

# MV-CT\*M/CG0120/R

## 12 MP GigE Area Scan Camera



**GEN*i*CAM**

**GigE**  
VISION

### Introduction

Designed for industrial applications, MV-CT\*M/CG0120/R camera offers industry-leading performance and reliability, with various versions to meet diverse application needs. It supports IP67 protection, expanded interfaces, and integration of liquid/electric lenses, light sources, and lens cap, creating a more flexible and efficient system.

### Key Features

- The devices with PRO version and MAX version support waterproof connector.
- The devices with PRO version and MAX version adopt precision temperature control design for fast heat balance.
- The color devices with PRO version and MAX version support auto color correction based on multi-spectral fusion technology.
- The device with MAX version integrates lens and light source, enabling lens focusing and light source control.
- Adopts GigE interface and max. transmission distance of 100 meters without relay.
- Compatible with GigE Vision V2.0 Protocol, GenICam Standard, and third-party software based on the protocol and standard.

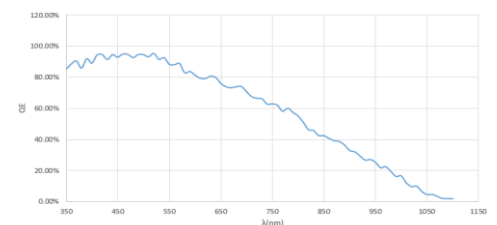
### Applicable Industry

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

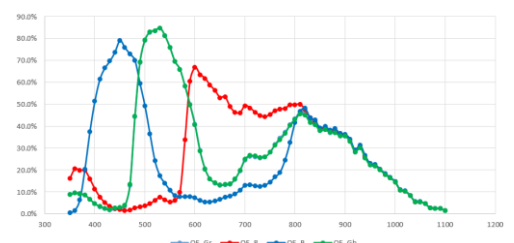
### Available Model

- Mono camera (BASE): MV-CT0MG0120/R/NN/NN
- Color camera (BASE): MV-CT0CG0120/R/NN/NN
- Mono camera (PRO): MV-CT1MG0120/R/NN/NN
- Color camera (PRO): MV-CT1CG0120/R/NN/NN
- Mono camera (MAX): MV-CT2MG0120/R/NN/NN
- Color camera (MAX): MV-CT2CG0120/R/NN/NN

