# MV-ID3030XM

## 3.1 MP Industrial Code Reader



## Introduction

With functions of image acquisition, code recognition and output, MV-ID3030XM industrial code reader can read different types of 1D codes and 2D codes with reading speed up to 90 codes/sec. It adopts Hikrobot's deep learning algorithm to process images with good robustness, and can recognize various complex codes.

## Applicable Industry

Consumer electronics, lithium battery, tobacco, medicine, photovoltaics, automobile, PCB, etc.

## Available Model

- 8 mm focal length: MV-ID3030XM-08M-RBN
- 12 mm focal length: MV-ID3030XM-12M-RBN
- 16 mm focal length: MV-ID3030XM-16M-RBN
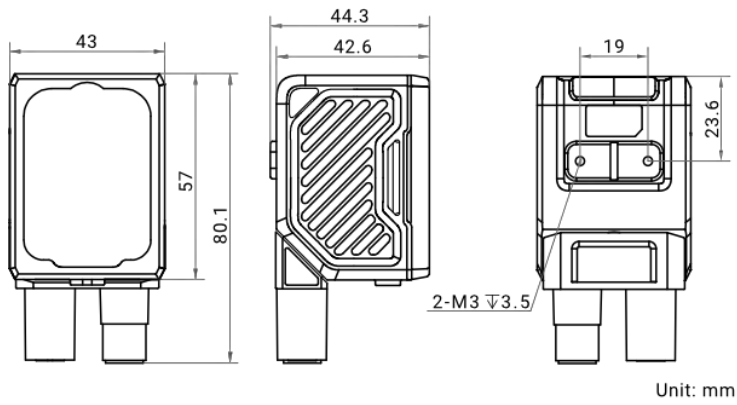- 25 mm focal length: MV-ID3030XM-25M-RBN

## Key Feature

- Adopts built-in deep learning algorithm to read codes with good robustness.
- Adopts CMOS sensor to acquire high-quality images.
- Supports one-key auto adjustment and easy to operate.
- Adopts multiple indicators displaying device status from different sides.
- Good environmental compatibility with Illuminating system.
- Adopts IO interfaces for input and output signals.
- Modularized light source design and easy to replace.

## Note

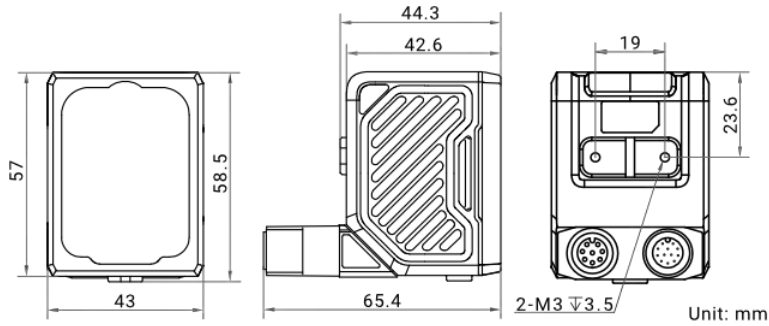- Do not directly touch cooling parts of the device to avoid scald.
- Looking directly at the device may cause harm to the eyes. Protective measures like wearing protective glasses should be taken in the process of installation, maintenance and debugging.

# HIKROBOT

## Specification

| Model | MV-ID3030XM-08M-RBN | MV-ID3030XM-12M-RBN | MV-ID3030XM-16M-RBN | MV-ID3030XM-25M-RBN |
|---|---|---|---|---|
| *Performance* | | | | |
| Symbologies | 1D codes: Code 39, Code 93, Code 128, CodaBar, EAN 8, EAN 13, ITF 14, ITF 25, MATRIX 25, UPCA, UPCE, MSI, Code 11, Industrial 25, China Post, and Pharmacode | | | |
| | 2D codes: QR Code, Data Matrix, and Micro QR | | | |
| | Stacked codes: PDF 417 | | | |
| Max. frame rate | 60 fps | | | |
| Max. reading speed | 90 codes/sec | | | |
| Sensor type | CMOS, global shutter | | | |
| Pixel size | 3.45 μm × 3.45 μm | | | |
| Sensor size | 1/1.8" | | | |
| Resolution | 2048 × 1536 | | | |
| Exposure time | 6 μs to 30000 μs | | | |
| Gain | 0 dB to 24 dB | | | |
| Mono/color | Mono | | | |
| Communication protocol | SmartSDK, TCP Client, TCP Server, Serial, FTP, Profinet, MELSEC/SLMP, Ethernet/IP, ModBus, Fins, UDP | | | |
| *Electrical feature* | | | | |
| Data interface | Fast Ethernet | | | |
| Digital I/O | 12-pin M12 connector provides power and I/O, including opto-isolated input (LineIn 0/1/2) × 3, opto-isolated output (LineOut 3/4/5) × 3, and RS-232 × 1. Triggering the device is supported via pressing the top button. | | | |
| Power supply | 24 VDC | | | |
| Max. power consumption | 6.2 W@24 VDC (self-light source enabled) | | | |
| *Mechanical* | | | | |
| Focal length | 8 mm (0.3") | 12 mm (0.5") | 16 mm (0.6") | 25 mm (1.0") |
| Lens mount | M12-mount, mechanical autofocus | | | |
| Lens cap | Transparent + polarized + diffused lens cap | | | |
| Light source | Red point light source + white diffused light source. White/blue/IR point light source is optional. | | | |
| Aiming system | Orange LED | | | |
| Indicator | Device body indicator, reading result indicator | | | |
| Dimension | Straight angle: 80.1 mm × 43 mm × 44.3 mm (3.2" × 1.7" × 1.7") Right angle: 58.5 mm × 43 mm × 65.4 mm (2.3" × 1.7" × 2.6") | | | |
| Weight | Approx. 195 g (0.4 lb.) | | | |
| Ingress protection | IP67 (under proper installation of waterproof lens cap) | | | |
| 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 | | | |

