COGNEX

IN-SIGHT 9902L
LINE SCAN VISION SYSTEM

The In-Sight® 9902L 2K line scan smart camera is a high resolution self-contained vision system ideal for detailed inspections of large, cylindrical, or continuously moving objects. The 9902L acquires up to 16,000 lines of 2,000 pixels per line to produce a 32MP image that can used to detect even the smallest features and defects. Each pixel line is acquired at 67,000 lines per second to keep up with the fastest production lines. This standalone vision system only requires a small view of the target part, making it an ideal choice for installations with restrictive field of view or mounting space requirements.

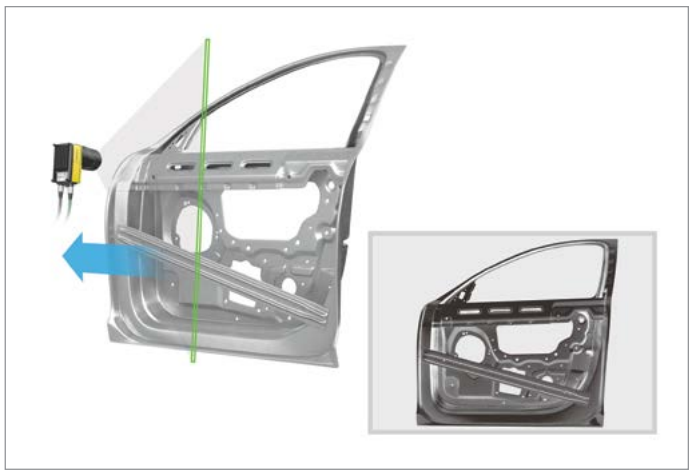
The only self-contained line scan system

The In-Sight 9902L is the only embedded industrial line scan system that processes images directly on the camera. Onboard processing eliminates the inconvenience of having to install a separate controller. Plus, the IP67-rated housing protects the system from liquids and dust without the need for an external enclosure.

Inspects long, cylindrical, and continuously moving parts

Line scan cameras are an ideal choice for inspecting oversized or cylindrical objects on fast-moving production lines. There are many applications for line scan, the most common including:

- Cylindrical objects, such automotive filters and batteries, where 100% of the product's surface can be inspected as it rotates along the production line
- Label inspection on curved surfaces, such as soup cans or bottles wrappers, that can be "unrolled" into a 2D flat surface for inspection
- Large objects, such as solar cells and car door panels that can be imaged and inspected as a whole



Fast, high resolution image acquisition

The In-Sight 9902L has a blazing fast 67 kHz line rate, acquiring each line of data in under 15 microseconds. Capturing 2,000 pixels with each line, the camera delivers 32MP images (16,000 lines) that enable vision tools to perform highly detailed inspections.

Wrap around LED indicator light provides clear pass/fail inspection results.

Self-contained vision system does not need a controller.

- Processes images directly on the camera
- Mounts easily on space-constrained production lines
- Captures images of large parts through narrow FOV

IP67-rated housing provides protection from harsh factory environments.

2K x 16K (32MP) resolution enables detailed inspections, or configure to a 1K x 16K (16MP) for increased image brightness.

In-Sight Explorer™ software with EasyBuilder simplifies application development and deployment.

Full suite of high performance vision tools, including PatMax® RedLine, OCRMax™, ID, and measurement tools.

