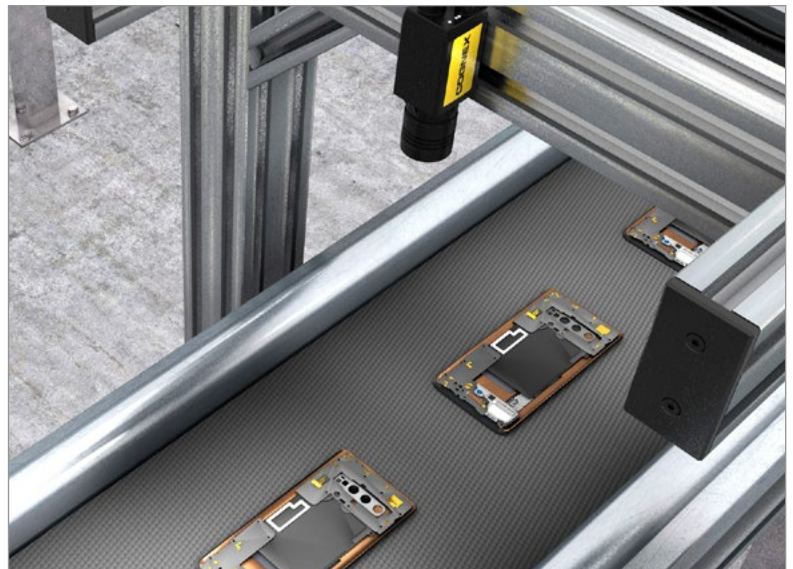


## IN-SIGHT 8000 SERIES VISION SYSTEMS

The In-Sight® 8000 series, a family of ultra-compact, standalone smart camera vision systems, delivers industry-leading vision tool performance in the form factor of a traditional GigE Vision® camera.

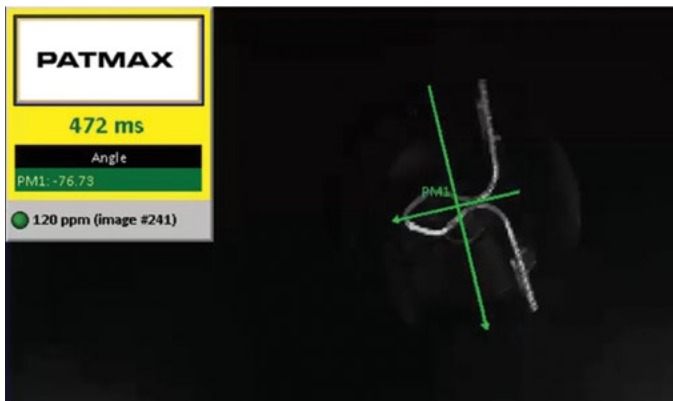


- World's smallest standalone vision system, available 0.3MP up to 5MP
- Powerful vision tool library including new PatMax RedLine®, OCRMax™, PowerGrid®, Hotbars®, and IDMax®
- Step-by-step application setup using EasyBuilder®, with the added flexibility and control of a spreadsheet with scripting
- High-speed communication with Gigabit Ethernet



### 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 8000 series can reduce cycle times and increase throughput without compromising inspection accuracy.



## Compact vision system fits just about anywhere

The In-Sight 8000 series compresses an entire stand-alone vision system into an amazingly small package. Its compact size, together with Power over Ethernet (PoE) to minimize cabling makes the In-Sight 8000 vision system family ideal for integrating into tight spaces on robots and hard-to-reach machinery anywhere on the production line. From high acquisition speed VGA to high resolution 5MP system, the In-Sight 8000 delivers the resolution and speed you need for your application, in a package the size of an image capture only camera.



