



## Features

- GPS, GLONASS, IRNSS, BeiDou, Galileo, QZSS
- 8-48V wide power supply
- High sensitivity
- I/O to communicate with peripherals
- Serial interface
- 4 digital inputs opto-isolated
- 2 digital outputs
- 2 analog inputs
- Embedded SIM support (optional)

AT-V3 is tracker for vehicles that support IRNSS (Navic), GPS, GLONASS, BeiDou, Galileo, QZSS. It can work with Atreyo Tracking System (A-Track) and other server systems. The Tracker API to communicate the server is according Indian Norm IS-140. AT-V3 has RS485 serial interface and opto-isolated digital inputs. Internal temperature monitoring and 3 axis accelerometer with gyroscope.

AT-V3 support by RS485 external keypad with display and setting for tracking solution for school, factory buses and city buses.

AT-V3 can be customisable according to client needs. It has expansion slot for extra interfaces or other hardware functions.

Description	Parameter
<b>GNSS specification</b>	
<b>Positioning technology</b>	GPS, GLONASS, IRNSS, BeiDou, Galileo, QZSS
<b>SBAS</b>	WAAS, EGNOS, MSAS, GAGAN
<b>Start</b>	Cold Start: <35s Warm Start: <25s Hot Start: <1.5s
<b>Accuracy</b>	Horizontal position accuracy – autonomous: <1.2m CEP Velocity without aid: <0.1m/s Time 1PPS: 37ns
<b>Sensitivity</b>	Acquisition: -149dBm Reacquisition: -165dBm Tracking: -160dBm
<b>Multipath</b>	Multipath detection and suppression
<b>A-GPS</b>	Supported
<b>GNSS module data output</b>	NMEA-0183
<b>Positional LOG</b>	65,536 logs in non-volatile memory

Description	Parameter
<b>GNSS specification</b>	
<b>storage</b>	Internal memory percentage used indication.*
<b>Data transmission</b>	
<b>Band</b>	Quad-band GSM 850/900/1800/1900MHz GSM
<b>Slot</b>	GPRS multi-slot class 12/10
<b>Link</b>	GPRS class 12: max. 85.6 kbps (downlink/uplink)
	Jamming detection
<b>SIM</b>	External nanoSIM 3V/1.8V Embedded SIM/UICC support SMS, Data – GPRS, TCP/IP Support multiple network OTA switching (on-demand / automatic) capabilities.
<b>Server and Data Functions</b>	
<b>Data servers</b>	Device is capable of transmitting data to

\* under development

Description	Parameter
	2 different IP addresses (1 IP address for regulatory purpose (PVT data) and 1 IP address for Emergency response system other than the IP's required for operational purpose.*
<b>Data mode/pooling time</b>	Normal mode – pooling time 1s – 60s (ignition ON) Battery mode – pooling time is 1s 60min Sleep mode – pooling time is 30s 60min (ignition OFF) The pooling time setting is possible to set for every mode.
<b>Data string format</b>	JSON, TCP/IP, XML
<b>Device ID</b>	The Device have a unique identifier <ul style="list-style-type: none"> <li>• name od device</li> <li>• IMEI number</li> </ul>
Configuration	
<b>Setting through SMS</b>	Authenticated channel/ telephone No.
<b>Setting parameters</b>	Primary or Secondary IP and port number Setting/ Change of the APN and APN user
	Set configuration parameters: like sleep time, over speed limit, harsh braking, harsh acceleration, rash turning, threshold limits etc.
	Configuring the vehicle registration number. The registration number is stored in the internal nonvolatile memory
	Configuring the frequency of data transmission in normal mode, battery mode, emergency mode
	Configuring the time duration for Emergency mode
<b>Phone number setting</b>	Emergency SMS Centre (up to 3)* Authenticated for settings
	Control centre number (up to 3)*
<b>Other SMS functions</b>	Capability to reset/restart the device
	Command to get the information about device: IMEI, ID, vehicle registration no, longitude, latitude, direction, date and time, location fix.
	Command to get status of device
	Configurable backup SMS facility in case of cellular failure.
Other Functions	
<b>Firmware update</b>	Updating of the firmware of the system from Backend Control Centre only Capability to send serving and adjacent

\* under development

Description	Parameter
Other Functions	
	cell ID as well as network measurement report (NMR)
<b>Accelerometer</b>	3 axis accelerometer 3 axis gyroscope
<b>Alerts</b>	<ul style="list-style-type: none"> <li>• Harsh braking</li> <li>• Harsh acceleration</li> <li>• Rash turning</li> <li>• Emergency button</li> <li>• Power supply disconnection</li> <li>• Temper of device</li> </ul>
Emergency	
<b>Emergency Buttons</b>	NC type, Opto-isolated Emergency button indicator can be reset remotely from server
<b>SMS data</b>	If GPSR is not available tracker will send emergency alert by SMS with vehicle location data (IMEI, latitude, longitude, direction, location fix, speed, cell ID, LAC (Location Area Code), date and time) to configured control centre number.
<b>Internal storage of location and emergency</b>	In absence of both cellular and GSM networks and on pressing of Emergency Button, the system implementing VLT function shall store the emergency alert. Once the cellular or GSM is available, this alert information will be sent on high priority to the configured IP addresses or as SMS message along with vehicle location data to configured control centre number.
<b>Internal memory</b>	Device can store 65536 records in internal memory
Interfaces	
<b>Digital Inputs</b>	4 opto-isolated inputs 5-25V
<b>Analog Inputs</b>	2 Analogue inputs 5-25V
<b>Digital Outputs</b>	2 open collector outputs
<b>Serial pore</b>	RS485
<b>Audio</b>	Device has microphone input and speaker/line output
<b>Antenna</b>	Device have an internal antenna; but optional external is supported
Power Supply	
<b>Voltage</b>	8-48V DC
<b>Power consumption</b>	TBD
<b>Battery backup</b>	Device has an internal back-up battery to support 4 hours of normal operations in battery mode (record transmission at a frequency of 60 sec)
<b>Connector</b>	14 pin

Description	Parameter
<b>Physical Characteristics</b>	
Housing	ABS
Size	TBD
Weight	0.5kg
IP protection	TBD
<b>Environmental Specification</b>	

Description	Parameter
Operating Temp.	-25 ~ 70°C (-13 ~ 158°F)
Storage Temp.	-40 ~ 85°C (-40 ~ 176°F)
Ambient RH	5% to 95% (non-condensing)



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