

# -CH120-20UM

12 MP 1" CMOS USB3.0 Area Scan Camera

GEN*i*CAM

USB<sup>TM</sup>  
VISION

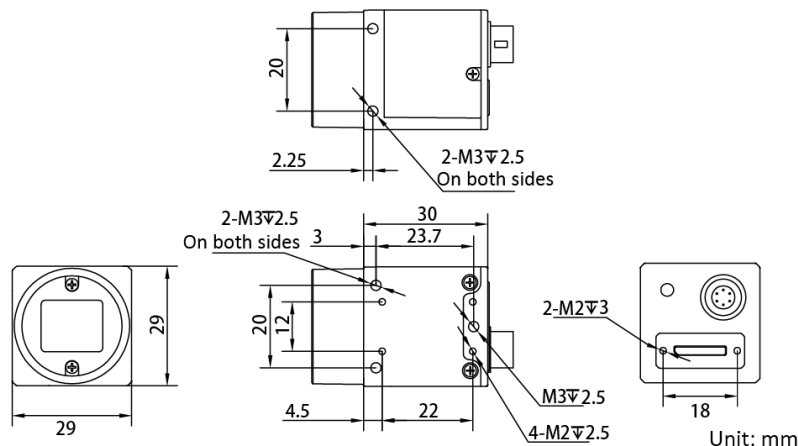
## Introduction

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



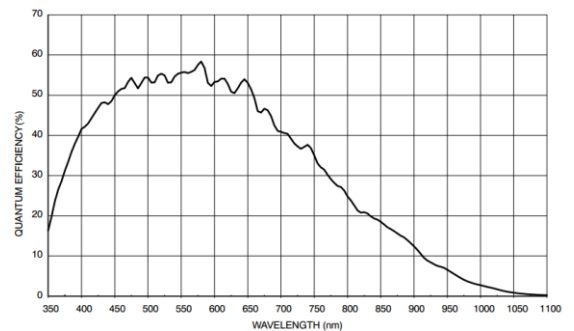
## Available Model

CH120-20UM

## Applicable Industry

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

## Sensor Quantum Efficiency



# Specification

<b>Model</b>	<b>HC-CH120-20UM</b>
<b>Camera</b>	
<b>Sensor type</b>	CMOS, global shutter
<b>Sensor model</b>	OnSemi XGS12000
<b>Pixel size</b>	3.2 $\mu\text{m}$ $\times$ 3.2 $\mu\text{m}$
<b>Sensor size</b>	1"
<b>Resolution</b>	4096 $\times$ 3072
<b>Max. frame rate</b>	28 fps @4096 $\times$ 3072
<b>Dynamic range</b>	68 dB
<b>SNR</b>	40 dB
<b>Gain</b>	0 dB to 18 dB
<b>Exposure time</b>	UltraShort exposure mode: 52 $\mu\text{s}$ to 161 $\mu\text{s}$ Standard exposure mode: 162 $\mu\text{s}$ to 10 sec
<b>Exposure mode</b>	Off/Once/Continuous exposure mode
<b>Mono/color</b>	Mono
<b>Pixel format</b>	Mono 8/10/10p/12/12p
<b>Binning</b>	Supports 1 $\times$ 1, 2 $\times$ 2, 4 $\times$ 4
<b>Decimation</b>	Supports 1 $\times$ 1, 2 $\times$ 2
<b>Reverse image</b>	Supports horizontal and vertical reverse image output
<b>Electrical features</b>	
<b>Data interface</b>	USB3.0, compatible with USB2.0
<b>Digital I/O</b>	6-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).
<b>Power supply</b>	9 VDC to 24 VDC, supports USB3.0 power supply
<b>Power consumption</b>	Typ. 3.5 W@5 VDC (USB3.0 provides power supply)
<b>Mechanical</b>	
<b>Lens mount</b>	C-Mount
<b>Dimension</b>	29 mm $\times$ 29 mm $\times$ 30 mm (1.1" $\times$ 1.1" $\times$ 1.2")
<b>Weight</b>	Approx. 80 g (0.18 lb.)
<b>Ingress protection</b>	IP40 (under proper lens installation and wiring)
<b>Temperature</b>	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 $^{\circ}\text{F}$ )
<b>Humidity</b>	20% to 80% RH, non-condensing
<b>General</b>	
<b>Client software</b>	MVS or third-party software meeting with USB3 Vision Protocol
<b>Operating system</b>	32/64-bit Windows XP/7/10, 32/64-bit Linux and 64-bit MacOS
<b>Compatibility</b>	USB3 Vision, GenICam
<b>Certification</b>	CE, FCC, RoHS, KC