

Product Overview Tokencube Tracker

Continuous condition monitoring of machinery transportation using autonomous radio sensors.
Detection of mechanical shock, tilt angles, occurring forces, humidity and temperature.
Worldwide geo-location. Designed for multimodal transport via ship, railway or truck.



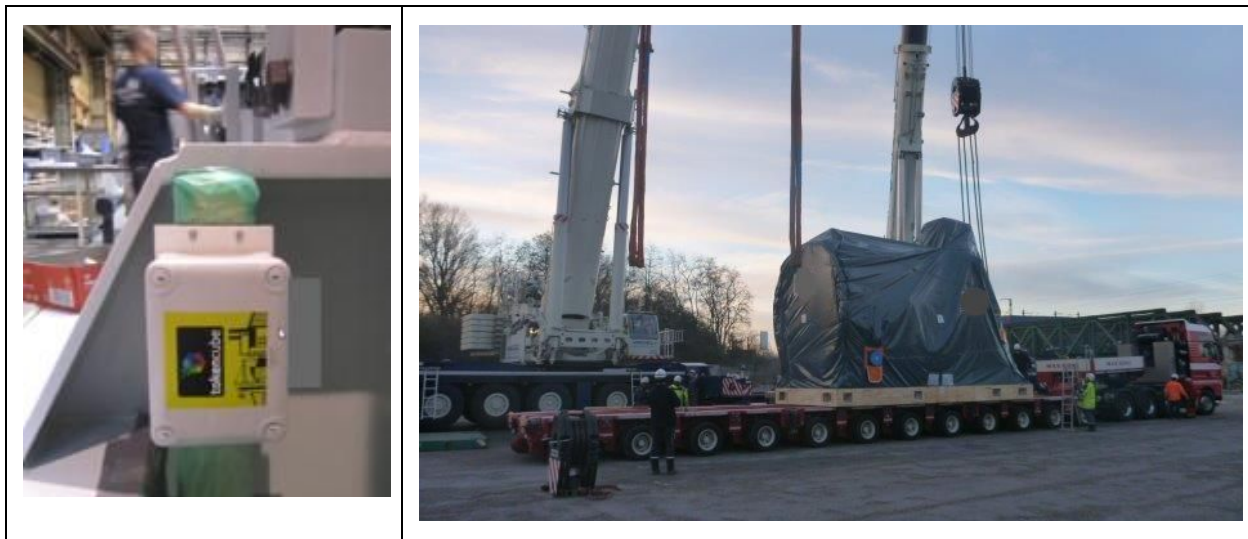
Use Case: Shipment of Machinery

Usually after production and end testing industrial machinery is dissolved and transported in numerous wooden containers by truck, ship and train to overseas construction sites. Often these are temporarily stored at the construction site for several months before construction start. The complex and time-consuming transport in many cases takes up to 2 months. The condition of the goods is unknown until manual acceptance. If particular damages are identified at the beginning of installation only, a lot of time has passed by and subsequently the project schedule is late. Cost can increase significantly.

The Solution: **Tokencube Tracker** Transport Monitoring System

The "**Tokencube Tracker**" transport monitoring system measures fully automatically occurring forces such as mechanical shock and forces, tilt and tilt angles, as well as climate parameters (temperature, barometric pressure, humidity) over the entire transport, as well as the entire storage period until the start of installation. In a few simple steps autonomous radio sensors and data loggers can be mounted on the packages and machine parts.

This is the starting point of continuous transport condition monitoring. The data loggers transmit data to a central backend. Instantly all measured data are documented. Reports for specific time windows can be downloaded from the sensor platform at any time. Alarms are reported immediately. At times without wireless connection data is logged and uploaded when the network is available.



