MV-ID2013EMI

1.3 MP Industrial Code Reader

Introduction

MV-ID2013EMI industrial code reader can read different types of 1D and 2D codes, and its max. reading speed reaches 30 codes/sec. It adopts deep learning algorithm to process images with good robustness, and can recognize various codes.

Applicable Industry

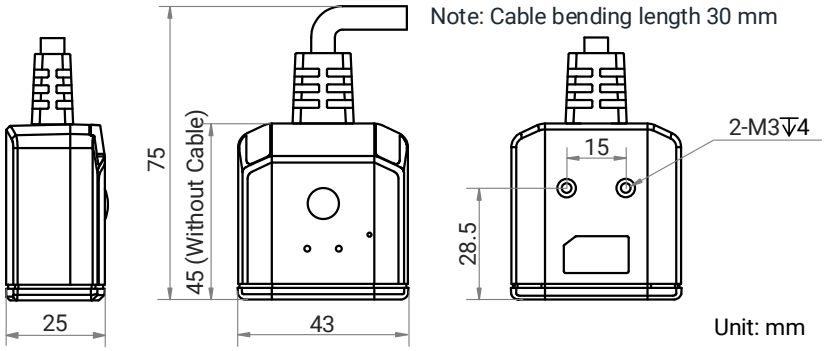
Manual or semi-automated workstation in low-speed and static scenarios, etc.

Key Feature

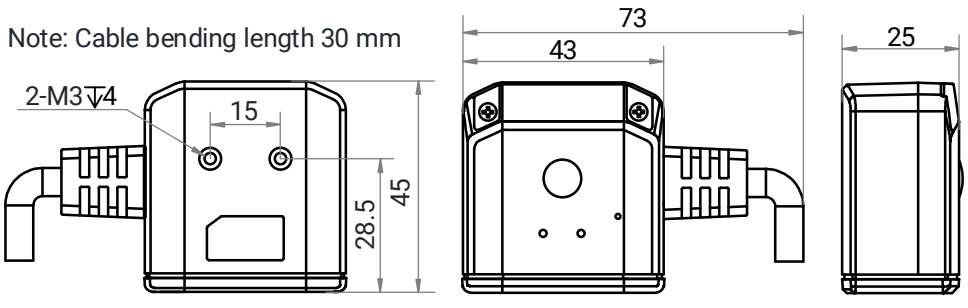
- Compact design and small in size.
- Adopts multiple I/O interfaces and plug-in power interface.
- Adopts LED aiming light to help aim codes.
- Adopts buzzer and indicator for indicating device status.
- Supports one-click parameter adjustment for convenient operation.
- Supports light source control for flexible configuration.

