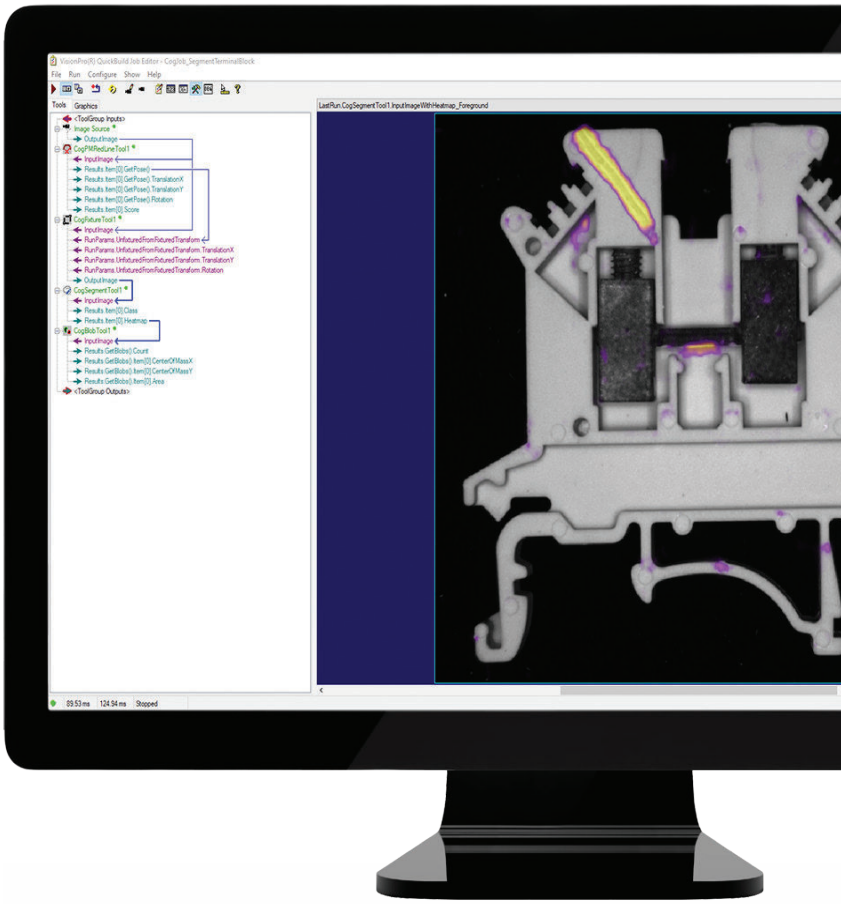
COGNEX

VISIONPRO

Solve your most challenging vision applications



VisionPro® is a PC-based software combining best-in-class vision technologies in an easy-to-use development environment. Powerful enough to automate any vision task, VisionPro leverages extensive tool prototyping to enable rapid deployment of highly-customizable applications. With rule-based tools and AI-based edge learning capabilities, this innovative software is ready to support your vision needs for today and tomorrow.

