深圳市龙桥科技发展有限公司

SHENZHEN DRAGON BRIDGE TECHNOLOGYLIDE COMPANY

Application :Rental cars, insurance cars, trucks, buses

Wireless Fleet management Solution Innovator

GSM/GPRS/GPS Tracker

User Manuel

LLS-100TS

ROADRAGON®

路特龙

Contents

1 Introduction

1.1 product description

The LLS-100TS is a positioning terminal specially designed for Vehicle and Marine positioning monitoring applications(Two different software). LLS-100TS can do the position monitoring and tracking of outdoor valuable assets such as ships and Container through GPS/BD satellite positioning technology, solar charging technology, GSM/GPRS communication technology, and Multi--Mode flexible configuration of location service monitoring and management system. The device has a tamper-evident alarm function, and the management center can monitor the device in real time. At the same time, it also has a one-button alarm function. In case of emergency, it can send an alarm to the management center through the button.

1.2 Technical Parameters

1. Platform: Low-power MCU+CDMA/GPRS module)+GPS/Beidou dual-mode positioning module+G sensor
2. Band: GSM850/GSM900/DCS1800/PCS1900
3. Module of 4G Version（optional）(Quectel, EC20 R2.1 for samples)

   LTE FDD:B1/ B3/ B5/ B8

   LTE TDD :B38/ B39/ B40/ B41

   WCDMA: B1/ B8

   TD-SCDMA B34/ B39

   3G: CDMA: BC0

   GSM:900/1800MHz
4. Battery capacity: 10000mAh Lithium polymer battery
5. GNSS type: Beidou/GPS dual mode
6. A-GNSS Auxiliary: Support
7. GPS chip: MTK AG3331 （The whole: GT1612-AGBD）
8. Tracking sensitivity: -165dBm; Capture sensitivity: -156dBm; Acquisition:148dBm
9. CPU: STM32L151CCT6
10. Channel: 66 search channels and 22 simultaneous tracking channels
11. Acceleration Accuracy:0.1M/S^2
12. Acceleration sensor: KX022-1020，LGA-12，KIONIX
13. Dynamic Performance: Maximum altitude: 18,000m; Maximum velocity: 515m/s; Acceleration: 4G
14. Search time: Hot start 1S Cold start 40S (open conditions)
15. Positioning accuracy: less than 10 meters (open conditions)

16. Solar panel specifications: Single crystal gauge, voltage 5.5V,
17. current 200mA, conversion rate 21.5%
18. Protection level: Waterproof IP67
19. Applicable environment: -20°C~75°C
20. Humidity: 30%----95%
21. Device Dimensions: 264mm*90mm*25mm
22. Bracket: 264mm*63.5mm*17mm
23. Device+ bracket：264mm*90mm*28.5mm
24. Weight: Device: 176 g; Accessories: 125 g. About 320 g in all.
25. Material of Shell: ABS+PC

2 Product Overview

2.1 Product accessories

Items	**description**
Main device	
Sealing ring of SIM card	
Cover of SIM card	

Waterproof sticker 1	
Waterproof sticker 2	
M3*11 screws	
Bracket (with magnet）	

2.2 Device LED light and push-button

Status light ---- corresponding working status

Green light indicates GPS status:

1. No positioning: 4 seconds cycle, 2 seconds interval on and off;
2. Positioning: 4 seconds period, 0.5s on and 3.5s off

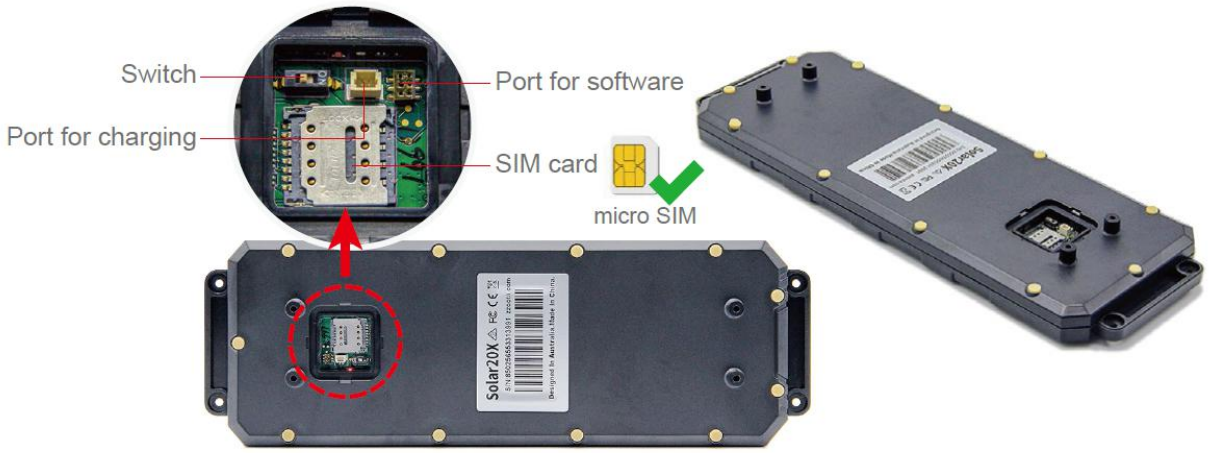
Red light indicates GSM status:

1. If the card is not found, the red light is always on;
2. If the card is found but GSM is not registered, it will turn on and off in 2 seconds;
3. Register for GSM, no GPRS, fast flash once in 4 seconds;
4. With GPRS, flash 2 times in 4 seconds

Note:

Press and hold the sos button for 3 seconds, the SOS alarm will be triggered, the buzzer will so und and the white light flashes 3 times quickly

Inside:



2.3 Parameters

Items	description
Platform	Low-power MCU+CDMA/GPRS module)+GPS/Beidou dual-mode positioning module+G sensor
GSM module	GSM850/GSM900/DCS1800/PCS1900 (Optional for 4G Version)
Dimensions	265mm*90mm*25mm (excluding the base)
Weight	409g

Solar panel specifications	Single crystal gauge, voltage 5.5V, current 200mA, conversion rate 21.5%
Battery capacity	10000mAh Lithium polymer battery
GNSS type	Beidou/GPS dual mode
A-GNSS Auxiliary	Support
Applicable environment	-20 C ~75 C
Working humidity	30%-95% RH does not clot
Module of 4G Version （optional） (Quectel, EC20 R2.1 for samples)	LTE FDD:B1/ B3/ B5/ B8 LTE TDD :B38/ B39/ B40/ B41 WCDMA: B1/ B8 TD-SCDMA B34/ B39 3G: CDMA: BC0 GSM:900/1800MHz
GPS chip	MTK AG3331 （The whole: GT1612-AGBD）
Tracking sensitivity	-165dBm
Capture sensitivity	-156dBm
Acquisition	148dBm
Positioning accuracy	<10 meters
CPU	STM32L151CCT6
Channel	66 search channels and 22 simultaneous tracking channels
Acceleration Accuracy	11.0.1M/S^2
Acceleration sensor	KX022-1020，LGA-12，KIONIX
Dynamic Performance	Maximum altitude: 18,000m; Maximum velocity: 515m/s; Acceleration: 4G
Search time	Hot start 1S Cold start 40S (open conditions)
Protection level	Waterproof IP67
Weight	Device: 180G; Accessories: 91G. About 270 G in all.
Material of Shell	ABS+PC

3 Product Function

3.1 Function

1.Supervision of the daily position of small fishing vessels;

2.Navigation track management;

3.Supporting blind zone supplements;

4.Solar charging, no external power supply is required, the power can be inquired, and the low-power active alarm;

5.Support tamper alarm;

6.Support one-button emergency alarm, except alarm, sound and light reminder;

7.The product meets the IP67 three-proof standard and is resistant to salt spray corrosion;

8.Having a solar charge status inquiry;

9.Flexible setting of the location upload interval, respectively, setting the parking and uploading data upload interval;

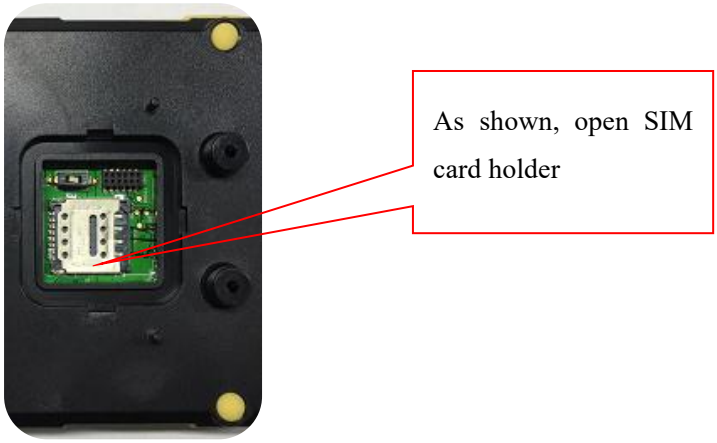
(The original setting is to upload data every 30 minutes when the vessel is stopped. Upload data every 5 minutes when you ship)

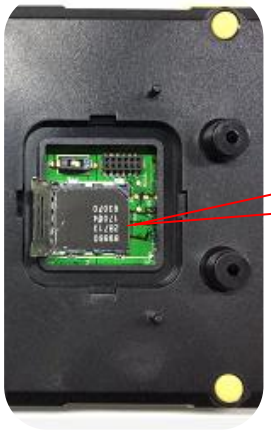
10. has low power protection function;

4 Equipment installation

Step 1: Install SIM card

Open the SIM card slot, load the Micro card, close the card slot, and confirm that the SIM card is clamped, pay attention to the direction of the card and the direction of the card slot, as shown below





As shown, place the SIM card

Follow the direction shown, close the SIM card holder, please confirm the card is in place

Step 2: Turn on the switch

Set the switch next to the SIM card to the ON position and light up.

