# MV-CH250-90TM/TC

**25 MP 1.1" CMOS 10 GigE Area Scan Camera**

## Introduction

MV-CH250-90TM/TC camera adopts Gpixel GMAX0505 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 41.5 fps in full resolution.

## Key Feature

- Resolution of 5120 × 5120, pixel size of 2.5 μm × 2.5 μm.
- Adopts 10 GigE interface providing maximum transmission distance of 100 meters.
- Supports adjustment for exposure time, gain, Look-Up Table (LUT), Gamma correction, etc.
- Mounting holes on panels for flexible installation.
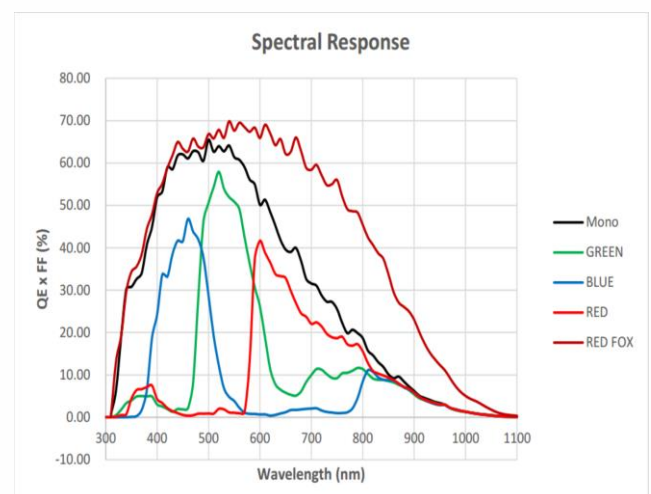- Compatible with GigE Vision Protocol V2.0, GenlCam Standard, and third-party software based on protocols.

## Available Model

- Mono M58-mount with fan: MV-CH250-90TM-M58S-NF
- Color M58-mount with fan: MV-CH250-90TC-M58S-NF
- Color C-mount with fan: MV-CH250-90TC-C-NF

## Applicable Industry

SMT/PCB AOI, FPD, railway related applications, photovoltaic industry, etc.
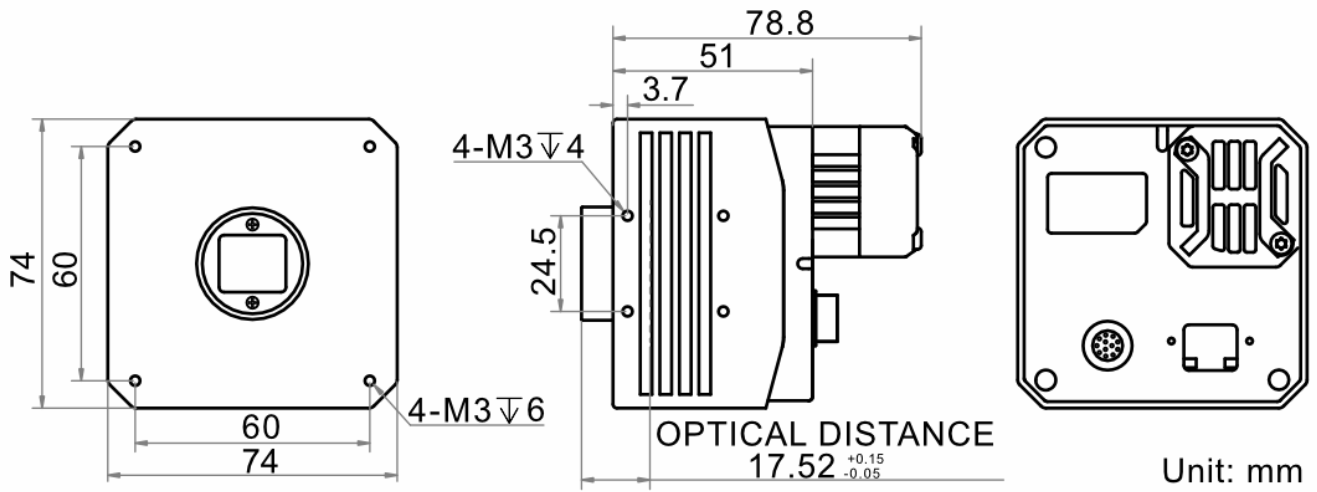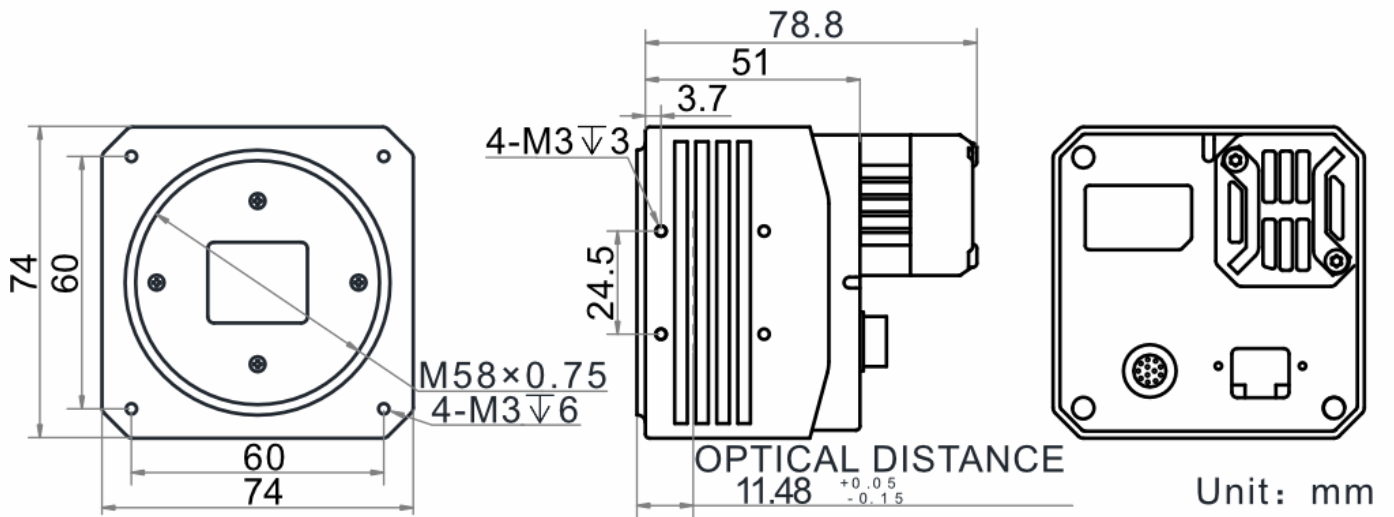
## Sensor Quantum Efficiency

