

VCXU-123C

USB 3.0, 12,3 Megapixel, Color

Article number: 11165896

Overview

- 4096 x 3000 px
- Sony IMX253
- 1.1" CMOS
- 29 fps
- USB 3.0



USB
VISION

GEN*i*CAM

CE EAC

Technical data

Sensor information

Sensor	Sony IMX253 Gen2
Mono/Color	Color
Sensor type	1.1" CMOS
Shutter type	Global shutter
Resolution	4096 × 3000 px
Pixel size	3.45 × 3.45 µm
Exposure time	0.001 ... 60000 ms

Data quality (EMVA 1288 typical)

Dark noise	2.11 e-
Saturation capacity	9041 e-
Dynamic range	70.3 dB
Signal-to-noise ratio	39.6 dB
Quantum efficiency	45.3 % @ 465 nm 58.4 % @ 536 nm 53.6 % @ 631 nm

Acquisition formats

Image formats, interface frame rate max.	Full Frame, 4000 × 3000 px, max. 29 fps Binning 2×2, 2048 × 1500 px, max. 31 fps Binning 2×1, 2048 × 3000 px, max. 31 fps Binning 1×2, 4096 × 1500 px, max. 31 fps
Image formats, acquisition frame rate max. (Burst Mode)	Full Frame, 4096 × 3000 px, max. 31 fps

Acquisition formats

Pixel formats	BayerRG8 BayerRG10 BayerRG12 BayerRG12 Packed Mono8 Mono10 Mono12 Mono12 Packed RGB8 BGR8
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Image preprocessing

Analog controls	Gain (0 ... 48 dB) Offset (0 ... 255 LSB 12 Bit)
Color models	Mono Raw Bayer RGB

Camera features

Basic Functions	Exposure Gain / Color Gain Trigger / Exposure Active (Flash) Binning 2x2 Partial Scan Offset Free Running Mode (Live Image)
Auto Functions	Exposure Auto Gain Auto White Balance Auto Color Transformation Auto

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Camera features

Image Pre-processing	Image Flipping (X/Y) Color Processing (RGB, BGR, Mono) Color Enhancement (with optimized ColorTransformationMatrix) LUT / Gamma
Acquisition / Interface	Burst Mode Adjustable Framerate Short Exposure Time Enable Device Link Throughput Limit Internal Image Buffer
Synchronization	free running trigger
Trigger sources	Hardware Software
Trigger delay	0 ... 2 sec, tracking and buffering of up to 256 trigger signals
Process Synchronization	Events Timer Trigger Delay Debouncer Counter Sequencer Trigger via Action CMD (GigE) Additional Output Modes (e.g. Trigger Ready) Chunk data inside transferred image Encoder support via Counter End trigger source
Additional Functions	User Set Integrated temperature sensor Readable additional information (e.g. sensor information) Save Custom Data
Internal image buffer	458 MB 13 images (Trigger Mode) 1 image (Free Running Mode)

Interfaces and connectors

Data interface	USB 3.0, Transfer Rate 5000 Mbits/sec, Connector: USB 3.0 Micro B
Process interface	M8 / 8 pins (SACC-DSI-M8MS-8CON-M8-L180)
Power supply	via USB 3.0 interface

Mechanical data

Lens mount	C-mount
Width	29 mm
Height	29 mm
Depth	38 mm
Weight	≤ 90 g
Material	zinc die casting, baked varnish (until 02-2020 nickel-chrome-plated), IP 40

Electrical data

Power consumption	approx. 3,9 W @ 29 fps
Operating voltage	5 VDC (via USB3.0 interface)

Non-volatile memory

Flash memory size	128 kB
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Environmental conditions

Operating temperature	0 ... +65 ° @ T = measurement point
Humidity	10 ... 90 % (non-condensing)
Protection class	IP 40

Digital I/Os

Lines	1 input line 1 output line 2 general purpose lines
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Conformity

Conformity	CE RoHS EAC
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Dimension drawing

