# COGNEX

## Next Generation Color Vision

*With three color models, the In-Sight® Micro vision system family solves color applications ranging from low cost to high performance in the smallest size package. Combined with two powerful color algorithms, In-Sight Micro delivers robust color inspection to a wide variety of industries.*

## Powerful Color Tools

Redefining the capability of a color vision system, the two color tools included in In-Sight Explorer solve a wide variety of color applications from color sortation to color-based product identification and assembly verification to highly sensitive monitoring of color hues. From food processing to consumer good packaging to pharmaceutical inspection and automotive assembly, these color tools solve the most difficult color applications.

- *Match Color Tool:* Defining colors in either RGB or HSI color space, this 24-bit resolution color tool solves color sortation and monitoring applications—even for parts with very subtle color differences.

- *Extract Color Tool*: Complex multi-color models make this high performance tool capable of solving the toughest color applications. User feedback with color swatches, image marking, and slider adjustments eases the training process and ensures a robust color model definition. Pixel counting and output images allow the results of this tool to feed into other tools for additional inspection.

## Broad Range of Choices

Whether low cost, high performance or small size are required of your color vision system, there's an In-Sight Micro model that's perfect.

- *Best Price/Performance: In-Sight Micro 1100C.* Standard (640x480) resolution and performance empower this low cost unit to solve a wide range of applications.

- *High Performance: In-Sight Micro 1400C.* At double the processing power, this standard resolution model quickly analyzes complex colors.

- *High Resolution: In-Sight Micro 1403C.* Color meets ultra high resolution with 1600x1200 pixels of inspection power in this industry-leading model.

### Need Industrial-Grade Ruggedness?

The same high-performance color tools can also be paired with In-Sight 5000 Series vision systems, wrapping the highly rugged IP67 package around your color application. Stainless steel IP68 In-Sight 5000 Series vision systems—also available with color sensors—bring vision-inspected quality assurance into food processing and pharmaceutical environments.

# In-Sight Micro Color Model Specifications

## Image

**Resolution (pixels)**

| | |
|---|---|
| Standard Resolution | 640x480 VGA |
| High Resolution | 1600x1200 UXGA |

**Sensor**

| | |
|---|---|
| Standard Resolution | 1/3-inch CCD |
| High Resolution | 1/1.8-inch CCD |
| Acquisition | 24 bit color |
| Standard Resolution | 58 full frames per second |
| High Resolution | 7.5 full frames per second |
| Lens Type | CS-mount and C-mount (with 5mm extension, included) |

## Minimum Firmware Requirement

| | |
|---|---|
| In-Sight Explorer version | Release 4.3.0 or later |

## Memory

| | |
|---|---|
| Job/Program | 64 MB FLASH memory, unlimited storage via remote network device |
| Image Processing | 128 MB |

## I/O

| | |
|---|---|
| Trigger | 1 onboard opto-isolated, NPN/PNP, acquisition trigger input |
| Discrete Outputs | 2 onboard opto-isolated, NPN/PNP, high speed outputs, 100 mA Max |
| Expansion I/O | 8 inputs and 8 outputs when connected to CIO-MICRO or CIO-MICRO-CC I/O module |
| Status LEDs | Network, 2 user configurable |

## Communications

1 Ethernet port, 10/100 BaseT, TCP/IP

| | |
|---|---|
| Standard Ethernet | TCP/IP, SMTP, FTP, Telnet, DHCP or static IP address. |
| Industrial Ethernet | Ethernet/IP, PROFINET, MC Protocol, Modbus TCP |
| Serial | RS-232C when connected to an optional I/O module |

## Power

| | |
|---|---|
| Class | Class 2 Power over Ethernet (PoE) device |
| Type | A or B accepted |

## Mechanical
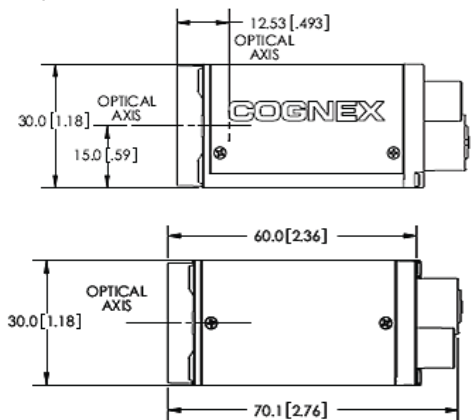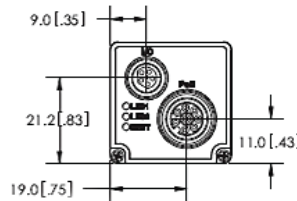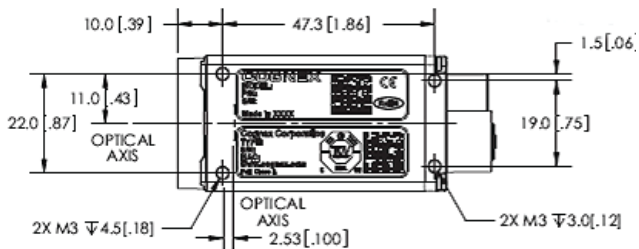
| | |
|---|---|
| Material | Die-cast zinc housing and steel cover |
| Mounting | 4 M3 threaded mounting holes or included 1/4"-20 mounting block |
| Dimensions | 30mm (1.18") W x 30mm (1.18") H x 60mm (2.36") D |
| Weight | 145 g (5.1 oz.) with mounting block 120 g (4.2 oz.) without mounting block |

## Environmental

| | |
|---|---|
| Operating Temp. | 0° to 45°C (32° to 113°F) |
| Storage Temp. | -30° to 80°C (22° to 176°F) |
| Humidity | 90%, non-condensing |
| Protection | IP51 |
| Shock | 80 G per IEC 68-2-27 |
| Vibration | 10 G from 10-2000 Hz per IEC 68-2-6 |

## Certifications

CE, FCC, TUV SUD NRTL, RoHS

# COGNEX

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