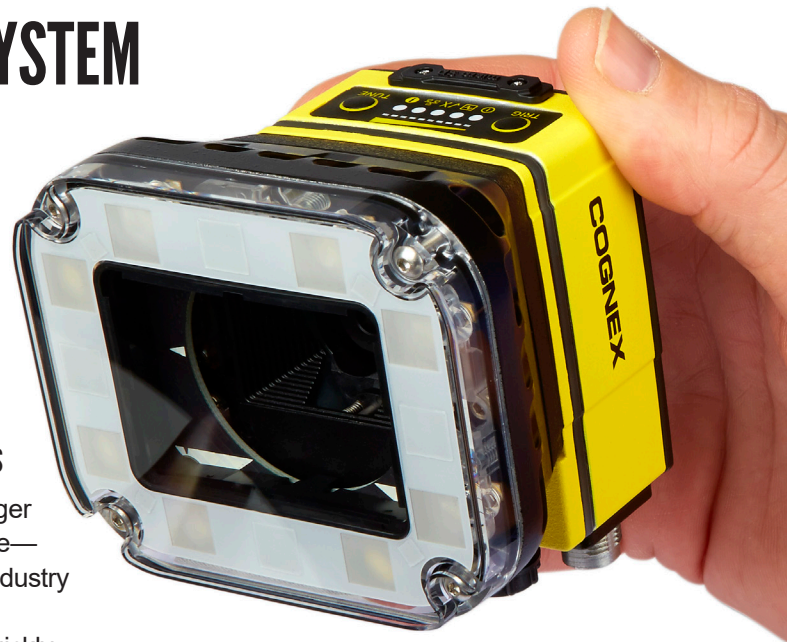# COGNEX

IN-SIGHT 7000 SERIES VISION SYSTEM

The In-Sight® 7000 series vision system represents a breakthrough in flexibility, performance and ease of integration. This powerful vision system performs fast, accurate inspections while its compact footprint easily fits into space-constrained production lines. The unique, modular design is highly field-customizable to your application requirements.

Enhanced performance keeps pace with increasing line speeds

With ever-increasing production line speeds, customers no longer have to choose between high-speed and industrial performance—the In-Sight 7000 offers both! With blazing fast acquisition and industry leading vision tools, including PatMax RedLine,® SurfaceFX,™ OCRMax®, and color ID tools, the In-Sight 7000 vision system quickly locates the part and accurately performs the necessary inspection.

Flexible design is field customizable to your application

When it comes to factory automation, one size rarely fits all. That's why the In-Sight 7000 is designed with Flexible Image Technology™ (FIT™) that optimizes image formation and minimizes the need for expensive external lighting. Field-changeable and user-configurable lighting and optics modules provide users with ultimate flexibility to customize the system for their application.

Base unit

Lens options

Internal lighting options

Filter options

Cover options

Full-featured system to tackle a wide range of vision applications

The In-Sight 7000 vision system is engineered with the full suite of powerful Cognex vision algorithms and convenient features to help you solve your applications easily and reliably.

Suite of enhanced vision tools including PatMax RedLine, SurfaceFX, OCRMax, and color ID tools for rapid part location and inspection.
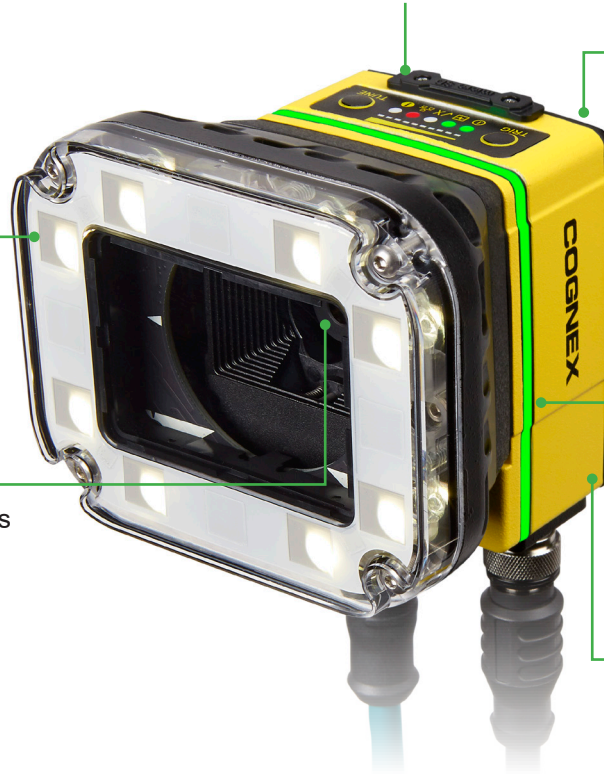
Onboard SD card for additional data storage and easy transfer of job files between systems.

