

MV-ID3016PM

1.6 MP Smart Code Reader



Introduction

MV-ID3016PM smart code reader can read different types of codes with reading speed up to 84 codes/sec. It adopts Hikrobot's deep learning algorithm to process images with good robustness, and can recognize various complex codes.

Key Feature

- Adopts built-in deep learning algorithm to read codes with good robustness.
- Adopts IO interfaces for input and output signals.
- Supports multiple communication protocols, including TCP, Serial, FTP, PROFINET, etc.
- Adopts CMOS sensor to acquire image data and provide high-quality image.
- Supports RS-232 serial port and indicators displaying device status.

Available Model

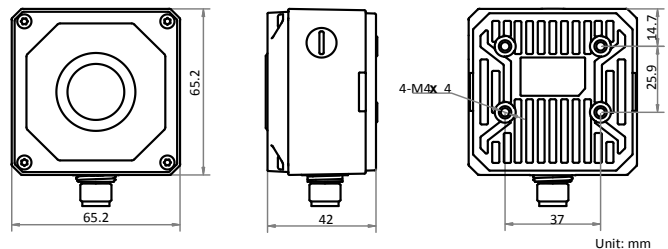
- 6 mm focal length with manual focus: MV-ID3016PM-06S-WBN
- 12 mm focal length with manual focus: MV-ID3016PM-12S-WBN
- 14.8 mm focal length with manual focus: MV-ID3016PM-15S-WBN
- 6 mm focal length with mechanical autofocus: MV-ID3016PM-06M-WBN
- 12 mm focal length with mechanical autofocus: MV-ID3016PM-12M-WBN
- 14.8 mm focal length with mechanical autofocus: MV-ID3016PM-15M-WBN

Applicable Industry

Consumer electronics, food and beverage, pharmaceutical, semiconductor, automobile, etc.

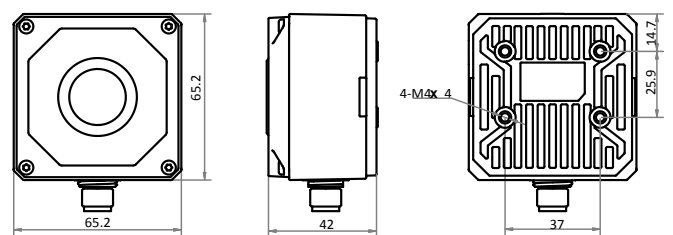
Dimension

Manual focus



Unit: mm

Mechanical autofocus



Unit: mm

Specification

| Model | MV-ID3016PM-06*-WBN | MV-ID3016PM-12*-WBN | MV-ID3016PM-15*-WBN |
|-------------------------------|---|---------------------|---------------------|
| Performance | | | |
| Symbologies | 1-dimensional codes: Code 39, Code 93, Code 128, ITF 25, CodaBar, EAN, MATRIX 25, MSI, Industrial 25, China Post, Code 11 | | |
| | 2-dimensional codes: QR Code, Data Matrix | | |
| Max. frame rate | 60 fps | | |
| Max. reading speed | 84 codes/sec | | |
| Sensor type | CMOS, global shutter | | |
| Pixel size | 3.45 μm \times 3.45 μm | | |
| Sensor size | 1/2.9" | | |
| Resolution | 1408 \times 1024 | | |
| Exposure time | 16 μs to 1 sec | | |
| Gain | 0 dB to 40 dB | | |
| Mono/color | Mono | | |
| Communication protocol | SmartSDK, TCP Client, TCP Server, UDP, Serial, FTP, PROFINET, Ethernet/IP, MELSEC, ModBus | | |
| Electrical feature | | | |
| Data interface | Fast Ethernet | | |
| Digital I/O | 17-pin M12 interface provides power supply and I/O, including non-isolated input (LineIn 0/1/2) \times 3, non-isolated output (LineOut 3/4/5) \times 3, RS-232 input \times 1, and RS-232 output \times 1. Device trigger via pressing button on top supported. | | |
| Power supply | 24 VDC | | |
| Max. power consumption | 20 W@24 VDC (self-light source enabled) | | |
| Mechanical | | | |
| Focal length | 6 mm (0.2") | 12 mm (0.5") | 14.8 mm (0.6") |
| Lens mount | M12-mount, manual focus or mechanical autofocus. | | |
| Lens cap | Transparent lens cap. Polarization lens cap is optional. | | |
| Light source | Spotlight white light. Spotlight red/blue/IR, and wide-angle white/red/blue light is optional. | | |
| Indicator | Power indicator (PWR), network indicator (LNK), status indicator (STS), result indicator (OK/NG) | | |
| Dimension | 65.2 mm \times 65.2 mm \times 42 mm (2.6" \times 2.6" \times 1.7") | | |
| Weight | Approx. 250 g (0.6 lb.) | | |
| Ingress protection | IP67 (under proper installation of waterproof lens cap) | | |
| 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, FCC, RoHS, KC | | |

Detection Range

MV-ID3016PM (Unit: mm)

| Lens Focal Length | Working Distance | FoV | | 1D Single Pixel Accuracy | 2D Single Pixel Accuracy | Horizontal FoV Diagram |
|-------------------|------------------|-------|-------|--------------------------|--------------------------|---|
| | | H | H | | | |
| 6 | 20 | 16.2 | 11.8 | 0.012 | 0.035 | <p>The diagram illustrates the horizontal field of view (FoV) for three different lens focal lengths: 6mm (green lines), 12mm (red lines), and 14.8mm (grey lines). The x-axis represents the working distance in millimeters, ranging from 0 to 600. The y-axis represents the horizontal FoV in millimeters, ranging from -260 to 240. The 6mm lens shows the widest FoV, reaching approximately ±242.9 mm at 600 mm. The 12mm lens reaches approximately ±121.45 mm, and the 14.8mm lens reaches approximately ±98.45 mm. At shorter distances, the FoV narrows significantly, with the 6mm lens having a width of 8.1 mm at 20 mm and 14.45 mm at 100 mm.</p> |
| | 100 | 81 | 58.9 | 0.058 | 0.173 | |
| | 200 | 161.9 | 117.8 | 0.115 | 0.345 | |
| | 300 | 242.9 | 176.6 | 0.173 | 0.518 | |
| | 400 | 323.8 | 235.5 | 0.230 | 0.690 | |
| | 500 | 404.8 | 294.4 | 0.288 | 0.863 | |
| 600 | 485.8 | 353.3 | 0.345 | 1.035 | | |
| 12 | 60 | 24.3 | 17.7 | 0.017 | 0.052 | |
| | 100 | 40.5 | 29.4 | 0.029 | 0.086 | |
| | 200 | 81 | 58.9 | 0.058 | 0.173 | |
| | 300 | 121.4 | 88.3 | 0.086 | 0.259 | |
| | 400 | 161.9 | 117.8 | 0.115 | 0.345 | |
| | 500 | 202.4 | 147.2 | 0.144 | 0.431 | |
| 600 | 242.9 | 176.6 | 0.173 | 0.518 | | |
| 14.8 | 88 | 28.9 | 21 | 0.021 | 0.062 | |
| | 100 | 32.8 | 23.9 | 0.023 | 0.070 | |
| | 200 | 65.6 | 47.7 | 0.047 | 0.140 | |
| | 300 | 98.5 | 71.6 | 0.070 | 0.210 | |
| | 400 | 131.3 | 95.5 | 0.093 | 0.280 | |
| | 500 | 164.1 | 119.4 | 0.117 | 0.350 | |
| 600 | 196.9 | 143.2 | 0.140 | 0.420 | | |