



## PATTERN SORTING TOOL

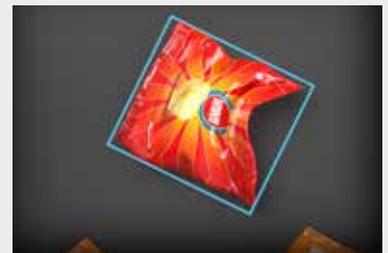
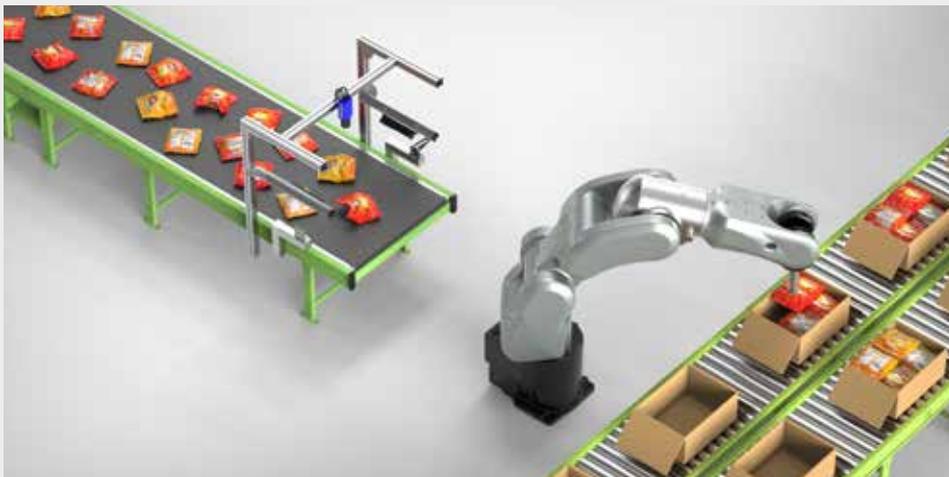
The Pattern Sorting Tool (PST) is a unique machine vision software tool that is able to recognize thousands of different objects according to their appearance, delivering the ability to identify products without the use of bar code detection. This leading-edge algorithm detects thousands of different patterns in an extremely effective way.

The Pattern Sorting Tool guarantees maximum performance and consistency in any situation; even patterns on difficult textures and in cluttered fields of view are detected yielding accurate product identification. This tool is a tremendous breakthrough in the machine vision industry. No other algorithm available is able to offer as reliable and robust recognition over such wide pattern databases.



VISION

## APPLICATIONS



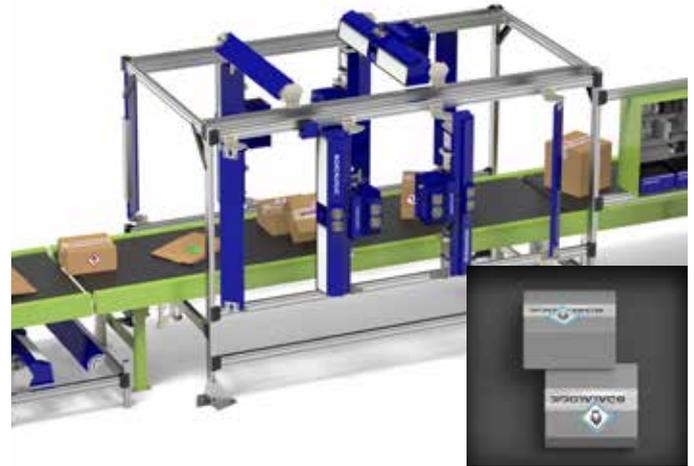
IMPACT Pattern Sorting Tool identifies and locates objects even in soft packaging such as chips, biscuits, frozen goods and pasta, enabling robot picking and sorting.



Its capability to manage large databases of patterns allows Pattern Sorting Tool to distinguish among thousands of different items manufactured or travelling on a conveyor. The algorithm delivers robust recognition in any situation: 360° pattern rotations, perspective distortions, different scales and light variations.



Datalogic vision systems running the IMPACT Pattern Sortation Tool enable countless machine vision applications for pattern recognition. The Pattern Sorting tool enables cross-check applications that ensure package contents match the information on the pallet or tote label.



The Pattern Sorting tool assists the safe handling of hazardous materials with its reliable HAZMAT label detection, minimizing risks to operators.

## PRODUCT HIGHLIGHTS



### Large pattern database management

The Pattern Sorting Tool handles databases with thousands of different patterns. Users can easily create new databases or edit existing ones.



### Recognition of Patterns Regardless of Size & Orientation

The Pattern Sorting Tool finds a trained pattern no matter its position and orientation. The algorithm can detect a reference pattern even when its dimensions are not fixed.



### Recognition of Out-of-Plane Rotations

The Pattern Sorting Tool effectively handles perspective distortions, out-of-plane pattern rotations. This capability is essential for inspection of objects having variable and inconsistent positioning or irregular shapes (e.g. boxes on a conveyor belt, non-planar objects).



### Capability of discriminating similar patterns

The PST allows users to draw a secondary ROI to search slight differences within a specific area of two similar patterns. As a result, patterns with small differences can be distinguished.



### Partially occluded pattern detection

The Pattern Sorting Tool effectively handles partially occluded patterns. By leveraging its ability to extract and match several pattern features simultaneously, the algorithm is able to identify patterns even when partially damaged or occluded.



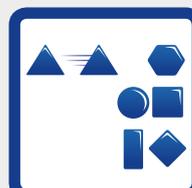
### Unaffected by Lighting Variations

The Pattern Sorting Tool extracts and matches features with minimum dependency to lighting. This guarantees extremely reliable pattern detection even when the surrounding lighting is variable and inconsistent.



### Color Match

When color detection is enabled, the Pattern Sorting Tool allows to distinguish patterns that differ from colors.



### Fast pattern training and database update

No need to retrain the database when adding or removing few patterns. A smart train ROI, automatic unknown pattern training and labelling speed up application deployment process.

## MODEL SELECTION AND ORDER INFORMATION

| DESCRIPTION                              | ORDER N°  |
|--|-----------|
| Dongle, IMPACT, PST*                     | 93ACC0187 |
| License, Pattern Sorting Tool, Processor | 95A906545 |

\* It can only be ordered for MX-E40 and MX-E80 vision processors.

The Pattern Sorting Tool license can be enabled on MX-U40/80 and MX-E40/80 Vision Processor models running Windows Embedded Standard 7. The tool license is sold on a per-processor basis i.e. once enabled on a Vision Processor it can be used with all connected cameras.

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