



# GL601CEU/MG Introduction

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*Driving Smarter IoT*

*By Jessamine  
2024/09/03*

## Background

### Why we made GL601CEU/MG?

*For intermodal transport, customers need an easy-to-install, maintenance-free, and sustainable asset tracker.*

- **Maintenance reduction:** Support **solar charging**, reduce battery charging or replacement maintenance.
- **Configurable device:** The device offers flexible settings, enabling users to switch between **real-time tracking** and **power-saving modes** as needed.
- **Continuous monitoring :** To ensure uninterrupted monitoring during **long-duration transport, trans-regional transportation** and **variable operating environments** without the need for maintenance.
- **Rugged and reliable:** The device is equipped with **a ruggedized casing** to ensure its durability in harsh environments.



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## Overview

*The GL601CEU/MG is the **LTE solar charging asset tracker**. It has a ruggedized casing, is waterproof, and can meet the requirements of customers in extreme environments.*

*ATEX compatible design. It has light sensor to detect tamper and temperature sensor to detect environment temperature. It supports BLE 5.0 and can be used to connect accessories, such as beacon, door sensor and temperature sensor.*

### **Target Region :**

GL601CEU EMEA

GL601MG Global

### **Target Application:**

*For intermodal transport, the asset is including container, trailer, rail wagon, etc.*



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## General Specification

GL601CEU/MG	
Protocol	<b>Second generation protocol</b>
GL601CEU Cellular	<b>CAT 1:</b> B1/3/7/8/20/28A <b>WCDMA:</b> B1/8 <b>EGPRS:</b> 900/1800MHz
GL601MG Cellular	<b>CAT M1:</b> B1/2/3/4/5/8/12/13/18/19/20/25/26/27/28/66/85 <b>CAT NB2:</b> B1/2/3/4/5/8/12/13/18/19/20/25/28/66/71/85 <b>EGPRS:</b> 850/900/1800/1900MHz
GNSS	All-in-one multi-constellation GNSS Receiver
Casing	IP Rating: IP67 Complaint; Ruggedized Case
BLE	BLE 5.0, Support BLE accessories
Wi-Fi Positioning	Support
Internal Sensor	3-axis Accelerometer, Temperature Sensor, Light Sensor
Interfaces	4-pin magnetic connector: used for charging battery, configuring the device and upgrading FW Reed switch magnet: used to power on the device
LED Indicator	Cellular network / GNSS / Power
Dimensions	212 x 86 x 30mm
Weight	572g
Backup Battery	6 x ICR18500 lithium batteries, 3.7V, <b>12000mAh</b>
Standby Time	*Without Solar Charging 1 report/minute, 2 working hours/day 80days 1 report/hour 5 months 1 report/day 5 years
Operating Temperature	-20°C ~ +70°C



\*1. The standby time is estimated under the condition of operating with LTE CAT M1/NB-IOT or LTE CAT 1 and the CSQ is greater than 15, working at a constant ambient temperature of 25°C where GNSS signal is strong enough and under open sky.  
2. The battery life estimation is based on LTE CAT M1/NB-IOT or LTE CAT 1 Connectivity and may be influenced by several factors such as network coverage, ambient temperature, sensors' setting, peripherals, installation location and orientation, etc. If you're interested in power consumption calculation of our device, please contact with our sales or FAE to get more information.

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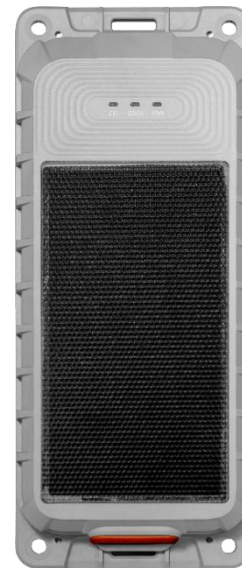


***Installation and Package list***

## Key Features

### Zero-Maintenance

- Solar charging
  - The uneven surface of solar panels helps to improve light transmission and reduce dust build-up;
  - The light transmittance of solar panels is as high as 95%, greatly improving the efficiency of light energy conversion and reducing dependence on external power sources;
  - No need to manually charge or replace batteries, reducing battery maintenance costs and operating costs;
- Battery
  - Battery capacity of 12000mAh to meet customers' transport tracking on a monthly basis;
  - Battery health management, prevent overcharging and over-discharging, extend the life of the battery;
- Casing
  - Ruggedized, weather-resistant casing, ensure the tracker maintains stable operation across a wide range of environmental.





