

**In series**

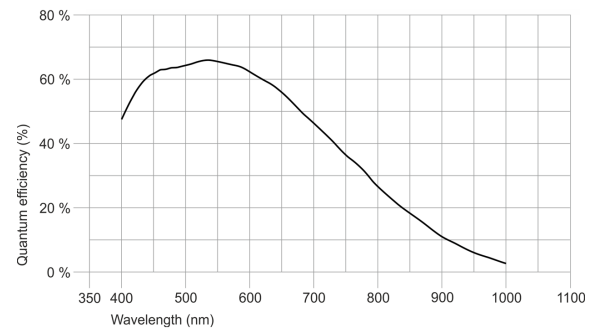
The model is in series and available for the long term.



## Specification

### Sensor

|   |                        |
|---|------------------------|
| Sensor type                             | CMOS Mono              |
| Shutter                                 | Global Shutter         |
| Sensor characteristic                   | Linear                 |
| Readout mode                            | Progressive scan       |
| Pixel Class                             | 12 MP                  |
| Resolution                              | 12.29 Mpix             |
| Resolution (h x v)                      | 4096 x 3000 Pixel      |
| Aspect ratio                            | 4:3                    |
| ADC                                     | 12 bit                 |
| Color depth (camera)                    | 12 bit                 |
| Optical sensor class                    | 1.1"                   |
| Optical Size                            | 14.131 mm x 10.350 mm) |
| Optical sensor diagonal                 | 17.52 mm               |
| Pixel size                              | 3.45 μm                |
| Manufacturer                            | Sony                   |
| Sensor Model                            | IMX304LLR-C            |
| Gain (master/RGB)                       | 24x/4x                 |
| AOI horizontal                          | same frame rate        |
| AOI vertical                            | increased frame rate   |
| AOI image width / step width            | 264 / 8                |
| AOI image height / step width           | 1 / 1                  |
| AOI position grid (horizontal/vertical) | 8 / 1                  |
| Binning horizontal                      | increased frame rate   |
| Binning vertical                        | increased 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           | 10 fps             |
| Frame rate trigger (continuous)   | 10 fps             |
| Frame rate trigger (maximum)      | 10 fps             |
| Exposure time (minimum - maximum) | 0.046 ms - 2000 ms |
| Long exposure (maximum)           | 90000 ms           |
| Power consumption                 | 1.3 W - 3.9 W      |
| Image memory                      | 128 MB             |

## 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 | GigE RJ45, screwable                      |
| I/O connector       | 8-pin Hirose connector (HR25-7TR-8PA(73)) |
| Power supply        | 12 V - 24 V or PoE                        |

## 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 | Input power supply (VCC) 12-24 V DC         |



## Design

|                  |                             |
|------------------|-----------------------------|
| Lens Mount       | C-Mount                     |
| IP code          | IP30                        |
| Dimensions H/W/L | 34.0 mm x 44.0 mm x 47.0 mm |
| Mass             | 107 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                    | -   |
| On-board Image Processing | Pixel formats                  | Mono8<br>Mono10<br>Mono10p<br>Mono12<br>Mono12p |
|                           | Region of interest             | ✓   |
|                           | Decimation (FPGA)              | ✓   |
|                           | Decimation (Sensor)            | -   |
|                           | Binning (FPGA)                 | ✓   |
|                           | Binning (Sensor)               | 2x2<br>Increases frame rate.                    |
|                           |                                |   |
| Others                    | IP settings                    | ✓   |
|                           | Bandwidth management           | ✓   |
|                           | Chunks                         | ✓   |
|                           | Sequencer                      | ✓   |
|                           | PTP                            | ✓   |
|                           | Firmware update                | ✓   |
|                           | 1st supported firmware version | 1.4   |