MV-ID3050XM

5 MP Industrial Code Reader

Introduction

With functions of image acquisition, code recognition and output, MV-ID3050XM industrial code reader can read different types of 1D codes and 2D codes with reading speed up to 90 codes/sec. It adopts Hikrobot's deep learning algorithm to process images with good robustness, and can recognize various complex codes.

Applicable Industry

Consumer electronics, lithium battery, tobacco, medicine, photovoltaics, automobile, PCB, etc.

Available Model

- 8 mm focal length, mechanical focusing: MV-ID3050XM-08M-RBN
- 12 mm focal length, mechanical focusing: MV-ID3050XM-12M-RBN
- 16 mm focal length, mechanical focusing: MV-ID3050XM-16M-RBN
- 25 mm focal length, mechanical focusing: MV-ID3050XM-25M-RBN
- 16 mm focal length, liquid lens focusing: MV-ID3050XM-16L-RBN

Key Feature

- Adopts built-in deep learning algorithm to read codes with good robustness.
- Adopts CMOS sensor to acquire high-quality images.
- Device with liquid lens combined with ToF can achieve fast image settings and real-time focusing.
- Supports one-key auto adjustment and easy to operate.
- Adopts multiple indicators displaying device status from different sides.
- Rotatable cable design for flexible mounting.
- Good environmental compatibility with Illuminating system.
- Adopts I/O interfaces for input and output signals.
- Ingress Protection Rating 67.

Note

Looking directly at the device may cause harm to the eyes. Protective measures like wearing protective glasses should be taken in the process of installation, maintenance and debugging.

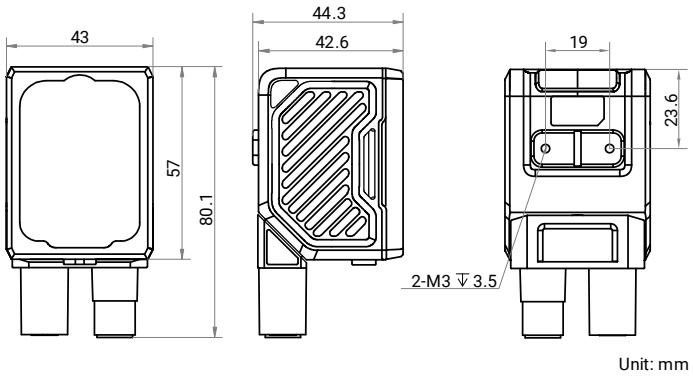
Specification

HIKROBOT

Model	MV-ID3050XM-08M-RBN	MV-ID3050XM-12M-RBN	MV-ID3050XM-16M-RBN	MV-ID3050XM-25M-RBN	MV-ID3050XM-16L-RBN
Performance					
Symbologies	1D codes: Code 39, Code 93, Code 128, CodaBar, EAN 8, EAN 13, ITF14, ITF25, MATRIX25, UPCA, UPCE, MSI, Code 11, Industrial 25, China Post, and Pharmacode				
	2D codes: QR Code, Data Matrix, Micro QR, and AZTEC				
	Stacked codes: PDF 417				
Max. frame rate	60 fps				
Max. reading speed	90 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 30000 μs				
Gain	0 dB to 24 dB				
Mono/color	Mono				
Communication protocol	SmartSDK, TCP Client, TCP Server, Serial, FTP, Profinet, MELSEC/SLMP, Ethernet/IP, ModBus, Fins, UDP				
Electrical feature					
Data interface	Fast Ethernet (100 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, and RS-232 × 1. Triggering the device is supported via pressing the top button.				
Power supply	24 VDC				
Max. power consumption	6.2 W @ 24 VDC (self-light source enabled)				
Mechanical					
Focal length	8 mm	12 mm	16 mm	25 mm	16 mm
Lens mount	M12-mount, mechanical focus				M12-mount, liquid lens focus
Lens cap	Transparent + polarized + diffused lens cap				
Light source	Red point light source + white diffused light source. White/blue/IR point light source is optional.				
Aiming system	Orange LED				
Indicator	Device body indicator, reading result indicator				
Dimension	Straight angle: 80.1 mm × 43 mm × 44.3 mm (3.2" × 1.7" × 1.7") Right angle: 58.5 mm × 43 mm × 65.4 mm (2.3" × 1.7" × 2.6")				
Weight	Approx. 195 g (0.4 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 45 °C (32 °F to 113 °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, RoHS, KC				

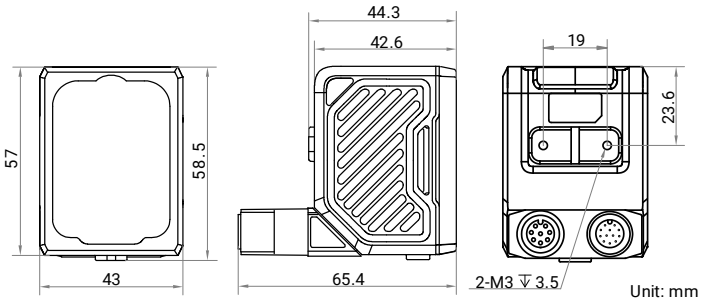
Dimension

Device (Straight Angle):



