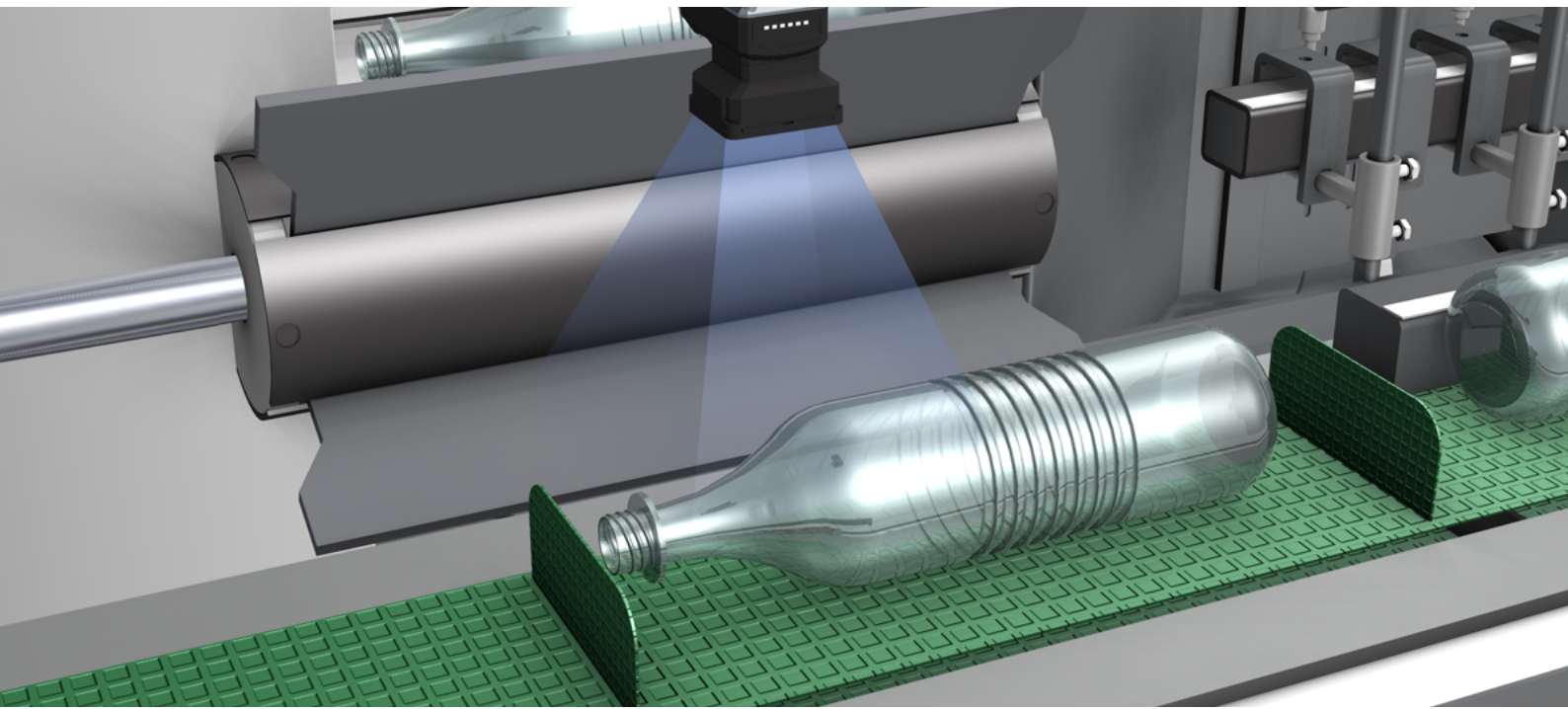


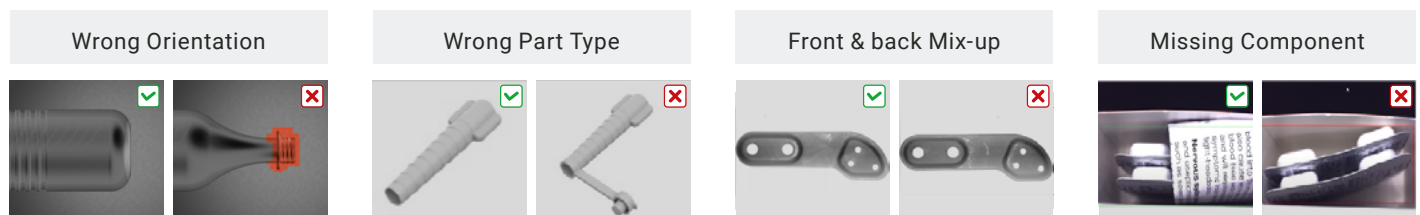
# Easy, fast training AI based detection to boost operational efficiency and quality



