



Tracking anything, anytime, anywhere

# InVehicle T310 Series

## Vehicle Telematics

The VT300 is a series of rugged and functionally capable vehicle telematics gateway. Integrating extensive interfaces, multiple diagnostic protocols and major IoT clouds, it delivers reliable vehicle data in some of the most challenging environments that involve severe cold or scorching heat, and/or water immersion, while remaining budget friendly.

Major fleet managers can rely on the VT310 to track and manage fleet vehicles and drivers with accuracy and efficiency.

### Market Applications

+ Freight and Logistics

+ Heavy Equipment

+ Public Transportation

+ Generator Monitoring



**InHand Networks**

[www.inhandnetworks.com](http://www.inhandnetworks.com)

## 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 OBD-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, Others

### + Continuous and Reliable Operation

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

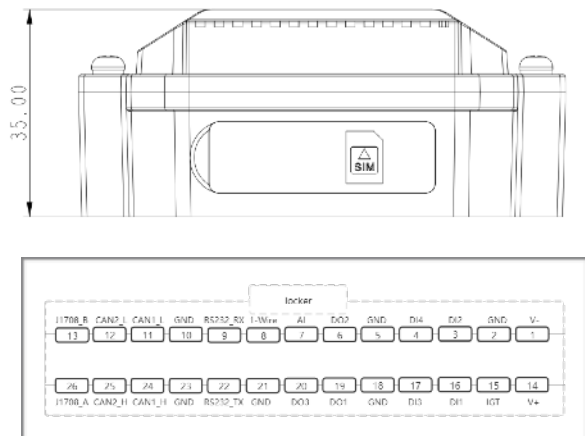
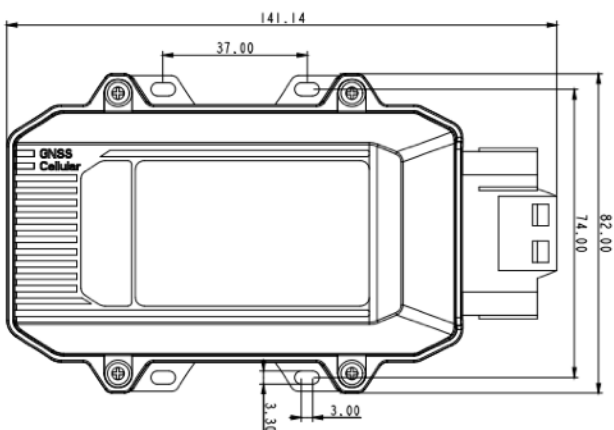
### + Purpose Designed for Vehicles

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 Li 1200mAh battery, the VT320 is able to continue working when the machine is turned off.

