Anytime, anywhere sense your vehicle.

# InVehicle T320 Series Vehicle Telematics



Featuring IP67 protection rating and low power consumption, the Vehicle Telematics 320 (also VT320) is capable of reliable operation in harsh environments even when the vehicle is powered off. Integrating LTE, GNSS, gyroscope and inertia sensor, equipped with powerful computing capabilities and a multitask system, the VT320 precisely locates vehicle positions in real time, records mileage, monitors hard braking, acceleration, collision and other accidents, maintains transport safety, records and analyzes driving behavior. Multiple I/O interfaces remotely monitor various vehicle peripherals such as alarms, sensors, switches, ignition status, controllers, etc. With standard vehicle protocols such as OBD-II, J1939 and J1708 supported, the VT320 tracks vehicle operation starts and delivers preventive maintenance.

Major fleet managers can rely on the VT320 to track and manage fleet vehicles and drivers with accuracy and efficiency.

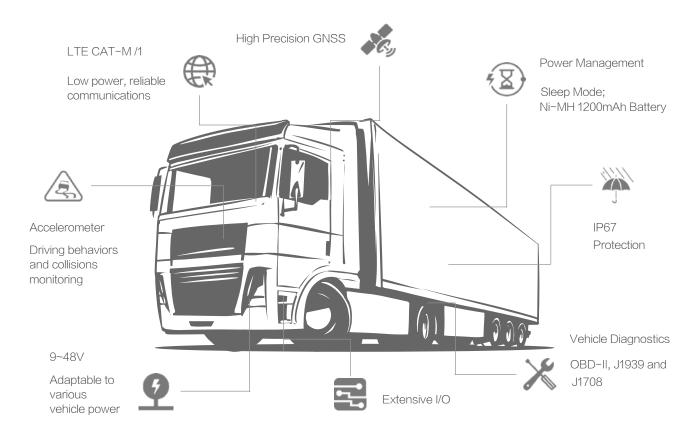
# Market Applications

+ Freight and Logistics

+ Heavy Equipment

+ Public Transportation

+ Generator Monitoring







## Features and Advantages

#### + High Performance Asset Tracking Gateway

Available with LTE CAT M1, CAT 1 and CAT 4, the VT310 continuously delivers reliable connectivity while being power-saving. Built-in GNSS module and inertial navigation for high-precision real-time location tracking; with the gyroscope, the VT300 enables continuous driving behavior monitoring and keeps you safe on the road.

#### + Extensive Interfaces, Better Integration with Vehicles

Built with dual CAN Bus, the VT310 is perfect for vehicles like heavy equipment. It supports common vehicle diagnostic protocols such as ODB-II J1939 and J1708.

Extensive interfaces, including serial ports, I/O, Bluetooth, 1-Wire.

#### + Multiple IoT Cloud Services Supported

AWS, Azure, Wialon, ThingsBoard, MQTT Cloud, Customer Private Cloud, etc.

#### + Continuous and Reliable Operation

Cache which over 30K location records, freeing you from concerns about data loss when Internet connection is unavailable.

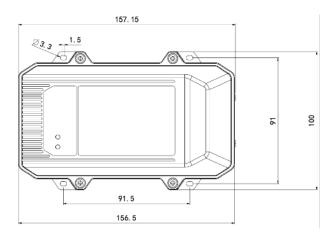
#### + Purpose Designed for Vehicles

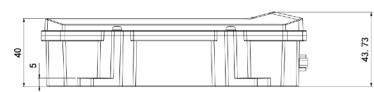
IP67 protection rating, which protects the product from water and dust. Wide voltage range of 9~48V covers all types of vehicle power supplies. Powered by Ni-MH 1200mAh battery, the VT320 is able to continue working when the machine is turned off. Operating temperature range is -40 °C  $\sim$  85 °C.

#### + Easy for Installation

With built-in cellular and GPS antennas, the VT320 is easy for installation and deployment on the road.

