



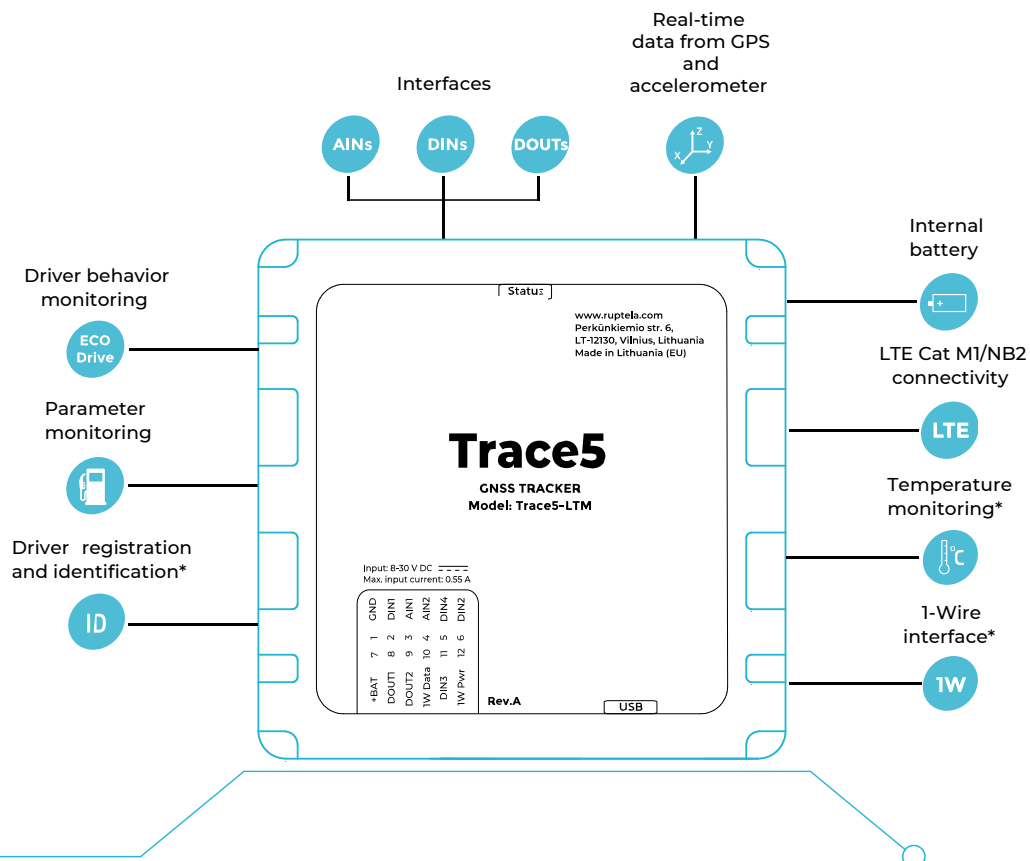
Trace5

Trace5 is a compact GNSS-based Automatic Vehicle Location (AVL) tracker with all essential features for vehicle tracking and fleet management. It acquires its position with a GNSS signal and transfers data to a server via cellular LTE Cat M1, NB-IoT or GSM networks.

This GNSS tracker uses 2G (GSM) and LTE Cat M1/NB2 (4G) connectivity and a premium GNSS module from U-blox.

Applications

- Track & Trace
- Safety & Security
- Green fleet
- Delivery
- Service fleets
- Vehicle leasing and financing
- Car rental



* - not available for pre-revision Trace5-LTM.

Detailed specifications

Trace5-2G	Trace5-LTM	Trace5-LTM-IP67
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Environmental specifications

Temperature	Operating: -30 to +60 °C (-22 to 140 °F) Storage: -40 to +65 °C (-40 to 149 °F) Battery charging: 0 to +45 °C (32 to 113 °F) Battery discharging: -20 to +60 °C (-4 to 140 °F) Battery storage: -20 to +60 °C (-4 to 140 °F)
Relative humidity	5% to 95% Non-condensing

