

# movCTX-N Vehicle Motion Monitor

## AUTONOMOUS MOTION AND VEHICLE DYNAMICS MONITORING FOR VEHICLES

**movCTX-N records unusual motion and acceleration events directly in the vehicle.**

The battery-powered sensor continuously monitors acceleration and rotational movement and responds autonomously as soon as a threshold is exceeded. In learning mode, thresholds can be derived automatically from normal vehicle operation using NFC. The time, measured values and contextual information are transmitted immediately via LoRaWAN. When combined with a Parametric LoRa gateway, each event can also be linked to position data.



1

### MONITOR



The sensor continuously monitors acceleration while consuming minimal energy

2

### DETECT



When a threshold is exceeded, movCTX-N detects the event autonomously

3

### EVALUATE



Contextual data and statistics are recorded and processed locally

4

### REPORT



The event is transmitted to the central platform as a compact LoRaWAN message

### TECHNICAL FEATURES

- Measurement triggering based on a three-axis acceleration threshold
- Measurement of acceleration up to  $\pm 4$  g on three axes during an event
- Measurement of roll, pitch and yaw movements at a single measurement point
- Event timestamping
- Battery-powered for autonomous operation
- Simple NFC-based learning
- LoRaWAN communication
- Position data when used with a Parametric RGW gateway

### TYPICAL APPLICATIONS

- Ride comfort measurement
- Track condition assessment
- Detection of hard braking or unusually rapid acceleration
- Driving style analysis
- Detection of shunting and coupling impacts
- Detection of unauthorised vehicle usage
- Rollover and tilt detection



Receive technical support from our engineers for consulting and integration

### YOUR BENEFITS

**Events instead of a flood of data**  
movCTX reports only relevant information, reducing communication requirements and energy consumption.

**Autonomous and battery-powered**  
No local power supply required.

**Easy to retrofit**  
Ideal for existing vehicles, switches, track systems, sleepers and other mechanically loaded components.



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