MCM SYSTEMS

MCM INDUSTRIAL SOLUTIONS

Industrial quality control & test systems

Tailored Engineering for Industrial Production Lines

Machine Vision • Functional Testing • Packaging Inspection

Since 2001 | **350+ systems delivered** | **7 countries**

Engineering company specialised in industrial testers, machine vision, automated inspection and production-line quality control.



Talk to an MCM engineer

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MCM SYSTEMS

Engineering systems that make quality measurable

From concept to installed equipment, MCM develops tailored solutions for production-line inspection and industrial testing.

2001	350+	7	~4 months
Founded	Systems delivered	Countries with installations	Typical custom project

What we deliver

01

Machine Vision

2D, 3D and AI-based inspection for presence, geometry, surface, print, colour, code reading and classification.

02

Functional Test

Electrical, communication, leak/pressure, optical and mechanical checks in automated test sequences.

03

Packaging

Inline and off-line systems for corrugated board, print, glue, crease, curvature, identity and process defects.

04

PCB Test Benches

Custom fixtures and software to stimulate PCB inputs, acquire outputs and validate signals repeatably.

05

Advanced Sensing

Deep learning, 3D, spectroscopy, thermography and other sensing technologies selected for the application.

06

Traceability

Result logging, serial/lot tracking, production databases, Andon information and Industry 4.0 connectivity.

Built around the customer problem — not around a fixed technology.

Typical applications

Presence / absence
Assembly confirmation

Dimensions / shape
Geometry control

Electrical signals
Functional validation

Leak / pressure
Integrity testing

Print / colour
Visual quality

Codes / serials
Traceability

VISION SYSTEMS

Detect Defects Before They Reach Your Customers

Inspection systems designed around the product, process, speed, lighting and decision required on the line.

2D · 3D · AI · OCR · I4.0

What can be inspected

- Presence and missing components
- Position, orientation and assembly
- Dimensions, profile and shape
- Surface defects and finish quality
- Colour, print and registration
- 1D/2D codes, OCR and product identity
- Glue presence, bonding defects and packaging features
- Product variant / model verification



A typical system combines controlled illumination, industrial cameras, processing, line I/O and traceability.

Controlled lighting · Industrial cameras

From image to decision

1 **Acquire**

2 **Inspect**

3 **Decide**

4 **Act / trace**

Need to know whether your product can be inspected?

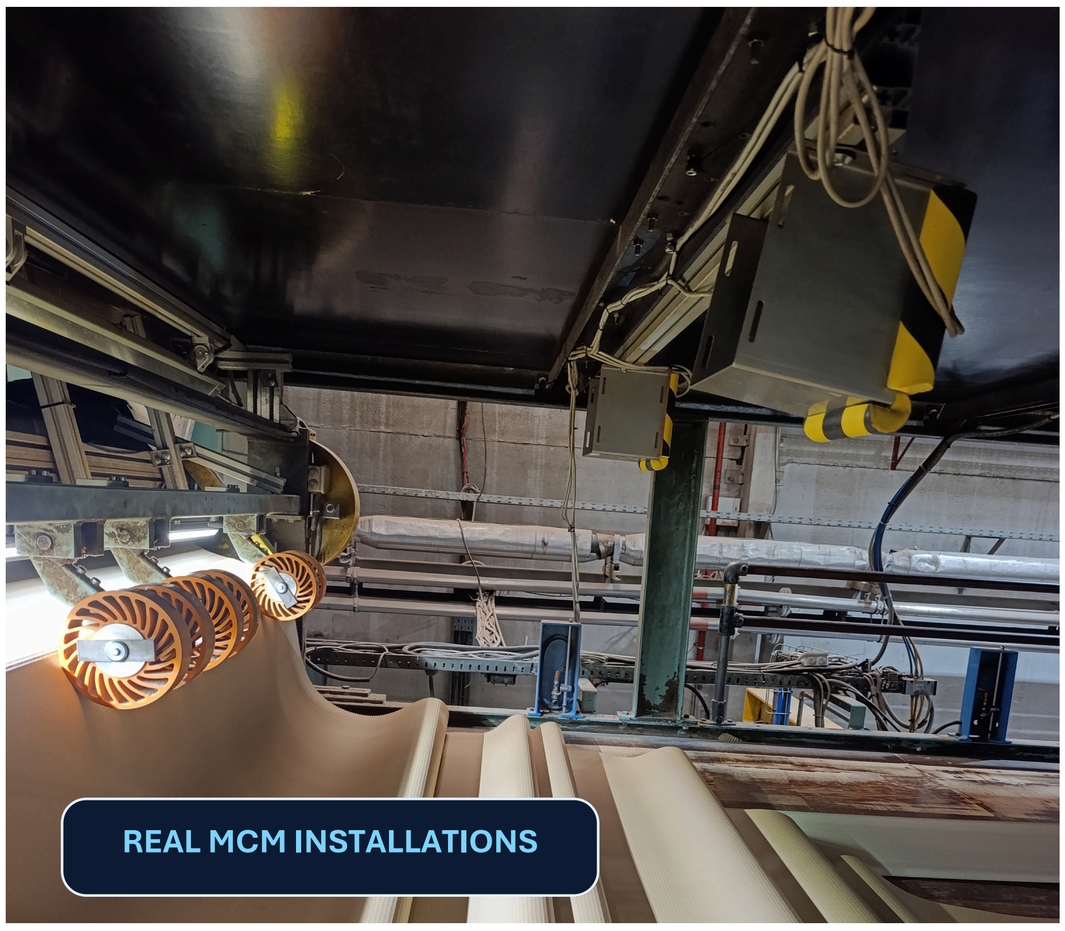
Send samples, defect examples, line speed and the acceptance criteria. MCM can review feasibility before the full project.

