MV4-D1280-L01-3D06-G2

The 3D CMOS cameras MV4-D1280-L01-3D06-G2 (LUX1310) are designed for high triangulation rates. The LUXIMA CMOS image sensor LUX1310, which is optimized for high frame rates and high sensitivity, was combined with two robust algorithms to determine the triangulation line in the FPGA of the camera.

Features

- LUXIMA LUX1310 CMOS image sensor
- 1280 x 1024 pixel resolution
- 41880fps
- Global shutter
- Extended sensor and camera features
- 4x Isolated inputs or shaft encoder
- 3x Isolated outputs
- GigEVision interface
- PoE (Power Over Ethernet)

© Photonfocus AG. All rights reserved. This datasheet is subject to change by Photonfocus at any time without any prior notice and Photonfocus cannot be held responsible for any technical or typographical errors.

Quantum Efficiency Image Sensor

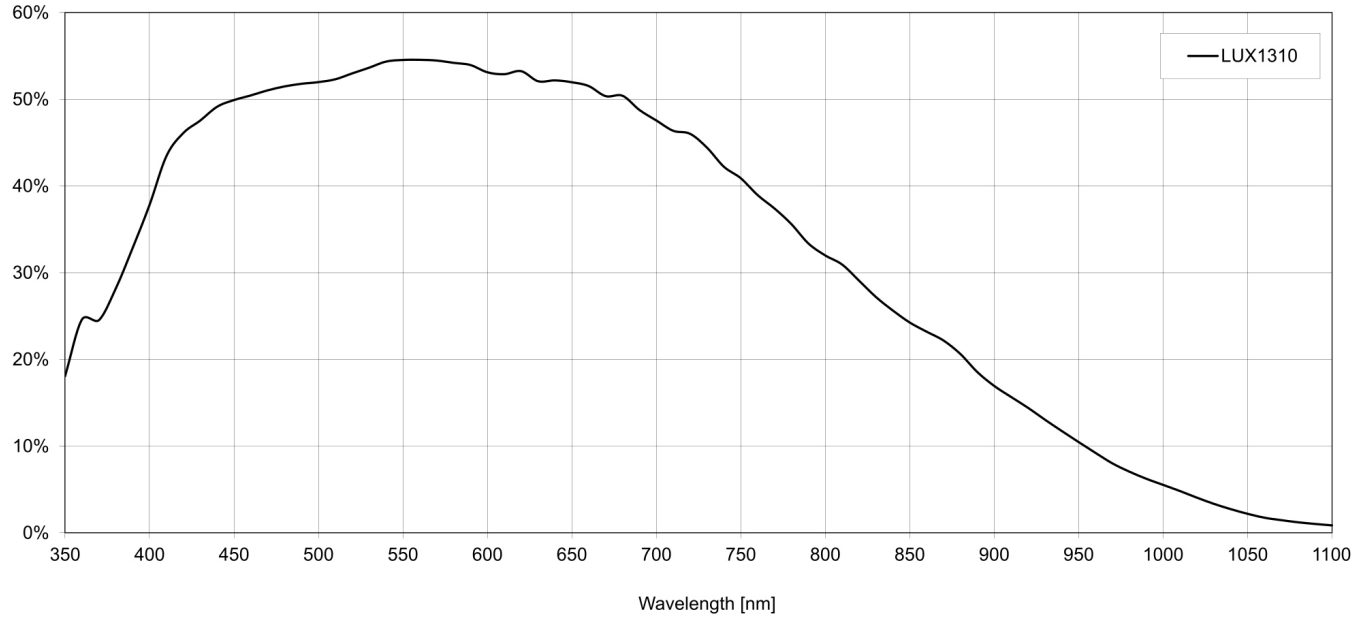


Image Sensor Specifications

Manufacturer / Type	LUXIMA, LUX1310
Technology	CMOS
Optical format	2/3"
Optical diagonal	10.82mm
Resolution	1280 x 1024
Pixel size	6.6µm x 6.6µm
Active optical area	8.45mm x 6.76mm
Dark current	41100e-/s
Read out noise	25e-
Full well capacity / SNR	17ke- / 130:1
Spectral range	Monochrome: 350 to 950nm (to 10% of peak responsivity)
Responsivity	Monochrome: 994 x 10^3 DN / (J/m^2) @ 560nm / 8bit
Quantum Efficiency	Monochrome: < 54%
Optical fill factor	45 % (without micro lenses)
Dynamic range	57dB
Characteristic curve	Linear
Shutter mode	Global shutter

© Photonfocus AG. All rights reserved. This datasheet is subject to change by Photonfocus at any time without any prior notice and Photonfocus cannot be held responsible for any technical or typographical errors.

