

MV-CH120-20UM/UC V4

12 MP 1" CMOS USB 3.0 Area Scan Camera



GEN*i*CAM

US3TM
VISION

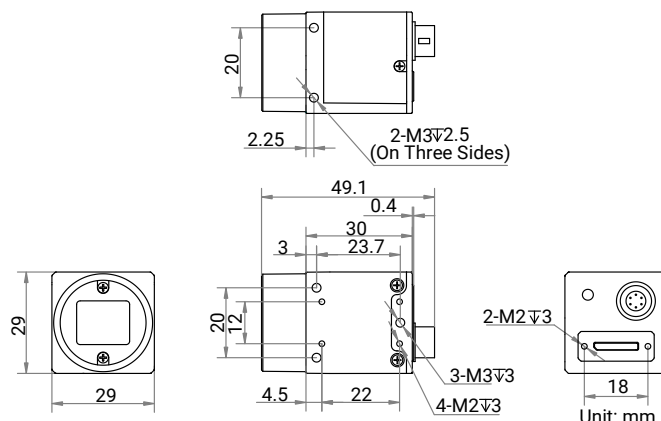
Introduction

MV-CH120-20UM/UC V4 camera adopts OnSemi XGS12000 sensor to provide high-quality images. It uses USB 3.0 interface to transmit images in real time, and its max. frame rate can reach 28 fps in full resolution.

Key Feature

- Supports auto or manual adjustment for gain, exposure time, LUT and Gamma correction.
- Supports customized ROI, and horizontal and vertical reverse image output.
- Supports hardware trigger, software trigger and free run mode.
- Compact design with mounting holes on panels for flexible mounting from 4 sides.
- Compatible with USB3 Vision Protocol, GenICam Standard, and the third-party software based on these protocols and standards.

Dimension



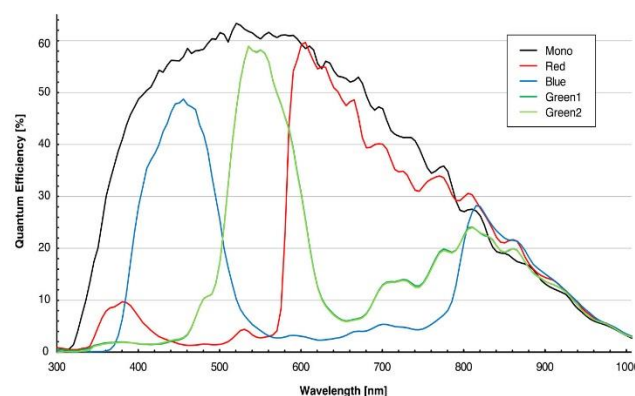
Available Model

- Mono camera: MV-CH120-20UM V4
- Color camera: MV-CH120-20UC V4

Applicable Industry

Electronic semiconductor, factory automation, food and beverage, medicine packing, screen AOI detection, etc.

Sensor Quantum Efficiency



Specification

Model	MV-CH120-20UM V4	MV-CH120-20UC V4
Performance		
Sensor type	CMOS, global shutter	
Sensor model	OnSemi XGS12000	
Pixel size	3.2 μm × 3.2 μm	
Sensor size	1"	
Resolution	4096 × 3072	
Max. frame rate	28 fps @ 4096 × 3072 Mono 8	28 fps @ 4096 × 3072 Bayer RG 8
Dynamic range	68 dB	
SNR	40 dB	
Gain	0 dB to 18 dB	
Exposure time	UltraShort exposure mode: 52 μs to 161 μs Standard exposure mode: 162 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 RG 8/10/10Packed/12/12Packed YUV422Packed, YUV422_YUYV_Packed RGB 8, BGR 8
Binning	Supports 1 × 1, 2 × 2, 4 × 4	
Decimation	Supports 1 × 1, 2 × 2, 4 × 4	
Reverse image	Supports horizontal and vertical reverse image output	
Electrical feature		
Data interface	USB 3.0, compatible with USB 2.0	
Digital I/O	6-pin P7 connector provides power and I/O, including opto-isolated input × 1 (Line 0), opto-isolated output × 1(Line 1), and bi-directional non-isolated I/O × 1 (Line 2)	
Power supply	9 VDC to 24 VDC, supports USB power supply	
Power consumption	Typ. 2.9 W @ 5 VDC (USB 3.0 provides power supply)	Typ. 3.2 W @ 5 VDC (USB 3.0 provides power supply)
Mechanical		
Lens mount	C-mount	
Dimension	29 mm × 29 mm × 30 mm (1.1" × 1.1" × 1.2")	
Weight	Approx. 80 g (0.2 lb.)	
Ingress protection	IP40 (under proper lens installation and wiring)	
Temperature	Working temperature: −10 °C to 50 °C (14 °F to 122 °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 USB3 Vision Protocol	
Operating system	32/64-bit Windows 7/10, 64-bit Windows 11, and 32/64-bit Linux	
Compatibility	USB3 Vision, GenICam	
Certification	CE, RoHS, KC	