# Dimension

## Device (Straight Angle):

43
44.3
42.6
19
23.6
57
80.1
2-M3 ⏷3.5
Unit: mm

## Device (Right Angle):

44.3
42.6
19
23.6
57
58.5
43
65.4
2-M3 ⏷3.5
Unit: mm

## Installation Bracket:

5
19
11.5
2-Ø3.5
42
11
19.66
13.77
27.53
40
2-Ø5.5
42
Unit: mm
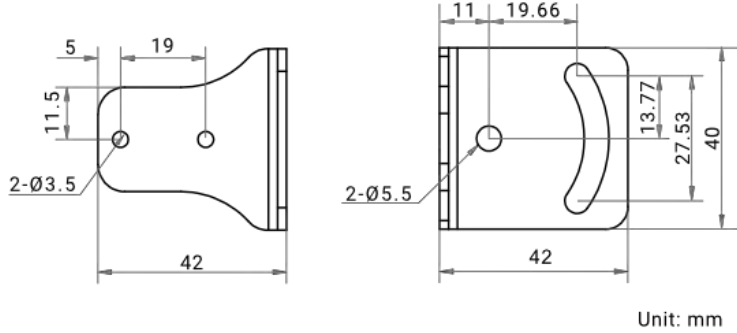
## Device and Installation Bracket (Straight Angle):

49
43
86.3
31
44.3
19
35°
20
35°
R24
58.5
80.1
23
23.6
40
2-M3 ⏷3.5
Unit: mm
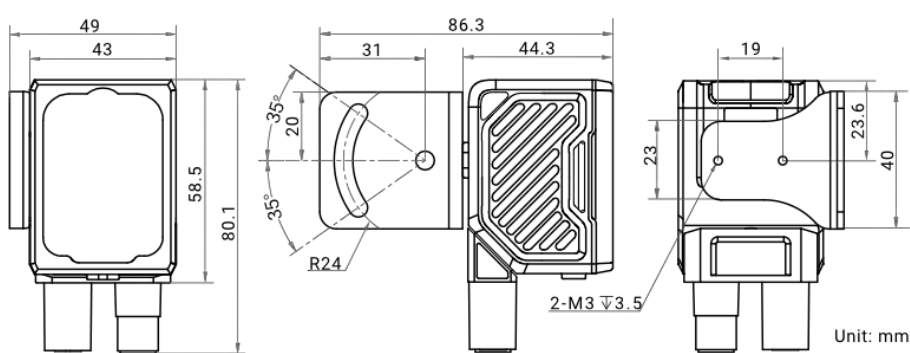
## Device and Installation Bracket (Right Angle):

49
43
86.3
31
44.3
19
35°
20
35°
R24
58.5
23
23.6
40
65.4
2-M3 ⏷3.5
Unit: mm
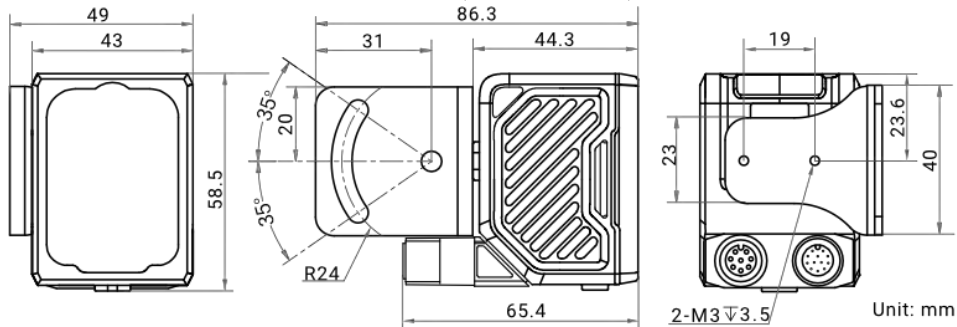
# Detection Range

