Synthomatic AI
Solutions

Automated **AI** Quality Control

From Image to Insight

A cost effective next-generation visual inspection system that leverages advanced neural networks (AI) to automatically identify manufacturing defects and ensure superior quality

- Significantly reduces the cost of manual inspection

- Improves quality and consistency of defect detection

- Detects defects not caught by traditional methods

- Deployed quickly and can be reconfigured as your process changes

- System accuracy continuously improves through retraining on additional data

Advanced AI Algorithms:

Human-assisted learning (supervised)
Autonomous learning (unsupervised)
Precision defect identification

Quality Optics & Lighting:

Ensures clear, high-resolution images
for accurate defect detection.

Flexible Integration & Control:

Seamlessly integrates with factory PLCs
and other common industrial hardware

Designed for Windows-based PCs to
guarantee robust performance and
expandability

Custom AI Programming & Ongoing Model Improvement:

Our application engineers work with you to
develop the most accurate inspection
models.

Retrain models with newly captured data
to stay ahead of changing manufacturing
conditions.

Defect Traceability & Reporting:

Comprehensive reporting tools
Keeps a secure record of defects,
enabling continuous improvement

Remote Monitoring

Check system status anytime,
anywhere
Real-time alerts and notifications

Typical
Applications
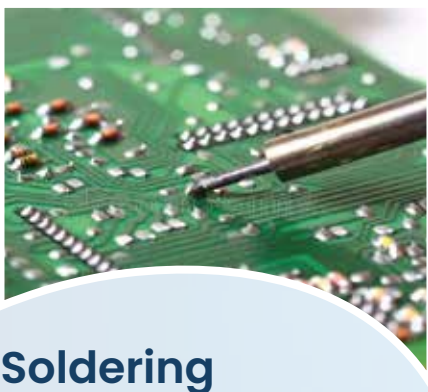
(Flexible to support a wide variety of applications)

Welding

Poor coverage, missing
Undercut
Cracks
Spatter

Molding

Warping
Shapes
Flashes
Burn Marks

Soldering

Cold Joints
Insufficient
Bridging
Webbing/Splashes

Assembly

Missing
Misalignment
Debris, FOD
Damaged Components

Machining

Surface Finish
Defects
Missing Features

Wiring

Polarity/Orientation
Missing Wires
Routing

Cutting/Punching

Edge Definition/Burrs
Surface Finish
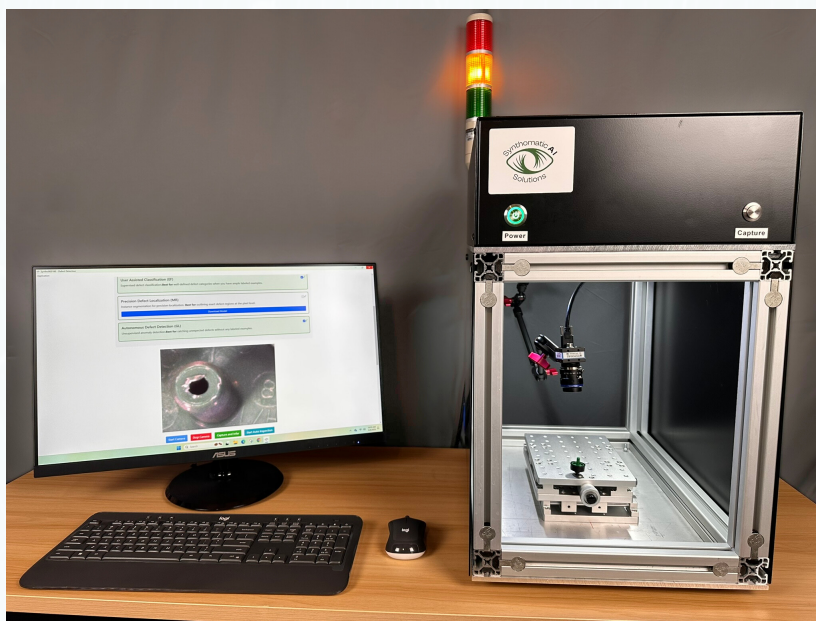Incomplete Cuts

Labeling

Location
Orientation
Missing

Specifications:

Power: 120V, 15A

Size: W15" x L21" x H26"

Field of View: 12" x 9"

Object Resolution: 0.0015" (40μm)