

RM-IoT-B

Predictive Maintenance Solution
Rotor Online Monitoring

LoRa LPWAN



- Rotor Quality
- Vibration Value Threshold
- Temp. Monitor
- AI Degradation Inference

In this competitive world, cutting costs is crucial and mandatory in terms of company benefits.

A predictive maintenance solution is used to detect early fault for your time-sensitive correction.

No matter what types of Power Generation Equipment you have, **Gas Turbine, Hydro Turbine, Steam Turbine**, etc. Any vibration surges can't fool ISO regulations and our proprietary algorithms. We avoid potential faults to turn into crises. All measurements can be trended for a long-period analysis.

Trouble-free operation and a safe working environment both rely on online automatic vibration analysis, compliant with ISO 20816/ 10816!

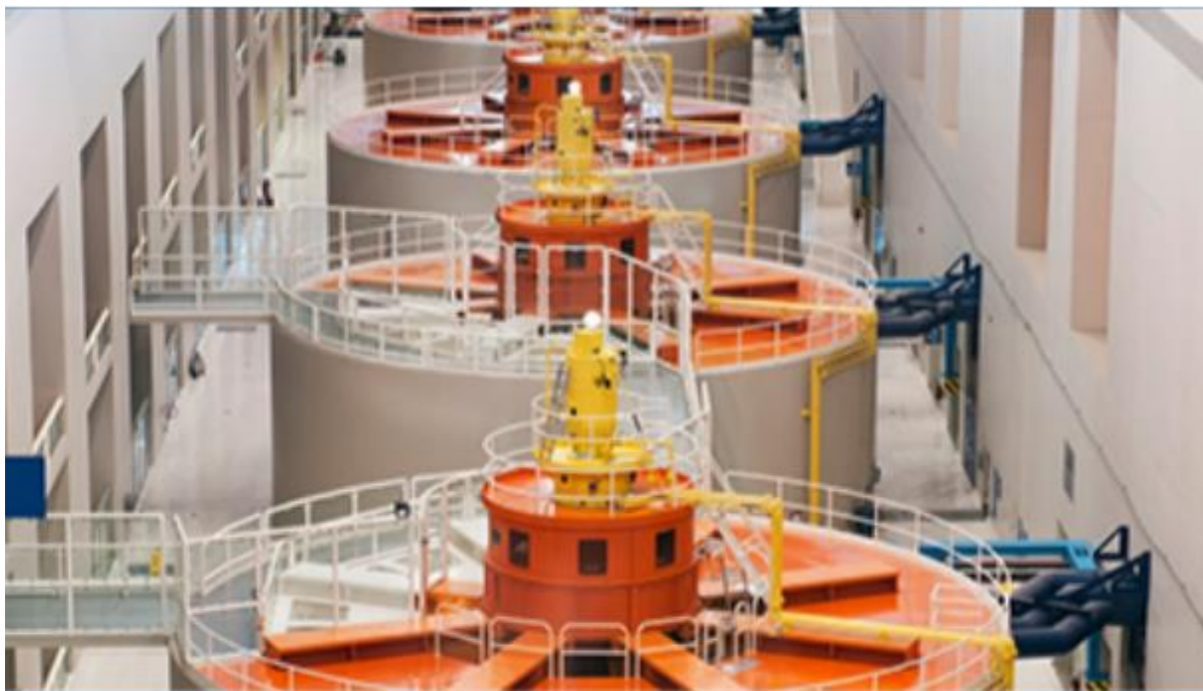




Figure 1

The power generator plant has tones of rotating machines, including all kinds of turbines, compressors, fans, etc. Manual inspection reserves the unsure risk because you never know when will the machine slow down or be abnormal no matter how frequently you send for the human inspections. **For real critical machines, like Gas turbines and Hydro turbines, an online monitoring solution is a must!** These turbines operate at a fixed load and speed, and can be monitored by ISO 20816 regulation for 4 criticality levels, as shown in the figure 1.

The most appealing part of this solution is the **"scalability"** said by our client of a power station. Not only because of the wireless connection of the sensors, but the gateway itself also supports Modbus TCP, interfacing to your existing **SCADA system** for an integral dashboard comprising other important parameters monitored by the **PLC**, such as motor current, and voltage, torque, etc.(Figure 2 & 3) Gives you an insightful and complete view of the machine's condition.

