MV-CH120-20UM

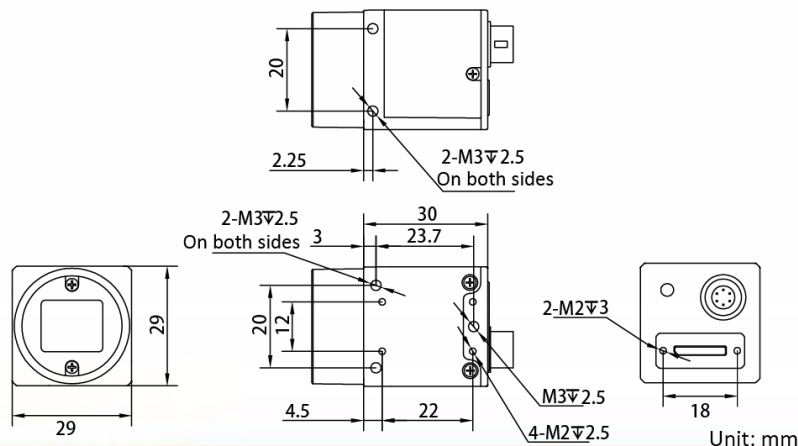## 12 MP 1" CMOS USB3.0 Area Scan Camera

GEN<i>CAM

US3 VISION

Introduction

MV-CH120-20UM camera adopts OnSemi XGS12000 sensor to provide high-quality images. It uses USB3.0 interface to transmit non-compressed images in real time, and its max. frame rate can reach 28 fps in full resolution.

Key Feature

- Compact design with mounting holes on panels for flexible mounting from 4 sides.
- Supports hard trigger, software trigger, free run, etc.
- Supports customized ROI, horizontal and vertical reverse image output.
- Adopts active alignment techniques for assembling.
- Supports auto or manual adjustment for gain, exposure time, Gamma correction, LUT, LSC, etc.
- Compatible with USB3 Vision Protocol, GenICam Standard, and the third-party software based on the protocol and standard.
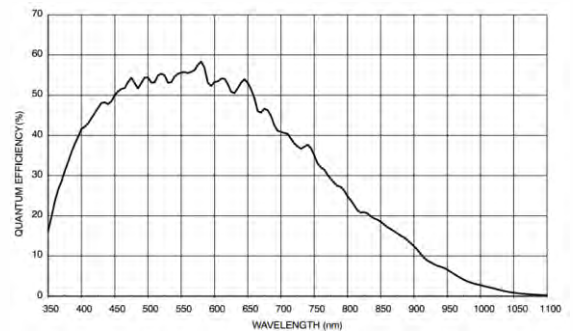
Dimension

Available Model

MV-CH120-20UM

Applicable Industry

Electrical semiconductor, factory automation, bottle test for beverage and alcohol, medicine packing, etc.

Sensor Quantum Efficiency

Unit: mm

Specification

Model	MV-CH120-20UM
Camera	
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
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
Pixel format	Mono 8/10/10p/12/12p
Binning	Supports 1 × 1, 2 × 2, 4 × 4
Decimation	Supports 1 × 1, 2 × 2
Reverse image	Supports horizontal and vertical reverse image output
Electrical features	
Data interface	USB3.0, compatible with USB2.0
Digital I/O	6-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).
Power supply	9 VDC to 24 VDC, supports USB3.0 power supply
Power consumption	Typ. 3.5 W@5 VDC (USB3.0 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 (0.18 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 80% RH, non-condensing
General	
Client software	MVS or third-party software meeting with USB3 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, FCC, RoHS, KC