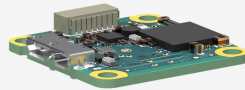
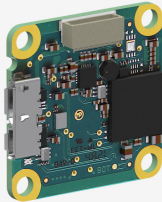
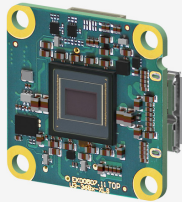


**In series**

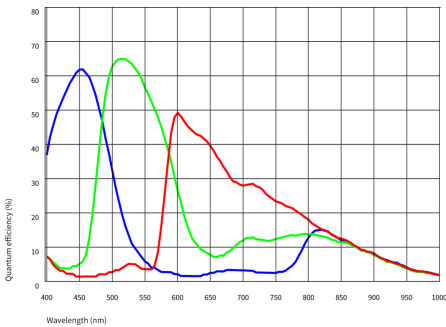
The model is in series and available for the long term.



Specification

Sensor

|                                         |                      |
|-----------------------------------------|----------------------|
| Sensor type                             | CMOS Color           |
| Shutter                                 | Rolling shutter      |
| Sensor characteristic                   | Linear               |
| Readout mode                            | Progressive scan     |
| 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"                 |
| Optical Size                            | 6.287 mm x 4.712 mm  |
| Optical sensor diagonal                 | 7.86 mm (1/2.04")    |
| 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                          | 2                    |
| Subsampling horizontal                  | -                    |
| Subsampling vertical                    | -                    |
| Subsampling method                      | -                    |
| Subsampling factor                      | -                    |



## Model

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

## Ambient conditions

The temperature values given below refer to the outer device temperature of the camera housing.  
For PCB versions, refer to the separate hints in the respective documentation.

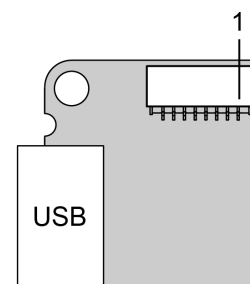
|                                     |                                 |
|-------------------------------------|---------------------------------|
| Device temperature during operation | 0 °C - 55 °C / 32 °F - 131 °F   |
| Device temperature during storage   | -20 °C - 80 °C / -4 °F - 176 °F |
| Humidity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

## Connectors

|                     |                 |
|---------------------|-----------------|
| Interface connector | USB 3.0 micro-B |
| I/O connector       | 8-pin 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                |



Camera rear view

## Design

|                  |                            |
|------------------|----------------------------|
| Lens Mount       | -                          |
| IP code          | -                          |
| Dimensions H/W/L | 29.0 mm x 29.0 mm x 6.4 mm |
| Mass             | 7 g                        |