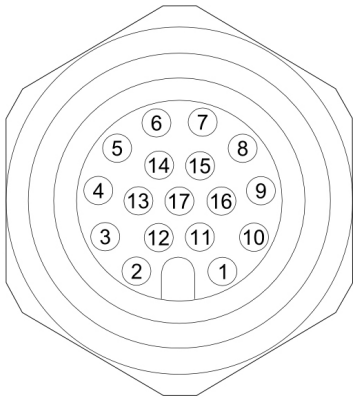
Camera Specifications

Interface	GigE
Frame rate	41880fps
Pixel clock	n/a
Camera taps	n/a
Greyscale resolution	8 Bit
Fixed pattern noise (FPN)	< 1DN RMS @ 8Bit
Exposure time range	10µs - 186ms
Analog gain	no
Digital gain	0.1 to 15.99 (FineGain)
Trigger Modes	Free running (non triggered), external Trigger, SWTrigger, Encoder
Features	Linear Mode / multiple slope (High Dynamic Range Mode), Two crosshair overlays for measurements and adjustments, Temperature monitoring of camera, Low trigger delay and low trigger jitter, Extended trigger input and strobe output functionality, 4x Isolated inputs or shaft encoder A, B, Z, Y interface (RS422, TTL, D-HTL, HTL), 3x Isolated outputs (2x open drain, 1x TTL highspeed)
Operation temperature / moisture	0°C ... 50°C / 20 ... 80 %
Storage temperature / moisture	-25°C ... 60°C / 20 ... 95 %
Power supply	+12VDC (-10%) ... +24VDC (+10%)
Power consumption	<9.7W
Lens mount	C-Mount
I/O Inputs	4x Isolated inputs or shaft encoder A, B, Z, Y interface (RS422, TTL, D-HTL, HTL)
I/O Outputs	3x Isolated outputs (2x open drain, 1x TTL highspeed)
Dimensions	59 x 59 x 89.6 mm3
Mass	392g
Connector I/O (Power)	17-pol. M12
Connector Interface	X-coded M12
Conformity	CE / RoHS / WEEE
IP Code	IP40