Turn the switch to ON position as shown

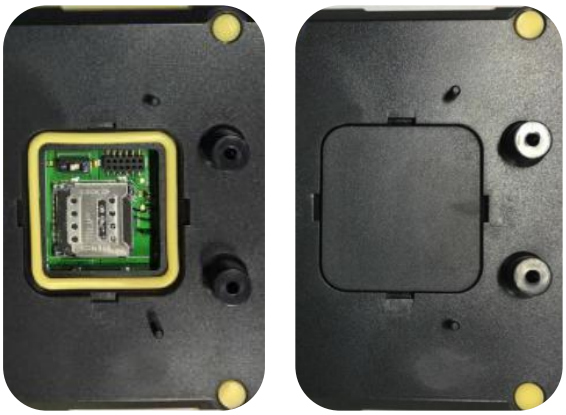
After the switch is turned to the ON position, the indicator light on the front will light up

Step 3: Make sure the equipment is online

Query the device on the platform to report the current location information correctly, enter step 4 correctly, otherwise please confirm whether the SIM card is open GPRS and install correctly.

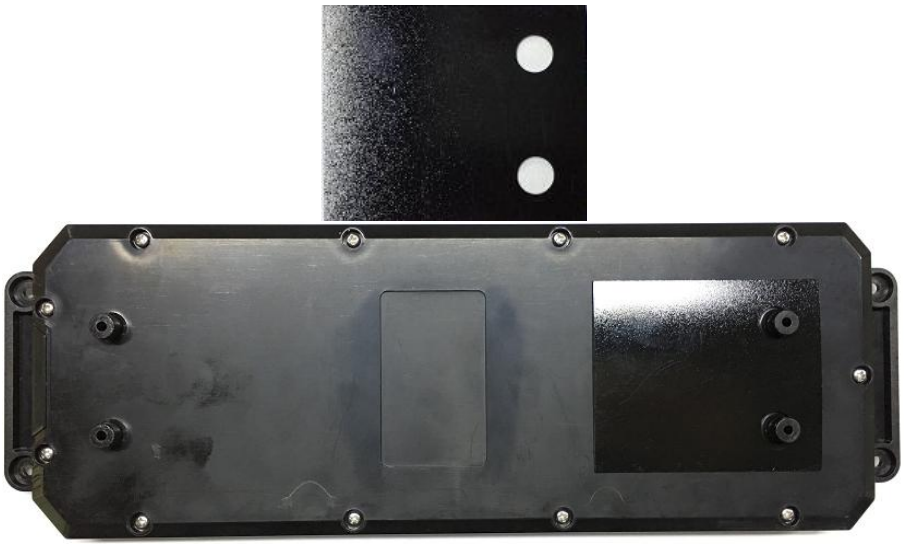
Step 4: Install SIM cap seal ring and SIM cap press plate

Place the square SIM cover seal ring in the fitting package in the rear cover slot of the main engine, then press the SIM card pressure plate into the square SIM card waterproof ring and buckle into the rear cover slot of the main engine, as shown below



Step 5: Stick waterproof back glue

Tear off the oil paper of the waterproof glue paste 1 in the fitting bag, then stick it on the back of the mainframe, pay attention to the two round holes on the back glue to the two positioning points behind the mainframe, as shown below



Step 6: Fixed mounting bracket on site

Fix the mounting bracket (with strong magnetic force) at the installation site with at least 4 M5 stainless steel tapping screws, as shown below

Step 7: Fix the host on the mounting bracket

Fix the main engine on the mounting bracket with 4 M3*11 stainless steel cross head screws, as shown below, note:

(1) One side of the main engine with indicator lamp is close to the side of the support with magnet, otherwise there is no disassembly alarm;

(2) The main solar panel is facing the sky, and there is no occlusion, otherwise it can not be charged;

Step 8: Stick waterproof glue 2

Stick 2 of the waterproof glue in the fitting, tear off the oil paper and stick it on both sides of the front of the main engine, as shown below

5 Precautions

1. During the installation process, please standardize the operation. After installation, please clean up the site to keep it clean and tidy.

2. After testing the equipment in the office or warehouse, please be sure to turn the switch to OFF. When testing in the office or warehouse, the equipment cannot be exposed to direct sunlight, cannot be charged, and is always in a state of power consumption.

3. The waterproof adhesive must be attached.

6 Question

The device does not return information	The installation position of the equipment is not suitable, and it may be in a metal shielded area The device is in a signal dead zone; The SIM card has not been activated or is in arrears; SIM card installation error, please open the lower cover to confirm; The device has insufficient power;
Inaccurate return position	The installation location of the equipment is not suitable and cannot face the sky; The device is in an area without GPS signals;
Device does not charge	The device is in an area without GPS signals; The installation position of the equipment is not suitable and cannot be exposed to the sun;

No disassembly alarm	Please confirm whether there is strong magnetic on the mounting bracket; Whether the side of the device indicator is close to the direction of the magnet;