MV-CH120-20UM/UC

12 MP 1" CMOS USB3.0 Area Scan Camera

GEN<i>CAM

USB3 VISION™

Introduction

MV-CH120-20UM/UC 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, GenlCam Standard, and the third-party software based on these protocol and standard.
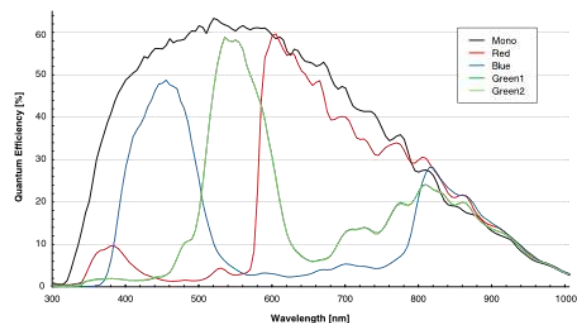
Available Model

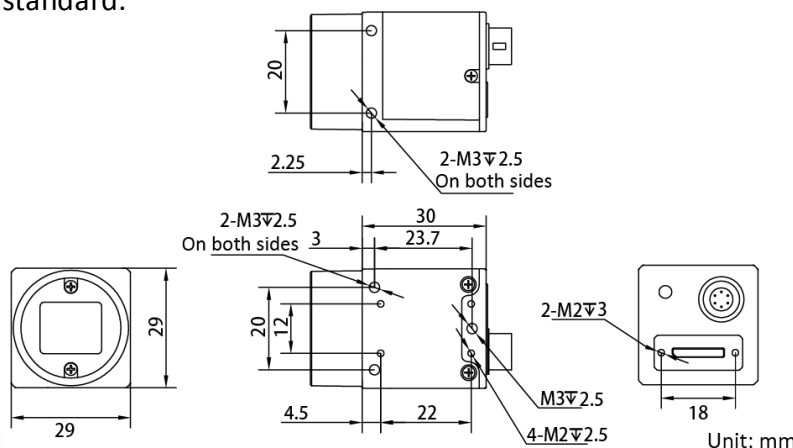- Mono camera: MV-CH120-20UM
- Color camera: MV-CH120-20UC

Applicable Industry

Electronic semiconductor, factory automation, logistics, etc.

Sensor Quantum Efficiency

Dimension

Unit: mm

Specification

Model	MV-CH120-20UM	MV-CH120-20UC
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	UltraShort exposure mode: 10 μs to 56 μs
	Standard exposure mode: 162 μs to 10 sec	Standard exposure mode: 57 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 × 1, 2 × 2, 4 × 4	
Decimation	Supports 1 × 1, 2 × 2	
Reverse image	Supports horizontal and vertical reverse image output	
Electrical feature		
Data interface	USB3.0, compatible with USB2.0	
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 USB3.0 power supply	
Power consumption	Typ. 3.5 W@5 VDC (USB3.0 provides power supply)	Typ. 3.2 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 (0.2 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 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, FCC, RoHS, KC	