

ALARM.COM

**ADC-CC110**

**INSTALLATION GUIDE**

**V 1.0**

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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. MUNIC reserves the right to make changes in the content without obligation to notify any person or organization of such changes or improvements. MUNIC 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 MUNIC 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.

Dispose of used batteries according to the instructions.

## FEDERAL COMMUNICATION COMMISSION INTERFERENCE STATEMENT

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 equipment 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 radiate 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 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.

## FCC CAUTION

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

## RADIATION EXPOSURE STATEMENT

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

## INDUSTRY CANADA STATEMENT

- ❶ 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.
- ❷ 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.
- ❸ This Class B digital apparatus complies with Canadian ICES-003.
- ❹ Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.
- ❺ This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter, except tested built-in radios.
- ❻ Cet appareil et son antenne ne doivent pas être situés ou fonctionner en conjonction avec une autre antenne ou un autre émetteur, exception faites des radios intégrées qui ont été testées.
- ❼ The County Code Selection feature is disabled for products marketed in the US/ Canada.
- ❼ La fonction de sélection de l'indicatif du pays est désactivée pour les produits commercialisés aux États-Unis et au Canada.

## Radiation Exposure Statement

The product complies with the Canada portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.

## Déclaration d'exposition aux radiations

Le produit est conforme aux limites d'exposition pour les appareils portables RF pour les Etats- Unis et le Canada établies pour un environnement non contrôlé.

Le produit est sûr pour un fonctionnement tel que décrit dans ce manuel. La réduction aux expositions RF peut être augmentée si l'appareil peut être conservé aussi loin que possible du corps de l'utilisateur ou que le dispositif est réglé sur la puissance de sortie la plus faible si une telle fonction est disponible.

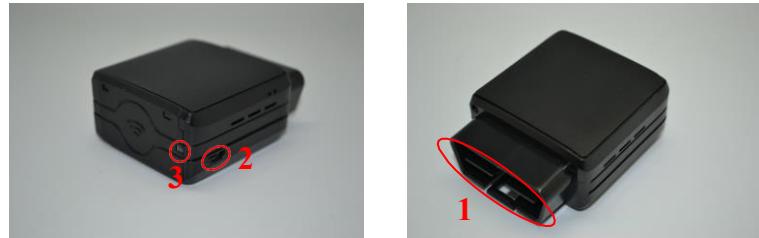
## HARDWARE FEATURES

Performance	Processor	ARM A7
	RAM	2 Gbytes
	NAND Flash	2 Gbytes
Power supply	External power supply range	8-30V
	External voltage measurement	•
	Li-pol battery	450mAh
Communication	Modem	LTE Cat M1 & EGPRS Module (BG96)
	Bands	LTE: band 2, 4, 12 GSM: band 850 MHz , 1900 MHz
	Modem antenna	Internal
	SIM	Micro SIM slot
	Wi-Fi	2.4 GHz band - 802.11b/g/n
	Bluetooth	V4.2 - EDR/BLE
Positioning	GNSS receiver	U-blox M8 (GPS, GLONASS)
	GNSS antenna	Internal
Interface & Telematics features	IMU	Accelerometer 3 axis ±2/4/8/16 G
	OBD protocols	CAN, KWP2000, VPW, PWM
	CAN interface	Single CAN coprocessor
	Leds	1 bicolor LED
Environmental	Connectors	OBD connector Micro USB type B connector
	Operating temperature	-20°C ~ +50°C with Battery
	Dimensions	With OBD connector: 27x50x61 mm Without OBD connector: 27x50x49 mm

## HARDWARE DESCRIPTION

### EXTERNAL VIEW

- 1 : OBD connector
- 2 : micro USB connector
- 3 : bicolor led



### INTERNALVIEW

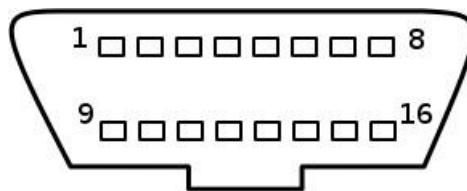
- 5 : GNSS antenna
- 6 : micro-SIM holder
- 7 : Internal battery\*



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

## OBD CONNECTOR PIN OUT

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



## OBD ADAPTER WIRES

This adapter is only used to connect the OBD to a computer (laptop/desktop).

