

# Advanced Vehicle Tracker

## Tracking + RS-232+1-Wire+ Accelerometer

### Key Features:

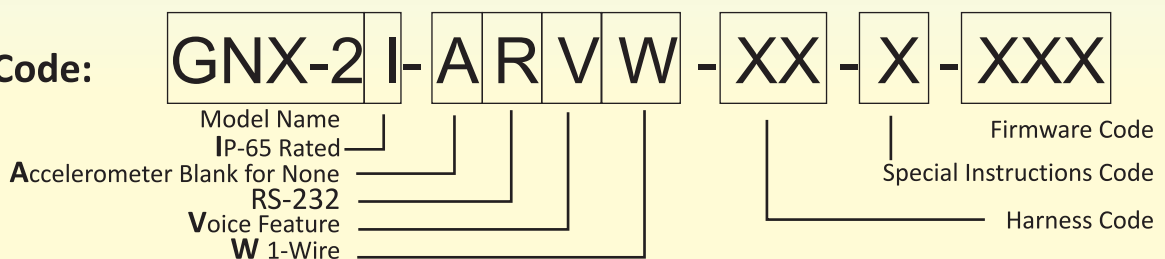
- Embedded GPS and GPRS Antenna.
- IP 65 Compliant Rugged ABS Body.
- Quad band Class 12 GPRS Modem.
- Multi-GNSS GPS and GLONASS with AGPS support.
- USB 2.0 Device Port.
- RS-232 Port.
- Analog Input 0-10V or 0-30V.
- 3 Axis Accelerometer<sup>#</sup>.
- 3 Digital Inputs, 2 Digital Outputs.
- Voice Support (Mic + Speaker)<sup>#</sup>.
- 1-Wire Protocol Interface<sup>#</sup>.
- 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.*
- *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.*
- *Andriod 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*
  - *Fuel Monitoring*
  - *Cold storage Vans*
  - *School Bus Tracking*
- *Driver Behavior*
  - *Driver Authentication*
  - *Immobilizer*
  - *Taxi Meter*

### Ordering Code:



# - 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

<b>Digital Inputs</b>	3 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

<b>Digital Outputs</b>	2 Nos.
Current	Open Drain, 500mA max.

<b>Analog Inputs</b>	1 Nos.
Range	0-10V (0-30V optional)

<b>+5V Output</b>	300mA Fused, With MOSFET based ON/OFF
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<b>Status LEDs</b>	Power, Cellular, GPS
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<b>Slide Switch</b>	For Reset, Firmware update using USB
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## USB

Type	Device, USB 2.0
Connector	Micro USB AB

## RS-232

Baudrate	2400 to 115200 Configurable
Hardware Handshake	No

## 1-Wire

Supported Devices	i-button for Driver Identification RHT03 for Temperature and Humidity Measurement
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## Voice / Audio

Connector	RJ-11 4 Pin.
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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