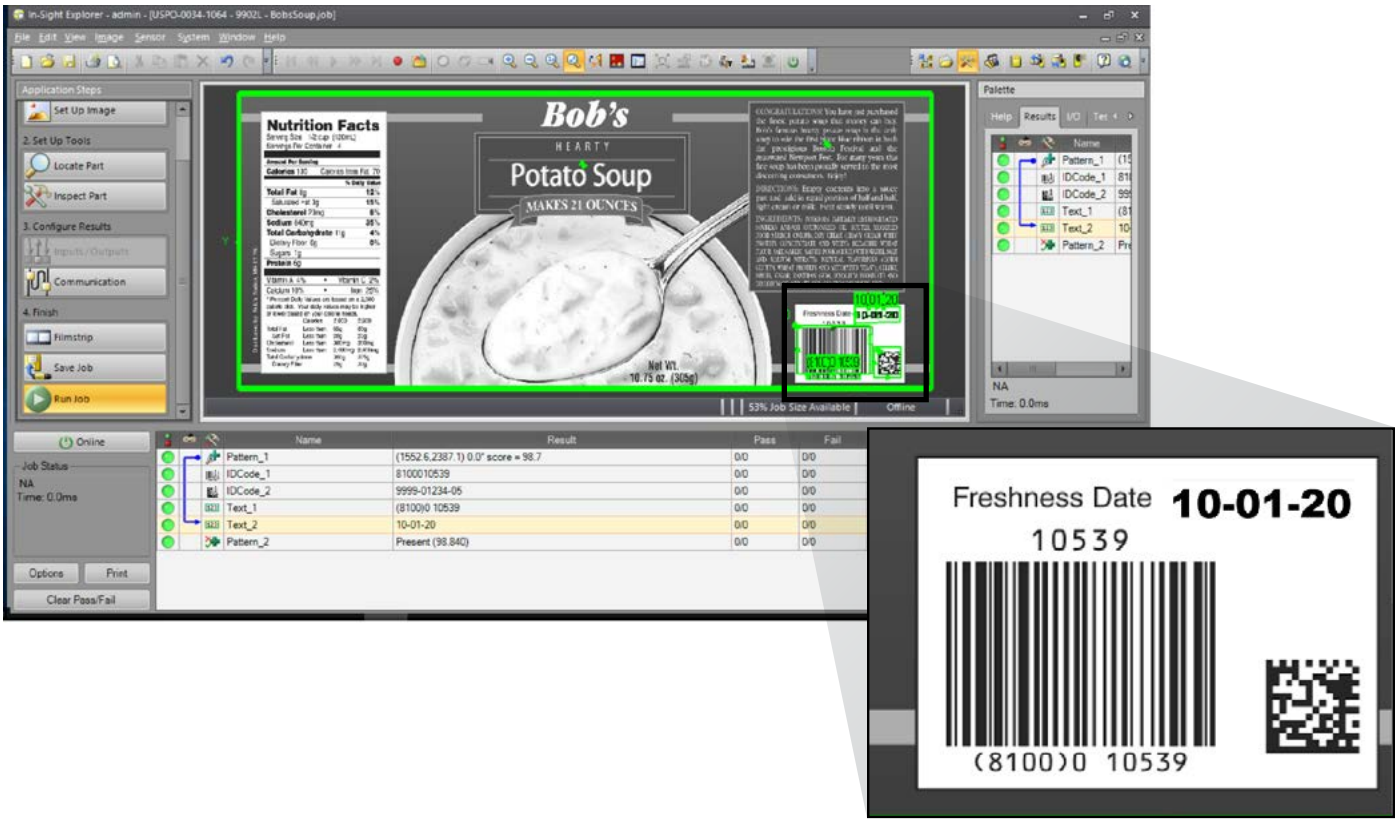
Clip Mode allows for customizable image length based on the target object while online.

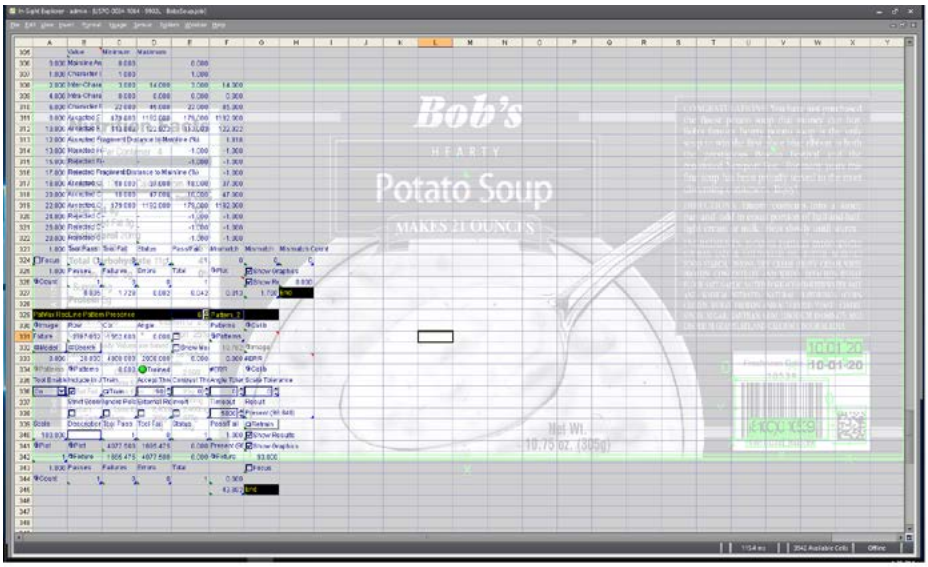
Supports hardware or software encoder.

