

# MV-CA013-21UM/UC

1.3 MP 1/2" CMOS USB3.0 Area Scan Camera



GEN*i*CAM

USB<sup>TM</sup>  
VISION

## Introduction

MV-CA013-21UM/UC camera adopts PYTHON1300 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 210 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.

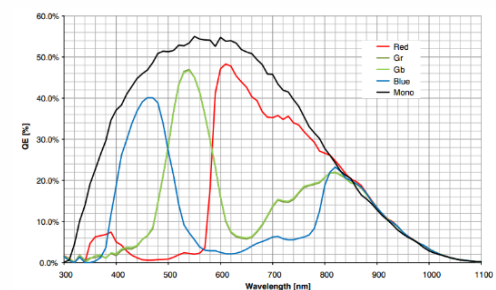
## Available Model

- Mono camera: MV-CA013-21UM
- Color camera: MV-CA013-21UC

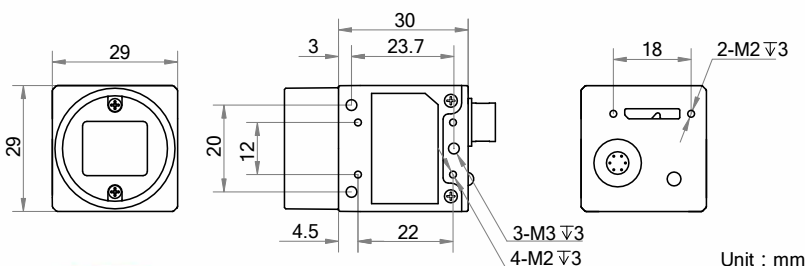
## Applicable Industry

Electronic semiconductor, factory automation, logistics code reading, liquor and beverage, medicine packing, etc.

## Sensor Quantum Efficiency



## Dimension



## Specification

Model	MV-CA013-21UM	MV-CA013-21UC
<b>Camera</b>		
Sensor type	CMOS, global shutter	
Sensor model	PYTHON1300	
Pixel size	4.8 $\mu\text{m}$ $\times$ 4.8 $\mu\text{m}$	
Sensor size	1/2"	
Resolution	1280 $\times$ 1024	
Max. frame rate	210 fps @1280 $\times$ 1024	
Dynamic range	59.6 dB	
SNR	39.8 dB	
Gain	0 dB to 15 dB	
Exposure time	40 $\mu\text{s}$ to 10 s	65 $\mu\text{s}$ to 10 s
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, 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 features</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 USB 3.0 power supply	
Power consumption	Typ. 3 W @5 VDC (USB3.0 provides power supply)	
<b>Structure</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 correct 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 compatible with USB3 Vision Protocol	
Operating system	32/64-bit Windows XP/7/10, 32/64-bit Linux and 64-bit MacOS	
Compatibility	USB 3.0 Vision, GenICam	
Certifications	CE, FCC, RoHS, KC	



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