

MV-ID2013EM

1.3 MP Industrial Code Reader



CE

RoHS



Introduction

MV-ID2013EM 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. •

Key Feature

- Built-in deep learning algorithm to read codes with good robustness.
- Compact design and small in size.
- Adopts multiple IO 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.

Available Model

- MV-ID2013EM-05-WBN
- MV-ID2013EM-05-WBP
- MV-ID2013EM-05-RBN
- MV-ID2013EM-05-RBP
- MV-ID2013EM-05-WBN-U
- MV-ID2013EM-05-WBP-U
- MV-ID2013EM-05-RBN-U
- MV-ID2013EM-05-RBP-U
- MV-ID2013EM-05H-RBN
- MV-ID2013EM-05H-RBN-U
- MV-ID2013EM-05H-RBP
- MV-ID2013EM-05H-RBP-U
- MV-ID2013EM-05N-RBN
- MV-ID2013EM-05N-RBN-U
- MV-ID2013EM-05N-RBP
- MV-ID2013EM-05N-RBP-U
- MV-ID2013EM-03N-RBP
- MV-ID2013EM-03N-RBN

Applicable Industry

Consumer electronics, household appliances, food and beverage, pharmaceutical, automobile parts, ticket checking machine, etc.

Specification

Model	MV-ID2013EM-05-	MV-ID2013EM-05-	MV-ID2013EM-05-	MV-ID2013EM-05-	
	WBN(-U)	WBP(-U)	RBN(-U)	RBP(-U)	
Performance					
Symbologies	1D codes: Code 39, Code 93, Code 128, ITF 14, ITF 25, CodaBar, EAN, UPCA, UPCE				
	2D codes: QR Code, Data Matrix				
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	1280 × 1024				
Exposure time	60 µs to 0.6 sec				
Gain	1 dB to 28 dB				
Mono/color	Mono				
Communication	Device with network interface: SmartSDK, TCP Client, Serial, FTP, TCP Server, UDP, Profinet,				
protocol	Ethernet/IP				
	Device with USB interface: SmartSDK, USB (HID, CDC)				
Depth of field∗	Code 39 (5 mil): 75 mm to 215 mm				
	Code 128 (10 mil): 50 r	nm 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				
Optics					
Focal length	4.7 mm				
Ambient illumination	0 lux to 10000 lux				
Light source	White	White (polarized)	Red	Red (polarized)	
Aiming system	Green LED				
Electrical feature					
Data interface	Device with network interface: Fast Ethernet, RS-232, DC terminal Device with USB interface: USB2.0				
Digital I/O	Device with network i	interface: DB15 connec	ctor provides power an	d I/O, including none-	
	 isolated input × 2 (Line 0/1), none-isolated output × 2 (Line 2/3), RS-232 × 1. Device trigger via pressing trigger button supported. Device with USB interface: DB15 connector provides data transmission. Device trigger via 				
	pressing trigger button supported.				
Power supply	Device with network in	terface: 12 VDC to 24 VI	00		
	Device with USB interface: 5 VDC (USB2.0 provides power supply)				
Max. power	Device with network interface: 2.5 W@12 VDC				
consumption	Device with USB interface: 2.5 W@5 VDC (USB2.0 provides power supply)				
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Mechanical				
Lens mount	M5.8-mount			
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 (0.15 lb.)			
Ingress protection	IP54			
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% to 95% RH, non-condensing			
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.

Model	MV-ID2013EM-05H-	MV-ID2013EM-	MV-ID2013EM-05N-	MV-ID2013EM-05N-	
	RBN(-U)	05H-RBP(-U)	RBN(-U)	RBP(-U)	
Performance	Performance				
Symbologies	1D codes: Code 39, Code 93, Code 128, ITF 14, ITF 25, CodaBar, EAN, UPCA, UPCE				
	2D codes: QR Code, Dat	2D codes: QR Code, Data Matrix			
Max. frame rate	50 fps				
Max. reading speed	30 codes/sec				
Sensor type	CMOS, global shutter				
Pixel size	2.7 μm × 2.7 μm	2.7 μm × 2.7 μm			
Sensor size	1/4"				
Resolution	1280 × 1024	1280 × 1024			
Exposure time	60 µs to 0.6 sec	60 µs to 0.6 sec			
Gain	1 dB to 28 dB				
Mono/color	Mono				
Communication	Device with network interface: SmartSDK, TCP Client, Serial, FTP, TCP Server, UDP, Profinet,				
protocol	Ethernet/IP				
	Device with USB interface: SmartSDK, USB (HID, CDC)				
Depth of field*	Code 39 (3 mil): 35 mm	to 65 mm	Code 39 (3 mil): 45 mm	i to 90 mm	
	Code 39 (5 mil): 30 mm	to 75 mm	Code 39 (5 mil): 35 mm	to 105 mm	
	EAN 13 (13 mil): 55 mm to 105 mm EAN 13 (13 mil): 50 mm		n to 125 mm		
	Data Matrix (5 mil): 30 mm to 65 mm Data Matrix (5 mil): 40 mm to 80 mm			mm to 80 mm	
	Data Matrix (10 mil): 25	mm to 90 mm	Data Matrix (10 mil): 25	mm to 125 mm	
	Code 128 (10 mil): 25 m	nm to 105 mm	Code 128 (10 mil): 40 n	nm to 140 mm	
	QR Code (10 mil): 25 m	m to 95 mm	QR Code (10 mil): 30 m	m to 120 mm	