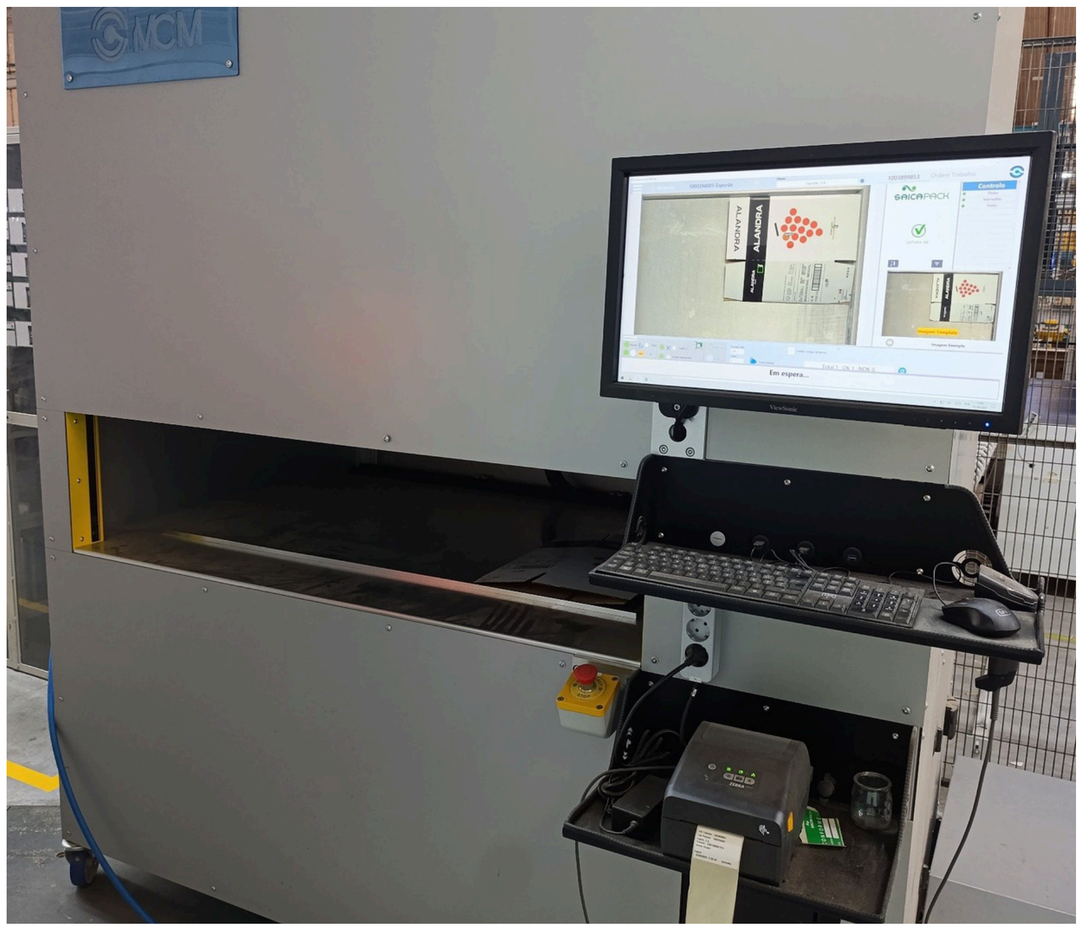
Ask MCM

PACKAGING INSPECTION

Inline and Offline Quality Control for Corrugated Board Production

Solutions for board identity, print, glue, crease, curvature, dimensions and process defects — designed around real production conditions.





Our Packaging Solutions

Check Inversion

Verify board orientation, product identity, barcode/OCR and print registration before die cutting.

CorruSense

Inline corrugator inspection for process or raw-material defects using line-scan cameras, controlled dark-field lighting and AI.

PrintSense

Complete off-line sheet tester for variety, RGB colour, colour misregistration, dimensions and production tracking.

WarpSense

3D projected-laser triangulation to measure and track stack curvature without stopping production.

Crease Gauge

Portable, repeatable measurement of crease functionality and washboard with configurable limits and tracking.

CorruSense — documented configuration

Up to 3 m inspection width • Up to 300 m/min • 2 high-resolution line-scan cameras

Dark-field illumination helps highlight defects and reduce sensitivity to external light; AI-based processing can learn and classify new defect types.

INDUSTRIAL TESTERS

Automated test sequences for products that must work — not only look correct

Custom stations combine fixtures, instrumentation, software, safety, line integration and traceability in one production-ready system.

Typical test functions

Electrical
Voltage, current, continuity, analog/digital I/O and signal behaviour.

Communication
Protocol checks, device communication and command/response validation.

Leak / pressure
Integrity and sealing verification where the product requires it.

Optical / light
Light quality, output, colour or visual characteristics.

Mechanical
Dimensions, movement, presence, assembly and actuator checks.

Traceability
Serial number, result storage, production order and database integration.

