

## 3.1.1 In-Sight Standard Vision System Specifications

**Table 3-1: 5100, 5100C, 5401, 5400C, 5403 and 5400 Vision System Specifications**

Specification		In-Sight 5100	In-Sight 5100C <sup>1</sup>	In-Sight 5401	In-Sight 5400C	In-Sight 5403	In-Sight 5400
Minimum Firmware Requirement		In-Sight version 2.80.01 PR1	In-Sight version 3.4.0	In-Sight version 2.80.01 PR1			
Memory	Job/Program	32MB non-volatile flash memory; unlimited storage via remote network device.					
	Image Processing	64MB					
Image	Sensor	1/3-inch CCD				1/1.8-inch CCD	1/3-inch CCD
	Sensor Properties	5.92mm diagonal, 7.4 x 7.4µm sq. pixels		5.952mm diagonal, 4.65 x 4.65µm sq. pixels	5.92mm diagonal, 7.4 x 7.4µm sq. pixels	8.8mm diagonal, 4.4 x 4.4µm sq. pixels	5.92mm diagonal, 7.4 x 7.4µm sq. pixels
	Resolution (pixels)	640 x 480		1024 x 768	640 x 480	1600 x 1200	640 x 480
	Electronic Shutter Speed	16µs to 1000ms		32µs to 1000ms	16µs to 1000ms	27µs to 1000ms	16µs to 1000ms
	Acquisition	Rapid reset, progressive scan, full-frame integration.					
		256 grey levels (8 bits/pixel)	24 bit color	256 grey levels (8 bits/pixel)	24 bit color	256 grey levels (8 bits/pixel)	
		Gain/Offset controlled by software.					
		60 full frames per second. <sup>3</sup>		17 full frames per second. <sup>2</sup>	60 full frames per second. <sup>3</sup>	14 full frames per second. <sup>3</sup>	60 full frames per second. <sup>3</sup>
	Lens Type	C-mount					
	CCD Alignment Variability <sup>4</sup>	±0.127mm (0.005in), (both x and y) from lens C-mount axis to center of imager.					
I/O	Trigger	1 opto-isolated, acquisition trigger input.					
		Remote software commands via Ethernet and RS-232C.					
	Discrete Inputs	None built-in. Additional inputs available using a compatible I/O module (see Table 1-3). Unlimited inputs when using an Ethernet I/O system.					
	Discrete Outputs	2 built-in, high-speed outputs. Additional outputs available using a compatible I/O module (see Table 1-3). Unlimited outputs when using an Ethernet I/O system.					
	Status LEDs	Power, Network Status, Network Traffic, 2 user configurable.					
Communications	Network	1 Ethernet port, 10/100 BaseT, TCP/IP protocol. Supports DHCP (factory default) or static IP address.					
	Serial	RS-232C when connected to an optional I/O module.					
Power		24VDC ±10%, 350mA maximum.				24VDC ±10%, 500mA maximum.	24VDC ±10%, 350mA maximum.

**Table 3-1: 5100, 5100C, 5401, 5400C, 5403 and 5400 Vision System Specifications (Cont.)**

Specification		In-Sight 5100	In-Sight 5100C <sup>1</sup>	In-Sight 5401	In-Sight 5400C	In-Sight 5403	In-Sight 5400
<b>Mechanical</b>	<b>Material</b>	Die-cast aluminum housing.					
	<b>Finish</b>	Painted.					
	<b>Mounting</b>	Eight M4 threaded mounting holes (four front and four back).					
	<b>Dimensions</b>	83.3mm (3.28in) x 123.2mm (4.85in) x 61.4mm (2.42in) with Lens Cover installed. 43.5mm (1.71in) x 123.2mm (4.85in) x 61.4mm (2.42in) without Lens Cover installed (includes Thread Guard).					
	<b>Weight</b>	350 g (12.3 oz.) Lens cover installed, without lens.					
<b>Environmental</b>	<b>Temperature</b>	Operating: 0°C to 45°C (32°F to 113°F) Storage: -30°C to 80°C (22°F to 176°F)					
	<b>Humidity</b>	95%, non-condensing (Operating and Storage)					
	<b>Protection</b>	IP67 (with appropriate Lens Cover properly installed).					
	<b>Shock</b>	80 G Shock with 150 gram lens attached per IEC 68-2-27.					
	<b>Vibration</b>	10 G from 10-500 Hz with 150 gram lens per IEC 68-2-6.					
<b>Regulatory Compliance</b>		CE, UL, CUL, FCC, RoHS					