## Key Features

### Rugged and Reliable

- The casing material is corrosion, heat and wear resistance.
- It is embedded with steel plates for increased product strength, reducing the risk of breakage from drops or pulls.
- It is equipped with reinforcement ribs on its side, enhancing its structural strength and rigidity.
- The magnetic charging port is equipped with a rubber plug, which is not easy to oxidize and is more durable.
- The stripe design at the bottom of the device increases adhesion, making the installation more stable.



## Key Feature

Hardware & Software	Feature	Benefits
<i>Light sensor</i>	<i>Tamper detection</i>	<i>Ensure asset security</i>
<i>Temperature sensor</i>	<i>Temperature alarm</i>	<i>Ensure asset security</i>
<i>Reed switch magnet</i>	<i>Quick start</i>	<i>Reduce operating costs</i>
<i>W-Fi scanning</i>	<i>Wi-Fi location &amp; Wi-Fi geo fence</i>	<i>Ensure asset security</i>
<i>BLE 5.2</i>	<i>Support BLE accessories, such as Beacon, WMS301,WTH301</i>	<i>Ensure asset security</i>
<i>2A adapter (O)</i>	<i>Fast charging</i>	<i>Reduce operating costs</i>
<i>Magnet kit (O)</i>	<i>Easy installation</i>	<i>Reduce installation costs</i>

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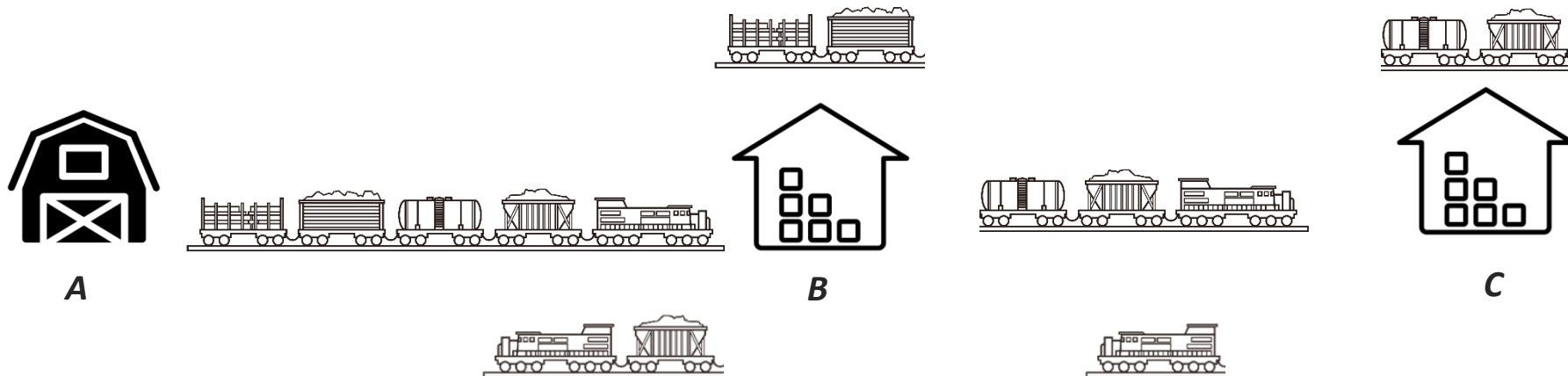