Optics				
Focal length	4.7 mm			
Ambient illumination	0 lux to 10000 lux			
Light source	Red	Red (polarized)	Red	Red (polarized)
Aiming system	Green LED			
Electrical feature				
Data interface	Device with network int	erface: Fast Ethernet,	RS-232, DC terminal	
	Device with USB interface: USB2.0			
Digital I/O	Device with network interface: DB15 connector provides power and I/O, including none-isolated input × 2 (Line 0/1), none-isolated output × 2 (Line 2/3), RS-232 × 1. Device trigger via pressing trigger button supported. Device with USB interface: DB15 connector provides data transmission. Device trigger via			
	pressing trigger button	supported.		
Power supply	Device with network interface: 12 VDC to 24 VDC Device with USB interface: 5 VDC (USB2.0 provides power supply)			
Max. power	Device with network interface: 2.5 W@12 VDC			
consumption	Device with USB interface: 2.5 W@5 VDC (USB2.0 provides power supply)			
Mechanical				
Lens mount	M5.8-mount			
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 (0.15 lb.)			
Ingress protection	IP54			
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% to 95% RH, non-condensing			
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.

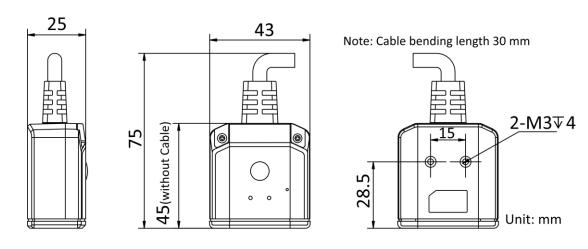


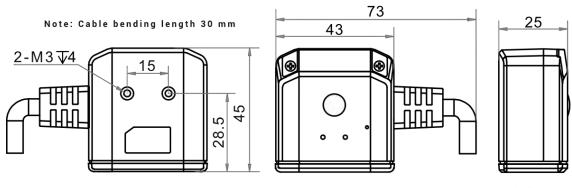
Model	MV-ID2013EM-03N-RBN	MV-ID2013EM-03N-RBP	
Performance		WV-ID2013LW-03IV-NBF	
Symbologies	1D codes: Code 39, Code 93, Code 128, ITF 14,	ITE 25 CodeBar FAN LIPCA LIPCE	
oymbologics	2D codes: QR Code, Data Matrix		
Max. frame rate	50 fps		
Max. reading speed	30 codes/sec		
Sensor type	CMOS, global shutter		
Pixel size	2.7 μm × 2.7 μm		
Sensor size	1/4"		
Resolution	1280 × 1024		
Exposure time	60 µs to 0.6 sec		
Gain	1 dB to 28 dB		
Mono/color	Mono		
Communication			
protocol	SmartSDK, TCP Client, Serial, FTP, TCP Server, I	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		
Optics			
Focal length	2.45 mm		
Ambient illumination	0 lux to 10000 lux		
Light source	Red	Red (polarized)	
Aiming system	Green LED		
Electrical feature			
Data interface	Fast Ethernet, RS-232, DC terminal		
Digital I/O	DB15 connector provides power and I/O, including none-isolated input × 2 (Line 0/1), none-isolated output × 2 (Line 2/3), RS-232 × 1. Device trigger via pressing trigger button supported.		
Power supply	12 VDC to 24 VDC		
Max. power			
consumption	2.5 W@12 VDC		
Mechanical			
Lens mount	M5.4-mount		
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 (0.15 lb.)		
Ingress protection	IP54		
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% to 95% RH, non-condensing		
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.



Dimension





Unit: mm

Detection Range

Focal Length (mm)	Working Distance (mm)	FoV		1D Single Pixel	2D Single Pixel
		H (mm)	V (mm)	Accuracy (mm)	Accuracy (mm)
3	120	163	130	0.12	0.29
5	120	89	72	0.070	0.278

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