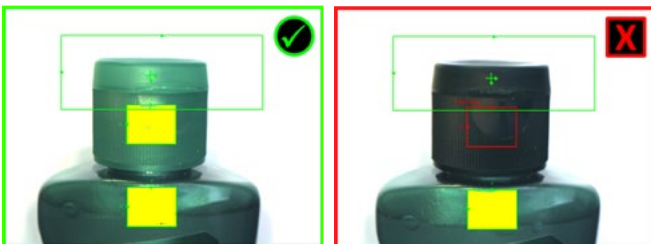
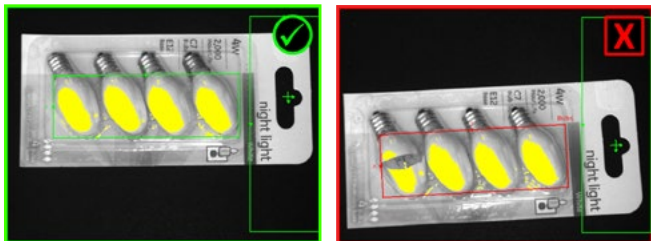
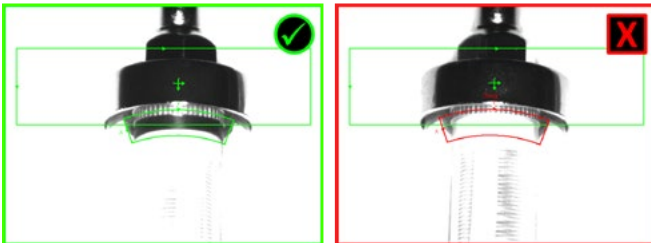
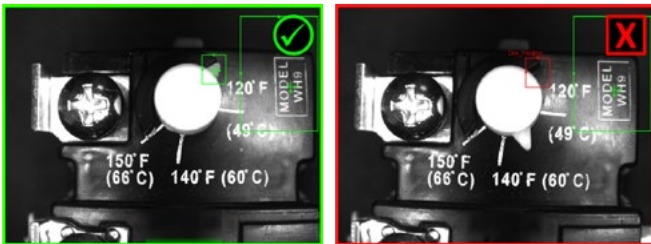


IN-SIGHT 2000 SERIES VISION SENSORS

In-Sight® 2000 series vision sensors combine the power of an In-Sight vision system with the simplicity and affordability of a vision sensor. Ideal for solving error-proofing applications, these vision sensors set new standards for value, ease of use and flexibility thanks to a powerful combination of proven In-Sight vision tools, simple setup, and a modular design featuring field-changeable lighting and optics.

Together with the In-Sight Explorer™ EasyBuilder® interface, which provides fast, step-by-step application setup, these vision sensors allow even novice users to achieve extremely reliable inspection performance in nearly any production environment.

In-Sight 2000 series vision sensors can also be configured for in-line and right-angle installation and are available in two form factors. This modular body design provides maximum flexibility to mount in tight spaces, allows for customized wiring and optical paths, and minimizes the need to design new mechanical fixtures.



