COGNEX

IN-SIGHT® 8405 VISION SYSTEM

The high-performance In-Sight 8405 is an ultra-compact 5 megapixel (MP) vision system that delivers high-performance vision tools, faster communication speeds, and high resolution in a small package that is ideal for integrating into space constrained applications.
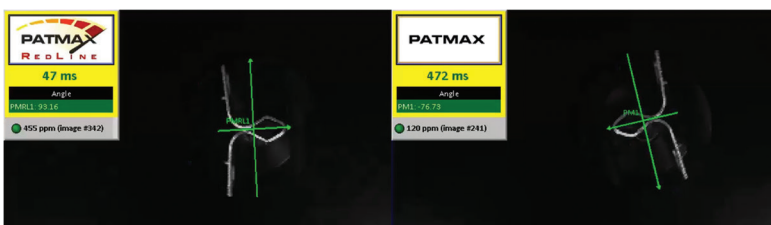
> World's smallest 5MP stand-alone vision system

> Powerful Cognex vision tool library including new PatMax RedLine™ and JavaScript support

> High speed communication with Gigabit Ethernet

Compact vision system fits just about anywhere

In-Sight 8405 compresses an entire stand-alone vision system into an amazingly small package. Its compact size, together with Power over Ethernet (PoE) to minimize cabling, and non-linear calibration tool that enables mounting at angles of up to 45 degrees makes the In-Sight 8405 vision system ideal for integrating into tight spaces on robots and hard-to-reach machinery anywhere on the production line.

PatMax, completely reinvented

PatMax RedLine was designed with one goal in mind: blazing fast pattern matching. In typical applications, PatMax RedLine runs 4 to 7 times faster than PatMax – or faster! – with no loss of search accuracy or robustness. Together with PatMax RedLine, the 8405 can reduce cycle times and increase throughput without compromising inspection accuracy.

High-performance vision tools

The In-Sight 8405 offers vision tools that are optimized to run at high speed. This includes PatMax® RedLine pattern matching, filtering (grayscale), advanced defect detection tools, ID tools (1DMax, 2DMax, and OCRMax) as well as the foundation tools of blob, edge, histogram, and non-linear calibration.
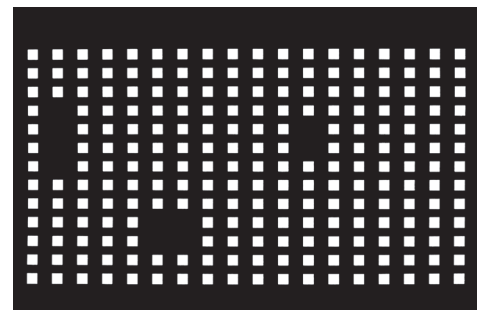
Flexible and easy Integration

Equipped with In-Sight Explorer software, the In-Sight 8405 provides quick and easy setup with the step-by-step EasyBuilder® interface. Advanced users can access the power and flexibility of the spreadsheet, including the new script function that uses standard JavaScript to simplify complex and data-intensive tasks. With scripting, constructing complicated formulas, analyzing large sets of data and managing spreadsheet cell execution logic can simplify job file maintenance.

Features at-a-glance

❯ World's smallest 5MP stand-alone vision system

❯ Compact design

❯ Powerful Cognex vision tool library including new PatMax RedLine™ and scripting functionality

❯ High resolution allows larger field of view (FOV) without sacrificing speed or accuracy

❯ High speed communication with Gigabit Ethernet

❯ Power over Ethernet to minimize cabling

Scripting Solution Spotlight:
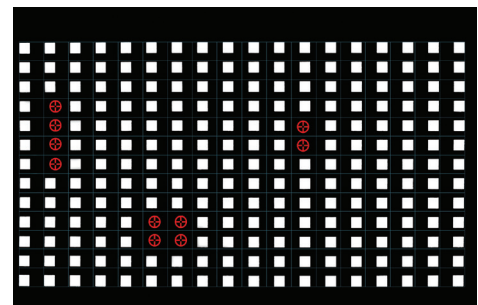
1. Find missing parts in tray with blob tool

2. Use scripting to parse all results

3. Locate and label missing parts

SPECIFICATIONS

GUI Interface	Spreadsheet and EasyBuilder
Firmware	In-Sight Explorer 5.1.0 or later
Job/Program Memory	512 MB non-volatile flash memory (unlimited storage via remote network device)
Image Processing Memory	512MB SDRAM
Sensor Type	1/2.5 inch CMOS, rolling-shutter
Lens Type	C-Mount
Maximum Resolution (pixels)	2592 x 1944
Acquisition Rate	10 full frames per second
Trigger	1 opto-isolated, acquisition trigger input. Remote software commands via Ethernet
Discrete Outputs	2 opto-isolated, NPN/PNP high-speed output lines
Status LEDs	Network, 2 user-configurable
Network Communication	RJ45 Ethernet port (locking), 10/100/1000 BaseT with auto MDIX. IEEE 802.3af TCP/IP Protocol
Power	Class 2 Power over Ethernet (PoE) device
Material	Die-cast zinc housing
Dimensions	31 mm x 31 mm x 63 mm
Connector type	RJ45 (Locking)for PoE and communication; M8 for IO
IP Rating	IP51

COGNEX

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

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