

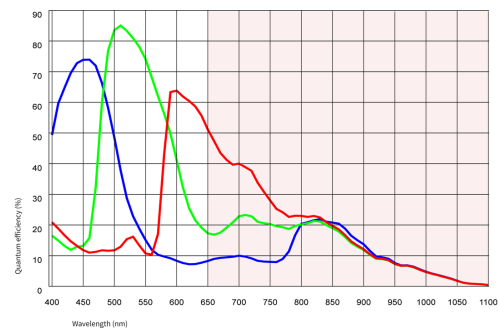
In series
The model is in series and available for the long term.



Specification

Sensor

Sensor type	CMOS Color
Shutter	Rolling shutter / Global Start Shutter
Sensor characteristic	Linear
Pixel Class	5 MP
Resolution	5.04 Mpix
Resolution (h x v)	2592 x 1944 Pixel
Aspect ratio	4:3
ADC	12 bit
Color depth (camera)	12 bit
Optical sensor class	1/2.5"
Optical Size	5.702 mm x 4.277 mm
Optical sensor diagonal	7.13 mm 1/2.5"
Pixel size	2.2 µm
CRA (Chief Ray Angle)	9 °
Manufacturer	Onsemi
Sensor Model	AR0521SR2C09SURA0
Gain (master/RGB)	15x/8x
AOI horizontal	same frame rate
AOI vertical	increased frame rate
AOI image width / step width	48 / 12
AOI image height / step width	4 / 2
AOI position grid (horizontal/vertical)	4 / 2
Binning horizontal	increased frame rate
Binning vertical	increased frame rate
Binning method	Horizontal: addition / Vertical: addition
Binning factor	2x2
Decimation (subsampling) horizontal	increased frame rate
Decimation (subsampling) vertical	increased frame rate
Decimation (subsampling) method	M/C automatic



Model

Frame rate freerun mode	49 fps
Frame rate trigger (continuous)	46 fps
Frame rate trigger (maximum)	46 fps
Exposure time (minimum - maximum)	0.016 ms - 658 ms
Power consumption	0.5 W - 1 W
Image memory	-

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 ambient temperature during operation	0 °C - °C / 32 °F - 32 °F
Allowed ambient 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 Wuerth connector
Power supply	USB cable

Pin assignment I/O connector

1	Voltage output 3.3 V
2	Ground (GND)
3	Flash output without optocoupler - Line 1
4	Trigger input without optocoupler - Line 0
5	General Purpose I/O (GPIO) 1 - Line 2
6	General Purpose I/O (GPIO) 2 - Line 3
7	Ground (GND)
8	USB Power: 5 V, max. 400 mA



Design

Lens Mount	C-Mount
IP code	IP30
Dimensions H/W/L	29.0 mm x 29.0 mm x 17.0 mm
Mass	61 g
Housing material	Zinc nickel-plated

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	-
Global start	✓

Flashing

Flashing	✓
PWM flashing	-

Subject to technical modifications (2026-08-26)

U3-3680XCP-C-HQ Rev.1.2 (1008725)

Image Adjustments

Auto exposure	-
Auto gain	-
Auto whitebalance	-
Color correction	-
Gamma	-
LUT	-
Mirror/flip	X/Y

On-board Image Processing

Pixel formats	BayerGR8 BayerGR10g40IDS BayerGR12g24IDS
Region of interest	✓
Decimation (FPGA)	-
Decimation (Sensor)	-
Binning (FPGA)	-
Binning (Sensor)	2x2 Increases frame rate.

Others

Chunks	-
Sequencer	-
Events	-
Firmware update	✓
1st supported firmware version	3.20