

# **GD230MG (GO Tracker 2.1)**

## **User Manual**

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By

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## 0. Revision History

Version	Date	Description of Change
1.00	2022-03-08	Initial

## 1. Introduction

The GD230MG (GO Tracker 2.1) series is a professional LTE Cat M1/NB2 device used in cold-chain logistics and cold storage.

It has excellent performance on humidity and temperature monitoring and motion detection, alongside with other features like door status detection (opening and closing) of cold storage through light sensor, extensive battery life with sophisticated power management.

### 1.1. GD230MG (GO Tracker 2.1) Products

Table 1. GD230M (GO Tracker 2.1) series Products

Models	Technology	Operating Band (MHz)
GO Real-Time 4G/5G	eMTC/NB-IoT/GSM	Cat M1/Cat NB2: <b>Cat M1:</b> B1/B2/B3/B4/B5/B8/B12/B13/B18/ B19/B20/B25/B27/B28/B66/B85 <b>Cat M1 Power:</b> 23±2.7dBm <b>Cat NB2:</b> B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B 20/B25/B28/B66/B71/B85 <b>Cat NB2 Power:</b> 23±2.7dBm <b>EGPRS:</b> 850 (33±2dBm)/900(33±2dBm) /1800(30±2dBm)/1900(30±2dBm)

## 2. Product Specifications and Operation

### 2.1. Basic Feature Set

- Single Use
- Operating range: -20C to 60C with a target of -30C for low temps
- Temp+Humidity
- Shock, Tilt (Device reports X, Y, Z values. Server does further processing)
- LUX
- Location - Queclink QLM100 tower information
- Single SIM, Nano SIM – size SIM card
- Pull Tab to start. No on/off button
- Micro USB charging port on bottom of unit, also used for redundant data transmission
- LEDs

### 2.2. Transmit Mode

- CAT.M1, CAT.NB2, EGPRS.
- Micro USB will allow for manual data download with cellular signal not available. Note same Micro USB will enable recharging during recycling process.

### 2.3. Activation

- Pull Tab which connects the battery power to the unit.
- Visual indication of successful activation: LEDs flash.

### 2.4. Reporting Interval

- Models can be configured to 6, 6, 18 (record every six minutes and report every 18 minutes) and 60, 60 (record and report every 60 minutes)
- During “emergency mode,” where shipments are lost or stolen, interval changes to the minimum interval allowed by technology. (1 minute)

### 2.5. Internal Sensors

- Accelerometer – 3 axis accelerometer
- Temperature
- Humidity
- LUX (light)

### 2.6. Color

Color of the plastic housing:

- GO Real-Time 4G/5G – White

## 3. Installation Precautions

- ◆ Firmly install the device to a reliable surface to prevent falling off.
- ◆ Do not install the device under metal surface or in enclosed environments having

difficulty in getting network signal.

## 4. Troubleshooting and Safety Info

### 4.1. Troubleshooting

Table 2. 1.1. GD230MG (GO Tracker 2.1) Troubleshooting List

Trouble	Possible Reason	Solution
Messages can't be reported to the backend server by network.	APN is not right.	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.
There is no response from USB port when the device is configured by using USB.	The port is not ready or the device is not powered on.	Please check the port and the device to ensure they are working properly.

### 4.2. Safety Info

- Do not disassemble the device by yourself.
- Do not put the device in the overheated place. Too high temperature will damage the device or even cause battery explosion.
- Do not use the device on the airplane or near medical equipment.



## 5. FCC Regulations

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiated radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

## RF Exposure Information

This device meets the government's requirements for exposure to radio waves.

This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation.

## 6. ISED Notice

This device complies with Innovation, Science and Economic Development Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en

This device complies with the Canadian ICES-003 Class B specifications. CAN ICES-003(B)/NMB-003(B)

## ISED RF Exposure Statement

This device complies with ISED RSS-102 RF exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the IC RSS-102 RF exposure limits, human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation.

Cet appareil est conforme aux limites d'exposition aux rayonnements de la CNR-102 définies pour un environnement non contrôlé. Afin d'éviter la possibilité de dépasser les limites d'exposition aux fréquences radio de la CNR-102, la proximité humaine à l'antenne ne doit pas être inférieure à 20 cm (8 pouces) pendant le fonctionnement normal.

## 7. CE Declaration

Hereby, Emerson Digital Cold Chain, Inc declares that the radio equipment type GO Tracker 2.1 is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:  
<https://go.locustraxx.com>.



The device could be used with a separation distance of 20cm to the human body.

## 8. Handling of Batteries

### 1. Prohibition short circuit

Never make short circuit cell. It generates very high current which causes heating of the cells and may cause electrolyte

leakage, gassing or explosion these are very dangerous.

The LIR tabs may be easily short-circuited by putting them on conductive surface.

Such outer short circuit may lead to heat generation and damage of the cell.

An appropriate circuitry with PCM shall be employed to protect accidental short circuit of the battery pack.

### 2. Mechanical shock

Falling, hitting, bending, etc. may cause degradation of LIR characteristics.

### 3. Cell connection

1) Direct soldering of wire leads or devices to the cell is strictly prohibited.

2) Lead tabs with pre-soldered wiring shall be spot welded to the cells.

Direct soldering may cause damage of components, such as separator and insulator, by heat generation.

### 4. Prohibition of disassembly

1) Never disassemble the cells

The disassembling may generate internal short circuit in the cell, which may cause gassing, firing, explosion, or other problems.

2) Electrolyte is harmful

LIR battery should not have liquid from electrolyte flowing, but in case the electrolyte come into contact with the skin, or

eyes, physicians shall flush the electrolyte immediately with fresh water and medical advice is to be sought.

3) Prohibition of dumping of cells into fire

Never incinerate nor dispose the cells in fire. These may cause explosion of the cells, which is very dangerous and is prohibited.

4) Prohibition of cells immersion into liquid such as water

The cells shall never be soaked with liquids such as water, seawater, drinks such as soft drinks, juices, coffee or others.