

ST4280

Tracking Device

**Asset Tracker with longer battery lifetime**

The ST4280 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 ST4280 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 3-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, B85
Power	Class 5 (21dBm+1.7/-3.0dBm) for LTE-FDD / LTE-TDD bands
Battery	Battery: 3.6V, 17Ah Primary Battery
Motion sensor	Built-in 3-axis accelerometer
BLE	2.4Ghz Support.
Power Consumption	Active mode : 40~60mA
Dust and water Resistant	IP67
Temperature Range	-30°C ~ +85°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
Dimension	110.9(W) × 59(L) ×38.5(T) mm
Weight	220g
Approval	FCC, PTCRB

GPS RECEIVER SPECIFICATION

Receiver Type	GPS GPS L1 C/A MASA, GAGAN AGPS (Optional)
Update Rate	18Hz (Single GNSS) 5Hz (4 Concurrent GNSS)
Accuracy¹⁾	Position 1.5m CEP
Acquisition²⁾	Cold starts <24s Aided start <2s Hot start <1s
Sensitivity³⁾	Tracking -167dBm Reacquisition -161dBm Acquisition -149dBm
Antenna type	Patch 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

Configuration	either by 4G, SMS or PC
Parameter Change	either by 4G, SMS or PC
Command /Control	either by 4G or SMS
4G Communication	TCP/UDP
4G Connection	either always connected or upon needed
BLE	Support the data reporting of external temperature by BLE
Basic Data reported	NMEA location, GPS signal status, Message No, Speed
Data Storage	up to 2,000 locations, in case of transmission failure or cost issue
Reports	Possible to send location report periodically and be adjusted the interval within a limited range

Report Back up	possible (IP address for backup server or Backup SMS reporting)
Firmware Upgrade	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.