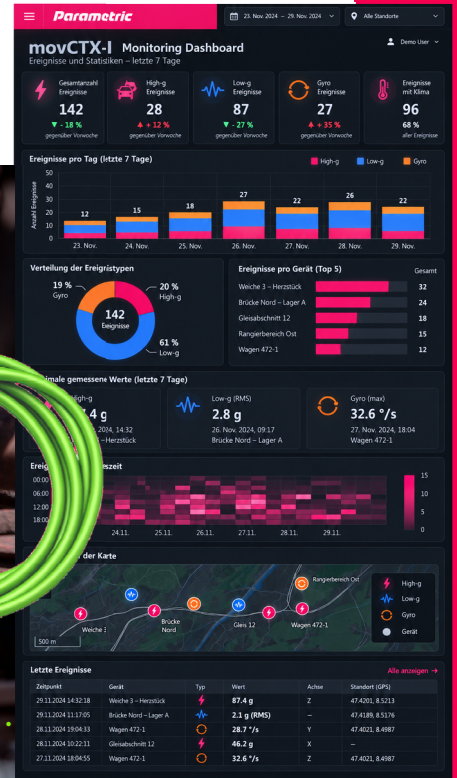


movCTX-I Movement Monitoring Node

MOVEMENT AND IMPACT MONITORING FOR RAIL INFRASTRUCTURE AND ROADS

movCTX-I records unusual mechanical movements and loads affecting infrastructure when a vehicle passes over it. The battery-powered sensor continuously monitors acceleration and shock events as well as torsion, and responds autonomously as soon as a passing vehicle is detected. The time, measured values and contextual information are transmitted immediately via LoRaWAN. When combined with a Parametric LoRaWAN gateway, the event can also be linked to GNSS position data.



1

MONITOR



The sensor continuously monitors acceleration while consuming minimal energy

2

DETECT



When a threshold is exceeded, movCTX-I 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

- Three-axis peak-impact measurement up to 64 g
- Three-axis acceleration and angular-rate measurements
- Movement estimation for trend analysis
- Precise event timestamping
- Battery-powered for autonomous operation
- Simple calibration using an NFC card
- LoRaWAN communication
- Optionally available as movCTX-IC with an environmental sensor

TYPICAL APPLICATIONS

- Bridges
- Bridge bearings
- Railway switches
- Rail joints and insulated rail joints
- Substructure transitions
- Construction sites
- Settlement monitoring



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.



Contact us for more information:
sales@parametric.ch