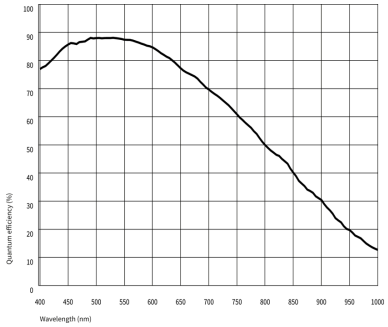
U3-33D1XLS-M Rev.1.2 (1012020)

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
Readout mode	Progressive scan
Pixel Class	3 MP
Resolution	3.20 Mpix
Resolution (h x v)	2064 x 1552 Pixel
Aspect ratio	4:3
ADC	12 bit
Color depth (camera)	12 bit
Optical sensor class	1/3.1""
Optical Size	4.644 mm x 3.492 mm
Optical sensor diagonal	5.81 mm (1/2.75")
Pixel size	2.25 µm
Manufacturer	Sony
Sensor Model	IMX900-AMR-C
Gain (master/RGB)	15.8x/-
AOI horizontal	same frame rate
AOI vertical	increased frame rate
AOI image width / step width	264 / 24
AOI image height / step width	16 / 8
AOI position grid (horizontal/vertical)	8 / 8
Binning horizontal	increased frame rate
Binning vertical	increased frame rate
Binning method	
Binning factor	2x2
Decimation (subsampling) horizontal	
Decimation (subsampling) vertical	
Decimation (subsampling) method	-
Decimation (subsampling) factor	1x1



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Model

Frame rate freerun mode	67 fps
Frame rate trigger (continuous)	70 fps
Frame rate trigger (maximum)	70 fps
Exposure time (minimum - maximum)	0.016 ms - 1999 ms
Power consumption	0.5 W - 1 W
Image memory	-

Ambient conditions

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

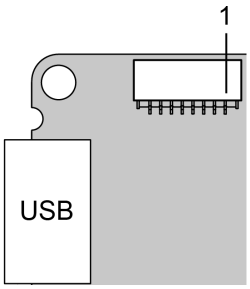
Allowed device temperature during operation	0 °C - °C / 32 °F - 32 °F
Allowed ambient temperature during operation	0 °C - 40 °C / 32 °F - 104 °F
Allowed ambient temperature during storage	-20 °C - 80 °C / -4 °F - 176 °F
Humidity (relative, non-condensing)	20 % - 80 %

Connectors

Interface connector	USB 3.0 micro-B
I/O connector	8-pin Wuerth connector
Power supply	USB cable

Pin assignment I/O connector

1	Voltage output 3.3 V
2	Ground (GND)
3	Flash output without optocoupler - Line 1
4	Trigger input without optocoupler - Line 0
5	General Purpose I/O (GPIO) 1 - Line 2
6	General Purpose I/O (GPIO) 2 - Line 3
7	Ground (GND)
8	USB Power: 5 V, max. 400 mA



Design

Lens Mount	S-Mount
IP code	-
Dimensions H/W/L	32.5 mm x 32.5 mm x 14.0 mm
Mass	13 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).

Image Acquisition	Freerun	✓
	Software trigger	✓
	Hardware trigger	✓
	Trigger controlled exposure	-
	Denoiser	-
	Long exposure	-
	Line scan	-
Flashing	Flashing	✓
	PWM flashing	-

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Image Adjustments

Auto exposure	-
Auto gain	-
Auto whitebalance	-
Color correction	-
Gamma	-
LUT	-
Mirror/flip	X/Y

On-board Image Processing

Pixel formats	Mono8 Mono10g40IDS Mono12g24IDS
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	3.62.25422

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