Kingwo

LT01
User manual

Declaration

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Contents

PART 01 Product Overview

- Support GPS/Beidou, AGPS, LBS,with accurate position performance；
- Built in high sensitive G-sensor accelerometer
- Supports intelligent self-diagnosis, intelligent power save mode, remote fuel and power cut off, OTA and alarm functions
- Small in size and wide voltage, especially designed for scooter, motorcycle, electric vehicles and automotive financial risk control project

Small and convenient for conceal installation

PART 02 Technical Specification

Characteristics	Description
Working Voltage	DC 9V-36V， applicable to12V/24V vehicles
	DC 9V-100V,applicable to scooter, motorcycle and electric vehicles management
Working current	Average current<30mA（DC12V），Maximum current<100mA（DC12V）Sleep current<10mA
Built in battery	110mAH,3.2V， Lithium polymer battery
Battery protection	Anti-200V power supply reverse connection; main voltage detection;；
Dimension	88mm*45mm*14mm（L*W*H）
Weight	47±5g
Memory	1300 pcs of data storage
Working Temperature	-20℃～70℃
Storage Temperature	-40℃～85℃
Relative humidity	5%～95%

Frequency	Standard cat1 version: LTE FDD: Band 1/3/5/8 LTE TDD: Band 34/38/39/40/41 GSM: 900/1800MHz Cat1-EU version: LTE FDD: B1 B3 B7 B8 B20 B28 GSM: 900/1800MHz
GNSS Parameters	GPS L1:1575.42MHz; BD B1: 1561.098MHz

PART 03 Functions

3.1 Basic function-Tracking function

Including timely upload, blind zone compensation, speed mileage statistics, area monitoring and other functions, the backend sends positioning commands, and the terminal uploads data including longitude, latitude, speed, direction, and status information.

3.1.1Timely Tracking

The device can be set to upload the position and status information of the vehicle to the backend at a certain time or a certain period or at a certain time interval.

3.1.2 Blind area data storage

When the vehicles enters the GPRS blind area, the device will store the GPS data upon 15s interval, the track data will be saved at the shortest 15S interval, those data will be uploaded to the backend server once GPRS network recovered, minimum 1000 pcs of data can be stored.

3.1.3 Cornering Compensation

If the device detects that the vehicle driving direction has certain angular deviation(default 15 degrees), the device will upload a packet extra to make sure the driving trace is more accurate.

3.1.4 LBS

If GPS is not available, the device will automatically switch to LBS mode, and acquire the LBS each 30s and upload the based information, the server shall interprets the specific location on the map.

3.1.5 AGPS

The device supports AGPS, once the device is connected to GPRS, the AGPS can be used to speed up the positioning and improve accuracy.

3.2 【Basic function-Alarm function】

3.2.1 Low Voltage Alarm

When the battery voltage on the vehicle is too low (0-11V or 19-22V), device will report a low voltage alarm to the backend

3.2.2 Speeding, low speed alarm

When the vehicle speed is higher than the preset alarm value, the device will notify the backend. Similarly, when the vehicle speed is lower than preset alarm value, a low speed alarm will be uploaded to the backend, this value is configurable.

3.2.3 Vibration alarm

The device supports vibration alarm, 10 minutes after the ignition off (Arm range 1-20 minutes), the device generates vibration (Delay range 1-10 mins) without ACC connected, the device will upload vibration alarm.

3.2.4 Towing alarm

An alarm is generated when the device is set to a displacement of more than 100 meters (message mode prompt), and the alarm information is reported when the displacement radius exceeds 100 meters when the device is turned off. (Note: displacement range 100~2000m)

The device will send SMS if the vehicle is moved in ignition off status, if the radius is more than 100 meters, will upload towing alarm (Towing range:100-2000m)

3.2.5 GPS error alarm

When the terminal detects that the GPS/BD module is working abnormally, it reports the GPS receiver failure alarm to the backend

3.3 【Basic function-Intelligent function】

3.3.1 Power Save

The device has a built-in high-sensitivity G-sensor accelerometer that monitors the vehicle for motion in real time. When no motion is detected for a long time, the terminal automatically enters the power saving state, meanwhile turns off the GPS/BD module, and GSM enters the heartbeat return mode. In this state, the power consumption of the device is extremely low, which can save power consumption from the vehicle battery.

