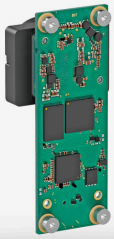
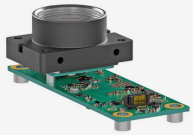
U3-3801ACP-M-GL Rev.1.2 (AB11344)

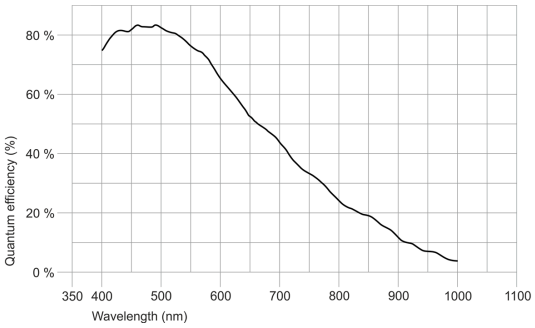
In series
The model is in series and available for the long term.

Specification

Sensor

Sensor type	CMOS Mono
Shutter	Rolling shutter
Sensor characteristic	Linear
Pixel Class	20 MP
Resolution	20.44 Mpix
Resolution (h x v)	5536 x 3692 Pixel
Aspect ratio	3:2
ADC	12 bit
Color depth (camera)	12 bit
Optical sensor class	1"
Optical Size	13.286 mm x 8.861 mm
Optical sensor diagonal	15.97 mm 1"
Pixel size	2.4 µm
CRA (Chief Ray Angle)	0 °
Manufacturer	Sony
Sensor Model	IMX183CLK-J
Gain (master/RGB)	16x/-
AOI horizontal	same frame rate
AOI vertical	same frame rate
AOI image width / step width	256 / 2
AOI image height / step width	1 / 1
AOI position grid (horizontal/vertical)	2 / 1
Binning horizontal	increased frame rate
Binning vertical	increased frame rate
Binning method	Horizontal: weighted / Vertical: weighted
Binning factor	2x2
Decimation (subsampling) horizontal	-
Decimation (subsampling) vertical	-
Decimation (subsampling) method	M/C automatic



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Model

Frame rate freerun mode	19 fps
Frame rate trigger (continuous)	10 fps
Frame rate trigger (maximum)	10 fps
Exposure time (minimum - maximum)	0.053 ms - 814 ms
Long exposure (maximum)	30000 ms
Power consumption	1.8 W - 3.5 W
Image memory	128 MB

Ambient conditions

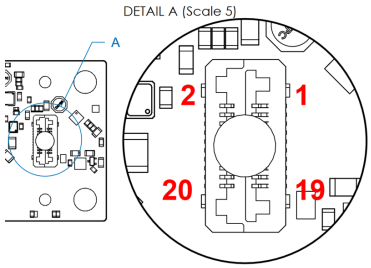
For PCB versions, refer to the separate hints in the respective documentation.

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	44 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	-
	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 Mono10 Mono10p Mono12 Mono12p
	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	2.20.17926

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