U3-31C0SE-C-HQ Rev.1.2 (1010371)

In series
The model is in series and available for the long term.

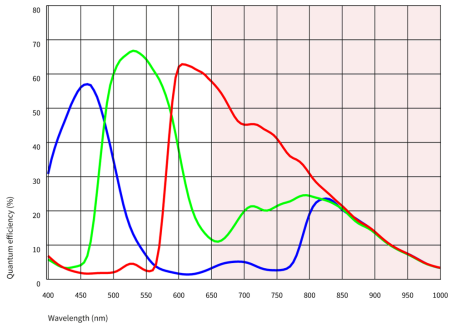




Specification

Sensor

Sensor type	CMOS Color
Shutter	Global Shutter
Sensor characteristic	Linear
Pixel Class	1.9 MP
Resolution	2.04 Mpix
Resolution (h x v)	1632 x 1248 Pixel
Aspect ratio	4:3
ADC	12 bit
Color depth (camera)	12 bit
Optical sensor class	1/1.7"
Optical Size	7.344 mm x 5.616 mm
Optical sensor diagonal	9.25 mm 1/1.7"
Pixel size	4.5 µm
CRA (Chief Ray Angle)	2.7 °
Manufacturer	Sony
Sensor Model	IMX422LQJ-C
Gain (master/RGB)	16x/16x
AOI horizontal	same frame rate
AOI vertical	increased frame rate
AOI image width / step width	256 / 2
AOI image height / step width	2 / 2
AOI position grid (horizontal/vertical)	2 / 2
Binning horizontal	-
Binning vertical	-
Binning method	Horizontal: addition / Vertical: addition
Binning factor	-
Decimation (subsampling) horizontal	increased frame rate
Decimation (subsampling) vertical	increased frame rate
Decimation (subsampling) method	M/C automatic



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Model

Frame rate freerun mode	197 fps
Frame rate trigger (continuous)	197 fps
Frame rate trigger (maximum)	238 fps
Exposure time (minimum - maximum)	0.011 ms - 2000 ms
Long exposure (maximum)	90000 ms
Line rate freerun mode (line scan)	2867 1/s
Line rate trigger mode (line scan)	3037 1/s
Lines per frame (line scan)	8000
Power consumption	1.8 W - 4.6 W
Image memory	128 MB

HDR

Mode	Sequencer

Ambient conditions

The temperature values given below refer to the outer device temperature of the camera housing.

Allowed device temperature during operation	0 °C - 55 °C / 32 °F - 131 °F
Allowed ambient temperature during storage	-20 °C - 60 °C / -4 °F - 140 °F
Humidity (relative, non-condensing)	20 % - 80 %

Connectors

Interface connector	USB Type-C, screwable
I/O connector	8-pin Hirose connector (HR25-7TR-8PA(73))
Power supply	USB cable

Pin assignment I/O connector

1	Ground (GND)
2	Flash output with optocoupler (-) - Line 1
3	General Purpose I/O (GPIO) 1, 3.3 V - Line 2
4	Trigger input with optocoupler (-) - Line 0
5	Flash output with optocoupler (+) - Line 1
6	General Purpose I/O (GPIO) 2, 3.3 V - Line 3
7	Trigger input with optocoupler (+) - Line 0
8	Output supply voltage, 5 V (100 mA)



Design

Lens Mount	C-Mount
IP code	IP30
Dimensions H/W/L	34.0 mm x 44.0 mm x 47.0 mm
Mass	110 g
Housing material	Aluminum

Features

List of on-camera image pre-processing features.
All features of the table are available via our IDS peak software for image pre-processing on the host computer (sensor model dependent).

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Image Acquisition	Freerun	✓
	Software trigger	✓
	Hardware trigger	✓
	Trigger controlled exposure	✓
	Denoiser	✓
	Long exposure	✓
	Line scan	✓
Flashing	Flashing	✓
	PWM flashing	✓
Image Adjustments	Auto exposure	✓
	Auto gain	✓
	Auto whitebalance	✓
	Color correction	✓
	Gamma	✓
	LUT	✓
	Mirror/flip	X/Y
On-board Image Processing	Pixel formats	Mono8 BayerRG8 BayerRG10 BayerRG10p BayerRG12 BayerRG12p BGR8 RGB8 BGR10p32 RGB10p32
	Region of interest	✓
	Decimation (FPGA)	✓
	Decimation (Sensor)	2x2
	Binning (FPGA)	✓
	Binning (Sensor)	
Others	Chunks	✓
	Sequencer	✓
	Events	✓
	Firmware update	✓
	1st supported firmware version	3.32

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