Benefits at-a-glance

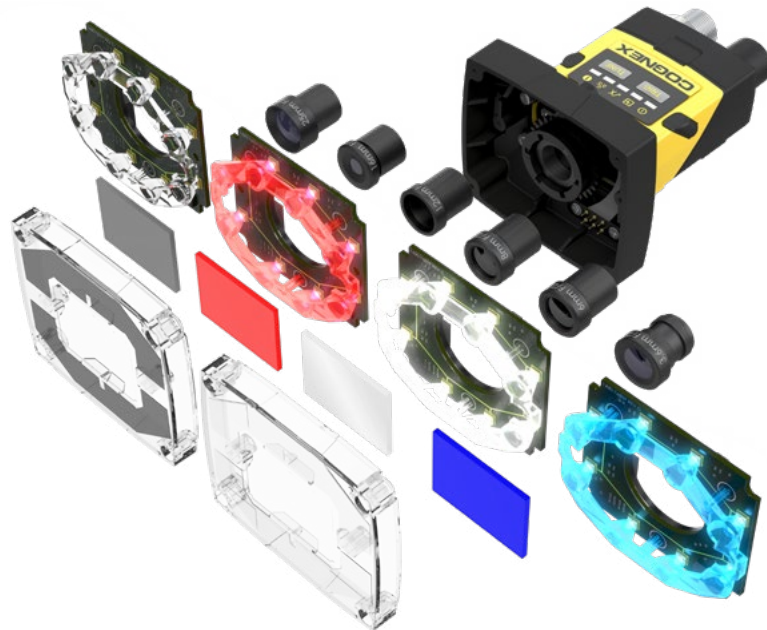
- Affordable vision sensor powered by In-Sight Explorer software and EasyBuilder—the same interface used for all In-Sight vision systems
- Simple for both new and existing users to meet their automated inspection challenges
- Monochrome and color sensor models solve presence/absence applications, including color verification
- Proven, reliable Cognex In-Sight vision tools
- Compact, modular design with field-changeable, integrated optics and lighting
- Fully compatible with Cognex VisionView® PC software and VisionView 900 HMI touchscreen panel

Choice of lighting and optics for different application requirements

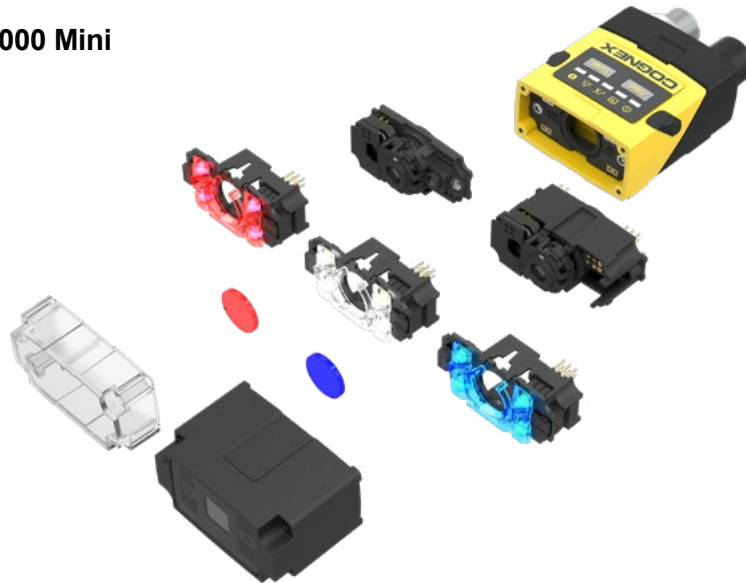
All In-Sight 2000 series models include an integrated lens and LED illumination that eliminates the need for costly external lighting. Lenses and lighting are field-interchangeable to adjust to different application requirements.

The In-Sight 2000 Mini has a smaller form factor making it ideal for mounting in tight spaces. This model also features an autofocus lens powered by liquid lens technology. This eliminates the need to manually refocus or adjust the mounting height of the sensor during a line changeover.

In-Sight 2000



In-Sight 2000 Mini



A model for any application

Available in both monochrome and color image models, and with three different combinations of vision tools, the In-Sight 2000 series lets you choose the level of capability you need. Many applications require only the simple pattern matching of the 2000-110 models. The 2000-120 and 2000-130 models offer larger tool sets for solving a wider range of applications, including a 2x magnification mode that delivers greater image detail for inspecting smaller features on parts. Whatever your inspection application, there's an In-Sight 2000 vision sensor model that's right for the job.

Fast, intuitive setup with EasyBuilder

With its intuitive, point-and-click presence/absence tools, the EasyBuilder interface is ideal for setting up simple pass/fail inspections. When more complex inspections are required, users can build on their experience to create vision applications using more advanced In-Sight vision systems—in the same In-Sight Explorer interface.

