GSM/GPRS/GPS Tracker **GMT200**
User Manual

TRACGMT200UM001

Revision: 1.00

http://www.queclink.com

sales@queclink.com

Document Title	GMT200 User Manual
Version	1.00
Date	2014-05-20
Status	Release
Document Control ID	TRACGMT200UM001

General Notes

Queclink offers this information as a service to its customers, to support application and engineering efforts that use the products designed by Queclink. The information provided is based upon requirements specifically provided to Queclink by the customers. Queclink has not undertaken any independent search for additional relevant information, including any information that may be in the customer's possession. Furthermore, system validation of this product designed by Queclink within a larger electronic system remains the responsibility of the customer or the customer's system integrator. All specifications supplied herein are subject to change.

Copyright

This document contains proprietary technical information which is the property of Queclink. Copying of this document and giving it to others and the using or communication of the contents thereof, are forbidden without express authority. Offenders are liable to the payment of damages. All rights reserved in the event of grant of a patent or the registration of a utility model or design. All specification supplied herein are subject to change without notice at any time.

Copyright © Queclink Wireless Solutions Co., Ltd. 2014

Contents

Table Index

Figure Index

Revision History

Revision	Date	Author	Description of change
V1.00	2014-05-20	Super	Initial

1. Introduction

The GMT200 is a water resistant GPS tracker designed for applications requiring low current drain such as motorcycles and boats. Its built-in GPS receiver has superior sensitivity and fast time to first fix. Its quad band GPRS/GSM subsystem supports 850/900/1800/1900 MHz allowing the GMT200'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 and extends battery life through sophisticated power management algorithms. Further reduction in current drain is achieved by configuring alternative recharge schemes for the internal battery. It measures 70mm*46mm*17.5mm and weighs only 65g, allowing easier and more covert installation. 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, low battery and scheduled GPS position.

1.1. Reference

Table 1: GMT200 Protocol Reference

SN	Document name	Remark
[1]	GMT200 @Track Air Interface Protocol	The air protocol interface between GMT200 and backend server.

1.2. Terms and Abbreviations

Table 2: Terms and Abbreviations

Abbreviation	Description
DIN	Digital Input
DOUT	Digital Output
GND	Ground

2. Product Overview

2.1. **Appearance**

Figure 1.Appearance of GMT200

2.2. **Parts List**

Table 3: Parts List

Name	Picture
GMT200 Locator	
DATA_CABLE_M (Optional)	

2.3. **Interface Definition**

There are 5 wires on GMT200 user cable which contains the connection for power, ignition input, digital input, digital output, etc. The user cable's definition is shown in the following table.

Table 4: Description of GMT200 User Cable

Index	Colour	Description	Comment
1	Red	Power	External DC power input, 8-32V
2	Black	Ground	System ground (connect to the vehicle's frame directly）
3	White	Ignition	Ignition input, positive trigger
4	Blue	Digital input	Digital input, negative trigger
5	Yellow	Digital output	Digital output, low side 150 mA max with latch

