DR4-D1952-L01-GT

The Double Rate camera series DR4-D1952-L01-GT is based on the LUXIMA LUX2100 CMOS image sensor. The Double-Rate cameras are nearly 100% faster than standard 10GigE cameras and use only one data cable (no link-aggregation). The cameras are available with the 10GigE interface (GigEVision).

Features

- Double Rate Technology
- LUXIMA LUX2100 CMOS image sensor
- 1952 x 1080 pixel resolution
- 1000fps @ full resolution
- Global shutter
- Extended sensor and camera features
- 4x Isolated inputs or shaft encoder
- 3x Isolated outputs
- GigEVision interface
- PoE (Power Over Ethernet)

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Quantum Efficiency Image Sensor

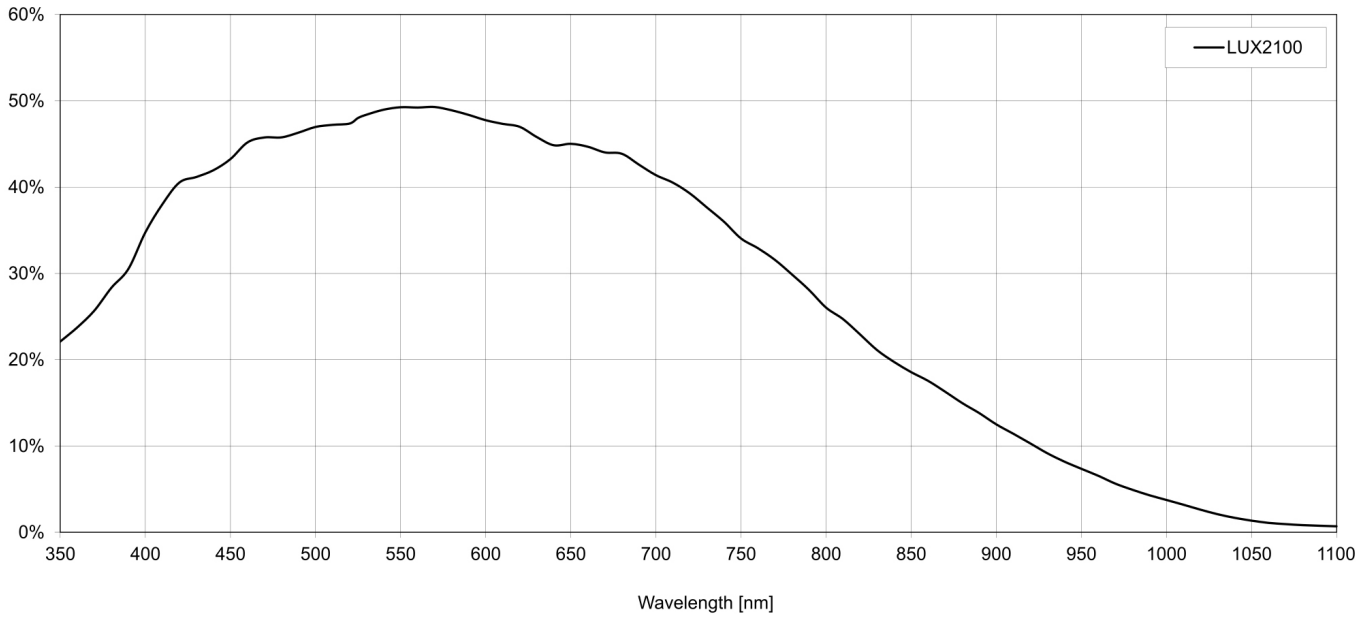

Image Sensor Specifications

Manufacturer / Type	LUXIMA, LUX2100
Technology	CMOS
Optical format	4/3"
Optical diagonal	22.3mm
Resolution	1952 x 1080
Pixel size	10µm x 10µm
Active optical area	19.52mm x 10.8mm
Dark current	17800e-/s @45°C
Read out noise	42e-
Full well capacity / SNR	21.2ke- / 145:1
Spectral range	Monochrome: 350 to 950nm (to 10% of peak responsivity)
Responsivity	Monochrome: 1600 x 10^3 DN / (J/m^2) @ 560nm / 8bit
Quantum Efficiency	Monochrome: < 54%
Optical fill factor	> 35% (without micro lenses)
Dynamic range	54 dB
Characteristic curve	Linear
Shutter mode	Global shutter

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Camera Specifications

Interface	10GigE
Frame rate	1000fps
Pixel clock	n/a
Camera taps	n/a
Greyscale resolution	8, 10 and 12Bit (only 8Bit, if DoubleRate is enabled)
Fixed pattern noise (FPN)	< 1DN RMS @ 8Bit
Exposure time range	10µs - 223ms
Analog gain	no
Digital gain	0.1 to 15.99 (FineGain)
Trigger Modes	Free running (non triggered), external Trigger, SWTrigger, Encoder
Features	- Double Rate technology - Configurable region of interest (ROI), up to 8 regions of interest (MROI) - Binning in x- and y-direction - 2 look-up tables (12-to-8 bit) on user-defined image region (Region-LUT) - Crosshairs overlay on the image - 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	< 19.4W
Lens mount	M42 and 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 106.7 mm3
Mass	480g
Connector I/O (Power)	17-pol. M12
Connector Interface	X-coded M12
Conformity	CE / RoHS / WEEE
IP Code	IP40

