MV-ID3016XM

1.6 MP Industrial Code Reader

Introduction

With functions of image acquisition, code recognition and output, MV-ID3016XM industrial code reader can read different types of 1D codes and 2D codes with reading speed up to 110 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-ID3016XM-08M-RBN
- 12 mm focal length, mechanical focusing: MV-ID3016XM-12M-RBN
- 16 mm focal length, mechanical focusing: MV-ID3016XM-16M-RBN
- 25 mm focal length, mechanical focusing: MV-ID3016XM-25M-RBN
- 16 mm focal length, liquid lens focusing: MV-ID3016XM-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

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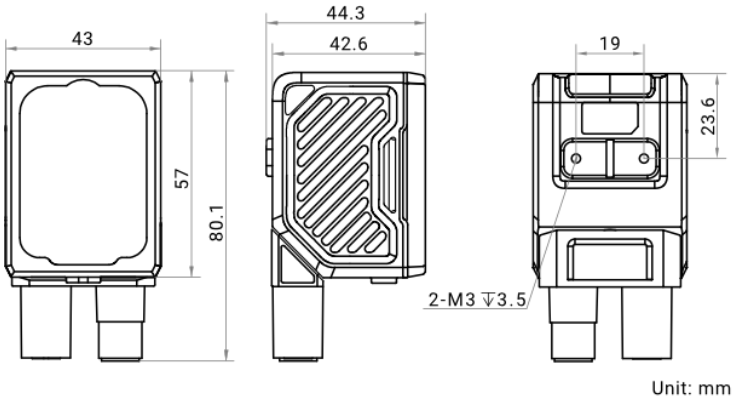
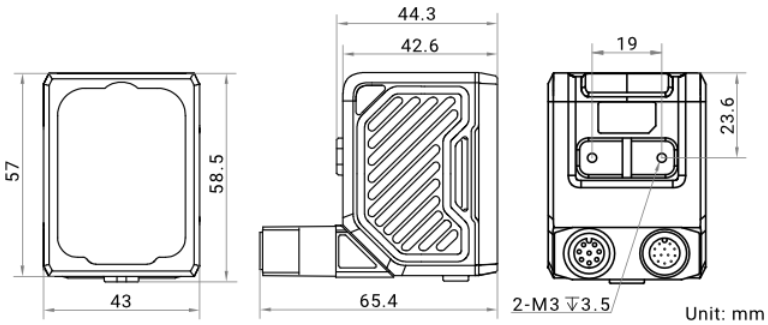
Model	MV-ID3016XM-08M-RBN	MV-ID3016XM-12M-RBN	MV-ID3016XM-16M-RBN	MV-ID3016XM-25M-RBN	MV-ID3016XM-16L-RBN
Performance					
Symbologies	1D codes: Code 39, Code 93, Code 128, CodaBar, EAN 8, EAN 13, ITF14, ITF25, MATRIX25, UPCA, UPCE, MSI, Code 11, Industrial 25, China Post, and Pharmacode				
	2D codes: QR Code, Data Matrix, and Micro QR				
	Stacked codes: PDF 417				
Max. frame rate	60 fps				
Max. reading speed	110 codes/sec				
Sensor type	CMOS, global shutter				
Pixel size	3.45 μm × 3.45 μm				
Sensor size	1/2.9"				
Resolution	1408 × 1024				
Exposure time	25 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

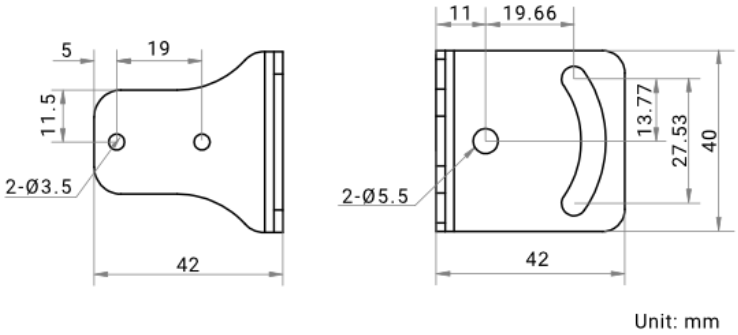
Device (Straight Angle):



