

REAL-TIME DETECTION, COUNTING AND QUALITY CONTROL ON THE LINE

Lena Vision watches every can on the conveyor, in real time, and automatically flags defective units by type and by their exact position on the line.



FIELD INSTALLATION – PRODUCTION LINE

THE CHALLENGE

On a high-speed beverage can production line, an unnoticed defect stops being a small problem within minutes. **Undetected inverted or fallen cans can cause unplanned production line stoppages, resulting in production losses and reduced operational efficiency.** Manual, spot-check inspection simply cannot keep pace with modern line speeds.

THE SOLUTION

Lena Vision watches every can continuously: an industrial camera and lighting unit feed an industrial computer running a deep learning model that detects, classifies and counts each can — then signals the line's PLC the instant a defect appears.

• Industrial camera

• Industrial lighting

• Industrial computer

• PLC integration

BUSINESS VALUE

BEFORE

- Delayed reporting
- Operator dependency
- Manual inspection
- Human error

AFTER

- • Live dashboard
- • 24/7 operation
- • AI-powered detection
- • Professional-grade detection

SYSTEM ARCHITECTURE

01

Camera & lighting

Industrial camera and lighting unit continuously capture the line.

02

AI computer

Industrial PC runs the detection model in real time.

03

PLC / relay

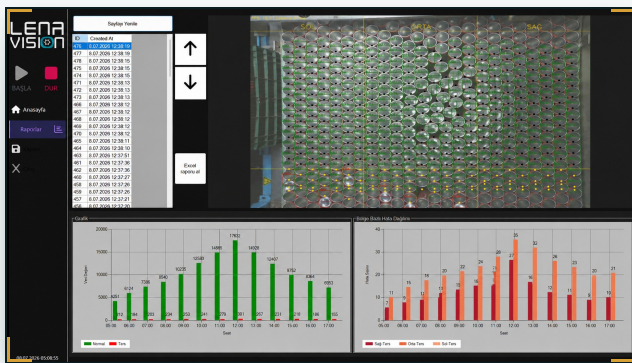
Line PLC is signalled instantly on defect detection.

04

Dashboard

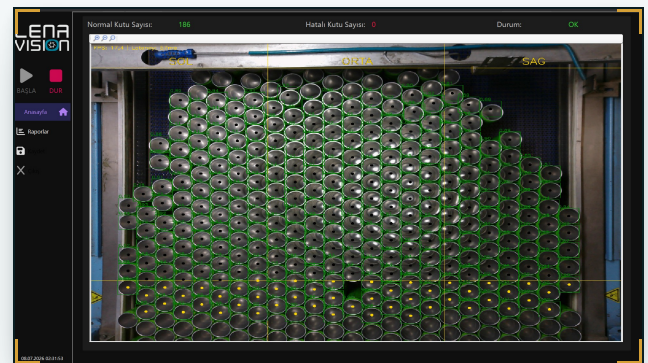
Counts, defects and reports update live.

LIVE DASHBOARD



HOURLY PRODUCTION & ZONE-LEVEL DEFECT ANALYTICS

LIVE DETECTION SCREEN



REAL-TIME DETECTION IN OPERATION

CASE STUDY

Lena Vision is deployed on a high-speed beverage can production line, running as part of daily production — not a pilot or a lab demo.

100,000+

UNITS / HOUR

100%

FAULTY PRODUCT DETECTION

ROI & OPERATIONAL IMPACT

- + **Fewer unplanned stoppages** — defects are caught and acted on before they cascade into line-wide issues.
- + **Lower dependency on manual inspection** — frees operators for higher-value tasks instead of constant visual checks.
- + **Faster decisions** — hourly production and defect data is live, not compiled after the fact.
- + **Consistent, audit-ready detection** — every can is classified against the same standard, shift after shift.

TECHNICAL SPECIFICATIONS

ENGINE YOLO-based deep learning model**ACCELERATION** Intel (OpenVINO), CPU fallback (ONNX Runtime)**THROUGHPUT** 100,000+ units / hour**ACCURACY** 100% detection accuracy on faulty products**CLASSIFICATION** Upright / Inverted / Fallen**ZONE ANALYSIS** Left / Center / Right defect distribution**HARDWARE** Industrial camera, industrial lighting, industrial computer**INTEGRATION** PLC / hardware relay — reject & alarm output**REPORTING** Live dashboard, local logging, one-click Excel export**TRACEABILITY** Automatic image archive of every defect