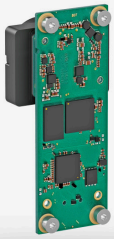
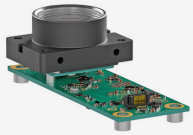
U3-3181ACP-C-HQ Rev.1.2 (1008903)

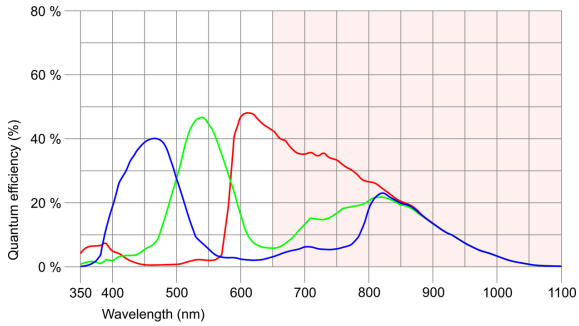
In series
The model is in series and available for the long term.

Specification

Sensor

Sensor type	CMOS Color
Shutter	-
Sensor characteristic	Linear
Pixel Class	5 MP
Resolution	5.31 Mpix
Resolution (h x v)	2592 x 2048 Pixel
Aspect ratio	5:4
ADC	10 bit
Color depth (camera)	0 bit
Optical sensor class	1"
Optical Size	12.442 mm x 9.830 mm
Optical sensor diagonal	15.86 mm 1"
Pixel size	4.8 µm
CRA (Chief Ray Angle)	5.4 °
Manufacturer	Onsemi
Sensor Model	NOIP1SE5000A-LTI
Gain (master/RGB)	4x/4x
AOI horizontal	-
AOI vertical	-
AOI image width / step width	- / -
AOI image height / step width	- / -
AOI position grid (horizontal/vertical)	- / -
Binning horizontal	-
Binning vertical	-
Binning method	-
Binning factor	-
Decimation (subsampling) horizontal	-
Decimation (subsampling) vertical	-
Decimation (subsampling) method	



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Model

Frame rate freerun mode	-
Frame rate trigger (maximum)	-
Exposure time (minimum - maximum)	-
Power consumption	0 W - 0 W
Image memory	128 MB

Ambient conditions

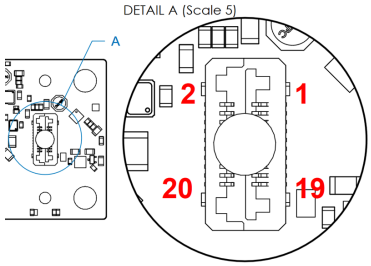
For PCB versions, refer to the separate hints in the respective documentation.

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	Samtec LSHM 20-pin
I/O connector	20-pin header (Samtec LSHM-110-L02.5-L-DV-A-N-K-TR)
Power supply	USB cable

Pin assignment I/O connector



1	Input power supply (VCC), 5 V DC USB
2	Do not connect (for future use)
3	Input power supply (VCC), 5 V DC USB
4	Do not connect (for future use)
5	USB 2 data (-)
6	I2C SDA (signal data) 3.3 V
7	USB 2 data (+)
8	I2C SCL (signal clock) 3.3 V
9	Ground (GND)
10	Trigger input without optocoupler 3.3 V
11	USB 3 TX (-)
12	Flash output without optocoupler 3.3 V 8 mA
13	USB 3 TX (+)
14	General Purpose I/O (GPIO) 1, 3.3 V
15	Ground (GND)
16	General Purpose I/O (GPIO) 2, 3.3 V
17	USB 3 RX (-)
18	Do not connect (for future use)
19	USB 3 RX (+)
20	Output power voltage, 5 V (900 mA – camera current depending on sensor)

Design

Lens Mount	C-Mount
IP code	-
Dimensions H/W/L	84.0 mm x 40.0 mm x 29.7 mm
Mass	41 g
Housing material	-

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).

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Image Acquisition	Freerun	-
	Software trigger	-
	Hardware trigger	-
	Trigger controlled exposure	-
	Denoiser	-
	Long exposure	-
	Line scan	-
Flashing	Flashing	-
	PWM flashing	-
Image Adjustments	Auto exposure	-
	Auto gain	-
	Auto whitebalance	-
	Color correction	-
	Gamma	-
	LUT	-
	Mirror/flip	
On-board Image Processing	Pixel formats	
	Region of interest	✓
	Decimation (FPGA)	-
	Decimation (Sensor)	
	Binning (FPGA)	-
Others	Chunks	-
	Sequencer	-
	Events	-
	Firmware update	-
	1st supported firmware version	3.6

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