

MAPVISION
Quality Gate

*– Complete understanding
of your production –*



**100% x 100% in-line inspection systems
for the automotive industry**

Deliver only good parts

A full final inspection is the only way to prevent the occasional delivery of bad parts.

Random errors occur during most manufacturing processes, but they can never be completely detected by sampling inspection.

- Say goodbye to the problems and expenses that are caused by the delivery of bad parts.
- Save CMM sampling costs.
- When you measure 100%, you won't need to sample and prove your process capability to your customers.

Only a short wait for a return on your investment

A payback period of less than one year is common.

Ask us to give you the numbers that show how Mapvision can benefit you!

Well-adjusted process
+ 100 % final inspection
= Peace of mind

Unique Capabilities

100% x 100% Inspection



All parts

100%



All features

100%

- CMM comparable results within your line cycle time
- Full 3D measurement of each feature (x,y,z)
- Cycle time typically 10-30 seconds
- Number of features typically 50-200

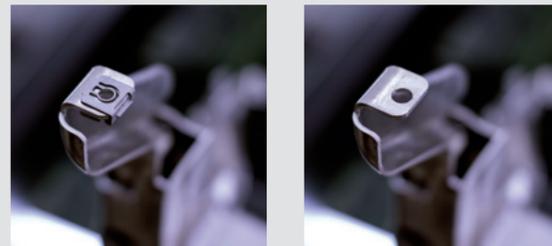
All-In-One

Measure

- 3D positions of features (x,y,z)
- Calculated distances, angles, sub-coordinates...
- Edges, corners, surfaces...

Inspect visually

Check the presence of nuts, clips, threads, etc.



Adjust process to nominal

Your measurement results are presented in a unique, simple and visual way. This gives you a complete understanding of your production. Adjusting your processes has never been more efficient!

Use the whole tolerance range

You can get the process into the middle of the tolerance range. When you can use the whole tolerance range, you produce fewer bad parts. This will reduce waste.

Start the line more efficiently

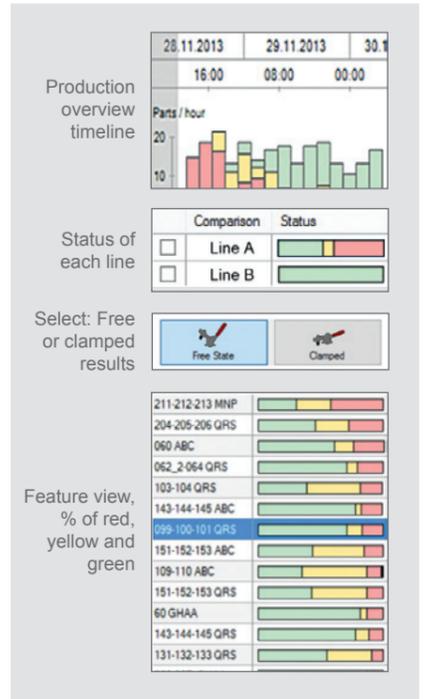
Quick and easy adjustments will help you reach your tolerance range faster. A complete understanding significantly reduces the time and manpower needed to identify and fix issues during start-up. This will reduce start-up costs.

No compromises in adjustment

A high speed of measurement buys you the time to make adjustments properly, and the full 3D measurement data (x,y,z) gives you the understanding and confidence to adjust with accuracy and efficiency.

Quick adjustments with immediate feedback

After adjustment, you can see the effects on several parts within minutes, and you can quickly and reliably verify a successful change, or readjust. Real-time in-line measurement shortens the process improvement cycle dramatically. This will reduce downtime costs.



100% x 100% in-line inspection

MAPVISION Quality Gate 4200 Series



- For chassis and body components
- Maximum length of part approx. 1800 mm
- Automated part loading by robot or shuttle
- Manual part loading by operator

MAPVISION Quality Gate 6200 Series

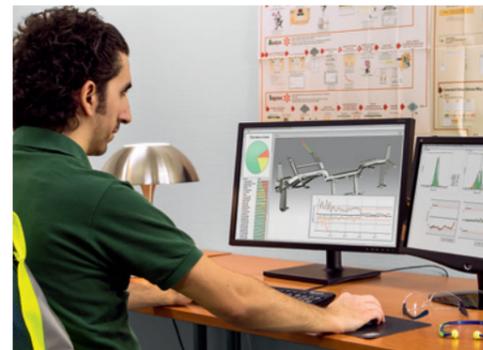


- For large assemblies
- Maximum length of part approx. 5000 mm
- Can be installed around a conveyor line

Complete Understanding

MAPVISION Result Suite

With its advanced visual presentation features, Result Suite gives you a complete understanding of your processes.