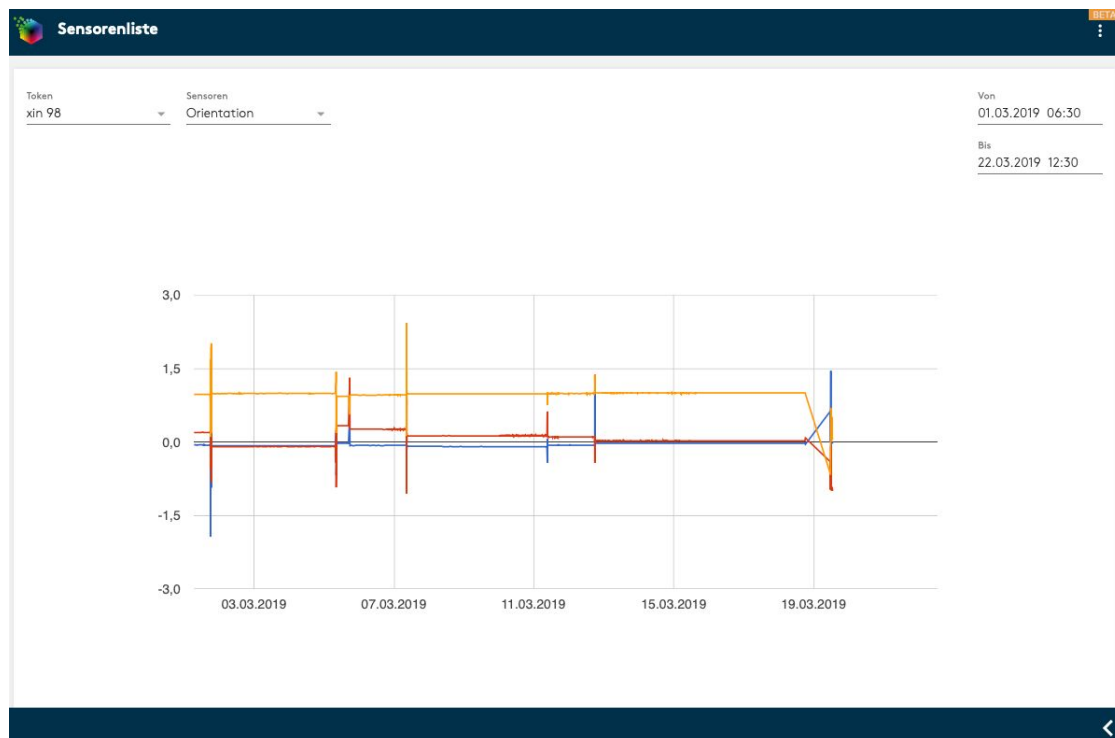
In addition to automatic recording, individual sensors can also be read directly via smartphone and individual reports can be generated if required.

Applications

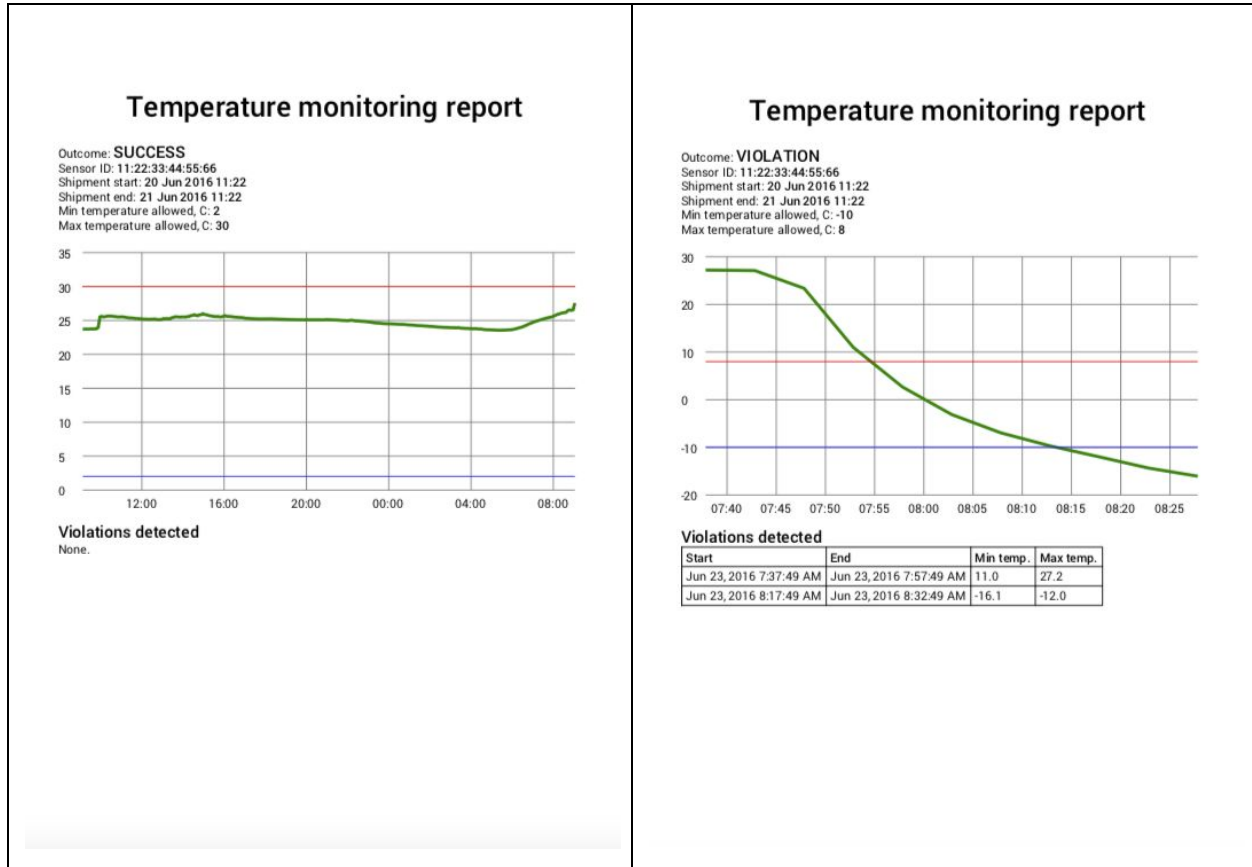
- Transport monitoring of machinery by sea, rail and road
- Temperature and climate monitoring of sea containers. Mold monitoring.
- Monitoring of valuable art transports by truck up to the place of installation
- End-to-end transport monitoring of products from end production to on-site assembly
- Monitoring of pharmaceutical transports
- Monitoring of water damage to structures

