HCV5

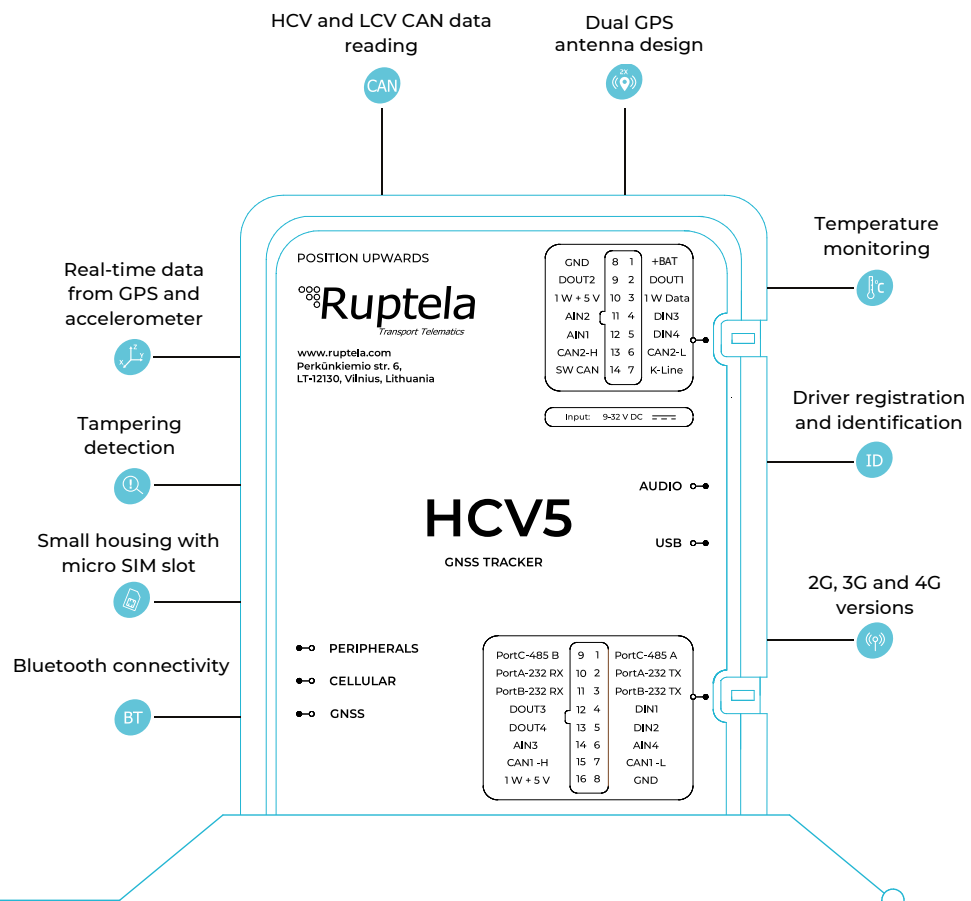**HCV5** is an advanced GPS tracker for trucks, busses, agriculture, and other specialized machinery. It is designed for vehicle tracking and can perform advanced tasks – read on-board computer data (CAN), monitor driver behavior, remotely download tachograph data, manage fuel, etc.

The device is available in variations that use GSM (2G), UMTS (3G) and LTE Cat M1 (4G) networks and Bluetooth for communication.

Applications

- **Real-time monitoring of fleets and cargo**

- **Remote tachograph solution**

- **Fleet efficiency optimization**

- **Driver behavior monitoring**

- **Driver, vehicle and cargo safety and security**

- **Fuel monitoring**

- **Cargo conditions monitoring**

- **Trailer tracking**

- **Customizable with accessories**

HCV and LCV CAN data reading

Dual GPS antenna design

Real-time data from GPS and accelerometer

Tampering detection

Small housing with micro SIM slot

Bluetooth connectivity

Temperature monitoring

Driver registration and identification

2G, 3G and 4G versions

Detailed specifications

Environmental specifications

Temperature	Operating:	-20 to +60 °C
	Storage:	-20 to +45 °C
	Battery charging:	0 to +45 °C
	Battery discharging:	-20 to +60 °C