Extended heat sink on In-Sight 7905 5MP high resolution model.

Flexible Image Technology (FIT) optimizes image formation and minimizes the need for expensive external lighting.

Field changeable C-mount and S-mount lenses and an autofocus option for best image resolution based on working distance.

Wrap-around LED indicator light provides clear visual pass/fail inspection results that can be seen from a distance regardless of product orientation.

IP67-rated housing provides protection in harsh factory environments.

Additional internal lighting options

In addition to other small form factor lights, the In-Sight 7000 is compatible with the high-powered integrated lighting module (HPIL) used with DataMan® 360 series barcode readers. The high-powered integrated lighting module offers diffuse illumination ideal for inspecting parts at varying working distances (Not supported on 5MP model.)
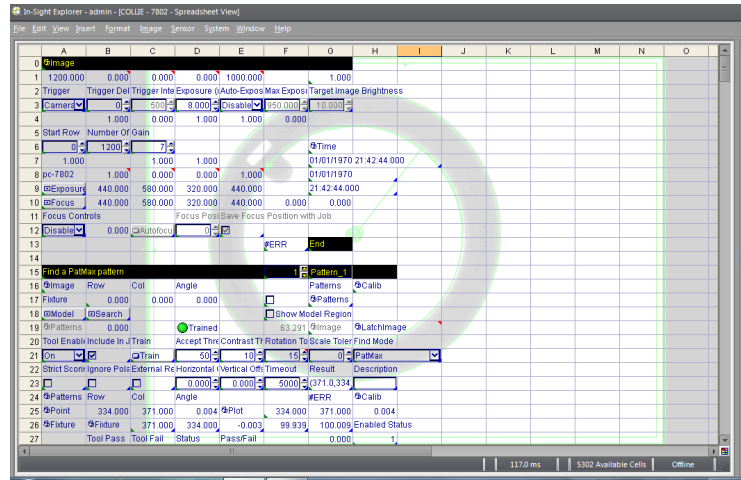
Integrates easily into your system infrastructure

Like all In-Sight vision systems, the In-Sight 7000 uses In-Sight Explorer 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.

The majority of applications can be solved using the point-and-click EasyBuilder interface, however should your application requirements change, the In-Sight spreadsheet provides you with 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 of your vision applications.
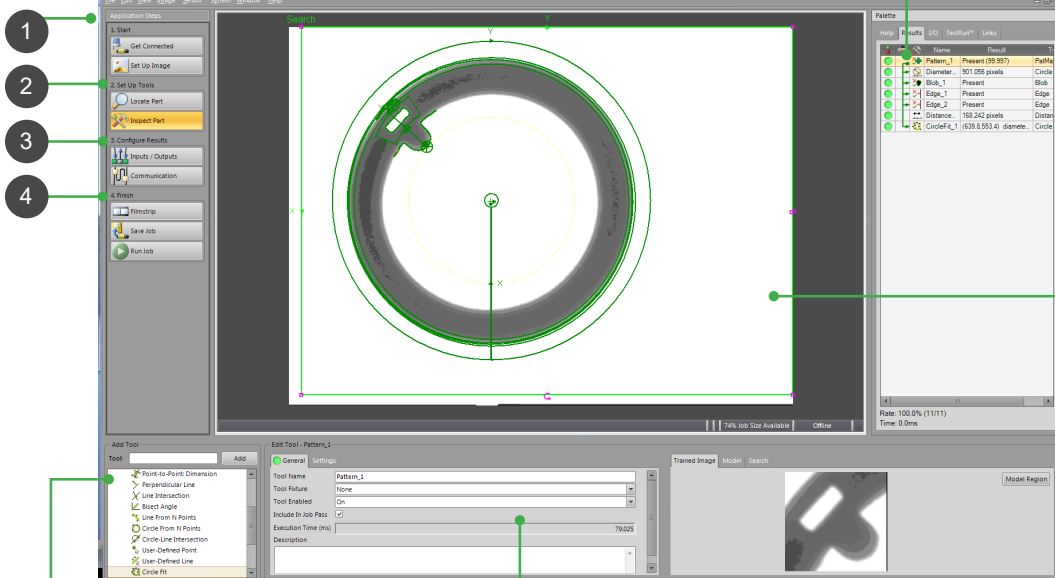
cognex.com/easybuilder

