

In series

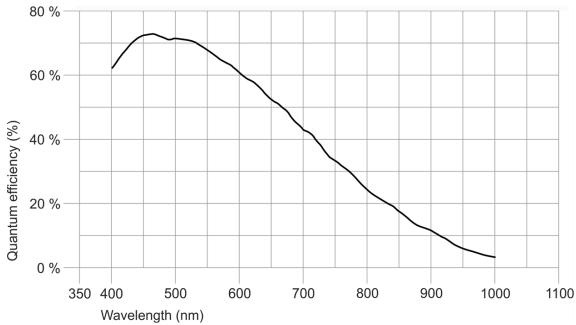
The model is in series and available for the long term.



Specification

Sensor

|                                         |                       |
|-----------------------------------------|-----------------------|
| Sensor type                             | CMOS Mono             |
| Shutter                                 | Global Shutter        |
| Sensor characteristic                   | Linear                |
| Readout mode                            | Progressive scan      |
| Pixel Class                             | 16 MP                 |
| Resolution                              | 16.20 Mpix            |
| Resolution (h x v)                      | 5328 x 3040 Pixel     |
| Aspect ratio                            | 16:9                  |
| ADC                                     | 12 bit                |
| Color depth (camera)                    | 12 bit                |
| Optical sensor class                    | 1.1"                  |
| Optical Size                            | 14.599 mm x 8.330 mm) |
| Optical sensor diagonal                 | 16.81 mm              |
| Pixel size                              | 2.74 µm               |
| Manufacturer                            | Sony                  |
| Sensor Model                            | IMX542-AAMJ-C         |
| Gain (master/RGB)                       | -/-                   |
| AOI horizontal                          | same frame rate       |
| AOI vertical                            | increased frame rate  |
| AOI image width / step width            | 256 / 2               |
| AOI image height / step width           | 1 / 1                 |
| AOI position grid (horizontal/vertical) | 2 / 1                 |
| Binning horizontal                      | same frame rate       |
| Binning vertical                        | same frame rate       |
| Binning method                          | M/C automatic         |
| Binning factor                          | 2 / 4 / 8             |
| Subsampling horizontal                  | same frame rate       |
| Subsampling vertical                    | same frame rate       |
| Subsampling method                      | M/C automatic         |
| Subsampling factor                      | 2, 4, 8               |



Model

|                                   |                    |
|-----------------------------------|--------------------|
| Frame rate freerun mode           | 25 fps             |
| Frame rate trigger (continuous)   | 25 fps             |
| Frame rate trigger (maximum)      | 26 fps             |
| Exposure time (minimum - maximum) | 0.015 ms - 2000 ms |
| Long exposure (maximum)           | 120000 ms          |
| Power consumption                 | 1.9 W - 4.5 W      |
| Image memory                      | 128 MB             |

Ambient conditions

The temperature values given below refer to the outer device temperature of the camera housing.

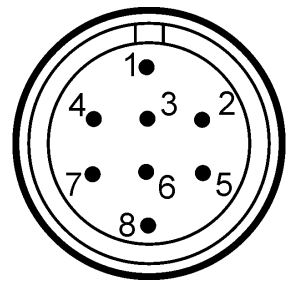
|                                             |                                 |
|---------------------------------------------|---------------------------------|
| Allowed device temperature during operation | 0 °C - 55 °C / 32 °F - 131 °F   |
| Allowed device temperature during storage   | -20 °C - 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 Hirose connector (HR25-7TR-8PA(73)) |
| Power supply        | USB cable                                 |

Pin assignment I/O connector

|   |                                             |
|---|---------------------------------------------|
| 1 | Ground (GND)                                |
| 2 | Flash output with optocoupler (-) - Line 1  |
| 3 | General Purpose I/O (GPIO) 1 - Line 2       |
| 4 | Trigger input with optocoupler (-) - Line 0 |
| 5 | Flash output with optocoupler (+) - Line 1  |
| 6 | General Purpose I/O (GPIO) 2                |
| 7 | Trigger input with optocoupler (+) - Line 0 |
| 8 | Output supply voltage, 5 V (100 mA)         |



Design

|                  |                             |
|------------------|-----------------------------|
| Lens Mount       | C-Mount                     |
| IP code          | IP30                        |
| Dimensions H/W/L | 29.0 mm x 29.0 mm x 29.0 mm |
| Mass             | 50 g                        |

Features

|                   |                             |   |
|-------------------|-----------------------------|---|
| Image Acquisition | Freerun                     | ✓ |
|                   | Software trigger            | ✓ |
|                   | Hardware trigger            | ✓ |
|                   | Trigger controlled exposure | ✓ |
|                   | Denoiser                    | ✓ |
|                   | Long exposure               | ✓ |
|                   | Line scan                   | - |
|                   | Line scan highspeed         | - |
| 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       | Mono8<br>Mono10<br>Mono10p<br>Mono12<br>Mono12p                     |
| Region of interest  | ✓                                                                   |
| Decimation (FPGA)   | ✓                                                                   |
| Decimation (Sensor) | 2x2                                                                 |
| 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 | 3.31 |