

MV-CS040-A0UM/UC

4 MP 1" CMOS USB 3.0 Area Scan Camera



GEN*i*CAM

USBTM
VISION

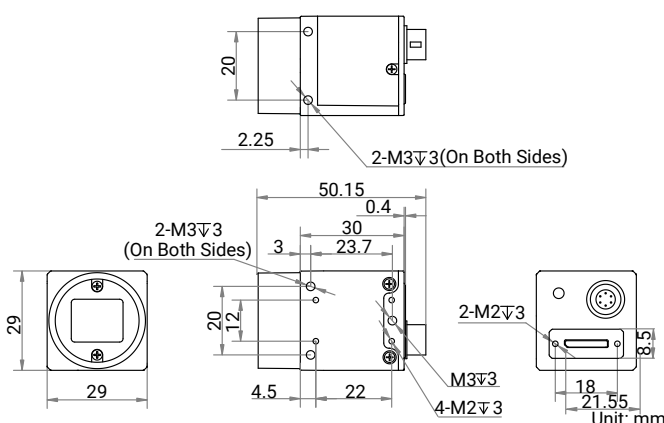
Introduction

MV-CS040-A0UM/UC camera adopts CMOS sensor to provide high-quality images. It uses USB 3.0 interface to transmit non-compressed images in real time, and its max. frame rate can reach 90.1 fps in full resolution.

Key Feature

- Adopts global shutter CMOS sensor providing high signal-to-noise ratio, wide dynamic range and high quality images.
- Resolution of 2048 × 2048, pixel size of 5.5 μm × 5.5 μm.
- Supports hardware trigger, software trigger, free run.
- Compact design with mounting holes on panels for flexible mounting from 4 sides.
- Compatible with USB3 Vision Protocol, GenICam Standard, and the third-party software based on the protocol and standard.

Dimension



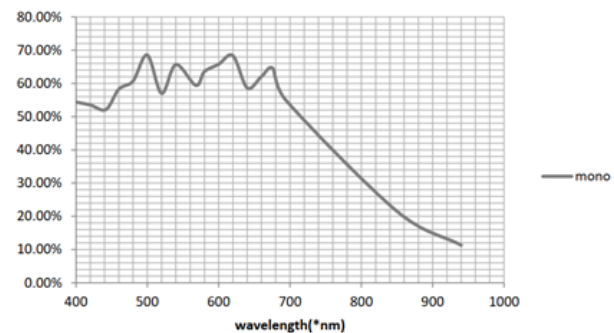
Available Model

- Mono camera: MV-CS040-A0UM
- Color camera: MV-CS040-A0UC

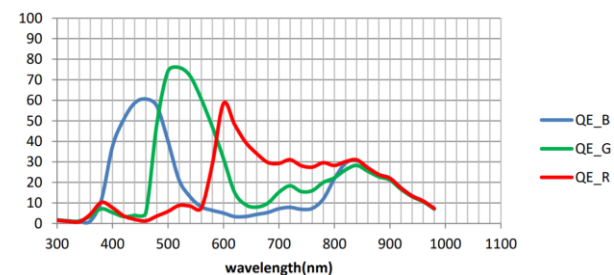
Applicable Industry

Electronics and semiconductor, factory automation, medicine package, etc.

Sensor Quantum Efficiency



MV-CS040-A0UM



MV-CS040-A0UC

Specification

| Model | MV-CS040-A0UM | MV-CS040-A0UC |
|----------------------------|--|---|
| Performance | | |
| Sensor type | CMOS, global shutter | |
| Pixel size | 5.5 μm \times 5.5 μm | |
| Sensor size | 1" | |
| Resolution | 2048 \times 2048 | |
| Max. frame rate | 90.1 fps @ 2048 \times 2048 Mono 8 | 90.1 fps @ 2048 \times 2048 Bayer GB 8 |
| Dynamic range | 59.7 dB | |
| SNR | 39.6 dB | |
| Gain | 0 dB to 12 dB | |
| Exposure time | 30 μs to 10 sec | |
| Exposure mode | Off/Once/Continuous exposure mode | |
| Mono/color | Mono | Color |
| Pixel format | Mono 8/10/10Packed/12/12Packed | Mono 8/10/12, Bayer GB 8/10/10Packed/12/12Packed, YUV422Packed, YUV422_YUYV_Packed, RGB 8, BGR 8 |
| Binning | Supports 1 \times 1, 2 \times 2, 4 \times 4 | Supports 1 \times 1, 2 \times 2, 4 \times 4 |
| Decimation | Supports 1 \times 1, 2 \times 2, 4 \times 4 | Supports 1 \times 1, 2 \times 2, 4 \times 4 |
| Reverse image | Supports horizontal and vertical reverse image output | |
| Electrical features | | |
| Data interface | USB 3.0, compatible with USB 2.0 | |
| Digital I/O | 6-pin P7 connector provides power and I/O, including opto-isolated input \times 1 (Line 0), opto-isolated output \times 1 (Line 1), bi-directional non-isolated I/O \times 1 (Line 2). | |
| Power supply | 9 VDC to 24 VDC, supports USB 3.0 power supply | |
| Power consumption | Typ. 2.4 W @ 5 VDC (USB 3.0 provides power supply) | |
| Mechanical | | |
| Lens mount | C-mount | |
| Dimension | 29 mm \times 29 mm \times 30 mm (1.1" \times 1.1" \times 1.2") | |
| Weight | Approx. 88 g (0.2 lb.) | |
| Ingress protection | IP40 (under proper lens installation and wiring) | |
| Temperature | Working temperature: -30 $^{\circ}\text{C}$ to 60 $^{\circ}\text{C}$ (-22 $^{\circ}\text{F}$ to 140 $^{\circ}\text{F}$) Storage temperature: -30 $^{\circ}\text{C}$ to 70 $^{\circ}\text{C}$ (-22 $^{\circ}\text{F}$ to 158 $^{\circ}\text{F}$) | |
| Humidity | 20% RH to 95% RH (no condensation) | |
| General | | |
| Client software | MVS or third-party software meeting with USB3 Vision Protocol | |
| Operating system | 32/64-bit Windows 7/10, 64-bit Windows 11, and 32/64-bit Linux | |
| Compatibility | USB3 Vision, GenICam | |
| Certification | CE, RoHS, KC | |