

# **Packaging Verification**

As packaging line speeds increase and automation replaces manual inspection, maintaining product and packaging integrity and quality is critical for end users. Assuring date and lot codes are correct and legible is vital for food and beverage packagers. Incorrect, missing or illegible code could result in a lack of product traceability leading to production downtime or product recalls. In addition, packagers need assurance their food containers are free of contaminants before filling and properly sealed afterwards. For these applications, industrial machine vision plays an important role in quality control for OCR, measurement, or counting of bottles, cans, containers, labels, foods, pills, and more.

## **Could you use Machine Vision?**

Here are some of the inspections a Teledyne DALSA IPD vision system could perform:

- Detect proper fill levels
- · Verify caps are on items and are correctly secured
- Ensure safety seal is present
- Verify a barcode or 2D matrix code
- Read OCR strings
- Verify the placement and quality of labels
- Count and verify items in a package
- Color inspection

### **Machine Vision Tools**

- 1D barcode and 2D matrix readers for traceability, sorting and process control
- Label inspection tools for verifying placement, print quality and correctness of labels
- OCR for reading printed characters and symbols
- Pattern recognition to calculate variations in label location and orientation
- Color tools to measure amount and location of colored elements such as foodstuffs
- Counting tools to determine number of items and indicate missing items
- Blob analysis tools for counting and dimensioning areas of similar color or contrast on the item
- Measurement tools to determine fill levels and verify safety seal





# **Typical Packaging Applications**



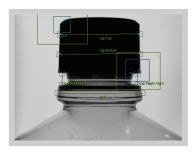
Label presence, placement and integrity



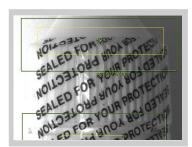
Date, lot and product code validation



Correct orientation of assembled parts



Presence and assembly of bottle caps



Presence of Tamper proof safety seal



Presence and correctness of printed characters



Product traceability using 2D code reader



Product traceability using 1D code readers

# Get more vision

Teledyne DALSA offers the very latest in machine vision technology for packaging applications. Designed specifically for industrial environments, the BOA2 smart camera is an all-in-one vision system that integrates easily into existing production lines, machinery or moving equipment. BOA2 comes fully loaded with a suite of quick-to-apply vision capabilities and interfacing methods for communicating with the factory enterprise. For packaging production lines requiring numerous inspection tasks, Teledyne DALSA GigE cameras can be combined with a centralized processor to offer a very cost-effective solution.

Teledyne DALSA vision solutions are available with choice of application software to accommodate the differing needs and experience of packaging end users. iNspect software allows experienced users and 1st-time adopters to quickly setup and deploy solutions. iNspect's logical setup is built using the experience and algorithms that have been put to the test over the course of many years. Sherlock provides functionality and customization to tackle the most challenging applications.

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