Electrical specifications

Power supply range	8 – 30 V DC	
Internal battery	LiPo 3.7 V 190 mAh	LiPo 3.7 V 190 mAh or LiPo 3.7 V 3100 mAh (TT version)
Protections	Battery short circuit protection Reverse polarity protection Electrostatic discharge protection on USB Charging protection 2 A fuse on the power line	

Average power consumption @ 12 V DC

Operating	Idle mode (battery fully charged): 33 mA* Active mode (peak): ~230 mA Sleep mode (lowest): ~3.5 mA** * – configuration dependent value ** – 5 mA for pre-revision Trace5-LTM
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Connectivity

Cellular	Modem: Quectel M95 Modem: Quectel BG95-M3 Antenna: Internal (Quad-band) Antenna: Internal Frequency band @ GSM: Bands (Cat M1): 850/900/1800/1900 MHz B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25*/B26/B27*/B28/ (GPRS multi-slot class 12) B66*/B85* Bands (Cat NB2): B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25*/B28/B66*/ B71*/B85* Bands (GSM): 850/900/1800/1900 MHz (GPRS multi-slot class 33) * – available upon request
GNSS module	Module: u-blox M8/M10 Antenna: Internal Positioning systems: GPS, GLONASS, Galileo Augmentation systems: QZSS, SBAS (WAAS, GAGAN, EGNOS, MSAS) Aided start services: AssistNow Online (A-GPS) Tracking sensitivity: -163 to -164 dBm (M8) / -167 to -168 dBm (M10) Reacquisition sensitivity: -156 to -160 dBm (M8) / -160 dBm (M10) Cold start duration: < 30 s Aided start: As low as 3 s (M8) / As low as 1 s (M10) Navigation update rate: 10 Hz Horizontal position accuracy: 2.5 m (CEP, 50%, 24 hours static, -130 dBm, > 6 SVs) (M8) / 1.5 m (CEP, 50%, 24 hours static, -130 dBm, >6 SVs for each GNSS system) (M10)

Detailed specifications

Trace5-2G

Trace5-LTM

Trace5-LTM-IP67

Interfaces

4 x Digital inputs (2 Voltage range: 0 - 30 V DC invertible)¹ Voltage threshold: 4 V DC

Voltage threshold when inverted: 250 mV DC

2 x Analog inputs² Voltage range: 0 - 30 V DC

Resolution: 12 bit

2 x Digital outputs Maximum voltage: 32 V DC

Maximum current: 1 A

1-Wire interface³ Power output: 0 mA @ 4.87 V DC

Power output: 100 mA @ 4.65 V DC

Maximum cable capacitance: 4 nF

User interfaces Mini USB interface

Indication LED

¹ – 1 x digital input (invertible) for pre-revision Trace5-LTM.

² – 1 x analog input for pre-revision Trace5-LTM.

³ – not available for pre-revision Trace5-LTM.

Features

SIM card Micro SIM

Device management Monitor, manage, upgrade firmware, configure and troubleshoot devices remotely

Accelerometer Built-in 3-axis (auto-calibrating, impact detection, motion sensing, tilt detection, g-force up to 16 g)

Certifications and ratings

Certifications CE, E-Mark, CITEC, PTCRB, FCC, IC, IP67 (IP67 versions only)

Physical properties

Dimensions 65 x 61 x 22 mm (2.54 x 2.40 x 0.87")

95 x 77 x 29 mm (3.74 x 3.03 x 1.14")

Weight 70 g (2.47 oz)

185 g (6.52 oz) or
242 g (8.53 oz) (TT version)
Plastic (PC), IP67 certified.

Housing Plastic (PC + ABS)

Ordering information

Trace5-2G Trace5 with 2G network support

Trace5-LTM Trace5 with global LTE Cat M1/NB2 and 2G fallback network support

Trace5-LTM-IP67 Trace5 with global LTE Cat M1/NB2 and 2G fallback network support, IP67 housing

Trace5-LTM-IP67 (TT) Trace5 with global LTE Cat M1/NB2 and 2G fallback network support, IP67 housing, big battery

Trace5-LTM-IP67 (Battery mounted) Trace5 with global LTE Cat M1/NB2 and 2G fallback network support, IP67 housing, two wire (power +/-) harness with fork type terminals and double-sided adhesive tape