### Sensor Quantum Efficiency



MV-CT\*MG0120/R



MV-CT\*CG0120/R

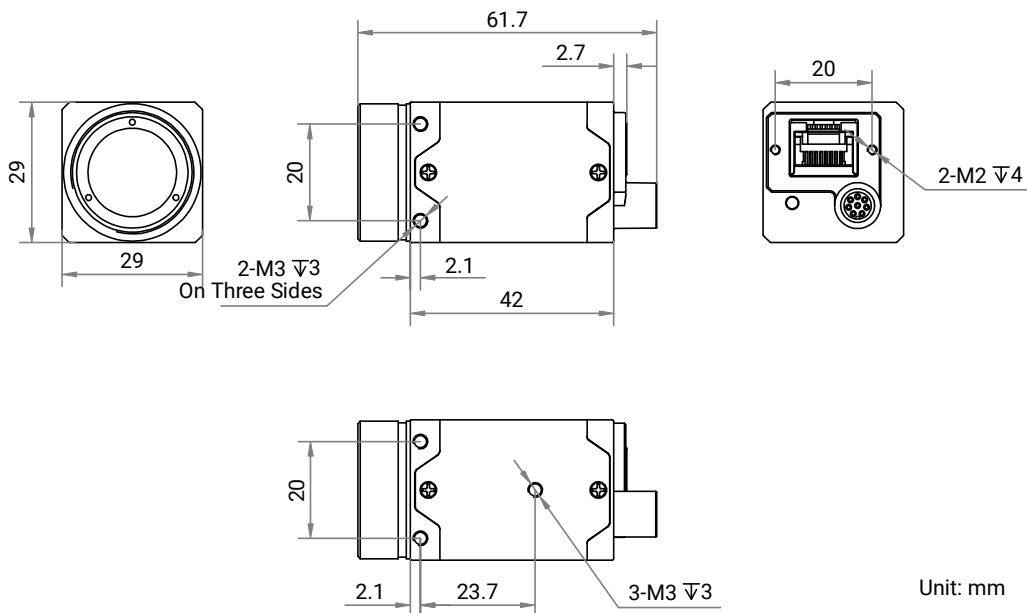
## Specification

Model	MV-CT*MG0120/R	MV-CT*CG0120/R
<b>Performance</b>		
<b>Sensor type</b>	CMOS, rolling shutter	
<b>Sensor model</b>	Stacked BSI	
<b>Pixel size</b>	2 μm × 2 μm	
<b>Sensor size</b>	1/1.56"	
<b>Resolution</b>	4096 × 3024	
<b>Max. frame rate</b>	9.9 fps @ 4096 × 3024 Mono 8 18.4 fps @ 4096 × 3024 Mono 8 (PRO + MAX: lossless compression mode enabled)	9.9 fps @ 4096 × 3024 Bayer BG 8 18.4 fps @ 4096 × 3024 Bayer BG 8 (PRO + MAX: lossless compression mode enabled)
<b>Dynamic range</b>	68.5 dB	
<b>SNR</b>	38.9 dB	
<b>Gain</b>	0 dB to 24 dB	
<b>Exposure time</b>	53 μs to 1.9 sec	
<b>Exposure mode</b>	Off/Once/Continuous exposure mode	
<b>Mono/color</b>	Mono	Color
<b>Pixel format</b>	Mono 8/10/10Packed/12/12Packed	Mono 8, Bayer BG 8/10/10Packed/12/12Packed, YUV422Packed, YUV422_YUYV_Packed, RGB 8, BGR 8
<b>Binning</b>	Supports 1 × 1, 2 × 2, 4 × 4	
<b>Decimation</b>	Supports 1 × 1, 2 × 2, 4 × 4	
<b>Reverse image</b>	Supports horizontal and vertical reverse image output	
<b>Electrical features</b>		
<b>Data interface</b>	Gigabit Ethernet (1000 Mbit/s), compatible with Fast Ethernet (100 Mbit/s)	
<b>Data interface type</b>	BASE: RJ45 connector PRO + MAX: 8-pin M12 X-Code waterproof aviation connector	
<b>Control interface</b>	BASE + PRO: Not supported MAX: 8-pin M12 A-Code waterproof aviation connector	
<b>Digital I/O</b>	8-pin M8 A-Code aviation 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).	
<b>Power supply</b>	9 VDC to 24 VDC, supports PoE	
<b>Power consumption</b>	BASE: Typ. 1.4 W @ 12 VDC PRO: Typ. 1.4 W @ 12 VDC (fast heat balance not enabled) MAX: Typ. 1.4 W @ 24 VDC (fast heat balance not enabled and external device not be controlled)	BASE: Typ. 1.4 W @ 12 VDC PRO: Typ. 1.5 W @ 12 VDC (fast heat balance not enabled) MAX: Typ. 1.5 W @ 24 VDC (fast heat balance not enabled and external device not be controlled)

Mechanical	
Lens mount	C-mount
Dimension	BASE + PRO: 29 mm × 29 mm × 42 mm (1.1" × 1.1" × 1.7") MAX: 42 mm × 42 mm × 43 mm (1.7" × 1.7" × 1.7")
Weight	BASE: Approx. 116 g (0.3 lb.) PRO: Approx. 124 g (0.3 lb.) MAX: Approx. 120 g (0.3 lb.)
Ingress protection	BASE: IP40 (under proper lens installation and wiring) PRO + MAX: IP67 (under proper lens and lens cap installation and wiring)
Temperature	Working temperature: -30 °C to 60 °C (-22 °F to 140 °F) Storage temperature: -30 °C to 80 °C (-22 °F to 176 °F)
Humidity	20% RH to 95% RH (no condensation)
General	
Client software	MVS or third-party software meeting with GigE Vision Protocol
Operating system	32/64-bit Windows 7/10, 64-bit Windows 11, 32/64-bit Linux
Compatibility	GigE Vision V2.0, GenICam
Certification	CE, RoHS, KC

