



Telemetry / tracking module for mobile devices optimized for LEV's (light electric vehicles).

## Features

- › GPS
- › 2G
- › TTL-UART
- › Battery supported

## Overview

The piTrack-IoT meets the requirements of modern IoT solutions. It can be used both as a data interface and as a data logger for mobile devices such as e-scooters, e-bikes or electric scooters.

The gateway enables location-independent administrative management of the vehicles. It records the position and operating data and forwards them directly to a higher-level system (e.g. computer, cloud or app).

The devices equipped with the piTrack-IoT form an effective, highly modern sensor network.

## Functions

- › Location
- › Route recording / route control
- › Theft protection
- › Geofence (leaving and reaching defined areas)
- › Sharing
- › Device control
- › Device diagnostics
- › location-independent software updates
- › Remote control

- › Telemetry / remote measurement
- › Pressure, voltage, temperature, current, humidity detection
- › Operating hours / runtime recording
- › Engine counting

## Use cases

The piTrack-IoT is the ideal solution wherever monitoring and remote parameterization of mobile devices is necessary and desired. Reading out the information about the status of the batteries in light electric vehicles (LEV) is easy to control from the backend.

GPS tracking offers a wide range of options for checking and monitoring the equipped e-scooters. Not only can they be located, routes can also be traced. In addition, the gateway can send warnings as soon as an e-scooter leaves a previously defined area.

The tracking offers the user effective protection against theft, as well as an overview of the movement of the vehicles.

The gateway not only records GPS data, but can also be used in other areas.

In addition to the position, values such as temperature, pressure, humidity and voltage can also be recorded and evaluated.

The Bluetooth interface enables direct communication with the smartphone and a lock. With confirmation on the smartphone, locks can be conveniently closed and opened, and e-scooters can be rented.



Datasheet

## piTrack-IoT



## Technical specifications

### Basics

Supply voltage	6.5-55V DC / dynamo voltage 6V
Battery pack	rechargeable backup battery (Li-Ion)
Cooling	passive and fanless cooling
Antennas	GSM (external) GPS antenna (internal / external) Bluetooth antenna (internal)
Temperature range	Charge the battery between 0 and 45°C
Dimensions	79 mm x 50 mm x 13,5 mm (T/B/H)

### Interfaces

Bluetooth	5.0 or 4.2 Bluetooth Low Energy
Data radio	2G, LTE
Serial	TTL-UART
Programming interface	JTAG

### Other properties

Sensors	Inertial measuring unit with 3-axis acceleration sensor 16 bit, $\pm 16$ g 3-axis gyroscope 16 bit, 2000 ° / s
Storage	20 kB RAM / 128 kB Flash
RTC	Real time clock
IO interfaces	1 x input (open drain)
SIM	customer-specific selectable (embedded SIM chip or nano SIM card)
Signal transmitter	acoustic (buzzer)