

# MV-ID2004M-16T

## 0.4 MP Industrial Code Reader



**RoHS**



### Introduction

MV-ID2004M-16T industrial code reader can read different types of 1-dimensional and 2-dimensional codes, and its max. reading speed reaches 45 codes/sec. It adopts high-speed focus adjustment technology for fast focus adjustment, and is a good selection for the mixed line production.

### Key Feature

- Supports high-speed focus adjustment for switching working distance.
- Compact design and small in size, and can be installed in narrow space.
- Adopts LED aiming light to aim targets.
- Adopts multiple IO interfaces and plug-in power interface for easy wiring.
- Supports multiple communication protocols, including TCP Server, Serial, FTP, TCP Client, Profinet, Ethernet/IP, MELSEC/SLMP, Modbus, UDP, and Fins.

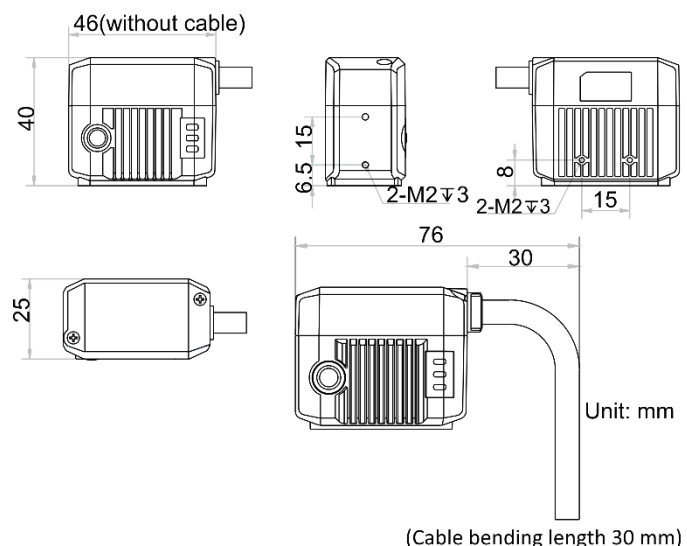
### Available Model

MV-ID2004M-16T-RBN

### Applicable Industry

Consumer electronics, food and beverage, pharmaceutical, semiconductor, new energy, etc.

