

## VLXT-50M.I

Gigabit Ethernet, 5,0 Megapixel, Monochrome

Article number: 11192927

### Overview

- 2448 × 2048 px
- Sony IMX250
- 2/3" CMOS
- 163 fps
- 10 GigE



Picture similar



GEN*i*CAM



### Technical data

#### Sensor information

|               |                    |
|---------------|--------------------|
| Sensor        | Sony IMX250 Gen2   |
| Mono/Color    | Mono               |
| Sensor type   | 2/3" CMOS          |
| Shutter type  | Global shutter     |
| Resolution    | 2448 × 2048 px     |
| Pixel size    | 3.45 × 3.45 µm     |
| Exposure time | 0.001 ... 60000 ms |

#### Data quality (EMVA 1288 typical)

|                       |                 |
|-----------------------|-----------------|
| Dark noise            | 2.14 e-         |
| Saturation capacity   | 9544 e-         |
| Dynamic range         | 70.6 dB         |
| Signal-to-noise ratio | 39.8 dB         |
| Quantum efficiency    | 65.9 % @ 536 nm |

#### Acquisition formats

|   |   |
|---|---|
| Image formats, interface frame rate max.                | Full Frame, 2448 × 2048 px, max. 163 fps<br>Binning 2×2, 1224 × 1024 px, max. 163 fps<br>Binning 2×1, 1224 × 2048 px, max. 163 fps<br>Binning 1×2, 2448 × 1024 px, max. 163 fps |
| Image formats, acquisition frame rate max. (Burst Mode) | Full Frame, 2448 × 2048 px, max. 163 fps  |

#### Acquisition formats

|               |  |
|---------------|--|
| 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 / Color Gain<br>Trigger / Exposure Active (Flash)<br>Binning 2x2<br>Partial Scan<br>Offset<br>Free Running Mode (Live Image)<br>Multi ROI |
|-----------------|--|

|                |                            |
|----------------|----------------------------|
| Auto Functions | Exposure Auto<br>Gain Auto |
|----------------|----------------------------|

|                      |   |
|----------------------|---|
| Image Pre-processing | Image Flipping (X/Y)<br>LUT / Gamma<br>Shading Correction<br>Edge Sharpening<br>Noise Reduction |
|----------------------|---|

|                         |   |
|-------------------------|---|
| Acquisition / Interface | Burst Mode<br>Adjustable Framerate<br>Short Exposure Time Enable<br>Device Link Throughput Limit<br>Internal Image Buffer |
|-------------------------|---|

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## Technical data

### Camera features

|                                |  |
|--------------------------------|--|
| Synchronization                | free running trigger   |
| Trigger sources                | Hardware<br>Software<br>ActionCommand  |
| Trigger delay                  | 0 ... 2 sec, tracking and buffering of up to 256 trigger signals   |
| Process Synchronization        | Events<br>Timer<br>Trigger Delay<br>Debouncer<br>Counter<br>Sequencer<br>Trigger via Action CMD (GigE)<br>Action CMD Request ID<br>Trigger ID inside Chunk<br>Additional Output Modes (e.g. Trigger Ready)<br>PWM (PWM Duration / PWM Duty Cycle)<br>Selectable Output format (e.g. Tri State, Push Pull)<br>Chunk data inside transferred image<br>Encoder support via Counter End trigger source<br>4 power outputs with up to 120 W (max. 48 V / 2.5 A) |
| Time synchronization IEEE 1588 | IEEE 1588 / Master and Slave function<br>IEEE 1588 / Scheduled Action CMD<br>IEEE 1588 / Synchronized Acquisition<br>Framerate   |
| Additional Functions           | User Set<br>Integrated temperature sensor<br>Readable additional information (e.g. sensor information)<br>Save Custom Data   |
| Lens control                   | Corning liquid lens  |
| Internal image buffer          | 1024 MB<br>193 images (Trigger Mode)<br>1 image (Free Running Mode)  |

### Interfaces and connectors

|                |  |
|----------------|--|
| Data interface | 10 Gigabit Ethernet, Transfer rate 10000 Mbits/sec, Gigabit Ethernet, Transfer rate 1000 Mbits/sec, Fast Ethernet, Transfer rate 100 Mbits/sec, Connector: M12 / 8-pol x-coded (SACC-CI-M12FS-8CON-L180-10G) |
|----------------|--|

### Interfaces and connectors

|                   |  |
|-------------------|--|
| Process interface | M12 / 12 pins a-coded (SACC-CI-M12MS-12CON-L180) |
| Power supply      | via M12/12 pins a-coded                          |

### Mechanical data

|            |          |
|------------|----------|
| Lens mount | C-mount  |
| Width      | 60 mm    |
| Height     | 60 mm    |
| Depth      | 99.7 mm  |
| Weight     | ≤ 485 g  |
| Material   | aluminum |

### Electrical data

|                          |  |
|--------------------------|--|
| Voltage supply range +Vs | 19.2 ... 28.8 V DC (external power supply) |
| Power consumption        | Approx. 10.3 W @ 24 VDC and 163 fps        |

### 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<br>IP 54 (with mounted tube and cable)<br>IP 65 (with mounted tube and cable)<br>IP 67 (with mounted tube and cable) |

### Digital I/Os

|       |   |
|-------|---|
| Lines | 2 input lines<br>4 power output lines with pulse width modulation (PWM) (max. 48 V / max. 2,5 A)<br>RS232 |
|-------|---|

### Conformity

|            |  |
|------------|--|
| Conformity | CE<br>RoHS<br>EAC<br>UL (in preparation) |
|------------|--|

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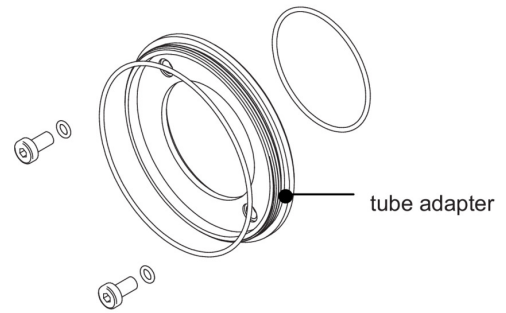
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## Dimension drawing



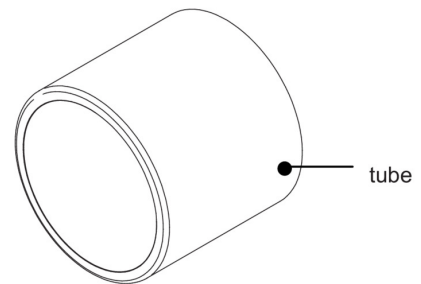
## Principle

Optional accessories for protection class IP 65/67:



tube adapter

- hard-anodized, incl. sealing and screws  
 $\varnothing$  49,5 mm (VCXG.I 11185373)  
 $\varnothing$  65 mm (VCXG.I 11185377)  
 $\varnothing$  95 mm (VCXG.I 11704311)  
 $\varnothing$  65 mm (VLXT 11193125)  
 $\varnothing$  95 mm (VLXT.EF 11704315)



tube

- hard-anodized, cover glass PMMA  
 $\varnothing$  49,5 mm, Length 44 mm (11185370)  
 $\varnothing$  65 mm, Length 58 mm (11185374)  
 $\varnothing$  95 mm, length 70 mm (11704312)
- hard-anodized, tempered laminated safety glass  
 $\varnothing$  49,5 mm, Length 44 mm (11701124)  
 $\varnothing$  65 mm, Length 58 mm (11701125)