Intuitive development environment and modular tool blocks

Graphical interface with drag-and-drop programming simplifies setup

Industry-leading vision tools

Comprehensive set of rule-based tools addresses a broad range of applications

Performance optimization

Robust design accommodates multi-core and multi-threaded processors

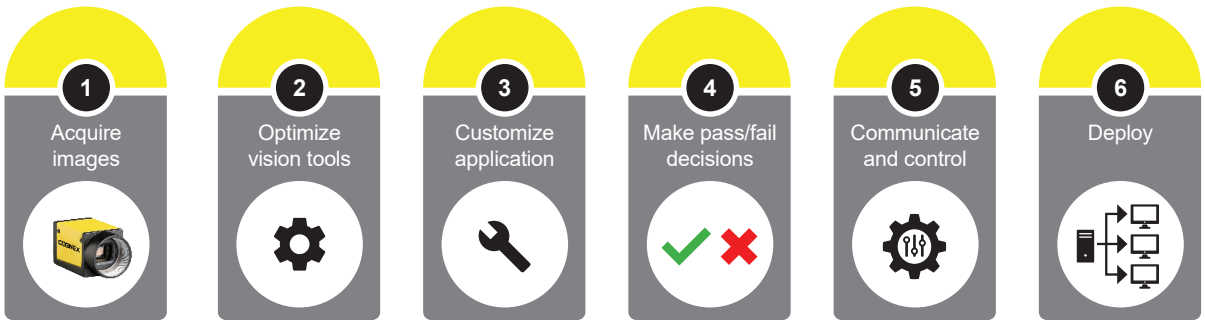
Powerful edge learning technology

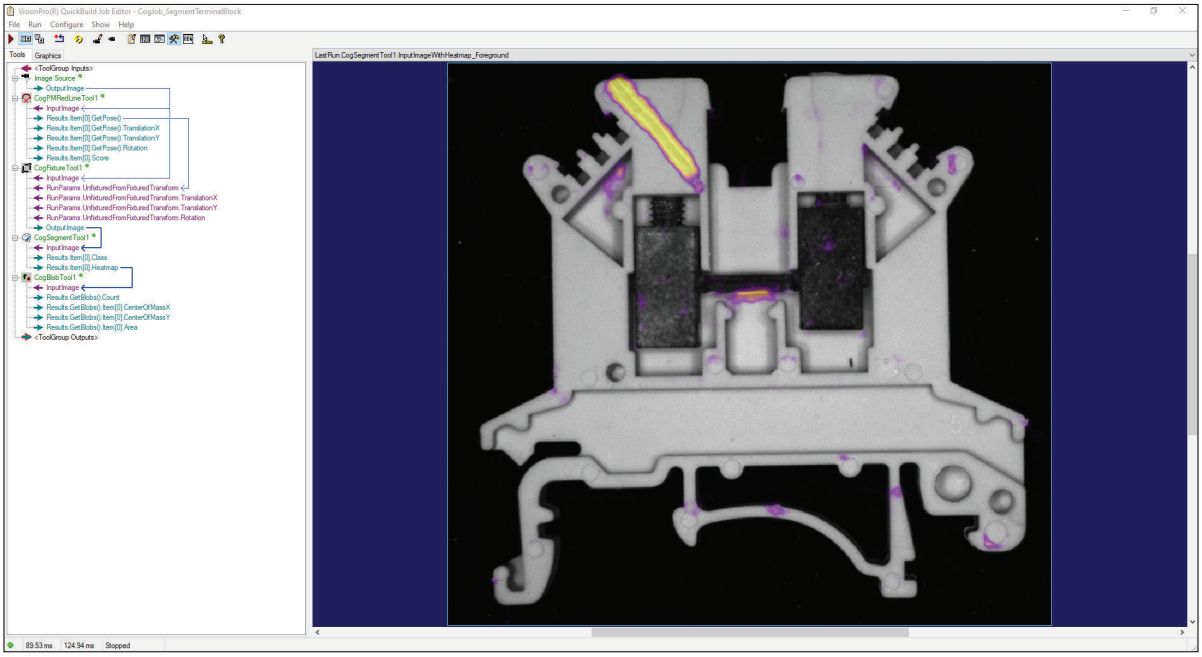
Combine the power of AI-based edge learning technology with the reliability of traditional rule-based tools in the same prototyping environment. Users can link rule-based and edge learning tools to solve complex vision tasks in minutes, and deploy the job in a standard VisionPro tool block.

QuickBuild environment shortens development time

VisionPro makes it simple to automate vision tasks with the QuickBuild™ prototyping environment. Using the intuitive graphical interface and point-and-click training, you can easily configure acquisition, select and optimize tools, and make pass/fail decisions, with no prior programming experience required. Modular tool blocks enable users to quickly create and reuse components, further supporting fast and flexible deployment. Plus, the ability for scripting addresses more sophisticated vision applications.