Data View Examples

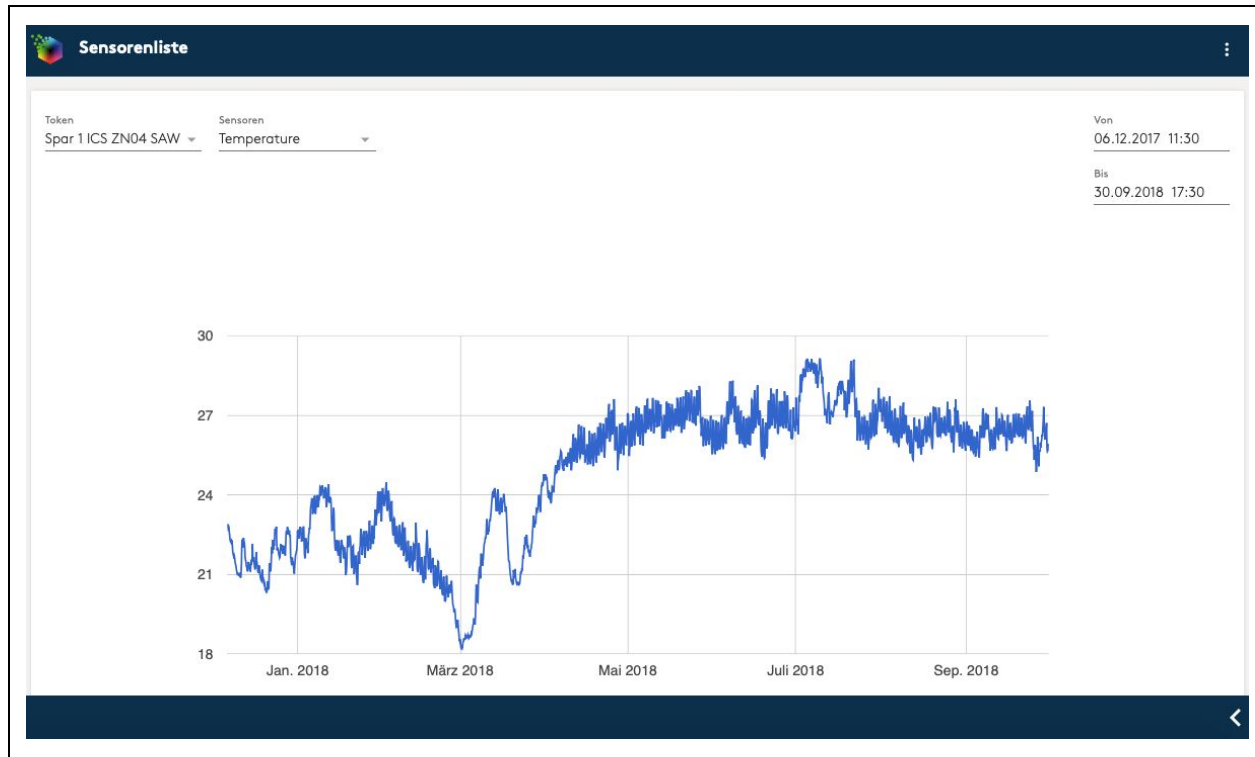
Example: Mechanical shock applied to a package



