

MV-CA003-21UM/UC

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



GEN<i>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.

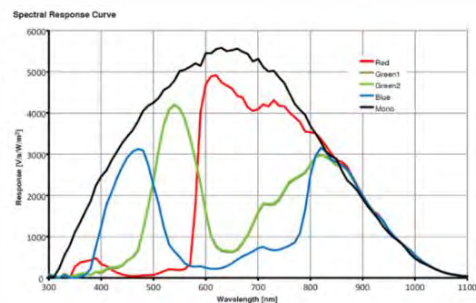
Available Model

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

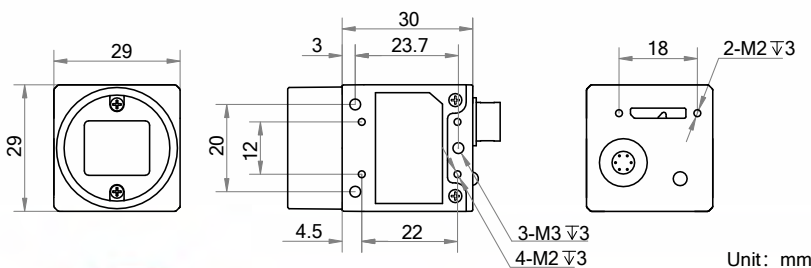
Applicable Industry

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% to 80% RH, non-condensing | |
| General | | |
| 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 | USB3 Vision, GenICam | |
| Certifications | CE, FCC, RoHS, KC | |

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