

# MV-CA016-10GM/GC

1.6 MP 1/2.9" CMOS GigE Area Scan Camera



GEN*i*CAM

**GigE**  
VISION

## Introduction

MV-CA016-10GM/GC camera adopts Sony® IMX 273 sensor and provides high quality image. The GigE interface provides high-speed and real-time transmission of uncompressed data with the maximum frame rate reaching 78.2 fps at full resolution.

## Key Feature

- Adopts GigE interface and max. transmission distance of 100 meters without relay.
- Supports auto and manual adjustment for exposure control, LUT, Gamma correction, etc.
- Up to 128 MB local memory for burst transmission and retransmission.
- Supports hardware trigger, software trigger, etc.
- Compatible with GigE Vision Protocol V2.0, GenICam Standard, and third-party software based on these protocol and standard.

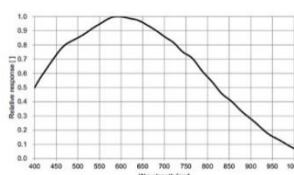
## Available Model

- Mono camera: MV-CA016-10GM
- Color camera: MV-CA016-10GC

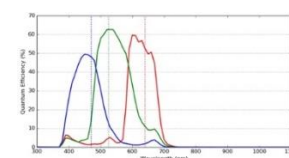
## Applicable Industry

Electronic semiconductor, factory automation, and quality inspection, etc.

## Sensor Quantum Efficiency

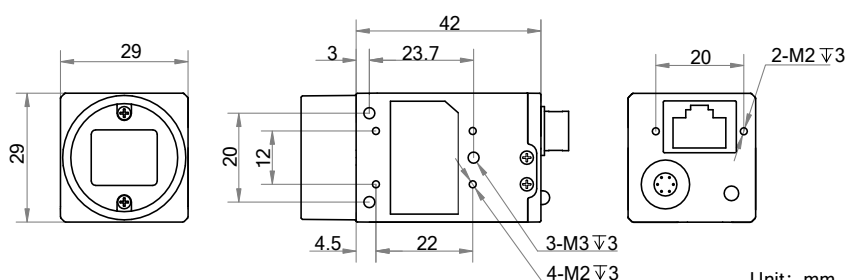


MV-CA016-10GM



MV-CA016-10GC

## Dimension



Unit: mm

## Specification

| Model              | MV-CA016-10GM                                                                                                                                                               | MV-CA016-10GC                                                                        |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Camera             |                                                                                                                                                                             |                                                                                      |
| Sensor type        | CMOS, global shutter                                                                                                                                                        |                                                                                      |
| Sensor model       | Sony® IMX273                                                                                                                                                                |                                                                                      |
| Pixel size         | 3.45 μm × 3.45 μm                                                                                                                                                           |                                                                                      |
| Sensor size        | 1/2.9"                                                                                                                                                                      |                                                                                      |
| Resolution         | 1440 × 1080                                                                                                                                                                 |                                                                                      |
| Max. frame rate    | 78.2 fps @ 1440 × 1080                                                                                                                                                      |                                                                                      |
| Dynamic range      | 71.4 dB                                                                                                                                                                     |                                                                                      |
| SNR                | 41 dB                                                                                                                                                                       |                                                                                      |
| Gain               | 0 dB to 20 dB                                                                                                                                                               |                                                                                      |
| Exposure time      | 1 μs to 10 sec                                                                                                                                                              |                                                                                      |
| Exposure mode      | Off/ Once /Continuous exposure mode                                                                                                                                         |                                                                                      |
| Mono/color         | Mono                                                                                                                                                                        | Color                                                                                |
| Pixel format       | Mono 8/10/10p/12/12p                                                                                                                                                        | Mono8/10/12, Bayer RG 8/10/10p/12/12p<br>YUV 422 Packed, YUV422_YUYV_Packed,<br>RGB8 |
| Binning            | Supports 1 × 1, 2 × 2                                                                                                                                                       |                                                                                      |
| Decimation         | Supports 1 × 1, 2 × 2                                                                                                                                                       |                                                                                      |
| Reverse image      | Supports horizontal and vertical reverse image output                                                                                                                       |                                                                                      |
| Image buffer       | 128 MB                                                                                                                                                                      |                                                                                      |
| Electrical feature |                                                                                                                                                                             |                                                                                      |
| Data interface     | Gigabit Ethernet, compatible with Fast Ethernet                                                                                                                             |                                                                                      |
| Digital I/O        | 6-pin Hirose 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, supports PoE                                                                                                                                               |                                                                                      |
| Power consumption  | Typ. 3 W @ 12 VDC                                                                                                                                                           |                                                                                      |
| Mechanical         |                                                                                                                                                                             |                                                                                      |
| Lens mount         | C-mount                                                                                                                                                                     |                                                                                      |
| Dimension          | 29 mm × 29 mm × 42 mm (1.1" × 1.1" × 1.7")                                                                                                                                  |                                                                                      |
| Weight             | Approx. 68 g (0.15 lb)                                                                                                                                                      |                                                                                      |
| Ingress protection | IP 30 (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 to 80% RH (no condensation)                                                                                                                                          |                                                                                      |
| General            |                                                                                                                                                                             |                                                                                      |
| Client software    | MVS or third-party software meeting with GigE Vision Protocol                                                                                                               |                                                                                      |
| Operating system   | 32/64-bit Windows 7/10, 32/64-bit Linux                                                                                                                                     |                                                                                      |
| Compatibility      | GigE Vision V2.0, GenICam                                                                                                                                                   |                                                                                      |
| Certification      | CE, RoHS                                                                                                                                                                    |                                                                                      |