

# COGNEX

PRODUCT GUIDE

Cognex has made vision easier than ever before



**IN-SIGHT**  
Vision Systems

# In-Sight ... for All Applications





# The Widest Range of Models

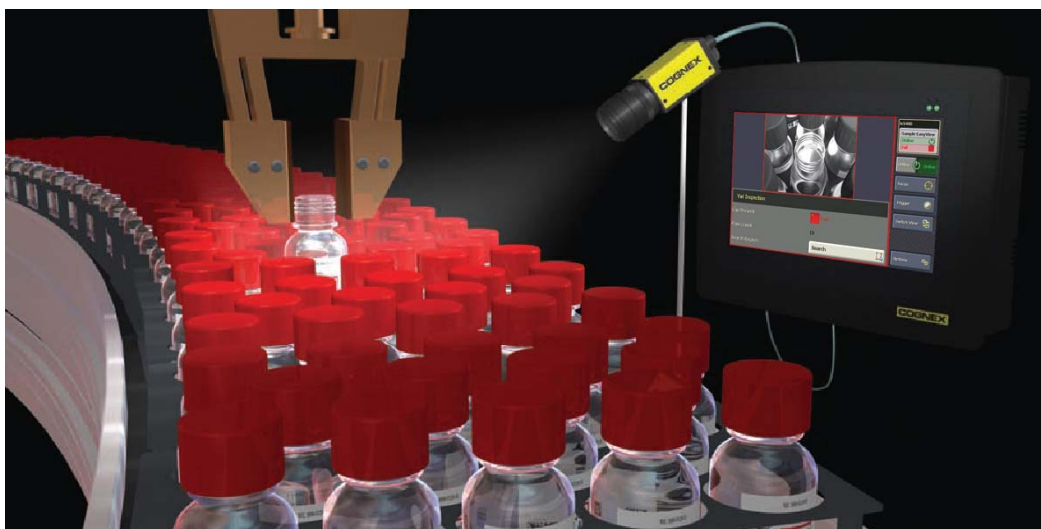
Cognex In-Sight vision systems are unmatched in their ability to inspect, guide, and identify parts and are the standard in the industry for automated inspection and product quality assurance. Whether the requirement is for low cost, high performance, small size, or industrial-grade ruggedness, there's a Cognex In-Sight vision system that's perfect for the application.

**General Purpose** models offer the best price/performance in their class. Customers have a choice of three levels of performance — from standard performance to the fastest vision system on the market. Whatever the production speed, there's an In-Sight model that can keep up with it!

**High Resolution** models are ideal for large parts, parts with fine detail, or for applications requiring that the camera be placed at a distance from the part, providing exactly what's needed for reliable results. And, the highest-speed models are also available with the highest resolution.

**Color** models offer combinations of color, speed and performance — from general color applications to differentiating colors at high production speeds.

**ID Readers** are available in a wide range of resolutions and performance levels. These readers provide 1D and 2D decoding for Direct Part Mark identification and OCV and OCR for verification and reading of alphanumeric strings.





## In-Sight Micro Series

In-Sight Micro vision systems provide world-class performance in the smallest package available. Powerful vision applications can now be solved where system size was previously a limiting factor.

**Small, Flexible Models** are ideal for mounting in very tight spaces on robots, production lines and machinery.



## In-Sight 5000 Series

In-Sight 5000 Series vision systems provide users with the highest level of In-Sight performance, and are the only vision systems available today that provide industrial-grade features as standard.

**Die-cast Aluminum Models** with sealed M12 connectors and protective lens cover provide an IP67 (NEMA 6) rating for dust and wash-down protection.

**Stainless Steel Models** are IP68-rated for caustic processing environments, such as in the food and pharmaceutical industries.



