

ES500/GT-423, 3G/GNSS AGPS Compact Sensitive Tracker with APP & Web Access.

Overview

ES500/GT-423 is a very sensitive GNSS online tracker with 3G (WCDMA) and 2G (GSM/GPRS/EDGE) communication support. Married with AGPS support, this SiRFstarV (SS5) tracker exhibits unprecedented position fix performance. It works perfectly in GPS/GLONASS difficult environments such as inside glove box, trunk, bumper etc.

The portable compact design allows it to be used almost anywhere with just limited GNSS/3G/2G signal reception.

The external power supply design allows it to connect to battery of different capacities based on the real demand. The built-in 3-axis G-sensor detects various movements and further reduces the power consumption of the tracker.

APP (Android & iOS) & WEB support makes the tracking easy and simple. Cloud notification allows you real-time handle any emergency by your smartphone.

Applications

- Personal, detective tracking
- Fleet/group vehicle tracking & management
- Asset security & tracking

Features⁺

- SiRFStartV GPS&GLONASS w/ AGPS support
- Gemalto high performance 3G/2G communication
- Bosch tri-axis G-Sensor
- Recovery from communication dead-zone – auto-retransmit after passing null-cellular signal zone.
 - Up to 16 thousands report buffer capacity, or
 - 270 hours non-stop report at interval of 1

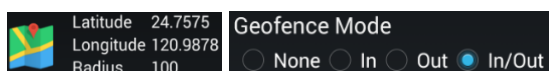
RoHS
Compliant



minute, or

- 11+ days, day and night non-stop report at interval of 1 minute
- Peace of mind;
 - Move call – call you automatically as the tracker (or your asset) moves. One just ignores the reminding call from the tracker. The tracker hangs up the call automatically. Asset status is under your control.
 - Move alert – send your smartphone an alert via cloud notification as the tracker moves. This function is useful for data-only SIM plan.
- Flexible external power supply via RCY connector
 - Battery of different capacities could be used.
 - Adapter cable from vehicle battery available
- Smart power saving as there is no moves
- Low battery alert[#] (1 day^{*h} working remains)
- Long standby time[#] – 120 days (5 days^{*h} working remains)
- Long working time[#] – 20 days^{*h}
- OTA (Over The Air) configuration-parameter setting
 - Report interval/distance
 - Sleep/Hibernate power saving mode
 - Geo-Fence: IN, OUT or IN and OUT
 - SMS alert on events
 - Move call
 - Etc.
- OTA firmware upgrade (for maintenance use)
- APP support
- Easy geo-fence setting – click & drag on map





- Powerful history browsing/playback function
- 1 month history data stored in the server
- *: MOQ-based feature customization is welcome.
- #: 12000mAh new battery; hibernate mode; 25°C
- *: Continuous working 2 hours a day, one report/minute
- h: Hibernate mode

Technical Specifications

Cellular Characteristic Data

Frequency bands	Dual-band
UMTS/HSPA+	900/2100MHz (-E, -E8) 850/1900MHz (-US)
GSM/GPRS/EDGE	900/1800MHz (-E, -E8) 850/1900MHz (-US)
HSPA data rate - 3GPP Release 6, 7	DL 7.2Mbps, UL 5.7Mbps HSDPA Cat.8 / HSUPA Cat.6
UMTS data rate - 3GPP Release 4	PS – 384 kbps DL / 384 kbps UL CS– 64 kbps DL / 64 kbps UL

GNSS (GPS & GLONASS) Receiver Data

Receiver Type	SiRFstarV - 52 channels, L1 frequency, C/A code GPS & QZSS:1575.42MHz GLONASS: 1598.0625~1605.375MHz
Horizontal Position Accuracy	< 2.5m (Autonomous) (50% 24hr static, -130dBm)
Velocity Accuracy	<0.01 m/s (speed, autonomous) <0.01° (heading) (50% @30m/s)
Time To First Fix Hot start Warm start Cold start	Autonomous (50% -130dBm) <1sec <30sec <35sec
Sensitivity (Autonomous)	Acquisition: -146dBm (GPS) Tracking: -165dBm (GPS), -163dBm(GLONASS)

3G/GNSS Compact, Sensitive Tracker / GT-423_ES500

	Navigation: -160dBm (GPS), -159dBm(GLONASS) (-142dBm 28dB-Hz with 4dB noise figure)
Max. Update Rate	5Hz
Max. Altitude	<18,000 m
Max. Velocity	<1,852 km/hr.
Protocol Support	NMEA V4.00, 115200 bps (default) GGA, GSA, GSV, RMC, VTG
SBAS Support	WAAS, EGNOS, MSAS, GAGAN
Dynamics	<4g

Electrical Data

Power supply	3.5~4.2 VDC via RCY port only
Power consumption	0.2~190mA depending on usage

Environmental Data

Operating temperature	-20 ~ 70°C
Storage temperature	-20 ~ 35°C (long-term storage)

Mechanical Data – 65 x 45 x 14 (mm)

Weight – 41.5g

I/O Interfaces

Power port	JST RCY connector - SYR-02T
Console port	2.5mm phone jack, female - GND, TX: Console TX RX: Console RX
Button	* Power status indication (1 tap) * GPS fix indication (2 taps)
LED (Blue)	Normally OFF w/o button tapping * LED ON 0.5s as button tapped GPS fix indication period: 10s * GPS unfixed: always ON * GPS fixed: 0.5s ON 1.5s OFF
SIM connector	Push-push micro-SIM card holder

Optional Accessories

- ✧ 3.2Ah Li-ion battery



- ✧ 5.5Ah Li-ion battery



- ✧ Battery Chargers



- ✧ Adapter cable (12/24V, 35V tolerable) -
Directly from vehicle power to tracker



Server Support

1. Work with your own server
 - NDA & sample purchase-based protocol available.
2. Work with Navisys server
 - ✧ Web access from a PC/NB, tablet, smartphone
 - ✧ APP access from a smartphone

Ordering Information (sub-model list)

R	Works in Russia, India, greater China only
E	European band
U	US band

*This document is subject to change without notice.