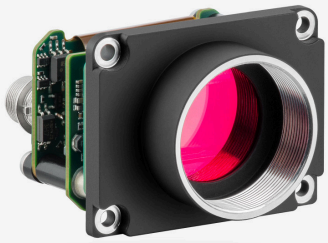
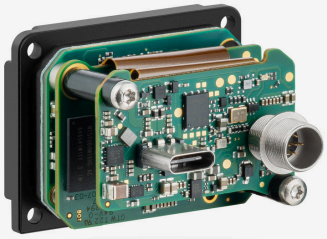
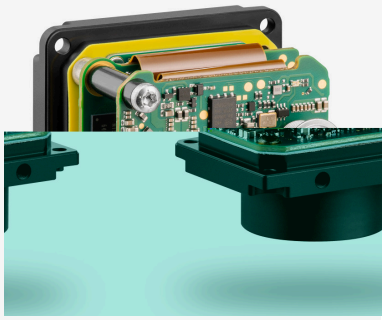
U3-3091SE-C-HQ Rev.1.2 (AB12341)

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



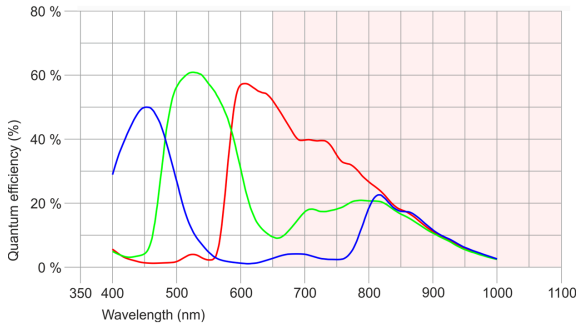




Specification

Sensor

Sensor type	CMOS Color
Shutter	Global Shutter
Sensor characteristic	Linear
Pixel Class	9 MP
Resolution	8.95 Mpix
Resolution (h x v)	4112 x 2176 Pixel
Aspect ratio	17:9
ADC	12 bit
Color depth (camera)	12 bit
Optical sensor class	1"
Optical Size	14.159 mm x 7.500 mm
Optical sensor diagonal	16.02 mm 1"
Pixel size	3.45 µm
CRA (Chief Ray Angle)	0 °
Manufacturer	Sony
Sensor Model	IMX255LQR-C
Gain (master/RGB)	25.4x/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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800 W Cummings Park Ste 2950 · Woburn, MA 01801-7221 · Phone +1 (781) 787-0048 · E-Mail usasales@ids-imaging.com

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Model

Frame rate freerun mode	45 fps
Frame rate trigger (continuous)	45 fps
Frame rate trigger (maximum)	51 fps
Exposure time (minimum - maximum)	0.023 ms - 2000 ms
Long exposure (maximum)	90000 ms
Line rate freerun mode (line scan)	2734 1/s
Line rate trigger mode (line scan)	2950 1/s
Lines per frame (line scan)	8000
Power consumption	1.6 W - 4.2 W
Image memory	128 MB

HDR

Mode	Sequencer

Ambient conditions

For PCB versions, refer to the separate hints in the respective documentation.

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

Connectors

Interface connector	USB Type-C
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	-
Dimensions H/W/L	34.0 mm x 44.0 mm x 31.0 mm
Mass	45 g
Housing material	-

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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U3-3091SE-C-HQ Rev.1.2 (AB12341)

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	2.20.17746

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