HIKROBOT

MV-SC6050M

5 MP Mono Smart Camera

MV-SC6050M smart camera is developed based on high-performance embedded platform with strong calculation performance. It integrates VM functions and AI deep learning algorithm, and can use more than 140 algorithms. It adopts multiple interfaces for supporting external light source, display, mouse, etc.

Key Features

- Adopts AI deep learning algorithm to achieve OCR, object recognition, defect detection, etc.
- Integrates VM functions, and supports more than 140 algorithms.
- Supports four-color light source (red/green/blue/white), and switching as needed.
- Adopts multiple I/O interfaces, such as multiple input/output signals.
- Supports multiple communication protocols.
- Supports indicators displaying device status for easy debugging and maintenance.
- Supports ingress protection IP67.

Available Models

- 8 mm focal length: MV-SC6050M-08M-XBN
- 12 mm focal length: MV-SC6050M-12M-XBN
- 16 mm focal length: MV-SC6050M-16M-XBN

Typical Application

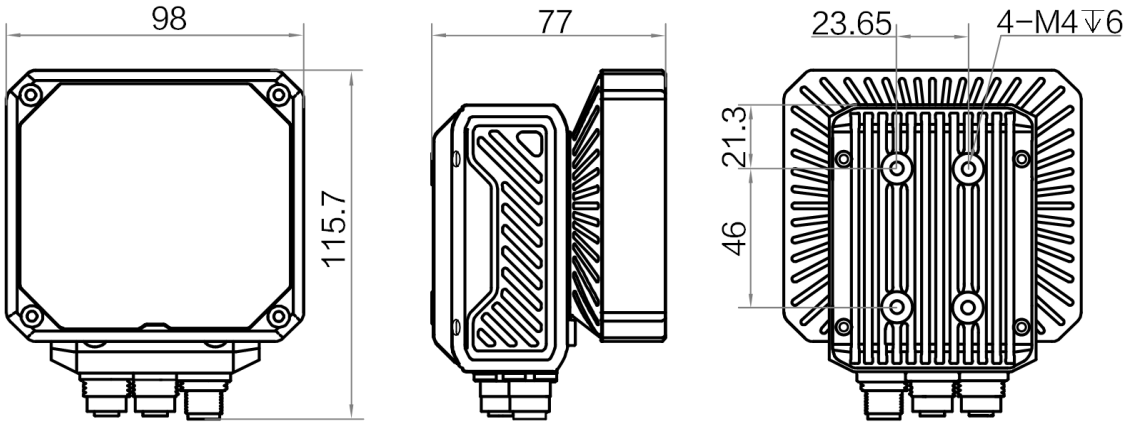
- Consumer electronics
- Food and pharmaceutical
- Packaging
- Positioning and grabbing

Specification

Model	MV-SC6050M-08M-XBN	MV-SC6050M-12M-XBN	MV-SC6050M-16M-XBN
Tool			
Function module	Vision Master Platform (include deep learning module)		
Communication protocol	TCP, UDP, MODBUS, Serial Port, PROFINET, EtherNet/IP, Fins, MC, FTP, etc.		
Camera			
Sensor type	CMOS, global shutter		
Pixel size	3.45 μm × 3.45 μm		
Sensor size	1/1.45"		
Resolution	2432 × 2048		
Max. frame rate	80 fps		
Gain	0 dB to 18 dB		
Exposure time	16 μs to 1 sec		
Pixel format	Mono 8		
Mono/color	Mono		
Platform			
Memory	8 GB		
Storage	64 GB		
Electrical features			
Data interface	Gigabit Ethernet (1000 Mbit/s)		
Digital I/O	17-pin M12 connector provides power and I/O, including opto-isolated input × 2 (Line 0/1), opto-isolated output × 2 (Line 4/5), configurable non-isolated input/output × 2 (Line 2/3), RS-232 × 1, and light source output (max. 30 W) × 1		
Extended interface	VGA × 1, and USB host × 1		
Power supply	24 VDC		
Power consumption	External light source and built-in light source cannot be used at the same time Avg. 12 W @ 24 VDC (with no external light source and the built-in light source disabled) Avg. 42 W @ 24 VDC (with external light source) Avg. 16.6 W @ 24 VDC (built-in light source is enabled) Max. 18 W @ 24 VDC (with no external light source and the built-in light source disabled) Max. 48 W @ 24 VDC (with external light source or the built-in light source enabled)		
Mechanical			
Lens mount	M12-mount		
Focal length	8 mm	12 mm	16 mm
Light source	Red light, green light, blue light, white light (switching by software)		
Indicator	Power indicator (PWR), network indicator (LNK), status indictor (STS), and user-defined indicator (U1/U2)		

Dimension	77 mm × 98 mm × 115.7 mm (3.0" × 3.9" × 4.6")
Weight	Approx. 750 g (1.7 lb.)
Ingress protection	IP67 (under proper installation of waterproof lens cap)
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% RH to 95% RH (no condensation)
Vibration resistance	Meets standard IEC 60068-2-6:2007. Device only (without installation bracket): 10 Hz to 55 Hz, 1.5 mm peak-to-peak amplitude, 2 hours per axis (X, Y, Z)
Shock resistance	Meets standard IEC 60068-2-27:2008. Device only (without installation bracket): 30 g / 11 ms, half-sine wave, 500 shocks per axis (6 directions)
General	
Certification	CE, KC

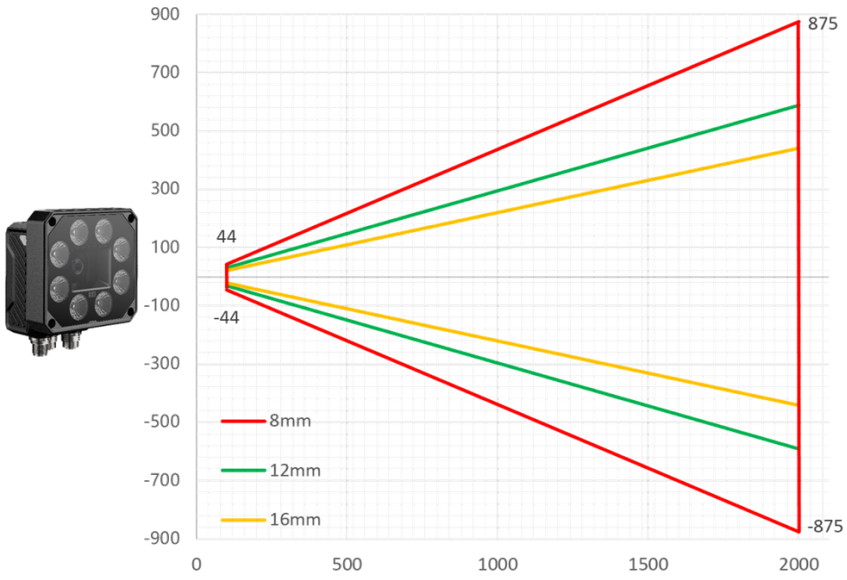
Dimension



Detection Range

Focal Length	Installation Distance	Field of View	Single Pixel Accuracy
8 mm	100 mm	100 mm × 88 mm	0.043 mm
	2000 mm	2000 mm × 1750 mm	0.863 mm
12 mm	100 mm	70 mm × 60 mm	0.029 mm
	2000 mm	1400 mm × 1180 mm	0.575 mm
16 mm	100 mm	52 mm × 44 mm	0.022 mm
	2000 mm	1050 mm × 883 mm	0.431 mm

Horizontal Field of View/mm



Working distance/mm

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