

# MV-CH320-60TM/TC

32 MP CMOS 10 GigE Area Scan Camera



GEN< i >CAM

10GiGE  
VISION

## Introduction

MV-CH320-60TM/TC camera adopts CMOS sensor to provide high-quality image. It uses 10 GigE interface to transmit non-compressed image in real time, and its max. frame rate can reach 30 fps in full resolution.

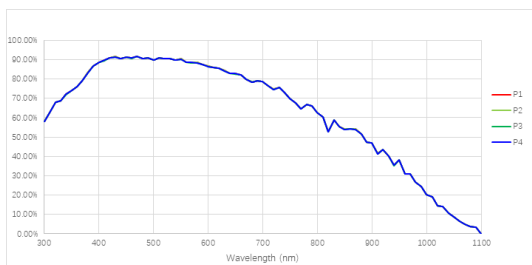
## Available Model

- Mono camera: MV-CH320-60TM
- Color camera: MV-CH320-60TC

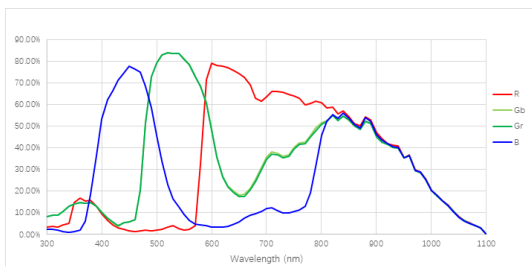
## Applicable Industry

PCB AOI, FPD, railway related applications, PV, etc.

## Sensor Quantum Efficiency



MV-CH320-60TM

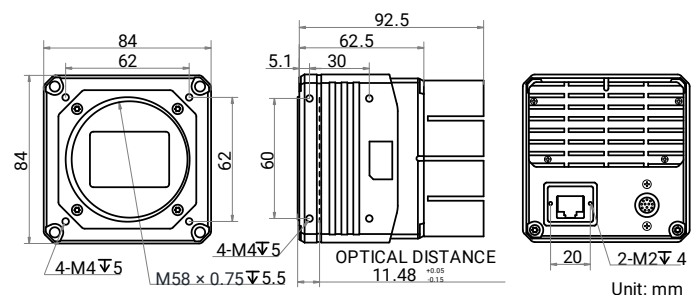


MV-CH320-60TC

## Key Features

- Resolution of 7744 × 4336, and pixel size of 2.9  $\mu\text{m}$  × 2.9  $\mu\text{m}$ .
- Supports auto or manual adjustment of exposure time and white balance, and manual adjustment of gain, LUT, Gamma correction, etc.
- Adopts 10 GigE interface providing max. transmission distance of 100 meters without relay.
- Compact design with mounting holes on panels for flexible mounting.
- Compatible with GigE Vision Protocol V2.0, GenICam Standard, and third-party software based on protocols.

## Dimension



Unit: mm

## Specification

| Model              | MV-CH320-60TM                                                                                                                                                                            | MV-CH320-60TC                                                                                          |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Performance        |                                                                                                                                                                                          |                                                                                                        |
| Sensor type        | CMOS, rolling shutter                                                                                                                                                                    |                                                                                                        |
| Sensor model       | Stacked BSI                                                                                                                                                                              |                                                                                                        |
| Pixel size         | 2.9 μm × 2.9 μm                                                                                                                                                                          |                                                                                                        |
| Sensor size        | 22.6 mm × 12.7 mm                                                                                                                                                                        |                                                                                                        |
| Resolution         | 7744 × 4336                                                                                                                                                                              |                                                                                                        |
| Max. frame rate    | 30 fps @ 7744 × 4336 Mono 8                                                                                                                                                              | 30 fps @ 7744 × 4336 Bayer BG 8                                                                        |
| Dynamic range      | 70.6 dB                                                                                                                                                                                  |                                                                                                        |
| SNR                | 41 dB                                                                                                                                                                                    |                                                                                                        |
| Gain               | 0 dB to 24 dB                                                                                                                                                                            |                                                                                                        |
| Exposure time      | 12 μs to 10 sec                                                                                                                                                                          |                                                                                                        |
| Exposure mode      | Off/Once/Continuous exposure mode, supports Rolling mode                                                                                                                                 |                                                                                                        |
| Mono/color         | Mono                                                                                                                                                                                     | Color                                                                                                  |
| Pixel format       | Mono 8/10/10Packed/12/12Packed                                                                                                                                                           | Mono 8/10/12<br>Bayer BG 8/10/10Packed/12/12Packed<br>YUV422Packed, YUV422_YUYV_Packed<br>RGB 8, BGR 8 |
| Binning            | Supports 1 × 1, 1 × 2, 1 × 4, 2 × 1, 2 × 2, 2 × 4, 4 × 1, 4 × 2, 4 × 4                                                                                                                   |                                                                                                        |
| Decimation         | Supports 1 × 1, 1 × 2, 1 × 4, 2 × 1, 2 × 2, 2 × 4, 4 × 1, 4 × 2, 4 × 4                                                                                                                   |                                                                                                        |
| Reverse image      | Supports horizontal and vertical reverse image output                                                                                                                                    |                                                                                                        |
| Electrical feature |                                                                                                                                                                                          |                                                                                                        |
| Data interface     | 10 Gigabit Ethernet (10000 Mbit/s), compatible with Gigabit Ethernet (1000 Mbit/s)                                                                                                       |                                                                                                        |
| Digital I/O        | 12-pin P10 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), and RS-232 × 1 |                                                                                                        |
| Power supply       | 9 VDC to 24 VDC                                                                                                                                                                          |                                                                                                        |
| Power consumption  | Typ. 10.6 W @ 12 VDC                                                                                                                                                                     | Typ. 11.2 W @ 12 VDC                                                                                   |
| Mechanical         |                                                                                                                                                                                          |                                                                                                        |
| Lens mount         | M58*0.75, flange back length 11.48 mm                                                                                                                                                    |                                                                                                        |
| Dimension          | 84 mm × 84 mm × 92.5 mm (3.3" × 3.3" × 3.6")                                                                                                                                             |                                                                                                        |
| Weight             | Approx. 600 g (1.3 lb.)                                                                                                                                                                  |                                                                                                        |
| Ingress protection | IP40 (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 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 and 32/64-bit Linux                                                                                                                            |                                                                                                        |
| Compatibility      | GigE Vision V2.0, GenICam                                                                                                                                                                |                                                                                                        |
| Certification      | CE, RoHS, KC                                                                                                                                                                             |                                                                                                        |