System architecture

Product / UUT — Unit Under Test

Fixtures & I/O — Jigs · Sensors

Test Engine — PC · PLC · DAQ

Decision — Pass / Fail

Trace — Data



Turnkey Solutions

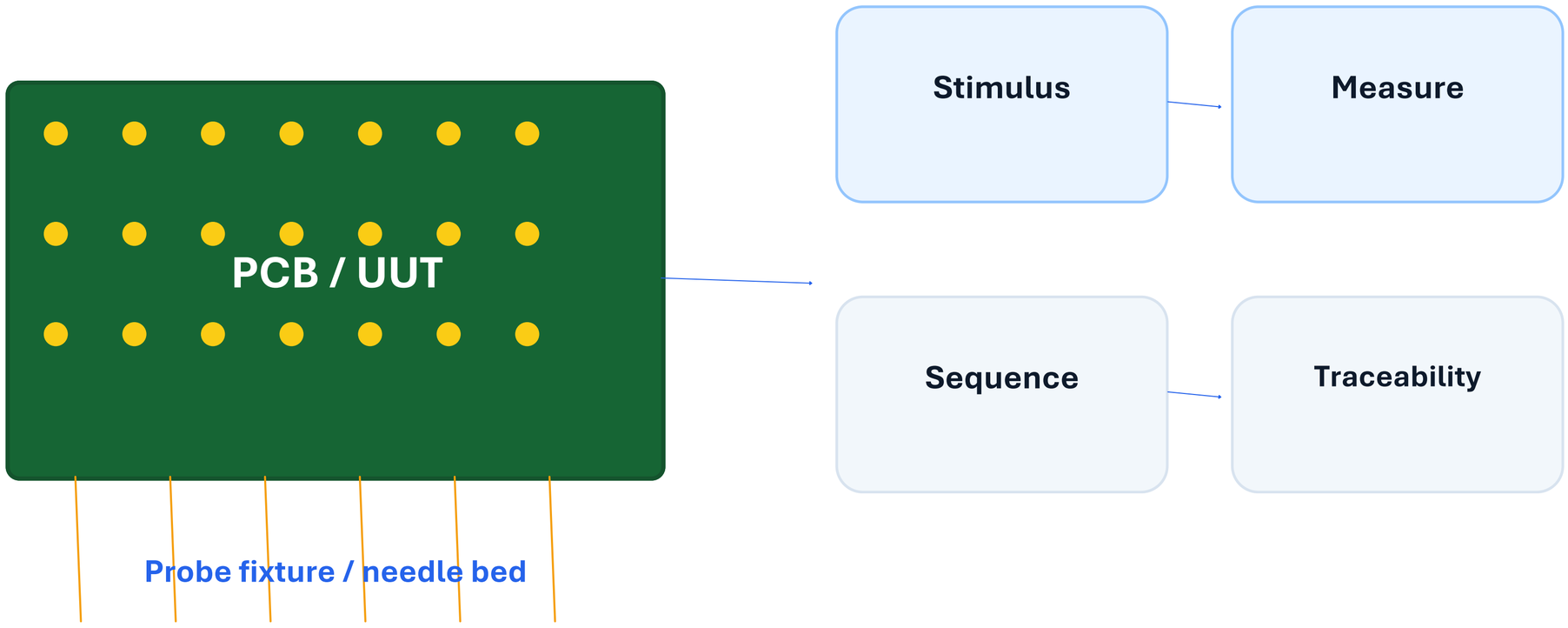
Mechanical design, electrical cabinet, safety, instrumentation, software, user interface, FAT, installation and support can be delivered as one integrated project.

ELECTRONICS TESTING

Repeatable PCB testing with custom fixtures and automated sequences

Designed to stimulate inputs, measure outputs and validate the electrical behaviour of each board in production.

Typical PCB Test Bench Architecture



What can be validated

- Continuity and shorts
- Power rails and current
- Functional sequences
- Pass/fail limits
- Analog / digital I/O
- Communication interfaces
- Serial number / barcode
- Result logging and database

Built for the operator and the production environment

Clear test sequence · Repeatable fixture positioning · Serviceable hardware · Configurable limits · Traceable results

The final test coverage, fixture concept and instrumentation are defined from the PCB signals, production volume and acceptance criteria.

TECHNOLOGY PORTFOLIO

The Right Technology for Every Inspection Challenge

MCM combines conventional vision, AI and advanced sensing with production data so the result is useful on the line — not only visible on a screen.

AI

Deep Learning

Useful when defects are variable, difficult to describe with fixed rules or require classification. Models can be taught from approved/rejected examples and integrated with the production decision.