Simple steps guide you through configuring and deploying your application

Choose tools from the list to add them to your inspection

| Name | Result | Type |
|-------------|--------|-------------|
| Flavor | Pass | Pattern |
| DateLotCode | Pass | Pixel Count |
| Straw | Pass | Brightness |
| Seal | Pass | Brightness |
| LeftFlap | Pass | Contrast |
| RightFlap | Pass | Contrast |

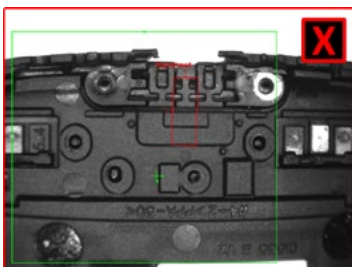
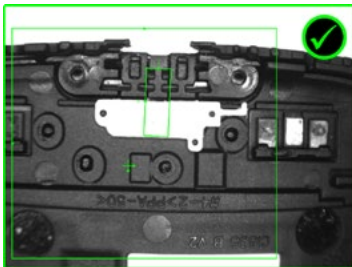
See inspection results at a glance

Point and click controls make it quick and easy to set up any tool to achieve reliable results

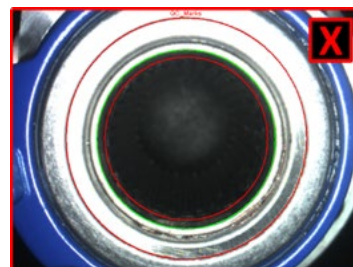
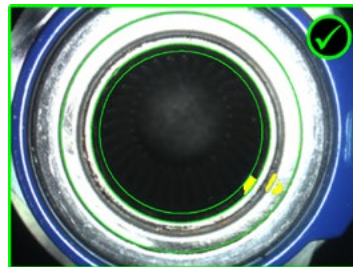
A solution for any industry

In-Sight 2000 series vision sensors deliver simple pass/fail results across a wide range of applications in multiple industries. Powerful vision tools deliver robust inspection results for parts in all shapes and sizes. Below, a contrast tool is used to detect the presence of a gasket in an electronics sub-assembly, a pixel count tool is used to identify QA marks on an automotive part, and a color pixel count tool is used to inspect the proper packaging for a fruit snack.

