

MV-SC5050XM

5 MP Mono Smart Camera

MV-SC5050XM 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 display, keyboard, 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.
- 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

- Mechanical focusing, 8 mm focal length: MV-SC5050XM-08M-WBN
- Mechanical focusing, 12 mm focal length: MV-SC5050XM-12M-WBN
- Mechanical focusing, 16 mm focal length: MV-SC5050XM-16M-WBN
- Liquid lens focusing, 8 mm focal length: MV- SC5050XM -08L-WBN
- Liquid lens focusing, 12 mm focal length: MV-SC5050XM-12L-WBN
- Liquid lens focusing, 16 mm focal length: MV-SC5050XM-16L-WBN

Typical Application

- Consumer electronics
- Food and pharmaceutical
- Packaging



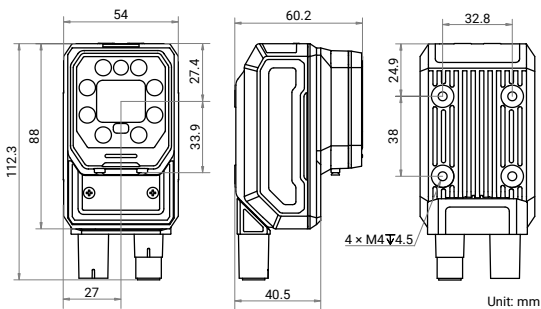
Specification

Model	MV-SC5050XM-**M-WBN	MV-SC5050XM-**L-WBN
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	60 fps	
Gain	0 dB to 37 dB	
Exposure time	15 μs to 1 sec	
Pixel format	Mono 8	
Mono/color	Mono	
Platform		
Memory	8 GB	
Storage	64 GB	
Electrical feature		
Data interface	Gigabit Ethernet (1000 Mbit/s)	
Digital I/O	12-pin M12 connector provides power and I/O, including opto-isolated input × 3 (Line 0/1/2), opto-isolated output × 3 (Line 3/4/5), RS-232 × 1	
Power supply	24 VDC	
Power consumption	Avg. 12.3 W @ 24 VDC (with included light source on) Max. 48 W @ 24 VDC (with included light source on)	
Mechanical		
Lens mount	M12-mount, mechanical focusing	D14-mount, liquid lens focusing
Focal length	8 mm / 12 mm / 16 mm	8 mm / 12 mm / 16 mm
Lens cap	Half polarization lens cap by default. Transparent or full polarization lens cap is optional.	
Light source	White light source by default. Red, blue, or IR light source is optional.	
Indicator	Power indicator (PWR), network indicator (LNK), and user-defined indicator (U1/U2)	
Dimension	Straight angle: 112.3 mm × 54 mm × 60.2 mm (4.4" × 2.1" × 2.4") Right angle: 88.7 mm × 54 mm × 82.5 mm (3.5" × 2.1" × 3.2")	
Weight	Approx. 370 g (0.8 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)	Working temperature: 0 °C to 40 °C (32 °F to 104 °F) Storage temperature: −30 °C to 70 °C (−22 °F to 158 °F)

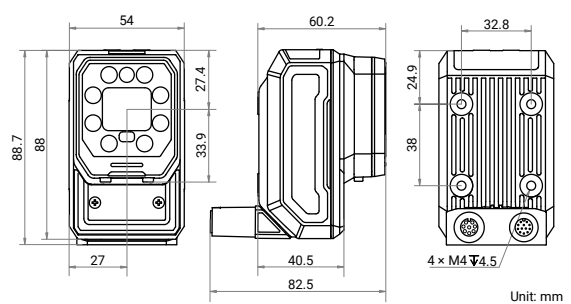
Humidity	20% RH to 95% RH (no condensation)
Vibration resistance	Meets standard IEC 60068-2-6:2007. Device only (without installation bracket): 10 Hz to 55 Hz, 1.5 mm peak-to-peak amplitude, 2 hours per axis (X, Y, Z)
Shock resistance	Meets standard IEC 60068-2-27:2008. Device only (without installation bracket): 30 g / 11 ms, half-sine wave, 500 shocks per axis (6 directions)
General	
Certification	CE, KC

