C4D-4G4EUAA_V8+ - INSTALLATION GUIDE

V 1.3

14/06/2022

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

There is a risk of explosion if the battery is disposed into fire or a hot oven, or mechanically crushed or cut.

There is a risk of explosion or leakage of flammable liquid or gas if the battery is left in an extremely high temperature surrounding environment or is subjected to extremely low air.

Please discard empty battery according to local regulations.

Dispose of used batteries according to the instructions.

RF Exposure Information (SAR)

This device meets the EU requirement (2014/53/EU Article 3.1a) and the UK Radio Equipment Regulations (SI 2017 No. 1206) on the limitation of exposure of the general public to electromagnetic fields by way of health protection.
The device complies with RF specification when the device is used at 20 cm from the Body.

1. Hardware features

| OBD Dongle		
Performance	Processor	ARM Cortex-A7 Dual-Core 1.2GHz
	RAM	256 Mbytes
	NAND Flash	512 Mbytes
Power supply	External power supply range	8-18V ⎓ 2A max*
	Internal battery	Li-pol battery 270mAh
Communication	Modem	4G Cat.4 module EC25-EUGB
	Bands	4G: B1, B3, B7, B8, B20, B28. 3G: B1, B8. 2G: B3, B8.
	Modem antenna	Internal
	SIM	MFF2 soldered SIM
Positioning	GNSS receiver	U-blox M8 (GPS, GLONASS)
	GNSS antenna	Internal
Interface & Telematics features	Accelerometer	Accelerometer 3 axis ±2/4/8/16 g
	OBD protocols	CAN, ISO9141, J1850 (VPW, PMW)
	Buttons	1 reset button
	Leds	2 bicolor LED
Environmental	Connectors	OBD connector Micro USB type B connector
	Operating temperature	-20°C/+50°C with Battery -20°C/+60°C without battery
	Dimensions	27.3x51x71 mm

*⎓ : direct current

2. Hardware description

2.1. External view

1 : OBD connector
2 : micro USB connector
3 : signal bicolor led
4 : power bicolor led

2.2. Internal view

2 : micro USB connector
5 : Modem antenna
6 : GNSS antenna
7 : nano SIM holder*
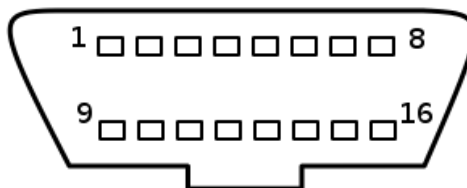8 : Internal battery**
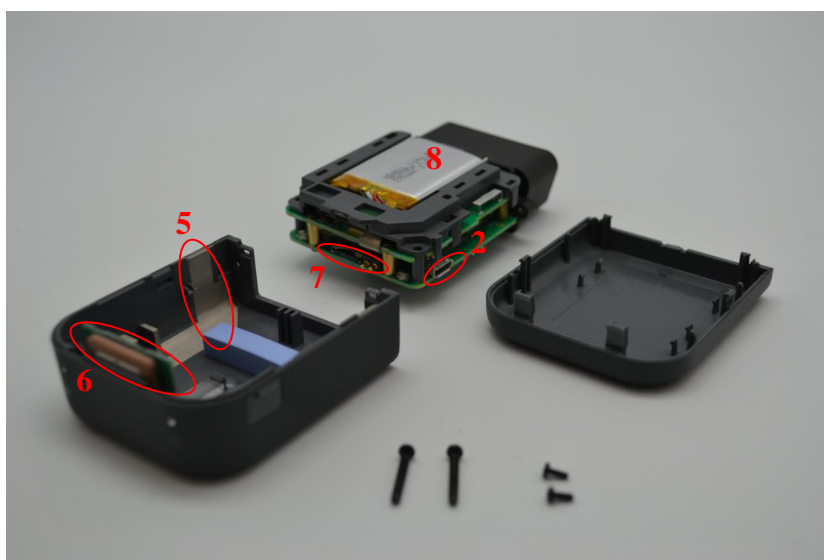
* SIM holder can be absent if device have eSIM chip.
** Please read warnings section at the beginning of the installation
guide.

