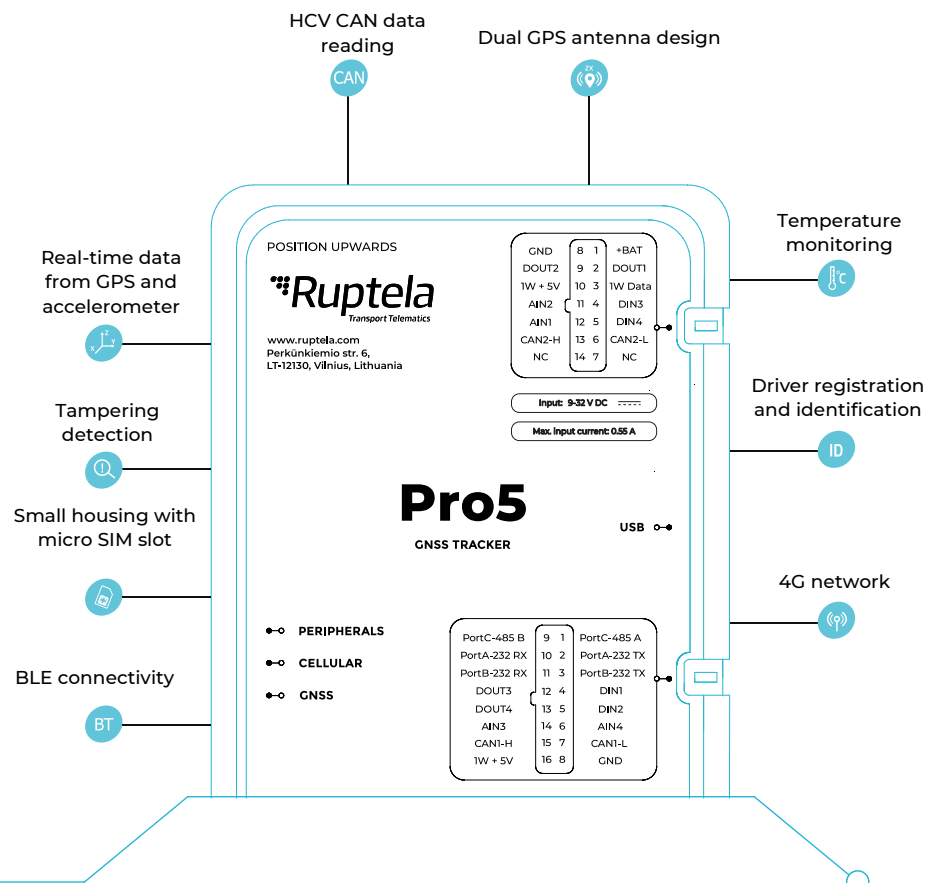![Ruptela Transport Telematics logo]

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 uses GSM (2G) and LTE Cat M1/NB-IoT (4G) networks and BLE for communication.

Applications

- **Basic HCV CAN reading**

- **HCV fuel monitoring**

- **Driver behavior monitoring**

- **Safety and security**

- **Customizable with accessories**

- **Accident reconstruction data recording**

HCV CAN data reading

Dual GPS antenna design

Real-time data from GPS and accelerometer

Tampering detection

Small housing with micro SIM slot

BLE connectivity

Temperature monitoring

Driver registration and identification

4G network

Device labels (detail)

POSITION UPWARDS

www.ruptela.com
Perkūnkiemio str. 6,
LT-12130, Vilnius, Lithuania

GND	8	1	+BAT
DOUT2	9	2	DOUT1
1W + 5V	10	3	1W Data
AIN2	11	4	DIN3
AIN1	12	5	DIN4
CAN2-H	13	6	CAN2-L
NC	14	7	NC

Input: 9-32 V DC

Max. input current: 0.55 A

Pro5

GNSS TRACKER

USB

PERIPHERALS

CELLULAR

GNSS

PortC-485 B	9	1	PortC-485 A
PortA-232 RX	10	2	PortA-232 TX
PortB-232 RX	11	3	PortB-232 TX
DOUT3	12	4	DIN1
DOUT4	13	5	DIN2
AIN3	14	6	AIN4
CAN1-H	15	7	CAN1-L
1W + 5V	16	8	GND

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
	2 amp fuse on the power line

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

LTE Cat M1/NB-IoT option	Modem: Quectel BG95
	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*
	* – 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
	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: 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	
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-LTM-GL-BT	Pro5 with global LTE Cat M1 and BLE