Electronics



Automotive



Food and Beverage

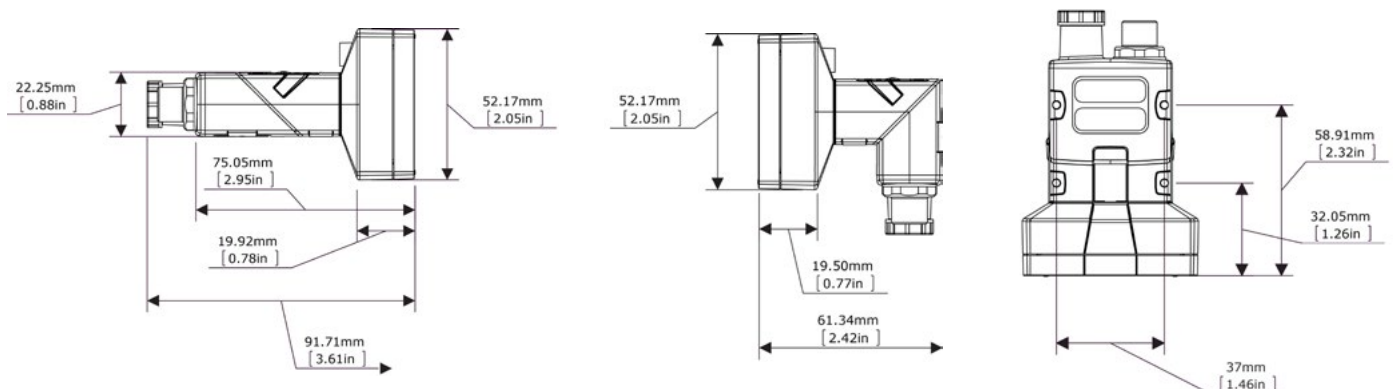


IN-SIGHT 2000 MODELS

| | | 2000-110 | 2000-120 | 2000-130 | 2000-23M | 2000-120C | 2000-130C |
|--|------------------------------|--|------------|------------|------------|-----------------------|-----------|
| User Interface | | In-Sight Explorer EasyBuilder, Cognex VisionView PC Software and VisionView 900 HMI touchscreen panel | | | | | |
| 1/3" CMOS Imager | | Monochrome | Monochrome | Monochrome | Monochrome | Color | Color |
| S-Mount/M12 Lenses | | 8 mm (standard), optional 3.6 mm, 6 mm, 12 mm, 16 mm, 25 mm | | | | | |
| Image Modes | 640 x 480 (standard) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | 640 x 480 (2x magnification) | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | 800 x 600 (2x magnification) | ✗ | ✗ | ✓ | ✓ | ✗ | ✓ |
| Lighting | Standard | Diffuse white LED ring light | | | | | |
| | Options | Red, blue and IR LED ring lights and lens filters, and polarized light cover | | | | Polarized light cover | |
| Maximum Acquisition Speed ¹ | | 40 fps | 75 fps | 75 fps | 75 fps | 55 fps | 55 fps |
| Relative Processing Speed | | 1x | 2x | 2x | 2x | 2x | 2x |
| Location Tools | Pattern | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Edge, Circle | ✗ | ✗ | ✓ | ✓ | ✗ | ✓ |
| Inspection Tools | Pattern | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Pixel Count | ✗ | Grayscale | Grayscale | Grayscale | Color | Color |
| | Brightness & Contrast | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Edges | ✗ | ✗ | ✓ | ✓ | ✗ | ✓ |
| Measurement & Counting Tools | Distance, Angle & Diameter | ✗ | ✗ | ✓ | ✓ | ✗ | ✓ |
| | Patterns & Edges | ✗ | ✗ | ✓ | ✓ | ✗ | ✓ |
| Geometry, Math and Plot Tools | | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ |
| Communications & I/O | Protocols | EtherNet/IP, PROFINET, SLMP, SLMP Scanner, Modbus TCP, TCP/IP, UDP, FTP, Telnet (Native Mode), RS-232 | | | | | |
| | Connectors | (1) Industrial M12 Ethernet, (1) M12 Power & I/O | | | | | |
| | Inputs & Outputs | (1) Acquisition trigger, (1) General purpose input ² , (4) General purpose outputs ² | | | | | |
| Mechanical | Dimensions | In-line configuration: 92 mm (3.61 in) x 60 mm (2.38 in) x 52 mm (2.05 in) Right-angle configuration: 61 mm (2.42 in) x 60 mm (2.38 in) x 52 mm (2.05 in) | | | | | |
| | Weight | 200 g (7.05 oz) | | | | | |
| | Material and Protection | Painted aluminum, IP65-rated housing | | | | | |
| Operating | Power | 24 VDC ±10%, 48 W (2.0 A) maximum when the illumination is on | | | | | |
| | Temperature | 0 °C to 40 °C (32 °F to 104 °F) | | | | | |

¹ Maximum framerate with minimum exposure; no vision tools; and 640 x 480 image with 2x Image Magnification enabled (for 2000-120/130 models)

² (7) general purpose inputs and (8) general purpose outputs when using optional CIO-1400 I/O Expansion Module.

