

SEQUANTA

Mobile assets

Disruptive solutions

In the era of IIoT the deployment of an always growing number of **connected things and equipment** leads to an **excessive volume of data**. Yet, among this mass of data, those that generate crucial information must be easily identified for field fast-track actions and informed **decision-making**.

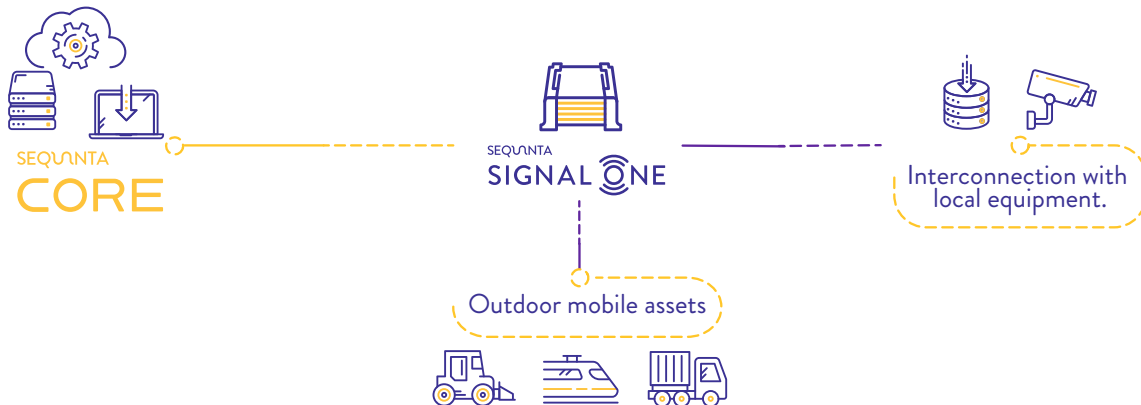
Sending all the data to the cloud does not always make sense in terms of both bandwidth and response time. Moreover, it goes against many use cases requiring the ability to respond to strict **energy-efficiency constraints** where the **real time** is the crux of the matter.

SEQUANTA solves the dilemma with **unique wireless ultra low-power computing solutions at the edge**.



EDGE COMPUTING -DECISIVE DATA

Many industrial contexts impose **harsh conditions**, especially when it comes with mobile assets and equipment (rolling stock, mobile machines, vehicles...). They often require real-time data and do not offer easy access to power supply. With wireless, **ultra low-power and low latency capabilities** **SEQUANTA solutions** take on their full value.



HARSH ENVIRONMENTS - DEMANDING APPLICATIONS

SEQUANTA simplifies the access to decisive data in **complex situations** enabling to optimize the management of mobile assets.

Applications

- **Detection of abnormalities:** identify, geolocate and characterize extraordinary events, conditionally trigger local control / command equipment
- **Monitoring of operating conditions:** capture and collect data closest to the critical elements to monitor vibrations, shocks, acceleration, pitch, roll, noise, temperature...

Industries

- Rail transport
- Public transport
- Ropeways
- Public works, mines & quarries
- Defense & civil security

■ SEQUANTA SIGNAL ONE - THE BOX THAT CHANGES THE GAME



SEQUANTA
SIGNAL ONE

Data capture in complex and harsh environments. Combined with the **SEQUANTA Core platform** and integrated into a **customized solution** thanks to the expertise of the **SEQUANTA teams**, **SEQUANTA Signal One** is the cornerstone of a complete offering for maximizing the use and optimizing the **maintenance of mobile assets**.

Technologies

- ARM Cortex-M3 ultra low-power microcontroller with a storage capacity of 128 Mo
- Set of on-board MEMS sensors (gyro, accelero, T°, GPS)
- Power management facility to control devices
- Dry contact interface and RS232 interfaces
- Wireless 2.4 GHz & 868 MHz chips
- Powered by DC voltage or Lithium-ion battery

Features

- Data acquisition from the embedded MEMS sensors and from wireless sensors, local processing and geolocation
- Location-based events consolidation
- Actuation of local controllers, based on event or location (ex: geofencing)
- Intermittent connectivity management
- Self-powered and autonomous system (Solar powered) or with long life-cycle (embedded batteries)

■ SEQUANTA CORE - THE APPLICATION FOR INFORMED DECISIONS



SEQUANTA
CORE

SEQUANTA Core is a non-stop storage and consolidation of data pre-processed by SEQUANTA Signal One. Available as a SaaS application or hosted within customer IT infrastructure or embedded on mobile assets.

Features

- Configuration and monitoring of the deployed systems
- Storage of data and events
- Data processing engine: spatial analysis, classification and segmentation
- Dashboards and reports generation
- Spatiotemporal data visualization
- Configuration of geofencing rules
- Intermittent connectivity management

■ CUTTING EDGE SOLUTIONS

Deployed on the field **SEQUANTA solutions** capture and **process data** best suited to change the game to:

- Build knowledge and enable agile operations,
- Characterize data, take decisions and trigger actions,
- Deploy everywhere with easy retrofitting on existing assets,
- Offer low power processing capabilities on the field.

■ EASY OPERATIONS

THALES



EUROMEDIA

Inria
INVENTEURS DU MONDE NUMÉRIQUE



acoem



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