

## UGN-3050 personal tracker

SKETCH E



DIMENSION: 90.5 x 39 x 15.5 (最高 17.7) mm

### Hardware Features:

- \* The GPS and GSM modules are integrated inside the tracking unit case.
- \* GPRS/ SMS and Voice I/O
- \* Up to 5.000 location / activation messages can be saved (automatic)
- \* Built in motion switch
- \* Battery charge circuit to charge 3.7 Volt Li-ion battery
- \* Panic input button (will power up the unit from deep sleep mode)
- \* Park Switch
- \* Super low battery use in deep sleep mode (low power timer on)  
(Up to 3 years with 3.7V/800mA battery)
- \* Timer circuit can wake up unit by time (hours – minutes – seconds – days Months) or any configured time or date.
- \* Time backup battery will last up to 3+ years without battery or external power connected.
- \* 18 Pin mini multi I/O connector
- \* One digital inputs (0 to 60VDC)
- \* One analogue – digital input (3.3VDC)
- \* External battery backup option (to connect second battery or Solar panel option)
- \* USB to Serial (Serial RS232 port (9600 baud Rate)) for external communication, firmware upgrade or direct access to modem (9600 baud rate).
- \* Build in Amplified Speaker (1.25Watt output power) and Microphone
- \* Build in Active high performance GPS antenna
- \* Unit can be activated from deep sleep mode using Panic input, wire connection (will activate the unit when wire is broken or cut) or when closed loop is opened.



- \* Low battery led indicator
- \* Status and GPS led indicator
- \* Build in buzzer for warning and motion detection
- \* External option to connect Speaker and Mic
- \* Operating temperature range -25 deg. C to +70 deg. C (Battery 0 – +60 Degrees C.)

### **Physical Characteristics:**

Unit size: LxWxH 90.5x 39 x 15.5 mm (17.7 max)

Plastic / Waterproof if required

Case Environmental Characteristics:

Operational Temperature: - 25 ~ + 70 °C (board temperature)

Storage temperature -40°C to +80°C

1 Multi I/O connector (18 pin with locking pins)

1 On/Off switch / 1 Park switch / 1 Panic button

### **Electrical Characteristics:**

Input Voltage: + 5 Volt DC regulated (USB port power)

Power Consumption: Depending on operating mode max up to 3 Years (using 3.7V/ 800 mA battery)

### **uBlox- LEA-4S chipset version (default)**

#### **Parameter Specification**

Receiver Type L1\_frequency,C/A Code, 16-Channels

8192\_time/frequency\_search\_windows

#### **Max Navigation Update Rate**

4 Hz

#### **Accuracy Position**

Position DGPS / SBAS2

2.5m CEP3 5.0m SEP4

2.0m CEP 3.0m SEP

#### **Acquisition GPS Mode:**

Cold Start 34 Sec (First time fix can be between 1-3 minutes)

Warm Start 33 Sec

Hot Start <3.5 Sec

Reacquisition <1 Sec

#### **Sensitivity**

Tracking -158 dBm

Acquisition & Re-acquisition -148 dBm

Cold Starts -142 dBm

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## **GSM Modem Specifications:**

### **Frequency bands**

Tri-band: 900, DCS 1800, PCS 1900 or  
EGSM 850, DCS 1800, PCS 1900  
Compliant to GSM Phase 2/2+  
GSM class Small MS

Transmit power Class 4 (2W) at EGSM900  
Class 1 (1W) at DCS1800 and PCS 1900  
GPRS connectivity  
GPRS multi-slot class 10  
GPRS mobile station class B

DATA

*GPRS:*

*CSD:*

GPRS data downlink transfer: max. 85.6 kbps  
GPRS data uplink transfer: max. 42.8 kbps  
Coding scheme: CS-1, CS-2, CS-3 and CS-4  
Supports the protocols PAP (Password Authentication Protocol) usually used for PPP connections.  
Integrated TCP/IP protocol.  
Support Packet Switched Broadcast Control Channel (PBCCH)  
CSD transmission rates: 2.4, 4.8, 9.6, 14.4 kbps, non-transparent  
Unstructured Supplementary Services Data (USSD) support  
SMS, MT, MO, CB, Text and PDU mode  
SMS storage: SIM card  
Support transmission of SMS alternatively over CSD or GPRS.  
SIM interface Supported SIM card: 1.8V ,3V



### **Audio features Speech codec modes:**

Half Rate (ETS 06.20)

Full Rate (ETS 06.10)

Enhanced Full Rate (ETS 06.50 / 06.60 / 06.80)

Echo cancellation

Noise reduction

Phonebook management Supported phonebook types: SM, FD, LD, MC, RC, ON,

ME, BN, VM, LA, DC, SD

Application Toolkit Supports SAT class 3, GSM 11.14 Release 98

Real time clock Implemented

Timer function Programmable via AT command

Firmware upgrade Firmware upgradeable over serial interface

### **Coding schemes and maximum net data rates over air interface**

#### **Coding scheme 1 Timeslot 2 Timeslot 4 Timeslot**

CS-1: 9.05kbps 18.1kbps 36.2kbps

CS-2: 13.4kbps 26.8kbps 53.6kbps

CS-3: 15.6kbps 31.2kbps 62.4kbps

CS-4: 21.4kbps 42.8kbps 85.6kbps

### **Power use :**

Using 800 mA/ 3.7Volt battery.

CPU Timer - GPS – running – normal mode = 50mA (16 hours)

CPU Timer – GPS – GSM – running normal mode = 100mA (8 hours)

CPU Timer – running – normal mode – ADC working – All inputs = 7mA  
(No activation last 4 Days)

Stop mode – GPS/GSM off – CPU Timer off – Activate by low power timer

– Panic – or any digital input = 0.83 mA

(No activation will last 40Days)

Stop mode 2 – GPS Off – GSM in sleep mode – CPU Timer off – Activate

by low power timer – Panic – SMS message or Call - or any digital input  
= 5 mA

(No activation will last up to 6 Days)

Unit off – low power timer running.

Can only wake up by Panic input or timer.

(No activation will last up to 3 + Years)



**Possible applications:**

- Security tracking
- Containers or Boats where no external power connection is available
- Remote locations
- Older people
- Kids
- Group travelling
- Dog tracking