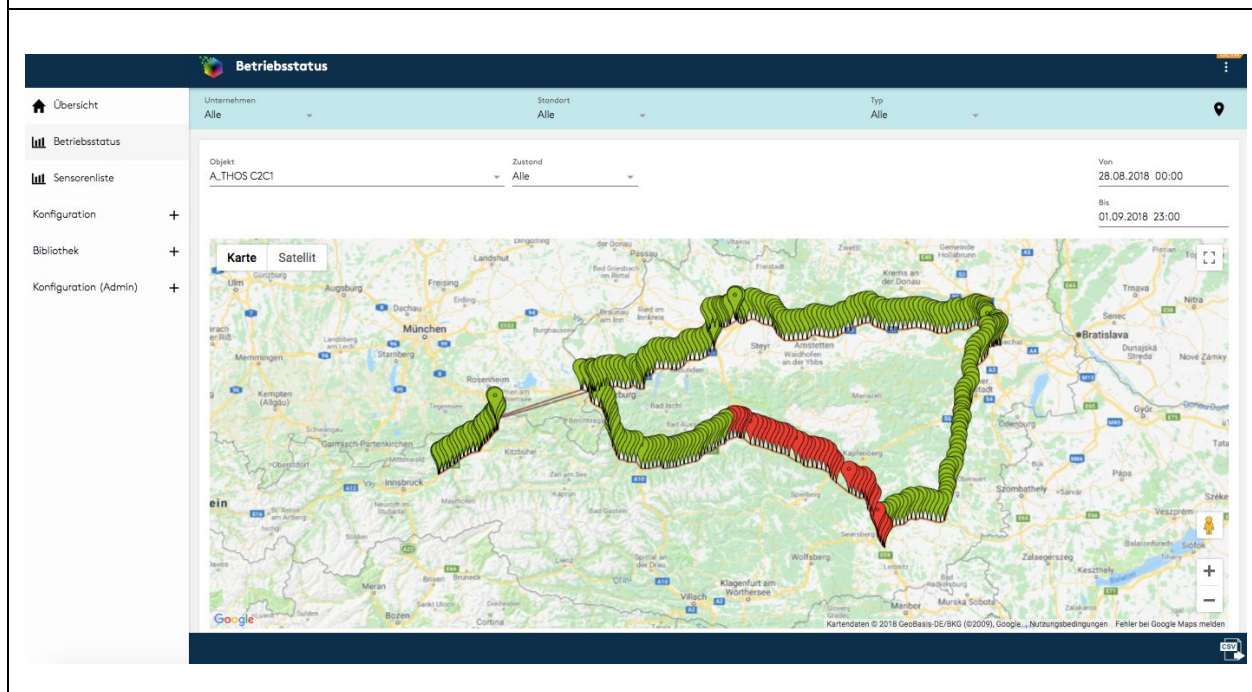
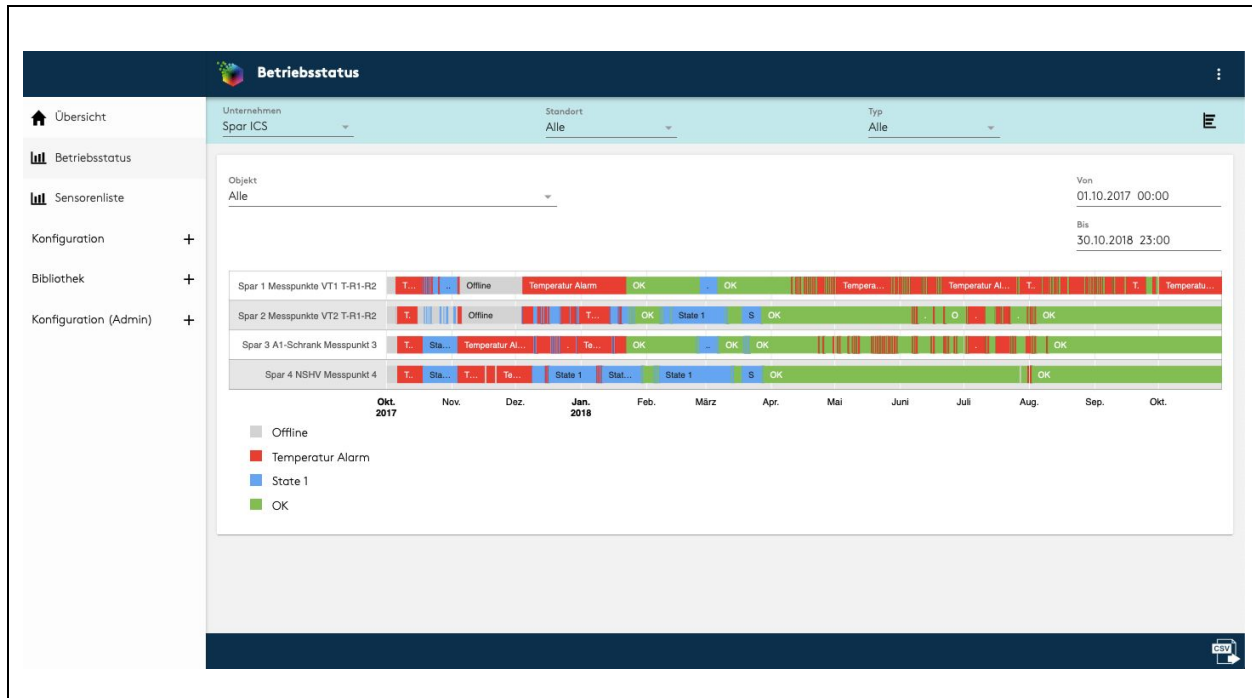
Example pdf-monitoring report