## In-Sight 3400

**Standalone Configuration** provides a remote head, with no PC required for setup, only a VGA display.

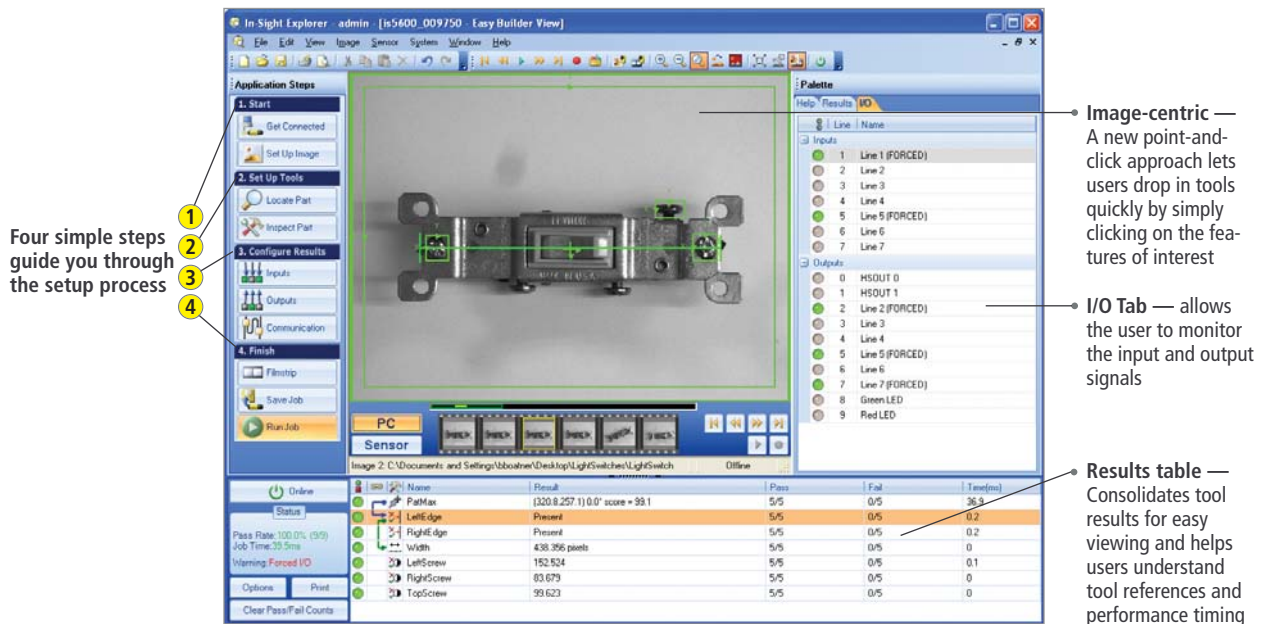


All models and specifications are shown on pages 12 and 13

# Vision has Never Been Easier

The most powerful In-Sight vision tools are now the easiest to use and are presented simply — from a control engineer’s perspective, not from a vision expert’s. The EasyBuilder interface walks you through the process of setting up your vision application, step by step.

Great for novice users, the application is deployed and running in a very short time. EasyBuilder doesn’t require users to learn programming, enabling them to focus on what’s most familiar ... the part!



The EasyBuilder user interface provides intuitive setups for even the most difficult applications. With no programming or spreadsheets needed, applications are deployed at breakthrough speed.

## Intuitive, Easy to Use

Working from an image of the part, four simple steps complete the application setup:

- 1 **Start** Find an In-Sight vision system on the network, then be guided through triggering the vision system and setting up scale and nonlinear calibrations.
- 2 **Set up tools** After finding the part, a library of 40 vision tools is available to inspect the part. The most powerful vision tools available are now made easy to use.
- 3 **Configure** A new point-and-click communications setup provides easy selection of data to be sent, and the protocol to use for communicating to a PLC, robot, or HMI for data collection and archiving results.
- 4 **Finish** In the deployment mode, colorful tool graphics, a results table, and a filmstrip control to review images simplify troubleshooting the application and identifying bad parts.

**That’s all it takes to complete an application!** In a fraction of the time that you would normally spend learning how to set up a vision system, you can have your entire solution configured, deployed, and productive.

# Flexible Display Options

Cognex offers a variety of visualization options that can be tailored to fit into any industrial application. The new VisionView operator display panel is ideal for new and novice users who need a simple “plug-and-go” product that doesn’t require the use of a PC for setup or deployment. For applications that require additional customization, Cognex offers CustomView, an integrated operator interface, or In-Sight ActiveX Display Control which can be integrated into common third-party HMI devices.

