UI-3180CP-M-GL Rev.2.1 (AB02546)

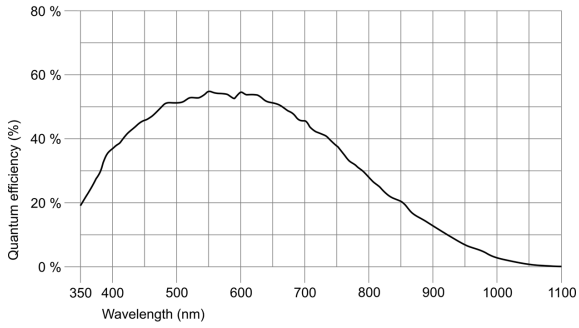
Not recommended for new designs
The camera model is no longer recommended for new application development.



Specification

Sensor

Sensor type	CMOS Mono
Shutter	Global 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)	12 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	NOIP1SN5000A-LTI
Gain (master/RGB)	4x/4x
AOI horizontal	increased frame rate
AOI vertical	increased frame rate
AOI image width / step width	128 / 16
AOI image height / step width	2 / 2
AOI position grid (horizontal/vertical)	16 / 2
Binning horizontal	same frame rate
Binning vertical	same frame rate
Binning method	Horizontal: mean / Vertical: mean
Binning factor	2
Decimation (subsampling) horizontal	increased frame rate
Decimation (subsampling) vertical	increased frame rate
Decimation (subsampling) method	M/C automatic



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Model

Pixel clock range	120 MHz - 480 MHz
Frame rate freerun mode	73 fps
Frame rate trigger (continuous)	73 fps
Frame rate trigger (maximum)	81 fps
Exposure time (minimum - maximum)	0.052 ms - 500 ms
Long exposure (maximum)	1000 ms
Power consumption	1.6 W - 4.3 W
Image memory	128 MB
Special features	IDS line scan mode Overlap trigger Sensor source gain Multi-AOI

Ambient conditions

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

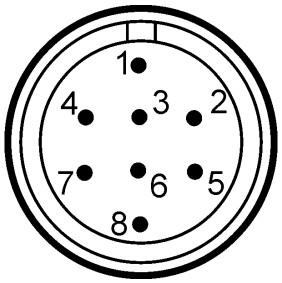
Allowed device temperature during operation	0 °C - 55 °C / 32 °F - 131 °F
Allowed ambient temperature during storage	-20 °C - 60 °C / -4 °F - 140 °F
Humidity (relative, non-condensing)	20 % - 80 %

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 (-)
3	General Purpose I/O (GPIO) 1
4	Trigger input with optocoupler (-)
5	Flash output with optocoupler (+)
6	General Purpose I/O (GPIO) 2
7	Trigger input with optocoupler (+)
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	50 g
Housing material	Magnesium / stainless steel

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	✓

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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	-
	Firmware update	-
	1st supported firmware version	4.90.3

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