

VCXG-53C

Gigabit Ethernet, 5,3 Megapixel, Color

Article number: 11151555

Overview

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



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 |

Data quality (EMVA 1288 typical)

| | |
|-----------------------|---|
| Dark noise | 11.18 e- |
| Saturation capacity | 9319 e- |
| Dynamic range | 57.8 dB |
| Signal-to-noise ratio | 39.7 dB |
| Quantum efficiency | 44.5 % @ 465 nm 48.5 % @ 536 nm 50.7 % @ 631 nm |

Acquisition formats

| | |
|---|---|
| Image formats, interface frame rate max. | Full Frame, 2592 × 2048 px, max. 23 fps Binning 2×2, 1296 × 1024 px, max. 28 fps Binning 2×1, 1296 × 2048 px, max. 28 fps 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 |

Acquisition formats

| | |
|---------------|--|
| Pixel formats | BayerRG8 BayerRG10 Mono8 Mono10 RGB8 BGR8 |
|---------------|--|

Image preprocessing

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|-----------------|--|
| Analog controls | Gain (0 ... 12 dB) Offset (0 ... 63 LSB 10 Bit) |
|-----------------|--|

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|--------------|--------------------------|
| Color models | Mono Raw Bayer RGB |
|--------------|--------------------------|

Camera features

| | |
|----------------------|---|
| Basic Functions | Exposure Gain / Color Gain Trigger / Exposure Active (Flash) Binning 2x2 Partial Scan Offset Free Running Mode (Live Image) |
| Auto Functions | Exposure Auto Gain Auto White Balance Auto Color Transformation Auto |
| Image Pre-processing | Image Flipping (X/Y) Color Processing (RGB, BGR, Mono) Color Enhancement (with optimized ColorTransformationMatrix) LUT / Gamma |

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Camera features

| | |
|-------------------------|---|
| Acquisition / Interface | Burst Mode Adjustable Framerate Device Link Throughput Limit Internal Image Buffer |
| Synchronization | free running trigger |
| Trigger sources | Hardware Software ActionCommand |
| Trigger delay | 0 ... 2 sec, tracking and buffering of up to 256 trigger signals |
| Process Synchronization | Events Timer Trigger Delay Debouncer Counter Sequencer 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) Save Custom Data |
| Internal image buffer | 122 MB 8 images (Trigger Mode) 1 image (Free Running Mode) |

Interfaces and connectors

| | |
|-------------------|---|
| Data interface | Gigabit Ethernet, Transfer rate 1000 Mb/s/sec, Fast Ethernet, Transfer Rate 100 Mb/s/sec, Connector: 8P8C Modular Jack (RJ45), screwable type |
| Process interface | M8 / 8 pins (SACC-DSI-M8MS-8CON-M8-L180) |

Interfaces and connectors

| | |
|--------------|--|
| Power supply | via M8 / 8 pins or Power over Ethernet (PoE) |
|--------------|--|

Mechanical data

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|------------|---|
| Lens mount | C-mount |
| Width | 29 mm |
| Height | 29 mm |
| Depth | 49 mm |
| Weight | ≤ 120 g |
| Material | zinc die casting, baked varnish (until 02-2020 nickel-chrome-plated), IP 40 |

Electrical data

| | |
|--------------------------|--|
| Voltage supply range +Vs | 12 ... 24 V DC (external power supply) 36 ... 57 V DC (Power over Ethernet) |
| Power consumption | approx. 3,1 W @ 12 VDC (PoE) and 23 fps approx. 3,6 W @ 48 VDC (PoE) and 23 fps |

Non-volatile memory

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

Environmental conditions

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|-----------------------|-------------------------------------|
| Operating temperature | 0 ... +65 ° @ T = measurement point |
| Humidity | 10 ... 90 % (non-condensing) |
| Protection class | IP 40 |

Digital I/Os

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

Conformity

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|------------|---|
| Conformity | CE RoHS KC (MISP-REI-BkR-VCXG-53M) EAC BIS-CRS (R-41207004) |
|------------|---|

Dimension drawing

