

MV-ID3040RM

4 MP Industrial Code Reader



Introduction

With functions of image acquisition, code recognition and output, MV-ID3040RM industrial code reader can read different types of 1D codes and 2D codes with reading speed up to 36 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-ID3040RM-08M-RBN
- 12 mm focal length: MV-ID3040RM-12M-RBN
- 16 mm focal length: MV-ID3040RM-16M-RBN
- 25 mm focal length: MV-ID3040RM-25M-RBN
- C-mount device: MV-ID3040RM-00C-NNN

Note

- The device package contains code reader, quick start guide, installation bracket, screw pack, power adapter, I/O interface cable and M12 aerospace-connector network cable.
- 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 Features

- 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.
- 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.

Model	MV-ID3040RM-***M-RBN	MV-ID3040RM-00C-NNN
Performance		
Symbologies	1D codes: Code 39, Code 93, Code 128 (include GS1-128), CodaBar, EAN8, EAN13, UPCA, UPCE, ITF14, ITF25, Matrix 25, MSI, China Post, Code 11, Industrial 2of5, Pharmacode	
	2D matrix codes: QR Code (include GS1-QR), Data Matrix (include GS1-DM), MicroQR, AZTEC, HanXin	
	Stacked codes: PDF 417, MicroPDF417	
Max. frame rate	20 fps	58 fps
Max. reading speed	36 codes/sec	
Sensor type	CMOS, rolling shutter	
Pixel size	2 μm × 2 μm	
Sensor size	1/2.4"	
Resolution	2688 × 1536	
Exposure time	540 μs to 200 ms	52 μs to 1000 ms
Gain	0 dB to 40 dB	
Mono/color	Mono	
Communication protocol	SmartSDK, TCP Client, Serial, FTP, TCP Server, Profinet, Melsec/SLMP, Ethernet/IP, Modbus, UDP, FINS	
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	12 VDC to 24 VDC	
Power consumption	Avg.: 5 W @ 24 VDC (light source enabled) Max.: 19 W @ 24 VDC (light source enabled)	Avg.: 3.5 W @ 24 VDC Max.: 8 W @ 24 VDC
Mechanical		
Focal length	8 mm / 12 mm / 16 mm / 25 mm	/
Lens mount	M12-mount, mechanical focus	C-mount
Lens cap	Transparent + polarized lens cap. Transparent and polarized caps are optional.	Transparent lens cap
Light source	Red point light source by default. White/blue/IR/UV point light source is optional.	No built-in light source
Aiming system	Red LED light	/
Indicator	Device body indicator, reading result indicator	
Shell material	Metal	
Dimension	Straight angle: 80.1 mm × 43 mm × 43.5 mm (3.2" × 1.7" × 1.7") Right angle: 58.5 mm × 43 mm × 64.6 mm (2.3" × 1.7" × 2.5")	Straight angle: 80.1 mm × 55.6 mm × 115.9 mm (3.2" × 2.2" × 4.6") Right angle: 58.5 mm × 55.6 mm × 137 mm (2.3" × 2.2" × 5.4")
Weight	Approx. 185 g (0.4 lb.)	Approx. 277 g (0.6 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)	
Humidity	20% RH to 95% RH (no condensation)	
Vibration resistance	Device only: 10 Hz to 55 Hz, 1.5 mm full amplitude, 2 hours per axis (X/Y/Z) (IEC 60068-2-6:2007\GB/T 2423.10-2019)	
Shock resistance	Device only, 30 g / 11 ms, half-sine wave, 500 shocks per axis (6 directions) (IEC 60068-2-27\GB/T 2423.5-2019)	

