CHUM-503M/C
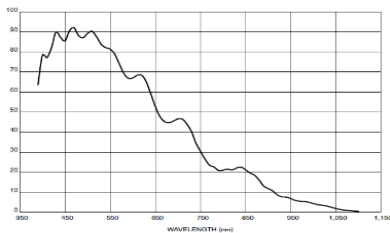## 5 MP 1/2.5" CMOS USB3.0 Area Scan Camera

GEN<i>CAM US3 VISION

Introduction

As one of CE-series economic area scan cameras, CHUM-503M/C adopts Aptina AR0521 sensor, and has high cost performance. It uses USB3.0 interface to quickly transmit non-compressed images in real time. It is widely applied into electron semiconductor, factory automation, medicine package and other industries.
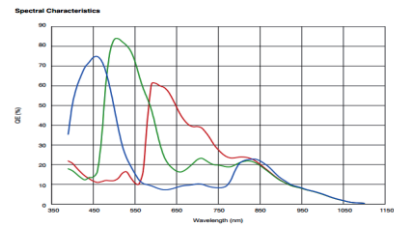
Key Feature

- Supports auto and manual adjustment for gain, exposure control, white balance, LUT, Gamma correction, and etc.
- Supports hardware triggering, software triggering and free run mode
- Adopts image interpolation algorithm for color camera to have better color correction
- Adopts M2 screw holes for securing cable that connects USB3.0 interface
- Compatible with USB3 Vision Protocol, GenICam standard, and the third-party software
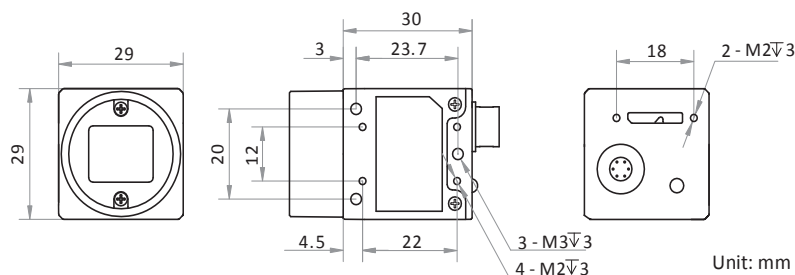
Sensor Quantum Efficiency

CHUM-503M

CHUM-503C

Available Model

- Mono camera: CHUM-503M
- Color camera: CHUM-503C

Dimension

Unit: mm

Specification

Model Parameters	CHUM-503M	CHUM-503C
	5 MP 1/2.5" CMOS USB3.0 Area Scan Camera	
Camera		
Sensor type	Rolling shutter, CMOS	
Sensor model	Aptina AR0521	
Pixel size	2.2 μm × 2.2 μm	
Sensor size	1/2.5"	
Resolution	2592 × 1944	
Frame rate	31 fps	
Dynamic range	60 dB	
SNR	40 dB	
Gain	0 dB to 15 dB	
Exposure time	28 μs to 1 s	Bayer format 16 μs to 1 s, others 28 μs to 1 s
Shutter mode	Auto/Manual/ One-Push exposure mode	
Acquisition mode	Continuous mode, single frame mode	
Reverse	Supports horizontal and vertical reverse	
Image buffer	128 MB	
Data format	Mono 8/10/10p/12/12p	Mono 8/10/12, Bayer GR 8/10/10p/12/12p, YUV 422_YUYV_Packed, YUV 422 Packed, RGB8
Decimation	Supports 1×1, 1×2, 2×1, 2×2	Supports 1×1, 1×2, 1×4, 2×1, 2×2, 2×4, 4×1, 4×2, 4×4
Electrical features		
Data interface	USB3.0 or USB2.0	
Digital I/O	Opto-isolated input x 1 (Line 0), Opto-isolated output x 1 (Line 1), Bi-directional non-isolated I/O x 1 (Line 2)	
Power supply	USB3.0 power supply, voltage range: 5 VDC to 15 VDC	
Power consumption	< 2.5 W@12 VDC	
Structure		
Lens mount	C-Mount	
Dimension	29 mm × 29 mm × 30 mm (1.1" × 1.1" × 1.2")	
Weight	Approx. 56 g (0.1 lb.)	
Ingress protection	IP30 (only when lens is correctly mounted and cables are correctly connected)	
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, without condensation	
General		
Client software	MVS or third-party software with USB3 Vision Protocol	
Operating system	32/64-bit Windows XP, Windows 7 and Windows 10	
Compatibility	USB3 Vision V1.0, GenICam	
Certification	CE, FCC, RoHS	