

# MV-CB013-A0UM/UC

1.3 MP 1/2" CMOS USB3.0 Board Level Camera



**GEN*i*CAM**

**USB™**  
VISION

## Introduction

MV-CB013-A0UM/UC camera adopts CMOS sensor to provide high-quality images. It uses USB3.0 interface to transmit non-compressed images in real time, and its max. frame rate can reach 201 fps in full resolution. With single board design, it is small in size, which can meet different spatial requirements.

## Key Feature

- Compact design for flexible installation.
- Supports auto or manual adjustment of gain, exposure time, white balance, Gamma correction, LUT, etc.
- Adopts image interpolation algorithm for color cameras to have better color correction.
- Adopts USB3.0 interface to provide power supply and transmit data.
- Compatible with USB3 Vision Protocol, GeniCam standard, and third-party software based on these protocol and standard.

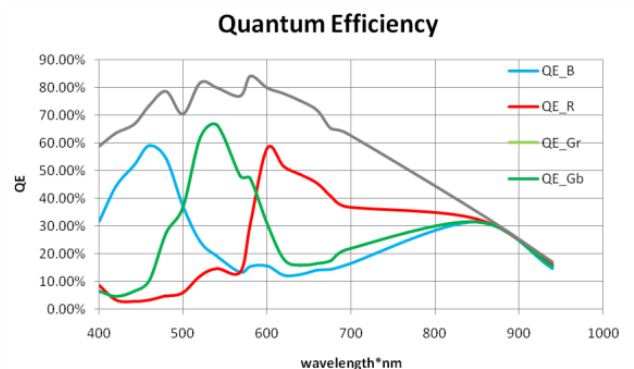
## Available Model

- Single board mono camera: MV-CB013-A0UM-B
- C-mount mono camera: MV-CB013-A0UM-C
- C-mount color camera: MV-CB013-A0UC-C
- M12-mount mono camera: MV-CB013-A0UM-S
- M12-mount color camera: MV-CB013-A0UC-S

## Applicable Industry

Electronic semiconductor, factory automation, logistics, bottle detection, medicine packing, etc.