General

Client software	IDMVS
Certification	CE, RoHS, KC

Detection Range
MV-ID3040RM-08/12/16/25M-RBN (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	16.8	9.6	0.006	0.019	
	100	67.1	38.4	0.025	0.075	
	200	134.3	76.7	0.050	0.150	
	300	201.4	115.1	0.075	0.225	
	600	402.8	230.2	0.150	0.450	
	1000	671.3	383.6	0.250	0.749	
	2000	1342.7	767.2	0.500	1.499	
12	60	26.9	15.3	0.010	0.030	
	100	44.8	25.6	0.017	0.050	
	200	89.5	51.1	0.033	0.100	
	300	134.3	76.7	0.050	0.150	
	600	268.5	153.4	0.100	0.300	
	1000	447.6	255.7	0.167	0.500	
	2000	895.1	511.5	0.333	0.999	
16	60	20.1	11.5	0.007	0.022	
	150	50.3	28.8	0.019	0.056	
	300	100.7	57.5	0.037	0.112	
	600	201.4	115.1	0.075	0.225	
	1000	335.7	191.8	0.125	0.375	
	2000	671.3	383.6	0.250	0.749	
25	230	49.4	28.2	0.018	0.055	
	300	64.4	36.8	0.024	0.072	
	500	107.4	61.4	0.040	0.120	
	1000	214.8	122.8	0.080	0.240	
	2000	429.6	245.5	0.160	0.480	

1D Min. Resolution (mm)*: Field of view (long side) / resolution (long side) × 1.

2D Min. Resolution (mm)**: Field of view (long side) / resolution (long side) × 3

Detection Range

MV-ID3040RM-00C-NNN Equipped with MVL-KF12(/16/25/35/50)28M-12MP Lens (Unit: mm)

Lens Focal Length	Working Distance	Field of View		1D Min. Resolution*	2D Min. Resolution**	Diagram of Field of View
		H	V			
12	100	44.8	25.6	0.017	0.050	
	200	89.5	51.2	0.033	0.100	
	500	223.8	127.9	0.083	0.250	
	1000	447.6	255.7	0.167	0.500	
	1500	671.3	383.6	0.250	0.749	
	2000	895.1	511.5	0.333	0.999	
16	100	33.6	19.2	0.012	0.037	
	200	67.1	38.4	0.025	0.075	
	500	167.8	95.9	0.062	0.187	
	1000	335.7	191.8	0.125	0.375	
	1500	503.5	287.7	0.187	0.562	
	2000	671.3	383.6	0.250	0.749	
25	100	21.5	12.3	0.008	0.024	
	200	43.0	24.6	0.016	0.048	
	500	107.4	61.4	0.040	0.120	
	1000	214.8	122.8	0.080	0.240	
	1500	322.2	184.1	0.120	0.360	
	2000	429.7	245.5	0.160	0.480	
35	200	30.7	17.5	0.011	0.034	
	500	76.72	43.84	0.029	0.086	
	800	122.8	70.2	0.046	0.137	
	1000	153.5	87.7	0.057	0.171	
	1500	230.2	131.5	0.086	0.257	
	2000	306.9	175.4	0.114	0.343	
50	300	32.2	18.4	0.012	0.036	
	500	53.7	30.7	0.020	0.060	
	800	85.9	49.1	0.032	0.096	
	1000	107.4	61.4	0.040	0.120	
	1500	161.1	92.1	0.060	0.180	
	2000	214.8	122.8	0.080	0.240	

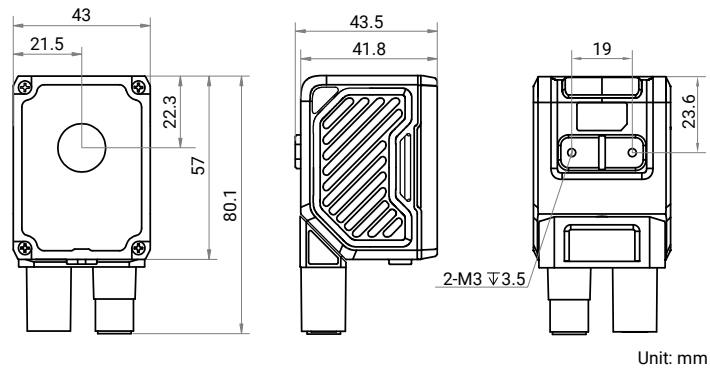
1D Min. Resolution (mm)*: Field of view (long side) / resolution (long side) × 1.