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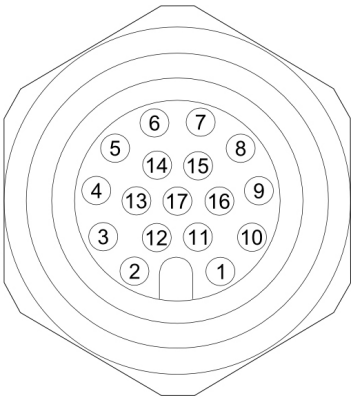
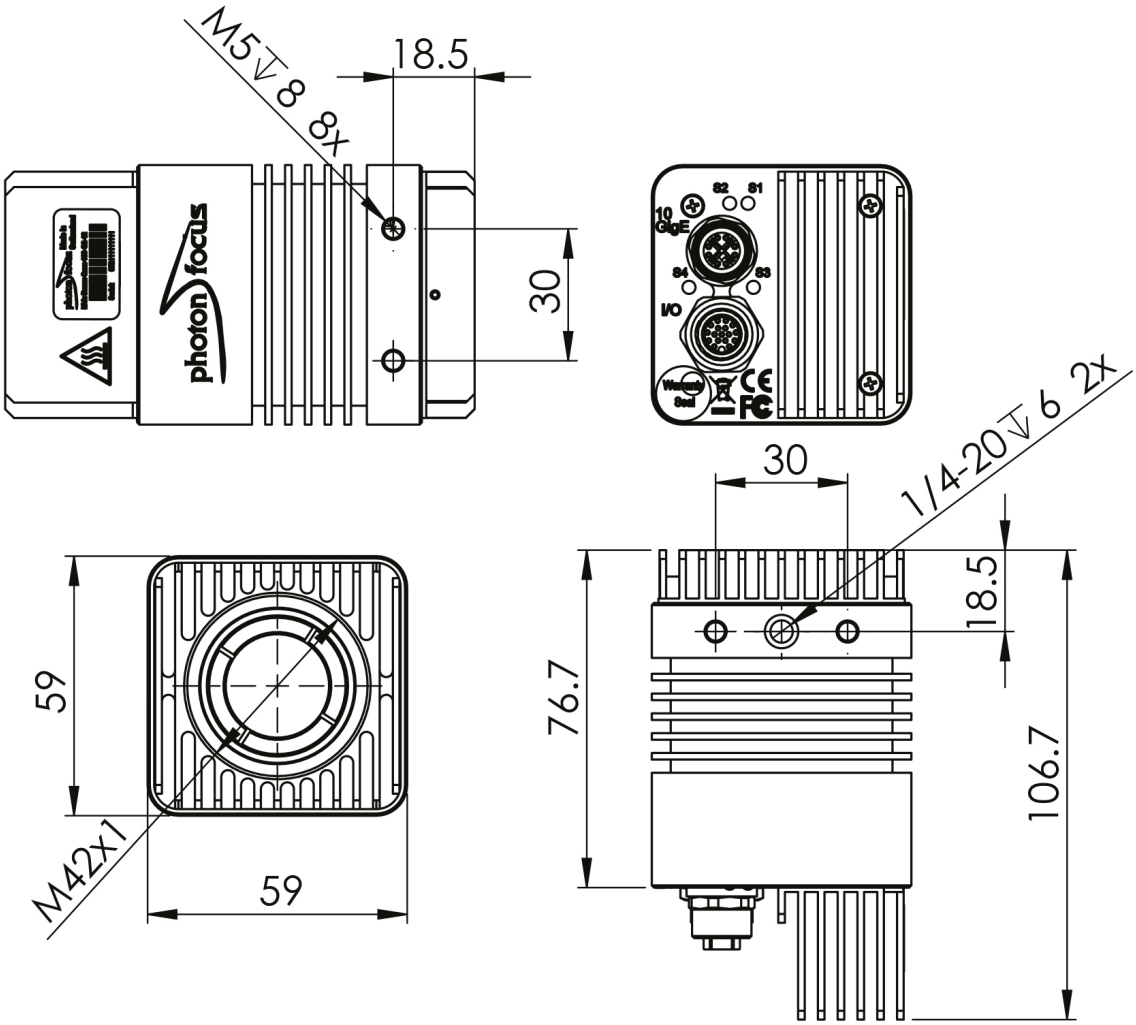
Connectors

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



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Explanation

DN DigitalNumber (equals to LSB)

e^- Electrons

Order Information

DR4-D1952-L01-GT	10GigE

Compatibility

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