UI-5140FA-M-GL Rev.1.2 (AB12064)

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

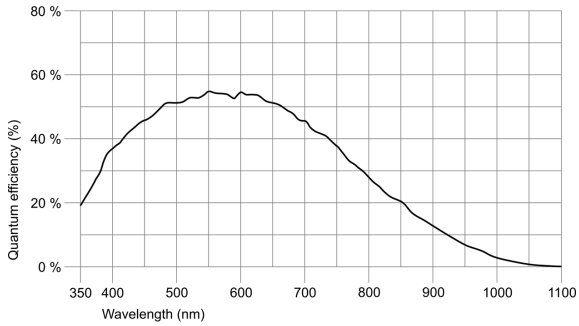




Specification

Sensor

Sensor type	CMOS Mono
Shutter	Global Shutter
Sensor characteristic	Linear
Pixel Class	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)	12 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)	4x/4x
AOI horizontal	increased frame rate
AOI vertical	increased frame rate
AOI image width / step width	120 / 8
AOI image height / step width	2 / 2
AOI position grid (horizontal/vertical)	8 / 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 - 152 MHz
Frame rate freerun mode	88 fps
Frame rate trigger (continuous)	88 fps
Frame rate trigger (maximum)	88 fps
Exposure time (minimum - maximum)	0.069 ms - 434 ms
Long exposure (maximum)	5000 ms
Power consumption	1.7 W - 2.8 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.

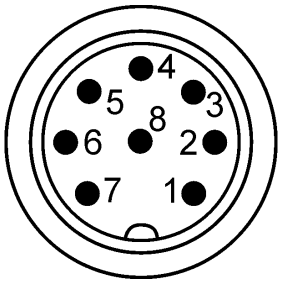
Allowed device temperature during operation	0 °C - 55 °C / 32 °F - 131 °F
Allowed ambient temperature during storage	-20 °C - 60 °C / -4 °F - 140 °F
Humidity (relative, non-condensing)	0 % - 100 %

Connectors

Interface connector	GigE M12, screwable
I/O connector	8-pin Binder connector (Binder series 712: 09-0427-020-08)
Power supply	12 V - 24 V or PoE

Pin assignment I/O connector

1	Trigger input with optocoupler (+)
2	Input power supply (VCC) 12-24 V DC
3	General Purpose I/O (GPIO) 1
4	Ground (GND)
5	Flash output with optocoupler (+)
6	Flash output with optocoupler (-)
7	Trigger input with optocoupler (-)
8	General Purpose I/O (GPIO) 2



Design

Lens Mount	C-Mount
IP code	IP65, IP67
Dimensions H/W/L	41.0 mm x 53.0 mm x 42.7 mm
Mass	173 g
Housing material	Aluminum

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)	(2,4)x(2,4)
	Binning (FPGA)	-
Others	Chunks	-
	Sequencer	-
	Firmware update	-
	1st supported firmware version	4.96.1

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