

In series

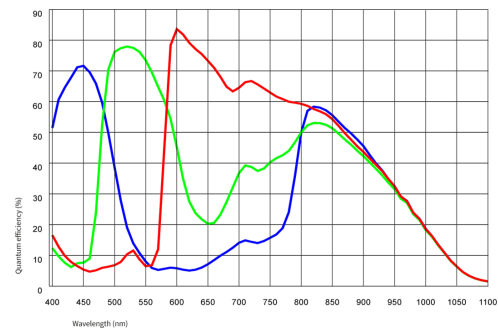
The model is in series and available for the long term.



Specification

Sensor

Sensor type	CMOS Color
Shutter	Rolling shutter
Sensor characteristic	Linear
Readout mode	-
Pixel Class	20 MP
Resolution	19.80 Mpix
Resolution (h x v)	5136 x 3856 Pixel
Aspect ratio	4:3
ADC	10 bit
Color depth (camera)	10 bit
Optical sensor class	1/1.8"
Optical Size	7.168 mm x 5.376 mm
Optical sensor diagonal	8.96 mm (1/1.79")
Pixel size	1.4 μm
Manufacturer	Onsemi
Sensor Model	AR2020CSSC13SMTA0-DP
Gain (master/RGB)	8x/16x
AOI horizontal	same frame rate
AOI vertical	increased frame rate
AOI image width / step width	648 / 12
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	
Binning factor	-
Subsampling horizontal	
Subsampling vertical	
Subsampling method	
Subsampling factor	-



Model

Frame rate freerun mode	14 fps
Frame rate trigger (continuous)	14 fps
Frame rate trigger (maximum)	14 fps
Exposure time (minimum - maximum)	0.017 ms - 1144 ms
Power consumption	0.5 W - 1.1 W

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 - 80 °C / -4 °F - 176 °F
Humidity (relative, non-condensing)	20 % - 80 %

Connectors

Interface connector	USB Type-C
I/O connector	-
Power supply	USB cable

Design

Lens Mount	S-Mount
IP code	IP30
Dimensions H/W/L	47.0 mm x 46.0 mm x 25.0 mm
Mass	36 g
Housing material	Plastic

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

On-board Image Processing

Pixel formats	BayerGR8 BayerGR10g40IDS
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	3.38