Dimension

Cable on the bottom



Cable on the side



Specification

HIKROBOT

Model	MV-ID2013EMI-05-RBN(-U/-S/-SU)	MV-ID2013EMI-05-RBP(-U/-S/-SU)	MV-ID2013EMI-05-WBN(-U/-S/-SU)	MV-ID2013EMI-05-WBP(-U/-S/-SU)
Performance				
Symbologies	1D codes: Code 39, Code 93, Code 128, EAN8, EAN13, ITF 14, ITF 25, CodaBar, EAN, UPCA, UPCE			
	2D codes: QR Code, Data Matrix, MicroQR, AZTEC, HanXin			
	Stacked codes: PDF417			
Max. frame rate	50 fps			
Max. reading speed	30 codes/sec			
Sensor type	CMOS, global shutter			
Pixel size	2.7 μm × 2.7 μm			
Sensor size	1/4"			
Resolution	1024 × 1280			
Exposure time	60 μs to 6000 μs			
Gain	1 dB to 28 dB			
Mono/color	Mono			
Communication protocol	Network interface: SmartSDK, TCP Client, Serial, FTP, TCP Server, UDP, Profinet, Ethernet/IP			
	USB interface: SmartSDK, USB (HID, CDC)			
Depth of field*	Code 39 (5 mil): 75 mm to 215 mm Code 128 (10 mil): 50 mm to 400 mm EAN 13 (13 mil): 60 mm to 420 mm QR Code (15 mil): 40 mm to 290 mm Data Matrix (10 mil): 50 mm to 240 mm			
Electrical feature				
Data interface	Network interface: Fast Ethernet (100 Mbit/s), RS-232, DC terminal			
	USB interface: USB 2.0			
Digital I/O	Network interface: DB15 connector provides power and I/O, including opto-isolated input × 2 (Line 0/1), opto-isolated output × 2 (Line 3/4), RS-232 × 1. USB interface: DB15 connector provides data transmission. Supports device triggering and restarting via pressing button on side.			
Power supply	Network interface: 12 VDC to 24 VDC USB interface: 5 VDC (Recommended: USB 3.0 provides power supply)			
Max. power consumption	Network interface: avg.: 2.2 W @ 12 VDC; max.: 4.5 W @ 12 VDC USB interface: avg.: 2.2 W @ 5 VDC; max.: 4.5 W @ 5 VDC			
Mechanical				
Focal length	4.63 mm			
Lens mount	M5.8-mount			
Ambient illumination	0 lux to 10000 lux			
Light source	Red	Red (polarized)	White	White (polarized)
Aiming system	Green LED			
Indicator	Power indicator (POWER), status indicator (OK/NG)			
Dimension	45 mm × 43 mm × 25 mm (1.8" × 1.7" × 1.0")			
Weight	Approx. 68.5 g (0.2 lb.)			
Ingress protection	IP54			
Temperature	Working temperature: 0 °C to 50 °C; storage temperature: –30 °C to 70 °C			
Humidity	20% RH to 95% RH (no condensation)			
General				
Client software	IDMVS			
Certification	CE, RoHS, KC			

Specification

HIKROBOT

Model	MV-ID2013EMI-05H-RBN(-U/-S/-SU)	MV-ID2013EMI-05H-RBP	MV-ID2013EMI-05N-RBN(-U/-S/-SU)	MV-ID2013EMI-05N-RBP
Performance				
Symbologies	1D codes: Code 39, Code 93, Code 128, EAN8, EAN13, ITF 14, ITF 25, CodaBar, EAN, UPCA, UPCE			
	2D codes: QR Code, Data Matrix, MicroQR, AZTEC, HanXin			
	Stacked codes: PDF417			
Max. frame rate	50 fps			
Max. reading speed	30 codes/sec			
Sensor type	CMOS, global shutter			
Pixel size	2.7 μm × 2.7 μm			
Sensor size	1/4"			
Resolution	1024 × 1280			
Exposure time	60 μs to 6000 μs			
Gain	1 dB to 28 dB			
Mono/color	Mono			
Communication protocol	Network interface: SmartSDK, TCP Client, Serial, FTP, TCP Server, UDP, Profinet, Ethernet/IP			
	USB interface: SmartSDK, USB (HID, CDC)			
Depth of field*	Code 39 (3 mil): 35 mm to 65 mm Code 39 (5 mil): 30 mm to 75 mm EAN 13 (13 mil): 55 mm to 105 mm Data Matrix (5 mil): 30 mm to 65 mm Data Matrix (10 mil): 25 mm to 90 mm Code 128 (10 mil): 25 mm to 105 mm QR Code (10 mil): 25 mm to 95 mm		Code 39 (3 mil): 45 mm to 90 mm Code 39 (5 mil): 35 mm to 105 mm EAN 13 (13 mil): 50 mm to 125 mm Data Matrix (5 mil): 40 mm to 80 mm Data Matrix (10 mil): 25 mm to 125 mm Code 128 (10 mil): 40 mm to 140 mm QR Code (10 mil): 30 mm to 120 mm	
Electrical feature				
Data interface	Network interface: Fast Ethernet (100 Mbit/s), RS-232, DC terminal; USB interface: USB 2.0			
Digital I/O	Network interface: DB15 connector provides power and I/O, including opto-isolated input × 2 (Line 0/1), opto-isolated output × 2 (Line 3/4), RS-232 × 1. USB interface: DB15 connector provides data transmission. Supports device triggering and restarting via pressing button on side.			
Power supply	Network interface: 12 VDC to 24 VDC USB interface: 5 VDC (Recommended: USB 3.0 provides power supply)			
Max. power consumption	Network interface: avg.: 2.2 W @ 12 VDC; max.: 4.5 W @ 12 VDC USB interface: avg.: 2.2 W @ 5 VDC; max.: 4.5 W @ 5 VDC			
Mechanical				
Focal length	4.63 mm			
Lens mount	M5.8-mount			
Ambient illumination	0 lux to 10000 lux			
Light source	Red	Red (polarized)	Red	Red (polarized)
Aiming system	Green LED			
Indicator	Power indicator (POWER), status indicator (OK/NG)			
Dimension	45 mm × 43 mm × 25 mm (1.8" × 1.7" × 1.0")			
Weight	Approx. 68.5 g (0.2 lb.)			
Ingress protection	IP54			
Temperature	Working temperature: 0 °C to 50 °C; storage temperature: –30 °C to 70 °C			
Humidity	20% RH to 95% RH (no condensation)			
General				
Client software	IDMVS			
Certification	CE, RoHS, KC			

