Predict Equipment Failures and Minimize Maintenance Costs

Predictive Maintenance

iOmniscient X ASUS X intel

Before equipment failure occurs, physical warning signs are almost always present—visible, audible, or detectable through smell. Equipment might begin to vibrate or become misaligned; pipes or railway tracks may develop cracks; conveyor belts may produce rattling noises; valves may leak hazardous gases; and ball bearings in pumps can overheat.

With the ability to see, hear, and smell, Predictive Maintenance operates as if a human were continuously present. Its agentic, autonomous response capability enables immediate, predefined actions to safely stop equipment and mitigate damage. This helps prevent unplanned breakdowns, reduce maintenance costs, and minimize product loss. The system can operate with existing sensors - such as cameras and microphones - provided they meet the required specifications. For smell, iOmniscient provides an e-Nose capable of detecting and differentiating an infinite number of smells. iOmniscient provides turnkey design and implementation, 24×7 support, and optional managed services.

Predictive Maintenance has been deployed on the ASUS IoT PE3100G, a rugged edge AI platform engineered for high-performance in industrial environments. This system accelerates AI inference, image processing, and real-time analytics for demanding applications such as Predictive Maintenance.

iOmniscient Predictive Maintenance can be implemented quickly and pay for itself in months rather than years.

Intel Products & Technologies

Accelerating AI and analytics at the edge

intel CORE

Intel® Core™ Processors

intel XEON

Intel® Xeon® Scalable Processors

OpenVINO™

OpenVINO™ Toolkit

Key Intel-Enabled Features

Real-Time AI and analytics make it easy

Real-Time Detection

Multi-Sensor Fusion

Rapid Model Training

Energy Efficient

Powered by Intel Processors and optimized with the OpenVINO™ toolkit, iOmniscient and ASUS deliver:

01

Real-time fault detection powered by high-speed CPUs

02

Scalable compute enables advanced multi-sensor fusion

03

Energy-efficient CPU design supports low-power operation

04

Rapid model training accelerated by advancing CPU power

That's the power of Intel Inside.

Country/Geo:

Worldwide

Verticals:

Video Safety & Critical Infrastructure
Manufacturing
Transportation

Use Cases:

Public Safety & Enterprise Security
Smart City & Critical Infrastructure
Smart Buildings

About iOmniscient

iOmniscient provides AI based multi-sensory analytics (video, sound and smell). It offers 300+ ready-to-go AI applications for 30 industries including an in-built Agentic capability to provide autonomous real time responses. With 75 International patents it does things that no one else can do. Its systems are implemented in 70 countries.

www.iomni.ai

Predictive Maintenance - Edge AI Partner Spotlight

intel ai
Intel® AI Edge Applications

About ASUS

ASUS is a global technology company driven by innovation and passionate about enhancing digital life. It designs and delivers a broad range of products and solutions that empower people and organizations, combining cutting-edge engineering, quality, and sustainability to create intuitive, reliable experiences for users worldwide.

www.asus.com

ASUS PE3100G - Edge AI Partner Spotlight

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