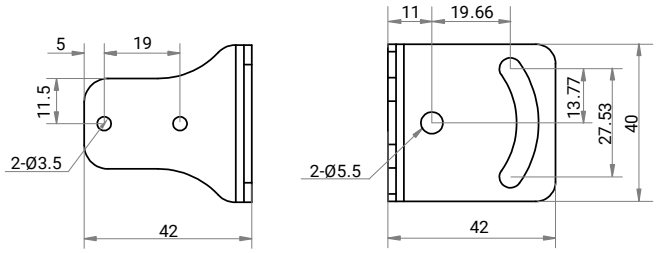
Unit: mm

Device (Right Angle):



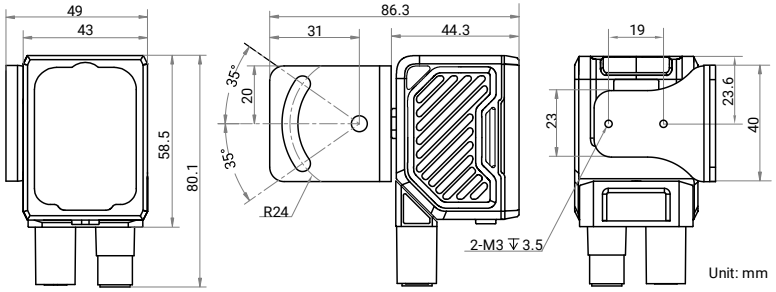
Unit: mm

Installation Bracket:



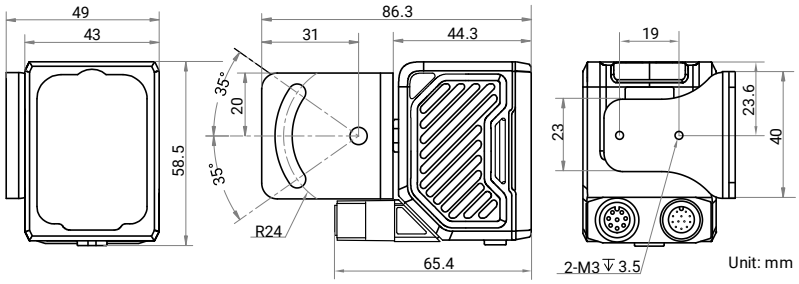
Unit: mm

Device and Installation Bracket (Straight Angle):



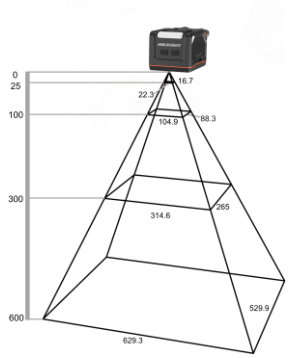
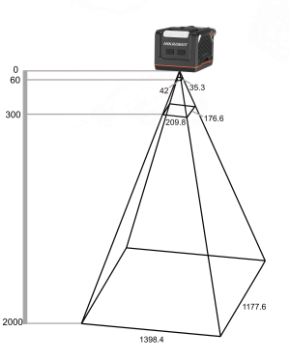
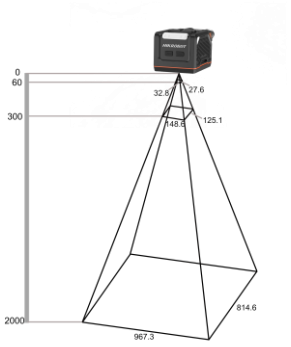
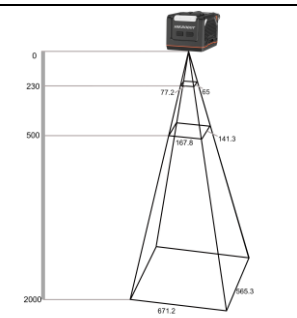
Unit: mm

Device and Installation Bracket (Right Angle):



Unit: mm

Detection Range

MV-ID3050XM (Unit: mm)						
Lens Focal Length	Working Distance	Field of View		1D Min. Resolution*	2D Min. Resolution△	Diagram of Field of View
		H	V			
8	25	26.2	22.1	0.01	0.03	
	100	104.9	88.3	0.04	0.13	
	300	314.6	265.0	0.13	0.39	
	600	629.3	529.9	0.26	0.78	
	1000	1048.8	883.2	0.43	1.29	
	2000	2097.6	1766.4	0.86	2.59	
12	60	42.0	35.3	0.02	0.05	
	100	69.9	58.9	0.03	0.09	
	300	209.8	176.6	0.09	0.26	
	600	419.5	353.3	0.17	0.52	
	1000	699.2	588.8	0.29	0.86	
	2000	1398.4	1177.6	0.58	1.73	
16	60	32.8	27.6	0.02	0.05	
	150	76.9	64.7	0.04	0.13	
	300	148.6	125.1	0.07	0.24	
	600	293.6	247.3	0.14	0.48	
	1000	483.6	407.3	0.24	0.80	
	2000	967.3	814.6	0.47	1.59	
25	230	77.2	65.0	0.03	0.10	
	300	100.7	84.8	0.04	0.12	
	500	167.8	141.3	0.07	0.21	
	1000	335.6	282.6	0.14	0.41	
	2000	671.2	565.3	0.28	0.83	

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)△: 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)