

MV-ID5050XM

5 MP Industrial Code Reader



Introduction

MV-ID5050XM industrial code reader can read different types of codes with reading speed up to 96 codes/sec. It adopts Hikrobot's deep learning algorithm to process images with good robustness, and can recognize various complex codes. The device has a built-in touchscreen to view the statistical data and adjust parameters without accessing to the client. It also supports board selection of accessories, such as multi-color light source or wafer light source, for improving code-reading ability and scene adaptability.

Available Model

- 8 mm focal length, mechanical focusing:
MV-ID5050XM-08M-RBN
- 12 mm focal length, mechanical focusing:
MV-ID5050XM-12M-RBN
- 16 mm focal length, mechanical focusing:
MV-ID5050XM-16M-RBN
- 25 mm focal length, mechanical focusing:
MV-ID5050XM-25M-RBN
- 8 mm focal length, liquid lens focusing:
MV-ID5050XM-08L-RBN
- 12 mm focal length, liquid lens focusing:
MV-ID5050XM-12L-RBN
- 16 mm focal length, liquid lens focusing:
MV-ID5050XM-16L-RBN

Key Features

- Adopts built-in deep learning algorithm to read codes with good robustness.
- Device with liquid lens can achieve focusing without delay by adjusting the liquid shape through voltage, and achieve fast zooming combined with ToF.
- Adopts a built-in touchscreen to view the statistical data and adjust parameters via pressing on the screen.
- Adopts multiple indicators to show device status from different sides.
- Rotatable cable design for flexible mounting.
- Adopts controllable light source design to provide diversified light according to workpiece material.
- Adopts I/O interfaces for input and output signals.
- Supports high-precision sensors to get the installation position.
- Supports board selection of accessories, such as multi-color light source or wafer light source, for improving code-reading ability and scene adaptability.

Applicable Industry

PCB, automobile, food and drug, lithium battery, photovoltaic industry, etc.

Specification

Model	MV-ID5050XM-08M-RBN	MV-ID5050XM-12M-RBN	MV-ID5050XM-16M-RBN	MV-ID5050XM-25M-RBN
Performance				
Symbologies	1D codes: Code 39, Code 93, Code 128, CodaBar, EAN 8, EAN 13, UPCA, UPCE, ITF 14, ITF 25, Matrix 25, MSI, China Post, Code 11, Industrial 2of5, and Pharmacode			
	2D codes: QR Code, Data Matrix, MicroQR, AZTEC, HanXin			
	Stacked codes: PDF 417			
Max. frame rate	60 fps			
Max. reading speed	96 codes/sec			
Sensor type	CMOS, global shutter			
Pixel size	3.45 μm × 3.45 μm			
Sensor size	1/1.45"			
Resolution	2432 × 2048			
Exposure time	6 μs to 3000 μs			
Gain	0 dB to 37 dB			
Mono/color	Mono			
Communication protocol	SmartSDK, TCP Client, TCP Server, Serial, FTP, Profinet, Ethernet/IP, MELSEC/SLMP, ModBus, Fins, UDP			
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 (LineIn 0/1/2) × 3, opto-isolated output (LineOut 3/4/5) × 3, RS-232 input × 1, and RS-232 output × 1 Supports device triggering via pressing on touchscreen.			
Power supply	24 VDC			
Max. power consumption	12 W @ 24 VDC (light source enabled)			
Mechanical				
Focal length	8 mm	12 mm	16 mm	25 mm
Lens mount	M12-mount, mechanical focus			
Lens cap	Half polarization lens cap by default. Transparent and full polarization caps are optional.			
Light source	Red light by default. White/blue/IR light is optional.			
Indicator	Multi-directional device body indicator			
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. 410 g (0.9 lb.)			
Ingress protection	IP67			
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)			
General				
Client software	IDMVS			
Certification	CE, KC			

Specification

Model	MV-ID5050XM-08L-RBN	MV-ID5050XM-12L-RBN	MV-ID5050XM-16L-RBN
Performance			
Symbologies	1D codes: Code 39, Code 93, Code 128, CodaBar, EAN 8, EAN 13, UPCA, UPCE, ITF 14, ITF 25, Matrix 25, MSI, China Post, Code 11, Industrial 2of5, and Pharmacode		
	2D codes: QR Code, Data Matrix, MicroQR, AZTEC, HanXin		
	Stacked codes: PDF 417		
Max. frame rate	60 fps		
Max. reading speed	96 codes/sec		
Sensor type	CMOS, global shutter		
Pixel size	3.45 μm × 3.45 μm		
Sensor size	1/1.45"		
Resolution	2432 × 2048		
Exposure time	6 μs to 3000 μs		
Gain	0 dB to 37 dB		
Mono/color	Mono		
Communication protocol	SmartSDK, TCP Client, TCP Server, Serial, FTP, Profinet, Ethernet/IP, MELSEC/SLMP, ModBus, Fins, UDP		
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 (LineIn 0/1/2) × 3, opto-isolated output (LineOut 3/4/5) × 3, RS-232 input × 1, and RS-232 output × 1 Supports device triggering via pressing on touchscreen.		
Power supply	24 VDC		
Max. power consumption	12 W @ 24 VDC (light source enabled)		
Mechanical			
Focal length	8 mm	12 mm	16 mm
Lens mount	D14-mount, liquid lens focus		
Lens cap	Half polarization lens cap by default. Transparent and full polarization caps are optional.		
Light source	Red light by default. White/blue/IR light is optional.		
Indicator	Multi-directional device body indicator		
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. 410 g (0.9 lb.)		
Ingress protection	IP67		
Temperature	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)		
General			
Client software	IDMVS		
Certification	CE, KC		