In-Sight spreadsheet provides ultimate control and direct access to vision tools.

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

Four simple steps guide you through the setup process.

Results table—Consolidates tool results for easy viewing and helps users understand tool dependencies and performance timing.

Image centric—Point-and-click approach lets users drop in tools quickly by simply clicking on the features of interest.

Tools palette—Comprehensive set of vision tools for locating, measuring, counting and identifying features, plus math, logic, geometry and graphic display tools.
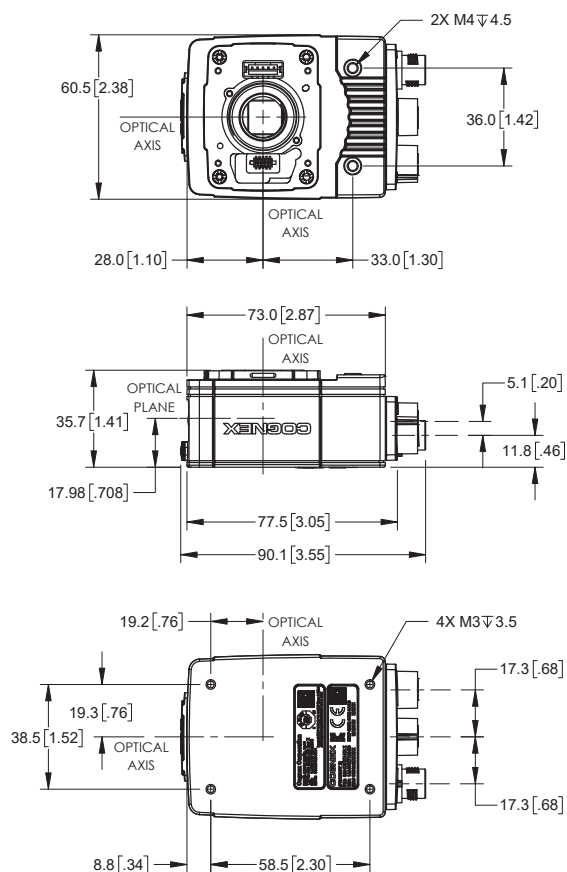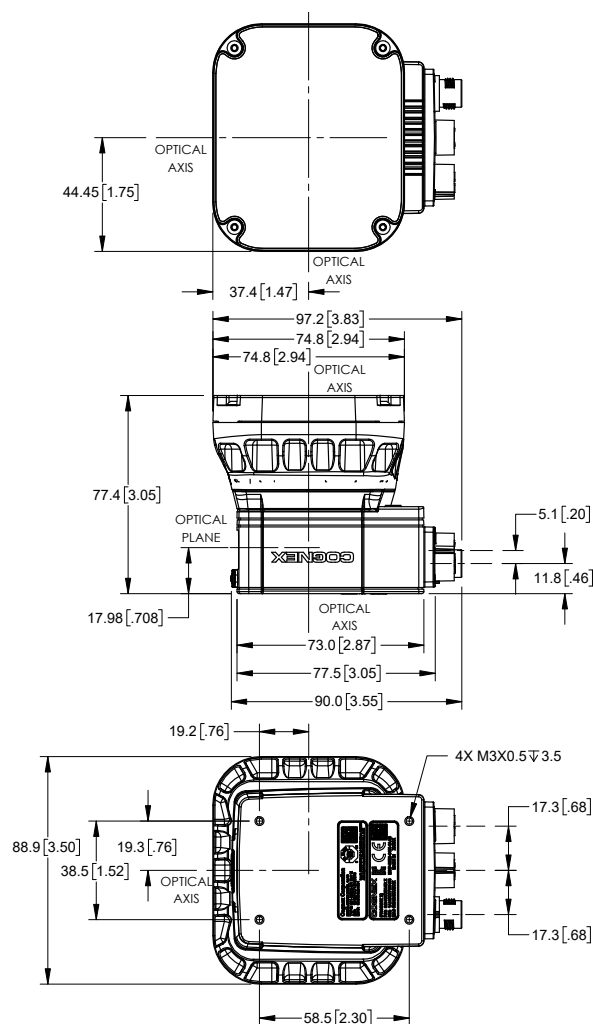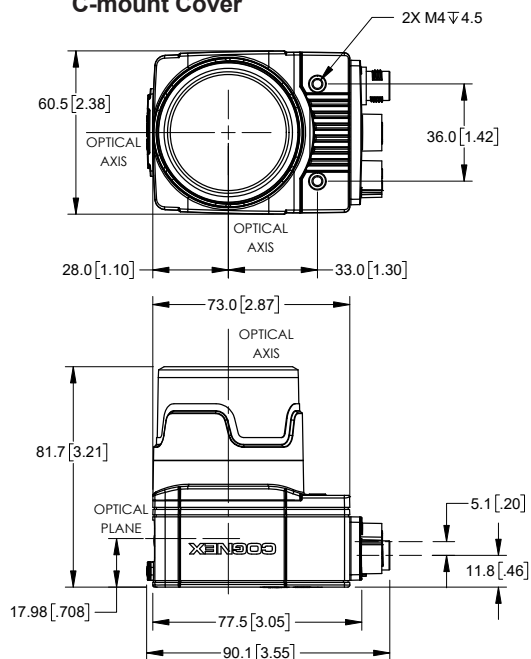
Settings pane—Configures all vision tool parameters and settings.
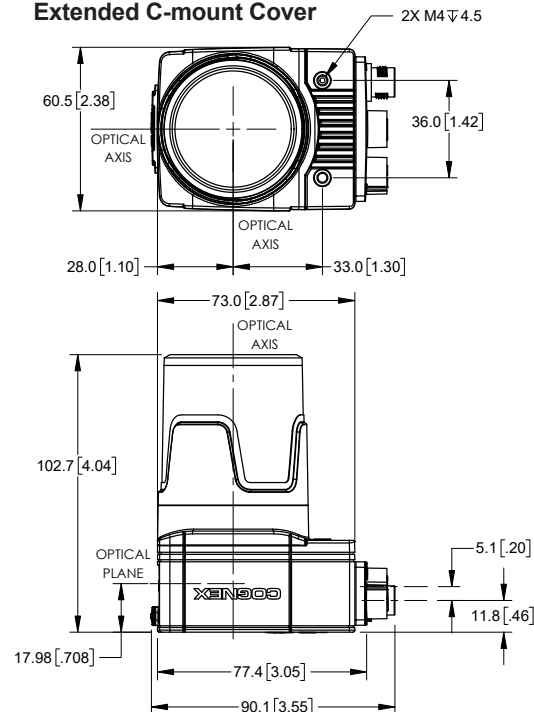
In-Sight 7000 Base Unit
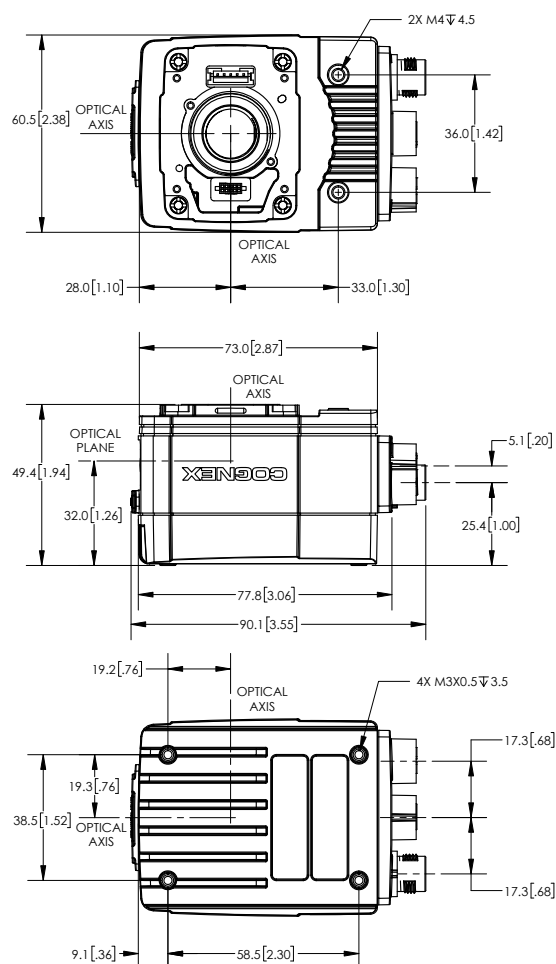

