

# 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: MV-ID3016XM-08M-RBN
- 12 mm focal length: MV-ID3016XM-12M-RBN
- 16 mm focal length: MV-ID3016XM-16M-RBN
- 25 mm focal length: MV-ID3016XM-25M-RBN

### Note

- Do not directly touch cooling parts of the device to avoid scald.
- 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.

### Key Feature

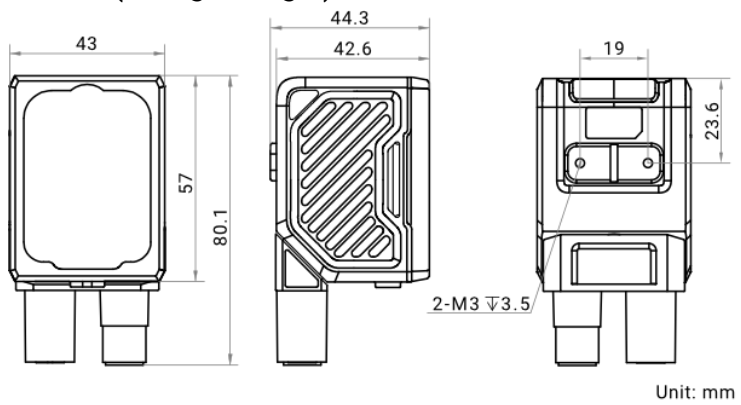
- Adopts built-in deep learning algorithm to read codes with good robustness.
- Adopts CMOS sensor to acquire high-quality images.
- Supports one-key auto adjustment and easy to operate.
- Adopts multiple indicators displaying device status from different sides.
- Good environmental compatibility with illuminating system.
- Adopts IO interfaces for input and output signals.
- Modularized light source design and easy to replace.

## Specification

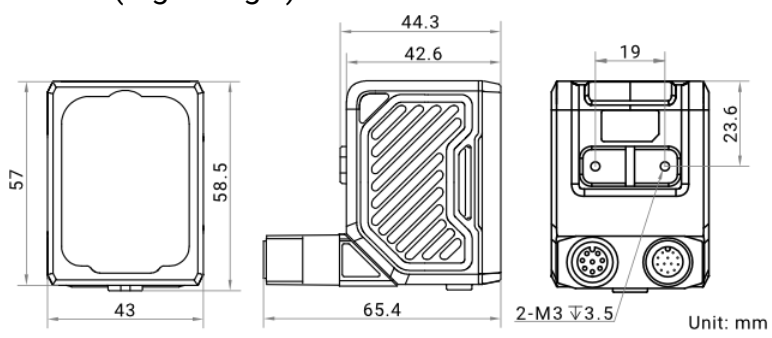
Model	MV-ID3016XM-08M-RBN	MV-ID3016XM-12M-RBN	MV-ID3016XM-16M-RBN	MV-ID3016XM-25M-RBN
<b>Performance</b>				
<b>Symbologies</b>	1D codes: Code 39, Code 93, Code 128, CodaBar, EAN 8, EAN 13, ITF 14, ITF 25, MATRIX 25, UPCA, UPCE, MSI, Code 11, Industrial 25, China Post, and Pharmacode			
	2D codes: QR Code, Data Matrix, and Micro QR			
	Stacked codes: PDF 417			
<b>Max. frame rate</b>	60 fps			
<b>Max. reading speed</b>	110 codes/sec			
<b>Sensor type</b>	CMOS, global shutter			
<b>Pixel size</b>	3.45 $\mu\text{m}$ $\times$ 3.45 $\mu\text{m}$			
<b>Sensor size</b>	1/2.9"			
<b>Resolution</b>	1408 $\times$ 1024			
<b>Exposure time</b>	6 $\mu\text{s}$ to 30000 $\mu\text{s}$			
<b>Gain</b>	0 dB to 24 dB			
<b>Mono/color</b>	Mono			
<b>Communication protocol</b>	SmartSDK, TCP Client, TCP Server, Serial, FTP, Profinet, MELSEC/SLMP, Ethernet/IP, ModBus, Fins, UDP			
<b>Electrical feature</b>				
<b>Data interface</b>	Fast Ethernet			
<b>Digital I/O</b>	12-pin M12 connector provides power and I/O, including opto-isolated input (LineIn 0/1/2) $\times$ 3, opto-isolated output (LineOut 3/4/5) $\times$ 3, and RS-232 $\times$ 1. Triggering the device is supported via pressing the top button.			
<b>Power supply</b>	24 VDC			
<b>Max. power consumption</b>	6.2 W@24 VDC (self-light source enabled)			
<b>Mechanical</b>				
<b>Focal length</b>	8 mm (0.3")	12 mm (0.5")	16 mm (0.6")	25 mm (1.0")
<b>Lens mount</b>	M12-mount, mechanical autofocus			
<b>Lens cap</b>	Transparent + polarized + diffused lens cap			
<b>Light source</b>	Red point light source + white diffused light source. White/blue/IR point light source is optional.			
<b>Aiming system</b>	Orange LED			
<b>Indicator</b>	Device body indicator, reading result indicator			
<b>Dimension</b>	Straight angle: 80.1 mm $\times$ 43 mm $\times$ 44.3 mm (3.2" $\times$ 1.7" $\times$ 1.7") Right angle: 58.5 mm $\times$ 43 mm $\times$ 65.4 mm (2.3" $\times$ 1.7" $\times$ 2.6")			
<b>Weight</b>	Approx. 195 g (0.4 lb.)			
<b>Ingress protection</b>	IP67 (under proper installation of waterproof lens cap)			
<b>Temperature</b>	Working temperature: 0 $^{\circ}\text{C}$ to 50 $^{\circ}\text{C}$ (32 $^{\circ}\text{F}$ to 122 $^{\circ}\text{F}$ ) Storage temperature: -30 $^{\circ}\text{C}$ to 70 $^{\circ}\text{C}$ (-22 $^{\circ}\text{F}$ to 158 $^{\circ}\text{F}$ )			
<b>Humidity</b>	20% to 95% RH, non-condensing			
<b>General</b>				
<b>Client software</b>	IDMVS			
<b>Certification</b>	CE, RoHS, KC			

