General Specifications

The following sections list general specifications for the In-Sight Micro vision systems.

Table 3-1: In-Sight Micro Vision System Specifications

Specification		In-Sight 1020/1050	In-Sight 1100/1110	In-Sight 1100C	In-Sight 1400/1410	In-Sight 1400C	In-Sight 1403/1413	In-Sight 1403C
Minimum Firmware Requirement		In-Sight version 4.1.0		In-Sight version 4.3.0	In-Sight version 4.1.0	In-Sight version 4.3.0	In-Sight version 4.1.0	In-Sight version 4.3.0
Memory	**Job/Program**	64MB non-volatile flash memory; unlimited storage via remote network device.						
	Image Processing	128MB						
Image	**Sensor**	1/3-inch CCD					1/1.8-inch CCD	
	Sensor Properties	5.92mm diagonal, 7.4 x 7.4µm sq. pixels					8.8mm diagonal, 4.4 x 4.4µm sq. pixels	
	Resolution (pixels)	640 x 480					1600 x 1200	
	Electronic Shutter Speed	16µs to 1000ms					27µs to 1000ms	
	Acquisition[1]	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)	24 bit color
		Gain/Offset controlled by software.						
		60 full frames per second		57 full frames per second	60 full frames per second	58 full frames per second	14 full frames per second	7 full frames per second
	Lens Type	CS-mount and C-mount (with 5mm extension, included).						
	CCD Alignment Variability[2]	±0.127mm (0.005in), (both x and y) from lens C-mount axis to center of imager.						

Table 3-1: In-Sight Micro Vision System Specifications (Cont.)

Specification		In-Sight 1020/1050	In-Sight 1100/1110	In-Sight 1100C	In-Sight 1400/1410	In-Sight 1400C	In-Sight 1403/1413	In-Sight 1403C
I/O	**Trigger**	1 opto-isolated, acquisition trigger input.						
		Remote software commands via Ethernet. (RS-232C available when using the optional CIO-MICRO or CIO-MICRO-CC I/O module.)						
	Discrete Inputs	None. (Eight additional inputs available when using the optional CIO-MICRO, CIO-MICRO-CC or CIO-WENET (750-341) I/O module.)						
	Discrete Outputs	2 opto-isolated, NPN/PNP high-speed outputs. (Eight additional outputs available when using the optional CIO-MICRO, CIO-MICRO-CC or CIO-WENET (750-341) I/O module.)						
	Status LEDs	Network, 2 user-configurable.						
Communications	**Network**	1 Ethernet port, 10/100 BaseT with auto MDI/MDIX. Supports DHCP (factory default), static and link-local IP address configuration.						
	Serial	None. (RS-232C: 1200 to 115,200 baud rates when connected to a CIO-MICRO or CIO-MICRO-CC I/O module).						
Power	**Class**	Class 2 Power over Ethernet (PoE) device.						
	Type	A and B.						
Mechanical	**Material**	Die-cast zinc housing.						
	Finish	Painted.						
	Mounting	Four M3 threaded mounting holes (1/4 - 20 and M6 mounting holes also available on mounting block).						
	Dimensions	30mm (1.18in) x 30mm (1.18in) x 60mm (2.36in)						
	Weight	121g (4.27oz.) without mounting block. 146g (5.15oz.) with mounting block.						
Environmental	**Temperature**	Operating: 0°C to 45°C (32°F to 113°F) Storage: -30°C to 80°C (-22°F to 176°F)						
	Humidity	90%, non-condensing (Operating and Storage)						
	Protection	IP51 with cables and lens attached.						
	Shock	80 G shock with 50 gram lens attached per IEC 68-2-27.						
	Vibration	10 G from 10-500 Hz with 50 gram lens attached per IEC 68-2-6.						
Regulatory Compliance		CE, FCC, TUV SUD NRTL, RoHS						

1. Maximum frames per second is job-dependent and based on the minimum exposure for a full image frame capture.
2. 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.

In-Sight Micro Vision System Dimensional Drawings

Note:

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

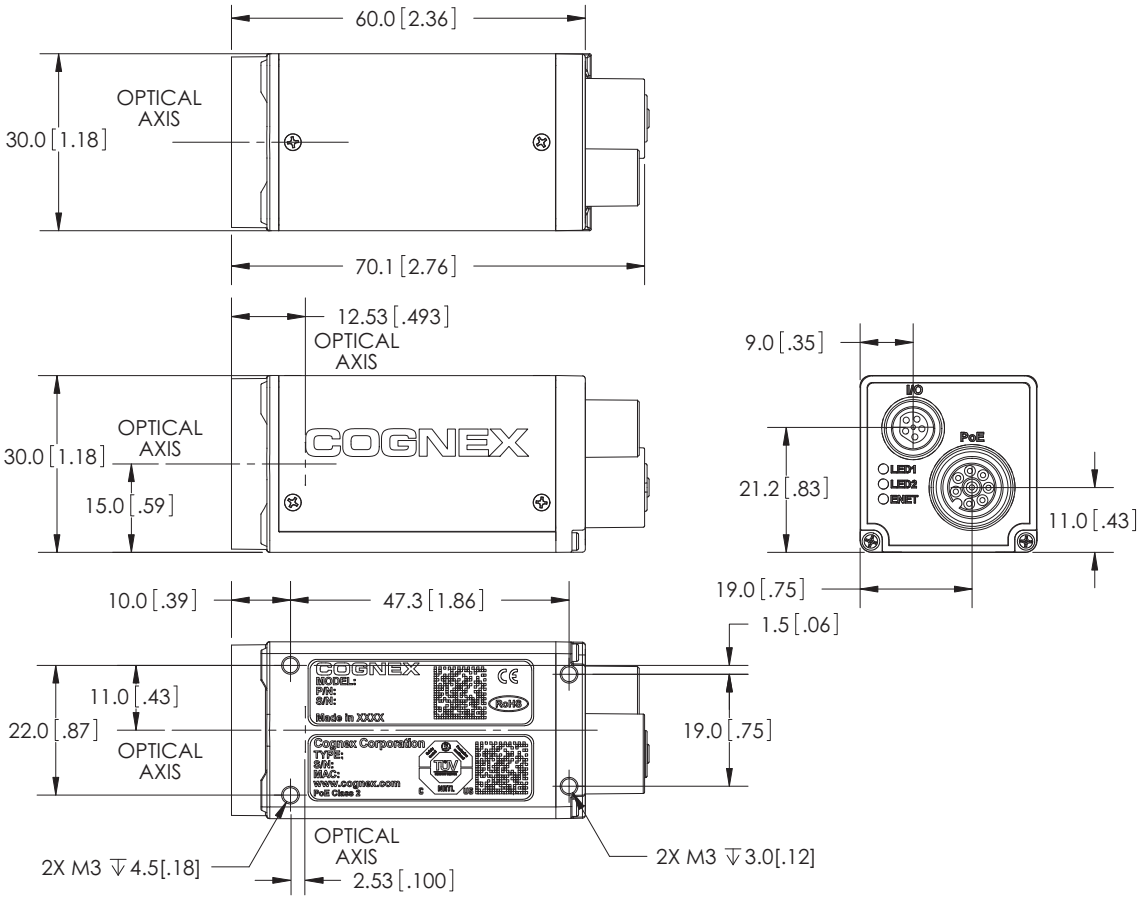

Figure 3-7: In-Sight Micro Vision System Dimensions

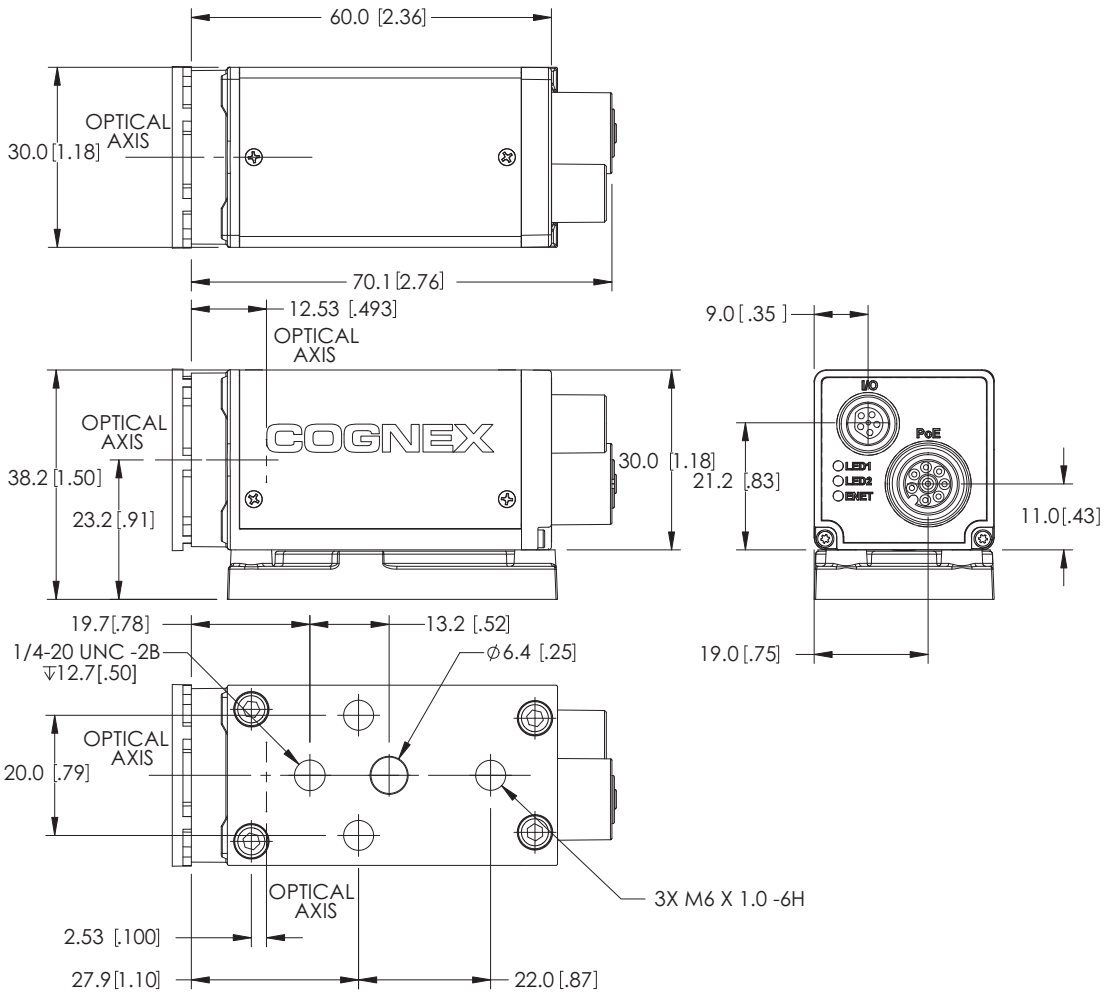

Figure 3-8: In-Sight Micro Vision System Dimensions (with Mounting Block)