

In development

The model is not yet in series production, but will be introduced shortly.

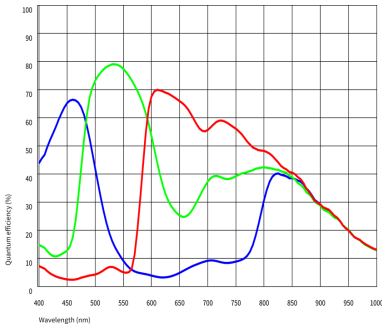


Specification

- PRELIMINARY -

Sensor

|                                         |                      |
|-----------------------------------------|----------------------|
| Sensor type                             | CMOS Color           |
| Shutter                                 | Global Shutter       |
| Sensor characteristic                   | Linear               |
| Readout mode                            | Progressive scan     |
| Pixel Class                             | 3 MP                 |
| Resolution                              | 3.20 Mpix            |
| Resolution (h x v)                      | 2064 x 1552 Pixel    |
| Aspect ratio                            | 4:3                  |
| ADC                                     | 12 bit               |
| Color depth (camera)                    | 12 bit               |
| Optical sensor class                    | 1/3.1"               |
| Optical Size                            | 4.644 mm x 3.492 mm  |
| Optical sensor diagonal                 | 5.81 mm (1/2.75")    |
| Pixel size                              | 2.25 μm              |
| Manufacturer                            | Sony                 |
| Sensor Model                            | IMX900-AQR-C         |
| Gain (master/RGB)                       | 16x/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                      |                      |
| Binning vertical                        |                      |
| Binning method                          |                      |
| Binning factor                          | -                    |
| Subsampling horizontal                  | increased frame rate |
| Subsampling vertical                    | increased frame rate |
| Subsampling method                      | M/C automatic        |
| Subsampling factor                      | -                    |



## Model

|                                   |                    |
|-----------------------------------|--------------------|
| Frame rate freerun mode           | 39 fps             |
| Frame rate trigger (continuous)   | 39 fps             |
| Frame rate trigger (maximum)      | 50 fps             |
| Exposure time (minimum - maximum) | 0.023 ms - 2000 ms |
| Power consumption                 | 2 W - 3.4 W        |

## Ambient conditions

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

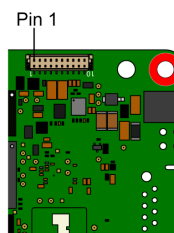
|                                              |                                 |
|----------------------------------------------|---------------------------------|
| Allowed device temperature during operation  | 0 °C - 80 °C / 32 °F - 176 °F   |
| Allowed ambient temperature during operation | 0 °C - 25 °C / 32 °F - 77 °F    |
| Allowed ambient temperature during storage   | -20 °C - 60 °C / -4 °F - 140 °F |
| Humidity (relative, non-condensing)          | 20 % - 80 %                     |

## Connectors

|                     |                                          |
|---------------------|------------------------------------------|
| Interface connector | ZIF                                      |
| I/O connector       | 10-pin Wuerth connector (WR-WTB 1.00 mm) |
| Power supply        | 12 V - 24 V                              |

## Pin assignment I/O connector

|    |                                                  |
|----|--------------------------------------------------|
| 1  | Power supply (VCC) 12-24 V                       |
| 2  | Power supply, ground                             |
| 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 SCL (signal clock) 3.3 V                     |
| 6  | I2C SDA (signal data) 3.3 V                      |
| 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, max. 100 mA                |



## Design

|                  |                             |
|------------------|-----------------------------|
| Lens Mount       | S-Mount                     |
| IP code          | -                           |
| Dimensions H/W/L | 50.0 mm x 50.0 mm x 23.5 mm |
| Mass             | 27 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                   | - |

|                           |                                |                                                                |
|---------------------------|--------------------------------|----------------------------------------------------------------|
| 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<br>BayerRG10p<br>BayerRG12<br>BayerRG12p<br>BayerRG10 |
|                           | Region of interest             | ✓                                                              |
|                           | Decimation (FPGA)              | ✓                                                              |
|                           | Decimation (Sensor)            | 2x2                                                            |
|                           | Binning (FPGA)                 | -                                                              |
|                           | Binning (Sensor)               | -                                                              |
| Others                    | IP settings                    | ✓                                                              |
|                           | Bandwidth management           | ✓                                                              |
|                           | Chunks                         | -                                                              |
|                           | Sequencer                      | -                                                              |
|                           | PTP                            | ✓                                                              |
|                           | Firmware update                | ✓                                                              |
|                           | 1st supported firmware version |                                                                |