# MV-CH500-90TM/TC

## 50 MP CMOS 10 GigE Area Scan Camera

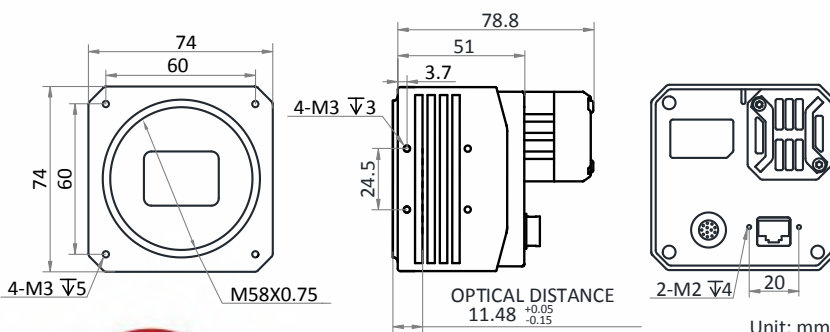GEN<i>CAM

10 GiGE VISION

## Introduction

MV-CH500-90TM/TC camera adopts Gpixel® GMAX sensor to provide high-quality images with high resolution and low noise. It uses 10 GigE interface to transmit non-compressed data in real time, and its max. frame rate can reach 15.5 fps in full resolution.

## Key Feature

- Resolution of 7008 × 7000, and pixel size of 3.2 μm × 3.2 μm.
- Supports auto or manual adjustment of gain, exposure time, and manual adjustment of Gamma correction, LUT, etc.
- Adopts 10 GigE interface, compatible with GigE, and max. transmission distance of 100 meters.
- Compact design with mounting holes on panels for flexible mounting.
- Compatible with GigE Vision V2.0 Protocol, GenlCam Standard, and third-party software based on the protocol and standard.
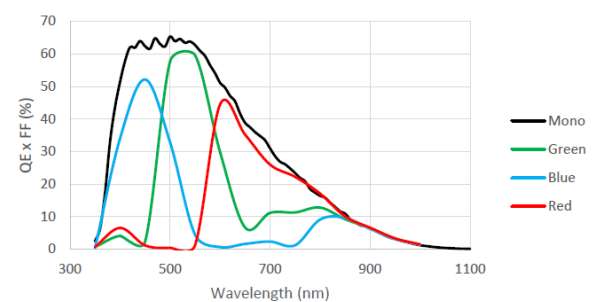
## Available Model

- M58-mount with fan, mono: MV-CH500-90TM-M58S-NF
- M58-mount with fan, color: MV-CH500-90TC-M58S-NF

## Applicable Industry

PCB AOI, FPD detection, photovoltaics, railway related application, etc.

## Sensor Quantum Efficiency

## Dimension

4-M3 ▽3
24.5
4-M3 ▽5
M58X0.75
74
60
74
60
78.8
51
3.7
OPTICAL DISTANCE
11.48 +0.05 −0.15
2-M2 ▽4
20
Unit: mm

# Specification

| Model | MV-CH500-90TM | MV-CH500-90TC |
|---|---|---|
| *Camera* | | |
| Sensor type | CMOS, global shutter | |
| Sensor model | Gpixel® GMAX | |
| Pixel size | 3.2 µm × 3.2 µm | |
| Sensor size | 22.4 mm × 22.4 mm | |
| Resolution | 7008 × 7000 | |
| Max. frame rate | 15.5 fps @7008 × 7000 | |
| Dynamic range | 66 dB | |
| SNR | 40 dB | |
| Gain | 1.25 × to 6 × | |
| Exposure time | 15 µs to 10 sec | |
| Exposure mode | Off/Once/Continuous exposure mode | |
| Mono/Color | Mono | Color |
| Pixel format | Mono 8/10/10Packed/12/12Packed | Mono 8/10/12, Bayer BG 8/10/10Packed/12/12Packed, 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 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), RS-232 × 1 | |
| Power supply | 9 VDC to 24 VDC | |
| Power consumption | Typ. 11 W@12 VDC | Typ. 12 W@12 VDC |
| *Mechanical* | | |
| Lens mount | M58-mount, flange back focal length: 11.48 mm (0.5") | |
| Dimension | 74 mm × 74 mm × 78.8 mm (2.9" × 2.9" × 3.1") | |
| Weight | 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) 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 7/10 | |
| Compatibility | GigE Vision V2.0, GenICam | |
| Certification | CE, RoHS, KC | |

**HIKROBOT**