



IoT sensor for mobile devices for data acquisition and signal transmission.

Overview

The piSmart-IoT-Sensor is used as a measuring device for a wide variety of data and also serves as a signal output device.

It records the operating data and forwards it directly to a connected gateway / mobile phone via Bluetooth. Together, the sensors and the gateway form an effective and flexible sensor network.

It can also be used to output signals linked to previously defined events and times.

Functions

- › Signal output by sound or lights (LED)
- › Telemetry / remote measurement
- › Temperature detection
- › Rotation detection
- › Magnetic field detection
- › Acceleration detection
- › Operating hours / runtime recording

Use cases

The piSmart-IoT-Sensor offers a wide range of applications: telemetry / remote measurement, temperature detection, rotation detection, magnetic field detection, acceleration detection or operating hours / runtime detection.

The Bluetooth interface not only provides a connection to a gateway, but also direct communication with a smartphone.



Technical specifications

Basics

Supply voltage	3V primary cell: CR2477, 1000 mAh optional: Use of a lithium battery, re-chargeable via USB (4.5-4.5V)
Battery pack	3V Primärzelle: CR2477, 1000 mAh optional: Verwendung eines Lithium Akkus aufladbar per USB(4,5-4,5V)
Cooling	Passive and fanless cooling
Antennas	Bluetooth antenna (internal)
Temperature range	Charge the battery between 0 and 45°C
Dimensions	79mm x 50mm x 13,5 mm (D/W/H)

Interfaces

Bluetooth	5.0 or 4.2 Bluetooth Low Energy
Programming interface	JTAG

Other properties

Sensors	9 axes
Digital resolution:	Acceleration (A): 0.98 mg Gyroscope (G): 0.004 ° / s Magnetometer: (M): 0.3 μT
Measuring ranges (programmable):	(A): ±2g, ±4g, ±8g, ±16 g (G): ±125°/s, ±250°/s, ±500°/s, ±1000°/s, ±2000°/s (M): ±1300μT (x,y), ±2500μT (z)
Sensitivity (calibrated):	(A): ±2g: 1024LSB/g ±4g: 512LSB/g ±8g: 256LSB/g ±16g: 128LSB/g (G): ±125°/s: 262.4 LSB/°/s ±250°/s: 131.2 LSB/°/s ±500°/s: 65.6 LSB/°/s ±1000°/s: 32.8 LSB/°/s ±2000°/s: 16.4 LSB/°/s (M): 3.3 LSB/μT
Storage	275kB Flash, 28kB SRAM
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) dBA