Result Viewer provides the simplest and clearest view of your process data. Automatic statistical analyses and clear trending graphs are all simply combined with intuitive 3D error vectors. Adjusting your process has never been this easy!

Result Database stores all your inspection results and gives easy access to the data. Check your processes whenever and wherever, in real time.

Image Studio is a unique and powerful tool that brings camera images alive. Understand your production through animations and image comparisons from actual camera images.

Training and consultation

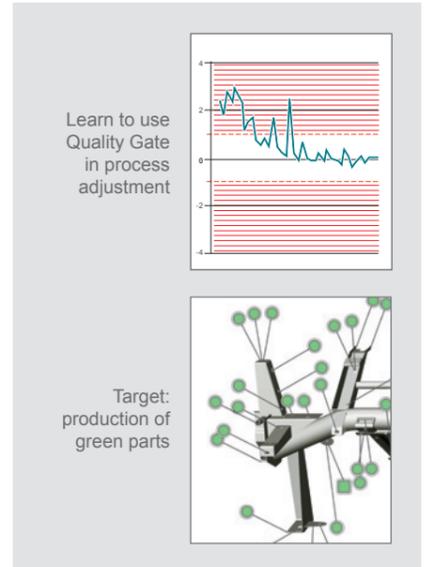
MAPVISION Green Part Program

After system delivery, our experts stay on-site with you to train your personnel to use the system efficiently.

These are the practical hands-on sessions that show you how the 100% inspection data is used to adjust your process in practice.



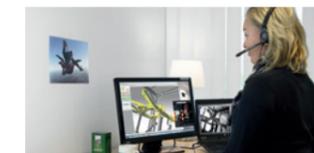
We want to stay with you until you have the confidence to use your Quality Gate independently and concrete results have been achieved.



All-inclusive support program

MAPVISION MAPcare

MAPcare is our complete support and maintenance program. It offers an extensive set of services to keep your Quality Gate system in efficient working order.



Quick response support

- Remote access online support**
- Most problems solved immediately
 - Support for change analysis in manufacturing process
 - Customer assistance

Telephone and email support



Modify inspection & add features

- Adapt to changes**
- Inspection program adjustments after changes in process
 - Remove and modify features
 - Add new features

Modify result output

Support during pre-production



Annual calibration & maintenance

- Annual on-site hardware maintenance**
- System calibration**
- Calibration certificate
- Measurement fine-tuning**
- Inspection reprogramming

Measurement capability analysis

- Gauge R&R test and report
- Correlation test and report



Software updates

- Get the benefits of new versions**
- Usability improvements
 - New visualizations and tools
 - Algorithm development
 - Error corrections

Key features

Mapvision Quality Gate is the fastest in-line inspection system on the market today. Using 3D imaging and new generation software, it measures every manufactured item that comes off your production line and checks the presence of product features. You get CMM-comparable results within the line cycle time.



Unique technology

- Mapvision RAIC® multi-camera system
- LED lights
- No moving parts

Unique performance

- Repeatability: ~ +/- 0.02 mm
- Correlation to CMM: ~ +/- 0.1 mm
- Stable calibration
- One coordinate system over whole measurement volume
- Flexible - can inspect different variants or even different products in one system
- Inspection time: 10-30 seconds

Compact footprint

- 4200 Series: 2.9 x 2.2 m
- 6200 Series: 7.0 x 4.0 m

Simple and reliable hardware

The system is designed for in-line use in a real production environment.

The accuracy and reliability of Mapvision Quality Gate comes from its sophisticated software, not from special mechanics.