3.3.2 Self-Diagnosis

The device can perform self-diagnosis. In case there is malfunction regarding GPS and GSM, it will report error message to the backend .The backend can query the current model, version, configuration, running status, and device functions.

3.3.3 Static Drift Suppression

The device has a built-in high-sensitivity G-sensor accelerometer and a complete positioning data-filtering algorithm that filters out most of the static drift data to ensure the accuracy of GPS data.

3.3.4 Mileage Calculation

Mileage data is calculated based on the speed from GPS, The vehicle mileage data is uploaded to the backend along with the vehicle positioning data; the initial mileage can be configured when initially the device is set up.

3.3.5 Remote Configuration

To remote set device parameters including IP, center number and various of monitoring parameters via the backend or SMS.

3.3.6 Remote Upgrade (OTA)

As long as GPRS is connected, remote firmware upgrade can be done remotely

3.3.7 Dual IP or Domain

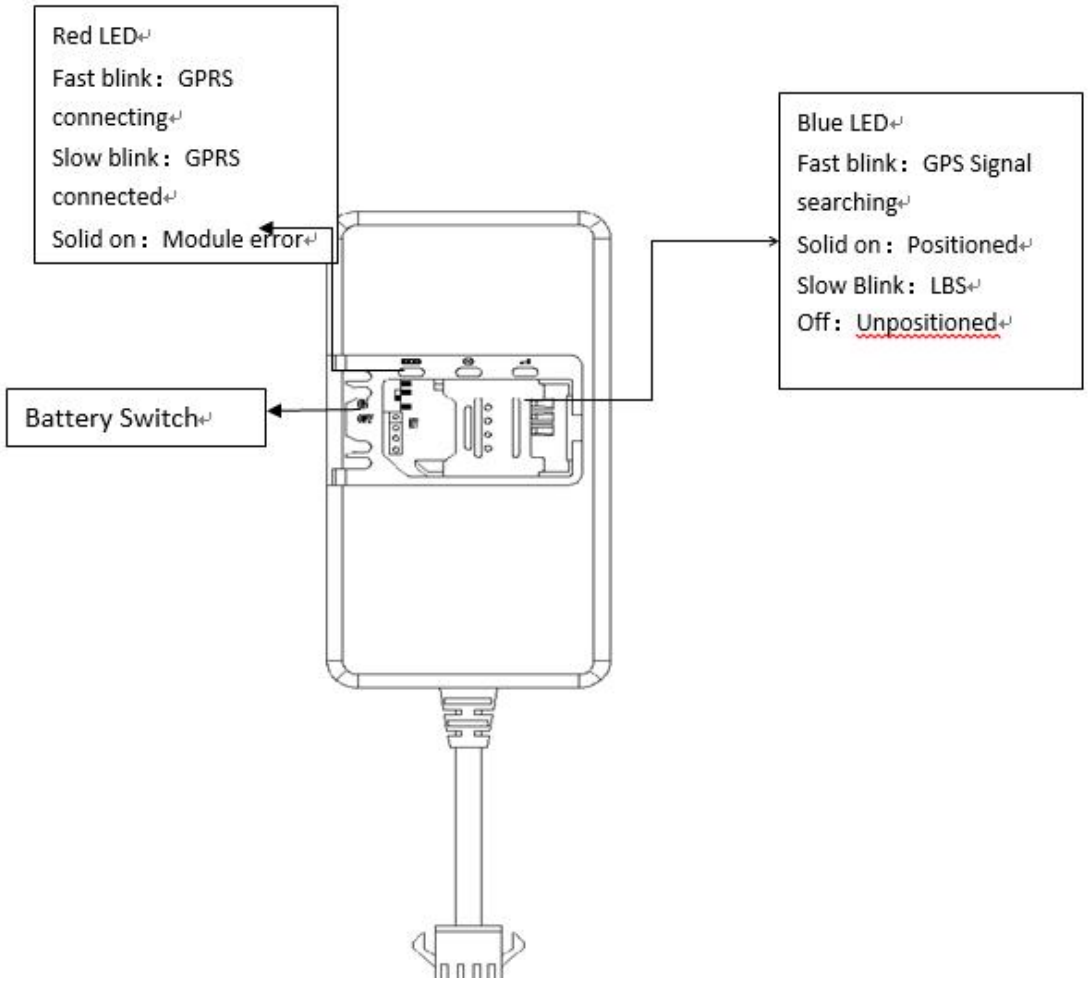
The device supports dual IP connection between the primary server and the standby server. The default connection is the primary server. If there is a problem with the primary server, the device automatically switches to the standby server. The primary server and the standby server can be set in either IP or domain name.

