

Advanced Vehicle Tracker

Tracking + CAN + RS-232+1-Wire

Key Features:

- Embedded GPS and GPRS Antenna.
- IP 65 Compliant Rugged ABS Body.
- Quad band Class 12 GPRS Modem.
- Multi-GNSS GPS and GLONASS with AGPS support.
- USB 2.0 Device Port.
- RS-232 Port.
- CAN Bus (Supports ISO15765-4, J-1939 and Open CAN Protocols).
- Analog Input 0-10V or 0-30V.
- 3 Axis Accelerometer[#].
- 4 Digital Inputs, 2 Digital Outputs.
- Voice Support (Mic + Speaker)[#].
- 1-Wire Protocol Interface[#].
- 15000 logs offline storage.
- **Distance measurement from odometer sensor by setting K-Factor. GPS based distance measurement in addition.**
- **In-built application firmware to integrate Mi-fare card reader (for student tracking in school bus applications).**
- **In-built application firmware to read Fuel sensor data over RS-232 Port.**
- **In-built application firmware to read Temperature and Humidity from 1-wire sensors, i-button.**
- **Device monitoring / configuration through USB using android based application on phone or tablet.**
- **Device dials a programmed phone number if panic button pressed.**
- **OBD-II over CAN for CARS and other vehicles. J1939 interface for Trucks and Buses.**
- **Driver Behavior using accelerometer.**
- **In-built application firmware to integrate Android based Tablet through USB port for metering and dispatch functions.**
- **Over the air Firmware Update and Configuration Update.**
- **Geo-Fencing polygonal, 3 nos. of Geo-Zone circular inside the device.**
- **Android based application for device configuration and monitoring over SMS.**
- **Packet data over TCP/IP protocol. MQTT and data publish and subscribe on standard IOT platforms like IBM Bluemix and AWS IOT on request.**
- **Battery Back-up up to 6 Hrs.****

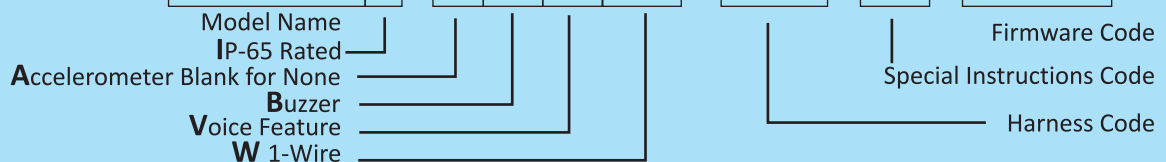


Application Areas:

- **Fleet Management**
 - **Vehicle Health Monitoring**
 - **Fuel Monitoring**
 - **Cold storage Vans**
 - **School Bus Tracking**
- **Driver Behavior**
 - **Driver Authentication**
 - **Immobilizer**
 - **Taxi Meter**
 - **Sensor Integration Over CAN**

Ordering Code:

GNX-3 I- A B V W - XX - X - XXX



- Optional. Ordering variant based feature. ** - @ GPRS data rate above 2 minutes.

Technical Specifications

MCU

| | |
|--------|-----------------------|
| Core | ARM Cortex-M4 |
| Memory | 256KB Flash, 60KB RAM |

Memory for Offline Logs

| | |
|------|---------------------|
| Type | Data Flash |
| Size | 2Mbyte / 15000 Logs |

Accelerometer

| | |
|-------------------|---------|
| Measurement Range | +/- 16g |
| Resolution | 12Bit |

Cellular

| | |
|---------------|-----------------------------------|
| Communication | 2G, GPRS |
| Frequency | Quadband 850/900/1800/1900 MHZ |
| GPRS Class | Class 12 |
| Antenna | Internal (External optional) |
| SIM card | 1.8/3.3V, Micro SIM |
| Data Support | TCP, HTTP, MQTT, SMS |

GNSS

| | |
|-----------------|--|
| GPS+GLONASS | GPS- 1575.42MHz, GLONASS - 1601.71 MHZ. |
| Output format | NMEA 0183 |
| No. of Channels | 33 Tracking, 99 Acquisition |
| Sensitivity | Acquisition -148dBm Tracking -165dBm |
| Antenna | Internal (External optional) |

Inputs / Outputs

| | |
|-----------------------|---|
| Digital Inputs | 4 Nos. |
| Voltage levels | 0 to 7.2V Logic Low / OFF 7.2 to 37V Logic High / ON |

Alternate Functions of Digital Inputs

| | |
|-----------------|-----------------|
| Digital Input 1 | Odometer Pulse |
| Digital Input 2 | Ignition Input |
| Digital Input 3 | Panic |
| Digital Input 4 | Seat Belt sense |

Digital Outputs

| | |
|---------|----------------------------------|
| Current | 2 Nos. Open Drain, 500mA max. |
|---------|----------------------------------|

Analog Inputs

| | |
|-------|----------------------------------|
| Range | 1 Nos. 0-10V (0-30V optional) |
|-------|----------------------------------|

+5V Output

300mA Fused,
With MOSFET based ON/OFF

Status LEDs

Power, Cellular, GPS

Slide Switch

For Reset, Firmware update
using USB

USB

| | |
|-----------|-----------------|
| Type | Device, USB 2.0 |
| Connector | Micro USB AB |

RS-232

| | |
|--------------------|-----------------------------|
| Baudrate | 2400 to 115200 Configurable |
| Hardware Handshake | No |

CAN

| | |
|------------------|---------------------------------|
| Speed | 250 / 500 Kbps |
| Protocol Support | ISO 15765-4 J1939 OpenCAN |

1-Wire

| | |
|-------------------|---|
| Supported Devices | i-button for Driver Identification RHT03 for Temperature and Humidity Measurement |
|-------------------|---|

Voice / Audio

| | |
|-----------|---|
| Connector | 4 Pin Relimate |
| Speaker | 1W, 40hm |
| Mic | 1.5V working Voltage Load Resistance 2.2KOhm |

Internal Battery

| | |
|--|--------------------------------|
| Type | Li-ion Rechargeable |
| Capacity | 1100mAH @ 3.7V |
| Protection Circuit | Yes. Internal to Battery Pack. |
| Battery temperature monitoring using NTC | Yes. |

Electrical

| | |
|-------------------|--|
| Input Voltage | 7.2 to 40 VDC. |
| Power Consumption | 3 Watts Maximum |
| Protections | Reverse Battery Transient Protection Under voltage lockout EMI/EMC Filter |

Certifications

In Process...

Environmental

| | |
|-----------------------|---|
| Operating Temperature | -40 to 85 Deg C |
| | Charging of Battery shall be terminated above +55 DegC |

Mechanical

| | |
|--------------------|--------------------------|
| Dimensions | 120 X 88 X 45 mm. |
| Material | ABS (UV stabilised + HR) |
| Ingress Protection | IP65 |
| Weight | TBD |

Version 1.0. Specifications are subjected to change without prior notice.

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