Example data view temperature



Example data view of alarm conditions of 4 measurement points

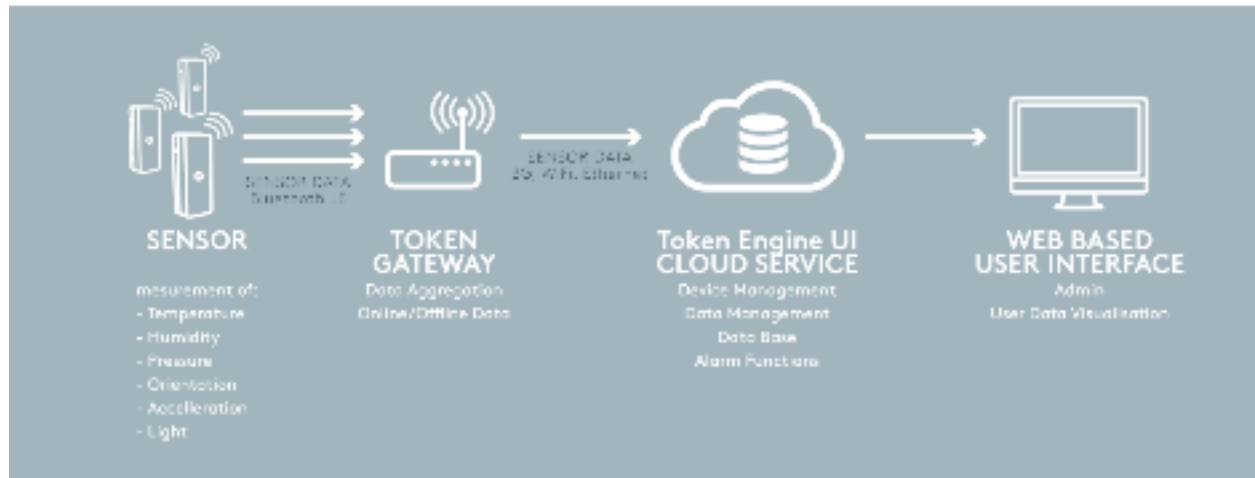


Technical Data

General Information

The **sit** Sensor Track & Trace System consists of the following components

- **Tokencube** Sensors: battery-powered wireless sensors to monitor parameters such as:
 - Movements, vibrations, rotations, orientation, bumps,
 - Angle detector, radio contacts, counters
 - Temperature, humidity, barometric pressure, carbon dioxide concentration,
 - Proximity (PIR), brightness, opening state of a door (door contact),
- **Tokencube** Gateways: Data concentrators for collecting the data from the wireless sensors and forwarding them to the backend.
- **Tokencube** Central Server for
 - Documentation
 - Data collection, data management (big data)
 - Data analysis (statistics)
 - Device management
- Web-based user interface (PC, smartphone, tablet)
 - Login for different user groups with different access rights
 - Login for administration and configuration



Sensors

- Housing in different sizes according to application (button size, matchbox, cigarette box)
- Housing protection class IP54-IP68
- Operating temperature: -15 ° C to 60 ° C
- Battery types CR2477N, AAA, AA, CR2032, mono cell depending on version and application

Examples of Sensors and Gateways



Contact

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