

U3-3890CP-C-HQ Rev.2.2 (AB12694)

In series

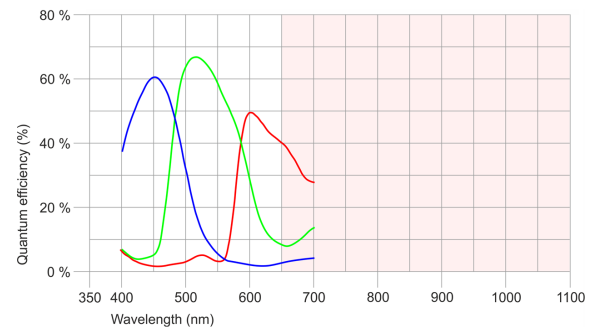
The model is in series and available for the long term.



Specification

Sensor

Sensor type	CMOS Color
Shutter	Rolling shutter
Sensor characteristic	Linear
Readout mode	Progressive scan
Pixel Class	12 MP
Resolution	12.00 Mpix
Resolution (h x v)	4000 x 3000 Pixel
Aspect ratio	4:3
ADC	12 bit
Color depth (camera)	12 bit
Optical sensor class	1/1.8"
Optical Size	7.400 mm x 5.550 mm
Optical sensor diagonal	9.25 mm (1/1.73")
Pixel size	1.85 µm
Micro lens shift	0.00
Manufacturer	Sony
Sensor Model	IMX226CQJ-C
Gain (master/RGB)	17x/15x
AOI horizontal	same frame rate
AOI vertical	same frame rate
AOI image width / step width	256 / 16
AOI image height / step width	2 / 2
AOI position grid (horizontal/vertical)	16 / 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



Subject to technical modifications (2023-12-12)

Model

Frame rate freerun mode (in 8-bit mode)	33 fps
Frame rate trigger (continuous)	17 fps
Frame rate trigger (maximum)	17 fps
Exposure time (minimum - maximum)	0.040 ms - 609 ms
Long exposure (maximum)	30000 ms
Power consumption	1.8 W - 2.9 W
Image memory	128 MB

Ambient conditions

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

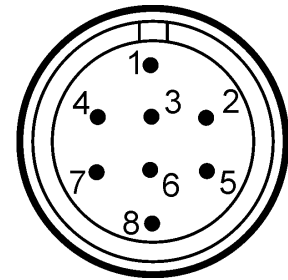
Device temperature during operation	0 °C - 55 °C / 32 °F - 131 °F
Device temperature during storage	-20 °C - 60 °C / -4 °F - 140 °F
Humidity (relative, non-condensing)	20 % - 80 %

Connectors

Interface connector	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	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 Horizontal and vertical binning can only be applied jointly.

Others

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