***Application***



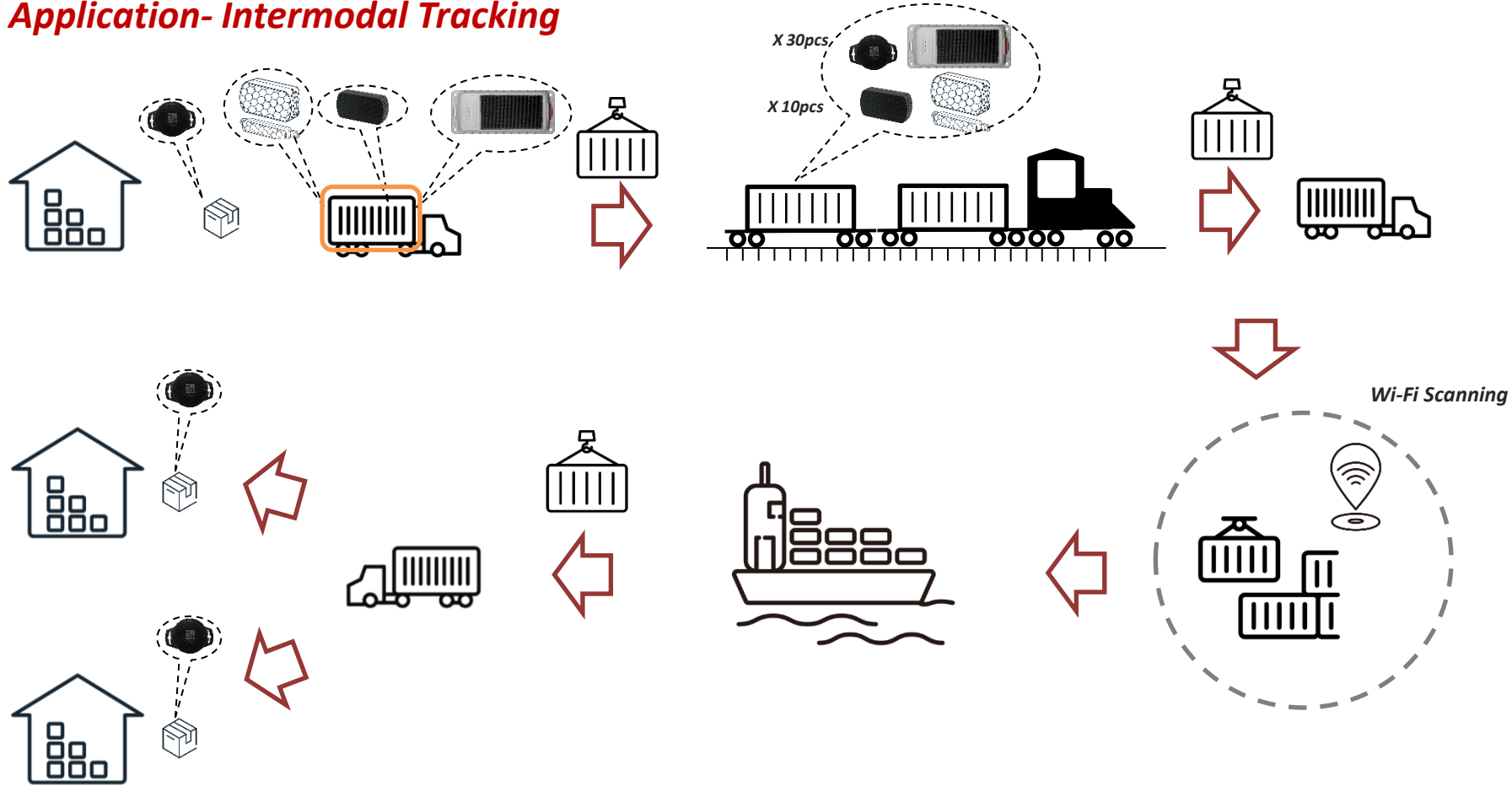
***Installation and Package list***

## Application- rail wagon Tracking



- Real-time tracking, provide real-time enquiry of cargo location ;
- Ensure asset security, wagons abnormal movement alarm to prevent cargo theft;
- Improve the utilization rate of wagon assets, effectively dispatch goods, and adjust transportation plans;
- Efficient accident response, in case of an emergency, can quickly locate the affected wagons to accelerate rescue and recovery efforts;
- Compliance, ensure specific freight meet legal requirements throughout transportation.

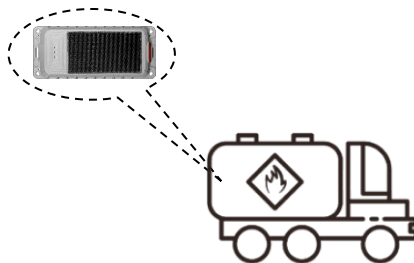
## Application- Intermodal Tracking



## Application- oil tank truck Tracking



Refinery



Gas station



Gas station

- Real-time monitoring of the location of oil tank trucks to ensure transparency of the transportation process;
- Reduce the risk of theft, driving out of the geo fence will send an alarm to the server;
- Safety and Compliance, record tanker transportation data, including routes, times, and parking spots.