Pin #	Wire color
2	Yellow
4	Black
5	Grey
6	Green
7	Blue
10	Violet
14	Orange
15	White
16	Red



## PREPARING/INSTALLING THE DEVICE

Those operations may need the use of specific tools like :

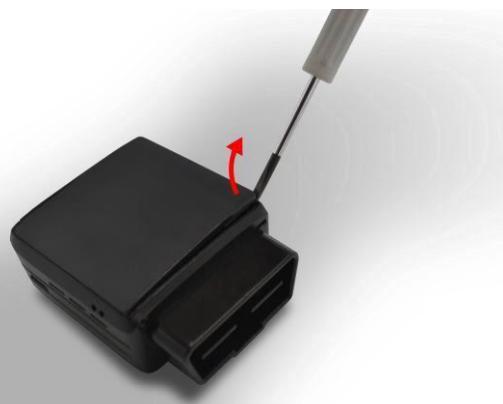
- Small cross-head screwdriver for the screw.
- Small slotted screwdriver to remove the cover.
- Thin tweezers to insert/remove the SIM card.

## OPEN THE DEVICE

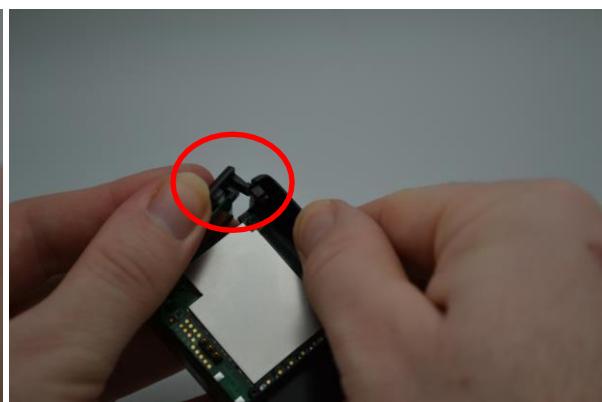
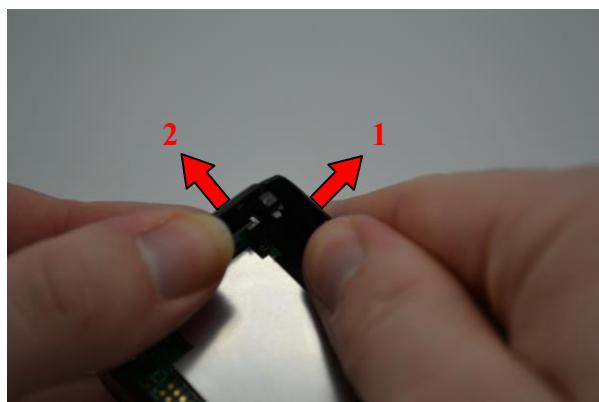
Remove the screw using Small cross-head screwdriver



Insert slotted screwdriver to pop-out the top cover and extract it.



Move apart the side of the device first and then pull the back cover out of his spot