Specification

Model	MV-ID2013EMI-03N-RBN	MV-ID2013EMI-03N-RBP(-S)	MV-ID2013EMI-03N-WBP-S
Performance			
Symbologies	1D codes: Code 39, Code 93, Code 128, EAN8, EAN13, ITF 14, ITF 25, CodaBar, EAN, UPCA, UPCE		
	2D codes: QR Code, Data Matrix, MicroQR, AZTEC, HanXin		
	Stacked codes: PDF417		
Max. frame rate	50 fps		
Max. reading speed	30 codes/sec		
Sensor type	CMOS, global shutter		
Pixel size	2.7 μm × 2.7 μm		
Sensor size	1/4"		
Resolution	1024 × 1280		
Exposure time	60 μs to 6000 μs		
Gain	1 dB to 28 dB		
Mono/color	Mono		
Communication protocol	SmartSDK, TCP Client, Serial, FTP, TCP Server, UDP, Profinet, Ethernet/IP		
Depth of field*	Code 39 (5 mil): 40 mm to 120 mm Code 128 (10 mil): 15 mm to 250 mm EAN 13 (13 mil): 30 mm to 280 mm QR Code (10 mil): 35 mm to 155 mm QR Code (15 mil): 15 mm to 215 mm QR Code (20 mil): 15 mm to 270 mm		
Electrical feature			
Data interface	Fast Ethernet (100 Mbit/s), RS-232, DC terminal		
Digital I/O	DB15 connector provides power and I/O, including opto-isolated input × 2 (Line 0/1), opto-isolated output × 2 (Line 3/4), RS-232 × 1. Supports device triggering and restarting via pressing button on side.		
Power supply	12 VDC to 24 VDC		
Max. power consumption	Avg.: 2.2 W @ 12 VDC Max.: 4.5 W @ 12 VDC		
Mechanical			
Focal length	2.48 mm		
Lens mount	M5.5-mount		
Ambient illumination	0 lux to 10000 lux		
Light source	Red	Red (polarized)	White (polarized)
Aiming system	Green LED		
Indicator	Power indicator (POWER), status indicator (OK/NG)		
Dimension	45 mm × 43 mm × 25 mm (1.8" × 1.7" × 1.0")		
Weight	Approx. 68.5 g (0.2 lb.)		
Ingress protection	IP54		
Temperature	Working temperature: 0 °C to 50 °C; storage temperature: –30 °C to 70 °C		
Humidity	20% RH to 95% RH (no condensation)		
General			
Client software	IDMVS		
Certification	CE, RoHS, KC		