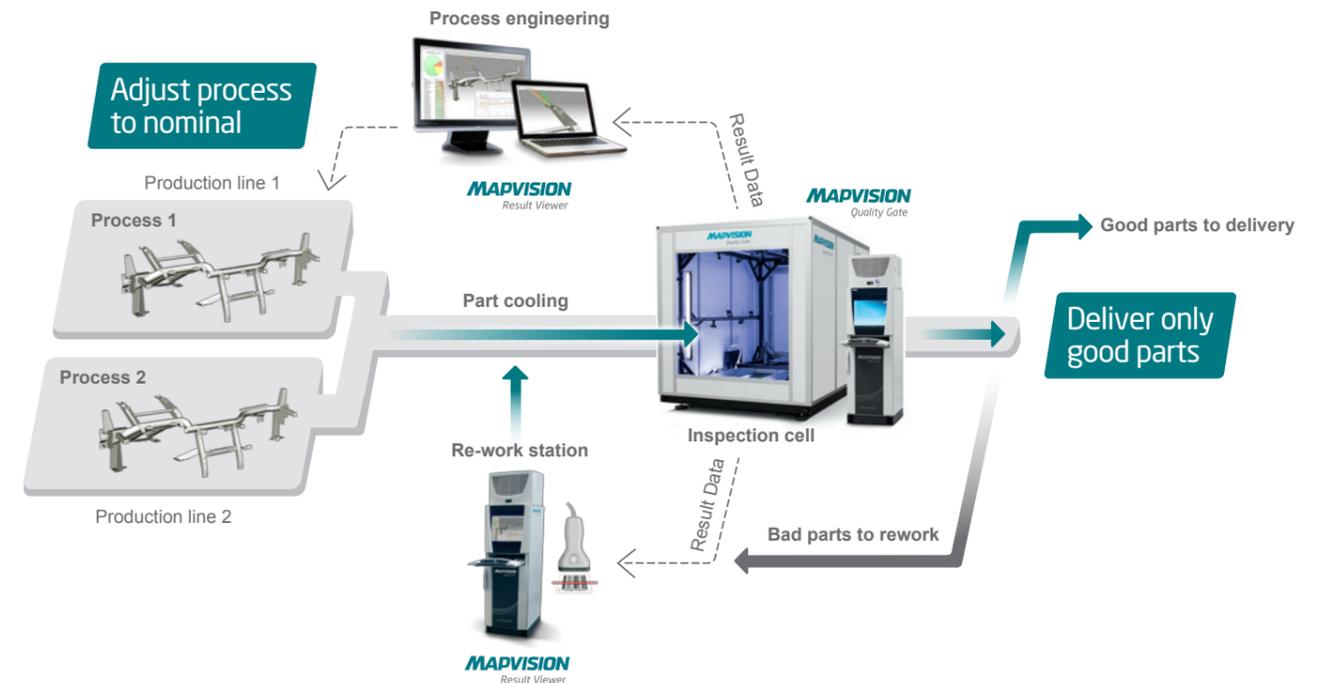
The hardware is simple and reliable and it doesn't have any moving parts. The system doesn't require any special foundation and it operates under all normal factory conditions, directly in-line.



Easy integration, turnkey delivery

Quality Gate is generally built into an automated production line. Mapvision provides clear interfaces for easy integration.

Mapvision delivers a fully-configured inspection system that includes inspection hardware, software, project services, training and consultation, all at a fixed price.



Once you get used to the luxury of a **fully-controlled** manufacturing process, you will never launch another line without **Quality Gate!**

About us



We are the only company in the world specializing in the 100% in-line inspection of automotive body and chassis component manufacturing. We have been a pioneer in multi-camera technology for decades. The development of a 100% x 100% in-line inspection system started in the mid-2000s and led to the introduction of the first Quality Gate in 2008.

Mapvision Quality Gate is used worldwide by leading OEMs and Tier 1 suppliers like the BMW Group Dingolfing Plant, Daimler, Gestamp and Magna.

We are based in Helsinki, Finland and we serve our global customers with local organisations in Europe, North America and Asia.



Mapvision Ltd. | Ruosilantie 10 | FI-00390 Helsinki, Finland | Tel +358 208 389 389

sales@mapvision.fi | www.mapvision.fi