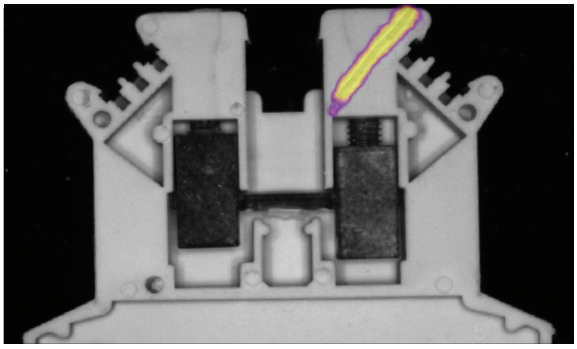
QuickBuild workflow





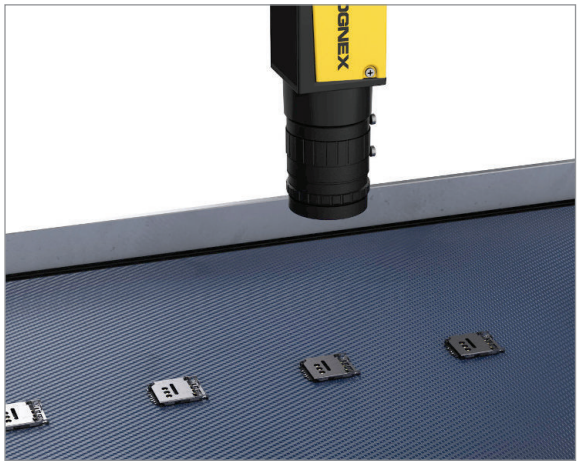
Edge learning tools deliver the power of deep learning without the complexity

VisionPro includes ViDi™ EL tools that offer a simpler and faster method of solving applications. ViDi EL tools empower users to solve problems with example-based training, no parameter adjustments or vision expertise necessary.



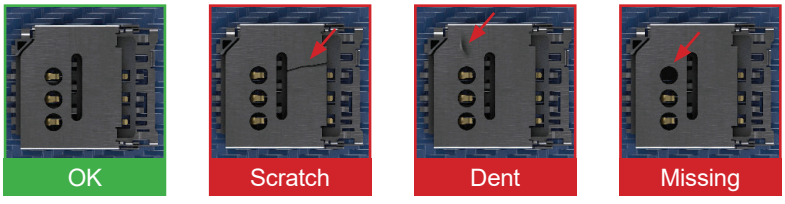
ViDi EL Segment

Quickly separate desired pixels from the background with the ViDi EL Segment tool. Highlight foreground pixels in five to ten images and let edge learning technology do the rest. This enables users to detect foreign objects, extract parts from a scene, highlight defect areas, or tackle any other task where specific regions within an image are required for further processing.



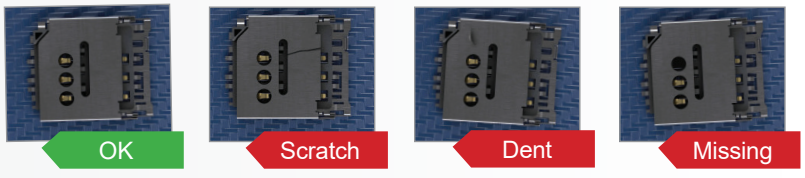
ViDi EL Classify

Go beyond the standard OK/NG output with the ViDi EL Classify tool. The tool identifies and sorts parts based on multiple features or characteristics. This enables users to classify defects into different categories and correctly identify parts with variation, allowing you to automate a wider range of tasks.



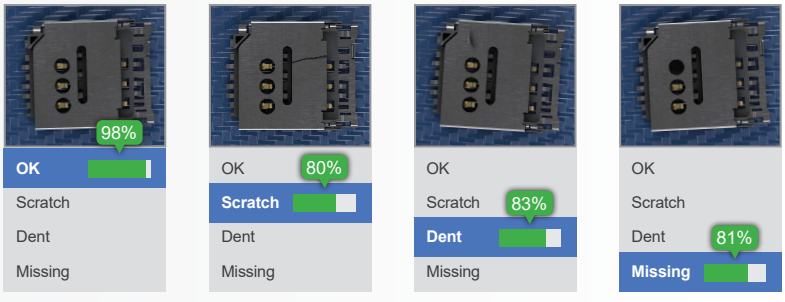
Training

ViDi EL tools are trained in minutes, using as few as five to ten images to deliver accurate results.