**Test condition: Environment temperature=25 °C (77 °F), ambient illumination=250 lux filament lamp, sample symbologies are used.*

Available Model

- 4.63 mm focal length, standard distance, red light, network interface: MV-ID2013EMI-05-RBN
- 4.63 mm focal length, standard distance, red light (polarized), network interface: MV-ID2013EMI-05-RBP
- 4.63 mm focal length, standard distance, white light, network interface: MV-ID2013EMI-05-WBN
- 4.63 mm focal length, standard distance, white light (polarized), network interface: MV-ID2013EMI-05-WBP
- 4.63 mm focal length, standard distance, red light, USB interface: MV-ID2013EMI-05-RBN-U
- 4.63 mm focal length, standard distance, red light (polarized), USB interface: MV-ID2013EMI-05-RBP-U
- 4.63 mm focal length, standard distance, white light, USB interface: MV-ID2013EMI-05-WBN-U
- 4.63 mm focal length, standard distance, white light (polarized), USB interface: MV-ID2013EMI-05-WBP-U
- 4.63 mm focal length, high density, red light, network interface: MV-ID2013EMI-05H-RBN
- 4.63 mm focal length, high density, red light (polarized), network interface: MV-ID2013EMI-05H-RBP
- 4.63 mm focal length, high density, red light, USB interface: MV-ID2013EMI-05H-RBN-U
- 4.63 mm focal length, near distance, red light, network interface: MV-ID2013EMI-05N-RBN
- 4.63 mm focal length, near distance, red light (polarized), network interface: MV-ID2013EMI-05N-RBP
- 4.63 mm focal length, near distance, red light, USB interface: MV-ID2013EMI-05N-RBN-U
- 4.63 mm focal length, standard distance, red light, side cable, network interface: MV-ID2013EMI-05-RBN-S
- 4.63 mm focal length, standard distance, red light (polarized), side cable, network interface: MV-ID2013EMI-05-RBP-S
- 4.63mm focal length, standard distance, red light, side cable, USB interface: MV-ID2013EMI-05-RBN-SU
- 4.63 mm focal length, standard distance, red light (polarized), side cable, USB interface: MV-ID2013EMI-05-RBP-SU
- 4.63 mm focal length, high density, red light, side cable, network interface: MV-ID2013EMI-05H-RBN-S
- 4.63 mm focal length, high density, red light, side cable, USB interface: MV-ID2013EMI-05H-RBN-SU
- 4.63 mm focal length, near distance, red light, side cable, network interface: MV-ID2013EMI-05N-RBN-S
- 4.63 mm focal length, near distance, red light, side cable, USB interface: MV-ID2013EMI-05N-RBN-SU
- 2.48 mm focal length, near distance, red light, network interface: MV-ID2013EMI-03N-RBN
- 2.48 mm focal length, near distance, red light (polarized), network interface: MV-ID2013EMI-03N-RBP
- 2.48 mm focal length, near distance, red light (polarized), side cable, network interface: MV-ID2013EMI-03N-RBP-S
- 2.48 mm focal length, near distance, white light (polarized), side cable, network interface: MV-ID2013EMI-03N-WBP-S

Detection Range

Device Model	Focal Length (mm)	Working Distance (mm)	Field of View		1D Min. Resolution (mm)*	2D Min. Resolution (mm)△
			H (mm)	V (mm)		
MV-ID2013EMI-05-*	4.63	120	89.6	71.7	0.07	0.21
MV-ID2013EMI-05N-*	4.63	70	52.3	41.8	0.04	0.12
MV-ID2013EMI-05H-*	4.63	40	29.9	23.9	0.02	0.07
MV-ID2013EMI-03N-*	2.48	70	97.6	78.0	0.08	0.23
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.						

Note

The integrated cable of the device is a high flexible cable by default that can be used in moving scene, such as drag chain. The cable chain can achieve over 5 million sliding cycles, and it is recommended to fix it during installation.