

VLXT-71C.I

Gigabit Ethernet, 7,0 Megapixel, Color

Article number: 11700337

Overview

- 3200 × 2200 px
- Sony IMX420
- 1.1" CMOS
- 174 fps
- 10 GigE



GEN<i>i>CAM



Technical data

Sensor information

Sensor	Sony IMX420 Gen3
Mono/Color	Color
Sensor type	1.1" CMOS
Shutter type	Global shutter
Resolution	3200 × 2200 px
Pixel size	4.5 × 4.5 µm
Exposure time	0.001 ... 60000 ms

Data quality (EMVA 1288 typical)

Dark noise	5.63 e-
Saturation capacity	24265 e-
Dynamic range	71.5 dB
Signal-to-noise ratio	43.8 dB
Quantum efficiency	52.5 % @ 465 nm 63.6 % @ 536 nm 60.4 % @ 631 nm 52.4 % @ 467 nm 63.7 % @ 533 nm 59.4 % @ 630 nm

Acquisition formats

Image formats, interface frame rate max.	Full Frame, 3200 × 2200 px, max. 174 fps Binning 2×2, 1600 × 1100 px, max. 208 fps Binning 2×1, 1600 × 2200 px, max. 208 fps Binning 1×2, 3200 × 1100 px, max. 208 fps
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Acquisition formats

Image formats, acquisition frame rate max. (Burst Mode)	Full Frame, 3200 × 2200 px, max. 209 fps
Pixel formats	BayerRG8 BayerRG10 BayerRG12 BayerRG12 Packed Mono8 Mono10 Mono12 Mono12 Packed RGB8 BGR8

Image preprocessing

Analog controls	Gain (0 ... 48 dB) Offset (0 ... 255 LSB 12 Bit)
Color models	Mono Raw Bayer RGB BGR

Camera features

Basic Functions	Exposure Gain / Color Gain Trigger / Exposure Active (Flash) Binning 2x2 Partial Scan Offset Free Running Mode (Live Image) Multi ROI
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Camera features

Auto Functions	Exposure Auto Gain Auto White Balance Auto Color Transformation Auto
Image Pre-processing	Image Flipping (X/Y) Color Processing (RGB, BGR, Mono) Advanced 5x5 Color Processing (RGB, BGR, Mono) Color Enhancement (with optimized ColorTransformationMatrix) LUT / Gamma Shading Correction Edge Sharpening Noise Reduction
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) Action CMD Request ID Trigger ID inside Chunk Additional Output Modes (e.g. Trigger Ready) PWM (PWM Duration / PWM Duty Cycle) Selectable Output format (e.g. Tri State, Push Pull) Chunk data inside transferred image Encoder support via Counter End trigger source 4 power outputs with up to 120 W (max. 48 V / 2.5 A)
Time synchronization IEEE 1588	IEEE 1588 / Master and Slave function IEEE 1588 / Scheduled Action CMD IEEE 1588 / Synchronized Acquisition Framerate
Additional Functions	User Set Integrated temperature sensor Readable additional information (e.g. sensor information) Save Custom Data
Lens control	Corning liquid lens

Camera features

Sequencer	Automated control for series of images using different sets of parameters
Sequencer parameter	Exposure time gain factor output line ROI Offset x ROI Offset y
Internal image buffer	1024 MB 78 images (Trigger Mode) 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)
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. 12.3 W @ 24 VDC and 174 fps

Non-volatile memory

Flash memory size	128 kB
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Environmental conditions

Operating temperature	0 ... +60 ° @ 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)

Digital I/Os

Lines	2 input lines 4 power output lines with pulse width modulation (PWM) (max. 48 V / max. 2,5 A) RS232
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Conformity

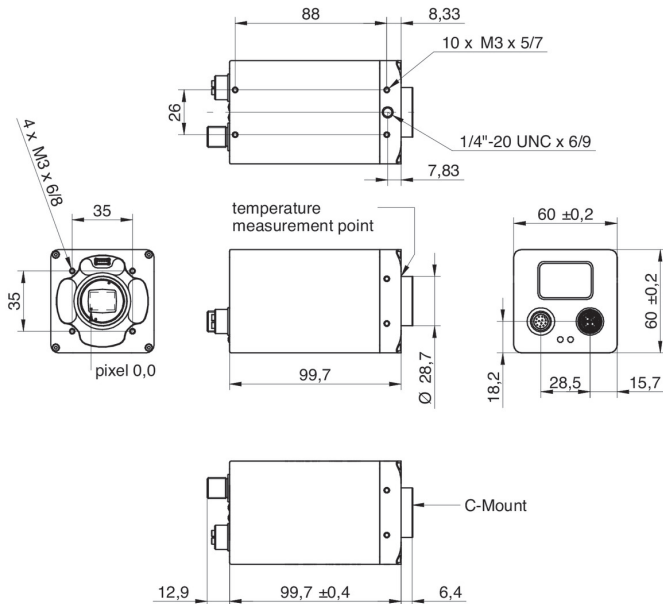
Conformity	CE RoHS EAC KC (R-R-BkR-VLXT-71MI) UL recognized
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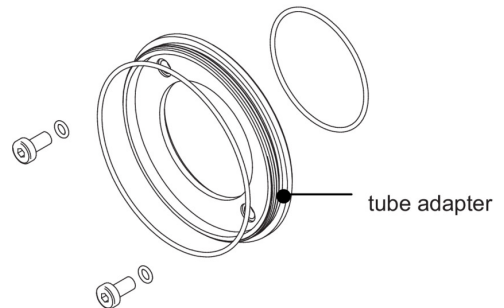
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Dimension drawing



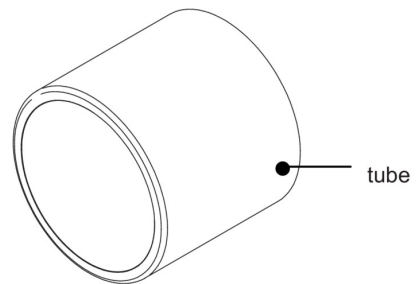
Principle

Optional accessories for protection class IP 65/67:



tube adapter

- hard-anodized, incl. sealing and screws
 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)



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)