U3-3140CP-M-GL Rev.2.2 (1008062)

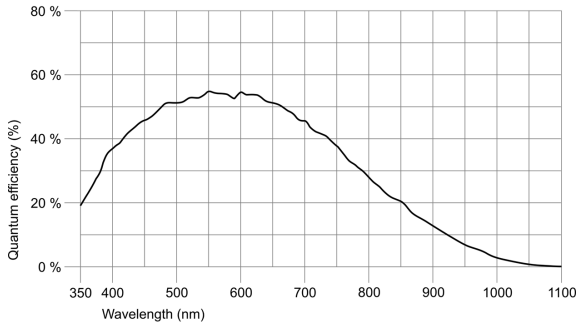
In series
The model is in series and available for the long term.



Specification

Sensor

Sensor type	CMOS Mono
Shutter	Global Shutter
Sensor characteristic	Linear
Pixel Class	1.3 MP
Resolution	1.31 Mpix
Resolution (h x v)	1280 x 1024 Pixel
Aspect ratio	5:4
ADC	10 bit
Color depth (camera)	10 bit
Optical sensor class	1/2"
Optical Size	6.144 mm x 4.915 mm
Optical sensor diagonal	7.87 mm 1/2"
Pixel size	4.8 µm
CRA (Chief Ray Angle)	2.7 °
Manufacturer	Onsemi
Sensor Model	NOIP1SN1300A-QDI
Gain (master/RGB)	16x/-
AOI horizontal	same frame rate
AOI vertical	increased 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	-
Binning vertical	-
Binning method	Horizontal: addition / Vertical: addition
Binning factor	-
Decimation (subsampling) horizontal	-
Decimation (subsampling) vertical	-
Decimation (subsampling) method	M/C automatic



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Model

Frame rate freerun mode	172 fps
Frame rate trigger (continuous)	172 fps
Frame rate trigger (maximum)	172 fps
Exposure time (minimum - maximum)	0.05 ms - 2000 ms
Line rate freerun mode (line scan)	7826 1/s
Line rate trigger mode (line scan)	7826 1/s
Lines per frame (line scan)	8000
Power consumption	2.4 W - 3.1 W
Image memory	128 MB

Ambient conditions

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

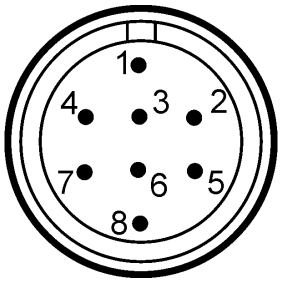
Allowed device temperature during operation	0 °C - 55 °C / 32 °F - 131 °F
Allowed ambient temperature during storage	-20 °C - 60 °C / -4 °F - 140 °F
Humidity (relative, non-condensing)	20 % - 80 %

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 (-) - Line 1
3	General Purpose I/O (GPIO) 1 - Line 2
4	Trigger input with optocoupler (-) - Line 0
5	Flash output with optocoupler (+) - Line 1
6	General Purpose I/O (GPIO) 2
7	Trigger input with optocoupler (+) - Line 0
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	52 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	Y
On-board Image Processing	Pixel formats	Mono8 Mono10 Mono10p
	Region of interest	✓
	Decimation (FPGA)	✓
	Decimation (Sensor)	
	Binning (FPGA)	✓
	Binning (Sensor)	
Others	Chunks	-
	Sequencer	-
	Events	✓
	Firmware update	✓
	1st supported firmware version	3.4

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