

# MV-CH120-60VC

12 MP 1.1" CMOS USB 3.0 Area Scan Camera



GEN*i*CAM

USB<sup>TM</sup>  
VISION

## Introduction

MV-CH120-60VC camera adopts new hardware platform to reduce power consumption, and has high dynamic range and good SNR to provide high-quality images. It uses dual USB 3.0 interfaces to transmit images in real time, and its max. frame rate can reach 30 fps.

## Key Feature

- Adopts dual USB 3.0 interfaces to transmit data.
- Adopts new hardware platform to optimize logical resource and reduce power consumption.
- Supports auto or manual adjustment of gain, exposure time, white balance, LUT, Gamma correction, and Sequencer, etc.
- Supports flexible installation with mounting holes on both top and bottom panels.
- Compatible with USB3 Vision Protocol, GenICam Standard, and the third-party software based on these protocol and standard.

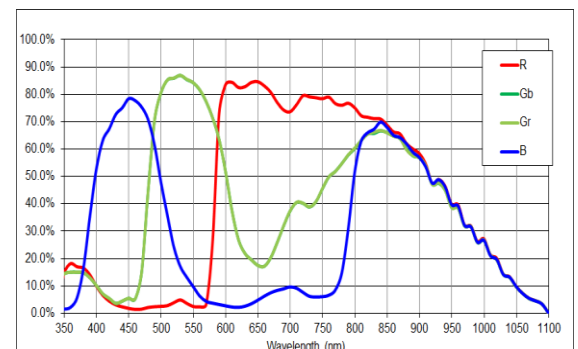
## Available Model

MV-CH120-60VC

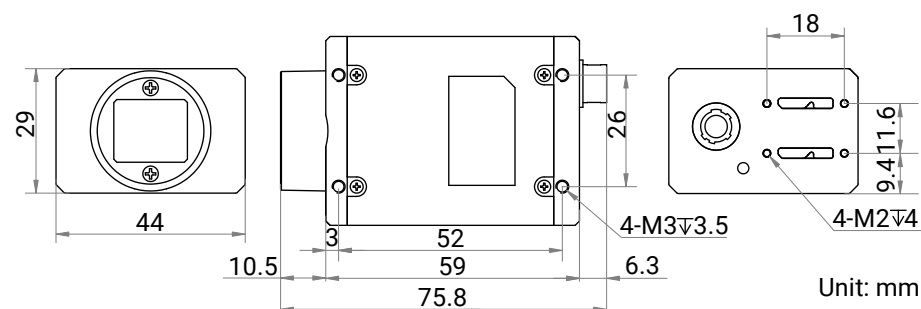
## Applicable Industry

Electronic semiconductor, factory automation, food and beverage, medicine packing, etc.

## Sensor Quantum Efficiency



## Dimension



## Specification

|                            |                                                                                                                                                                                                                                               |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Model</b>               | <b>MV-CH120-60VC</b>                                                                                                                                                                                                                          |
| <b>Performance</b>         |                                                                                                                                                                                                                                               |
| <b>Sensor type</b>         | CMOS, global shutter                                                                                                                                                                                                                          |
| <b>Sensor model</b>        | Stacked BSI                                                                                                                                                                                                                                   |
| <b>Pixel size</b>          | 3.45 $\mu\text{m}$ $\times$ 3.45 $\mu\text{m}$                                                                                                                                                                                                |
| <b>Sensor size</b>         | 1.1"                                                                                                                                                                                                                                          |
| <b>Resolution</b>          | 4096 $\times$ 3000                                                                                                                                                                                                                            |
| <b>Max. frame rate</b>     | 30 fps @ 4096 $\times$ 3000 Bayer GB 8                                                                                                                                                                                                        |
| <b>Dynamic range</b>       | 75.7 dB                                                                                                                                                                                                                                       |
| <b>SNR</b>                 | 42.1 dB                                                                                                                                                                                                                                       |
| <b>Gain</b>                | 0 dB to 5.7 dB                                                                                                                                                                                                                                |
| <b>Exposure time</b>       | 41 $\mu\text{s}$ to 10 sec                                                                                                                                                                                                                    |
| <b>Exposure mode</b>       | Off/Once/Continuous exposure mode                                                                                                                                                                                                             |
| <b>Mono/color</b>          | Color                                                                                                                                                                                                                                         |
| <b>Pixel format</b>        | Mono 8/10/12<br>Bayer GB 8/10/10Packed/12/12Packed<br>YUV422Packed, YUV422_YUYV_Packed,<br>RGB 8, BGR 8                                                                                                                                       |
| <b>Reverse image</b>       | Supports horizontal and vertical reverse image output                                                                                                                                                                                         |
| <b>Electrical features</b> |                                                                                                                                                                                                                                               |
| <b>Data interface</b>      | USB 3.0, compatible with USB 2.0                                                                                                                                                                                                              |
| <b>Digital I/O</b>         | 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).                                                  |
| <b>Power supply</b>        | 12 VDC to 24 VDC, supports USB 3.0 power supply                                                                                                                                                                                               |
| <b>Power consumption</b>   | Typ. 3.9 W @ 5 VDC (dual USB 3.0 interfaces provide power supply)                                                                                                                                                                             |
| <b>Mechanical</b>          |                                                                                                                                                                                                                                               |
| <b>Lens mount</b>          | C-mount                                                                                                                                                                                                                                       |
| <b>Dimension</b>           | 29 mm $\times$ 44 mm $\times$ 59 mm (1.1" $\times$ 1.7" $\times$ 2.3")                                                                                                                                                                        |
| <b>Weight</b>              | Approx. 100 g (0.2 lb.)                                                                                                                                                                                                                       |
| <b>Ingress protection</b>  | IP40 (under proper lens installation and wiring)                                                                                                                                                                                              |
| <b>Temperature</b>         | Working temperature: $-10^{\circ}\text{C}$ to $50^{\circ}\text{C}$ ( $14^{\circ}\text{F}$ to $122^{\circ}\text{F}$ )<br>Storage temperature: $-30^{\circ}\text{C}$ to $80^{\circ}\text{C}$ ( $-22^{\circ}\text{F}$ to $176^{\circ}\text{F}$ ) |
| <b>Humidity</b>            | 20% RH to 95% RH (no condensation)                                                                                                                                                                                                            |
| <b>General</b>             |                                                                                                                                                                                                                                               |
| <b>Client software</b>     | MVS or third-party software meeting with USB 3.0 Vision Protocol                                                                                                                                                                              |
| <b>Operating system</b>    | 32/64-bit Windows 7/10/11, 32/64-bit Linux                                                                                                                                                                                                    |
| <b>Compatibility</b>       | USB 3.0 Vision, GenICam                                                                                                                                                                                                                       |
| <b>Certification</b>       | CE, RoHS                                                                                                                                                                                                                                      |