### + Easy for Installation

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

## Dimensions and Interfaces



Pin Definition




## Product Specifications

InVehicle T310			
Model	VT310-FS31	VT310-FS52	VT310-FQ58
Network Type	LTE CAT-M	LTE CAT 1	LTE CAT 4
LTE Antenna	FPC built-in antenna		
GNSS Antenna	Ceramic built-in antenna		
Bluetooth Antenna	Ceramic built-in antenna		
GNSS (Global Navigation Satellite System)	Satellite Support	GPS/GNSS/A-GNSS	
	Channel	31 channels	
	Sensitivity	-162 dBm, initial positioning time 32s	
	Collection Sensitivity	-156 dBm (hot start); -148 dBm (cold start)	
	Location Accuracy	2.5m (CEP50)	
	Update Frequency	1Hz by default, max. 10Hz	
Inertial Sensor	Low Power Consumption	Continuous operation: <15mA (@ 3.3V single system positioning)	
	Acceleration	Measurement range: $\pm 2 / \pm 4 / \pm 8 / \pm 16g$	
Inertial Sensor	Angular Velocity	Measurement range: $\pm 125 / \pm 250 / \pm 500 / \pm 1000 / \pm 2000dps$	
	Bluetooth	Bluetooth 4.1 (Optional)	
Electrical Features	Working Voltage	9-48V DC	
	Power Consumption	0.45W	0.55W
Environment	Operating Temperature:	-40 ~ 85 °C (Connected to main power)	
		-20 ~ 60 °C (Powered by internal battery)	
	Humidity	95% RH @ 50 °C non-condensing	
Battery parameter	ESD	IEC 61000-4-2 (4KV test)	
	Capacity	1200mAh	
	Rated Voltage	3.7V	
	Cut-off Voltage	4.2V	
	Battery Material	Lithium-ion battery	
	Working Temperature	Charging: 0 ~ 45 °C; Discharging: -20 ~ 60 °C	
Mechanical Features	Storage Temperature	For 1 month: -20 ~ 45 °C; For 6 months: -10 ~ 35 °C	
	Shell Material	Engineering plastic + engineering plastic alloy (PC + ABS)	
	Dimensions	Approximately 141 x 82 x 35 mm	
	Weight	152g	
Vehicle Features	Protection Rating	IP67	
	CANBus	2 channels	
	J1708	1 channel	
I/O	Ignition Signal	1 channel	
	Digital Input	4 channels	
	Digital Output	3-channels (max. 300 mA)	
	1-Wire	1 channel	
	Analog Input	1 channel	
	Serial Port	RS232	
External Interfaces	SIM Card Slot	2FF, push-in slot	
	I/O	26 PIN	
	LED Indicator	2 LED indicators: cellular status, GNSS status	
Certification	CE, FCC, IC, PTCRB, E-Mark		

## Ordering Guide

Model	Cellular Type	Region
VT310-FS31	LTE CAT-M: B2 / B4 / B12 / B13	North America
VT310-FS52	GSM/GPRS/EDGE: 900 / 1800MHz	Europe,
	UMTS/HSPA+: B8 / B1	Middle East and Africa,
	LTE: B28 / B20 / B8 / B3 / B1	Asia Pacific
VT310-FQ58	LTE FDD: B1 / B3 / B5 / B8	China, India
	LTE TDD: B34 / B38 / B39 / B40 / B41	
	WCDMA: B1 / B8 GSM: 900 / 1800MHz	
<b>Example</b>	V310-FS52: supports LTE CAT 1, can be used in Europe, Middle East, Africa and Asia Pacific.	

## Accessories

Cable	Picture	Order Code	Specifications
26 PIN All-in-one Test Cable		SCAB000229	The cable has P1 and P2 ends: P1 is 26PIN female, connected to VT310; P2 is open end, which requires a 9-48V adaptor. Suitable for engineering environments and indoor tests.
OBD-II 7 PIN All-in-one Cable		SCAB000231	The cable has P1, P2 and P3 ends: P1 is 26PIN female connected to VT310; P2 is OBD-II male connected to the vehicle; P3 is ignition signal terminal connected to the ignition on/off. Suitable for heavy trucks with OBD-II vehicle diagnostic interfaces, and powers VT310 through interfaces.
OBD-II 26 PIN All-in-one Cable		SCAB000232	This cable has P1, P2, P3 and P4 ends: P1 is 26PIN female connected to VT310; P2 is OBD-II male connected to the vehicle; P3 is open end that includes I/O, RS232-1 and 1-Wire; P4 is ignition signal terminal connected to the ignition on/off. Suitable for heavy trucks with OBD-II vehicle diagnostic interfaces, and powers VT310 through interfaces. Recommended for customers who need DI, DO, AI, 1-Wire devices or vehicle-mounted controllers.

## 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 Encompass Product Partner in Asia-Pacific and Schneider Electric CAPP Technology Partner, InHand Networks defines industrial innovation and reliability.



3900 Jermantown Rd., Suite 150, Fairfax, VA 22030 USA  
 T: +1 (703) 348-2988  
 E: info@inhandnetworks.com  
 www.inhandnetworks.com