2D Min. Resolution (mm)**: Field of view (long side) / resolution (long side) × 3

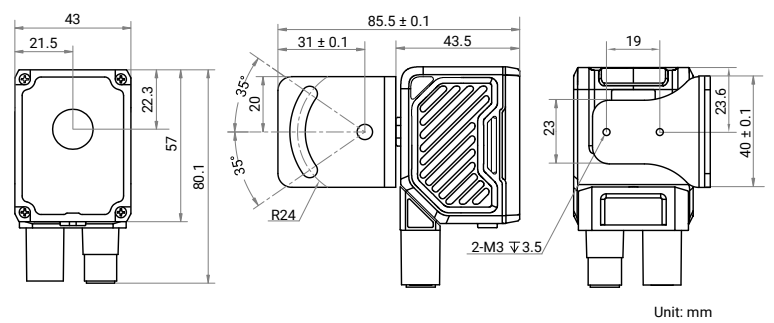
Dimension

MV-ID3040RM-**M-RBN

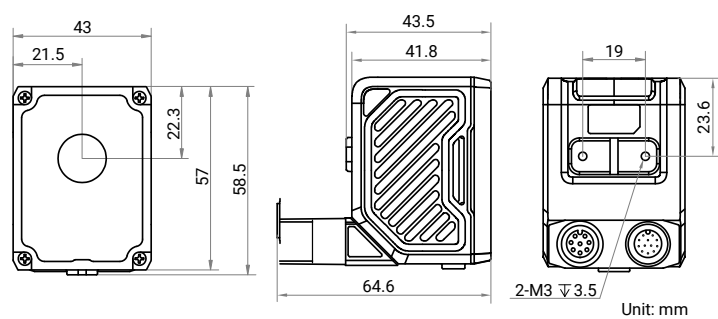
Device (Straight Angle)



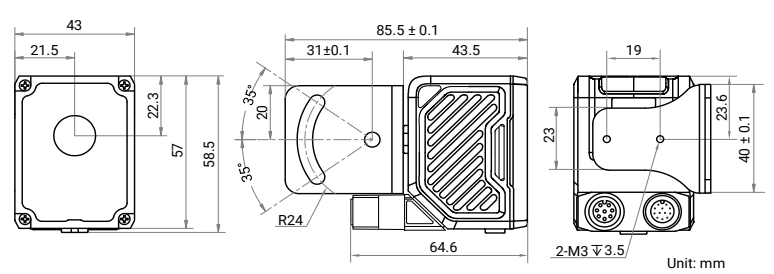
Device with Installation Bracket (Straight Angle)



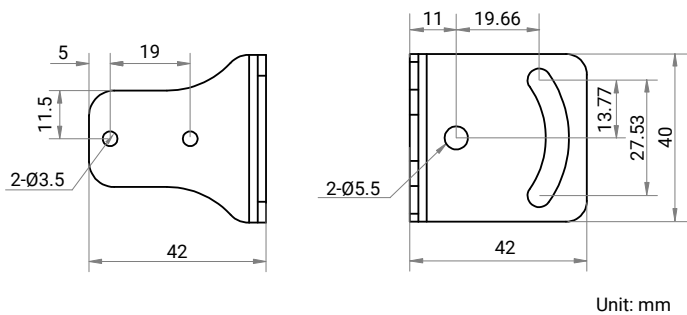
Device (Right Angle)



Device with Installation Bracket (Right Angle)