3.3.8 JTT808 protocol

This is government protocol in China, it supports connection to any platform that support JTT808 protocol

PART 04 Installation guide

4.1 Installation Diagram



4.2 Installation and debugging process

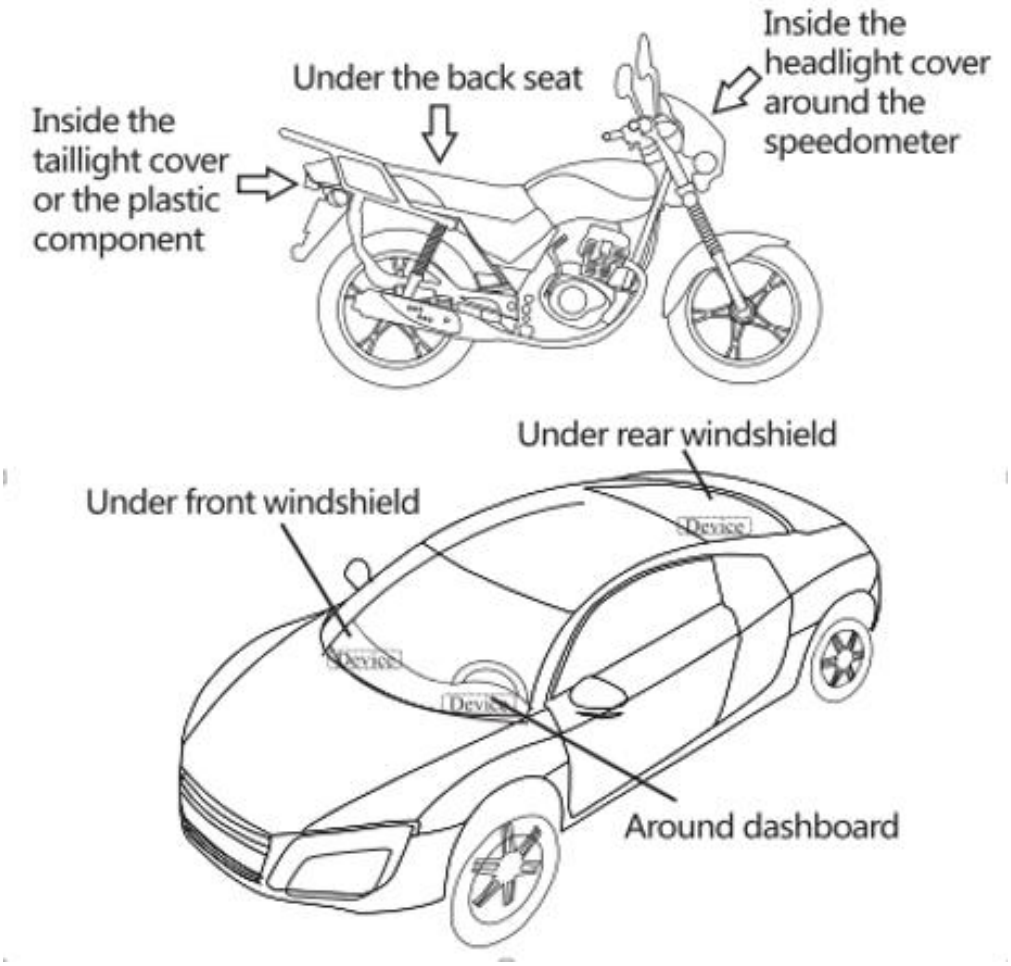
4.2.1 SIM installation

Open the top cover of the device, insert the prepared SIM card into the SIM cardholder, and then confirm that the SIM card button is in place. Please make sure that the SIM card has the GPRS function enabled in advance and know the SIM card number.

4.2.2 Main unit power on

After installing the SIM card, turn the battery switch to the ON position. At this time, the red light starts to blink, indicating that the device is power on.

4.2.3 Recommended Installation place



4.2.4 Parameter setting by SMS

Note: The device is with unique ID number, the factory can preset t IP, port and APN, generally do not need to do parameter setting; if you need to modify the IP, follow the below instructions, make sure the SIMs has SMS functions available:

HC,<T1>,<T2>,<T3>#	**Set the upload interval in real time tracking mode:** T1: upload interval in ignition on status, range,5-7200s ,default 30s T2: Upload interval in ignition off status ,range 5-7200s, default 120 s T3：Sleep return interval, range 15-7200s, default 180 For example: HC,30,90# Set the upload interval as 30s in ignition on and 90s in ignition off HC,30,90,300# Set the upload interval as 30s, 90 s in ignition off and 300s while in sleep mode
UTC,TTTT#	Set time zone， unit minutes, default UTC+8:00 For example: UTC,480# Time zone UTC+8:00 UTC,330# Time zone UTC+5:30 UTC,-480# Time zone UTC-8:00 UTC,-210# Time zone UTC-3:30