Real-time visual feedback

View results from your edge learning tool in real-time for instant feedback. For ViDi EL Classify, a confidence score indicates the predicted class of an unlabeled image, while for ViDi EL Segment, a heatmap indicates the predicted segmentation region. Users can then accept the prediction or determine that re-training is needed.

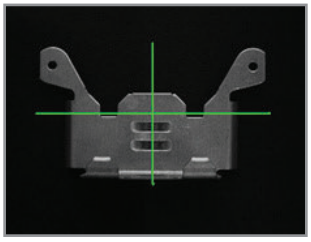


Extensive library of tools tackles your toughest vision challenges

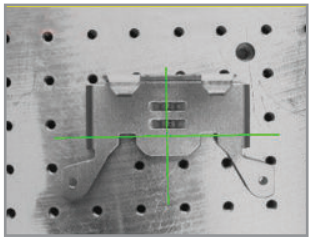
From inspection and verification to robotic guidance applications, VisionPro offers rule-based and edge learning tools capable of solving vision applications of ranging complexity. Industry-proven, rule-based tools offer reliable, highly accurate automation, while edge learning tools provide solutions for tasks that introduce significant variation.

PatMax

The industry standard for part and feature location.



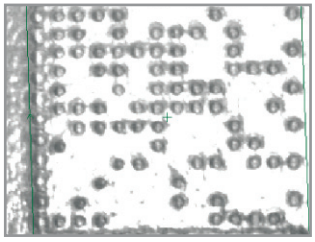
Trained image



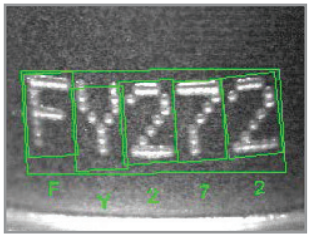
Confusing background

Identification and Verification

Optimized code reading and character verification.



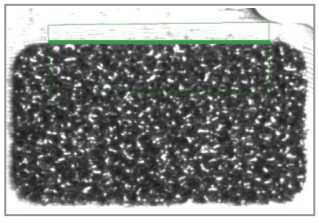
IDMax® – Degraded DataMatrix codes



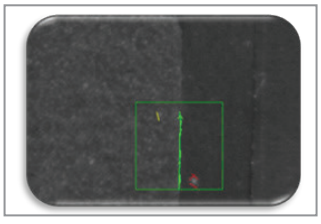
OCVMax – Vertical shift dot-matrix font

LineMax

Advanced line finding under low contrast and noisy conditions.



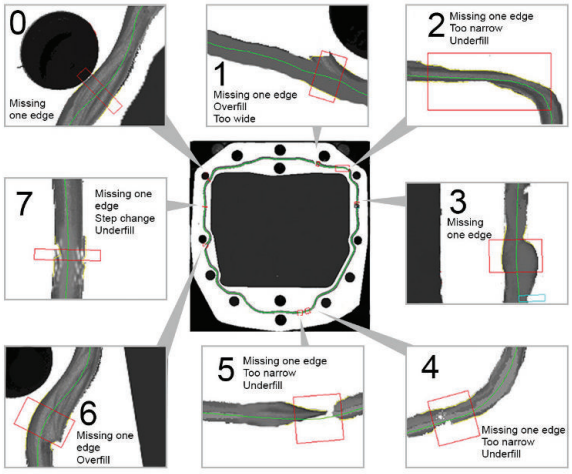
Noisy background



Low contrast

BeadInspect

Robust bead inspection locates glue beads on surfaces and detects defects.



COGNEX

Companies around the world rely on Cognex vision and barcode reading solutions to optimize quality, drive down costs and control traceability.

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