3. Get Started

3.1. Install a SIM Card

Step 1: Remove the cover.
Step 2: Insert the SIM card into the SIM card holder.
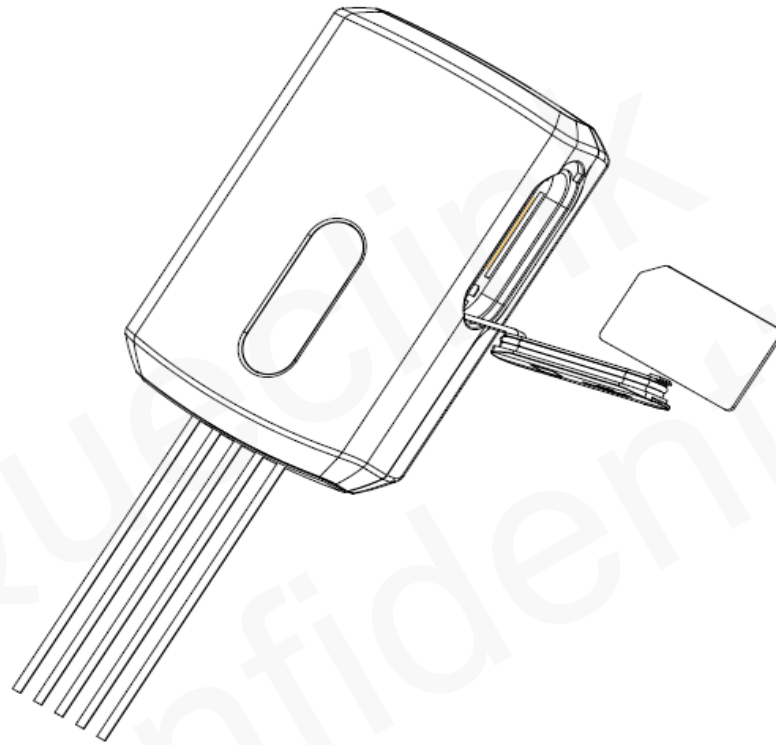**Step 3:** Compress the SIM card cover.

Figure 2.SIM Card Installation

3.2. Switch the Device on/off

There are two methods to power on GMT200:
- Use external power to turn on.
- Connect GMT200 to PC with user cable.

When the external power or USB cable is removed, GMT200 will switch to internal backup battery and keep on running. When internal backup battery is exhausted, GMT200 will give a report and then turn off.

Note:

1-External power and user USB power can be present at the same time.

2-For USB port current limitation, when configuring GMT200 by user cable, please keep the backup battery on.

There is one method to turn off GMT200.

   -Remove the external power and USB power.

   -Press the reset key.

  Note:

  GMT200 PWR LED will be off.

3.3. Reset Key

There is a reset key behind the SIM card cover. If the power wire is connected to vehicle power, the system will reboot when the key is pressed; if the system is powered by the backup battery and the power wire is not connected to vehicle power, the system will be shut down when the key is pressed.

Note:

When you finish the firmware upgrade, please press the reset key to reboot the system before configuring the terminal.

3.4. USB Connector

There is a USB connector on GMT200 which is beside the SIM card holder. With the USB connector and the DATA_CABLE_M, user can configure the system or upgrade the firmware. When the DATA_CABLE_M is plugged in, the system will boot.

3.5. Power Connection

The red wire is power wire and the black wire is ground wire. 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 or 24V systems without the need for external transformers.
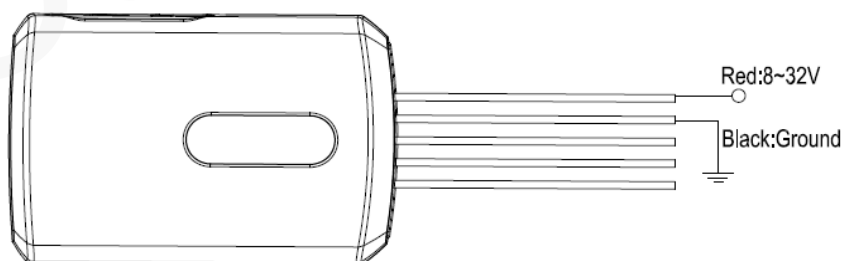
Red:8~32V