### Dimension



## Specification

|                               |                                                                                                                                                                                                                                                                                               |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Model</b>                  | <b>MV-ID2004M-16T-RBN</b>                                                                                                                                                                                                                                                                     |
| <b>Performance</b>            |                                                                                                                                                                                                                                                                                               |
| <b>Symbologies</b>            | 1-dimensional codes: Code 39, Code 93, Code 128 (include GS1-128), ITF 14, ITF 25, CodaBar, EAN 8, EAN 13, UPCA, UPCE, Matrix 25, MSI, China Post, Code 11, Industrial 2of5, Pharmacode                                                                                                       |
|                               | 2-dimensional codes: QR Code (include GS1-QR), Data Matrix (include GS1-DM), MicroQR, AZTEC, HanXin                                                                                                                                                                                           |
|                               | Stacked codes: PDF 417                                                                                                                                                                                                                                                                        |
| <b>Max. frame rate</b>        | 60 fps                                                                                                                                                                                                                                                                                        |
| <b>Max. reading speed</b>     | 45 codes/sec                                                                                                                                                                                                                                                                                  |
| <b>Sensor type</b>            | CMOS, global shutter                                                                                                                                                                                                                                                                          |
| <b>Pixel size</b>             | 6.9 $\mu\text{m}$ $\times$ 6.9 $\mu\text{m}$                                                                                                                                                                                                                                                  |
| <b>Sensor size</b>            | 1/2.9"                                                                                                                                                                                                                                                                                        |
| <b>Resolution</b>             | 704 $\times$ 540                                                                                                                                                                                                                                                                              |
| <b>Exposure time</b>          | 16 $\mu\text{s}$ to 20000 $\mu\text{s}$                                                                                                                                                                                                                                                       |
| <b>Gain</b>                   | 0 dB to 15 dB                                                                                                                                                                                                                                                                                 |
| <b>Mono/color</b>             | Mono                                                                                                                                                                                                                                                                                          |
| <b>Communication protocol</b> | TCP Server, Serial, FTP, TCP Client, Profinet, Ethernet/IP, MELSEC/SLMP, Modbus, UDP, and Fins                                                                                                                                                                                                |
| <b>Electrical feature</b>     |                                                                                                                                                                                                                                                                                               |
| <b>Data interface</b>         | Fast Ethernet (100 Mbit/s)                                                                                                                                                                                                                                                                    |
| <b>Digital I/O</b>            | 17-pin M12 connector provides power and I/O, including non-isolated input (Line 2) $\times$ 1, non-isolated output (Line 3) $\times$ 1, configurable bi-directional non-isolated I/O $\times$ 2 (Line 0/1), and RS-232 $\times$ 1.<br>Supports device triggering via pressing button on side. |
| <b>Power supply</b>           | 12 VDC to 24 VDC                                                                                                                                                                                                                                                                              |
| <b>Max. power consumption</b> | Approx. 4 W @ 12 VDC                                                                                                                                                                                                                                                                          |
| <b>Mechanical</b>             |                                                                                                                                                                                                                                                                                               |
| <b>Focal length</b>           | 16 mm                                                                                                                                                                                                                                                                                         |
| <b>Lens mount</b>             | M12-mount                                                                                                                                                                                                                                                                                     |
| <b>Working distance</b>       | 100 mm to 400 mm                                                                                                                                                                                                                                                                              |
| <b>Ambient illumination</b>   | 0 lux to 50000 lux                                                                                                                                                                                                                                                                            |
| <b>Light source</b>           | Red                                                                                                                                                                                                                                                                                           |
| <b>Aiming system</b>          | Orange LED                                                                                                                                                                                                                                                                                    |
| <b>Indicator</b>              | Power indicator (PWR), network indicator (LNK), and status indicator (STS)                                                                                                                                                                                                                    |
| <b>Dimension</b>              | 46 mm $\times$ 40 mm $\times$ 25 mm (1.8" $\times$ 1.6" $\times$ 1.0")                                                                                                                                                                                                                        |
| <b>Weight</b>                 | Approx. 135 g (0.3 lb.)                                                                                                                                                                                                                                                                       |
| <b>Ingress protection</b>     | IP65                                                                                                                                                                                                                                                                                          |
| <b>Temperature</b>            | Working temperature: 0 $^{\circ}\text{C}$ to 50 $^{\circ}\text{C}$ (32 $^{\circ}\text{F}$ to 122 $^{\circ}\text{F}$ )<br>Storage temperature: -30 $^{\circ}\text{C}$ to 70 $^{\circ}\text{C}$ (-22 $^{\circ}\text{F}$ to 158 $^{\circ}\text{F}$ )                                             |
| <b>Humidity</b>               | 20% RH to 95% RH (no condensation)                                                                                                                                                                                                                                                            |
| <b>General</b>                |                                                                                                                                                                                                                                                                                               |
| <b>Client software</b>        | IDMVS                                                                                                                                                                                                                                                                                         |
| <b>Certification</b>          | CE, RoHS, KC                                                                                                                                                                                                                                                                                  |

## Detection Range

| Working Distance (mm) | Field of View |        | 1D Min. Resolution (mm)* | 2D Min. Resolution (mm)△ | Diagram of Field of View |
|-----------------------|---------------|--------|--------------------------|--------------------------|--------------------------|
|                       | H (mm)        | V (mm) |                          |                          |                          |
| 100                   | 30.36         | 23.29  | 0.04                     | 0.13                     |                          |
| 150                   | 45.54         | 34.93  | 0.06                     | 0.19                     |                          |
| 200                   | 60.72         | 46.58  | 0.09                     | 0.26                     |                          |
| 250                   | 75.9          | 58.22  | 0.11                     | 0.32                     |                          |
| 300                   | 91.08         | 69.86  | 0.13                     | 0.39                     |                          |
| 350                   | 106.26        | 81.51  | 0.15                     | 0.45                     |                          |
| 400                   | 121.44        | 93.15  | 0.17                     | 0.52                     |                          |

*1D Min. Resolution (mm)\*: Field of view (long side) / resolution (long side) × number of pixels in the minimum bar width (number of pixels in the minimum bar width = 1)*  
*2D Min. Resolution (mm)△: Field of view (long side) / resolution (long side) × number of pixels in the side length of minimum module unit (number of pixels in the side length of minimum module unit = 3)*