## VisionView Operator Interface Panel

This simple, low-cost operator interface panel facilitates monitoring the production process without ever having to connect to a PC, making operator decisions easier than ever. A tiled view of images from up to nine systems can be displayed. And, standard built-in automation protocols provide information to the control system and HMI simply and easily.

**Automatic system detection** ... it automatically detects any Cognex vision system on your network

**Mix and match Cognex vision systems** ... and view them all at the same time

**“Plug-and-Go” configuration** ... no PC required. Just use the simple setup from within VisionView

**Optimized for vision** ... 800 x 480 touch screen (widescreen) displays full color images

**System expansion** ... five Ethernet ports and three USB ports allow system flexibility

**Fast image updates** ... provide the most recent inspection images

**CustomView Functionality** ... display CustomView screens on VisionView, for greater operator flexibility in modifying basic job parameters

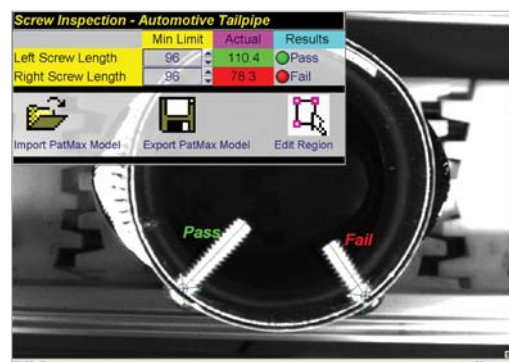
**EasyView display** ... items selected from In-Sight EasyBuilder will appear on the VisionView screen, with impressive ease of use



## Customized Powerful Displays

In-Sight Explorer provides a CustomView interface that simplifies In-Sight use for the operator, while eliminating the cost of additional interface software to monitor single or networked In-Sight vision systems. From within the spreadsheet, a custom operator interface can be created, making it easy for line operators, technicians, and maintenance staff to use and monitor In-Sight vision systems.

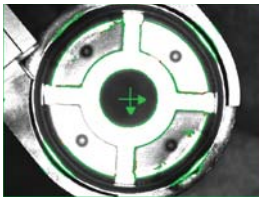

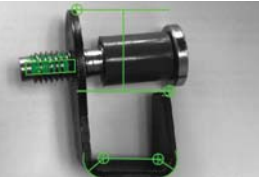
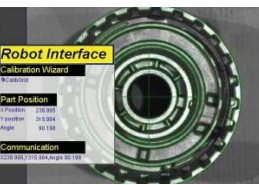
The In-Sight Software Development Kit (SDK) allows integrators to develop application-specific inspection solutions.



The CustomView interface is created easily, and is a cost-effective way to monitor single or networked In-Sight vision systems from a PC.

# Powerful Vision Tools

The industry-leading Cognex vision tool library provides reliable, repeatable performance in even the most challenging vision applications. Regardless of the application, In-Sight vision tools have the track record needed to get the most difficult job done right.