## Dimension

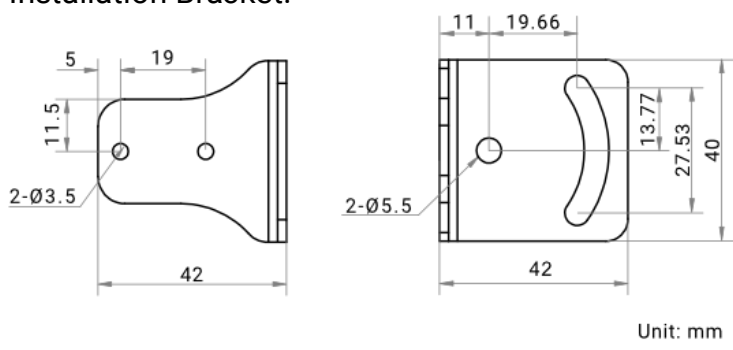
### Device (Straight Angle):



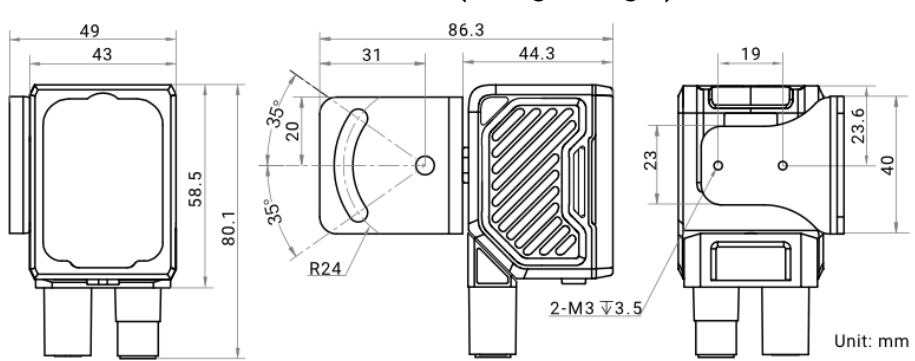
### Device (Right Angle):