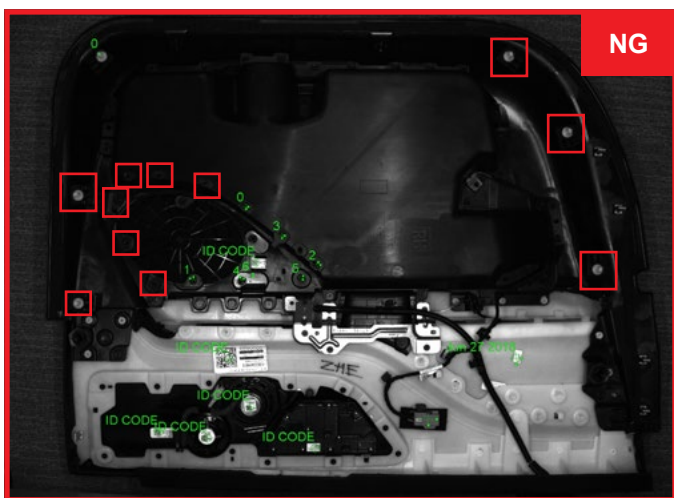
## High-performance vision tools

The In-Sight 8000 series offers vision tools that are optimized to run at high speed. This includes PatMax RedLine pattern matching, image processing, color extraction, advanced defect detection, PowerGrid and Hotbars for barcode reading, as well as the foundation tools like blob, edge, histogram and non-linear calibration.

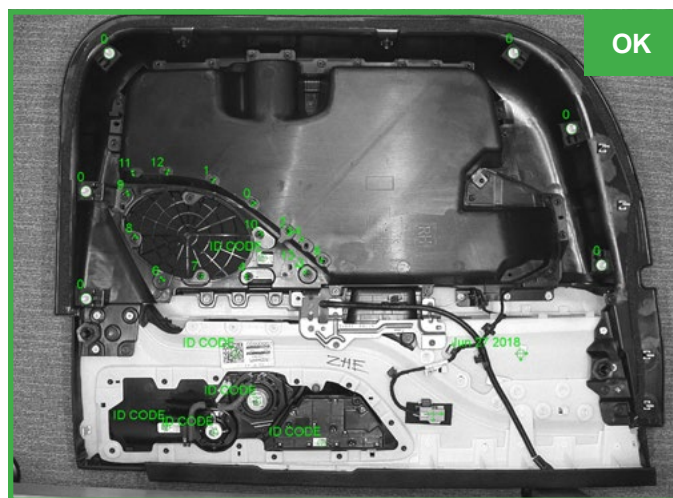
## Advanced image formation technology

Low contrast environments present difficult challenges in multi-point assembly verification and fine detail inspection environments. Designed to solve these issues, the In-Sight 8505P model also features HDR+, which stretches the boundaries of high dynamic range (HDR) technology to enhance image contrast across the entire image with no reduction in acquisition speed. This creates a more uniform image in a single acquisition allowing greater depth-of-field, faster line speeds, and improved handling of difficult to read inspection targets and codes.