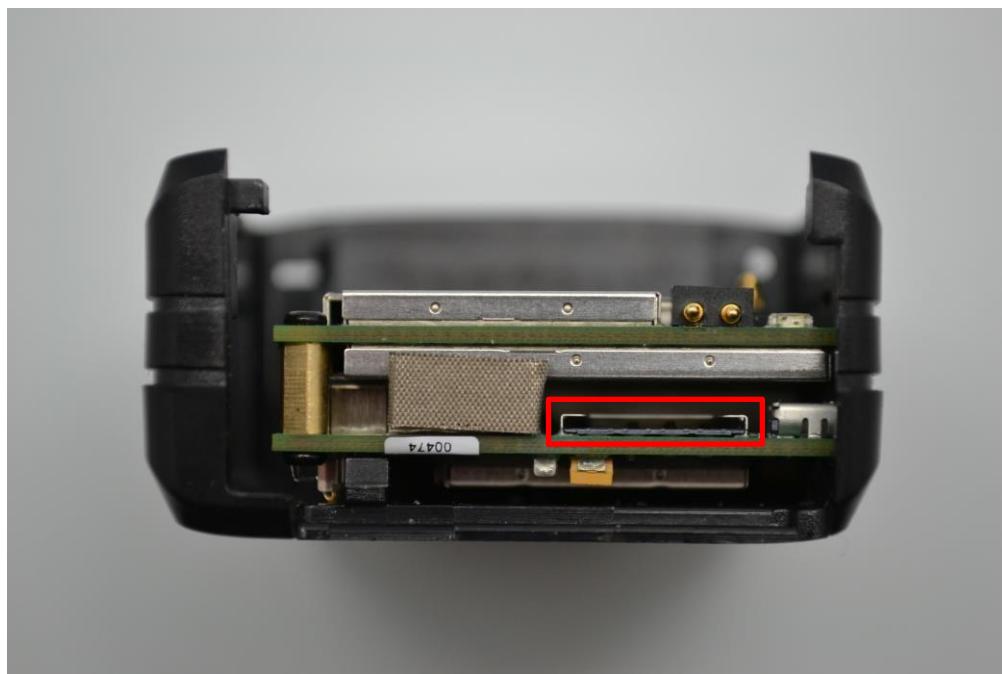


Device is now open

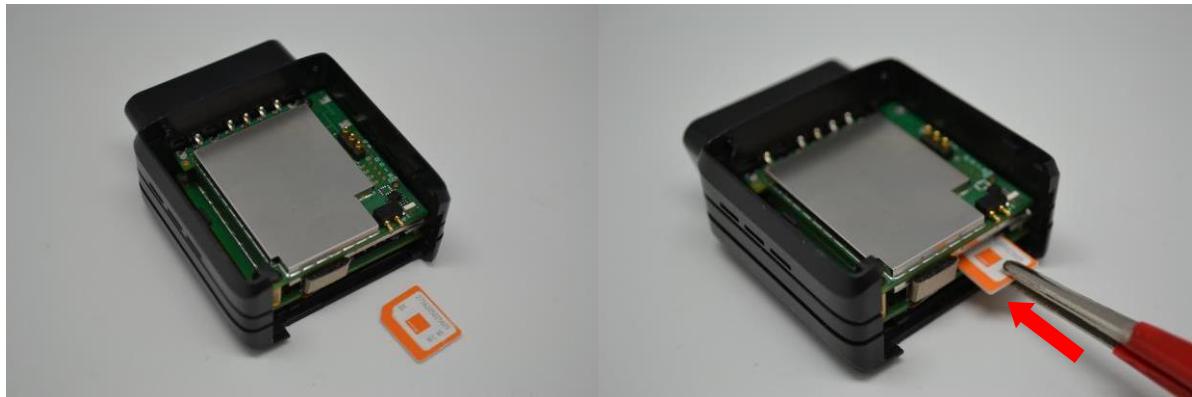


### **INSERT THE SIM CARD**

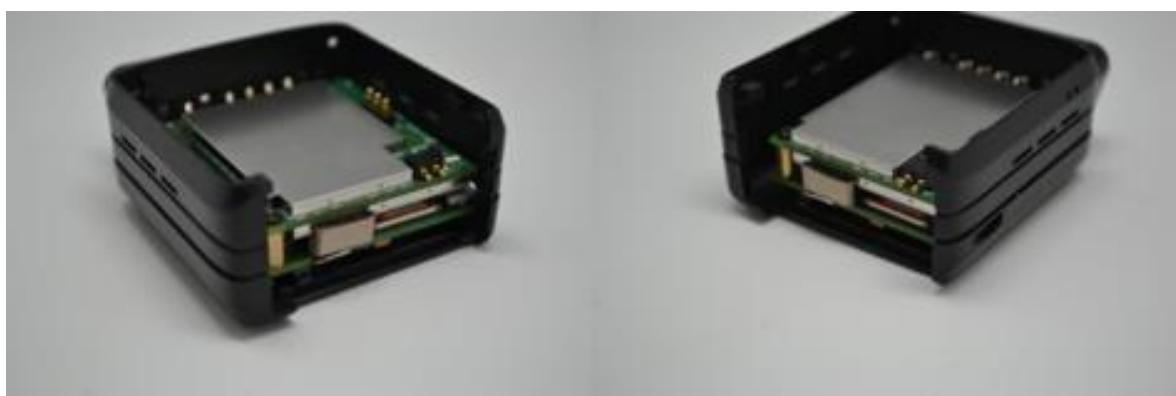
The micro-SIM card slot is located between the two electronic cards.



Insert the card with contact on bottom into the slot and push it as far as it will go.

