

# VCXG-53C.I

Gigabit Ethernet, 5,3 Megapixel, Color

Article number: 11186800

## Overview

- 2592 x 2048 px
- onsemi PYTHON5000
- 1" CMOS
- 23 fps
- Gigabit Ethernet
- Availability on request



GEN*i*CAM



## Technical data

### Sensor information

|               |                   |
|---------------|-------------------|
| Sensor        | onsemi PYTHON5000 |
| Mono/Color    | Color             |
| 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. 23 fps<br>Binning 2×2, 1296 × 1024 px, max. 28 fps<br>Binning 2×1, 1296 × 2048 px, max. 28 fps<br>Binning 1×2, 2592 × 1024 px, max. 28 fps |
| Image formats, acquisition frame rate max. (Burst Mode) | Full Frame, 2592 × 2048 px, max. 28 fps   |
| Pixel formats   | BayerRG8<br>BayerRG10<br>Mono8<br>Mono10<br>RGB8<br>BGR8  |

### Image preprocessing

|                 |  |
|-----------------|--|
| Analog controls | Gain (0 ... 18 dB)<br>Offset (0 ... 63 LSB 10 Bit) |
| Color models    | Mono<br>RGB<br>BGR                                 |

### 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) |
| Auto Functions          | Exposure Auto<br>Gain Auto<br>White Balance Auto<br>Color Transformation Auto   |
| Image Pre-processing    | Image Flipping (X/Y)<br>Color Processing (RGB, BGR, Mono)<br>Color Enhancement (with optimized ColorTransformationMatrix)<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<br>ActionCommand   |
| Trigger delay           | 0 ... 2 sec, tracking and buffering of up to 256 trigger signals  |

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### Camera features

|                         |  |
|-------------------------|--|
| Process Synchronization | <ul style="list-style-type: none"> <li>Events</li> <li>Timer</li> <li>Trigger Delay</li> <li>Debouncer</li> <li>Counter</li> <li>Sequencer</li> <li>Trigger via Action CMD (GigE)</li> <li>Additional Output Modes (e.g. Trigger Ready)</li> <li>PWM (PWM Duration / PWM Duty Cycle)</li> <li>4 power outputs with up to 120 W (max. 48 V / 2.5 A)</li> <li>Selectable Output format (e.g. Tri State, Push Pull)</li> <li>Chunk data inside transferred image</li> <li>Encoder support via Counter End trigger source</li> </ul> |
|-------------------------|--|

|                      |  |
|----------------------|--|
| Additional Functions | <ul style="list-style-type: none"> <li>User Set</li> <li>Integrated temperature sensor</li> <li>Readable additional information (e.g. sensor information)</li> <li>Save Custom Data</li> </ul> |
|----------------------|--|

|                       |  |
|-----------------------|--|
| Internal image buffer | <ul style="list-style-type: none"> <li>122 MB</li> <li>8 images (Trigger Mode)</li> <li>1 image (Free Running Mode)</li> </ul> |
|-----------------------|--|

### Interfaces and connectors

|                |  |
|----------------|--|
| Data interface | Gigabit Ethernet, Transfer rate 1000 Mbits/sec, Fast Ethernet, Transfer rate 100 Mbits/sec, Connector: M12 / 8 pol x-coded, screwable type |
|----------------|--|

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

|              |  |
|--------------|--|
| Power supply | via M12/12 pins a-coded or Power over Ethernet (PoE) |
|--------------|--|

### Mechanical data

|            |                         |
|------------|-------------------------|
| Lens mount | C-mount                 |
| Width      | 40 mm                   |
| Height     | 40 mm                   |
| Depth      | 50.8 mm                 |
| Weight     | ≤ 137 g                 |
| Material   | aluminum, hard-anodized |

### Electrical data

|                          |  |
|--------------------------|--|
| Voltage supply range +Vs | 12 ... 24 V DC (external power supply)<br>36 ... 57 V DC (Power over Ethernet) |
| Power consumption        | approx. 2,9 W @ 12 VDC and 23 fps<br>approx. 3,6 W @ 48 VDC (PoE) and 23 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      | <ul style="list-style-type: none"> <li>IP 40</li> <li>IP 54 (with mounted tube and cable)</li> <li>IP 65 (with mounted tube and cable)</li> <li>IP 67 (with mounted tube and cable)</li> <li>IP 69K (with stainless steel housing accessory)</li> </ul> |