Black:Ground

Figure 3. Typical Power Connection

3.6. **Ignition Detection**

Table 5: Electrical Characteristics of Ignition Detection

Logical status	Electrical status
Active	5.0V to 32V
Inactive	0V to 3V or open

Red:8~32V

Black:Ground

White:Ignition

Vehicle ignition switch
Start(4th position)
Run(3rd position)
Accesories(2nd position)
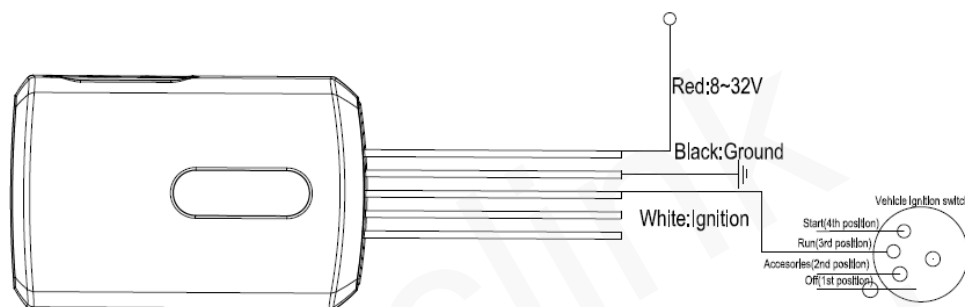Off(1st position)

Figure 4.Typical Ignition Detection

The white wire is used for ignition detection. It is strongly recommended to connect this wire to ignition key "RUN" position as shown above.

An alternative to connecting to the ignition switch is to find a non-permanent power source that is only available when the vehicle is running. For example, the power source for the FM radio.

Ignition signal can be configured to start transmitting information to the backend server when ignition is on and enter power saving mode when ignition is off.

3.7. **Digital Input**

There is a general purpose digital input which is the blue wire on GMT200 user cable, and it is a negative trigger. The digital input is recommended to support panic button function.

Table 6: Electrical Characteristics of the Digital Inputs

Logical status	Electrical characteristics
Active	0V to 0.8V
Inactive	Open

The following diagram shows the recommended connection of the digital input.
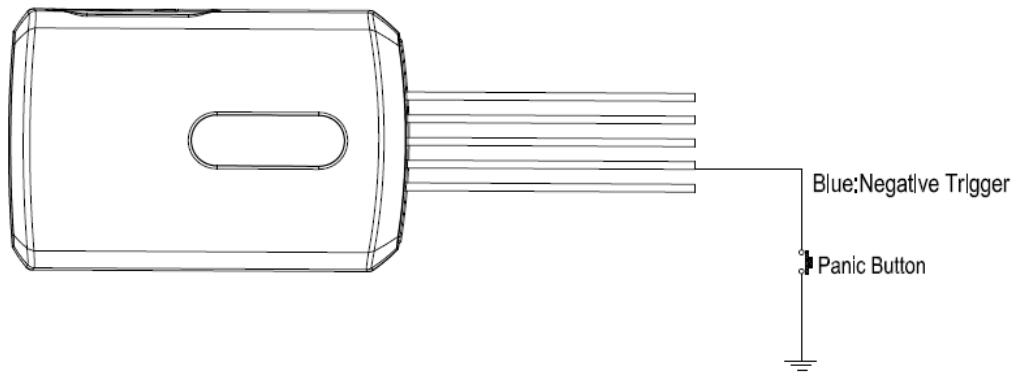
Figure 5.Typical Digital Input Connection

3.8. **Digital Output**

There is a digital output for relay on GMT200, and it is low side 150 mA max with latch.
Note:
1: The relay output can be latched by the software, so even if the GMT200 is restarted or powered down in some cases, the relay output will not change. To use the latch function, the main power and backup battery should be connected. Otherwise the relay will always be in normal close status.
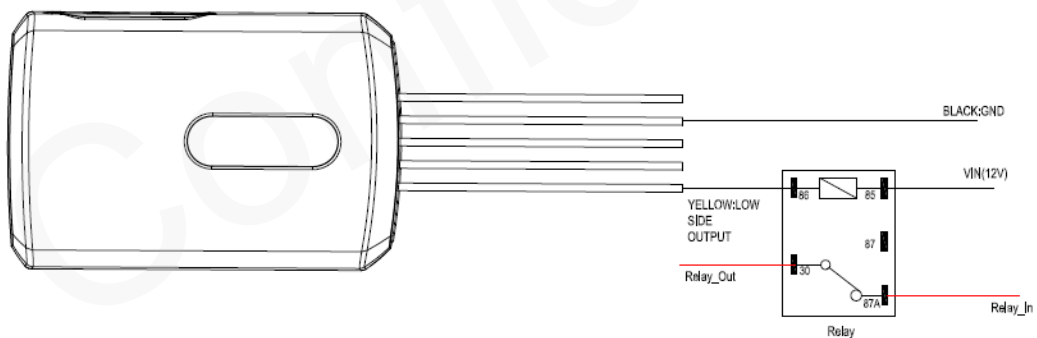

