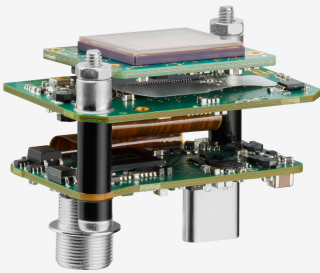
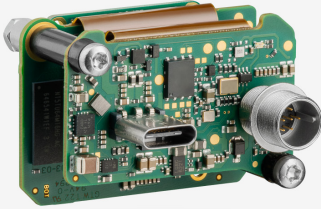
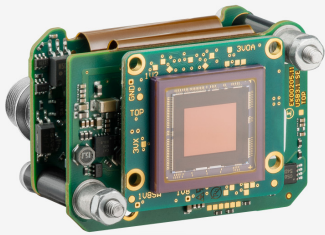


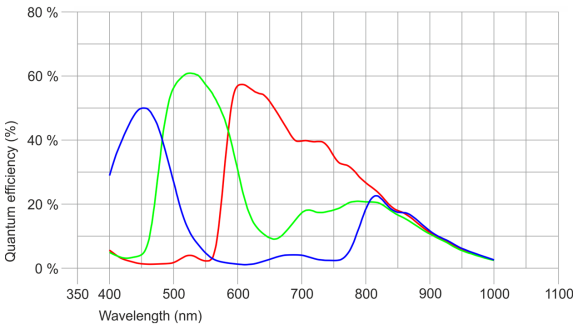
Not recommended for new designs
The camera model is no longer recommended for new application development.



Specification

Sensor

Sensor type	CMOS Color
Shutter	Global Shutter
Sensor characteristic	Linear
Pixel Class	5 MP
Resolution	5.01 Mpix
Resolution (h x v)	2448 x 2048 Pixel
Aspect ratio	5:4
ADC	12 bit
Color depth (camera)	12 bit
Optical sensor class	2/3"
Optical Size	8.473 mm x 7.086 mm
Optical sensor diagonal	11.05 mm 2/3"
Pixel size	3.45 µm
CRA (Chief Ray Angle)	0 °
Manufacturer	Sony
Sensor Model	IMX250LQR-C
Gain (master/RGB)	24x/4x
AOI horizontal	same frame rate
AOI vertical	increased frame rate
AOI image width / step width	256 / 8
AOI image height / step width	2 / 2
AOI position grid (horizontal/vertical)	8 / 2
Binning horizontal	same frame rate
Binning vertical	same frame rate
Binning method	Horizontal: addition / Vertical: addition
Binning factor	2 / 4 / 8
Decimation (subsampling) horizontal	same frame rate
Decimation (subsampling) vertical	same frame rate
Decimation (subsampling) method	M/C automatic



U3-3082SE-C (AB02851)

Model

Frame rate freerun mode	79 fps
Frame rate trigger (continuous)	79 fps
Frame rate trigger (maximum)	87 fps
Exposure time (minimum - maximum)	0.036 ms - 2000 ms
Long exposure (maximum)	90000 ms
Line rate freerun mode (line scan)	4510 1/s
Line rate trigger mode (line scan)	4510 1/s
Lines per frame (line scan)	8000
Power consumption	1.6 W - 3.7 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	No mount
IP code	-
Dimensions H/W/L	29.5 mm x 40.0 mm x 25.0 mm
Mass	20 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	✓

Subject to technical modifications (2026-09-11)

U3-3082SE-C (AB02851)

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		2.0	