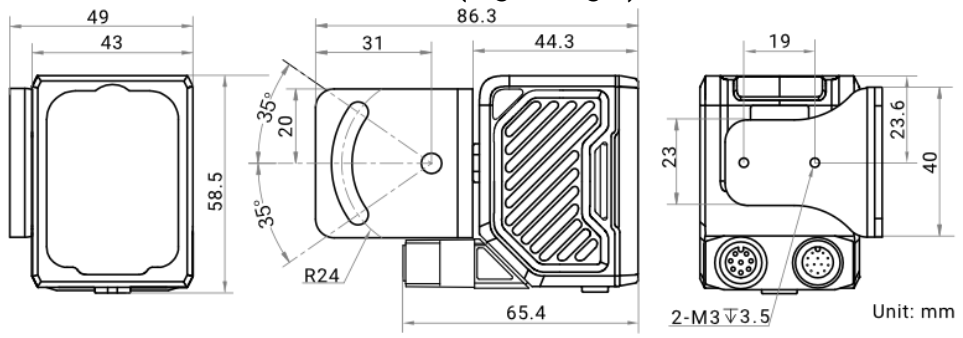
### Installation Bracket:



### Device and Installation Bracket (Straight Angle):

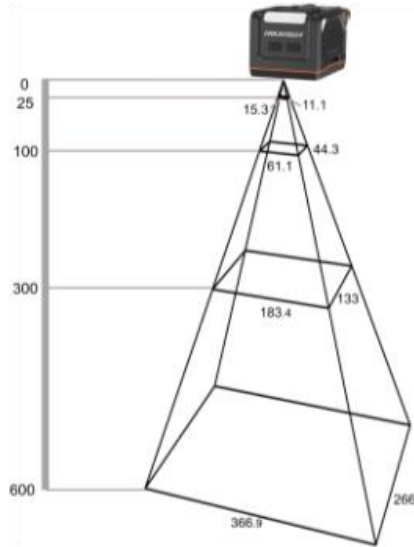


### Device and Installation Bracket (Right Angle):

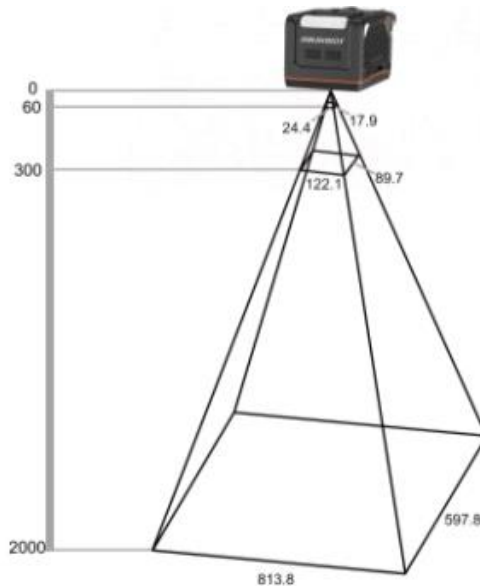


## Detection Range

MV-ID3016XM (Unit: mm)					
Lens Focal Length	Working Distance	FoV		1D Single Pixel Accuracy	2D Single Pixel Accuracy
		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

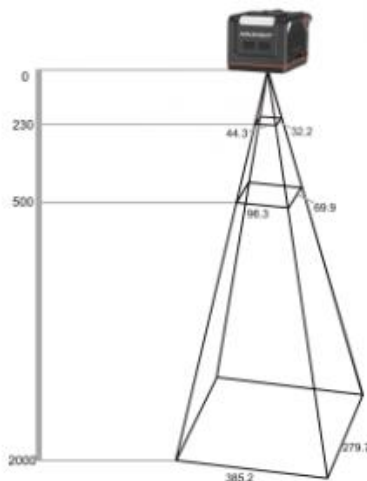


MV-ID3016XM (Unit: mm)					
Lens Focal Length	Working Distance	FoV		1D Single Pixel Accuracy	2D Single Pixel Accuracy
		H	V		
12	60	24.4	17.9	0.017	0.053
	100	40.7	29.9	0.029	0.088
	300	122.1	89.7	0.087	0.263
	600	244.1	179.3	0.173	0.525
	1000	406.9	298.9	0.300	0.900
	2000	813.8	597.8	0.600	1.800



## Detection Range

MV-ID3016XM (Unit: mm)					
Lens Focal Length	Working Distance	FoV		1D Single Pixel Accuracy	2D Single Pixel Accuracy
		H	V		
25	230	44.3	32.2	0.031	0.094
	300	57.8	42	0.041	0.123
	500	96.3	66.9	0.068	0.205
	1000	192.6	139.9	0.100	0.400
	2000	385.2	279.7	0.300	0.800



MV-ID3016XM (Unit: mm)					
Lens Focal Length	Working Distance	FoV		1D Single Pixel Accuracy	2D Single Pixel Accuracy
		H	V		
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

