

VCXU-13M

USB 3.0, 1,3 Megapixel, Monochrome

Article number: 11165908

Overview

- 1280 x 1024 px
- onsemi PYTHON1300
- 1/2" CMOS
- 222 fps
- USB 3.0



USB
VISION

GEN*<i>i</i>*CAM



Technical data

Sensor information

Sensor	onsemi PYTHON1300
Mono/Color	Mono
Sensor type	1/2" CMOS
Shutter type	Global shutter
Resolution	1280 × 1024 px
Pixel size	4.8 × 4.8 µm
Exposure time	0.02 ... 1000 ms

Data quality (EMVA 1288 typical)

Dark noise	9.78 e-
Saturation capacity	6952 e-
Dynamic range	56.3 dB
Signal-to-noise ratio	38.4 dB
Quantum efficiency	53.5 % @ 536 nm

Acquisition formats

Image formats, interface frame rate max.	Full Frame, 1280 × 1024 px, max. 222 fps Binning 2×2, 640 × 512 px, max. 222 fps Binning 2×1, 640 × 1024 px, max. 222 fps Binning 1×2, 1280 × 512 px, max. 222 fps
Image formats, acquisition frame rate max. (Burst Mode)	Full Frame, 1280 × 1024 px, max. 222 fps
Pixel formats	Mono8 Mono10

Image preprocessing

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

Camera features

Basic Functions	Exposure Gain Trigger / Exposure Active (Flash) Binning 2x2 Partial Scan Offset Free Running Mode (Live Image)
Auto Functions	Exposure Auto Gain Auto
Image Pre-processing	Image Flipping (X/Y) LUT / Gamma
Acquisition / Interface	Burst Mode Adjustable Framerate 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

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Camera features

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	477 MB 127 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
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Mechanical data

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. 3,2 W @ 222 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 KC (MSIP-REI-BkR-VCXU13M) EAC
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Dimension drawing

