

# MV-CH120-20UM

12 MP 1" CMOS USB3.0 Area Scan Camera



GEN<I>CAM

USB<sup>TM</sup>  
VISION

## Introduction

MV-CH120-20UM camera adopts OnSemi XGS12000 sensor to provide high-quality images. It uses USB3.0 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 and exposure time, and manual adjustment for LUT and Gamma correction.
- Compact design with mounting holes on panels for flexible mounting from 4 sides.
- Supports hardware trigger, software trigger and free run mode.
- Compatible with USB3 Vision Protocol, GenICam Standard, and the third-party software based on these protocol and standard.

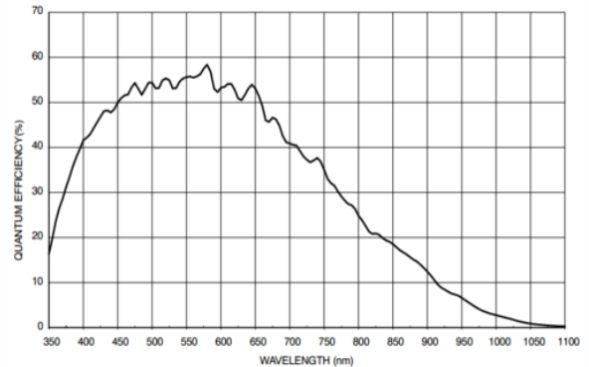
## Available Model

MV-CH120-20UM

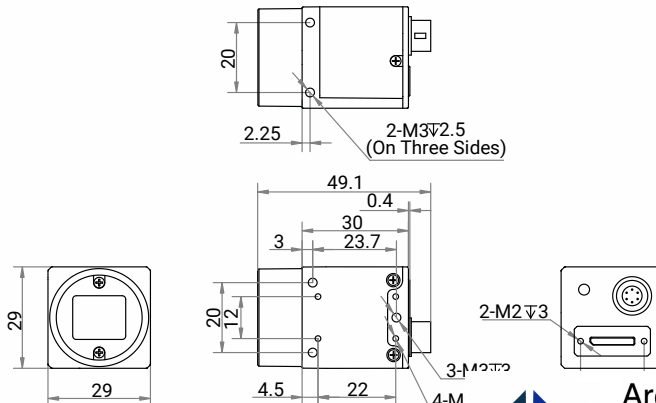
## Applicable Industry

Electronic semiconductor, factory automation, logistics, etc.

## Sensor Quantum Efficiency



## Dimension



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# Specification

Model	MV-CH120-20UM
<b>Performance</b>	
Sensor type	CMOS, global shutter
Sensor model	OnSemi XGS12000
Pixel size	3.2 $\mu\text{m}$ $\times$ 3.2 $\mu\text{m}$
Sensor size	1"
Resolution	4096 $\times$ 3072
Max. frame rate	28 fps @4096 $\times$ 3072 Mono 8
Dynamic range	68 dB
SNR	40 dB
Gain	0 dB to 18 dB
Exposure time	UltraShort exposure mode: 52 $\mu\text{s}$ to 161 $\mu\text{s}$ Standard exposure mode: 162 $\mu\text{s}$ to 10 sec
Exposure mode	Off/Once/Continuous exposure mode
Mono/color	Mono
Pixel format	Mono 8/10/10Packed/12/12Packed
Binning	Supports 1 $\times$ 1, 2 $\times$ 2, 4 $\times$ 4
Decimation	Supports 1 $\times$ 1, 2 $\times$ 2
Reverse image	Supports horizontal and vertical reverse image output
<b>Electrical feature</b>	
Data interface	USB3.0, compatible with USB2.0
Digital I/O	6-pin P7 connector provides power and I/O, including opto-isolated input $\times$ 1 (Line 0), opto-isolated output $\times$ 1 (Line 1), and bi-directional non-isolated I/O $\times$ 1 (Line 2)
Power supply	9 VDC to 24 VDC, supports USB3.0 power supply
Power consumption	Typ. 2.9 W@5 VDC (USB3.0 provides power supply)
<b>Mechanical</b>	
Lens mount	C-mount
Dimension	29 mm $\times$ 29 mm $\times$ 30 mm (1.1" $\times$ 1.1" $\times$ 1.2")
Weight	Approx. 80 g (0.2 lb.)
Ingress protection	IP40 (under proper lens installation and wiring)
Temperature	Working temperature: -10 $^{\circ}\text{C}$ to 50 $^{\circ}\text{C}$ (14 $^{\circ}\text{F}$ 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
<b>General</b>	
Client software	MVS or third-party software meeting with USB3.0 Vision Protocol
Operating system	32/64-bit Windows XP/7/10, 32/64-bit Linux and 64-bit MacOS
Compatibility	USB3 Vision, GenICam
Certification	CE, RoHS, KC

**HIKROBOT**

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