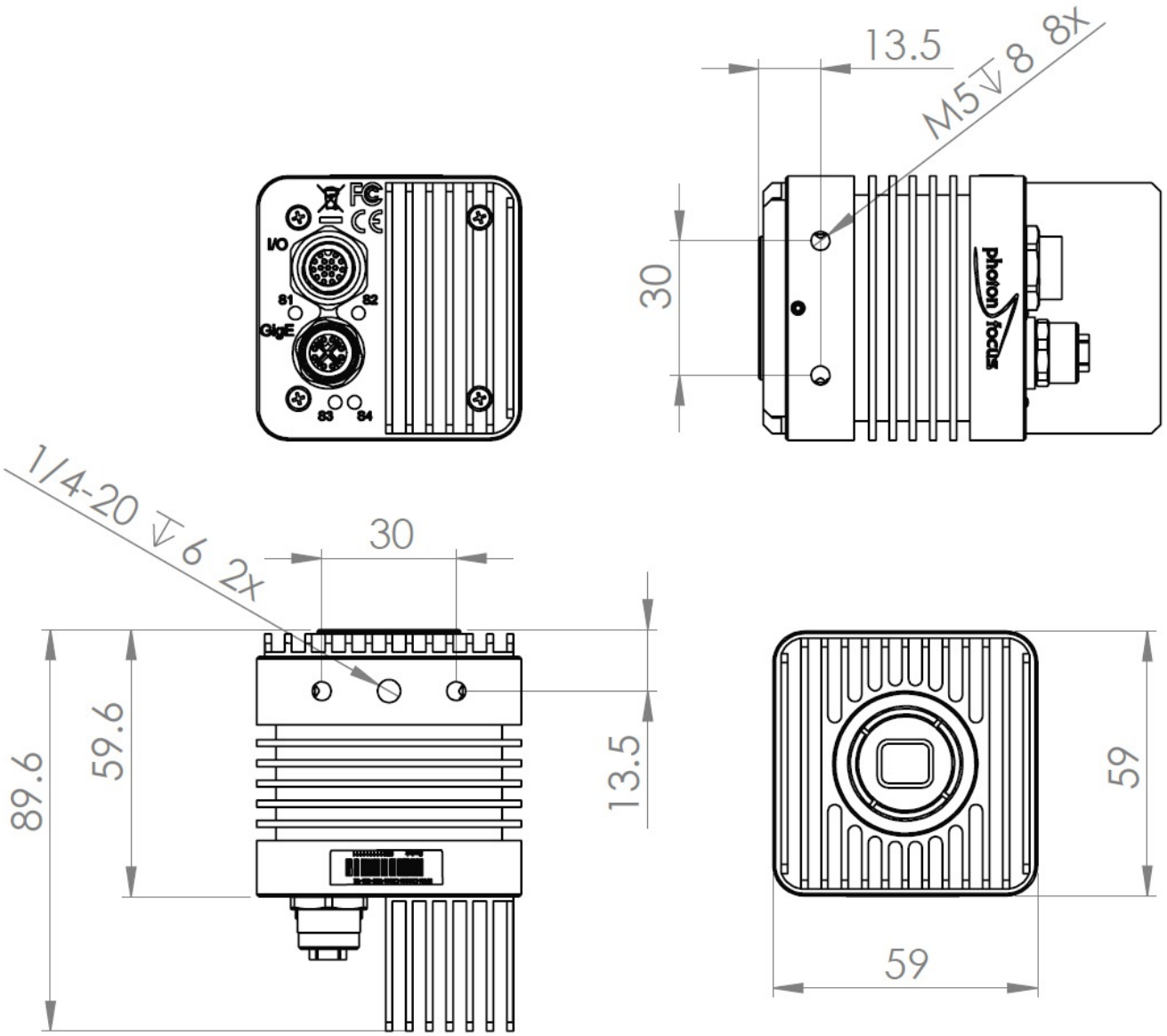
© Photonfocus AG. All rights reserved. This datasheet is subject to change by Photonfocus at any time without any prior notice and Photonfocus cannot be held responsible for any technical or typographical errors.

Connectors

Pin	I/O Type	Name	Description
1	PWR	CAMERA_GND	Camera GND, 0V
2	PWR	CAMERA_PWR	Camera Power
3	I	ISO_INC0_P / ISO_IN0	Isolated RS422/HTL positive differential or Isolated TTL/HTL single ended input
4	I	ISO_INC0_N / ISO_GND	Isolated RS422/HTL negativ differential input or ground
5	I	ISO_INC1_P / ISO_IN1	Isolated RS422/HTL positive differential or Isolated TTL/HTL single ended input
6	I	ISO_INC1_N / ISO_GND	Isolated RS422/HTL negativ differential input or ground
7	I	ISO_INC2_P / ISO_IN2	Isolated RS422/HTL positive differential or Isolated TTL/HTL single ended input
8	I	ISO_INC2_N / ISO_GND	Isolated RS422/HTL negativ differential input or ground
9	I	ISO_IN3	Isolated TTL input
10	O	ISO_OUT2	Isolated TTL output
11	PWR	CAMERA_GND	Camera GND, 0V
12	PWR	CAMERA_PWR	Camera Power
13	O	ISO_OUT0	Isolated open drain output
14	O	ISO_OUT1	Isolated open drain output
15	IO	RS485_DATA_P	RS485 interface data positive polarity
16	IO	RS485_DATA_N	RS485 interface data negative polarity
17	PWR	ISO_GND	Isolated I/O GND



Dimensions



© Photonfocus AG. All rights reserved. This datasheet is subject to change by Photonfocus at any time without any prior notice and Photonfocus cannot be held responsible for any technical or typographical errors.

Explanation

DN DigitalNumber (equals to LSB)

e^- Electrons

Order Information

MV4-D1280-L01-3D06-G2	BW model

Compatibility

Photonfocus AG
Bahnhofplatz 10
CH-8853 Lachen SZ
Switzerland

Phone: +41 55 451 00 00
www.photonfocus.com
info@photonfocus.com

© Photonfocus AG. All rights reserved. This datasheet is subject to change by Photonfocus at any time without any prior notice and Photonfocus cannot be held responsible for any technical or typographical errors.