

# ThingPark IoT Solutions



## Vibration Monitoring for Rotating Machinery Solution

The turnkey IoT solution to prevent unexpected breakdowns.

The possibility of **machine failure shutting down a production line** ranks high on most manufacturing managers' list of worries. They are anxious about their critical machines being prone to downtime without them being alerted upfront and **unnecessary overconsumption of energy** because they lack insights into their devices. With the ability to anticipate any significant failure event, **you'll improve the effectiveness of your maintenance schedule, reduce workplace accidents, and achieve greater uptime.** Advantech IoT starter kit provides you with the hardware and software to assess a predictive maintenance solution.

**ADVANTECH**



**Actility**

## What are the challenges?



Industrial manufacturers struggle to understand equipment health and its data patterns over time, which by consequence is keeping maintenance costs high with no possibility to prevent machines downtimes before they happen.



On-site industrial managers are frustrated by the time they need to invest in health monitoring of their assets in a manual and often inefficient way.

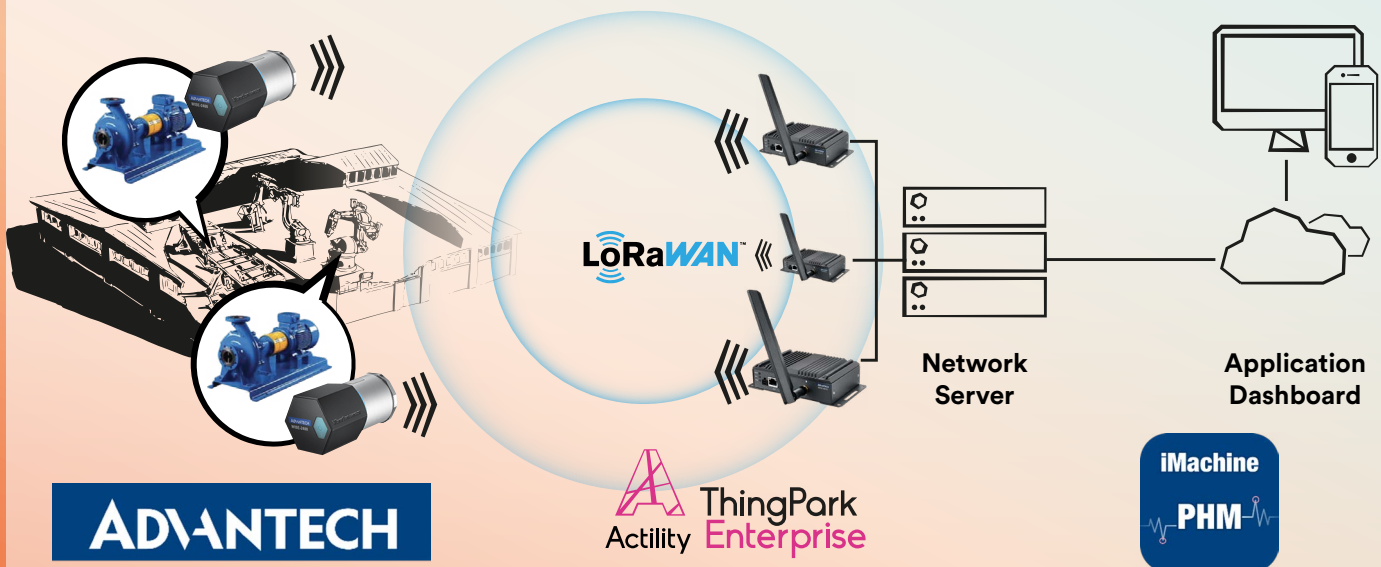


Industrial manufacturers are heavily dependent on external services and outdated cloud software to maintain their equipment, which lowers productivity.



Factory operators are overpaying for expensive complex legacy non-battery-based sensor equipment and tools.

## AI-based Intelligent Predictive Maintenance Solution for Rotating Machinery Solution:



### WISE 2410 IoT sensor by Advantech



LoRaWAN® wireless condition and monitoring sensor integrated with an ARM Cortex-M4 processor, LoRa transceiver, 3-axis accelerometer, and temperature sensor. It follows ISO-10816 inspection standard, suitable for most kinds of rotating facilities in factory.

### Advantech WISE-6610 a high-performance LoRaWAN gateway



Offers reliable connectivity for industrial environments. It supports the LoRaWAN protocol for building LoRaWAN private and public networks, provides rich features for edge intelligence systems, and its support for VPN tunneling with various protocols ensures safe communications. **Powered by Activity.**  
*\*Alternative SaaS solution can also be used.*

### Advantech - iMachine/ PHM. Smart machine management booster

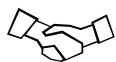


Application that assists the maintenance crew, handles the historical, real-time, and future machine data. With the predictive maintenance solution, you can smartly arrange the human power and resources, realizing smart machine management.





## Key features:



**No disturbance:** sensors conduct non-interference monitoring in the background, collect operational data, and transmit the collected information through the cloud or designated servers for the appropriate team to monitor the equipment conditions.



**Interoperability:** Interoperable solution: a pre-integrated solution, reduced unnecessary expensive integration costs.

ISO

**Standardized solution:** Follows the common inspection standard ISO-10816, enabling customers to avoid specific proprietary custom developed solutions and to learn a new inspection method or algorithm. It follows a mounting standard so customers can easily replace traditional sensors.



**Ease of use:** Available as on-premises & cloud-based application. Manage your installation from one single application dashboard with easy accessibility, usability, management & control.



**Low-Power:** Leverage LoRaWAN® technology, optimize assets energy consumption and lower your operational costs

## Use cases:

This end-to-end IoT Solution is designed for industrial end customers who requires zero infra, zero cabling, and zero configuration. It allows to analyze data from **sensors measuring vibrations frequencies** of machines and equipment in order to **detect anomalous behavior**, therefore enabling industrial end customers to **decrease machines shutdowns and work accidents while increasing performance and safety**. It alerts you in real-time to the operating status of your isolated machines such as:



Water pump

Blower ventilation motor

Industrial compressor

Conveyor motor

## Build your IoT Solution with us!

Get your starter kit on ThingPark Market, or contact Activity to learn more

