

# Vireum Vision AI

## Taking industrial quality control to a new level

Benefits of Vireum Vision AI:

- Production speed improves
- Improved quality
- Manual labor is reduced
- Fewer complaints
- Competitiveness improves

## What does Vireum Vision AI do?

The system enables automated quality control and measurement by utilizing machine vision and artificial intelligence, which improves the accuracy and efficiency of the production process. Thanks to real-time alerts, any deviations and quality errors are detected immediately, allowing them to be addressed quickly.

Smart analytics and comprehensive reporting support decision-making by providing in-depth information on process performance and areas for improvement. AI models can be used to optimize processes and predict future needs more accurately. The collected data remains fully under the customer's control, ensuring data security and ownership.

Vireum Vision AI brings tangible added value to industrial quality control and production optimization. The solution leverages artificial intelligence and machine vision to automatically monitor production processes, alert on deviations, and generate predictive analytics – in real time.

## An integrated part of your company's production chain

Vireum Vision AI does not operate as a stand-alone system, but can be seamlessly integrated into your company's industrial automation systems, such as Siemens PLC and enterprise resource planning systems, such as our partner Collapick's ERP system. Integrations can also be implemented into other systems

Two-way data transfer enables, among other things:

- Automated transfer of quality data to the ERP system
- Based on the quality of automatic process control
- Distribute alerts and analytics to the right users without delays

## Everything you need in one package

- Machine vision-based quality control equipment (cameras, lights, racks)
- Industrial-grade AI computers for computing and control
- Data transfer interfaces for automation and ERP systems
- Modern user interfaces for analytics, alerts and production management
- Installation service and solution testing before deployment

## Who is the solution suitable for?

The solution is particularly suitable for the needs of the wood processing, metal, plastic and packaging industries, where quality assurance and efficiency of production processes are at the forefront. It serves companies with a continuous need for quality monitoring, traceability and process development, enabling more precise control and better production results.

In addition, the system supports organizations aiming towards Smart Factory solutions, providing modern tools for utilizing automation, data, and artificial intelligence as a strategic competitive advantage.

## Vireum Vision AI is a modular artificial intelligence solution

### Data sources and interfaces

The system collects information from two main channels:

- From the customer's ERP system, source system, or database that transmits data via the Data API.
- Sensors and cameras that transmit measurement and image data via the Sensor API.

### Vireum Vision AI environment

Vireum Vision AI, operates in a virtual server environment (Vireum Vision VM).

It consists of several functions:

- AI models that perform automatic recognition and analysis.
- Processing that processes sensor and image data in real time.
- Documents that record observations, reports, and quality assurance information.
- Alarms that indicate deviations or errors in production.
- Reports that provide tracking and analytics.
- Control commands that can be used to influence automation or process control.

## Output interfaces

- A web interface that gives the user a real-time view of production and analytics.
- ERP interface that enables data transfer to, for example, the Odoo ERP system.
- PLC interface used for controlling industrial automation and robotics.

## Benefits of the system

- Enables immediate correction of quality deviations in production.
- Provides real-time analytics that support decision-making and quality monitoring.
- Enables the automatic creation of quality assurance documents and quality certificates.
- Integrates with ERP systems such as Collapick Odoo ERP, enabling seamless data transfer.
- Can also be combined with logistics and industrial automation control.

## System placement and installation

- Vireum Vision can be implemented entirely within a company's own internal network without any external connection.
- The software platform (Vireum Vision VM and AI) can be installed either on the company's own server or on an edge computing device provided by Vireum Oy, such as NVIDIA Jetson Orin.