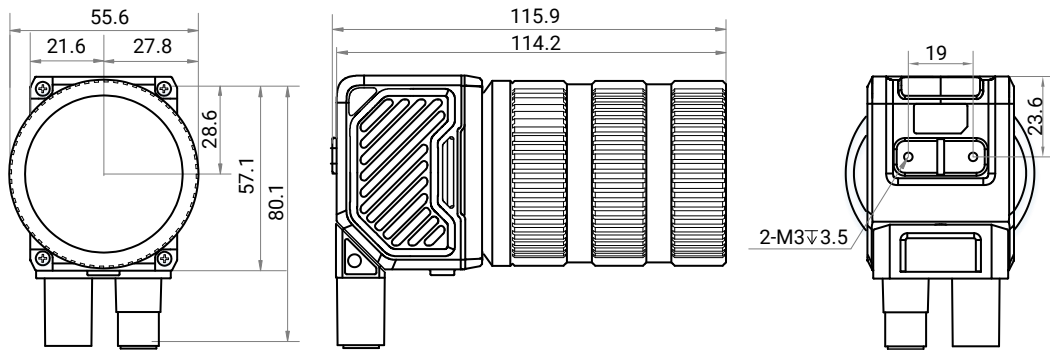


Bracket



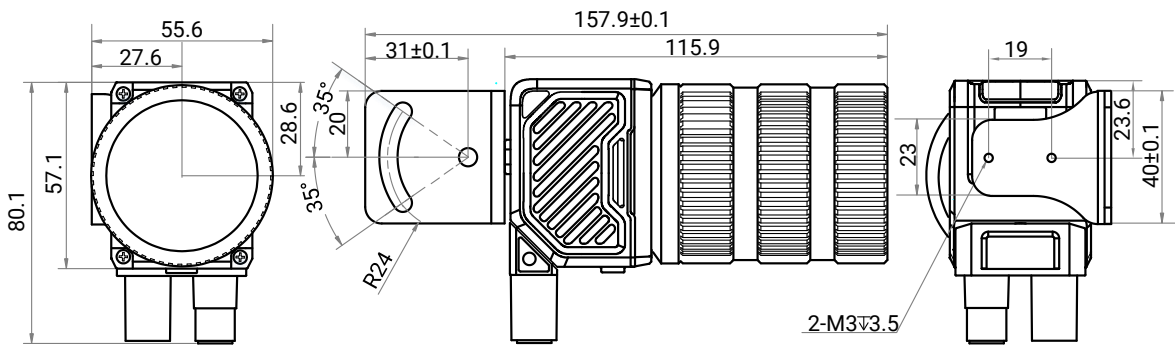
MV-ID3040RM-00C-NNN

Device Without Installation Bracket (Straight Angle)



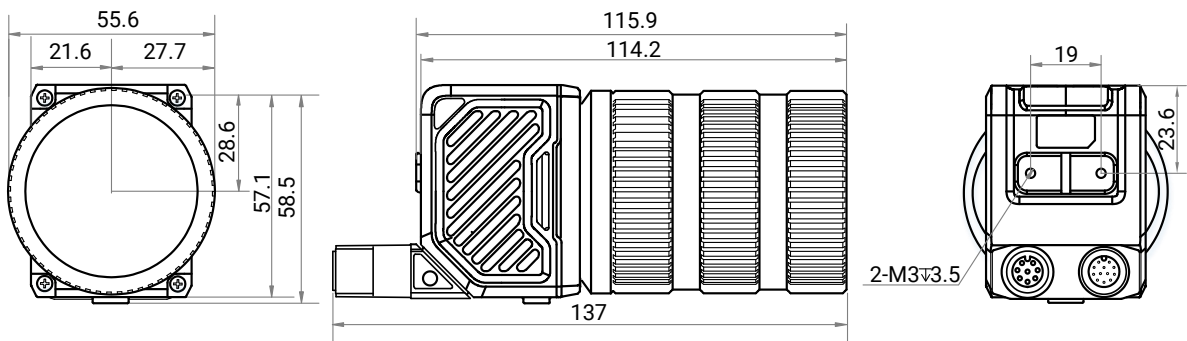
Unit: mm

Device with Installation Bracket (Straight Angle)



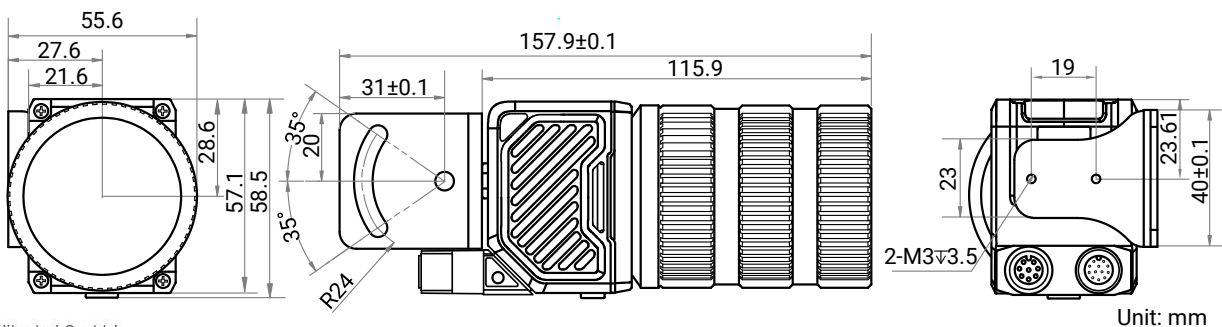
Unit: mm

Device Without Installation Bracket (Right Angle)



Unit: mm

Device with Installation Bracket (Right Angle)



Unit: mm