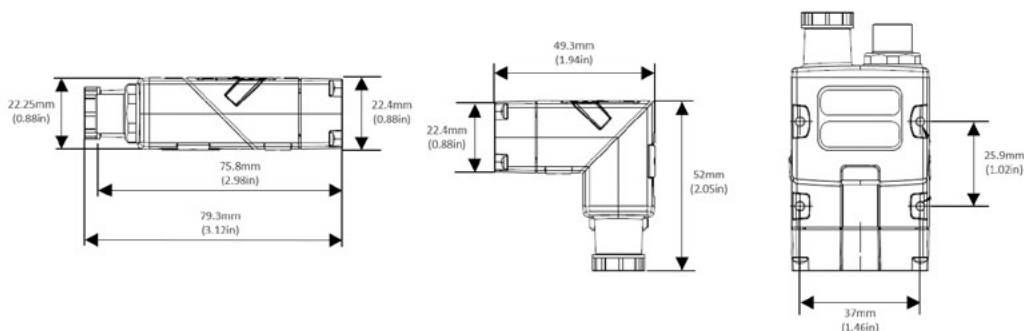


IN-SIGHT 2000 MINI MODELS

| | | 2000-110 Mini | 2000-120 Mini | 2000-130 Mini | 2000-120C Mini | 2000-130C Mini |
|--|------------------------------|--|---------------|---------------|-----------------------|----------------|
| User Interface | | In-Sight Explorer EasyBuilder, Cognex VisionView PC Software and VisionView 900 HMI touchscreen panel | | | | |
| 1/3" CMOS Imager | | Monochrome | Monochrome | Monochrome | Color | Color |
| Liquid Lens Autofocus | | 6.2 mm or 16 mm | | | | |
| Image Modes | 640 x 480 (standard) | ✓ | ✓ | ✓ | ✓ | ✓ |
| | 640 x 480 (2x magnification) | ✗ | ✓ | ✓ | ✓ | ✓ |
| | 800 x 600 (2x magnification) | ✗ | ✗ | ✓ | ✗ | ✓ |
| Lighting | Standard | Modular red LEDs | | | Modular white LEDs | |
| | Options | White, blue & IR LED lights, band-pass filters & polarizing filter | | | Polarized light cover | |
| Maximum Acquisition Speed ¹ | | 40 fps | 75 fps | 75 fps | 55 fps | 55 fps |
| Relative Processing Speed | | 1x | 2x | 2x | 2x | 2x |
| Location Tools | Pattern | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Edge, Circle | ✗ | ✗ | ✓ | ✗ | ✓ |
| Inspection Tools | Pattern | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Pixel Count | ✗ | Grayscale | Grayscale | Color | Color |
| | Brightness & Contrast | ✗ | ✓ | ✓ | ✓ | ✓ |
| | Edges | ✗ | ✗ | ✓ | ✗ | ✓ |
| Measurement & Counting Tools | Distance, Angle & Diameter | ✗ | ✗ | ✓ | ✗ | ✓ |
| | Patterns & Edges | ✗ | ✗ | ✓ | ✗ | ✓ |
| Communications & I/O | Protocols | EtherNet/IP, PROFINET, SLMP, SLMP Scanner, Modbus TCP, TCP/IP, UDP, FTP, Telnet (Native Mode), RS-232 | | | | |
| | Connectors | (1) Industrial M12 Ethernet, (1) M12 Power & I/O | | | | |
| | Inputs & Outputs | (1) Acquisition trigger, (1) General purpose input ² , (4) General purpose outputs ² | | | | |
| Mechanical | Dimensions | In-line configuration: 43.1 mm (1.69 in) x 22.4 mm (0.88 in) x 64 mm (2.51 in) Right-angle configuration: 43.1 mm (1.69 in) x 35.8 mm (1.40 in) x 49.3 mm (1.94 in) | | | | |
| | Weight | 142 g (5 oz) | | | | |
| | Material and Protection | Painted aluminum, IP65-rated housing | | | | |
| Operating | Power | <3.0 W (PoE or external power) | | | | |
| | Temperature | 0 °C to 40 °C (32 °F to 104 °F) | | | | |