Relative humidity	5% to 95% Non-condensing

Electrical specifications

Power supply range	9 – 32 V DC

Internal battery	LiPo 3.7 V 1050 mAh

Protections	Battery and a 1-Wire power line short circuit protection
	Reverse polarity protection
	Electrostatic discharge protection on USB, SIM card slot and 1-Wire data line
	Overcurrent protection on a 1-Wire power line and digital outputs
	Overvoltage protection on inputs
	Charging protection

Power consumption @ 12 V DC

Operating (battery fully charged)	Idle mode:	~80 mA
	Active mode (peak):	~130 mA
	Sleep mode:	~6 mA

Connectivity

2G option	Modem: Quectel M95
	Antenna: Internal
	Frequency bands @ 2G (GSM): 850/900/1800/1900 MHz

3G option	Modem: Quectel UG96
	Antenna: Internal
	Frequency bands @ 2G (GSM): 850/900/1800/1900 MHz
	Frequency band @ 3G (UMTS): 800/850/900/1900/2100 MHz

LTE Cat M1 option	Modem: Quectel BG96
	Antenna: Internal
	Frequency bands @ 2G (GSM): 850/900/1800/1900 MHz
	Bands @ 4G (LTE Cat M1): B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B28/B39
	Bands @ NB-IoT (in development): B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B28

GNSS module	Module: U-blox EVA-M8M
	Antenna: Internal and external (available as an additional accessory)
	Positioning systems: GPS, GLONASS, Galileo
	Augmentation systems: QZSS, SBAS (WAAS, GAGAN, EGNOS, MSAS)
	Aided start services: AssistNow Online (A-GPS)
	Tracking sensitivity: -154 to -164 dBm
	Reacquisition sensitivity: -152 to -160 dBm
	Cold start duration: < 30 s
	Aided start: As low as 3 s

Bluetooth module	Module: NRF52832
	Bluetooth version: 5.1 Low energy

Detailed specifications

Interfaces

4 x Digital inputs	Voltage range: Voltage threshold: Voltage threshold when inverted:	0 - 30 V DC 4 V DC 250 mV DC
4 x Analog inputs	Voltage range: Resolution:	0 - 30 V DC 12 bit
4 x Digital outputs	Maximum voltage: 32 V DC Maximum current: 1 A @ 25 °C	
3 x CAN interfaces	High speed CAN interfaces: 2 Single-Wire CAN interfaces: 1 FMS, J1939, HCV CAN, LCV CAN, OBD and tachograph data reading 2 interfaces can be used simultaneously (2 x High speed or 1 x High speed + Single-Wire)	
K-Line interface	OBD parameter and DTC reading Tachograph data reading	
3 x Serial ports	RS232 ports: 2 (DFS, refrigerators, transparent channel, RFID) RS485 ports: 1 (DFS, transparent channel, J1708 data reading)	
1-Wire interface	Power output: 100 mA @ 4.7 V DC iButton DS1990A, DS1971, up to 4 DS18B20 temperature sensors	
User interfaces	Micro USB interface 3 x Indication LEDs 3.5 mm audio interface (not available for the LTE Cat M1 option)	

Features

Internal storage	8 MB
External storage	Up to 32 GB
Accelerometer	Built-in 3-axis (auto-calibrating, impact detection, motion sensing, tilt detection, g-force up to 4 g)

Certifications and ratings

Certifications	E-mark (in progress) CE, FCC, IC, RoHS, WEEE, EAC (in progress)

Physical properties

Dimensions	101 x 74 x 23 mm
Weight	128 ± 1 g
Housing	Plastic

Ordering information

HCV5-2G-GL-BT	HCV5 with global 2G and Bluetooth
HCV5-3G-GL-BT	HCV5 with global 3G and Bluetooth
HCV5-LTM-GL-BT	HCV5 with global LTE Cat M1 and Bluetooth