Tool Category	Advantages	Applications
<b>PART LOCATION TOOLS ... LOCATE PARTS IN WIDELY-VARYING CONDITIONS RELIABLY AND ACCURATELY</b>		
	<ul style="list-style-type: none"> <li>• PatMax®, the industry's performance standard for part and feature location software, utilizes advanced geometric pattern matching technology to locate parts under difficult conditions</li> <li>• Simplifies mechanical fixturing and lighting, making vision projects easier and less expensive to implement</li> </ul>	<ul style="list-style-type: none"> <li>• Locate automotive, electronic, pharmaceutical, and consumer parts and assemblies for inspection</li> <li>• Identify locations of parts for robotic handling</li> </ul>
<b>INSPECTION TOOLS ... VERIFY THE CORRECT ASSEMBLY OF COMPONENTS AND FIND FLAWS IN PART APPEARANCE</b>		
	<ul style="list-style-type: none"> <li>• Provides robust, repeatable inspection results despite changes in part orientation</li> <li>• Allows users to easily classify defects by defect type</li> </ul>	<ul style="list-style-type: none"> <li>• Verify correct assembly of automotive parts</li> <li>• Verify the contents and seals of packaged goods for food, consumer, and pharmaceuticals</li> <li>• Inspect correct assembly of electronics</li> </ul>
<b>MEASUREMENT TOOLS ... MEASURE DISTANCES BETWEEN FEATURES, VERIFY TOLERANCES, AND LOCATE EDGES</b>		
	<ul style="list-style-type: none"> <li>• Enables high-accuracy gauging of critical part dimensions despite changes in part orientation and ambient lighting</li> </ul>	<ul style="list-style-type: none"> <li>• Measure and verify tolerances of automotive parts, assemblies, and product labels</li> <li>• Measure critical tolerances of medical and surgical devices</li> </ul>
<b>ROBOT GUIDANCE TOOLS ... ELIMINATE PART FIXTURING</b>		
	<ul style="list-style-type: none"> <li>• Combines part location tools with communications features for total guidance capability</li> <li>• Eliminates costly fixtures in pick and place applications</li> <li>• Allows processing multiple part types at the same robotic station</li> </ul>	<ul style="list-style-type: none"> <li>• Place/remove parts on pallets</li> <li>• Locate unfixtured parts on conveyor, and place them in package</li> <li>• Use robot to manipulate part or camera to inspect critical features of part</li> </ul>



## Tool Category

## Advantages

## Applications

### COLOR VISION TOOLS \* ... VERIFY AND SORT A WIDE RANGE OF PART TYPES BASED ON COLOR

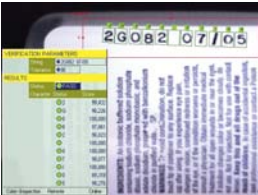


\* Available on color models only

- Provides robust, reliable color detection of a wide range of part types
- Converts color images to grayscale for additional types of inspections

- Verify label color of food and beverage, consumer, and pharmaceutical packaging
- Sort parts by color on processing and packaging lines, and verify components prior to assembly

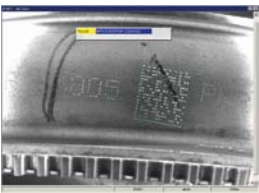
### ADVANCED OCV/OCR TOOLS ... VERIFY AND READ ALPHANUMERIC TEXT STRINGS



- Handles low-contrast characters, as well as confusing or unevenly-spaced characters
- Inspection speeds of faster than 1ms per character
- Font editor improves the readability of poorly-trained or degraded fonts

- Read or verify date/lot codes and SKUs of food and beverage, pharmaceutical, and consumer items
- Verify character legibility and proper printer operation
- Read direct-marked numbers and characters on automotive components

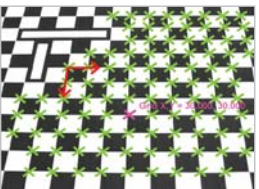
### INDUSTRIAL CODE READING TOOLS ... RELIABLY READ 1D AND 2D CODES ON LABELS OR DIRECTLY MARKED ON PARTS



- Handles low-contrast and poorly formed codes resulting from process degradation and marking techniques such as dot peen and laser etch. Damaged codes, such as the example at left, can also be read with Cognex ID tools.
- Reads up to 7200 parts per minute

- Read direct-marked 2D parts for automotive, aerospace, and pharmaceutical products
- Read and track 1D and 2D codes, and verify print quality to industry standards for consumer, food and beverage, and pharmaceutical products

### NON-LINEAR CALIBRATION WIZARD



- Step-by-step wizard that facilitates calibration, guiding users through the process of correlating image pixels to robot or real world coordinates
- Non-Linear Calibration improves accuracy and repeatability by correcting for lens and perspective distortion

- Remove distortion and calibrate pixels to perform measurements accurately
- Compensate for lens distortion, achieving +/- 1 inch repeatability in eight-inch wide field of view.
- Maintain accuracy even when camera is mounted off-axis

# Factory Floor Communications

Whether communicating with other automation controls or providing quality metrics to a supervisory system, In-Sight vision systems do it easily and affordably. The Ethernet port on every model utilizes the latest factory floor protocol standards, presented in a simple symbolic point-and-click interface. Serial and fieldbus networks are also supported, with common protocols pre-configured.