## **Application – other**

### **Marine**



*Marine Work Platform*



*Surface marker buoy*



*Yacht*

### **Ski industry**



*snowmaker*



*piste-basher*



*snowmobile*

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# Installation

## Chassis Magnetic Mount Installation



Magnet kit A, thinner  
Model: GL502MG Magnetic Mounting Kit



Magnet kit B, Suitable for mounting in grooves

Step 2



**NOTE: If the device is installed with the magnet kit, power on the device first and then install the magnet kit so it will not interfere triggering power-on of the device.**

Step 1



Device mounted on the surface of the container door side



Device mounted on the surface of the container





Use the sling kit to connect the Locking Rod



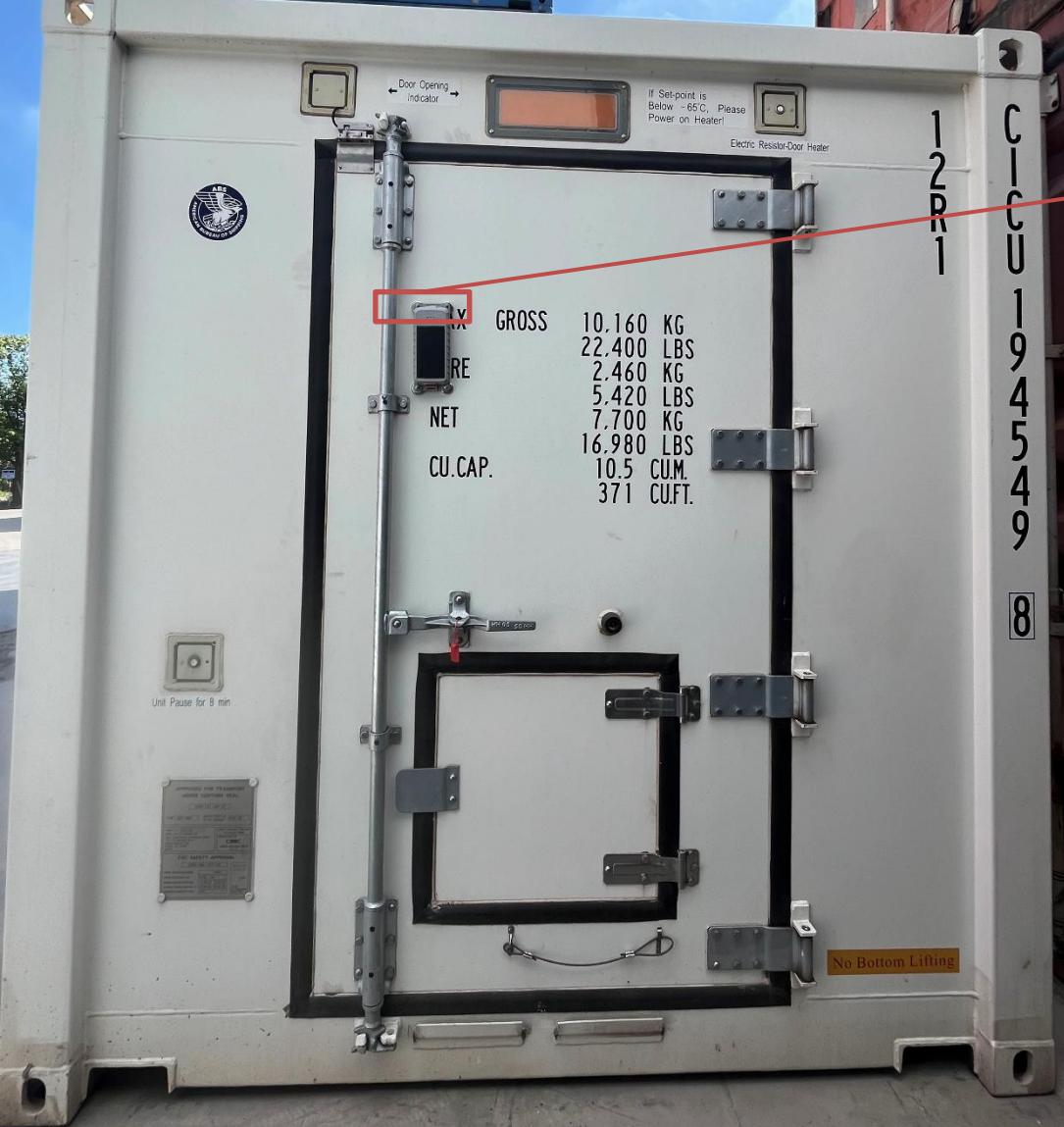
Wrap Lanyard around Locking Rod and  
Secure with Threaded Link