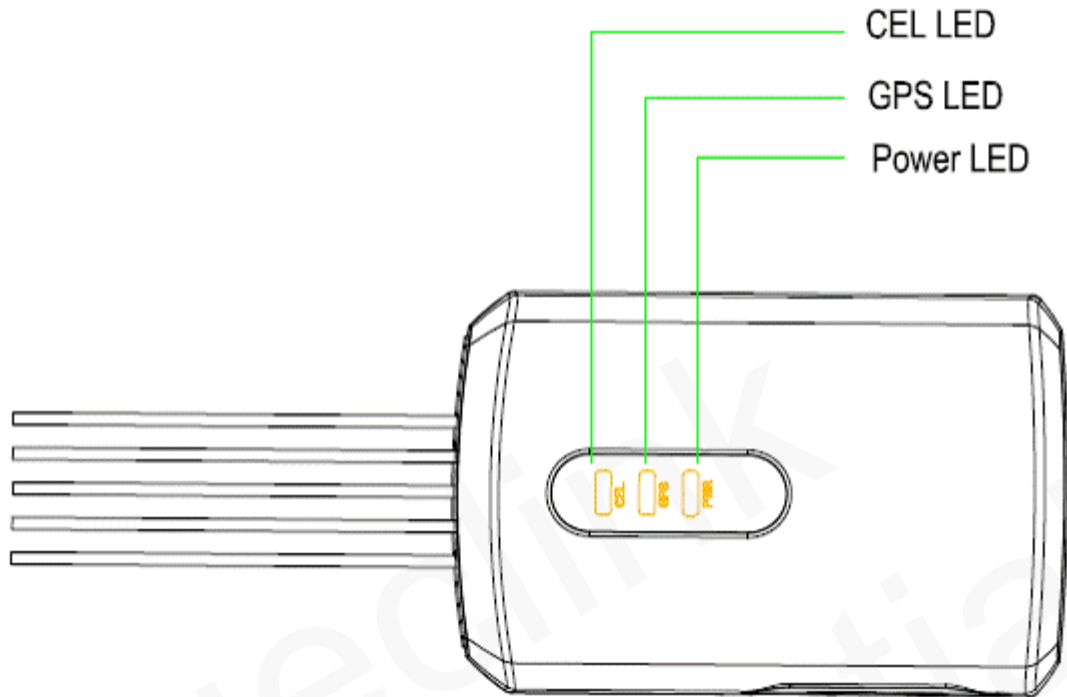**Figure 6.Typical Connection with Relay**

3.9. **Device Status LED**

Figure 7.GMT200 LED on the Case

Table 7: Definition of Device Status and LED

LED	Device status	LED status
CEL (note 1)	Device is searching GSM network.	Fast flashing (Note 3)
	Device has registered to GSM 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 backup battery voltage is lower than 3.35V.	OFF
	No external power and backup battery voltage is below 3.5V.	Slow flashing
	External power in and backup battery is charging.	Fast flashing
	External power in and backup battery is fully charged.	ON

Note:

1 - CEL LED cannot be configured.

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 is about 60 ms ON/780 ms OFF.

4 - Slow flashing is about 60 ms ON/1940 ms OFF.