

# -CA050-20UM/UC

5 MP 1" CMOS USB3.0 Area Scan Camera



GEN<i>i</i>CAM

US3™  
VISION

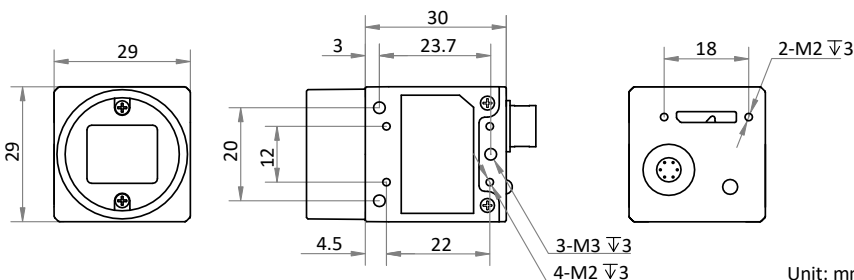
## Introduction

CA050-20UM/UC camera adopts PYTHON5000 sensor to provide high-quality image. It uses USB3.0 interface to transmit non-compressed images in real time, and its max. frame rate can reach 71.8 fps in full resolution.

## Key Feature

- Supports auto and manual adjustment for gain, exposure control, LUT, Gamma correction, etc.
- Supports hardware triggering, software triggering and free run mode.
- Adopts M2 screw holes for securing cable that connects USB3.0 interface.
- Compatible with USB3 Vision Protocol, GenICam Standard, and the third-party software based on these protocol and standard.

## Dimension



## Available Model

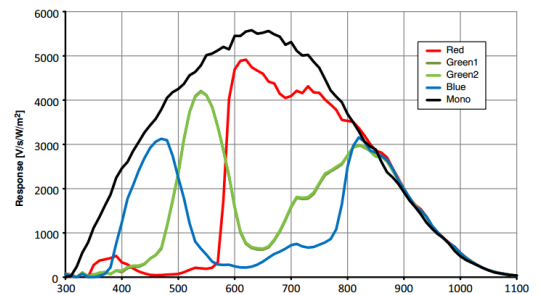
Mono camera: HC-CA050-20UM

Color camera: HC-CA050-20UC

## Applicable Industry

Electronic semiconductor, factory automation, logistics code reading, bottle inspection, medical packaging, etc.

## Sensor Quantum Efficiency



## Specification

Model	HC-CA050-20UM	HC-CA050-20UC
<b>Camera</b>		
Sensor type	CMOS, global shutter	
Sensor model	PYTHON5000	
Pixel size	4.8 $\mu\text{m}$ $\times$ 4.8 $\mu\text{m}$	
Sensor size	1"	
Resolution	2592 $\times$ 2048	
Max. frame rate	71.8 fps @2592 $\times$ 2048	
Dynamic range	57.5 dB	
SNR	39.5 dB	
Gain	0 dB to 15 dB	0 dB to 10 dB
Exposure time	59 $\mu\text{s}$ 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 BG 8/10/10p/12/12p, YUV422_YUYV_Packed, YUV 422 Packed, RGB8, BGR8
Binning	Supports 1 $\times$ 1, 1 $\times$ 2, 1 $\times$ 4, 2 $\times$ 1, 2 $\times$ 2, 2 $\times$ 4, 4 $\times$ 1, 4 $\times$ 2, 4 $\times$ 4	
Decimation	Supports 1 $\times$ 1, 2 $\times$ 2	
Reverse image	Supports horizontal and vertical reverse image output	
Image buffer	128 MB	
<b>Electrical feature</b>		
Data interface	USB3.0, compatible with USB2.0	
Digital I/O	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)	
Power supply	12 VDC, supports USB3.0 power supply	
Power consumption	Typ. 3.5 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. 56 g (0.12 lb.)	
Ingress protection	IP30 (under proper lens installation and wiring)	
Temperature	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 $^{\circ}\text{F}$ )	
Humidity	20% to 80% 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, FCC, RoHS, KC	