

## VCXU-53M

USB 3.0, 5,3 Megapixel, Monochrome

Article number: 11165900

### Overview

- 2592 x 2048 px
- onsemi PYTHON5000
- 1" CMOS
- 73 fps
- USB 3.0
- available on request



**USB**  
VISION

GEN*i*CAM



### Technical data

#### Sensor information

|               |                   |
|---------------|-------------------|
| Sensor        | onsemi PYTHON5000 |
| Mono/Color    | Mono              |
| Sensor type   | 1" CMOS           |
| Shutter type  | Global shutter    |
| Resolution    | 2592 × 2048 px    |
| Pixel size    | 4.8 × 4.8 µm      |
| Exposure time | 0.02 ... 1000 ms  |

#### Acquisition formats

|                                                         |                                                                                                                                                                             |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Image formats, interface frame rate max.                | Full Frame, 2592 × 2048 px, max. 73 fps<br>Binning 2×2, 1296 × 1024 px, max. 73 fps<br>Binning 2×1, 1296 × 2048 px, max. 73 fps<br>Binning 1×2, 2592 × 1024 px, max. 73 fps |
| Image formats, acquisition frame rate max. (Burst Mode) | Full Frame, 2592 × 2048 px, max. 73 fps                                                                                                                                     |
| Pixel formats                                           | Mono8<br>Mono10                                                                                                                                                             |

#### Image preprocessing

|                 |                                                    |
|-----------------|----------------------------------------------------|
| Analog controls | Gain (0 ... 12 dB)<br>Offset (0 ... 63 LSB 10 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>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)<br>Save Custom Data                                                                                                                      |
| Internal image buffer   | 471 MB<br>31 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 |
| 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. 3,9 W @ 73 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<br>KC (R-R-BkR-VCXU-53M)<br>EAC |
|------------|--------------------------------------------|

### Dimension drawing

