

MV-ID2013EM

1.3 MP Industrial Code Reader



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-WBN(-U) | MV-ID2013EM-05-WBP(-U) | MV-ID2013EM-05-RBN(-U) | MV-ID2013EM-05-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 \times 2.7 μm | | | |
| Sensor size | 1/4" | | | |
| Resolution | 1280 \times 1024 | | | |
| Exposure time | 60 μs to 0.6 sec | | | |
| Gain | 1 dB to 28 dB | | | |
| Mono/color | Mono | | | |
| Communication protocol | Device with network interface: SmartSDK, TCP Client, Serial, FTP, TCP Server, UDP, Profinet, 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 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 | | | |
| 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 interface: DB15 connector provides power and I/O, including none-isolated input \times 2 (Line 0/1), none-isolated output \times 2 (Line 2/3), RS-232 \times 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 consumption | Device with network interface: 2.5 W@12 VDC | | | |
| | 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-05H-RBN(-U) | MV-ID2013EM-05H-RBP(-U) | MV-ID2013EM-05N-RBN(-U) | MV-ID2013EM-05N-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 protocol | Device with network interface: SmartSDK, TCP Client, Serial, FTP, TCP Server, UDP, Profinet, Ethernet/IP Device with 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 | |

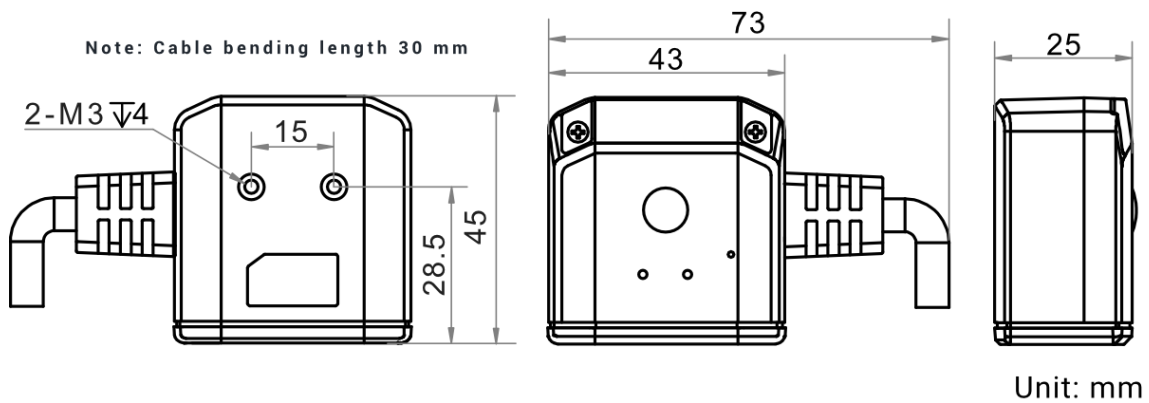
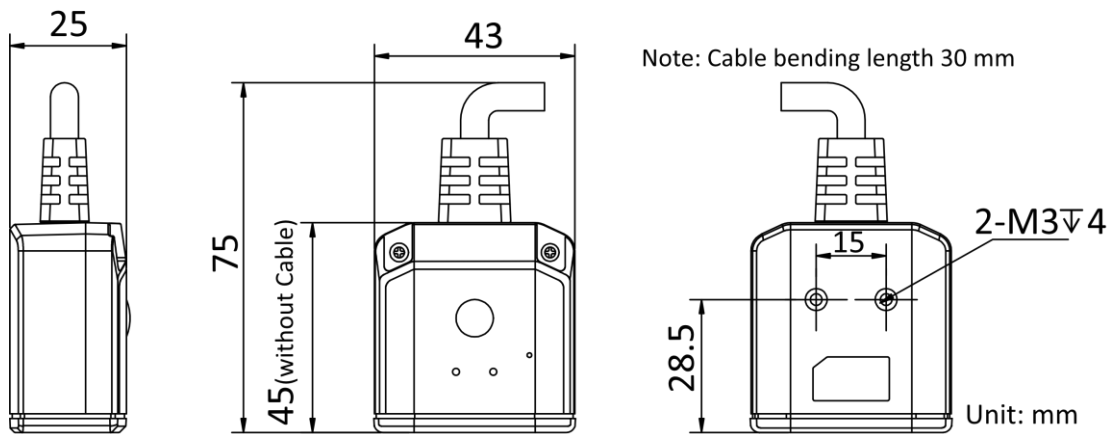
| Optics | | | | |
|-------------------------------|--|-----------------|-----|-----------------|
| Focal length | 4.7 mm | | | |
| Ambient illumination | 0 lux to 10000 lux | | | |
| Light source | Red | Red (polarized) | Red | Red (polarized) |
| Aiming system | Green LED | | | |
| Electrical feature | | | | |
| Data interface | Device with network interface: 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 consumption | Device with network interface: 2.5 W@12 VDC | | | |
| | 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 | | |
| 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 \times 2.7 μm | |
| Sensor size | 1/4" | |
| Resolution | 1280 \times 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, 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 \times 2 (Line 0/1), none-isolated output \times 2 (Line 2/3), RS-232 \times 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 \times 43 mm \times 25 mm (1.8" \times 1.7" \times 1.0") | |
| Weight | Approx. 68.5 g (0.15 lb.) | |
| Ingress protection | IP54 | |
| Temperature | 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 $^{\circ}\text{F}$) | |
| Humidity | 20% to 95% RH, non-condensing | |
| General | | |
| Client software | IDMVS | |
| Certification | CE, RoHS, KC | |

*Test condition: Environment temperature=25 $^{\circ}\text{C}$ (77 $^{\circ}\text{F}$), ambient illumination=250 lux filament lamp, sample symbologies are used.

Dimension



Detection Range

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