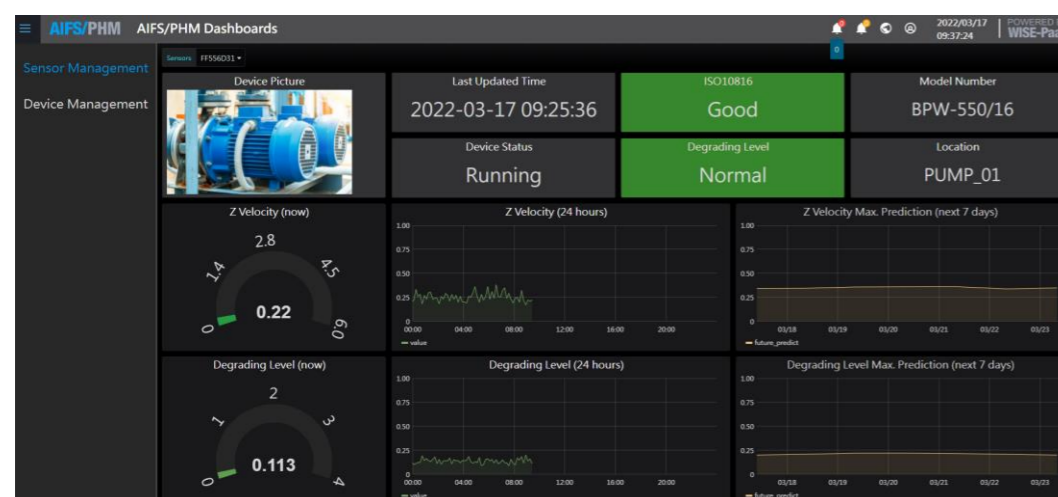
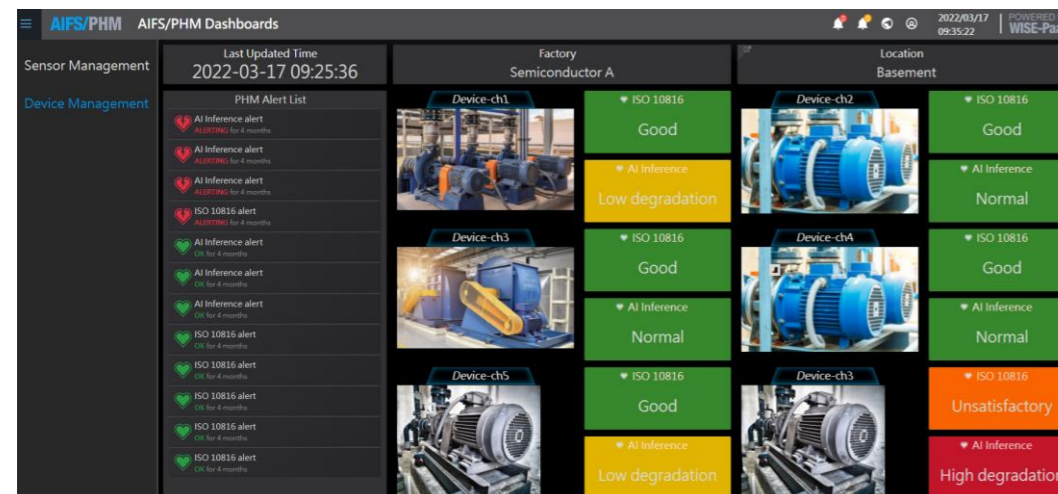
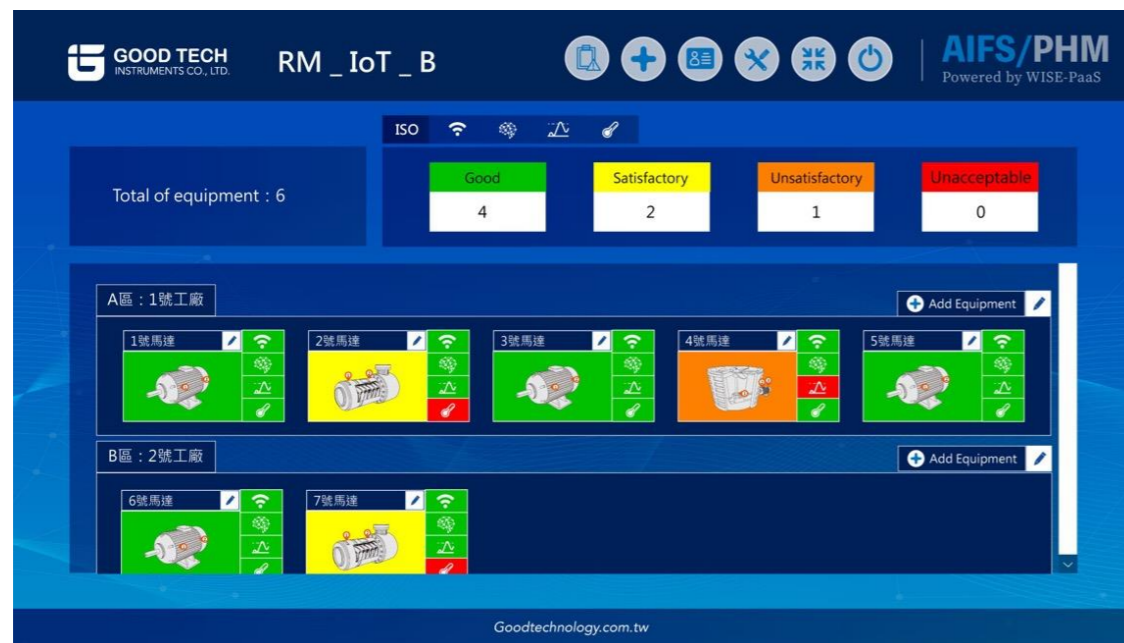


Figure 2 & 3

Fleet monitoring can be shown in RM-IOT-B **edge system** for the different factory areas and detailed machine categories. The graphical display of the machine and respective measurement points realize time-effective management. **Optional AI degradation inference function renders a week degradation trend for your coming decision-making.**

The power plant client benefits a lot from the phenomenal transmission coverage supported by LoRa LPWAN technology, enabling a meticulous surveillance net with the minimum gateway quantity required for a **large-scale accommodation.**



"Fleet Management at the Edge" makes big-scale scenarios easier to execute. Distinguish various factory zones and machine groups by graphical visualization with a sharp color display. The abnormal conditions are at a glance.

Testimony in various vertical markets

Upstream Semicon (Crystal Growth)	Midstream Semicon (Logic & Memory IC manufacturing)	Downstream Semicon (Test and Package)	PCB Industry	Panel Industry	Automation Industry	Petrochemical & Conventional manufacturing	Machine Tool

Key customers of research institute					
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