

VCXU-22M.R

USB 3.0, 2,1 Megapixel, Monochrome

Article number: 11184370

Overview

- 1920 x 1080 px
- Sony IMX290
- 1/2.8" CMOS
- 138 fps
- USB 3.0



Picture similar



GEN<i>i>CAM



Technical data

Sensor information

| | |
|---------------|---|
| Sensor | Sony IMX290 |
| Mono/Color | Mono |
| Sensor type | 1/2.8" CMOS |
| Shutter type | Rolling shutter Global reset shutter |
| Resolution | 1920 × 1080 px |
| Pixel size | 2.9 × 2.9 μm |
| Exposure time | 0.015 ... 60000 ms |

Data quality (EMVA 1288 typical)

| | |
|-----------------------|-----------------|
| Dark noise | 2.89 e- |
| Saturation capacity | 13937 e- |
| Dynamic range | 71.7 dB |
| Signal-to-noise ratio | 41.4 dB |
| Quantum efficiency | 83.3 % @ 536 nm |

Acquisition formats

| | |
|---|---|
| Image formats, interface frame rate max. | Full Frame, 1920 × 1080 px, max. 138 fps Binning 2×2, 960 × 540 px, max. 138 fps Binning 2×1, 960 × 1080 px, max. 138 fps Binning 1×2, 1920 × 540 px, max. 138 fps |
| Image formats, acquisition frame rate max. (Burst Mode) | Full Frame, 1920 × 1080 px, max. 60 fps |
| Pixel formats | Mono8 Mono10 Mono12 Mono12 Packed |

Image preprocessing

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

Camera features

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|-----------------|--|
| Basic Functions | Exposure Gain Trigger / Exposure Active (Flash) Binning 2x2 Partial Scan Offset Free Running Mode (Live Image) |
|-----------------|--|

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|----------------|----------------------------|
| Auto Functions | Exposure Auto Gain Auto |
|----------------|----------------------------|

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|----------------------|-------------------------------------|
| Image Pre-processing | Image Flipping (X/Y) LUT / Gamma |
|----------------------|-------------------------------------|

| | |
|-------------------------|---|
| Acquisition / Interface | Burst Mode Adjustable Framerate Device Link Throughput Limit Internal Image Buffer |
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| | |
|-----------------|-------------------------|
| Synchronization | free running trigger |
|-----------------|-------------------------|

| | |
|-----------------|----------------------|
| Trigger sources | Hardware Software |
|-----------------|----------------------|

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|---------------|--|
| Trigger delay | 0 ... 2 s, tracking and buffering of up to 256 trigger signals |
|---------------|--|

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Camera features

| | |
|-------------------------|--|
| Process Synchronization | Events Timer Trigger Delay Debouncer Counter 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) |
| Calibration data | Customer data storage (128 bytes user defined) |
| Internal image buffer | 469 MB 79 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 |
|------------|---------|

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. 2.8 W @ 138 fps |
| Operating voltage | 5 VDC (via USB3.0 interface) |

Non-volatile memory

| | |
|-------------------|--------|
| Flash memory size | 128 kB |
|-------------------|--------|

Environmental conditions

| | |
|-----------------------|-------------------------------------|
| Operating temperature | 0 ... +65 ° @ T = measurement point |
| Storage temperature | -20 ... +70 °C |
| Humidity | 10 ... 90 % (non-condensing) |
| Protection class | IP 40 (with mounted lens and cable) |

Digital I/Os

| | |
|-------|--|
| Lines | 1 input line 1 output line 2 general purpose lines |
|-------|--|

Conformity

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|------------|------------------------------------|
| Conformity | CE RoHS UL recognized EAC |
|------------|------------------------------------|

Dimension drawing