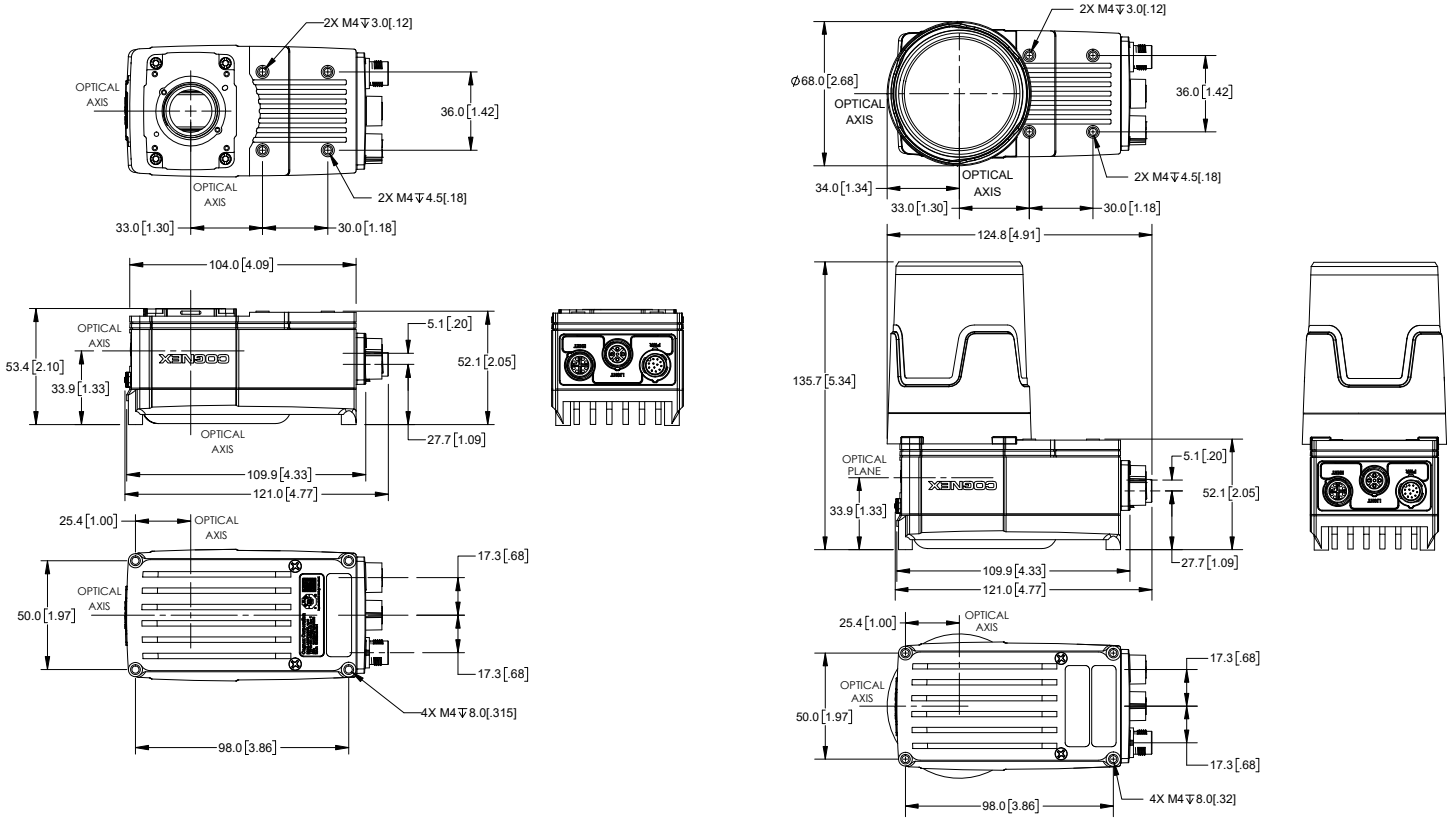
Integrates easily into your system infrastructure

