



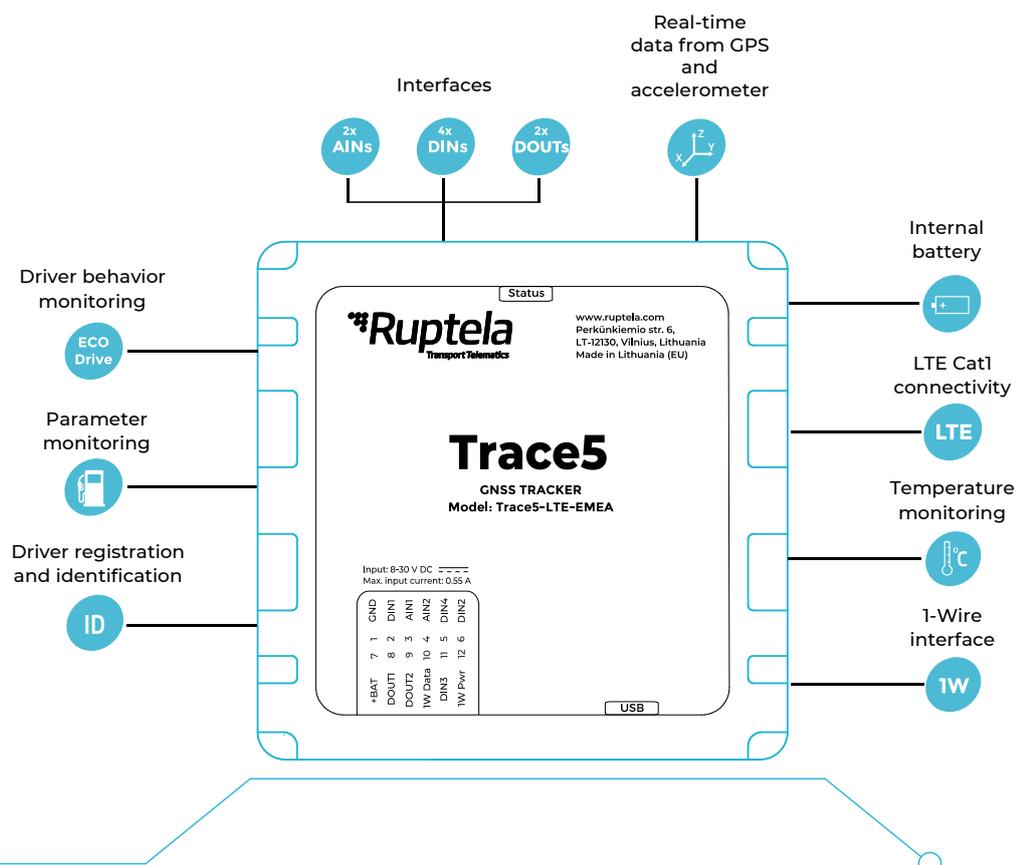
## Trace5

**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 Cat1 or GSM networks.

This GNSS tracker uses GSM (2G) and LTE Cat1 (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



# Detailed specifications

Trace5-LTE-EMEA	Trace5-LTE-EMEA-IP67	Trace5-LTE-LA	Trace5-LTE-LA-IP67
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## Environmental specifications

<b>Temperature</b>	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)
<b>Relative humidity</b>	5% to 95% Non-condensing	

## Electrical specifications

<b>Power supply range</b>	8 – 30 V DC
<b>Internal battery</b>	LiPo 3.7 V 190 mAh
<b>Protections</b>	Battery short circuit protection Reverse polarity protection Electrostatic discharge protection on USB Charging protection

## Average power consumption @ 12 V DC

<b>Operating</b>	Idle mode (battery fully charged):	33 mA*
	Active mode (peak):	~230 mA
	Sleep mode (lowest):	~3.5 mA
* – configuration dependent value		

## Connectivity

<b>Cellular</b>	Modem: Fibocom MC610-EU Antenna: Internal Bands (LTE-FDD): B1/3/7/8/20/28 Bands (GSM): 900/1800 MHz (GPRS multi-slot class 12)	Modem: Fibocom MC610-LA Antenna: Internal Bands (LTE-FDD): B1/2/3/4/5/7/8/28/66 Bands (GSM): 850/900/1800/1900 MHz (GPRS multi-slot class 12)
<b>GNSS module</b>	Module: U-blox M8 or 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: -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)	

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### Interfaces

<b>4 x Digital inputs (2 invertible)</b>	Voltage range: 0 - 30 V DC Voltage threshold: 4 V DC Voltage threshold when inverted: 250 mV DC
<b>2 x Analog inputs</b>	Voltage range: 0 - 30 V DC Resolution: 12 bit
<b>2 x Digital outputs</b>	Maximum voltage: 32 V DC Maximum current: 1 A
<b>1-Wire interface</b>	Power output: 0 mA @ 4.87 V DC Power output: 100 mA @ 4.65 V DC Maximum cable capacitance: 4 nF
<b>User interfaces</b>	Mini USB interface Indication LED

### Features

<b>SIM card</b>	Nano SIM
<b>Device management</b>	Monitor, manage, upgrade firmware, configure and troubleshoot devices remotely
<b>Accelerometer</b>	Built-in 3-axis (auto-calibrating, impact detection, motion sensing, tilt detection, g-force up to 4 g)

### Certifications and ratings

<b>Certifications</b>	CE, E-Mark, CITE*, IP67 (IP67 versions only) * – pending	FCC, IP67 (IP67 versions only)
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### Physical properties

<b>Dimensions</b>	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")	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")
<b>Weight</b>	70 g (2.47 oz)	185 g (6.52 oz)	70 g (2.47 oz)	185 g (6.52 oz)
<b>Housing</b>	Plastic (PC + ABS)	Plastic (PC), IP67 certified.	Plastic (PC + ABS)	Plastic (PC), IP67 certified.

## Ordering information

<b>Trace5-LTE-EMEA</b>	Trace5 with LTE Cat1 and 2G fallback network support for the EMEA region
<b>Trace5-LTE-EMEA-IP67</b>	Trace5 with LTE Cat1 and 2G fallback network support for the EMEA region, IP67 housing
<b>Trace5-LTE-LA</b>	Trace5 with LTE Cat1 and 2G fallback network support for the LA region
<b>Trace5-LTE-LA-IP67</b>	Trace5 with LTE Cat1 and 2G fallback network support for the LA region, IP67 housing

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Datasheet v1.2  
2022-03-30