### Dimensions and Interfaces





# Product Specifications

InVehicle T320						
Network Type		LTE CAT 1 / CAT M				
Antenna		LTE FPC built-in antenna	GNSS Bluetooth Antenna	Ceramic built-in antenna		
	Satellite Support	GPS Galileo Beidou GLONASS				
GNSS (Global Navigation Satellite System)	Channel	72 channels				
	Sensitivity	-167 dBm, initial positioning time 26s				
	Tracking Sensitivity	-157 dBm (Hot start); -148 dBm (Cold start)				
	Location Accuracy	2.5m (CEP50)				
	Update Frequency	0.25 Hz ~ 10 MHz Configrable				
Inertial Sensor	Acceleration	Measurement range: ±2 / ±4 / ±8 / ±16g				
	Angular Velocity	Measurement range: ±125 / ±250 / ±500 / ±1000 / ±2000dps				
Bluetooth		Bluetooth 4.1				
Electrical Features	Working Voltage	9-48V DC				
	Operating Temperature:	-40 °C ~ 85 °C				
Environment	Humidity	95% RH @ 50 °C non-condensing				
	ESD	IEC 61000-4-2 (4KV test)				
	Capacity	1200mAh				
	Battery Material	Ni-MH				
Battery parameter	Working Temperature	Charging: 0 ~ 45 °C; Discharging: -40 ~ 85 °C				
	Storage Temperature	For 1 month: -40 °C ~ 55 °C; For 1 year: - 40 ~ 35 °C				
	Shell Material	Engineering plastic + engineering plastic alloy (PC + ABS)				
Mechanical Features	Dimensions	Approximately 158 x 100 x 44 mm				
	Protection Rating	IP67				
Vehicle Feetures	CAN Bus	2 channels				
Vehicle Features	J1708/RS485	1 channel	Serial Port	RS232		
	Ignition Signal	1 channel				
I/O	Digital Input	4 channels	Digital Output	3-channels (max. 300 mA)		
	1-Wire	1 channel, 4 sensor	Analog Input	1 channel		
	SIM Card Slot	2FF, push-in slot				
External Interfaces	I/O	26 PIN				
	LED Indicator	2 LED indicators: cellular status, GNSS status				
	Cloud Platform	AWS IoT, Azure IoT, Aliyun IoT, Wialon, Traccar, GPSWox, WhiteLable Tracking, ThingsBoard, Customer platform				
	Transport Protocol	TCP, UDP, HTTP, MQTT				
	Vehicle Data	OBD-II, J1939, J1708				
Software Service	RS232/RS485	Transparent, Modbus protocol data acquisition				
	Event Alarm	Collision detection, motion detection, overspeed, IO change, ignition signal detection, etc. Report support SMS or FlexAPI over TCP/UDP/MQTT				
	ELD	Forward vehicle data via BLE				
Config	Configuration Tool	RS232 or Bluetooth				
Certification	٩	CE, FCC, IC, PTCRB, E-Mark, AT&T, Verizon				



# Ordering Guide

Model	Cellular Type	Region	
	LTE CAT1:		
VT320-FQ33	LTE-FDDB2/B4/B5/B12/B13	North America	
	WCDMA B2/B4/B5		
	LTE Cat M1:		
	LTE-FDD: B1/B2/B3/B4/B5/B8/B12/B13/ B14/B18/B19/		
	B20/B25/B26/B27/ B28/B66/B85		
VT000 F000	LTE Cat NB2:	Global	
VT320-FQ02	LTE-FDD: B1/B2/B3/B4/B5/B8/B12/B13/ B18/B19/B20/		
	B25/B26/ B28/B66/B71/B85		
	EGPRS:		
	850/900/1800/1900 MHz		

# Accessories

Cable	Picture	Order Code	Specifications
26 PIN Test Cable			The cable has P1 and P2 ends: P1 is 26PIN female, connected to VT320; P2 is open end, which requires a 9-48V adaptor. Suitable for engineering environments and indoor tests.



Singel 3 | B-2550 Kontich | Belgium | Tel. +32 (0)3 458 30 33 info@alcom.be | www.alcom.be Rivium 1e straat 52 | 2909 LE Capelle aan den IJssel | The Netherlands Tel. +31 (0)10 288 25 00 | info@alcom.nl | www.alcom.nl

#### **About Us**

InHand Networks is a global leader of Industrial IoT, with a record of tremendous success following groundbreaking innovation since our inception in 2001.

InHand serves world-class partners and customers with industrial M2M routers, gateways, industrial Ethernet switches, rugged computers and IoT management platforms. We provide IoT solutions for various vertical markets including Smart Grid, Industrial Automation, Remote Machine Monitoring, Smart Vending, Smart City, Retail and more.

Proudly bearing the marks of both Rockwell Automation Technology Partner in Asia-Pacific and Schneider Electric Technology Partner, InHand Networks defines industrial innovation and reliability.



43671 Trade Center Place, Suite 100, Dulles,

VA 20166, USA

T: +1 (703) 348-2988

E: info@inhandnetworks.com

www.inhandnetworks.com









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