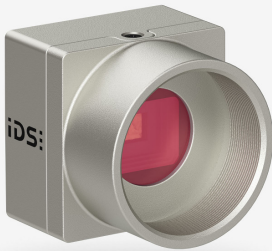


In series

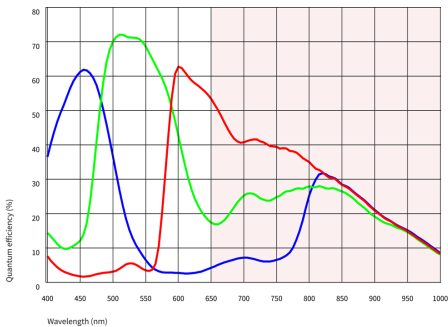
The model is in series and available for the long term.



Specification

Sensor

|                                         |                      |
|-----------------------------------------|----------------------|
| Sensor type                             | CMOS Color           |
| Shutter                                 | Rolling shutter      |
| Sensor characteristic                   | Linear               |
| Readout mode                            | Progressive scan     |
| Pixel Class                             | 8 MP                 |
| Resolution                              | 8.41 Mpix            |
| Resolution (h x v)                      | 3864 x 2176 Pixel    |
| Aspect ratio                            | 16:9                 |
| ADC                                     | 12 bit               |
| Color depth (camera)                    | 12 bit               |
| Optical sensor class                    | 1/3"                 |
| Optical Size                            | 5.603 mm x 3.155 mm  |
| Optical sensor diagonal                 | 6.43 mm (1/2.49")    |
| Pixel size                              | 1.45 µm              |
| Micro lens shift                        | 0.00                 |
| Manufacturer                            | Sony                 |
| Sensor Model                            | IMX415-AAQR-C        |
| Gain (master/RGB)                       | 31.6x/-              |
| AOI horizontal                          | same frame rate      |
| AOI vertical                            | increased frame rate |
| AOI image width / step width            | 24 / 24              |
| AOI image height / step width           | 40 / 4               |
| 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 (in 8-bit mode) | 25 fps             |
| Frame rate trigger (continuous)         | 25 fps             |
| Frame rate trigger (maximum)            | 25 fps             |
| 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.

|                                     |                                 |
|-------------------------------------|---------------------------------|
| Device temperature during operation | 0 °C - 55 °C / 32 °F - 131 °F   |
| Device temperature during storage   | -20 °C - 60 °C / -4 °F - 140 °F |
| Humidity (relative, non-condensing) | 20 % - 80 %                     |

## Connectors

|                     |                            |
|---------------------|----------------------------|
| Interface connector | USB 3.0 micro-B, screwable |
| 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 |                                            |



## Design

|                  |                             |
|------------------|-----------------------------|
| Lens Mount       | C-Mount                     |
| IP code          | IP30                        |
| Dimensions H/W/L | 29.0 mm x 29.0 mm x 17.0 mm |
| Mass             | 61 g                        |

## Features

### Image Acquisition

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

### 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                  | BayerGR10g40IDS<br>BayerGR12g24IDS                                  |
|                           | Region of interest             | ✓                                                                   |
|                           | Decimation (FPGA)              | -                                                                   |
|                           | Decimation (Sensor)            | -                                                                   |
|                           | Binning (FPGA)                 | -                                                                   |
|                           | Binning (Sensor)               | 2x2<br>Horizontal and vertical binning can only be applied jointly. |
|                           |                                |                                                                     |
| Others                    | Chunks                         | -                                                                   |
|                           | Sequencer                      | -                                                                   |
|                           | Events                         | -                                                                   |
|                           | Firmware update                | ✓                                                                   |
|                           | 1st supported firmware version | 3.20                                                                |