2.3 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

2.4 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
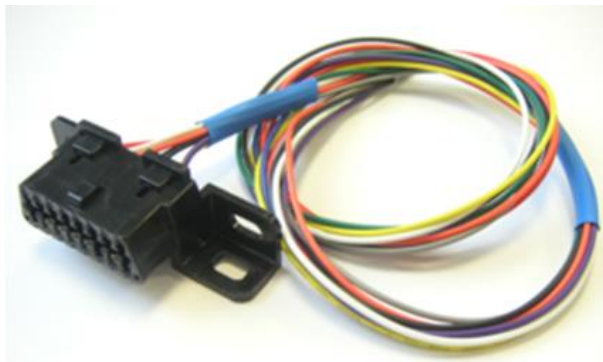
3. Preparing/installing the device

Those operations may need the use of specific tools like :
- T4 Torx screwdriver for the external screw.
- T6 Torx screwdriver for the internal screw.
- Small slotted screwdriver to remove the cover.
- Thin tweezers to insert/remove the SIM card.

3.1. Open the device

Insert slotted screwdriver between top cover and body to pop-out the top cover on each side and extract it.

Remove the screw located on each side of the OBD connector using T4 Torx screwdriver

Remove the screw located on the PCB at the bottom of the device using T6 Torx screwdriver

Move apart the side of the device first and then pull the OBD connector out of the body.

Device is now open

3.2.   Properly close the device

First, insert the main part into the bottom cover. Insert the rear first and take care of the pogo pin of the GNSS antenna.

Once inserted, push the main part into the back cover until your hear two "clac"

Place the long screw on the rear of the electronic cards in order to fix it to the body using T6 Torx screwdriver.

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Place the screw on each side of the OBD connector to fix it to the body using T4 Torx screwdriver.

Insert the top cover beginning with the rear.

Finally, push the top cover down until you hear the "clac".

Device is ready.

4. LED sequences

The Dongle has a two-coloured LED, green and red.
Please note that when both LEDs are brightened, you can perceive the colour as orange.

Signal LED (Left)		Power LED (Right)	
Sequence	Meaning	Sequence	Meaning
		Dongle OFF	OFF
No Modem /No GNSS	3 times 50ms Green ON/100ms OFF 3550ms OFF	Ext. Power/Run	Green ON
No Modem /Fix GNSS	2 times 50ms Green ON/100ms OFF 3700ms OFF		
Modem OK /No GNSS	50ms Green ON 3950ms OFF		
Modem OK /Fix GNSS	2000ms ON 2000ms OFF		
		Shutdown/Hibernate	30ms Green ON / 1s OFF
		Idle/Sleep	30ms Green ON / 1s OFF

5. EU Regulatory

We, MUNIC declares that the radio equipment type C4D-4G4EUAA_V8+ are in compliance with the Directive 2014/53/EU and UK Radio Equipment Regulations SI 2017 No. 1206.

Technology/Band	Mode	Conduct Power (dBm)
GPS	RX	NA
GLONASS	RX	NA
LTE Band 1	QPSK/16QAM	22.29dBm
LTE Band 3	QPSK/16QAM	21.88dBm
LTE Band 7	QPSK/16QAM	21.88dBm
LTE Band 8	QPSK/16QAM	23.04dBm
LTE Band 20	QPSK/16QAM	21.95dBm
LTE Band 28	QPSK/16QAM	21.46dBm
3G Band 1	RMC12.2Kbps	23.78dBm
3G Band 8	RMC12.2Kbps	23.98dBm
GSM 900	GPR	32.64dBm
	EDGE	19,47dBm
GSM 1800	GPRS	29.4dBm
	EDGE	24.65dBm

6. Support

For all questions not related in this installation guide, please contact the support team by email at support@munic.io