In-Sight 7000 with Internal Lighting

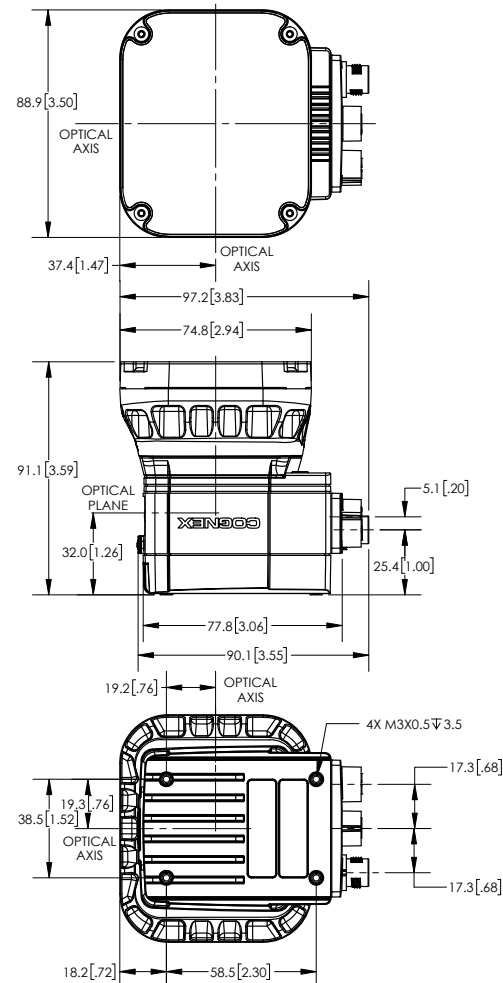## In-Sight 7000 with C-mount Cover

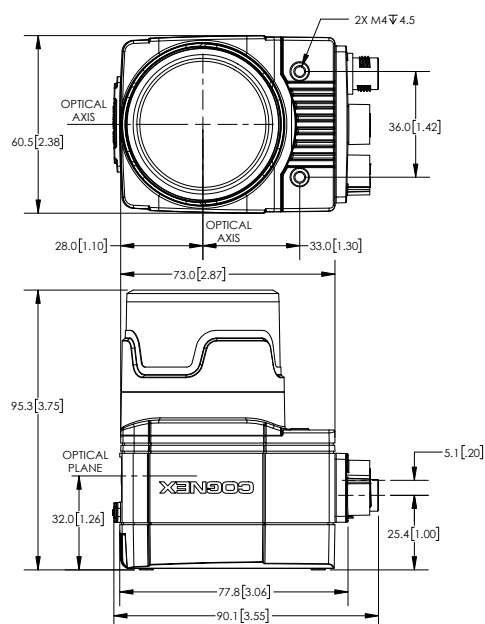
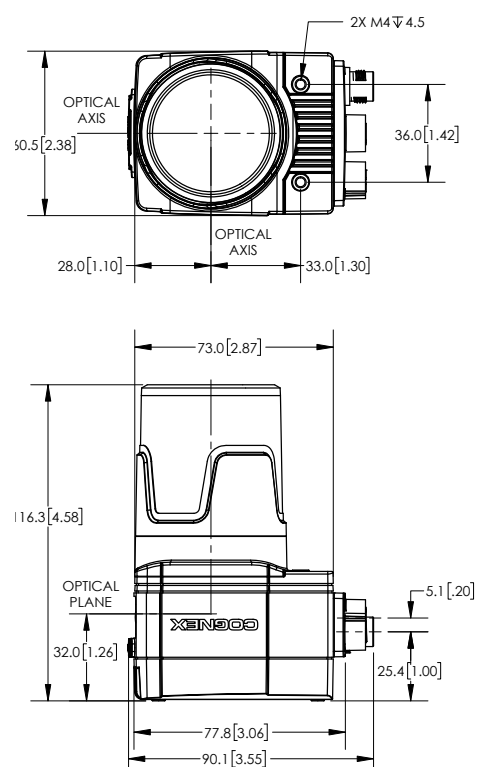## In-Sight 7000 with Extended C-mount Cover

In-Sight 7905 Base Unit

In-Sight 7905 with Internal Lighting

In-Sight 7905 with C-mount Cover

In-Sight 7905 with Extended C-mount Cover

SPECIFICATIONS

	In-Sight 7600	In-Sight 7800	In-Sight 7801	In-Sight 7802	In-Sight 7900	In-Sight 7901	In-Sight 7902	In-Sight 7905
Image Type	Monochrome and color							
Performance Factor	1X	2.3X			2.5X			
Job/Program Memory	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)	640 x 480/ 800 x 600 (software configurable)	1280 x 1024	1600 x 1200	640 x 480/ 800 x 600 (software configurable)	1280 x 1024	1600 x 1200	2448 x 2048	
Acquisition Rate (fps)	217/165 (monochrome) 135/100 (color)	76 (monochrome) 45 (color)	53 (monochrome) 33 (color)	217/165 (monochrome) 135/100 (color)	76 (monochrome) 45 (color)	53 (monochrome) 33 (color)	32 (monochrome) 17 (color)	
Lens Type	C-mount/S-mount/Autofocus						C-mount	
Light Options	Internal light, DataMan 360 light; External light powered by In-Sight 7000; External light independent power						Internal light, External light powered by In-Sight 7000; External light independent power	
Internal Light Color	Red, white, IR, blue							
Indicator LEDs	SD card status, pass/fail LED and 360-degree viewing indicator ring, network LED and error LED							
Built in IO	1 dedicated trigger in, 2 inputs, 2 outputs, 2 bi-directional/configurable. Additional IO available via external IO modules: CIO-MICRO or CIO-1400							
Power	24 VDC							
Industrial M12 Connectors	3: Power/IO; Ethernet; External light power/control							
Protection	IP67 with internal light option or C-mount lens cover							
Network Communications	1G (1000)/100/10 Mbps							
IEEE 1588 Support	Timestamp resolution: 8 ns ; Synchronization accuracy through transparent clock: 5 µs							
Rockwell Add-on Profile	Yes							

Note: All models have full vision tool suite with PatMax. Optional PatMax RedLine tool.

COGNEX

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

Corporate Headquarters   One Vision Drive Natick, MA 01760 USA

Regional Sales Offices

www.cognex.com