

NAVI-TRACK 258 AIS140

Advanced GPS-IRNSS-GAGAN Based VTD



Features

- NAVITRACK 258 VTD is ARAI AIS140 Certified with IRNSS
- GPS-IRNSS-SBAS high performance position engine
- Quad band GSM / GPRS modem:850 MHz / 900 MHz / 1800 MHz / 1900 MHz)
- Powerful microcontroller with superior sleep mode
- 4 Digital inputs, 2 Digital outputs and 1 analog input
- RS 232 interface for sensor and accessory integration
- In-Built 3-Axis Accelerometer and temperature sensor
- Power supply range of 7V to 40V
- Sleep mode current (700uA)
- Internal GPS+IRNSS and GSM antenna
- Location transmission over SMS and GPRS
- Unit configuration through Serial RS 232 / SMS
- Supports TCP / IP on GPRS as per AIS 140
- Connection up to 2 servers/domains supports
- Memory logs: 40,000 Data records (256 byte per record)
- Supports Embedded SIM/eUICC/Micro-Sim
- Battery backup of 18 Hrs with 10 sec update interval
- Li-ion Battery, 3.7 V, 2000mAh
- Firmware upgrade over the air (FOTA)
- Password protection and Authentication
- Device tampering alerts
- IP67 enclosure
- Geofence Alert

Vehicle Tracking Device



Navi-Track 258

Product Description

Navi-Track is an indigenously developed family of Vehicle Tracking Devices (VTD) that provides precise location, time, speed, distance and other useful information aimed at tracking applications.

Navi-Track 258 is an AIS140 certified VTD with built-in GPS-IRNSS-SBAS receiver which provides unmatched performance in terms of sensitivity and TTFF. The GPS+IRNSS and GSM antennas are embedded within the enclosure thereby ensuring tamper-proof operation. The VTD meets the AIS-140 specifications by incorporating all the requirements including IRNSS.

Navi-Track 258 consists of a multi-band GSM / GPRS modem for data communication. The general purpose I/O's of the Navi-Track 258 are conditioned and brought out to serve as digital I/O and analog input.

The Navi-Track 258 power supply design is robust enough to handle the vehicle supply variations. It can operate from 7V upto 40V and provide protection against surges, short circuit and reverse battery connection.

Navi-Track 258 consists of Li-Ion backup battery for operations when the mains intentionally/un-intentionally disconnected.

Navi-Track 258 supports HTTP, TCP/IP and UDP/IP protocols for the communication with the server.

Over the air firmware upgrade feature helps in upgrading the firmware of the device when the device is live on the field. Navi-Track 258 can be integrated with many accessories such as SOS button, temperature sensor, fuel sensor, RS-232 based active/passive RFID's etc.

Technical Specifications of Navi-Track 258 AIS140

GPS	
GPS+IRNSS Receiver	49 channels GPS-GAGAN; L1 band (1575.42 MHz) IRNSS; L5 band (1176.45 MHz)
Sensitivity (with respect to antenna)	-147 dBm acquisition -156 dBm reacquisition -162 dBm tracking
TTF	1.5 sec (typical) Hot start 25 sec (typical) Warm start 32 sec (typical) Cold start
PVT accuracy (Under open sky condition)	Position (horizontal): 1.8 m (CEP) Speed: 0.1 m/s
Aiding	AGPS compatible
GSM/GPRS	
General	Quad Band (850 MHz / 900 MHz / 1800 MHz / 1900 MHz)
Class	GPRS Multi slot Class 12/10
Output power	Class 4(2W) at 850/900MHz Class 2(1W) at 1800/1900MHz
IO's	
Digital inputs	4 (0V-32V)
Digital outputs	3 (At Low Side)
Analog inputs	2 (0V-30V)
Memory	
Data storage capacity	> 40000 data records (assuming 256 byte/record)
In Built Sensor	
Accelerometer	3-Axis Accelerometer with inbuilt Temperature Sensor
Gyroscope	3-Axis Gyroscope
SIM Card	
SIM Type	Micro-SIM / Embedded SIM / eUICC
Power	
Mains supply	7V to 40V through cable harness
Current consumption	
Active Mode- Battery not charging	60mA @ 12V (average)
Active Mode- Battery charging	240 mA @12V(average)
Sleep Mode	700uA @12 V
Battery	
Internal battery	3.7V Li-Ion battery (2000mAh)
Backup	18 hours with 10 sec data update interval
Antenna	
GPS + IRNSS	Internal patch antenna
GSM	Internal PCB antenna
Protocol	
IP Protocol	HTTP, TCP / IP and UDP / IP
Output	NMEA 0183 Custom message format
Data transmission	2 IP addresses
LED Indication	
Red LED	Power
Orange LED	GSM/GPRS
Green LED	Position availability
Device Configuration	
RS232	Serial Configuration
FOTA (Firmware over the air)	Supports firmware upgrade over the air
COTA (Configuration over the air)	Supports over the air configuration of various parameters such as APN, server IP, port, update interval and many more

Enclosure	
Enclosure Rating	IP 67

Mechanical	
Dimension (L*W*H)	120mm*85mm*37mm
Weight	225 gms (without cable)

Harness	
Cable Length	350mm
Number of cores	14
Signals brought out	B+, GND, IGN, DI1, DI2, DI3, DI4, DO1, DO2, AI1, AI2, SOS, UART_TX, UART_RX

Environmental	
Operational Temperature Range (Ambient)	-40°C to +70°C
Storage Temperature Range	-40°C to +85°C
Humidity	95% non-condensing +30°C to 60°C

Alert	
Emergency (SOS)	
Low Battery	
Mains connect	
Mains disconnect	
Harsh acceleration	
Harsh braking	
Tamper	
Health Packet	

Certification	
EMI/EMC – AIS 004: Part 3	
Enclosure – IP67	
Shock – Clause No. 4.12 – IS:10250	
Vibration – Clause No. 4.1 – IS:10250	
Humidity – Clause No. 4.3 – IS:10250	
Dry Heat – Clause No. 4.2 – IS:10250	
Cold – Clause No. 4.4 – IS:10250	

Protection	
Surge Protection, upto pulse 5 with internal resistance of 4ohM as per ISO7637-2(200A)	
Short Circuit	
Reverse Battery	
Tamper Protection (Tamper Switch)	
Password Protection (Device configuration)	

Compliance	
Compliant to KMVD –CDAC Kerala standards	
Compliant to DIMTS	
Compliant to GEL	
Compliant to ORSAC Standards	
Compliant to DMJ	
Compliant to CDAC Kolkata	

Additional Features	
CAN (J1939, OBD II)	
HTTP, UDP/IP, MQTT* Protocols	
LTE / 4G*	
Fuel level Monitoring	
Immobilizer	
LIDAR Sensors	
TPMS	
Temperature Monitoring	
2 line Character display	
Mic	
Speaker	
Keypad	