

In series

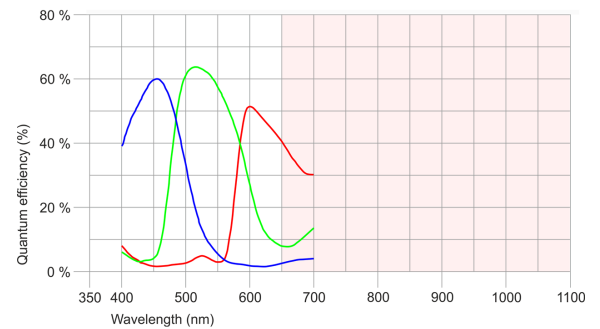
The model is in series and available for the long term.



Specification

Sensor

| | |
|---|--|
| Sensor type | CMOS Color |
| Shutter | Rolling shutter / Global Start Shutter |
| Sensor characteristic | Linear |
| Readout mode | Progressive scan |
| Pixel Class | 6 MP |
| Resolution | 6.41 Mpix |
| Resolution (h x v) | 3088 x 2076 Pixel |
| Aspect ratio | 3:2 |
| ADC | 12 bit |
| Color depth (camera) | 12 bit |
| Optical sensor class | 1/1.8" |
| Optical Size | 7.411 mm x 4.982 mm) |
| Optical sensor diagonal | 8.93 mm (1/1.79") |
| Pixel size | 2.4 µm |
| Manufacturer | Sony |
| Sensor Model | IMX178LQJ-C |
| Gain (master/RGB) | 14.5x/5x |
| AOI horizontal | same frame rate |
| AOI vertical | increased frame rate |
| AOI image width / step width | 88 / 8 |
| AOI image height / step width | 2 / 2 |
| AOI position grid (horizontal/vertical) | 8 / 2 |
| 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 | 59 fps |
| Frame rate trigger (continuous) | 57 fps |
| Frame rate trigger (maximum) | 57 fps |
| Exposure time (minimum - maximum) | 0.013 ms - 1060 ms |
| Long exposure (maximum) | 60000 ms |
| Power consumption | 1.4 W - 3 W |
| Image memory | 128 MB |

Ambient conditions

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

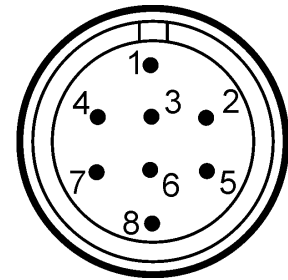
| | |
|---|---------------------------------|
| Allowed device temperature during operation | 0 °C - 55 °C / 32 °F - 131 °F |
| Allowed device temperature during storage | -20 °C - 60 °C / -4 °F - 140 °F |
| Humidity (relative, non-condensing) | 20 % - 80 % |

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 | 48 g |

Features

Image Acquisition

| | |
|-----------------------------|---|
| Freerun | ✓ |
| Software trigger | ✓ |
| Hardware trigger | ✓ |
| Trigger controlled exposure | - |
| Denoisier | ✓ |
| 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 | Mono8 BayerRG8 BayerRG10 BayerRG10p BayerRG12 BayerRG12p BGR8 RGB8 BGR10p32 RGB10p32 |
| Region of interest | ✓ |
| Decimation (FPGA) | ✓ |
| Decimation (Sensor) | - |
| Binning (FPGA) | ✓ |
| Binning (Sensor) | 2x2 Frame rate does not increase. Horizontal and vertical binning can only be applied jointly. |

Others

| | |
|--------------------------------|------|
| Chunks | ✓ |
| Sequencer | - |
| Events | ✓ |
| Firmware update | ✓ |
| 1st supported firmware version | 2.20 |