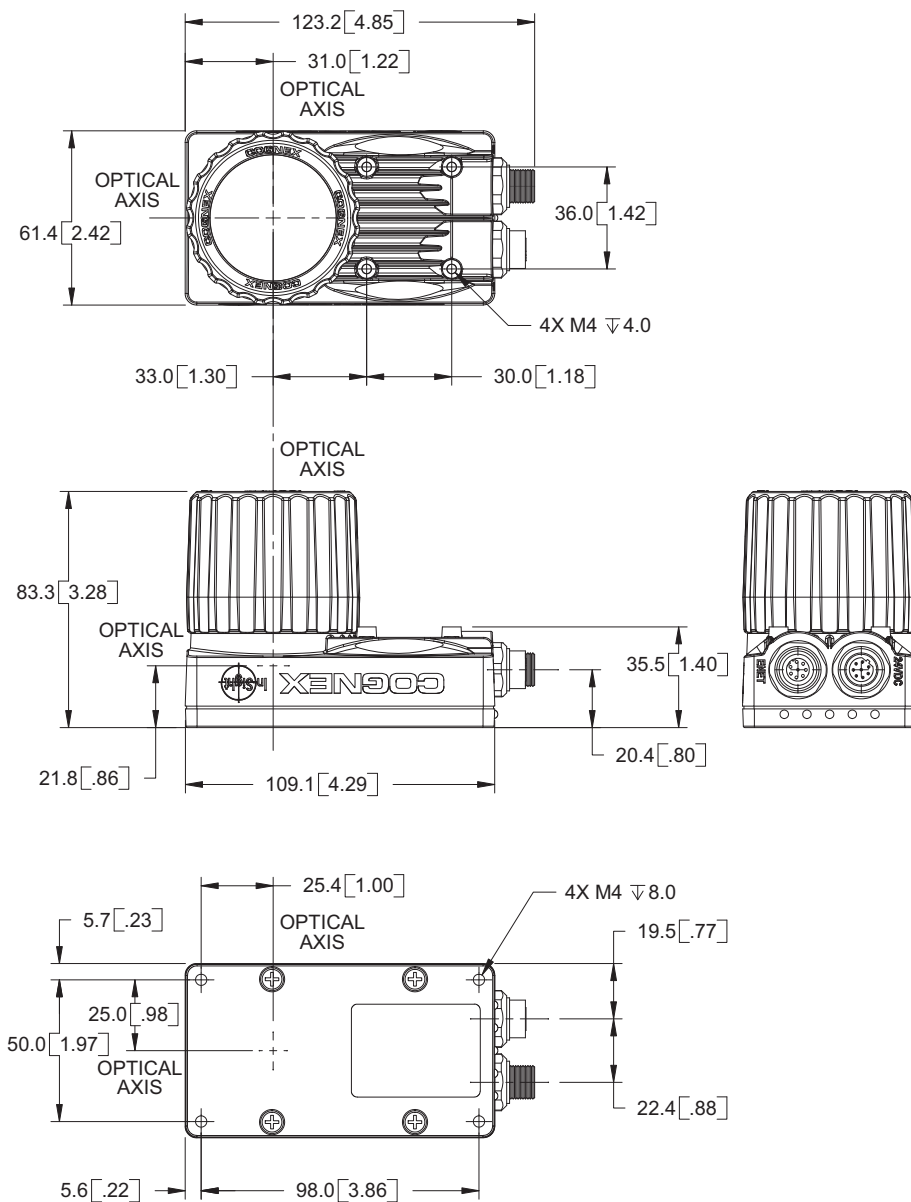
1. In-Sight 5100C vision systems with P/N 800-5837-1 are compatible with firmware version 2.65.00 and higher. In-Sight 5100C vision systems with P/N 800-5837-4 are compatible with firmware version 3.4.0 and higher. To locate the Part Number, refer to the Part Number label on the back of your vision system.
2. Maximum frames per second are job dependent and based on an 8ms exposure and a full image frame capture.
3. Maximum frames per second are job dependent and based on the minimum exposure for a full image frame capture.
4. Expected variability in the physical position of the CCD, from vision system-to-vision system. This equates to ~ ±17 pixels on a 640 x 480 resolution CCD and ~ ±29 pixels on a 1600 x 1200 resolution CCD.