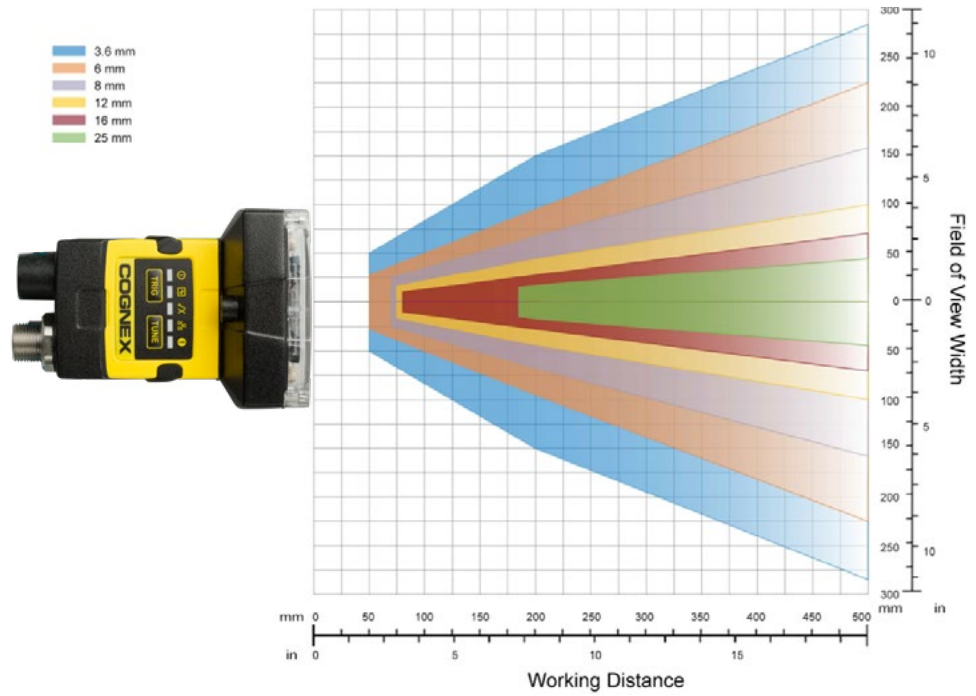
¹ Maximum framerate with minimum exposure; no vision tools; and 640 x 480 image with 2x Image Magnification enabled (for 2000-120/130 models)

² (7) general purpose inputs and (8) general purpose outputs when using optional CIO-1400 I/O Expansion Module.

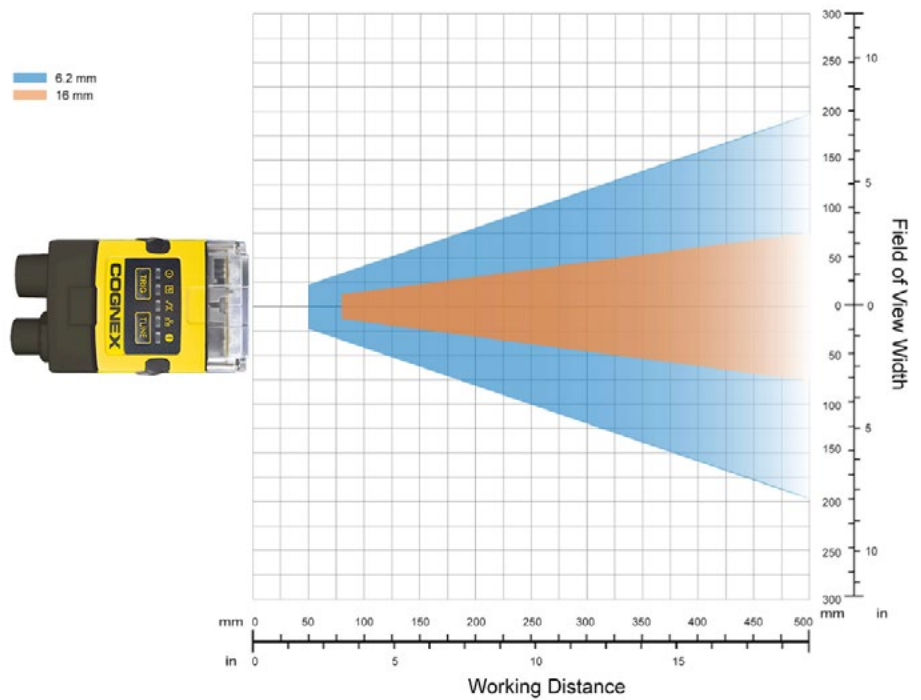


Field of View Diagrams

In-Sight 2000



In-Sight 2000 Mini



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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