Dimension

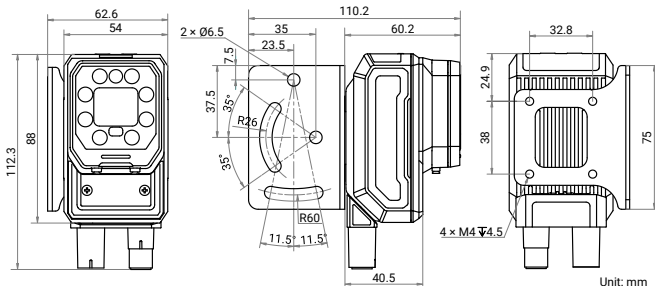
Device (Straight Angle):



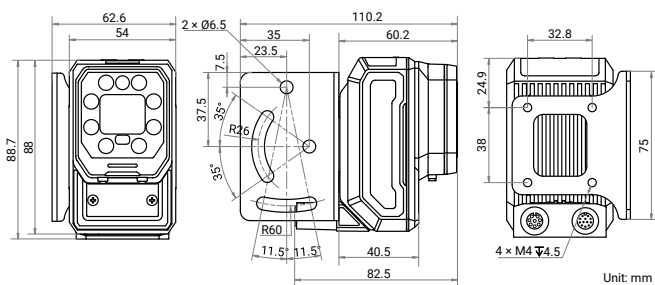
Device (Right Angle):



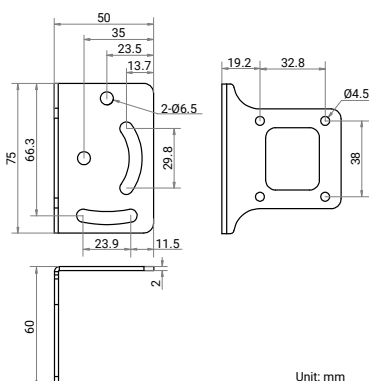
Device and Installation Bracket (Straight Angle):



Device and Installation Bracket (Right Angle):



Installation Bracket:



Detection Range

MV-SC5050XM-08/12/16M-WBN (Unit: mm)					
Lens Focal Length	Working Distance	Field of View		Single Pixel Accuracy	Field of View Diagram
		H	V		
8	25	26	22	0.01	
	100	103	87	0.04	
	200	206	173	0.08	
	300	308	260	0.13	
	500	514	433	0.21	
	1000	1028	866	0.42	
	2000	2056	1732	0.85	
12	60	42	35	0.02	
	100	69	58	0.03	
	200	139	117	0.06	
	300	208	175	0.09	
	500	347	292	0.14	
	1000	693	584	0.29	
	2000	1387	1168	0.57	
16	100	52	44	0.02	
	200	105	88	0.04	
	300	157	132	0.06	
	400	210	177	0.09	
	500	262	221	0.11	
	1000	524	442	0.22	
	2000	1049	883	0.43	

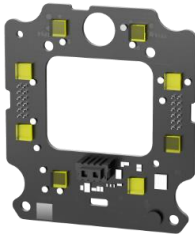
Detection Range

MV-SC5050XM-08/12/16L-WBN (Unit: mm)					
Lens Focal Length	Working Distance	Field of View		Single Pixel Accuracy	Field of View Diagram
		H	V		
8	100	105	88	0.04	
	200	210	177	0.09	
	300	315	265	0.13	
	500	524	442	0.22	
	1000	1049	883	0.43	
	1500	1573	1325	0.65	
	2000	2098	1766	0.86	
12	100	70	59	0.03	
	200	140	118	0.06	
	300	210	177	0.09	
	500	350	294	0.14	
	1000	699	589	0.29	
	1500	1049	883	0.43	
	2000	1398	1178	0.58	
16	100	52	44	0.02	
	200	105	88	0.04	
	300	157	132	0.06	
	500	262	221	0.11	
	1000	524	442	0.22	
	1500	787	662	0.32	
	2000	1049	883	0.43	

Note: For liquid lens models, the minimum working distance in Fast Focus (ToF autofocus) mode is 100 mm.

Accessories

Included

Bracket	Half-Polarized Lens Cap	White Light Board	Screws
			-

Required

24V Power Supply	24V Power Adapter	AC Power Cables	Type-C Adapter Cable
			
12-Pin M12 to Open Power & I/O Cable		8-Pin M12 to RJ45 Gigabit Ethernet Cable	
● Cable for static scenes: 3 m/5 m/7 m/10 m/15 m/30 m ● High-flex cable: 3 m/5 m/10 m/ 20 m		● Cable for static scenes: 3 m/5 m/7 m/10 m/15 m/30 m ● High-flex cable: 3 m/5 m/10 m/ 20 m	
			

Optional

Transparent/Fully-Polarized/ESD Protective Caps	Red/Blue/IR Light Board	Flash Light Source
	