



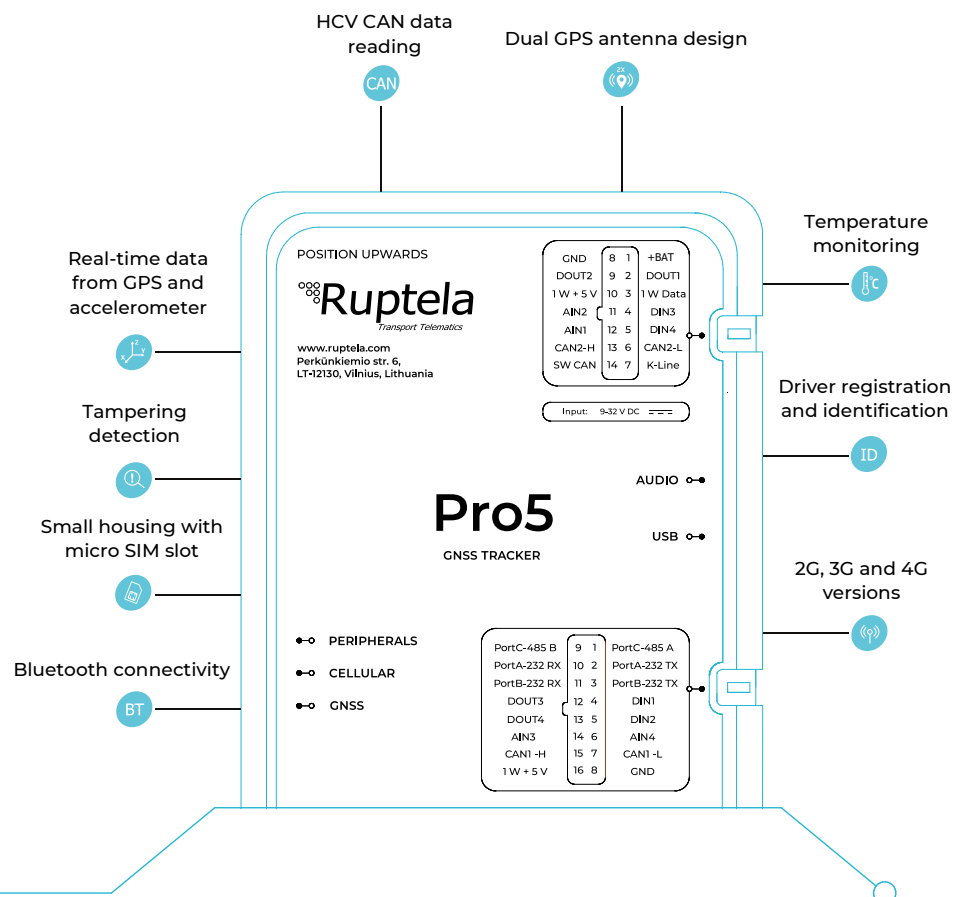
Pro5

Pro5 is an advanced GPS tracker for all types of vehicles – 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, manage fuel, etc.

The device is available in variations that use GSM (2G), UMTS (3G) and LTE Cat M1/NB-IoT (4G) networks and Bluetooth for communication. The NB-IoT network is included into the LTE Cat M1 variation.

Applications

- Basic HCV CAN reading
- HCV fuel monitoring
- Driver behavior monitoring
- Safety and security
- 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
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	

Average power consumption @ 12 V DC

Operating (battery charging)	Normal operation (data sending interval ~15 s) :	~160 mA
	Normal operation (constant link enabled):	~155 mA
	Peak value:	~260 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

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/NB-IoT option	Modem: Quectel BG95 Antenna: Internal Frequency bands @ 2G (GSM): 850/900/1800/1900 MHz Bands @ 4G (LTE Cat M1/NB-IoT): B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25*/B26/B28/B39* * – available upon request
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: 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 data reading
3 x Serial ports	RS232 ports: 2 (DFS, 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
-----------------------	--------------------------------------

Physical properties

Dimensions	102 x 74 x 23 mm
Weight	128 ± 1 g
Housing	Plastic

Ordering information

Pro5-2G-GL-BT	Pro5 with global 2G and Bluetooth
Pro5-2G-GL	Pro5 with global 2G without Bluetooth
Pro5-3G-GL-BT	Pro5 with global 3G and Bluetooth
Pro5-3G-GL	Pro5 with global 3G without Bluetooth
Pro5-LTM-GL-BT	Pro5 with global LTE Cat M1 and Bluetooth
Pro5-LTM-GL	Pro5 with global LTE Cat M1 without Bluetooth

Contact information:

Perkūnkiemio g. 6
LT-12130 Vilnius, Lithuania
Phone: +370 520 451 88
Web: www.ruptela.com

Datasheet v1.8
2021-05-10