

# Machine Vision

Vision guided machining and robotics

**Automated Inspection**

Increased productivity and improved flexibility



**e-Factory**  
Partner Product

**IMPROVED  
QUALITY** 

Advanced inspection tools before, during and after production

**SPEED  
UP** 

Immediate rework of production failures

**FULL  
INTEGRATION** 

Direct integration into existing factory management systems for traceability

# Integrated vision to improve production



Effective production and inspection



Vision control integrated into the iQ Platform

## Scalable vision

Conventionally within a manufacturing process, some element of quality inspection is incorporated into the process either manually or automatically by machine vision. Although machine vision is not a new technology, it is often used as an independent, stand alone solution. Mitsubishi Electric and e-F@ctory Partner Datalogic have developed a solution to integrate vision with automation controllers on the shop floor to improve productivity.

## Key markets:

- Automotive
- Electronics
- Packaging
- Medical & Pharma

The Datalogic machine vision product line up encompasses a wide range of inspection equipment, from vision sensors to high end vision processors to improve production.

The range includes solutions to automate the identification process of products based on reading barcodes, analysis of images and profiling of items.

Linked to Mitsubishi Electric's renowned ultra-reliable iQ platform controller, the two represent the perfect combination for high precision robot control in small to high end vision systems.

## Better inspection

Datalogic's vision solutions provide the know-how for Mitsubishi Electric's robots to position and move to grip.

This seamless integration of inspection, robotics and position detection brings improved productivity and flexibility to demanding shop floor environments.

## Integrated machine vision solutions

- Vision Sensors
- Smart Cameras
- Vision processors
- Machine Vision Software

Datalogic's complete family of high performance smart cameras and embedded machine vision systems utilize the same software across all products. The hardware consists of vision sensors, smart cameras, and vision processors. These products are specifically designed and developed to meet all your manufacturing inspection requirements and to get your application up and running faster.

## Experience

With over 30 years of experience in the machine vision business and thousands of successful customer installations, Mitsubishi Electric selected Datalogic to solve the most challenging inspection applications within a wide variety of markets and manufacturing environments.

## Completing the loop

In addition to fault position detection, vital information such as the amount of parts that have passed or failed inspection, production batch numbers, production instances can all be directly sent to the control system for further data manipulation. By integrating Mitsubishi Electric's iQ Platform - especially using the MES interface IT module, this vital data can be directly transported to enterprise level software systems for further integration into production reports for production and factory management.

This fully integrated vision and rework system makes it easy and efficient to maintain quality and production quantity.

## Integrated functions:

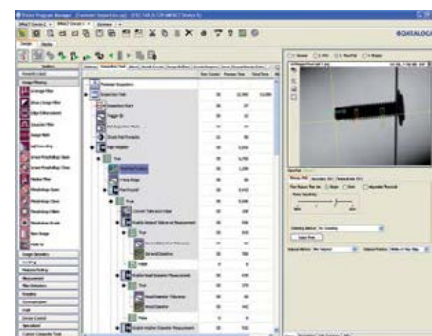
- Feature finding
- Flaw detection
- Locate
- Image filtering
- Color verification and sorting
- Measurement
- Code readers & OCR
- Logic programming
- Image calibration
- Data communication Vision Program Manager



Inspection solutions integrated into the PLC world

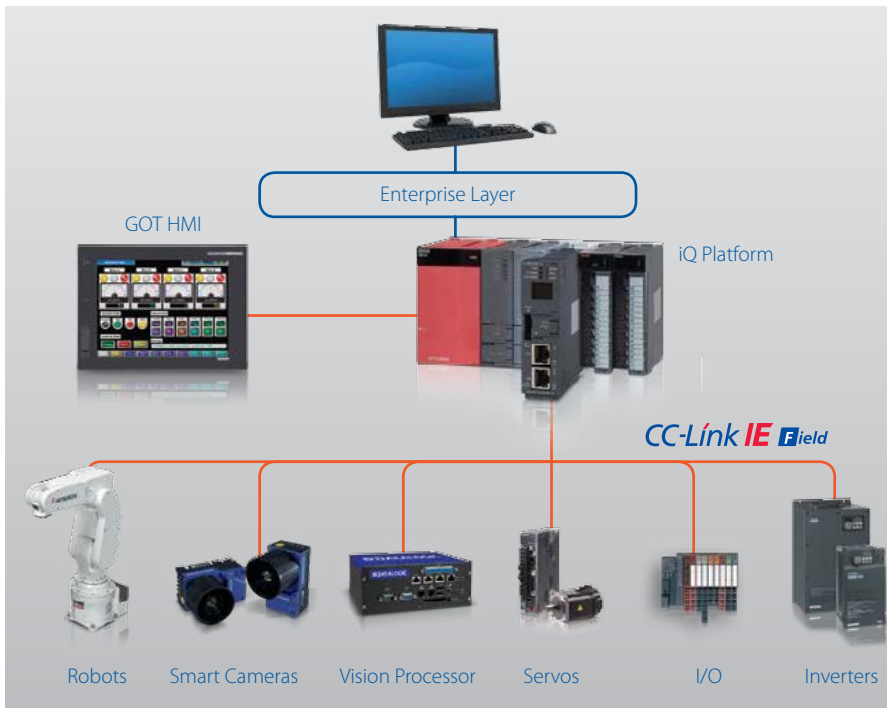
Vision Program Manager (VPM) provides hundreds of image processing and analysis functions. Use VPM to enhance images, locate features, measure objects, check for presence and read text and bar codes.

For further information talk to one of our machine vision experts or visit [www.mitsubishi-automation.com](http://www.mitsubishi-automation.com) and check out the e-F@ctory section for vision systems.



Scalable software solutions for image filtering, flow detection and locations etc

# Typical Configuration



Typical vision and inspection structure

## Benefits:

Inspection of the used and produced parts before, during and after production.

- Higher quality
- Better traceability
- Reduced waste
- Improved OEE
- Increased production flexibility for 2D and 3D position detection

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