

COGNEX

INDUSTRY APPLICATIONS

Cognex machine vision ...
for the highest level of
manufacturing confidence.



Food and Beverage

A Wide Array of Solutions

A wide array of machine vision products provides the food and beverage industry with reliable inspection solutions. Products, combined with extensive application expertise, enable manufacturing engineers to meet tough packaging, safety, and quality goals.



Color vision sensors rapidly sort and precisely identify products based on color.



Stainless steel vision sensors are ideally suited for wash-down food and beverage environments.



ID products quickly and reliably read and verify 1D and 2D codes printed by all methods.



Inspection sensors are used for presence sensing, such as verifying that the cap is on and the date/lot code is present.



PC vision systems provide solutions that meet the most challenging machine vision applications, such as high-speed reading of poorly-printed codes, and the inspection of flexible packages.

Meeting Increased Manufacturing Demands

Cognex application experience helps meet difficult production requirements

Packaging flexibility, food safety, productivity, and quality control ... they're on the mind of every manufacturing engineer and manager. Achieving tough goals in those areas requires machine vision, and the expertise of the vision supplier. More than 25 years of experience in food and beverage applications uniquely positions Cognex to help you achieve the highest levels of confidence in packaging, safety, and productivity.

The Cognex Advantage

- **Unmatched expertise** ... for the most challenging vision requirements
- **Advanced vision technology** ... provides the most powerful vision tools
- **Wide product selection** ... to exactly match the product to the job

Allergen Management

Mislabeled allergens in food processing cause expensive product recalls, and FDA traceability directives require manufacturers to track ingredients such as peanuts, soybeans, milk, eggs, shell fish, tree nuts, and wheat.

- Achieve traceability with robust vision tools that track products, while performing additional product quality checks
- Facilitate allergen management by quickly confirming package/product match and lowering the risk of a recall
- Reduce scrap by detecting mislabeled products early in the production process



Verifying the correct allergen label and its presence on the product is crucial to avoiding costly recalls.



Verifying product match ensures that a product has the correct package and ID code.



Reading can codes enables products to be tracked and traced through manufacturing.

Product Quality

Whether it's the wrong product in a package or a damaged product being shipped, the result is the same ... a dissatisfied customer and a weakened brand image. Cognex vision systems enable cost-effective quality control in a wide range of food and beverage applications.

- Confirming that ingredients are uniformly dispensed
- Maintaining consistent appearance, such as product form, texture, and composition
- Ensuring that liquids in bottles are consistent in color after mixing and filling



Checking for debris assures that no foreign objects are in a product before shipping to consumers.



Maintaining correct product shape/size is vital to a positive product image, as with candies.



Checking the completeness of each product.

Assembly Verification

Quickly and accurately checking for a complete product assembly *before* it's placed into a package and sent to consumers is critical. Increasingly, the use of vision-guided robots on the factory floor is improving production efficiency.

- Diverting incorrectly-assembled products off the production line
- Robotic picking and placement of product from conveyors into packages
- Palletizing cartons with vision-guided robotics



Detecting missing items assures that the consumer receives a complete product.



Enhancing palletizing and pick-and-place operations, for increased versatility.



Checking fill levels ensures uniform product quantities, and is vital to the fill and seal process.

Packaging Inspection

Packaging greatly affects consumer perception of product quality, reliability, and value. Machine vision is the means by which a safe, attractive package is assured. Cognex products enable faster packaging inspection without compromising accuracy.

- Detecting package imperfections, such as damaged or dented cans or boxes
- Confirming that the product matches its label, verifying that a cap is correctly positioned and tightened on the bottle, and verifying that the safety ring is present
- Reliably locating the inkjet code strings on randomly-placed cans



Checking for torn or missing labels is critical to the packaging process.



Locating and inspecting distorted or curved products is made possible by Cognex technology.



Verifying label printing integrity ensures a positive brand image on store shelves.



Achieving traceability via codes depends upon verifying that the code was clearly printed, then reading and storing the information acquired.



Checking date code presence ensures that an inkjet printer is functioning properly.



Detecting damaged products resulting from operations such as cartoning, minimizes rejects by consumers.



Verifying safety seal presence is vital to product safety and consumer confidence.

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The Cognex Product Family



DVT™ and In-Sight® Vision Sensors deliver proven Cognex technology in easy-to-use packages. These vision sensors are ideal for a wide range of food and beverage vision tasks, and offer specific models to meet all price and performance requirements.



Checker® is a family of low-cost sensors designed to address specific inspection problems. Checker detects products on the line by understanding what they look like, providing unmatched inspection reliability without precise part fixturing or handling.



DataMan™ products quickly and reliably read everything from printed 1D and 2D codes to tough DPM codes. The DataMan 100 is the world's smallest high-performance fixed-mount ID reader, and the rugged 7500 handheld ID readers set the standard for part traceability and handheld portable verification.



PC Vision Systems combine the power and flexibility of advanced programming with the simplicity of a graphical programming environment. Cognex VisionPro® systems offer quick and powerful application development.

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