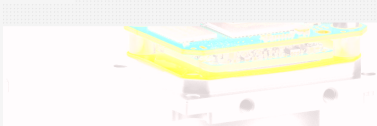
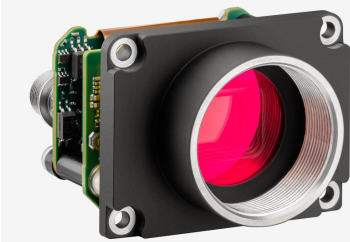


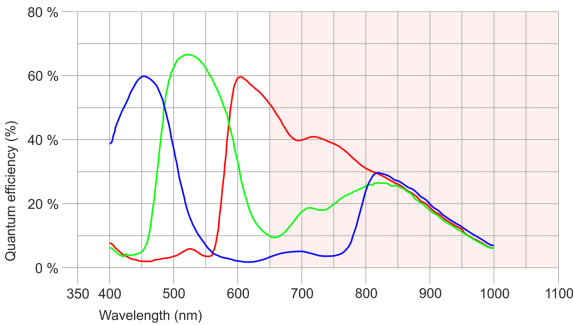
In series
The model is in series and available for the long term.



Specification

Sensor

Sensor type	CMOS Color
Shutter	Rolling shutter
Sensor characteristic	Linear
Pixel Class	2 MP
Resolution	2.12 Mpix
Resolution (h x v)	1936 x 1096 Pixel
Aspect ratio	16:9
ADC	12 bit
Color depth (camera)	12 bit
Optical sensor class	1/2.8"
Optical Size	5.614 mm x 3.178 mm
Optical sensor diagonal	6.45 mm 1/2.8"
Pixel size	2.9 μm
CRA (Chief Ray Angle)	0 °
Manufacturer	Sony
Sensor Model	IMX290LQR-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	-
Decimation (subsampling) vertical	-
Decimation (subsampling) method	M/C automatic
Decimation (subsampling) factor	-



Model

Frame rate freerun mode	134 fps
Frame rate trigger (continuous)	67 fps
Frame rate trigger (maximum)	67 fps
Exposure time (minimum - maximum)	0.011 ms - 1736 ms
Long exposure (maximum)	120000 ms
Line rate freerun mode (line scan)	6040 1/s
Line rate trigger mode (line scan)	2696 1/s
Lines per frame (line scan)	8000
Power consumption	1.5 W - 2.8 W
Image memory	128 MB

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).

Image Acquisition

Freerun	✓
Software trigger	✓
Hardware trigger	✓
Trigger controlled exposure	-
Denoiser	✓
Long exposure	✓
Line scan	✓
Global start	-

Subject to technical modifications (2026-07-13)

U3-3861SE-C-HQ Rev.1.2 (AB12796)

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)	
	Binning (FPGA)	✓
	Binning (Sensor)	
Others	Chunks	✓
	Sequencer	-
	Events	✓
	Firmware update	✓
	1st supported firmware version	2.20.17746