Standard factory floor protocols available:

- TCP/IP, FTP, Telnet, SMTP (Standard Ethernet)
- Ethernet/IP, PROFINET, Modbus TCP (Industrial Ethernet)
- Pre-configured and user defined RS-232 and RS-495 (Serial)
- DeviceNet, PROFIBUS, CC-Link (Fieldbus networks)

## HMI Communications

To integrate into vision data and images into the operator's existing interface, Cognex offers ActiveX Display Controls capable of integrating into common third-party HMI devices and a powerful OPC Server.



The In-Sight OPC Server, included with every vision system, allows users to quickly configure and publish OPC tags, delivering quality data to HMI devices, statistical process control systems and plant supervisory systems. Using FTP communications, In-Sight can also send images to data servers for lot and part traceability.



## Robot Communications

In addition to locating parts for pick-and-place, or guiding a robot to assemble components, In-Sight vision systems also inspect, measure, and read 1D and 2D codes as products are being handled or assembled. Tight, seamless communication is assured through robot drivers, robot sample code, string formatter, and spreadsheet snippets.



## PLC Communications

Where existing PLC equipment uses Ethernet, fieldbus or serial communications or a combination of all three, In-Sight vision systems easily integrate for control and data exchange.

Conformance to industry-standard protocols such as Ethernet I/P, PROFINET, MC Protocol, and Modbus TCP ensures acquisition triggers, vision inspection results and statistical data are reliably exchanged over Ethernet.

Protocol gateways place In-Sight vision systems on fieldbus networks such as CC-Link, DeviceNet and PROFIBUS.

Legacy PLC systems are easily integrated through serial protocols and discrete I/O.



# A Full Range of Accessories

To simplify and complete system integration, Cognex offers a wide range of optional accessories designed specifically for use with In-Sight vision systems.

## Lighting



LED array provides economical bright light for many applications.

In order to achieve the highest quality images possible, Cognex offers a wide array of lighting accessories. When basic lighting works for the application, integrated ring lights are ideal for In-Sight vision systems. Easily mounted directly to the vision system, these lights provide basic front lighting without having to purchase and install a separate light. Integrated ring lights are available in red LEDs, red diffuse LEDs, and white LEDs.

## Lenses

Cognex offers a full range of high-quality compact camera lenses designed specifically for machine vision applications.

And, for In-Sight ID readers, Image Formation Systems are available in 7 different lens focal lengths.

## Cables

In-Sight cables provide superior performance with rugged, stainless steel M12 connectors and are rated for ten million linear and thirty thousand torsional flex cycles ... ideal for robot-mounted applications.



## VisionView Operator Interface Panel



7-inch color touch screen

Monitor a tiled view of images from up to nine systems on the line without a PC! And, standard built-in automation protocols provide information to the control system and HMI simply and easily.

See page 5 for additional VisionView information.

## I/O Modules

In-Sight I/O modules are designed to simplify connections and expand the I/O capabilities of In-Sight vision systems.

They allow easy access to power, acquisition triggers, and light strobe, and provide convenient general-purpose input and output wiring. Rugged quick-connect cables ensure reliable connections to the In-Sight vision system.

Additionally, I/O modules provide an RS-232 communications port for serial devices.



Your Cognex sales engineer or Automation Solution Provider (ASP) can provide information on other accessories that enhance In-Sight systems.

# Training

**Cognex provides world-class training programs online and at multiple locations in the Americas, Europe, Japan, and Asia.**

**Seminars and Workshops** ... are given by Cognex and Automation Solution Providers (ASP) around the world. They are a great way of getting introduced to the product, and determining if it is the right fit for your application.

**Classroom** ... most training courses at Cognex facilities are provided at no cost to customers, and many standard and advanced programs can be conducted at customer facilities on a fee-paid basis.