3D+

Advanced Sensing

3D profile measurement, spectroscopy, thermography and hyperspectral approaches can be evaluated when geometry or material behaviour cannot be solved reliably with standard 2D imaging alone.

DATA

Traceability & Andon

Store results by serial, lot or production order; communicate with databases; display status and alarms; and integrate inspection/test information into Industry 4.0 workflows.

Technology selection logic

Simple, stable visual feature	2D machine vision
Height / profile / curvature	3D / laser triangulation
Variable visual defect	Deep learning
Material / spectral behaviour	Spectroscopy / advanced sensing
Production visibility	Traceability / Andon / database

Principle: choose the simplest robust technology that meets the quality requirement and production conditions.

START A PROJECT

From sample to installed system

A structured engineering path to confirm feasibility, define the solution and deliver a production-ready system.

Typical project flow

01 Sample
02 Feasibility
03 Engineering
04 Build
05 FAT
06 Installation
07 Support

What helps MCM assess your application quickly

Product samples (conforming and non-conforming) · Required defects/tests · Line speed · Available space · Interface requirements · Acceptance limits.

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Scan to contact MCM on WhatsApp

Tell Us What You Need to Inspect or Test

Commercial note: final specifications, cycle time, hardware and acceptance limits depend on the application and are confirmed during feasibility / engineering.