Like all In-Sight vision systems, the In-Sight 9902L uses In-Sight Explorer software with EasyBuilder® to set up and monitor machine vision inspections. The intuitive interface guides operators through a step-by-step setup process allowing both novice and experienced users to configure vision applications quickly and easily.

While many applications can be solved using the point-and-click EasyBuilder interface, users can access the In-Sight spreadsheet for ultimate control through direct access to the vision tools and communication options. Access to the spreadsheet not only provides programming flexibility to make essential adjustments, it also offers assurance that you will be able to solve any vision application.



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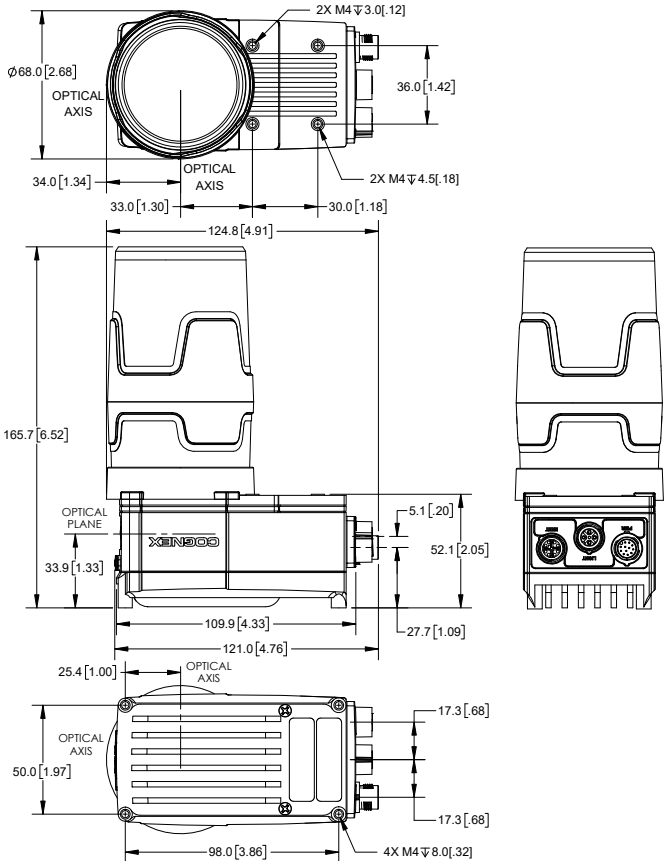
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IN-SIGHT 9902L SPECIFICATIONS

Image Type	Monochrome
Job/Program	7.2 GB non-volatile flash memory
Image Processing Memory	512 MB SDRAM
Additional Storage	8 GB SD card, network drive via FTP over gigabit network
Sensor Type	CMOS, global shutter
Resolution (pixels)	2048 x 1; 2048 x 16384 (up to 16384 lines) software configurable, or 1024 x 1; 1024 x 16384 (up to 16384 lines) software configurable
Line Rate	66 K lines per second
Lens Type	C-mount only
Indicator LEDs	SD card status, pass/fail LED and 360° viewing indicator ring, network LED, and error LED
Built-in IO	1 dedicated trigger in, 1 input, 2 outputs
Encoder Input	2 encoder line inputs for quadrature support
Encoder Input Voltage	5–24 VDC
Power	24 VDC
Industrial M12 Connectors	Power/IO; Ethernet; External light power/control (N/A)
Protection	IP67 with C-mount lens cover
Network Communications	1G (1000)/100/10 Mbps
IEEE 1588 Support	Timestamp resolution: 8 ns; Synchronization accuracy through transparent clock: 5 ns
Rockwell Add-on Profile	Yes
Vision Tools	Full vision tool suite with PatMax. Optional PatMax RedLine tool.

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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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