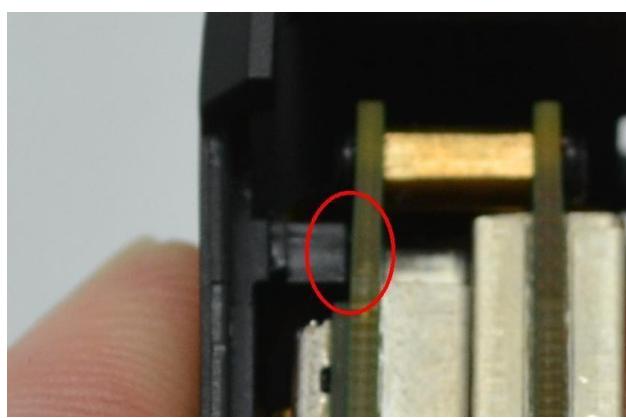
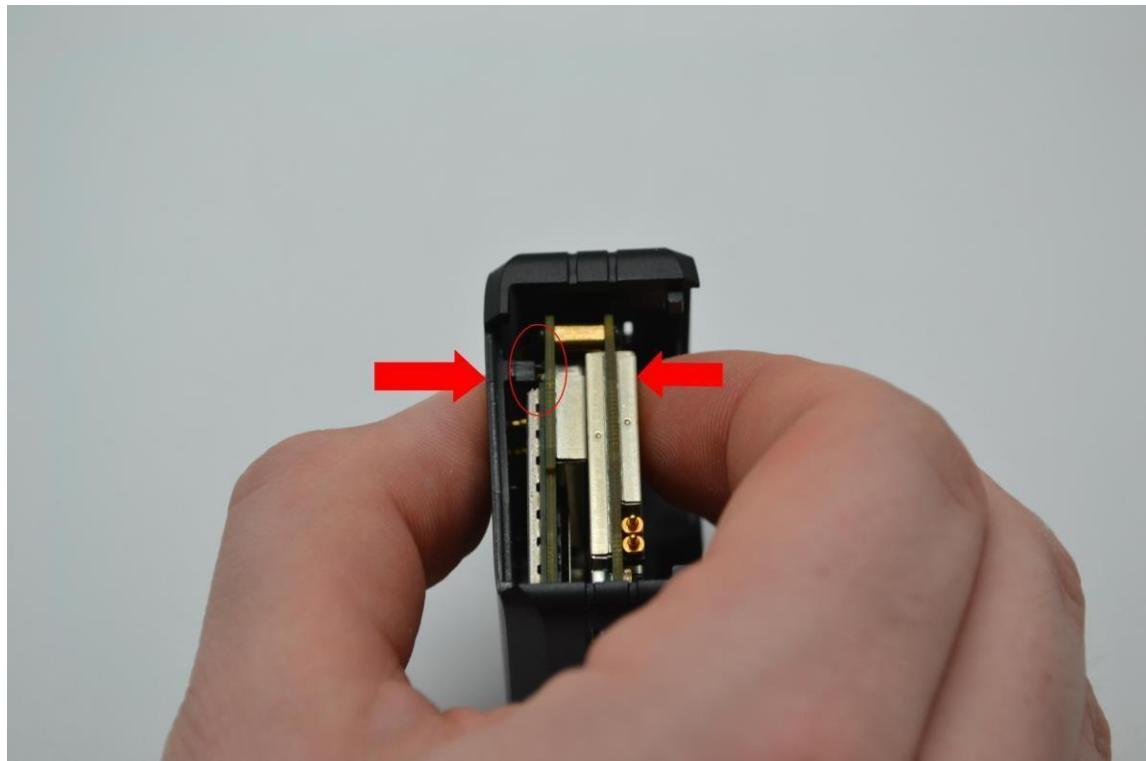


Once inserted the SIM card looks like this:

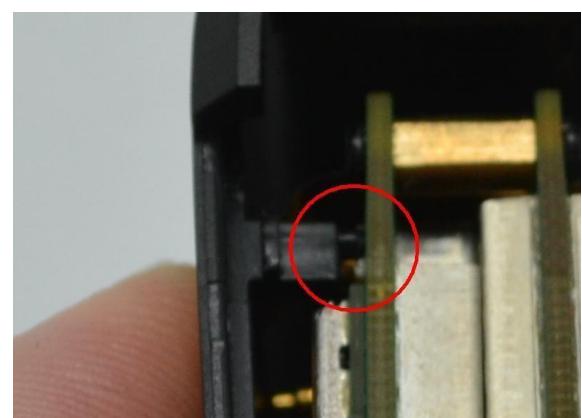


## PROPERLY CLOSE THE DEVICE

First, check that the hole of the electronic card is correctly inserted in the plastic part. If it's not inserted please move smoothly the electronic cards right and left to place it in correct position.

