MV-SC2016M

1.6 MP Vision Sensor

Introduction

With built-in positioning and measurement algorithm, MV-SC2016M vision sensor can detect object's presence, position, dimension, etc. It can be monitored and operated via web based interface. The vision sensor can output detection results via RS-232 and Ethernet, and cooperate with other processes via IO. It supports multiple result output methods and customized result text output.

Key Feature

- Adopts embedded hardware platform for high-speed image processing.
- Adopts built-in positioning and measurement algorithm to detect object's presence, position, etc.
- Multiple IO interfaces for input and output signals.
- Multiple indicators for displaying device status.
- Adopts light cup to ensure uniform brightness in the illuminated area.
- Supports multiple communication protocols, including Fast Ethernet, serial port, TCP, UDP, FTP, etc.

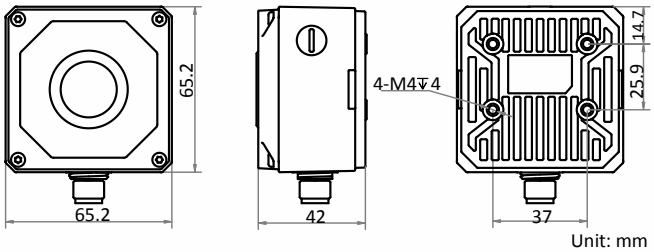
Available Model

- Vision sensor with 6 mm focal length: MV-SC2016M-06S-WBN
- Vision sensor with 12.4 mm focal length: MV-SC2016M-12S-WBN
- Vision sensor with 14.8 mm focal length: MV-SC2016M-16S-WBN

Applicable Industry

Consumer electronics, food and beverage, pharmaceutical, automobile, etc.

Dimension



Specification

Model	MV-SC2016M-06S-WBN	MV-SC2016M-12S-WBN	MV-SC2016M-16S-WBN
Tool			
Vision tool	Feature matching, Blob, fixture, find line, find circle, detect distance, measure brightness, measure line to line		
Solution capacity	Supports solution importing and exporting, up to 16 solutions and 40 modules can be stored.		
Communication protocol	RS-232, TCP, UDP, FTP		
Camera			
Sensor type	CMOS, global shutter		
Pixel size	3.45 μm × 3.45 μm		
Sensor size	1/2.9"		
Resolution	1440 × 1080		
Max. frame rate	60 fps		
Dynamic range	71.4 dB		
SNR	41 dB		
Gain	0 dB to 15 dB		
Exposure time	16 μs to 1 sec		
Pixel format	Mono 8		
Mono/color	Mono		
Electrical features			
Data interface	17-pin M12 connector provides power, Ethernet, digital IO, and serial port		
Ethernet	Fast Ethernet		
Digital I/O	Input signal × 2 (Line 0/1), output signal × 3 (Line 5/6/7), bi-directional I/O × 3 (Line 2/3/4), and button input × 1. Output signal can be set as NPN or PNP		
Power supply	12 VDC to 24 VDC		
Power consumption	Approx. 5.4 W@12 VDC		
Mechanical			
Lens mount	M12-mount, manual focus supported		
Focal length	6 mm (0.2")	12.4 mm (0.5")	14.8 mm (0.6")
Lens cap	Transparent lens cap. Polarization lens cap is optional		
Light source	Spotlight white light. Spotlight red/blue, and wide-angle white/red/blue light is optional		
Indicator	Power indicator (PWR), network indicator (LNK), status indicator (STS), result indicator (OK/NG)		
Dimension	65.2 mm × 65.2 mm × 42 mm (2.6" × 2.6" × 1.7")		
Weight	Approx. 240 g (0.5 lb.)		
Ingress protection	IP67 (under proper installation of lens and wiring)		
Temperature	Working temperature: 0 °C to 50 °C (32 °F to 122 °F) Storage temperature: -30 °C to 70 °C (-22 °F to 158 °F)		
Humidity	20% to 95% RH, non-condensing		
General			
Client software	Via web based interface		
Certification	CE, FCC, KC		

Detection Range

Lens focal length	Installation distance	Field of view	Single pixel accuracy
6 mm (0.2")	20 mm (0.8")	16.56 mm × 12.42 mm (0.7" × 0.5")	0.0115 mm
	300 mm (11.8")	248.4 mm × 186.3 mm (9.8" × 7.3")	0.1725 mm
12.4 mm (0.5")	80 mm (3.1")	33.12 mm × 24.84 mm (1.3" × 1.0")	0.023 mm
	600 mm (23.6")	248 mm × 186.3 mm (9.8" × 7.3")	0.1722 mm
14.8 mm (0.6")	100 mm (3.9")	33.12 mm × 24.84 mm (1.3" × 1.0")	0.023 mm
	800 mm (31.5")	264.96 mm × 198.72 mm (10.4" × 7.8")	0.184 mm