**Video** ... learn at your own pace, 24 hours-a-day, 7 days-a-week. Many Cognex products have downloadable videos of classes previously taught. The class videos are an excellent way to quickly get up to speed in a specific area, or to refresh your memory of a class topic.

**Online** ... live and recorded instructor-led courses are offered over the internet. Generally, these hour-long sessions cover advanced topics, or provide more depth on the subjects covered.

**On-Site Application Training** ... classes are conducted at an end-user facility given by the local ASP/Integrator or Application Engineer that was involved in the implementation of the application.



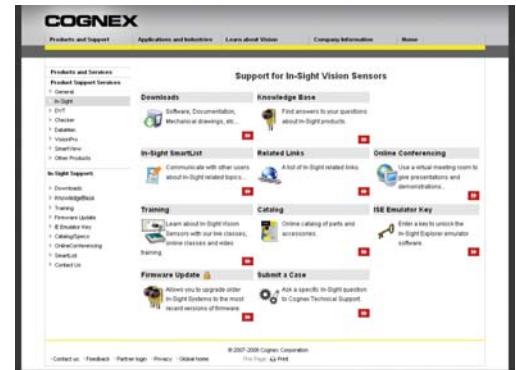
# Support

**An extensive selection of warranties assures customers of getting the exact coverage they need. Add the wide range of additional support, services, and training, and the result is total confidence in Cognex vision system applications.**

## Telephone and Web Support

- **Telephone Support** ... Direct telephone support is provided by experienced vision engineers dedicated to assisting our customers
- **Downloads** ... software, documentation, mechanical drawings, and more
- **Knowledge Base** ... find answers to your questions about In-Sight products
- **In-Sight SmartList** ... communicate with other users about In-Sight topics
- **Submit a Case** ... ask a specific In-Sight question to Cognex Technical Support

For more information on Cognex support, please visit [www.cognex.com/support](http://www.cognex.com/support)



Accessing Cognex support information is easy ... just visit the particular product support page at [cognex.com](http://cognex.com), and click on what you need.

## Warranties and Services

**Extended Warranties** can be purchased on eligible products. While an In-Sight vision system is under warranty, replacements are available for units that experience warranty-related failures. After obtaining a return authorization, a replacement unit is usually shipped within two business days. For out-of warranty product failures, replacement products may be purchased at discounted prices by contacting the Cognex service facility.

**The Firmware Upgrade Program (FUP)**, available as an annual site license, allows customers to access new firmware and software releases for all eligible products at the covered location.

**Fee-based Fast Track engineering service** are available for application development, start-up services and maintenance programs. This service can be performed at Cognex Support Centers, or on-site as required.