WY,<A>[,R,M]#	Set towing alarm: A: On and off，1:On 0:Off Default is off R: Towing radius，Default 500 meters，Range：100-2000 meters M: Alarm mode，Optional M=0:GPRS,M=1:SMS+GPRS Eg：WY,1,100,1# towing alarm on，radius 100 meters notification mode:GPRS+SMS
LOCKACCOFF,A#	Set vehicle lock A=0 Receive lock command, execute immediately A=1 Receive lock command, if ACC is off, execute immediately, if ACC is on, store this command until ACC off A=2 Store the command, lock vehicle from ACC Off to On, if the communication is well, lock vehicle, otherwise wait for next turn For example：LOCKACCOFF,0# means execute the lock command immediately after receiving it
APN,apn,user,pswd#	Set APN, User name and password For example：APN,CMNET,internet,internet# APN:CMNET Username: internet Password: internet
*22*1#	Restore to factory setting
*22*2#	Lock vehicle

*22*3#	Unlock vehicle
*22*4#	Reboot device
IP,ip or dns,port,type#	IP,119.23.233.52,6000,1# Set the primary server IP:119.23.233.52，port 6000，communication type:TCP IP,www.365qczx.com,6000,0# Set the primary server domain:www.365qczx.com，Port 6000，communication type UDP
IP2,ip or dns,port,type#	IP2,119.23.233.52,6000,1# Set the backend server IP:119.23.233.52,port 6000，communication type is TCP IP2,www.365qczx.com,6000,0# Set the backend server domain:www.365qczx.com，port 6000，communication type: UDP IP2,,0,0# Delete backend server parameter

LT01 usage requirements

The terminal is strictly forbidden to use according to the operating instructions ,disassemble, collide, charge, soak, over 80 °C, human failure, force majeure damage, etc. may cause short circuit, insufficient working time, battery deformation, liquid leakage, explosion, no warranty and compensation will be provided by KINGWO.

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