

MV-CA003-21UM/UC

0.3 MP 1/4" CMOS USB3.0 Area Scan Camera



GEN*i*CAM

US3TM
VISION

Introduction

MV-CA003-21UM/UC camera adopts PYTHON300 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 814.5 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.

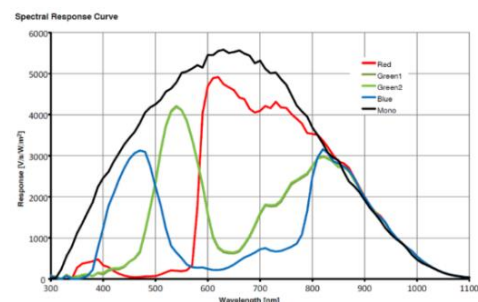
Available Model

- Mono camera : MV-CA003-21UM
- Color camera: MV-CA003-21UC

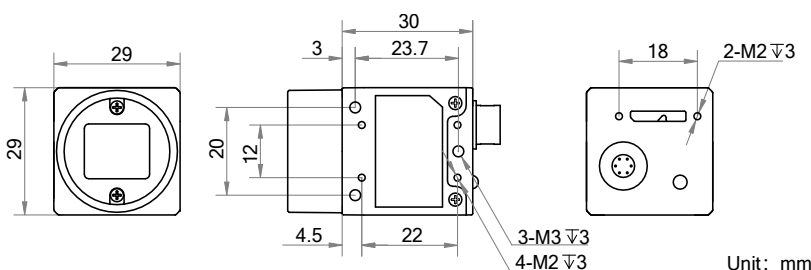
Applicable Industry

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

Sensor Quantum Efficiency



Dimension



Specification

Model	MV-CA003-21UM	MV-CA003-21UC
Camera		
Sensor type	CMOS, global shutter	
Sensor model	PYTHON300	
Pixel size	4.8 μm × 4.8 μm	
Sensor size	1/4"	
Resolution	640 × 480	
Max. frame rate	814.5 fps @ 640 × 480	
Dynamic range	59 dB	
SNR	39.9 dB	
Gain	0 dB to 15 dB	
Exposure time	40 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, YUV422_YUYV_Packed, YUV 422 Packed, RGB8, BGR8
Binning	Supports 1 × 1, 1 × 2, 1 × 4, 2 × 1, 2 × 2, 2 × 4, 4 × 1, 4 × 2, 4 × 4	
Decimation	Supports 1 × 1, 2 × 2	
Reverse image	Supports horizontal and vertical reverse image output	
Image buffer	128 MB	
Electrical feature		
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	12 VDC, supports USB3.0 power supply	
Power consumption	Typ. 3.3 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. 56 g (0.12 lb.)	
Ingress protection	IP30 (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% RH to 80% RH (no condensation)	
General		
Client software	MVS or third-party software compatible with USB3 Vision Protocol	
Operating system	32/64-bit Windows 7/10, 32/64-bit Linux	
Compatibility	USB3 Vision, GenICam	
Certifications	CE, RoHS, KC	