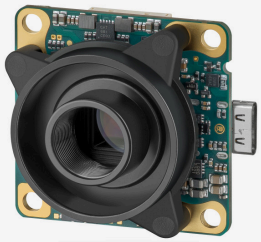
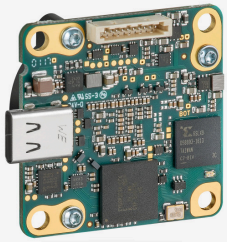
U3-3881LE-C-HQ Rev.1.2 (AB03468)

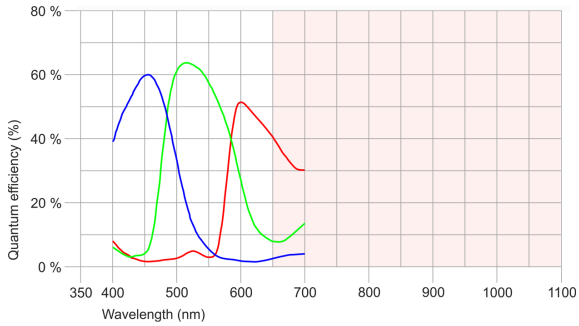
In series
The model is in series and available for the long term.


Specification

Sensor

Sensor type	CMOS Color
Shutter	Rolling shutter / Global Start Shutter
Sensor characteristic	Linear
Pixel Class	6 MP
Resolution	6.41 Mpix
Resolution (h x v)	3088 x 2076 Pixel
Aspect ratio	3:2
ADC	12 bit
Color depth (camera)	12 bit
Optical sensor class	1/1.8"
Optical Size	7.411 mm x 4.982 mm
Optical sensor diagonal	8.93 mm 1/1.8"
Pixel size	2.4 µm
CRA (Chief Ray Angle)	0 °
Manufacturer	Sony
Sensor Model	IMX178LQJ-C
Gain (master/RGB)	11.1x/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	increased frame rate
Binning vertical	increased frame rate
Binning method	Horizontal: addition / Vertical: addition
Binning factor	2x2
Decimation (subsampling) horizontal	-
Decimation (subsampling) vertical	-
Decimation (subsampling) method	M/C automatic



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Model

Frame rate freerun mode	58 fps
Frame rate trigger (continuous)	56 fps
Frame rate trigger (maximum)	56 fps
Exposure time (minimum - maximum)	0.013 ms - 1063 ms
Long exposure (maximum)	60043 ms
Power consumption	0.8 W - 1.7 W
Image memory	-

Ambient conditions

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

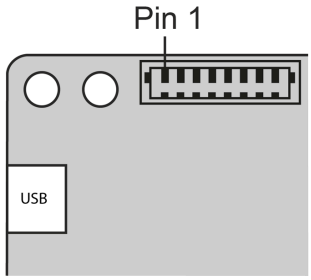
Allowed device temperature during operation	0 °C - 55 °C / 32 °F - 131 °F
Allowed device temperature during storage	-20 °C - 80 °C / -4 °F - 176 °F
Humidity (relative, non-condensing)	20 % - 80 %

Connectors

Interface connector	USB Type-C
I/O connector	10-pin Wuerth connector (WR-WTB 1.00 mm)
Power supply	USB cable

Pin assignment I/O connector

1	Voltage output 5 V, max. 400 mA
2	Ground (GND)
3	General Purpose I/O (GPIO) 2, 3.3 V - Line 3
4	General Purpose I/O (GPIO) 1, 3.3 V - Line 2
5	I2C clock signal - requires USB3 Vision Firmware 3.2 or higher
6	I2C data signal - requires USB3 Vision Firmware 3.2 or higher
7	Trigger input without optocoupler 3.3 V - Line 0
8	Flash output without optocoupler 3.3 V - Line 1
9	Ground (GND)
10	Voltage output 3.3 V



Design

Lens Mount	S-Mount
IP code	-
Dimensions H/W/L	36.0 mm x 36.0 mm x 19.9 mm
Mass	16 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	✓

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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	BayerRG8 BayerRG10p BayerRG12 BayerRG12p BayerRG10
	Region of interest	✓
	Decimation (FPGA)	✓
	Decimation (Sensor)	
	Binning (FPGA)	-
	Binning (Sensor)	2x2 Increases frame rate.
Others	Chunks	-
	Sequencer	-
	Events	-
	Firmware update	✓
	1st supported firmware version	2.20

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