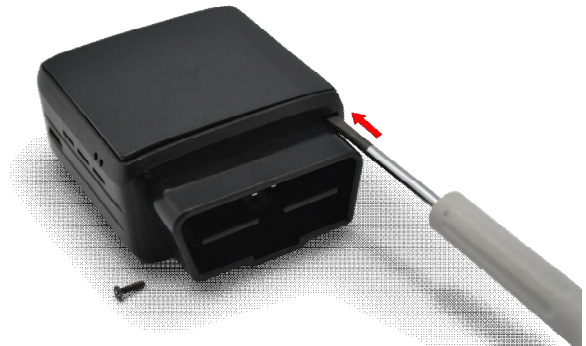
## 2.3 OBD connector pin out

Pin #	Comment
2	J1850+ (PWM/VPW)
4	Chassis ground
5	Signal ground
6	CAN High
7	K line
10	J1850- (PWM)
14	CAN low
15	L line
16	Battery voltage



### 3. Preparing/installing the device

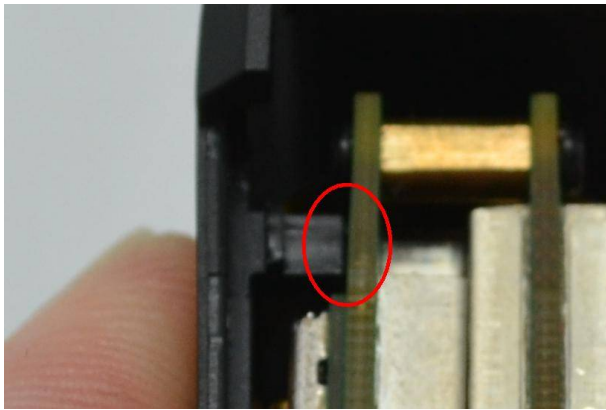
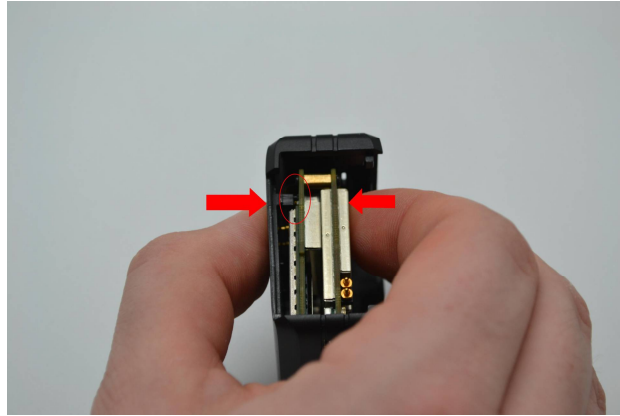
#### 3.1. Open the device to insert a SIM card



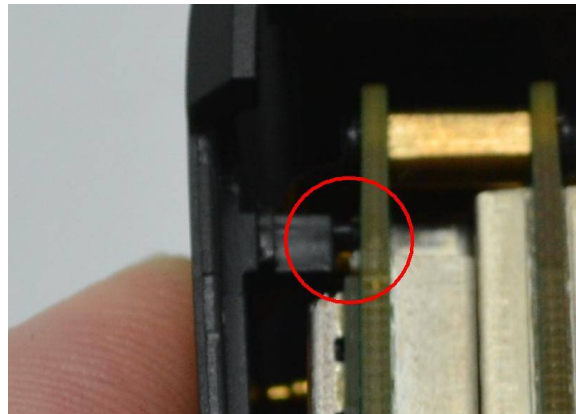


### 3.2. Properly close the device

First, check that the hole of the electronic card is correctly inserted in the plastic part.  
If it's not inserted proceed as shown below.

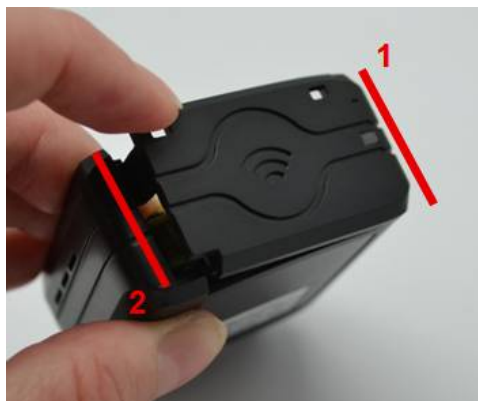


**GOOD**

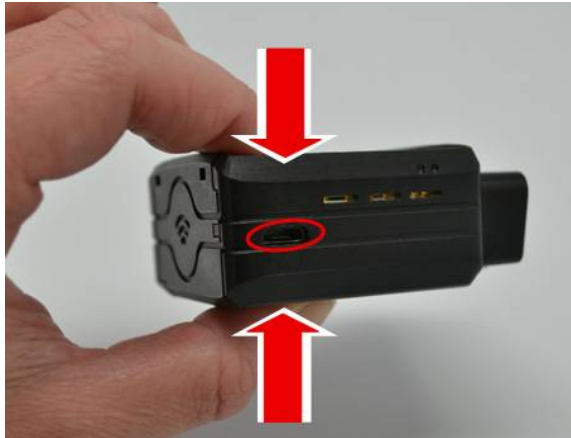


**NOT GOOD**

Second, insert the GPS antenna as shown below.



Third, check that the micro USB port is correctly inserted on its place.  
If it's not inserted proceed as shown below.



**GOOD**



**NOT GOOD**

Finally, insert the battery and place the screw.



### 3.3. Install the OBD Dongle

Connect the OBD Dongle on your vehicle OBD connector.

Note : The USB port is not intended to be used during driving operation.  
The USB is only used for flashing and debug purpose via USB key or computer.

### 4. LED sequences

The Dongle has a two-coloured LED, green and red.  
When both colours are brightened, you can see an orange light.

Green LED		Red LED	
Sequence	Meaning	Sequence	Meaning
		Dongle OFF	OFF
No Modem /No GNSS	3 times (50ms ON/100ms OFF) 3550ms OFF	Ext. Power/Run	ON
No Modem /Fix GNSS	2 times (50ms ON/100ms OFF) 3700ms OFF		
Modem OK /No GNSS	1 time (50ms ON/100ms OFF) 3850ms OFF		
Modem OK /Fix GNSS	2000ms ON 2000ms OFF		
		Shutdown/Hibernate	30ms ON / 1 s OFF
		Idle/Sleep	30ms ON / 1 s OFF

### 5. Support

For all questions not related in this installation guide, please contact the support team by email at [support@mobile-devices.fr](mailto:support@mobile-devices.fr)