Detection Range

MV-ID5050XM-08/12/16/25M-RBN (Unit: mm)						
Lens Focal Length	Working Distance	Field of View		1D Min. Resolution*	2D Min. Resolution Δ	Diagram of Field of View
		H	V			
8	25	26.22	22.08	0.01	0.03	
	100	104.88	88.32	0.04	0.13	
	200	209.76	176.64	0.09	0.26	
	300	314.64	264.96	0.13	0.39	
	400	419.52	353.28	0.17	0.52	
	500	524.40	441.60	0.22	0.65	
	600	629.28	529.92	0.26	0.78	
	1000	1048.80	883.20	0.43	1.29	
	2000	2097.60	1766.40	0.86	2.59	
12	60	41.95	35.33	0.02	0.05	
	100	69.92	58.88	0.03	0.09	
	200	139.84	117.76	0.06	0.17	
	300	209.76	176.64	0.09	0.26	
	400	279.68	235.52	0.12	0.35	
	500	349.60	294.40	0.14	0.43	
	600	419.52	353.28	0.17	0.52	
	1000	699.20	588.80	0.29	0.86	
	2000	1398.40	1177.60	0.58	1.73	
16	100	52.44	44.16	100	52.44	
	200	104.88	88.32	200	104.88	
	300	157.32	132.48	300	157.32	
	400	209.76	176.64	400	209.76	
	500	262.20	220.80	500	262.20	
	600	314.64	264.96	600	314.64	
	1000	524.40	441.60	1000	524.40	
	2000	1048.80	883.20	2000	1048.80	
25	230	77.19	65.00	0.03	0.10	
	300	100.68	84.79	0.04	0.12	
	400	134.25	113.05	0.06	0.17	
	500	167.81	141.31	0.07	0.21	
	600	201.37	169.57	0.08	0.25	
	1000	335.62	282.62	0.14	0.41	
	2000	671.23	565.25	0.28	0.83	

1D Min. Resolution (mm)*: Field of view (long side) / resolution (long side) $\times$ number of pixels in the minimum bar width (number of pixels in the minimum bar width = 1)

2D Min. Resolution (mm) Δ : Field of view (long side) / resolution (long side) $\times$ number of pixels in the side length of minimum module unit (number of pixels in the side length of minimum module unit = 3)

Detection Range

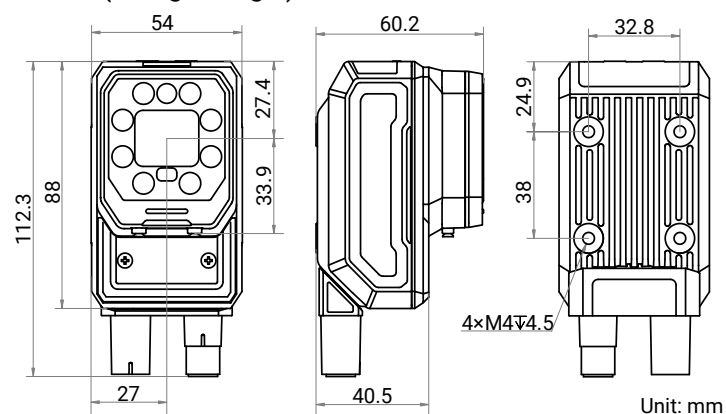
MV-ID5050XM-08/12/16L-RBN (Unit: mm)