### No HDR

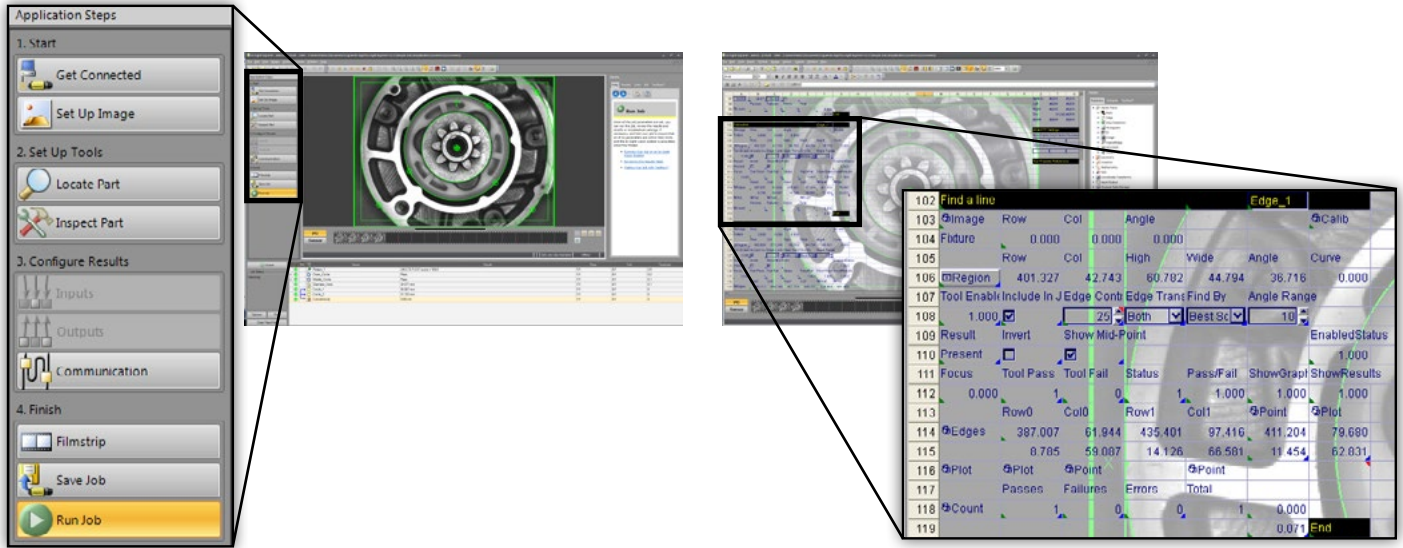


### HDR+

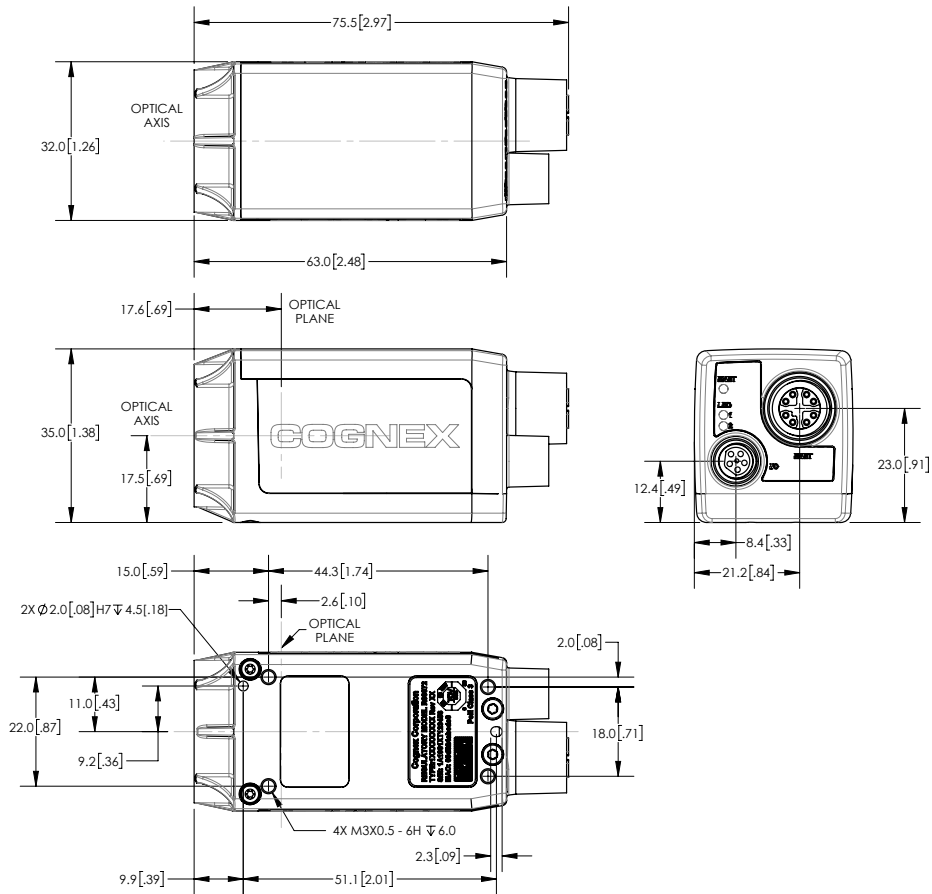


# Flexible and easy integration

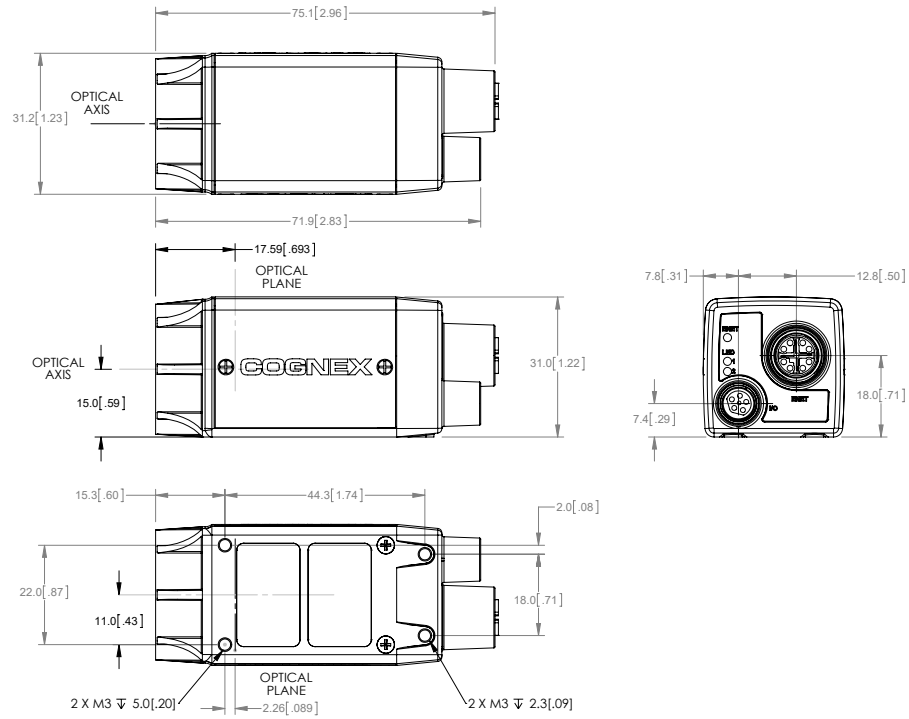
Like all In-Sight vision systems, the In-Sight 8000 series are conveniently setup with the In-Sight