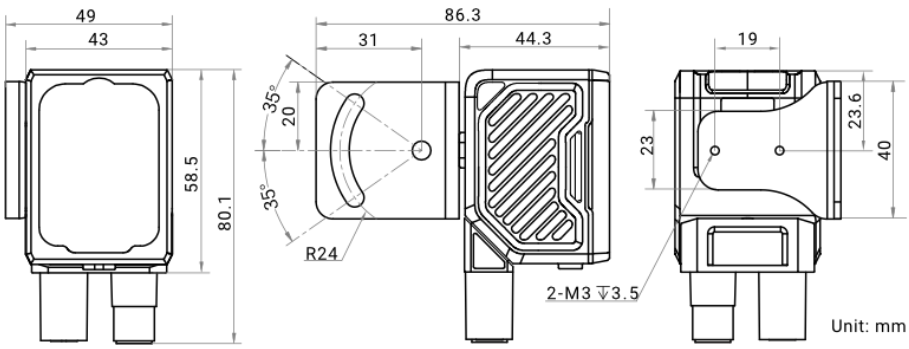
Device (Right Angle):



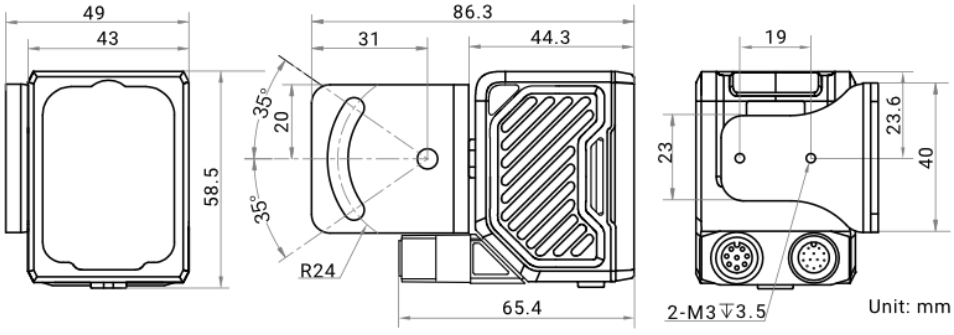
Installation Bracket:



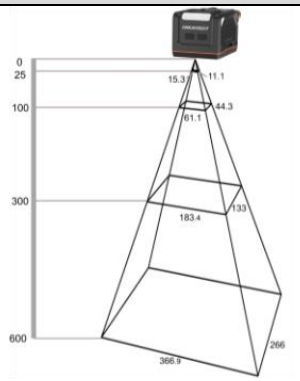
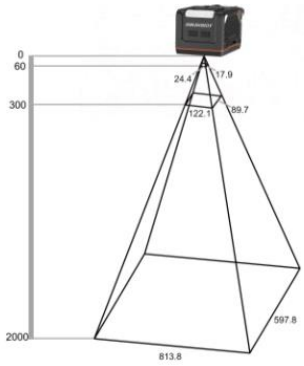
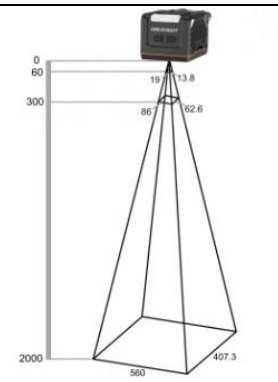
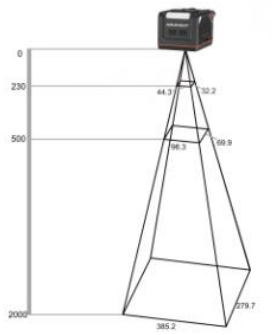
Device and Installation Bracket (Straight Angle):



Device and Installation Bracket (Right Angle):



Detection Range

MV-ID3016XM (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	15.3	11.1	0.011	0.032	
	100	61.1	44.3	0.043	0.130	
	300	183.4	133	0.130	0.390	
	600	366.9	266	0.261	0.779	
	1000	611.5	443.4	0.400	1.300	
	2000	1222.9	886.8	0.900	2.600	
12	60	24.4	17.9	0.017	0.053	
	100	40.7	29.9	0.029	0.088	
	300	122.1	89.7	0.087	0.263	
	600	244.1	179.3	0.173	0.525	
	1000	406.9	298.9	0.300	0.900	
	2000	813.8	597.8	0.600	1.800	
16	60	19	13.8	0.013	0.040	
	150	44.5	32.4	0.032	0.095	
	300	86	62.6	0.061	0.183	
	600	170	123.6	0.121	0.362	
	1000	280	203.6	0.199	0.597	
	2000	560	407.3	0.398	1.193	
25	230	44.3	32.2	0.031	0.094	
	300	57.8	42	0.041	0.123	
	500	96.3	69.9	0.068	0.205	
	1000	192.6	139.9	0.100	0.400	
	2000	385.2	279.7	0.300	0.800	

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)

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