# In-Sight Model Comparison

General-Purpose Vision Systems		MICRO SERIES					5000 SERIES				
		STANDARD RESOLUTION				HIGH RESOLUTION	STANDARD RESOLUTION				
		1020	1050	1100	1400	1403	5100	5400 5400S	5600	3400 (STANDALONE)	
Performance	Performance Rating <sup>1</sup>	.25X	.25X	1X	2.5X	2X	1X	2.5X	5X	2X	
Memory	Firmware & Job Storage	64MB	64MB	64MB	64MB	64MB	32MB	32MB	64MB	32MB	
Imager	Resolution	640x480	640x480	640x480	640x480	1600x1200	640x480	640x480	640x480	640x480	
	CCD System Size	1/3"	1/3"	1/3"	1/3"	1/1.8"	1/3"	1/3"	1/3"	1/3"	
	Acquisition Rate <sup>2</sup> (frames per second)	60fps	60fps	60fps	60fps	14fps	60fps	60fps	60fps	40fps	
User Interface	EasyBuilder	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
	Spreadsheet	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Display Options	VisionView, PC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes <sup>3</sup>	
I/O Options	Trigger & 2 High-speed Outputs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes <sup>4</sup>	
	General Purpose I/O (via I/O Module)	8 in/8 out	8 in/8 out	8 in/8 out	8 in/8 out	8 in/8 out	8 in/6 out	8 in/6 out	8 in/6 out	8 in/8 out	
Communications	Ethernet & Serial (RS-232)	Yes <sup>5</sup>	Yes <sup>5</sup>	Yes <sup>5</sup>	Yes <sup>5</sup>	Yes <sup>5</sup>	Yes	Yes	Yes	Yes	
Lighting	Integrated Ring Light Options	No	No	No	No	No	Yes	Yes	Yes	No	
Lens Mount	C or CS	C / CS	C / CS	C / CS	C / CS	C / CS	C	C	C	C/CS	
Tool Set Supported	Full or Limited or ID Only <sup>6</sup>	Limited	Limited	Full	Full	Full	Full	Full	Full	Full	
Power Consumption	Current	400mA <sup>7</sup>	400mA <sup>7</sup>	400mA <sup>7</sup>	400mA <sup>7</sup>	400mA <sup>7</sup>	350mA	350mA	350mA	500mA	
Environmental	Protection Rating	IP51	IP51	IP51	IP51	IP51	IP67	IP67/IP68 <sup>8</sup>	IP67	IP67	
	Operating Temperature	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 50°C (122°F)	
	Storage Temperature	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	
Approvals	CE, UL/CUL, FCC, RoHS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Dimensions	Millimeters (inches)	30(1.18)H x 30(1.18)W x 60(2.36)D					109.1(4.29)H x 61.4(2.42)W x 35.5(1.40)D <sup>9</sup>			109.1(4.29)H x 61.4(2.42)W x 52.0(2.05)D <sup>9</sup>	32(1.26)DIA x 39.7(1.56)D <sup>10</sup>

ID Readers		MICRO SERIES			5000 SERIES					
		STANDARD RESOLUTION		HIGH RESOLUTION	STANDARD RESOLUTION			HIGH RESOLUTION		
		1110	1410	1413	5110	5410 5410S	5610	5411	5413	5613
Performance	Performance Rating <sup>1</sup>	1X	2.5X	2X	1X	2.5X	5X	2X	2.5X	5X
Memory	Firmware & Job Storage	64MB	64MB	64MB	32MB	32MB	64MB	32MB	32MB	64MB
Imager	Resolution	640x480	640x480	1600x1200	640x480	640x480	640x480	1024x768	1600x1200	1600x1200
	CCD System Size	1/3"	1/3"	1/1.8"	1/3"	1/3"	1/3"	1/3"	1/1.8"	1/1.8"
	Acquisition Rate <sup>2</sup> (frames per second)	60fps	60fps	14fps	60fps	60fps	60fps	20fps	15fps	15fps
User Interface	EasyBuilder	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Spreadsheet	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Display Options	VisionView, PC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
I/O Options	Trigger & 2 High-speed Outputs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	General Purpose I/O (via I/O Module)	8 in/8 out	8 in/8 out	8 in/8 out	8 in/6 out	8 in/6 out	8 in/6 out	8 in/6 out	8 in/6 out	8 in/6 out
Communications	Ethernet & Serial (RS-232)	Yes <sup>5</sup>	Yes <sup>5</sup>	Yes <sup>5</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Lighting	Integrated Ring Light Options	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Lens Mount	C or CS	C / CS	C / CS	C / CS	C	C	C	C	C	C
Tool Set Supported	Full or Limited or ID Only <sup>6</sup>	ID Only	ID Only	ID Only	ID Only	ID Only	ID Only	ID Only	ID Only	ID Only
Power Consumption	Current	400mA <sup>7</sup>	400mA <sup>7</sup>	400mA <sup>7</sup>	350mA	350mA	350mA	350mA	350mA	500mA
Environmental	Protection Rating	IP51	IP51	IP51	IP67	IP67/IP68 <sup>8</sup>	IP67	IP67	IP67	IP67
	Operating Temperature	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)
	Storage Temperature	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)
Approvals	CE, UL/CUL, FCC, RoHS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dimensions	Millimeters (inches)	30(1.18)H x 30(1.18)W x 60(2.36)D			109.1(4.29)H x 61.4(2.42)W x 35.5(1.40)D <sup>9</sup>		109.1(4.29)H x 61.4(2.42)W x 35.5(1.40)D <sup>9</sup>		109.1(4.29)H x 61.4(2.42)W x 52.0(2.05)D <sup>9</sup>	