Explorer® software. In-Sight Explorer combines the guided step by step setup of EasyBuilder with the additional power and flexibility of the spreadsheet for greater control and customizing of application data.



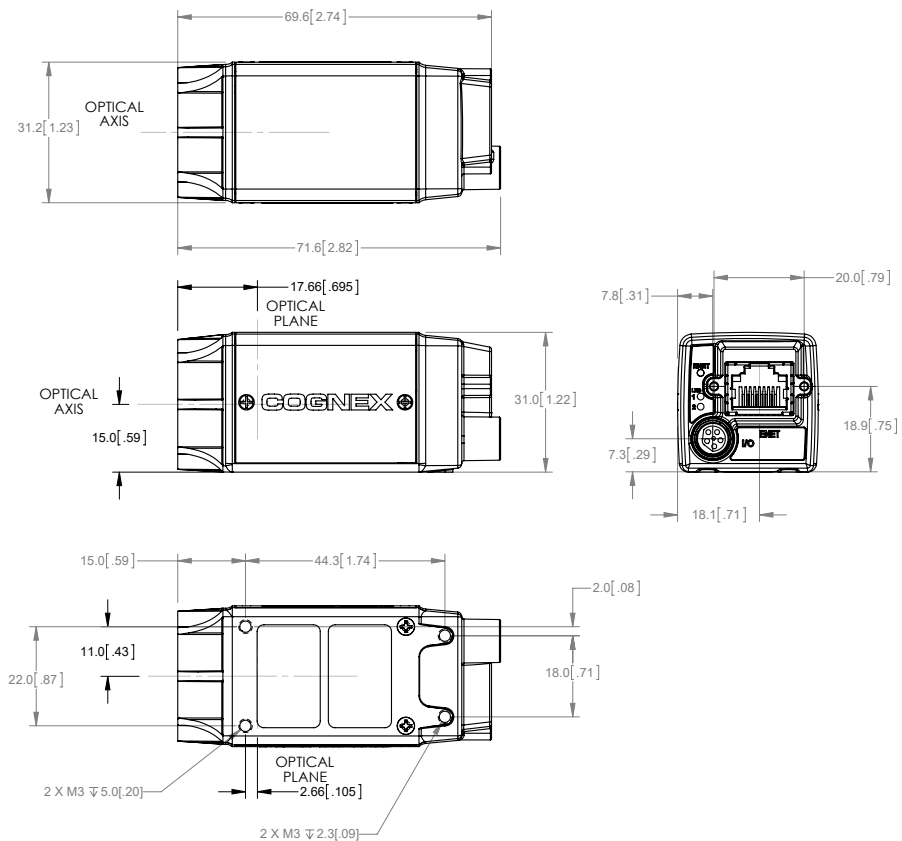
## In-Sight 8500P, 8501P, 8502P and 8505P



