

GV301TP 4G WW User Manual

EGPRS/LTE Cat-M1/LTE Cat-NB2/GNSS Tracker

QSZTGV301TPMGUM0100

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0. Revision History

Revision	Date	Author	Description of change
1.00	2022-07-29	Eddy Qi	Initial

1. Introduction

The GV301TP 4G WW is a powerful GPS locator designed for vehicle or asset tracking. It has superior receiver sensitivity, fast TTFF (Time to First Fix) and supports EGPRS/LTE Cat-M1/LTE Cat-NB2/GPS tracker. Its location can be monitored in real time or periodically tracked by a backend server or other specified terminals. It has Bluetooth. The GV301TP 4G WW has multiple input/output interfaces that can be used for monitoring or controlling external devices. Based on the integrated @Track protocol, the GV301TP 4G WW can communicate with a backend server through the network to transfer reports of emergency, geo-fence boundary crossings, low backup battery and scheduled GPS position as well as many other useful functions. Users can also use GV301 TP 4G WW to monitor the status of a vehicle and control the vehicle by its external relay output. System integrators can easily set up their tracking systems based on the full-featured @Track protocol.

1.1 Reference

Table 1.GV301TP 4G WW Protocol Reference

SN	Document name	Remark
[1]	GV301TPMG @Track Air Interface Protocol	The air protocol interface between GV301TP 4G WW and backend server.

1.2 Terms and Abbreviations

Table 2.Terms and Abbreviations

Abbreviation	Description
AIN	Analog Input
DIN	Digital Input
GND	Ground
RXD	Receive Data
TXD	Transmit Data

2. Product Overview

2.1. Check Parts List

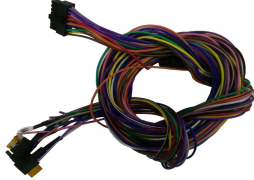
Before starting, check whether the product is intact. If anything is missing, please contact your supplier.



Figure 1. Appearance of GV301TP 4G WW

2.2. Parts List

Table 3.Parts List

Name	Picture
GV301TP 4G WW Locator	122*85.2*24.2 mm
Tracker Cable	
OBD Cable	
GPS Antenna (Optional)	
Debug Cable (Optional)	

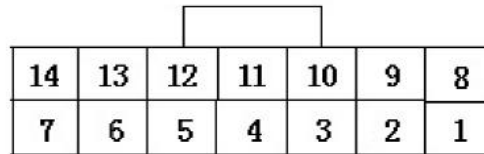
2.3. Interface Definition

16-pin interface

16	15	14	13	12	11	10	9
8	7	6	5	4	3	2	1

PIN NO.	PIN Name	Description
1	MICP	Microphone input+
2	AGND	Microphone ground (-)
3	IGN	IGN signal input
4	UART0_RX	RS232 connect to external device TX
5	UART0_TX	RS232 connect to external device RX
6	GND	Signal ground (-)
7	OUT3	Voltage output 3(5V/ 1-WIRE power support)/ Negative output3
8	OUT2	Voltage output 2(12V)/ Negative output2
9	EARP	Audio out +
10	EARN	Audio out -
11	VIN	Power supply (Range 8V to 32V DC)
12	AD2/IN2	Analog input 2/ Negative triggered 2
13	AD1/IN1	Analog input 1/ Negative triggered 1
14	OUT1	Negative output 1
15	OUT4/IN3	Voltage output 4(12V) / Negative output4/ Negative triggered 3
16	1-WIRE DATA	1-WIRE bus

14-pin interface



PIN No.	PIN Name	Description
1	OBD1	High Speed CANH /Low Speed CANH / Single Wire CAN BUS
2	OBD15	ISO L-Line
3	OBD3	HS CANH
4	Chassis Ground	Chassis Ground
5	Signal Ground	Signal Ground
6	OBD6	HS CANH
7	OBD7	ISO K7-Line
8	OBD8	HS CANL
9	OBD9	HS CANL /LS CANL
10	VCC signal	VCC (8V-32V DC only used to detect for OBD port insert)
11	OBD11	HS CANL
12	OBD12	ISO K12-Line/HS CANH
13	OBD13	HS CANL
14	OBD14	HS CANL