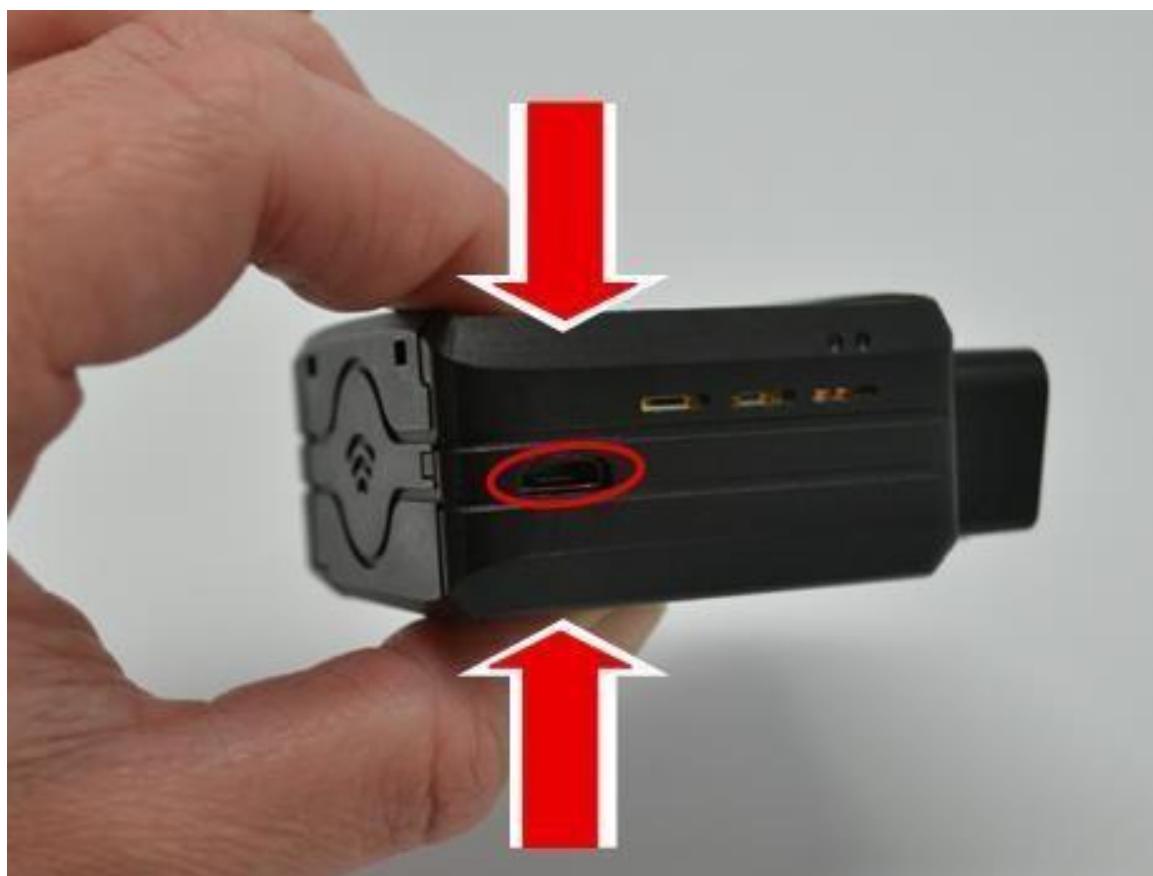


**GOOD**



**NOT GOOD**

Second, check that the micro-USB port is correctly inserted in its place. If it's not inserted, please move smoothly the electronic cards to place it in correct position.



**GOOD**

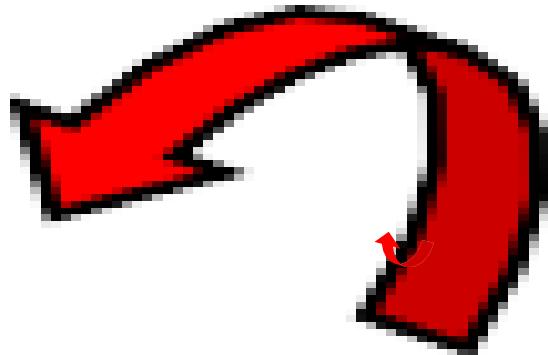
Insert the GPS antenna as shown below.



**NOT GOOD**



Finally, insert the battery and place the screw.



### Install the OBD Dongle

Connect the OBD Dongle on your vehicle OBD connector.

## LED SEQUENCES

The Dongle has a two-colored LED, green and red.  
When both colors 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		
No Modem /Fix GNSS	2 times (50ms ON/100ms OFF) 3700ms OFF	Ext. Power/Run	ON
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

## SUPPORT

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