**5000 SERIES (CONTINUED)**

HIGH RESOLUTION			COLOR	
5401	5403 5403S	5603	5100C	5400C 5400CS
2X	2.5X	5X	1X	2X
32MB	32MB	64MB	32MB	34MB
1078x768	1600x1200	1600x1200	640x480	640x480
1/3"	1/1.8"	1/1.8"	1/1.8"	1/3"
20fps	15fps	15fps	60fps	60fps
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
8 in/6 out	8 in/6 out	8 in/6 out	8 in/6 out	8 in/6 out
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
C	C	C	C	C
Full	Full	Full	Full	Full
350mA	500mA	500mA	350mA	350mA
IP67	IP67/IP68 <sup>9</sup>	IP67	IP67	IP67/IP68 <sup>9</sup>
0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)	0°C (32°F) to 45°C (113°F)
-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)	-30°C (-22°F) to 30°C (176°F)
Yes	Yes	Yes	Yes	Yes
109.1(4.29)H x 61.4(2.42)W x 35.5(1.40)D <sup>9</sup>		109.1(4.29)H x 61.4(2.42)W x 52.0(2.05)D <sup>9</sup>	109.1(4.29)H x 61.4(2.42)W x 35.5(1.40)D <sup>9</sup>	

Notes:

- 1) Performance rating compared to In-Sight 5100 model, and does not include image acquisition rate.
- 2) Acquisition rate is based on 1ms exposure, and a full image frame capture.
- 3) Additionally supports VGA output as display option.
- 4) Also has two high-speed inputs.
- 5) Requires optional I/O module for serial communication.
- 6) Limited tool set excludes: PatMax, 1D/2D code reading, text reading (OCR/OCV), image filters, non-linear calibration, and caliper tool.  
ID Only tool set includes: 1D/2D code reading, text reading (OCR/OCV), and image filters.
- 7) Requires Power over Ethernet (PoE) Class 2 power supply.
- 8) Standard case models are IP67; stainless steel models are IP68 rated protection.
- 9) Dimensions do not include lens cover.
- 10) Dimensions listed are for remote head camera. Control box dimensions are 45.5 (1.79)H x 293.1 (11.54)W x 150.1 (5.93)D.

## VisionView 700 Operator Interface

Models supported	In-Sight Micro (firmware 4.1.0 and later), In-Sight 3400 and 5000 (firmware 3.1.0 and later)
Languages	English, French, Spanish, Italian, German, Japanese, Korean, and Simplified Chinese

### TOUCH SCREEN

Size	7-inch diagonal (16:9 aspect ratio)
Type	TFT LCD
Resolution (pixels)	800x480 WVGA (384,000 pixels)
Number of colors	18 bits/pixel (262,144)

### MEMORY

System	64MB SDRAM
Program	128MB non-volatile flash memory
Video	16MB Video SDRAM

### COMMUNICATIONS

Ethernet	10/100 BaseT TCP/IP, Full Duplex
LAN Port	1, for connection to wide area network
Direct sensor ports	4, for connection to Cognex vision systems. Provides PoE for In-Sight Micro Series.

### POWER

Voltage	24VDC ±10%
Current	2A maximum (1A maximum when not supplying PoE to four In-Sight Micro Vision Systems)

### MECHANICAL

Dimensions	170.3mm (6.70in) H x 205.9mm (8.10in) W x 52.5mm (2.07in) D
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### ENVIRONMENTAL

Operating temperature	0°C (32°F) to 45°C (113°F)
Storage temperature	-30°C (-22°F) to 80°C (176°F)
Protection	NEMA4 when panel mounted

### CERTIFICATIONS

	CE, FCC, TUV SUD NRTL, RoHS
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For additional In-Sight vision system technical information, please visit [www.cognex.com/insightspecs](http://www.cognex.com/insightspecs)

## COGNEX

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

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