# Specification

| Model | MV-CH250-90TM | MV-CH250-90TC |
|---|---|---|
| *Camera* | | |
| Sensor type | CMOS, global shutter | |
| Sensor model | Gpixel GMAX0505 | |
| Pixel size | 2.5 μm × 2.5 μm | |
| Sensor size | 1.1" | |
| Resolution | 5120 × 5120 | |
| Max. frame rate | 41.5 fps @5120 × 5120 | |
| Dynamic range | 63 dB | |
| SNR | 36 dB | |
| Gain | 2.0x to 5.0x | |
| Exposure time | 13 μs to 10 sec | |
| Exposure mode | Off/Once/Continuous exposure mode | |
| Mono/color | Mono | Color |
| Pixel format | Mono 8/10/10p/12/12p | Mono 8/10/12, Bayer BG 8/10/10p/12/12p, YUV422Packed, YUV422_YUYV_Packed, 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, compatible with Gigabit Ethernet | |
| Digital I/O | 12-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), and RS-232 × 1 | |
| Power supply | 9 VDC to 24 VDC | |
| Power consumption | Typ. 9.7 W@12 VDC | Typ. 10.0 W@12 VDC |
| *Mechanical* | | |
| Lens mount | C-mount, optical back focal length 17.52 mm (0.7")<br>M58-mount, optical back focal length 11.48 mm (0.5") | |
| Dimension | 74 mm × 74 mm × 78.8 mm (2.9" × 2.9" × 3.1") | |
| Weight | C-mount camera: approx. 590 g (1.3 lb.)<br>M58-mount camera: approx. 550 g (1.2 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 70 °C (-22 °F to 158 °F) | |
| Humidity | 20% to 95% RH, non-condensing | |
| *General* | | |
| Client software | MVS or third-party software meeting with GigE Vision Protocol | |
| Operating system | 32/64-bit Windows XP/7/10 | |
| Compatibility | GigE Vision V2.0, GenlCam | |
| Certification | CE, FCC, RoHS, KC | |

# Dimension

C-mount camera:



OPTICAL DISTANCE

17.52 +0.15 -0.05

Unit: mm

M58-mount camera:



OPTICAL DISTANCE

11.48 +0.05 -0.15

Unit: mm