3. Getting Started

3.1. Open the Case

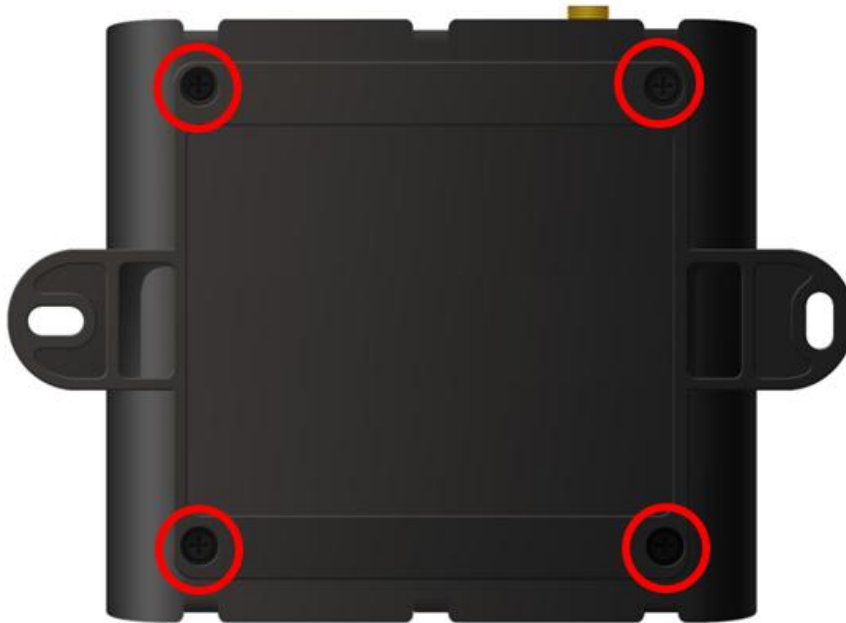


Figure 2.Open the Case

Loosen the screws at the back of the device.

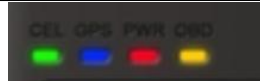
3.2. Installing a SIM Card

Open the case and ensure the unit is not powered (unplug the cable and unplug the internal battery). Slide the holder to open the SIM card holder. Insert the SIM card into the slot. Take care to align the cut mark. Close the SIM card holder. Close the case.

3.3. Device Status LED

Note:

1. CEL LED cannot be configured.

		
LED	Device status	LED status
CEL (Note 1)	Device is searching network.	Fast flashing (Note 3)
	Device has registered to network.	Slow flashing (Note 4)
	SIM card needs pin code to unlock.	ON
GPS (Note 2)	GPS chip is powered off.	OFF
	GPS sends no data or data format error occurs.	Slow flashing
	GPS chip is searching GPS info.	Fast flashing
	GPS chip has gotten GPS info.	ON
PWR (Note 2)	No external power and internal battery voltage is lower than 3.35V.	OFF
	No external power and internal battery voltage is below 3.5V.	Slow flashing
	External power in and internal battery is charging.	Fast flashing
	External power in and internal battery is fully charged.	ON

2. GPS LED and PWR LED can be configured to turn off after a period of time by using the configuration tool.
3. Fast flashing: for GSM LED is about 60 ms ON/780 ms OFF; for GPS LED and PWR LED is about 100 ms ON/100 ms OFF.
4. Slow flashing: for GSM LED is about 60 ms ON/1940 ms OFF; for GPS LED and PWR LED is about 600 ms ON/600 ms OFF.

4. CE Declaration

Hereby, Quectel Wireless Solutions Co., Ltd. declares that the radio equipment type GPS tracker is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:
<http://www.quectel.com/>



FCC Caution.

§ 15.19 Labeling requirements.

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.

§ 15.21 Changes or modification warning.

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

§ 15.105 Information to the user.

Note: 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 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.

RF warning for Mobile device:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device complies with Industry Canada licence-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

Declaration of Conformity

Hereby, [Targa Telematics spa] declares that the radio equipment type [designation of type of radio equipment] is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:
WWW.TARGATELEMATICS.COM

Operating Temperature:-20°C ~ +60°C

RF exposure *statement*

RF exposure information: The Maximum Permissible Exposure (MPE) level has been calculated based on a distance of d=20 cm between the device and the human body. To maintain compliance with RF exposure requirement, use product that maintain a 20cm distance between the device and human body.

Max power for WWAN and BT

GSM900

32.85 dBm

GSM1800

30.23 dBm

CATM&NB

Band 1

24 dBm

Band 3

24 dBm

Band 7

24dBm

Band 8

24 dBm

Band 20

24 dBm

Band 28

24 dBm

BLE

7dbm