## Current Challenges in manufacturing multiple SKU

Modern manufacturing lines face increasing challenges when working with multiple SKU, as it requires an efficient control of any changes in packaging formats, components or parts to assembly. Operational efficiency and quality are often impacted by containers or parts falling in the wrong orientation, the wrong type of component, or none at all, is fed to the line, etc., leading to issues like:

- Downstream misalignment or incorrect assembly causing malfunction and/or product failure/reject.
- Unplanned stops or bottlenecks reducing throughput and affecting line efficiency.
- False rejects increasing re-work costs and generating waste of products, containers or parts.



# The Solution: Precise presence, orientation and discrimination with OMRON AI-all-in-one detection solution

Effortless AI detection for parts and packaging: train in minutes, zero expertise

## Key features

- **All-in-one solution:** integrates AI-based vision detection (camera, lighting, and processor), controller, trigger sensor, communications and HMI in one package for simplified set-up.
- **Advanced AI-based detection:** Self-learning model trained in one click requires fewer images to get accurate results eliminating the need of expert setup and reducing commissioning time to minutes.
- **Industrial grade housing:** Robust and resistant build designed for demanding production environments.
- **Easy User-guided interface:** Step-by-step set-up with on-screen adjustments and automatic optimization of detection parameters.
- **Industrial connectivity:** Simplified cabling enables reliable network and IT/OT integration.

## Operational benefits

- **Accurate detection:** Ensures correct part type, orientation, side, and completeness for components and packaged items preventing downstream assembly or labeling errors.
- **Quick deployment:** "One-click" AI training and autofocus drastically reduce commissioning time and complexity.
- **High reproducibility:** Robust triggering and automated image selection eliminates operator bias and ensures consistent detection results.
- **Reduced maintenance and downtime:** The sealed, preassembled unit minimizes recalibration and mechanical adjustments.
- **Lower total cost of ownership:** Combines smart AI, durable hardware, built-in lighting, reliable sensing, versatile controller and user friendly software cutting integration and maintenance costs.



## Technology behind the Solution

### FHV7-AI + SD card

- IP67, camera, lighting, processor, 1.6 MP color sensor

### FHV7-AI Simulator / remote tools

- Step-by-step guidance for automatic optimization of inspection parameters.
- AI assisted learning, No parameters to adjust.

### NX1 Controller

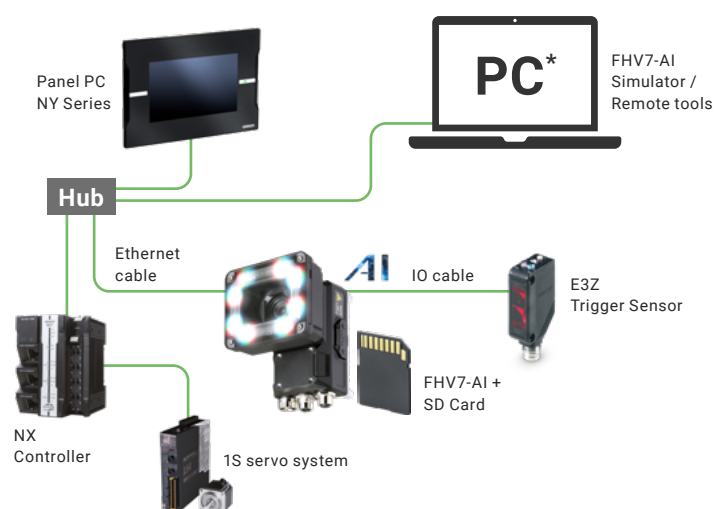
- Integrates logic, motion and data and eliminates middleware for seamless IT connectivity.

### NY Panel PC

- Touch screen HMI Panel PC, with easy IT/OT integration.

### E3Z trigger Sensor

- IP67 Compact housing size and high-power LED for excellent performance-size ratio.



For more information visit  
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