

# 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.

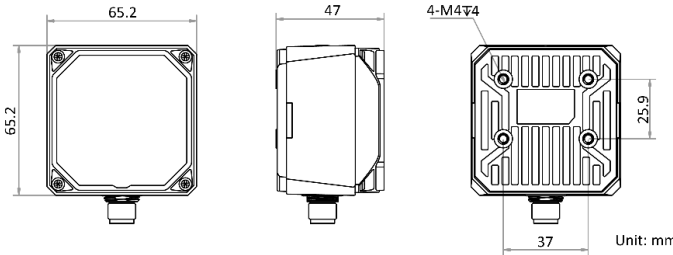
### Available Model

- 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
<b>Tool</b>			
<b>Vision tool</b>	<ul style="list-style-type: none"> <li>● Existence: Pattern existence, spot existence, edge existence, circle existence, line existence</li> <li>● Count: Pattern count, spot count, edge count</li> <li>● Measurement: Brightness analysis, contrast measurement, greyscale size, diameter measurement, width measurement, line angle, line to line angle, point to line measurement, color size</li> <li>● Recognition: OCR, color contrast, barcode recognition</li> </ul>		
<b>Solution capacity*</b>	Supports solution importing and exporting, up to 32 solutions and 40 modules can be stored.		
<b>Communication protocol</b>	Serial Port, TCP Client, TCP Server, UDP Server, FTP, Profinet, Modbus, Ethernet/IP		
<b>Camera</b>			
<b>Sensor type</b>	CMOS, global shutter		
<b>Pixel size</b>	3.45 μm × 3.45 μm		
<b>Sensor size</b>	1/2.9"		
<b>Resolution</b>	1408 × 1024		
<b>Max. frame rate</b>	60 fps		
<b>Dynamic range</b>	71.4 dB		
<b>SNR</b>	41 dB		
<b>Gain</b>	0 dB to 15 dB		
<b>Exposure time</b>	16 μs to 1 sec		
<b>Pixel format</b>	RGB 8, Mono 8		
<b>Mono/color</b>	Color		
<b>Electrical features</b>			
<b>Data interface</b>	17-pin M12 connector provides power, Ethernet, digital I/O, and serial port		
<b>Ethernet</b>	Fast Ethernet		
<b>Digital I/O</b>	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		
<b>Power supply</b>	24 VDC		
<b>Max. power consumption</b>	Approx. 48 W@24 VDC		
<b>Mechanical</b>			
<b>Lens mount</b>	M12-mount, mechanical autofocus lens		
<b>Focal length</b>	6 mm (0.2")	12.4 mm (0.5")	14.8 mm (0.6")
<b>Lens cap</b>	Transparent lens cap. Polarization or infrared filter lens cap is optional.		
<b>Light source</b>	White light by default. Red/blue/near-infrared is optional.		
<b>Indicator</b>	Power indicator (PWR), network indicator (LNK), status indicator (STS), result indicator (OK/NG)		
<b>Dimension</b>	65.2 mm × 65.2 mm × 47 mm (2.6" × 2.6" × 1.9")		
<b>Weight</b>	Approx. 280 g (0.6 lb.)		
<b>Ingress protection</b>	IP67 (under proper installation of lens and wiring)		
<b>Temperature</b>	Working temperature: 0 °C to 50 °C (32 °F to 122 °F) Storage temperature: -30 °C to 70 °C (-22 °F to 158 °F)		
<b>Humidity</b>	20% to 95% RH, non-condensing		
<b>General</b>			
<b>Client software</b>	SCMVS		
<b>Certification</b>	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

