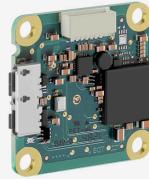
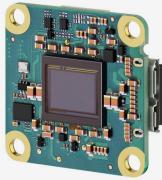


 In series

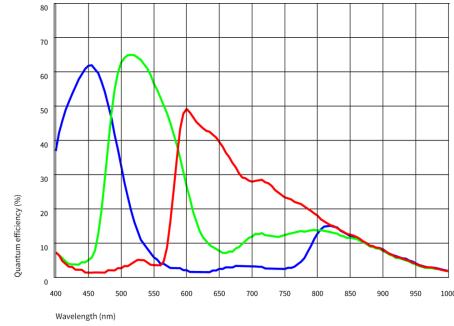
The model is in series and available for the long term.



## Specification

### Sensor

Sensor type	CMOS Color
Shutter	Rolling shutter
Sensor characteristic	Linear
Readout mode	-
Pixel Class	12 MP
Resolution	12.33 Mpix
Resolution (h x v)	4056 x 3040 Pixel
Aspect ratio	4:3
ADC	12 bit
Color depth (camera)	12 bit
Optical sensor class	1/2.3"
Optical Size	6.287 mm x 4.712 mm
Optical sensor diagonal	7.86 mm 1/2.3"
Pixel size	1.55 µm
Manufacturer	Sony
Sensor Model	IMX412-AACK-D
Gain (master/RGB)	-/-
AOI horizontal	same frame rate
AOI vertical	increased frame rate
AOI image width / step width	24 / 12
AOI image height / step width	32 / 8
AOI position grid (horizontal/vertical)	2 / 4
Binning horizontal	increased frame rate
Binning vertical	increased frame rate
Binning method	M/C automatic
Binning factor	2x2 constrain
Decimation (subsampling) horizontal	-
Decimation (subsampling) vertical	-
Decimation (subsampling) method	-
Decimation (subsampling) factor	-



## Model

Frame rate freerun mode	18 fps
Frame rate trigger (continuous)	18 fps
Frame rate trigger (maximum)	18 fps
Exposure time (minimum - maximum)	0.032 ms - 1900 ms
Power consumption	0.5 W - 1 W
Image memory	-

## Ambient conditions

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

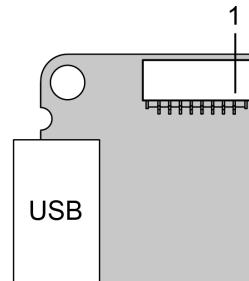
Allowed device temperature during operation	0 °C - 75 °C / 32 °F - 167 °F
Allowed device temperature during storage	-20 °C - 80 °C / -4 °F - 176 °F
Humidity (relative, non-condensing)	20 % - 80 %

## Connectors

Interface connector	USB 3.0 micro-B
I/O connector	8-pin Wuerth connector
Power supply	USB cable

## Pin assignment I/O connector

1	Voltage output 3.3 V
2	Ground (GND)
3	Flash output without optocoupler - Line 1
4	Trigger input without optocoupler - Line 0
5	General Purpose I/O (GPIO) 1 - Line 2
6	General Purpose I/O (GPIO) 2 - Line 3
7	Ground (GND)
8	USB Power: 5 V, max. 400 mA



## Design

Lens Mount	No mount
IP code	-
Dimensions H/W/L	29.0 mm x 29.0 mm x 6.4 mm
Mass	7 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	-
Flashing	Flashing	-
	PWM flashing	-

Subject to technical modifications (2026-01-14)

## Image Adjustments

Auto exposure	-
Auto gain	-
Auto whitebalance	-
Color correction	-
Gamma	-
LUT	-
Mirror/flip	X/Y

## On-board Image Processing

Pixel formats	BayerGR10g40IDS BayerGR12g24IDS
Region of interest	✓
Decimation (FPGA)	-
Decimation (Sensor)	-
Binning (FPGA)	-
Binning (Sensor)	2x2 Horizontal and vertical binning can only be applied jointly.

## Others

Chunks	-
Sequencer	-
Events	-
Firmware update	✓
1st supported firmware version	3.3