## Sensor Quantum Efficiency

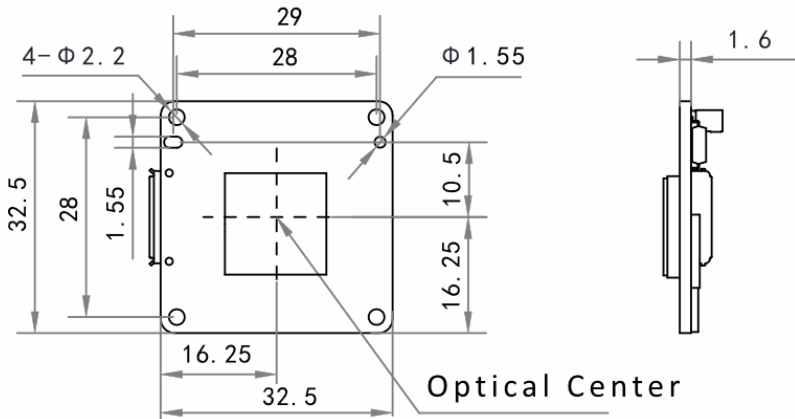


## Specification

| Model                      | MV-CB013-A0UM   | MV-CB013-A0UC  |
|----------------------------|---|--|
| <b>Camera</b>              |   |  |
| Sensor type                | CMOS, global shutter  |  |
| Pixel size                 | 4.8 μm × 4.8 μm   |  |
| Sensor size                | 1/2"  |  |
| Resolution                 | 1280 × 1024   |  |
| Max. frame rate            | 201 fps @1280 × 1024  |  |
| Dynamic range              | 53 dB   |  |
| SNR                        | 40 dB   |  |
| Gain                       | 0 dB to 16 dB   |  |
| Exposure time              | 9 μs to 10 sec  |  |
| Exposure mode              | Off/ Once/ Continuous exposure mode   |  |
| Mono/color                 | Mono  | Color  |
| Pixel format               | Mono 8/10/10p/12/12p  | Mono 8/10/12, Bayer GB 8/10/10p/12/12p<br>YUV422Packed, YUV422_YUYV_Packed, RGB 8,<br>BGR 8  |
| Binning                    | Supports 1 × 1, 2 × 2, 4 × 4  |  |
| Decimation                 | Supports 1 × 1, 2 × 2, 4 × 4  |  |
| Reverse image              | Supports horizontal and vertical reverse image output   |  |
| <b>Electrical features</b> |   |  |
| Data interface             | USB3.0  |  |
| Digital I/O                | Bi-directional non-isolated I/O × 2 (Line 2, Line 5)  |  |
| Power supply               | USB3.0 power supply   |  |
| Power consumption          | Typ. 1.65 W@5 VDC<br>(USB3.0 provides power supply)   | Typ. 2.85 W@5 VDC<br>(USB3.0 provides power supply)  |
| <b>Mechanical</b>          |   |  |
| Lens mount                 | Single board camera: None<br>C-mount camera: C-mount<br>M12-mount camera: M12-mount   | C-mount camera: C-mount<br>M12-mount camera: M12-mount   |
| Dimension                  | Single board camera: 32.5 mm × 32.5 mm × 1.6 mm<br>(1.3" × 1.3" × 0.1")<br>C-mount camera: 35 mm × 35 mm × 8.6 mm<br>(1.4" × 1.4" × 0.3")<br>M12-mount camera: 35 mm × 35 mm × 8.6 mm<br>(1.4" × 1.4" × 0.3") | C-mount camera: 35 mm × 35 mm × 8.6 mm<br>(1.4" × 1.4" × 0.3")<br>M12-mount camera: 35 mm × 35 mm × 8.6 mm<br>(1.4" × 1.4" × 0.3") |
| Weight                     | Single board camera: Approx. 10 g (0.02 lb.)<br>C-mount camera: Approx. 30 g (0.07 lb.)<br>M12-mount camera: Approx. 30 g (0.07 lb.)  | C-mount camera: Approx. 30 g (0.07 lb.)<br>M12-mount camera: Approx. 30 g (0.07 lb.)   |
| Temperature                | Working temperature: 0 °C to 50 °C (32 °F to 122 °F)<br>Storage temperature: -30 °C to 70 °C (-22 °F to 158 °F)   |  |
| Humidity                   | 20% to 80% RH, non-condensing   |  |
| <b>General</b>             |   |  |
| Client software            | MVS or third-party software compatible with USB3 Vision Protocol  |  |
| Operating system           | 32/64-bit Windows XP/7/10, 32/64-bit Linux, and 64-bit MacOS  |  |
| Compatibility              | USB3 Vision, GenICam  |  |
| Certification              | CE, FCC, RoHS, KC   |  |

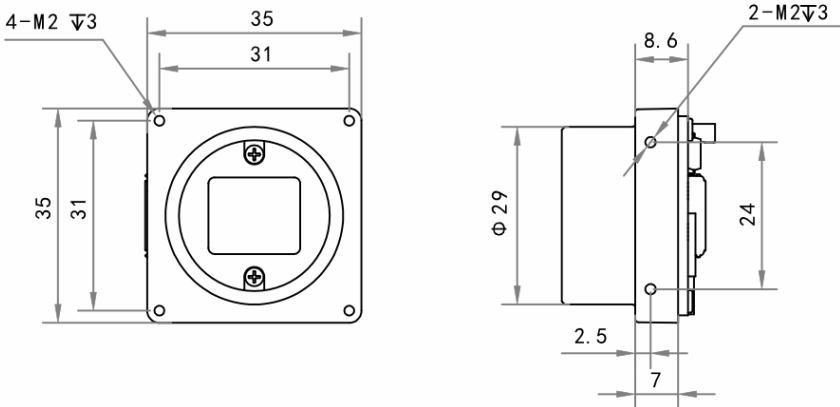
## Dimension

Single board camera:



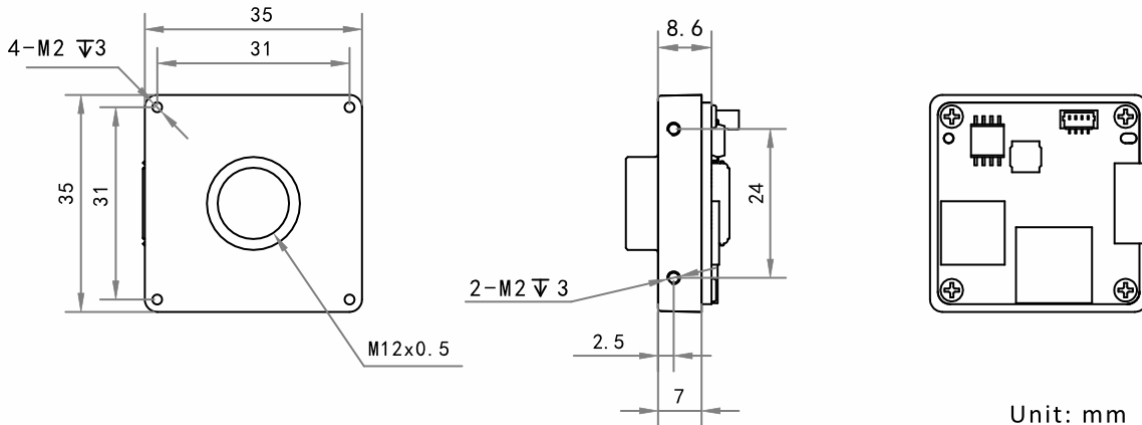
Unit: mm

C-mount camera:



Unit: mm

M12-mount camera:



Unit: mm

Distribution Partner:



# SCORPION VISION