

## VCXU.2-32M

USB 3.0, 3,1 Megapixel, Monochrome

Article number: 11707453

### Overview

- 2048 x 1536 px
- Sony IMX265
- 1/1.8" CMOS
- 55 fps
- USB 3.0



GEN*i*CAM



### Technical data

#### Sensor information

|               |                    |
|---------------|--------------------|
| Sensor        | Sony IMX265 Gen2   |
| Mono/Color    | Mono               |
| Sensor type   | 1/1.8" CMOS        |
| Shutter type  | Global shutter     |
| Resolution    | 2048 × 1536 px     |
| Pixel size    | 3.45 × 3.45 µm     |
| Exposure time | 0.001 ... 60000 ms |

#### Data quality (EMVA 1288 typical)

|                       |                                  |
|-----------------------|----------------------------------|
| Dark noise            | 2.05 e-                          |
| Saturation capacity   | 9395 e-                          |
| Dynamic range         | 70.8 dB                          |
| Signal-to-noise ratio | 39.7 dB                          |
| Quantum efficiency    | 65.7 % @ 536 nm<br>65 % @ 533 nm |

#### Acquisition formats

|                                                         |                                                                                                                                                                           |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Image formats, interface frame rate max.                | Full Frame, 2048 × 1536 px, max. 55 fps<br>Binning 2×2, 1024 × 768 px, max. 55 fps<br>Binning 2×1, 1024 × 1536 px, max. 55 fps<br>Binning 1×2, 2048 × 768 px, max. 55 fps |
| Image formats, acquisition frame rate max. (Burst Mode) | Full Frame, 2048 × 1536 px, max. 55 fps                                                                                                                                   |
| Pixel formats                                           | Mono8<br>Mono10<br>Mono12<br>Mono12 Packed                                                                                                                                |

#### Image preprocessing

|                 |                                                     |
|-----------------|-----------------------------------------------------|
| Analog controls | Gain (0 ... 48 dB)<br>Offset (0 ... 255 LSB 12 Bit) |
|-----------------|-----------------------------------------------------|

|              |      |
|--------------|------|
| Color models | Mono |
|--------------|------|

#### Camera features

|                         |                                                                                                                                  |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Basic Functions         | Exposure<br>Gain<br>Trigger / Exposure Active (Flash)<br>Binning 2x2<br>Partial Scan<br>Offset<br>Free Running Mode (Live Image) |
| Auto Functions          | Exposure Auto<br>Gain Auto                                                                                                       |
| Image Pre-processing    | Image Flipping (X/Y)<br>LUT / Gamma                                                                                              |
| Acquisition / Interface | Burst Mode<br>Adjustable Framerate<br>Short Exposure Time Enable<br>Device Link Throughput Limit<br>Internal Image Buffer        |
| Synchronization         | free running<br>trigger                                                                                                          |
| Trigger sources         | Hardware<br>Software                                                                                                             |
| Trigger delay           | 0 ... 2 sec, tracking and buffering of up to 256 trigger signals                                                                 |

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#### Camera features

|                         |                                                                                                                                                                                                                                                                       |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process Synchronization | Events<br>Timer<br>Trigger Delay<br>Debouncer<br>Counter<br>Sequencer<br>Trigger via Action CMD (GigE)<br>Additional Output Modes (e.g. Trigger Ready)<br>Chunk data inside transferred image<br>Encoder support via Counter End trigger source                       |
| Additional Functions    | User Set<br>Integrated temperature sensor<br>Readable additional information (e.g. sensor information)                                                                                                                                                                |
| Calibration data        | Integrated color correction matrix (3000 K, 5000 K, 6500 K, 9500 K, and user defined)<br>Camera calibration data (user defined storage for intrinsic / extrinsic camera parameters, and geometry distortion values)<br>Customer data storage (128 bytes user defined) |
| Internal image buffer   | 432 MB<br>48 images (Trigger Mode)<br>1 image (Free Running Mode)                                                                                                                                                                                                     |

#### Interfaces and connectors

|                |                                                                      |
|----------------|----------------------------------------------------------------------|
| Data interface | USB 3.0, Transfer Rate 5000 Mbits/sec,<br>Connector: USB 3.0 Micro B |
|----------------|----------------------------------------------------------------------|

#### Interfaces and connectors

|                        |                                                                             |
|------------------------|-----------------------------------------------------------------------------|
| Process interface      | M8 / 8 pins (SACC-DSI-M8MS-8CON-M8-L180)                                    |
| Power supply           | via USB 3.0 interface                                                       |
| <b>Mechanical data</b> |                                                                             |
| 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. 2,5 W @ 55 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 |
| Humidity              | 10 ... 90 % (non-condensing)        |
| Protection class      | IP 40                               |

#### Digital I/Os

|       |                                                          |
|-------|----------------------------------------------------------|
| Lines | 1 input line<br>1 output line<br>2 general purpose lines |
|-------|----------------------------------------------------------|

#### Conformity

|            |            |
|------------|------------|
| Conformity | CE<br>RoHS |
|------------|------------|

### Dimension drawing

