Product Model: Solar Positioner

Hardware version: V1.0

Software version: V1.0

Document Revision History

Version	Revision Date	Version Description
V1.0	2023/10/19	New Document

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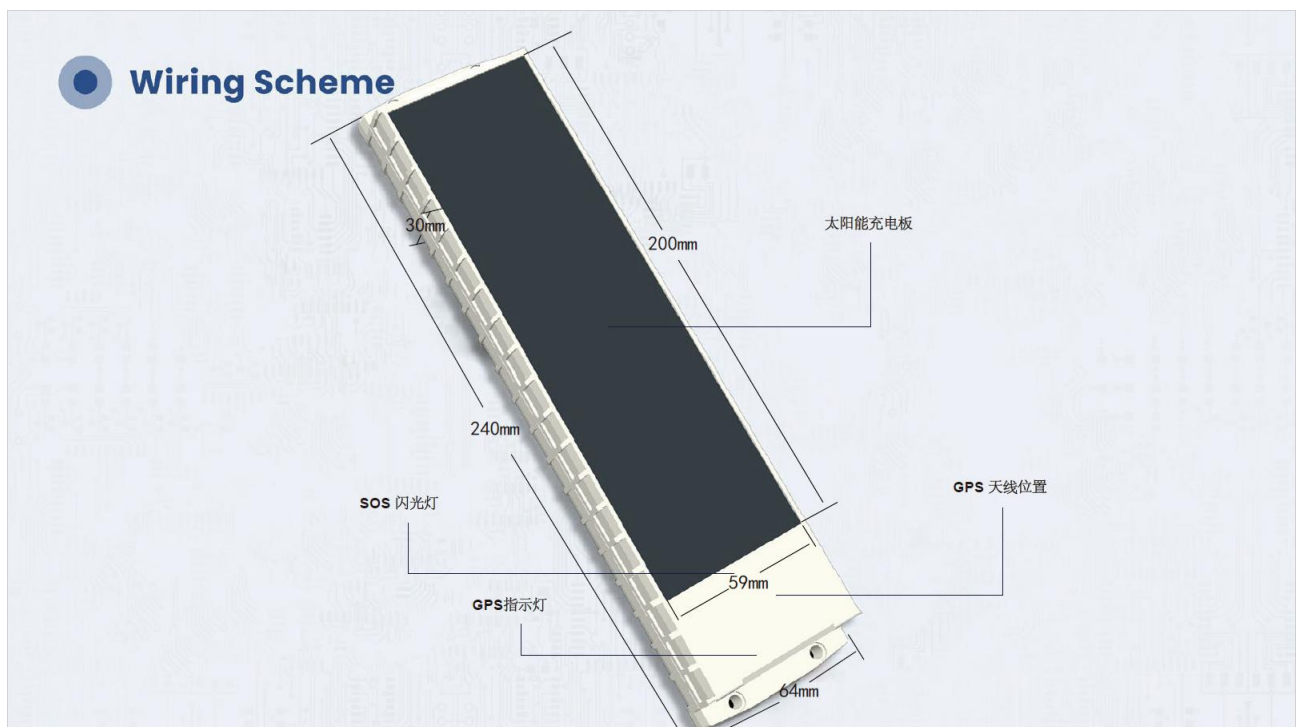
1. Basic product introduction

1.1 Product Introduction

The solar-powered locator sounds like a versatile solution, especially for applications in remote areas or where power sources are limited. With its solar panels continuously providing power, it would be ideal for long-term operations without needing frequent recharging or power supply interruptions.

1.2 Product images

1.3 Application Scenario

Application scenarios: logistics and transportation, RVs, marine applications (ship-borne positioning, ocean buoys, etc.), airport non-powered trucks, port containers and semi-trailer trucks, etc.

1.4 Product size

Length 240mm*Width 64mm*Height 30mm

1.5 Product Usage Introduction

Indicator Light Description

Orange indicator light:

Light status	Meaning
Flash	Initializing
Always on	Receiving signal is normal
Not bright	No LTE number received/SIM card not inserted

Blue indicator light:

Light status	Meaning
Flash	Searching for GPS signal
Always on	GPS Positioned
Not bright	GPS Sleep/GPS Not Working

Hardware configuration:

LED indicators	LED. GNSS indicator
Micro USB	Upgrade and Debug
SIM card slot	Micro-SIM/E-SIM
Gravity sensor	Three-axis acceleration sensor

2. Product parameters

GNSS performance indicators

Sensitivity	Track	- 165dBm
	Capture	- 148dBm
TTFF	Cold Start	Average 23S (open sky)
	Warm start	Average < 5S
	Hot Start	Average <1S
Type	22 tracking channels, 56 capture channels	
	Frequency GPS L1 1575.42MHz C/A code BDS B1 1561.75MHz C/A code	
Positioning accuracy	-	Static
	＜1.5m	dynamic
	Coordinate system	Coordinate datum: WGS-84
Speed accuracy	0.1m/s	
Time Pulse	1s	
Update rate and baud rate	Default 9600 (1hz) {Configurable: 115200bps (1hz\5hz)}	
Operational restrictions	high	＜18000m
	speed	＜100m/s
	Acceleration	＜8g
Data Format	NMEA 0183 universal protocol, default 9600 baud rate, refresh rate 1hz	
Serial port upgrade	Not supported	

Communication standard

Communication standard	LTE/GSM
GSM Antenna	Built-in, GSM/LTE antenna
GPRS Specifications	Glass12/CAT1
Data Channel	SMS,USB,CABLE

Power Specifications

Power supply	DC/3.7V-5.0V
Enable level	High level 1.2V-5V
Power consumption	0.25W
Low power state	EN low level is low power consumption state
Functional Interface	External power interface

Physical properties

Temperature	Operating temperature	-30℃~80℃
	Storage temperature	-40℃~85℃