

# ST4230

## Tracking Device


**Asset Tracker with longer battery lifetime**

The ST4230 is a multi-purpose tracking device useful for varied applications such as trailer or container management, vehicle/motorcycle tracking or any kind of valuable asset tracking. The ST4230 supports 4G LTE M1 networks and has a water resistant (IP67 compliant) rugged, hard-case. Designed to minimize power consumption efficiently, the device incorporates a large battery suitable for longer-term usage.

**Key Features**

- Network: LTE Cat. M1
- Low Battery Alert
- Built-in 6-axis accelerometer
- BLE - 2.4GHz Support.
- GNSS
- Maintenance Server Supported (Optional)
- Firmware upgradeable remotely (OTA)
- Waterproof compliant: IP67

## GENERAL SPECIFICATION

Frequency	LTE Cat M1 : B2, B4, B5, B12, B13, B66
Power	Class 5
Battery	 <p>Use only Ultimate Lithium 2 x AA Battery *Please dispose of Lithium batteries in a safe and responsible manner</p>
Motion sensor	Built-in 6-axis accelerometer
BLE	2.4Ghz Support.
Power Consumption	Active mode : 200mA(LTE Cat M1) Active Mode : 40mA(GPS) DeepSleep mode : under 270uA @ 3.0V
Dust and water Resistant	IP67
Temperature Range	-25°C ~ +70°C
LED Indicator	LTE Network Status, GPS Status, POWER
Packet Switched data rate	LTE Cat M1 DL : Max 588 kbps / UL : Max 1119 kbps
PC Sync Track	Uart USB cable
USIM CARD SLOT	NANO SIM CARD(4FF)
Dimension	63(W) × 94(L) ×18(T) mm
Weight	65g without battery 100g with 2 x AA Battery
Approval	FCC, PTCRB, CE(TBD)

**GPS RECEIVER SPECIFICATION**

<b>Receiver Type</b>	GPS concurrent AGPS (Optional)
<b>Update Rate</b>	18Hz (Single GNSS) 5Hz (4 Concurrent GNSS)
<b>Accuracy<sup>1)</sup></b>	Position 1.5m CEP
<b>Acquisition<sup>2)</sup></b>	Cold starts <24s Aided start <2s Hot start <1s
<b>Sensitivity<sup>3)</sup></b>	Tracking -167dBm Reacquisition -161dBm Acquisition -149dBm
<b>Antenna type</b>	Carrier Antenna

\*1) All SV @ -130 dBm

\*2) It depends on aiding data connection speed and latency

\*3) The 3 figures were measured with a good active antenna.

## AVAILABLE OPERATION / FEATURES

<b>Configuration</b>	either by 4G, SMS or PC
<b>Parameter Change</b>	either by 4G, SMS or PC
<b>Command /Control</b>	either by 4G or SMS
<b>4G Communication</b>	TCP/UDP
<b>4G Connection</b>	either always connected or upon needed
<b>BLE</b>	Support the data reporting of external temperature by BLE
<b>Basic Data reported</b>	NMEA location, GPS signal status, Message No, Speed
<b>Data Storage</b>	up to 2,000 locations, in case of transmission failure or cost issue
<b>Reports</b>	Possible to send location report periodically and be adjusted the interval within a limited range
<b>Report Back up</b>	possible (IP address for backup server or Backup SMS reporting)
<b>Firmware Upgrade</b>	by OTA (Over The Air ) or pc tool.

## INSTALLATION, CONFIGURATION AND PROTOCOL

Most important point is to install the unit horizontally in order to have the top cover to see the sky  
*For the details of product handlings / installations, please refer to the attached pictures.*

**Note 1 :** *Do not take out SIM card when the power line is connected.*

*Before taking out SIM card, disconnect power line first.*

**Note 2 :** *Configuration or Parameter setting should be done before installation.*

**Configuration :** Refer to separate document and software tool for configuration.

**Protocol :** Refer to separate document for the standard protocol

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.

Any changes or modifications (including the antennas) to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

This equipment and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.