Use the sling kit to connect the Locking Rod





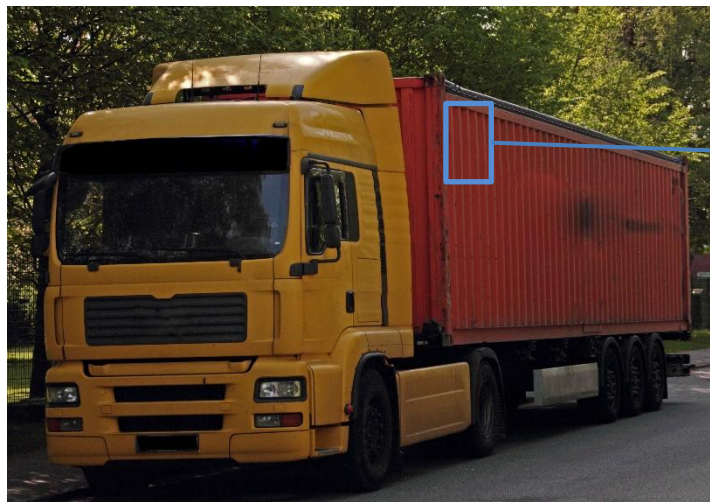


Use the sling kit to connect the Locking Rod









## **Installation**

### **Chassis Magnetic Mount Installation**



*oil tank truck*



*Tank railway wagon*



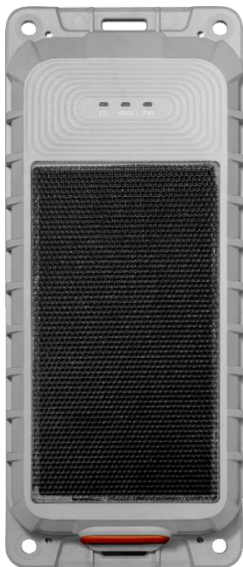






## Standard package and optional accessories

### Standard package

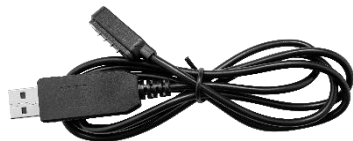


**7 Hours, fully charged**

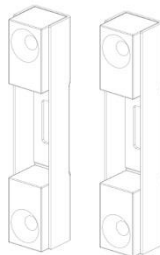
### Optional Accessories



Adapter (5V-2A)  
Model: TBD



4-pin magnetic cable  
Model: USB-Mag[C&D]-ST-GL601



Magnet Kit  
Model: TBD

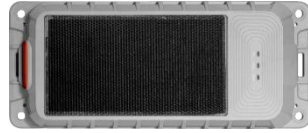


Magnet Kit  
Model: TBD



Sling Kit  
Model: TBD

## Internal Comparison



	GL601CEU / MG	GL521MG	GL502MG
<b>Dimensions</b>	212 × 86 × 30mm	87 × 51 × 30mm	250 × 58 × 61mm
<b>Weight</b>	572g	150g	719g
<b>Battery</b>	12000mAh (ICR18500 x 6)	2400mAh	57000mAh (Replaceable)
<b>Standby Time</b>	1 Report/Day(Solar charging):Up to 10 Years 1 Report/Day: 5 years 1 Report/Hour: 5 months 1 Report/Minute(2 Hours): 80 days	1 Report/Day: 1 year	1 Report/Day: Up to 10 Years 6 Reports/Day : Up to 6 Years 5 Min Reporting: 3 Months
<b>Waterproof</b>	IP67 Complaint	IP67 Complaint	IP68 Complaint
<b>ATEX compatible</b>	Support (Not all)	N/A	N/A
<b>BLE</b>	BLE 5.0	BLE5.2	BLE 5.2
<b>Wi-Fi Location</b>	Support	N/A	Support
<b>Temp. Sensor</b>	Support	Support	N/A
<b>Light Sensor</b>	Support	Support	N/A
<b>Magnetic Mounting</b>	Optional	Optional	Optional



# Thank You

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 [www.queclink.com](http://www.queclink.com)