## In-Sight 8100, 8101, 8200, 8400, 8401, 8402



## In-Sight 8405





# SPECIFICATIONS

|                           | In-Sight 8100  | In-Sight 8101 | In-Sight 8200 | In-Sight 8400 | In-Sight 8401 | In-Sight 8402 | In-Sight 8405                          | In-Sight 8500P                  | In-Sight 8501P       | In-Sight 8502P | In-Sight 8505P |    |
|---------------------------|--|---------------|---------------|---------------|---------------|---------------|--|---------------------------------|----------------------|----------------|----------------|----|
| Performance Factor        | 1X   |               | 1.7X          | 3.9X          |               |               |  | 4.6X                            |                      |                |                |    |
| Image Type                | Monochrome and Color   |               |               |               |               |               | Monochrome                             |                                 | Monochrome and Color |                |                |    |
| Job/Program Memory        | 512 MB   |               |               |               |               |               |  | 14.8 GB                         |                      |                |                |    |
| Image Processing Memory   | 512 MB   |               |               |               |               |               |  |                                 |                      |                |                |    |
| Sensor Type               | CMOS, global shutter   |               |               |               |               |               | CMOS, rolling shutter                  | CMOS, global shutter            |                      |                |                |    |
| Resolution                | 640 x 480  | 1280 x 1024   | 640 x 480     | 640 x 480     | 1280 x 1024   | 1600 x 1200   | 2592 x 1944                            | 640 x 480<br>800 x 600          | 1280 x 1024          | 1920 x 1200    | 2448 x 2048    |    |
| HDR+ Support <sup>1</sup> | No   | No            | No            | No            | No            | No            | No                                     | Yes                             | Yes                  | Yes            | Yes            |    |
| Acquisition Rate (fps)    | Monochrome   | 217           | 76            | 217           | 217           | 76            | 53                                     | 13                              | 133<br>108           | 66             | 55             | 32 |
|                           | Color  | 135           | 45            | 135           | 135           | 45            | 33                                     | n/a                             | n/a                  | n/a            | 35             | 17 |
| Lens Type                 | C-mount  |               |               |               |               |               |  |                                 |                      |                |                |    |
| Indicator LEDs            | Network status, 2 configurable LEDs  |               |               |               |               |               |  |                                 |                      |                |                |    |
| Built-in I/O              | 1 dedicated trigger input, 2 high speed outputs (including strobe). Additional I/O available via CIO-MICRO <sup>2</sup> external I/O module. |               |               |               |               |               |  |                                 |                      |                |                |    |
| Power                     | Class 2 Power over Ethernet (PoE)  |               |               |               |               |               | Class 3 Power over Ethernet (PoE)      |                                 |                      |                |                |    |
| Industrial Connectors     | M12: Power/Ethernet,<br>M8: I/O  |               |               |               |               |               | RJ45:<br>Power/<br>Ethernet,<br>M8: IO | M12: Power/Ethernet,<br>M8: I/O |                      |                |                |    |
| Industrial Protocols      | OPC UA, Ethernet/IP with AOP, PROFINET Class B, iQSS, Modbus TCP, SLMP/SLMP Scanner  |               |               |               |               |               |  |                                 |                      |                |                |    |
| Size                      | 31 mm x 31.2 mm x 75.1 mm  |               |               |               |               |               | 31 mm x<br>31.2 mm x<br>71.6 mm        | 35 mm x<br>32 mm x 75.55 mm     |                      |                |                |    |
| Weight                    | 132.2 g  |               |               |               |               |               | 78 g                                   | 192 g                           |                      |                |                |    |
| Network Speed             | 10/1000/1000 Mbps (Gigabit)  |               |               |               |               |               |  |                                 |                      |                |                |    |
| Rockwell Add-on Profile   | Yes  |               |               |               |               |               |  |                                 |                      |                |                |    |

<sup>1</sup> HDR+ supported on monochrome models only.

<sup>2</sup> The In-Sight 8505P/8500P/8501P/8502P vision systems must be connected to a Class 0, 3 or 4 PoE power source, rated for at least 12.95 Watts. The CIO-MICRO I/O module is a Class 2 PoE device and therefore cannot be used to supply power to the In-Sight 8505P/8500P/8501P/8502P vision system via the I/O module's PoE port.

## 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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