Lens Focal Length	Working Distance	Field of View		1D Min. Resolution*	2D Min. Resolution Δ	Diagram of Field of View
		H	V			
8	100	124.36	104.24	0.05	0.15	
	200	232.08	194.54	0.09	0.28	
	300	339.83	284.86	0.14	0.41	
	400	447.57	375.16	0.18	0.55	
	500	555.34	465.50	0.23	0.68	
	600	663.13	555.85	0.27	0.81	
	1000	1094.23	917.21	0.44	1.33	
	2000	2171.79	1820.44	0.88	2.65	
12	100	81.07	67.95	0.03	0.10	
	200	150.94	126.51	0.06	0.18	
	300	220.82	185.10	0.09	0.27	
	400	290.72	243.67	0.12	0.35	
	500	360.62	302.28	0.15	0.44	
	600	430.51	360.87	0.17	0.52	
	1000	710.17	595.28	0.29	0.87	
	2000	1409.34	1181.35	0.58	1.72	
16	100	58.05	48.66	0.02	0.07	
	200	108.27	90.76	0.04	0.13	
	300	158.39	132.76	0.06	0.19	
	400	208.48	174.76	0.08	0.25	
	500	258.60	216.76	0.10	0.31	
	600	308.74	258.80	0.13	0.38	
	1000	509.30	426.91	0.21	0.62	
	2000	1010.60	847.11	0.41	1.23	

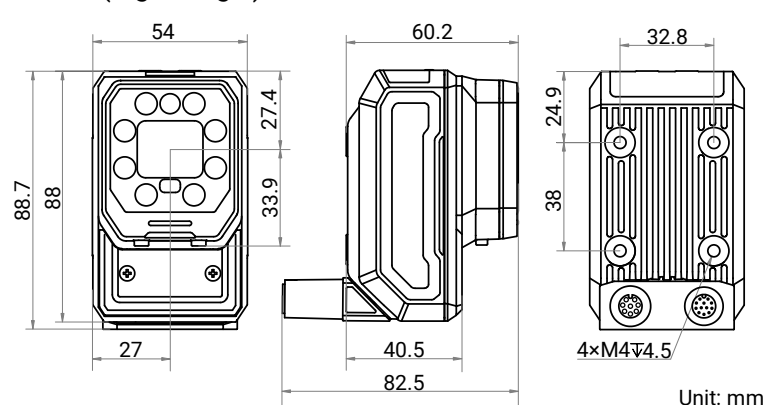
1D Min. Resolution (mm)*: Field of view (long side) / resolution (long side) × number of pixels in the minimum bar width (number of pixels in the minimum bar width = 1)

2D Min. Resolution (mm) Δ : Field of view (long side) / resolution (long side) × number of pixels in the side length of minimum module unit (number of pixels in the side length of minimum module unit = 3)

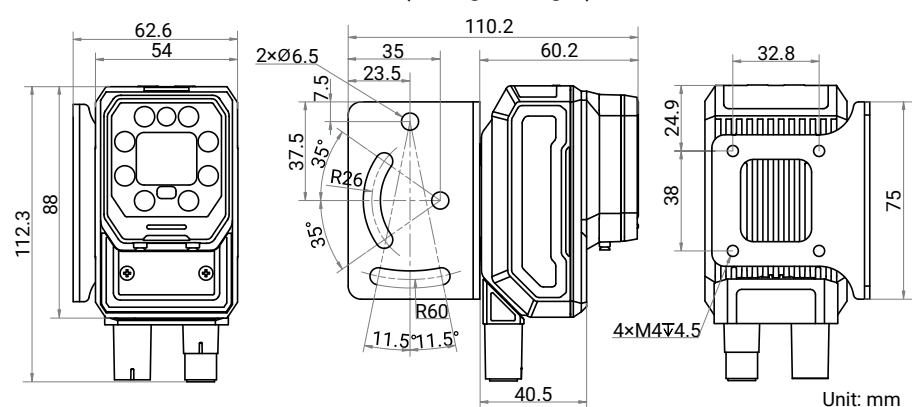
Device (Straight Angle)



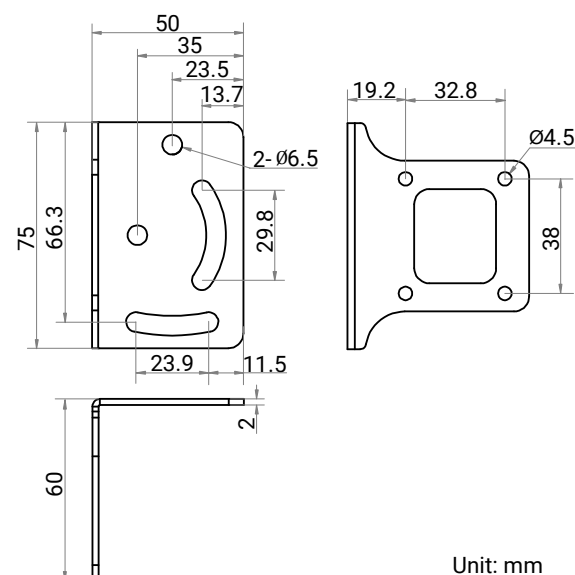
Device (Right Angle)



Device and Installation Bracket (Straight Angle)



Installation Bracket



Device and Installation Bracket (Right Angle)