### Digital I/Os

|       |  |
|-------|--|
| Lines | <ul style="list-style-type: none"> <li>4 input lines</li> <li>4 power output lines with pulse width modulation (PWM) (max. 48 V / max. 2,5 A)</li> </ul> |
|-------|--|

### Conformity

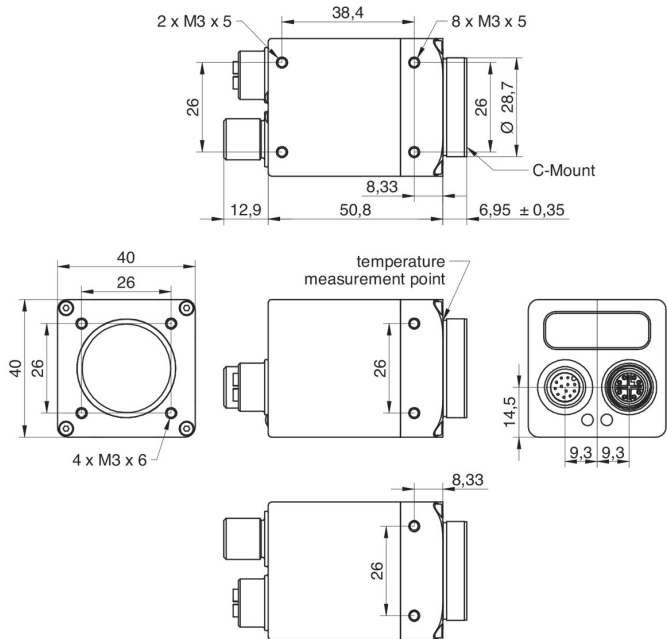
|            |   |
|------------|---|
| Conformity | <ul style="list-style-type: none"> <li>CE</li> <li>RoHS</li> <li>EAC</li> <li>BIS-CRS (R-41207004)</li> </ul> |
|------------|---|

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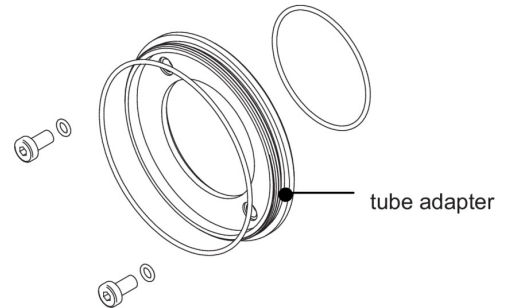
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## Dimension drawing



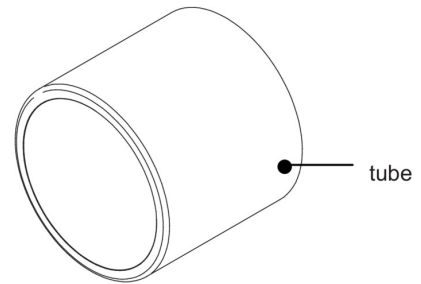
## Principle

Optional accessories for protection class IP 65/67:



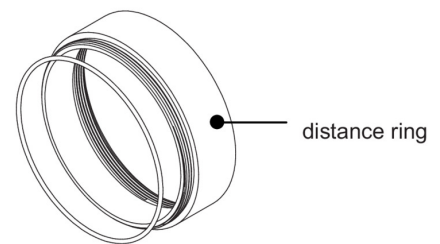
tube adapter

- hard-anodized, incl. sealing and screws  
 $\varnothing$  49.5 mm (VCXG.I 11185373)  
 $\varnothing$  65 mm (VCXG.I 11185377)  
 $\varnothing$  65 mm (VLXT 11193125)



tube

- hard-anodized, cover glass PMMA  
 $\varnothing$  49.5 mm, length 44 mm (11185370)  
 $\varnothing$  65 mm, length 58 mm (11185374)
- hard-anodized, tempered laminated safety glass  
 $\varnothing$  49.5 mm, length 44 mm (11701124)  
 $\varnothing$  65 mm, length 58 mm (11701125)



distance ring

- hard-anodized, incl. sealing  
 $\varnothing$  49.5 mm, length 6 mm (11185372)  
 $\varnothing$  49.5 mm, length 12 mm (11185371)  
 $\varnothing$  49.5 mm, length 36 mm (11211571)
- $\varnothing$  65 mm, length 6 mm (11185376)  
 $\varnothing$  65 mm, length 12 mm (11185375)  
 $\varnothing$  65 mm, length 36 mm (111988906)

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## Principle

