

# GB100(P) User Manual

## GSM/GPRS/GNSS Tracker

TRACGB100(P)UM001

Revision: 1.04



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## Contents

|                                    |    |
|------------------------------------|----|
| Contents .....                     | 2  |
| Table Index .....                  | 3  |
| Figure Index .....                 | 4  |
| 0. Revision History .....          | 5  |
| 1. Introduction .....              | 6  |
| 1.1. Reference .....               | 6  |
| 2. Product Overview .....          | 7  |
| 2.1. Check Parts List .....        | 7  |
| 2.2. Parts List .....              | 8  |
| 2.3. Interface Definition .....    | 8  |
| 2.3.1 Interface .....              | 8  |
| 3. Get Started .....               | 9  |
| 3.1. Open the Case .....           | 9  |
| 3.2. Close the case .....          | 10 |
| 3.3. Install the SIM Card .....    | 10 |
| 3.4. Power Connection .....        | 10 |
| 3.5. LED Status .....              | 11 |
| 3.6. Motion Sensor Direction ..... | 13 |

## Table Index

|  |    |
|--|----|
| Table 1: GB100(P) Protocol Reference .....         | 6  |
| Table 2: Parts List.....                           | 8  |
| Table 3: Description of 2PIN Power Cable .....     | 8  |
| Table 4: Definition of Device Status and LED ..... | 11 |

## Figure Index

|  |    |
|--|----|
| Figure 1: Appearance of GB100(P) .....   | 7  |
| Figure 2: GB100(P) 2PIN Power Cable..... | 8  |
| Figure 3: Open the Case .....            | 9  |
| Figure 4: Close the Case .....           | 10 |
| Figure 5: Install the SIM Card .....     | 10 |
| Figure 6: Typical Power Connection ..... | 11 |
| Figure 7: GB100(P) LED on the Case.....  | 12 |
| Figure 8: Motion Sensor Direction .....  | 13 |

## 0.Revision History

| Revision | Date       | Author     | Description of Change                                 |
|----------|------------|------------|---|
| 1.00     | 2017-02-15 | Pablo Dang | 1. Initial.   |
| 1.01     | 2017-06-23 | Pablo Dang | 1. Added some notes.                                  |
| 1.02     | 2017-09-26 | Pablo Dang | 1. Modified the document name.                        |
| 1.03     | 2019-03-11 | Young Chen | 1. Added the description for Motion Sensor Direction. |
| 1.04     | 2019-11-15 | Young Chen | 1. Modified the LED Status note information for TZA.  |

## 1.Introduction

The GB100(P) is a device designed for self-installation by a customer. It simply mounts directly onto the vehicle's battery with only two wires to attach. This approach allows for either a very low cost installation or for the insurance customer to self-install. Its built-in GNSS receiver has very high sensitivity, a fast time to first fix and supports 1Hz (every second) location sampling during vehicle motion. Its quad band GPRS/GSM subsystem supports 900/1800 MHz and enables the GB100(P)'s location to be monitored in real time or periodically tracked by a backend server and mobile devices. Its built-in 3-axis accelerometer allows motion detection, incident detection, 2000 Hz\* pre/post incident data collection and extends battery life through sophisticated power management algorithms. System integration is straightforward as complete documentation is provided for the full featured @Track protocol. The @Track protocol supports a wide variety of reports including emergency, geo-fence boundary crossings, driving behavior, low battery and scheduled and compressed GNSS position.

### 1.1.Reference

Table 1: GB100(P) Protocol Reference

| SN  | Document Name  | Remark  |
|-----|--|---|
| [1] | GB100 @Track Air Interface Protocol & GB100P @Track Air Interface Protocol | The air protocol interface between GB100(P) and the backend server. |

## 2. Product Overview

### 2.1. Check Parts List

Before starting, check to make sure all the following items have been included with your GB100(P). If anything is missing, please contact your supplier.




Figure 1: Appearance of GB100(P)



## 2.2.Parts List

Table 2: Parts List

| Name             | Picture  |
|------------------|--|
| GB100(P) Locator |  |

## 2.3.Interface Definition

### 2.3.1 Interface

The GB100(P) has a 2PIN power cable. The pin description of the 2PIN power cable is shown below:



Figure 2: GB100(P) 2PIN Power Cable

Table 3: Description of 2PIN Power Cable

| Index | Description | Remark                         |
|-------|-------------|--------------------------------|
| 1     | VIN         | External DC power input, 8-32V |
| 2     | GND         | GND                            |

### 3. Get Started

#### 3.1. Open the Case

Insert the triangular-pry-opener into the gap of the case as shown below, and push the opener up until the case is unsnapped.



Figure 3: Open the Case

### 3.2. Close the case

Firstly, make sure the silicon rubber seal ring is in the gap of the front case. Secondly, put the power cable holder in the rubber groove of the rear case. Place the cover on the bottom in the position as shown in the following figure. Press the cover until it snaps (press the GSM antenna side first).



Figure 4: Close the Case

### 3.3. Install the SIM Card

Open the case and ensure the unit is not powered. Slide the holder right to open the SIM card. Insert the SIM card into the holder as shown below with the gold-colored contact area facing down. Take care to align the cutting mark. Close the SIM card holder. Close the case.



Figure 5: Install the SIM Card

### 3.4. Power Connection

PWR (PIN1) / GND (PIN2) are the power input pins. The input voltage range for this device is

from 8V to 32V. The device is designed to be installed in vehicles that operate on 12V/24V vehicle without the need for external transformers.



Figure 6: Typical Power Connection

**Note: Do not connect any external cable on GB100(P) device.**

### 3.5.LED Status

GB100(P) has three status LEDs that are PWR LED, GSM LED and GPS LED.

Table 4: Definition of Device Status and LED

| LED                     | Device Status   | LED Status    |
|-------------------------|---|---------------|
| GSM (Green)<br>(Note 1) | Device is searching GSM network.                                  | Fast flashing |
|                         | Device has been registered on the GSM network.                    | Slow flashing |
|                         | SIM card needs pin code to unlock.                                | ON            |
| GPS (Blue)<br>(Note 2)  | GPS chip is powered off.  | OFF           |
|                         | GPS sends no data or data format error occurs.                    | Slow flashing |
|                         | GPS chip is searching GPS information.                            | Fast flashing |
|                         | GPS chip has got GPS information.                                 | ON            |
| PWR (Red)<br>(Note 2)   | No external power and internal battery voltage is lower than 0%.  | OFF           |
|                         | No external power and internal battery voltage is lower than 20%. | Slow flashing |
|                         | External power in and internal battery is charging.               | Fast flashing |
|                         | External power in and internal battery is fully charged.          | ON            |



Figure 7: GB100(P) LED on the Case

**Note:**

1. GSM LED, GPS LED, and PWR LED will be turned off after 30 minutes by default, but it can be changed by configuration.

### 3.6.Motion Sensor Direction

GB100(P) has an internal 3-axis accelerometer supporting driving behavior monitoring and motion detection. The following shows the direction of the motion sensor. The Z axis faces outwards vertically.



Figure 8: Motion Sensor Direction