

SC3016C

1.6 MP 1/2.9" Vision Sensor



Introduction

With built-in positioning and measurement algorithms, SC3016C vision sensor can detect object's existence, position, dimension, color, etc. It can be monitored and operated via the SCMVS client. It can output results via RS-232 and Ethernet, and cooperate with other processes via IO. The vision sensor supports multiple result output methods and customized result text output.

Key Features

- Adopts embedded hardware platform for high-speed image processing.
- Adopts built-in positioning and measurement algorithms to detect object's existence, position, dimension, etc.
- Multiple IO interfaces for input and output signals.
- Multiple indicators for displaying device status.
- Adopts light source to ensure uniform brightness in the illuminated area.
- Supports multiple communication protocols, including Serial Port, TCP Client, TCP Server, Profinet, Modbus, etc.

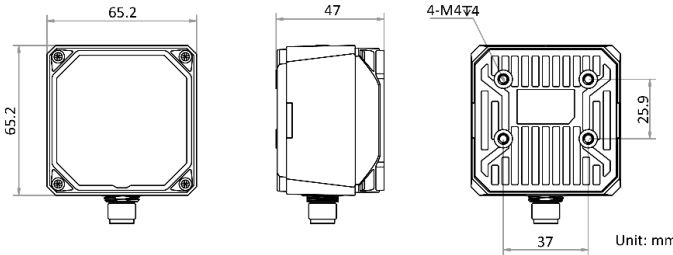
Available Model

- 6 mm focal length: SC3016C-06M-WBN
- 12.4 mm focal length: SC3016C-12M-WBN
- 14.8 mm focal length: SC3016C-15M-WBN

Applicable Industry

Consumer electronics, food and medical industry, automobile, etc.

Dimension



Specification

Model	SC3016C-06M-WBN	SC3016C-12M-WBN	SC3016C-15M-WBN
Tool			
Vision tool	<ul style="list-style-type: none"> ● Existence: Pattern existence, spot existence, edge existence, circle existence, line existence ● Count: Pattern count, spot count, edge count ● Measurement: Brightness analysis, contrast measurement, greyscale size, diameter measurement, width measurement, line angle, line to line angle, point to line measurement, color size ● Recognition: OCR, color contrast, barcode recognition 		
Solution capacity*	Supports solution importing and exporting, up to 32 solutions and 40 modules can be stored.		
Communication protocol	Serial Port, TCP Client, TCP Server, UDP Server, FTP, Profinet, Modbus, Ethernet/IP		
Camera			
Sensor type	CMOS, global shutter		
Pixel size	3.45 μm × 3.45 μm		
Sensor size	1/2.9"		
Resolution	1408 × 1024		
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	RGB 8, Mono 8		
Mono/color	Color		
Electrical features			
Data interface	17-pin M12 connector provides power, Ethernet, digital I/O, 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 external button input × 1. Output signal can be set as NPN or PNP		
Power supply	24 VDC		
Max. power consumption	Approx. 48 W@24 VDC		
Mechanical			
Lens mount	M12-mount, mechanical autofocus lens		
Focal length	6 mm (0.2")	12.4 mm (0.5")	14.8 mm (0.6")
Lens cap	Transparent lens cap. Polarization or infrared filter lens cap is optional.		
Light source	White light by default. Red/blue/near-infrared is optional.		
Indicator	Power indicator (PWR), network indicator (LNK), status indicator (STS), result indicator (OK/NG)		
Dimension	65.2 mm × 65.2 mm × 47 mm (2.6" × 2.6" × 1.9")		
Weight	Approx. 280 g (0.6 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	SCMVS		
Certification	CE, FCC, KC		

*Single solution supports up to 4 pattern count modules, or 4 existence modules, or 4 color size modules.

Detection Range

Lens focal length	Installation distance	Field of view	Single pixel accuracy
6 mm (0.2")	5 mm (0.2")	4.05 mm × 2.94 mm (0.2" × 0.1")	0.003 mm
	2000 mm (78.7")	1619.20 mm × 1177.60 mm (63.7" × 46.4")	1.150 mm
12.4 mm (0.5")	70 mm (2.8")	27.42 mm × 19.94 mm (1.1" × 0.8")	0.019 mm
	2000 mm (78.7")	783.48 mm × 569.81 mm (30.8" × 22.4")	0.556 mm
14.8 mm (0.6")	80 mm (3.1")	26.26 mm × 19.10 mm (1.0" × 0.8")	0.019 mm
	2000 mm (78.7")	656.43 mm × 477.41 mm (25.8" × 18.8")	0.466 mm

