

MV-CH250-21TM/20TC

25 MP CMOS 10 GigE Area Scan Camera



GEN*i*CAM

10GigE
VISION

Introduction

MV-CH250-21TM/20TC adopts OnSemi PYTHON25K sensor to provide high-quality image. It uses 10 GigE interface to transmit non-compressed image in real-time with max. frame rate reaching 40 fps.

Key Feature

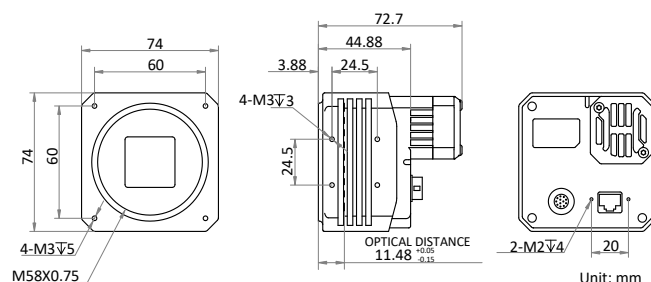
- Resolution of 5120 × 5120 and pixel size of 4.5 μm × 4.5 μm.
- Adopts 10 GigE interface providing max. transmission distance of 100 meters without relay.
- Adopts compact design with mounting holes on the up and bottom panels for flexible mounting.
- Compatible with GigE Vision Protocol V2.0, GenICam Standard, and third-party software based on these protocol and standard.

Applicable Industry

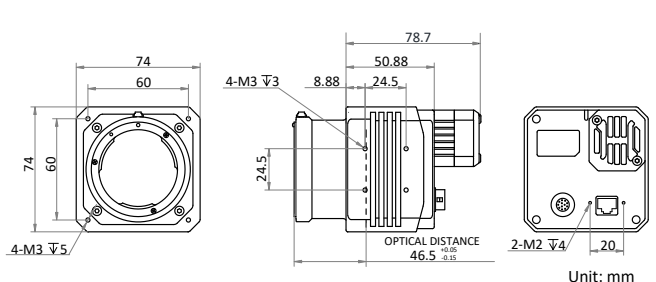
SMT/ PCB AOI, FPD, railway related applications, etc.

Dimension

M58-mount with fan:



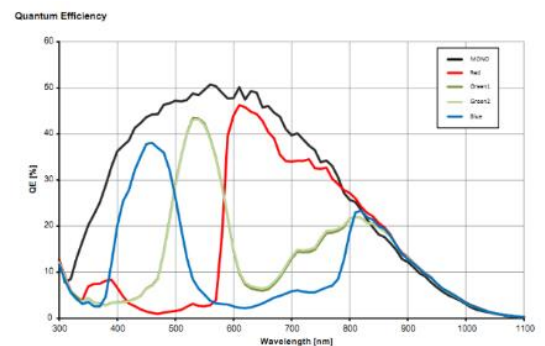
F-mount with fan:



Available Model

- M58-mount with fan, mono camera: MV-CH250-21TM-M58S-NF
- F-mount with fan, mono camera: MV-CH250-21TM-F-NF
- M58-mount with fan, color camera: MV-CH250-20TC-M58S-NF
- F-mount with fan, color camera: MV-CH250-20TC-F-NF

Sensor Quantum Efficiency



Specification

Model	MV-CH250-21TM	MV-CH250-20TC
Camera		
Sensor type	CMOS, global shutter	
Sensor model	OnSemi PYTHON25K	
Pixel size	4.5 μm \times 4.5 μm	
Sensor size	23 mm \times 23 mm	
Resolution	5120 \times 5120	
Max. frame rate	40 fps @5120 \times 5120	
Dynamic range	58 dB	
SNR	41 dB	
Gain	0 dB to 15 dB	
Exposure time	45 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 RG 8/10/10p/12/12p, YUV422Packed, YUV422_YUYV_Packed, RGB 8, BGR 8
Binning	Supports 1 \times 1, 1 \times 2, 2 \times 1, 2 \times 2	Not support
Decimation	Supports 1 \times 1, 2 \times 2	
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 \times 1 (Line 0), opto-isolated output \times 1 (Line 1), bi-directional non-isolated I/O \times 1 (Line 2), RS-232 \times 1	
Power supply	9 VDC to 24 VDC	
Power consumption	Typ. 14 W@12 VDC	
Mechanical		
Lens mount	M58-mount, optical back focal length 11.48 mm (0.45") F-mount, optical back focal length 46.5 mm (1.8")	
Dimension	M58-mount with fan: 74 mm \times 74 mm \times 72.7 mm (2.9" \times 2.9" \times 2.9") F-mount with fan: 74 mm \times 74 mm \times 78.7 mm (2.9" \times 2.9" \times 3.1")	
Weight	M58-mount with fan: approx. 550 g (1.2 lb.), F-mount with fan: approx. 600 g (1.3 lb.)	
Ingress protection	IP40 (under proper lens installation and wiring)	
Temperature	Working temperature: 0 $^{\circ}\text{C}$ to 50 $^{\circ}\text{C}$ (32 $^{\circ}\text{F}$ to 122 $^{\circ}\text{F}$) Storage temperature: -30 $^{\circ}\text{C}$ to 70 $^{\circ}\text{C}$ (-22 $^{\circ}\text{F}$ to 158 $^{\circ}\text{F}$)	
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, GenICam	
Certification	CE, FCC, RoHS, KC	