

# MV-CH120-10CM/CC

12MP1.1"CMOS Camera Link Area Scan Camera



GEN*i*CAM



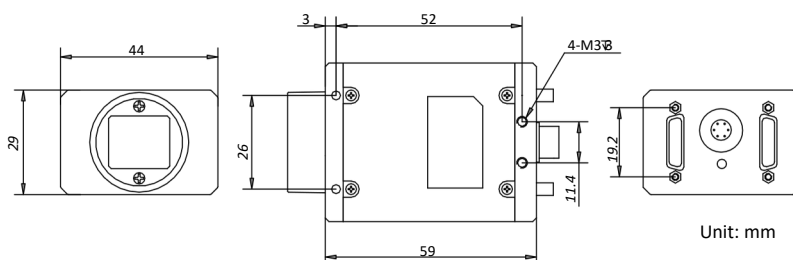
## Introduction

MV-CH120-10CM/CC camera adopts Sony® IMX253 sensor to provide high-quality image. It uses Camera Link interface to transmit non-compressed images in real time with max. frame rate reaching 69.8 fps in full resolution.

## Key Feature

- Supports auto or manual adjustment of gain exposure time, LUT and Gamma correction.
- Supports hardware trigger, software trigger and free run mode, and supports camera triggering via Camera Link frame grabber.
- Supports customized ROI, and horizontal and vertical reverse image output.
- Supports configuration modes of Base, Medium, Full and 80-bit via the Camera Link interface.
- Compatible with Camera Link V2.0 Protocol, GeniCam Standard, and the third-party software based on the protocol and standard.

## Dimension



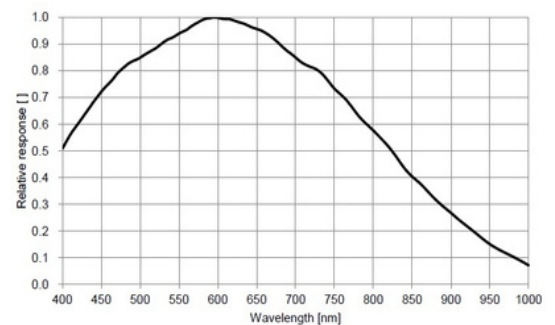
## Available Model

Mono camera: MV-CH120-10CM  
Color camera: MV-CH120-10CC

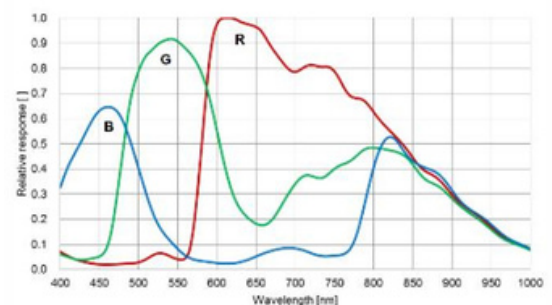
## Applicable Industry

SMT/ PCB AOI, FPD, high-accuracy measurement, etc.

## Sensor Quantum Efficiency



MV-CH120-10CM



MV-CH120-10CC

# Specification

| Model              | MV-CH120-10CM                                                                                                                                                           | MV-CH120-10CC                                                                                      |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Camera             |                                                                                                                                                                         |                                                                                                    |
| Sensor type        | CMOS, global shutter                                                                                                                                                    |                                                                                                    |
| Sensor model       | Sony® IMX253                                                                                                                                                            |                                                                                                    |
| Pixel size         | 3.45 μm × 3.45 μm                                                                                                                                                       |                                                                                                    |
| Sensor size        | 1.1"                                                                                                                                                                    |                                                                                                    |
| Resolution         | 4096 × 3000 (Base/Medium/Full), 3840 × 3000 (80-bit)                                                                                                                    |                                                                                                    |
| Max. frame rate    | 50.9 fps @ 4096 × 3000 Mono 8 (Base/Medium/Full)<br>69.8 fps @ 3840 × 3000 Mono 8 (80-bit)                                                                              | 51.4 fps @ 4096 × 3000 Bayer RG 8 (Base/Medium/Full)<br>68.1 fps @ 3840 × 3000 Bayer RG 8 (80-bit) |
| Configuration mode | Base, Medium, Full, 80-bit                                                                                                                                              |                                                                                                    |
| Tap geometry       | 1X2_1Y, 1X4_1Y, 1X8_1Y, 1X10_1Y                                                                                                                                         | 1X_1Y, 1X2_1Y, 1X4_1Y, 1X8_1Y, 1X10_1Y                                                             |
| Tap number         | 2 Taps, 4 Taps, 8 Taps, 10 Taps                                                                                                                                         | 1 Tap, 2 Taps, 4 Taps, 8 Taps, 10 Taps                                                             |
| Pixel clock        | 60 MHz, 70 MHz, 85 MHz                                                                                                                                                  | 40 MHz, 60 MHz, 70 MHz, 85 MHz                                                                     |
| Dynamic range      | 71.6 dB                                                                                                                                                                 |                                                                                                    |
| SNR                | 39.7 dB                                                                                                                                                                 |                                                                                                    |
| Gain               | 0 dB to 24 dB                                                                                                                                                           |                                                                                                    |
| Exposure time      | 1 μs to 10 sec                                                                                                                                                          |                                                                                                    |
| Exposure mode      | Off/Once/Continuous exposure mode                                                                                                                                       |                                                                                                    |
| Mono/color         | Mono                                                                                                                                                                    | Color                                                                                              |
| Pixel format       | Mono 8/10/12                                                                                                                                                            | Bayer RG 8/10/12, RGB 8                                                                            |
| Binning            | Not support                                                                                                                                                             |                                                                                                    |
| Decimation         | Not support                                                                                                                                                             |                                                                                                    |
| Reverse image      | Supports horizontal and vertical reverse image output                                                                                                                   |                                                                                                    |
| Electrical feature |                                                                                                                                                                         |                                                                                                    |
| Data interface     | Camera Link with SDR interface                                                                                                                                          |                                                                                                    |
| Digital I/O        | 6-pin P7 connector provides power and I/O, including opto-isolated input × 1 (Line 0), opto-isolated output × 1 (Line 1), bi-directional non-isolated I/O × 1 (Line 2). |                                                                                                    |
| Power supply       | 9 VDC to 24 VDC                                                                                                                                                         |                                                                                                    |
| Power consumption  | Typ. 4.51 W @ 12 VDC                                                                                                                                                    | Typ. 4.5 W @ 12 VDC                                                                                |
| Mechanical         |                                                                                                                                                                         |                                                                                                    |
| Lens mount         | C-mount                                                                                                                                                                 |                                                                                                    |
| Dimension          | 44 mm × 29 mm × 59 mm (1.7" × 1.1" × 2.3")                                                                                                                              |                                                                                                    |
| Weight             | Approx. 100 g (0.2 lb.)                                                                                                                                                 |                                                                                                    |
| Ingress protection | IP30 (under proper lens installation and wiring)                                                                                                                        |                                                                                                    |
| 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% RH 80% RH (no condensation)                                                                                                                                         |                                                                                                    |
| General            |                                                                                                                                                                         |                                                                                                    |
| Client software    | MVS or frame grabber software meeting with GenICam Protocol                                                                                                             |                                                                                                    |
| Operating system   | 32/64-bit Windows 7/10, 64-bit Windows 11                                                                                                                               |                                                                                                    |
| Compatibility      | Camera Link V2.0, GenICam                                                                                                                                               |                                                                                                    |
| Certification      | CE, RoHS, KC                                                                                                                                                            |                                                                                                    |