## 3.3 In-Sight Dimensional Drawings

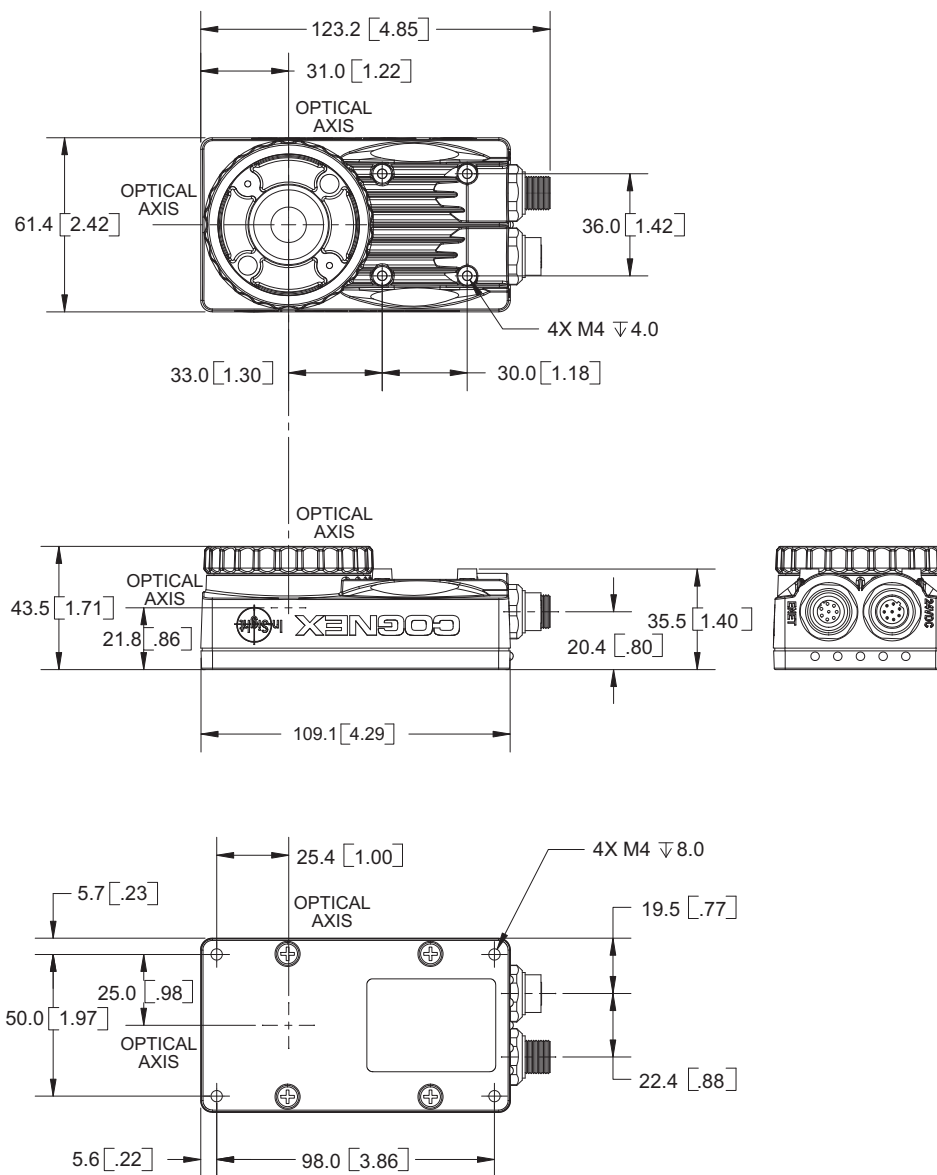
### 3.3.1 5100, 5100C, 5400, 5401, 5400C and 5403 Vision System Dimensions

**Notes:**

- All dimensions are in millimeters [inches] and are for reference purposes only.
- All specifications may be changed without notice.



**Figure 3-6: Standard Vision System Dimensions (With Lens Cover)**



**Figure 3-7: Standard Vision System Dimensions (Without Lens Cover)**