

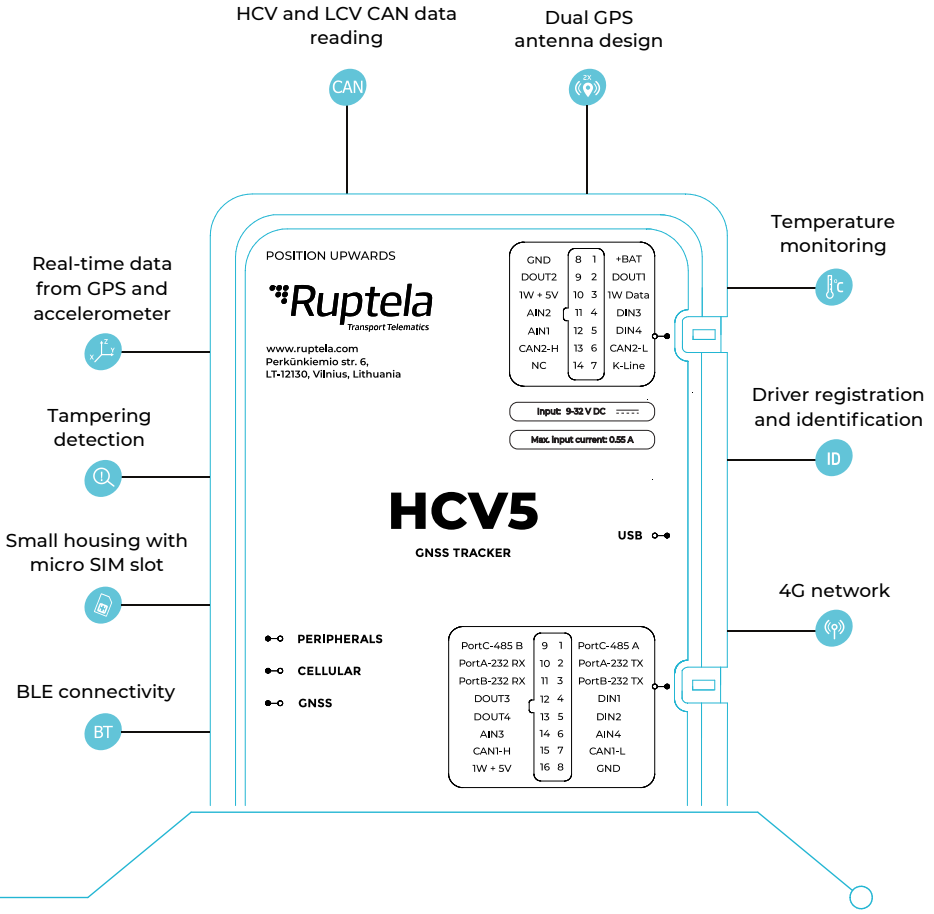
HCV5

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 with the LTE Cat M1/NB-IoT (4G) network and BLE for communication. The NB-IoT network is included in the LTE Cat M1 variation.

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**
- **Accident reconstruction data recording**



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 Without battery: -40 to +80 °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 analog inputs Charging protection 2 amp fuse on the power line

Average power consumption @ 12 V DC

Operating (battery fully charged)	Idle mode: ~80 mA Active mode (peak): ~130 mA Sleep mode: ~6 mA
Sleep mode	All modules disabled: ~6 mA Modem in sleep mode, other modules disabled: ~8 mA Modem enabled, other modules disabled: ~16 mA GNSS module enabled, other modules disabled: ~22mA

Connectivity

LTE Cat M1/NB-IoT option	Modem 1*: Quectel BG95 Antenna: Internal Frequency bands @ 2G (GSM): 850/900/1800/1900 MHz (GPRS multi-slot class 33) Bands @ 4G (LTE Cat M1): B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85 Bands @ 4G (NB-IoT): B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85 Modem 2*: Quectel BG96 Antenna: Internal Frequency bands @ 2G (GSM): 850/900/1800/1900 MHz (GPRS multi-slot class 33) Bands @ 4G (LTE Cat M1/NB-IoT): B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25**/B26/B28/B39** * - depends on component availability, contact your sales manager for more information ** – available upon request
GNSS module	Module: U-blox EVA-M8M Receiver type: 72-channel u-blox M8 engine 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 Navigation update rate: 10 Hz Horizontal position accuracy: 2.5 m (CEP, 50%, 24 hours static, -130 dBm, > 6 SVs)
BLE module	Module: NRF52832 BLE version: 5.1 Low energy

Detailed specifications

Interfaces

4 x Digital inputs	Voltage range: 0 - 30 V DC Voltage threshold: 4 V DC Voltage threshold when inverted: 250 mV DC
4 x Analog inputs	Voltage range: 0 - 30 V DC Resolution: 12 bit
4 x Digital outputs	Maximum voltage: 32 V DC Maximum current: 1 A @ 25 °C
2 x CAN interfaces	High-speed CAN interfaces: 2 FMS, J1939, HCV CAN, LCV CAN, OBD (including proprietary manufacturer data) and tachograph data reading
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: 300 mA @ 4.7 V DC iButton DS1990A, DS1971, DS1982 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/NB-IoT option)

Features

Internal storage	8 MB (max. 39000 records)
External storage	Up to 32 GB (max. 250M records)
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, CE, FCC, IC, RoHS, WEEE, EAC, PTCRB

Physical properties

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

Ordering information

HCV5-LTM-GL-BT	HCV5 with global LTE Cat M1 and BLE

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