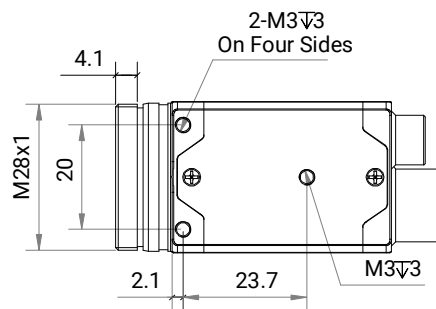
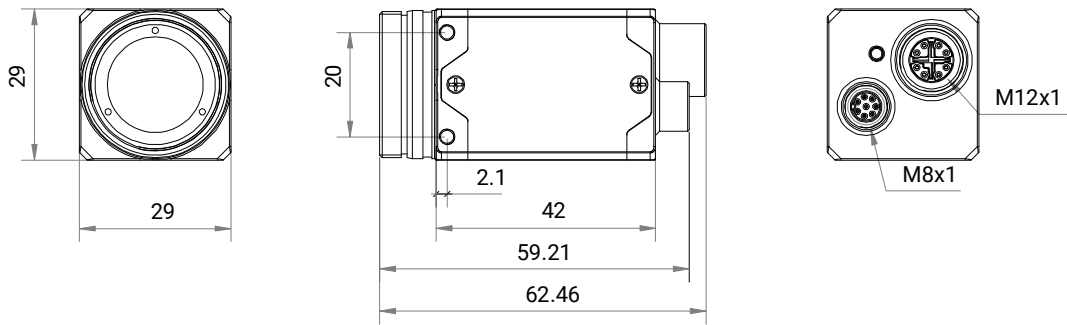
## Dimension

### BASE



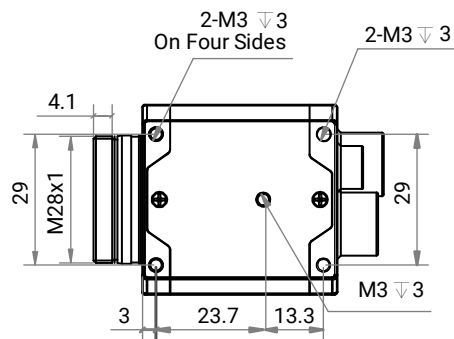
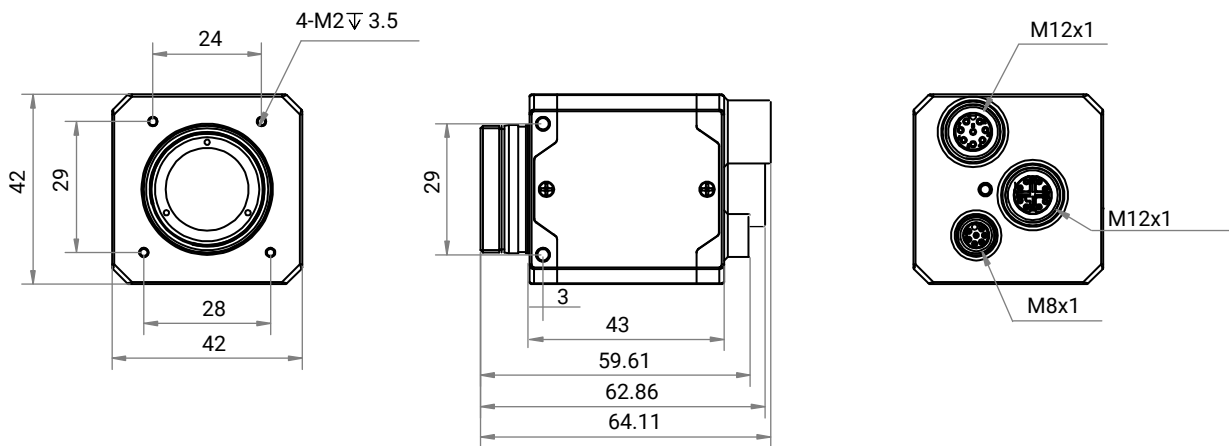
Unit: mm

## PRO



Unit: mm

## MAX



Unit: mm