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GSM/GPRS/WIFI/GPS Tracker **CP100**

User Manual

TRACCP100UM001

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0. Revision history

Revision	Date	Author	Description of change
1.01	2011-3-3	Johnson Jiang	Initial

1. Introduction

CP100 is a powerful GPS Tracker designed for student, pet and asset tracking. With superior receive sensitivity, fast TTFF (Time to First Fix) and Dual-band GSM frequencies 850 / 1900MHz, its location can be monitored or periodically reported to a backend server or other device . Based on the embedded CP100@ Track protocol , the CP100 can communicate with the backend server through the GPRS/GSM/ WIFI network (or SMS) to report emergency alerts, low battery and scheduled GPS positions along with several other advanced reporting features. System Integrators can easily setup their custom tracking platforms to communicate with the CP100 based on the CP100@Track protocol.

This device complies with part 22 and part 24,part 15.247 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference (2) this device must accept any interference, including interference that may cause undesired operation.

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

2. Product Overview

GSM/GPS/WIFI Specifications

GSM Frequency	Dual-Band: 850/1900MHz
GPS Chipset	uBlox All-In-One GPS Receiver Sensitive, Fast and Accurate
GPS Sensitivity	Cold start: -147dBm Reacquisition: -160dBm Tracking: -160dBm
Position Accuracy	Autonomous: < 2.5 m SBAS: 2.0 m
TTFF (Open Sky)	Cold start 29s Warm start <29s Hot start <1s
WIFI Chipset	MTK MAC/BB WLAN Chip .
WIFI Frequency	2.412G – 2.462GHz .
WIFI Compatible	IEEE 802.11g/b Compliant .

User Interfaces

Mini USB Connector	Include external power and UART
SIM Card Holder	Support 1.8V/3V SIM Card.
Power Button	For power on .

Gerneral Specifications

Dimension	69mm* 39.5mm * 17mm
Weight	60g
Backup Battery	Li-ion 850mAh , 3.7V
Standby Time	Full work 2 hours when power off above one month in emergency
Charge Voltage	5V DC
External Battery Voltage	3.4 V to 4.2 V DC

3. Product Overview

3.1. Appearance

3.2. Buttons/Mini USB/SIM-Card Interface Description

Button /Mini USB Interface Description	
Power Key	● Turn on CP100
SIM-Card Interface	● Insert 1.8V/3V SIM-Card
Mini USB Interface	● Connect a 3.7V Li-ion or Li-Polymer battery ● Connect 5V DC adapter can charge internal battery ● Only Backend server developer or administrator can use the Data_Cable_M to configure CP100

3.3. LEDs Description

There are two LEDs in CP100, the description as following.

light	Event	State
Low Battery light	Battery voltage is lower than 3.8v	Red Light Solid
	Battery voltage is higher than 4.0v	Dark
Power light	Power on and normal	Green light Solid
	Charging Exception	Bule Light flash quickly

	Power key was pressed and prepare to power off		Fast flash
	Abnormal		Fast flash
	Power low alert		Slow flash
	Power off or turn off the power light by command		Dark
	Power Off	On Charging	Bule Light flash slowly
		Charging finished	Blue Light Solid
	Power On	On Charging	Greed light flash twice, then Blue light flash twice, and the whole process will be repeated
		Charging finished	Greed light flash once,then Blue light flash once, and the whole process will be repeated

4. Getting Started

4.1. Parts List

Name	Picture	Remark
CP100 Locator		The GSM/GPRS/GPS locator.
AC-DC Power Adapter (Standard accessory)		It is used to charge the internal battery of CP100.
CP100 Data Cable (Optional accessory)		It is the USB data cable which can be used for firmware upgrading and configuration.(**Please note , it only for backend server developer or administrator ,It is not in delivery list of CP100**)

4.2. Battery Charging

● Please connect AC-DC power adapter with CP100.
● Insert the AC-DC power adapter into the power socket.
● During charging, the PWR LED is flashing fast. When the battery is full charged, the PWR LED will be Ever-light.
● You can also charge the battery by USB cable which connects CP100 with the PC.
● Charging time is about 5 hours.

Note: Before the first time using CP100, please full charge the battery.

4.3. Install SIM Card

● First, open the cover of SIM-card..
● Then insert the SIM card into the slot of SIM card according to the direction shown.

- Finally, cover the slot.

4.4. Turn on/Turn off

- Turn on:
    - ◆ Method 1: Press the Power key at least 3 seconds and release it to turn on CP100. At the same time, PWR LED will light on.
- Turn off:
    - ◆ Method 1: Turn off device by manage tool ,use GTRTO ,parameter set to 5 (PWROFF).
    - ◆ Method 2: Turn off device by server command GTRTO, parameter set to 5 (PWROFF).

5. Troubleshooting and Safety info

5.1. Troubleshooting

Trouble	Possible Reason	Solution
After CP100 is turned on, the PWR LED flashes quickly always.	Charging is abnormal.	Please unplug wall charger from CP100 and check wall charger.
Messages can't be reported to the backend server by GPRS.	The SIM card in CP100 doesn't support GPRS.	Try a GPRS supported SIM card.
	APN is wrong. Some APN can not visit the internet directly.	Ask the network operator for the right APN.
	The IP address or port of the backend server is wrong.	Make sure the IP address for the backend server is an identified address in the internet.
Unable to power off CP100.	The function was disabled.	Please use manage tool to turn off or by server command.
No response from UART when configure CP100 through UART	CP100 is in power saving mode.	Remove the Data_Cable_M, and plug it in again. After this operation, CP100 will exit from power saving mode for 10 seconds.
		Re-try CP100 manager tool again, it will try to wake up device.
CP100 can't get successful GPS fixing.	The GPS signal is weak.	Please move CP100 to a place with open sky.
		It is better to let the top surface face to sky.

5.2. Safety info

● Please do not disassemble the device by yourself.
● Please do not put the device on the overheating or too humid place, avoid exposure to direct sunlight. Too high temperature will damage the device or even cause the battery explosion.
● Please do not use CP100 on the airplane or near medical equipment.