| MV-ID3030XM (Unit: mm) | | | | | |
|---|---|---|---|---|---|
| Lens Focal Length | Working Distance | FoV | | 1D Single Pixel Accuracy | 2D Single Pixel Accuracy |
| | | H | V | | |
| 8 | 25 | 22.3 | 16.7 | 0.011 | 0.033 |
| | 100 | 89.0 | 66.9 | 0.043 | 0.131 |
| | 300 | 267.1 | 200.8 | 0.130 | 0.392 |
| | 600 | 534.3 | 401.5 | 0.261 | 0.784 |
| | 1000 | 883.2 | 662.4 | 0.400 | 1.300 |
| | 2000 | 1766.4 | 1324.8 | 0.900 | 2.600 |



| MV-ID3030XM (Unit: mm) | | | | | |
|---|---|---|---|---|---|
| Lens Focal Length | Working Distance | FoV | | 1D Single Pixel Accuracy | 2D Single Pixel Accuracy |
| | | H | V | | |
| 12 | 60 | 35.5 | 26.6 | 0.017 | 0.052 |
| | 100 | 59.2 | 44.3 | 0.029 | 0.087 |
| | 300 | 177.7 | 133.0 | 0.087 | 0.260 |
| | 600 | 355.5 | 266.0 | 0.174 | 0.520 |
| | 1000 | 592.4 | 443.4 | 0.300 | 0.900 |
| | 2000 | 1184.9 | 886.8 | 0.600 | 1.700 |
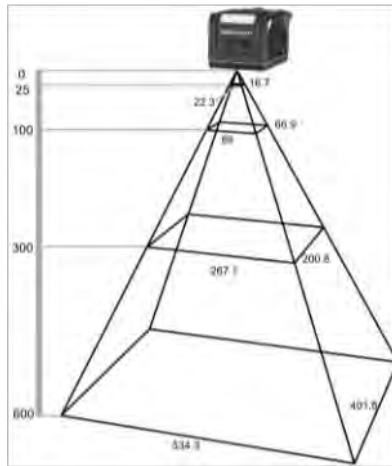
# Detection Range

**HIKROBOT**
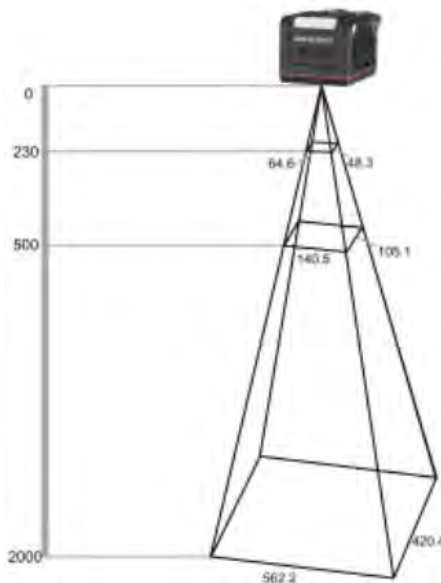
| MV-ID3030XM (Unit: mm) | | | | |
|---|---|---|---|---|
| Lens Focal Length | Working Distance | FoV | | 1D Single Pixel Accuracy | 2D Single Pixel Accuracy |
| | | H | V | | |
| 25 | 230 | 64.6 | 48.3 | 0.032 | 0.094 |
| | 300 | 84.3 | 63.1 | 0.041 | 0.123 |
| | 500 | 140.5 | 105.1 | 0.069 | 0.205 |
| | 1000 | 281.1 | 210.2 | 0.100 | 0.400 |
| | 2000 | 562.2 | 420.4 | 0.300 | 0.800 |



| MV-ID3016XM (Unit: mm) | | | | |
|---|---|---|---|---|
| Lens Focal Length | Working Distance | FoV | | 1D Single Pixel Accuracy | 2D Single Pixel Accuracy |
| | | H | V | | |
| 16 | 60 | 27.6 | 20.7 | 0.013 | 0.040 |
| | 150 | 64.7 | 48.5 | 0.032 | 0.095 |
| | 300 | 125.1 | 93.8 | 0.061 | 0.183 |
| | 600 | 247.3 | 185.5 | 0.121 | 0.362 |
| | 1000 | 407.3 | 296.2 | 0.199 | 0.579 |
| | 2000 | 814.5 | 592.4 | 0.398 | 1.157 |