

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



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	11.27 e-
Saturation capacity	9488 e-
Dynamic range	57.9 dB
Signal-to-noise ratio	39.8 dB
Quantum efficiency	39.3 % @ 465 nm 43.7 % @ 536 nm 46.9 % @ 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
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Image preprocessing

Analog controls	Gain (0 ... 18 dB) Offset (0 ... 63 LSB 10 Bit)
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Color models	Mono RGB BGR
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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 Short Exposure Time Enable 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) PWM (PWM Duration / PWM Duty Cycle) 4 power outputs with up to 120 W (max. 48 V / 2.5 A) Selectable Output format (e.g. Tri State, Push Pull) 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: M12 / 8 pol x-coded, screwable type
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Interfaces and connectors

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) 36 ... 57 V DC (Power over Ethernet)
Power consumption	approx. 2.9 W @ 12 VDC and 23 fps approx. 3.6 W @ 48 VDC (PoE) and 23 fps

Non-volatile memory

Flash memory size	128 kB
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Environmental conditions

Operating temperature	0 ... +65 ° @ T = measurement point
Humidity	10 ... 90 % (non-condensing)
Protection class	IP 40 IP 54 (with mounted tube and cable) IP 65 (with mounted tube and cable) IP 67 (with mounted tube and cable) IP 69K (with stainless steel housing accessory)

Digital I/Os

Lines	4 input lines 4 power output lines with pulse width modulation (PWM) (max. 48 V / max. 2.5 A)
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Conformity

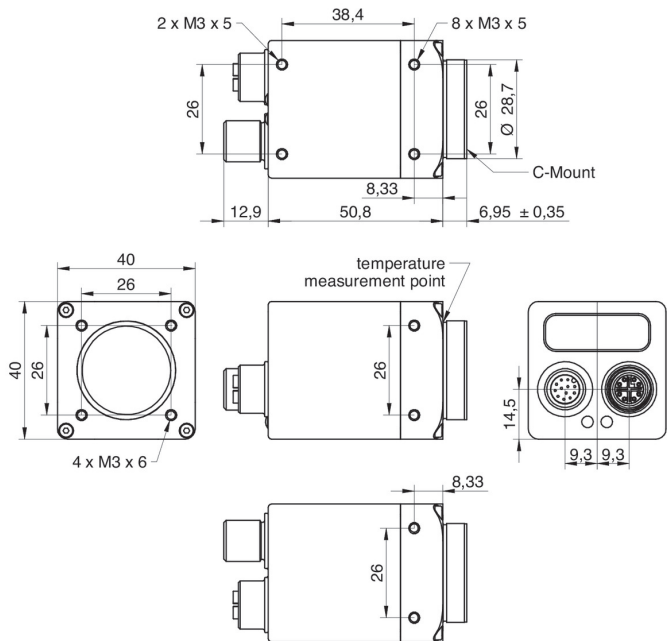
Conformity	CE RoHS EAC BIS-CRS (R-41207004)
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Dimension drawing



Principle

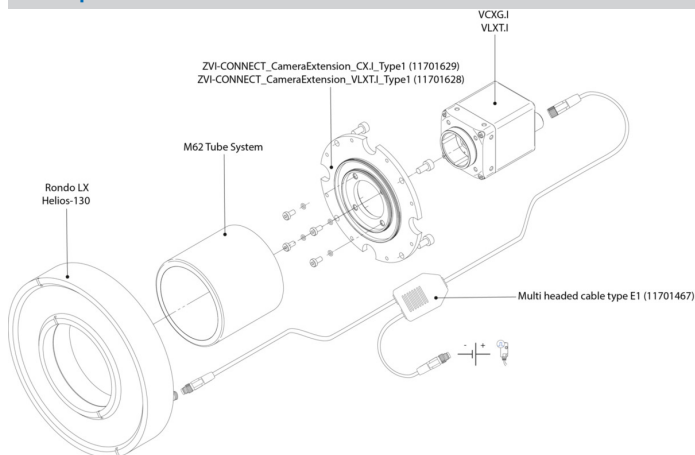
Optional accessories for protection class IP 65/67:



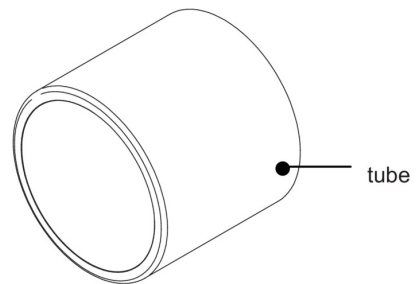
tube adapter

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

Principle



tube



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

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Principle



distance ring

- hard-anodized, incl. sealing
 - Ø 49,5 mm, Length 6 mm (11185372)
 - Ø 49,5 mm, Length 12 mm (11185371)
 - Ø 49,5 mm, Length 36 mm (11211571)
 - Ø 65 mm, Length 6 mm (11185376)
 - Ø 65 mm, Length 12 mm (11185375)
 - Ø 65 mm, Length 36 mm (111988906)
 - Ø 95 mm, length 6 mm (11704395)
 - Ø 95 mm, length 12 mm (11704397)
 - Ø 95 mm, length 36 mm (11704394)