

# MV4-D2048x1088-C01-3D06-G2

The 3D CMOS cameras MV4-D2048x1088-C01-3D06-G2 are designed for high triangulation rates. The CMOSIS CMOS image sensor CMV2000 is optimized for high frame rates and high sensitivity and combined with two robust algorithms to determine the triangulation line in the FPGA of the camera.



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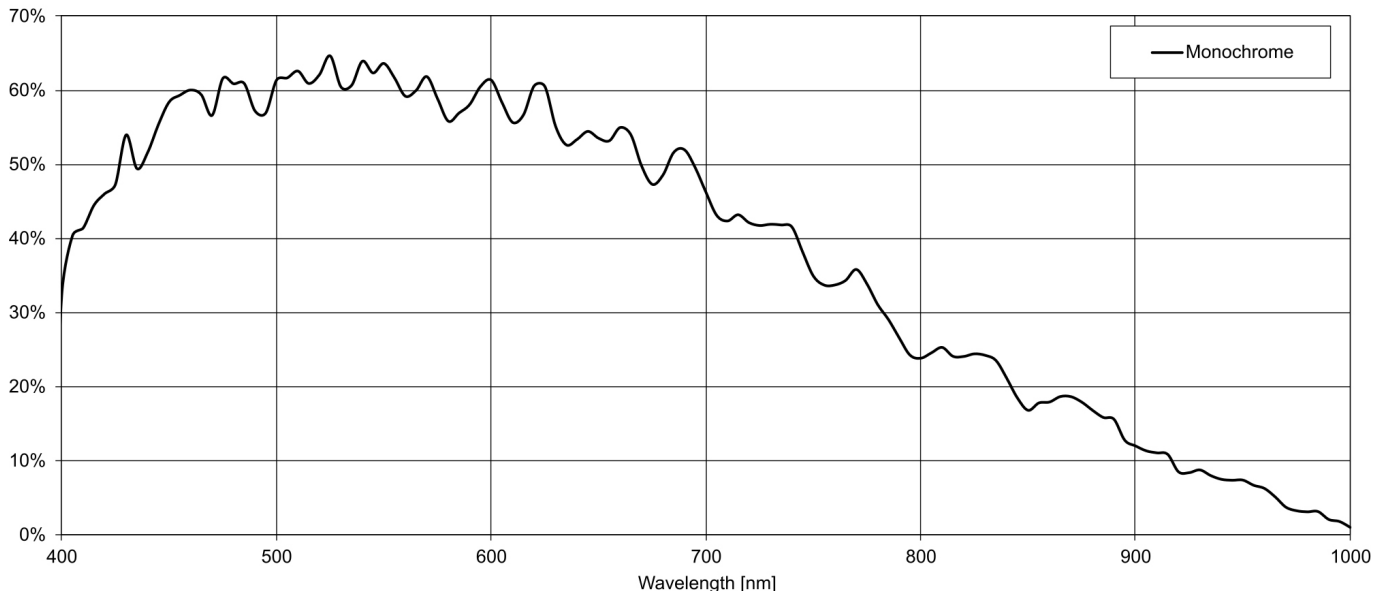
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## Features

- CMOSIS CMV2000 V3 image sensor
- 2048 x 1088 pixel resolution
- 18540 profiles per second (pps)
- Global shutter
- Extended sensor and camera features
- 4x Isolated inputs or shaft encoder
- 3x Isolated outputs
- GigEVision interface
- PoE (Power Over Ethernet, IEEE 802.3bt standard Class 4) or wall adapter (+12VDC (-10%) ... +24VDC (+10%))



## Quantum Efficiency Image Sensor



## Image Sensor Specifications

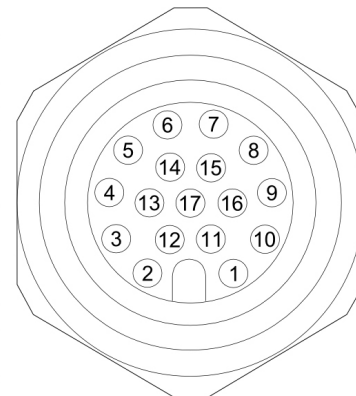
Manufacturer / Type	CMOSIS, CMV2000
Technology	CMOS
Optical format	2/3"
Optical diagonal	12.76mm
Resolution	2048 x 1088
Pixel size	5.5µm x 5.5µm
Active optical area	11.26mm x 5.98mm
Dark current	125e-/s
Read out noise	13e-
Full well capacity / SNR	11ke- / 105:1
Spectral range	Monochrome: 330 to 930nm (to 10% of peak responsivity)
Responsivity	Monochrome: 1200 x 10 <sup>3</sup> DN / (J/m <sup>2</sup> ) @ 540nm / 8bit
Quantum Efficiency	Monochrome: < 57%
Optical fill factor	42% without micro lenses
Dynamic range	58.5 dB
Characteristic curve	Linear, Piecewise linear (multiple slope)
Shutter mode	Global shutter

## Camera Specifications

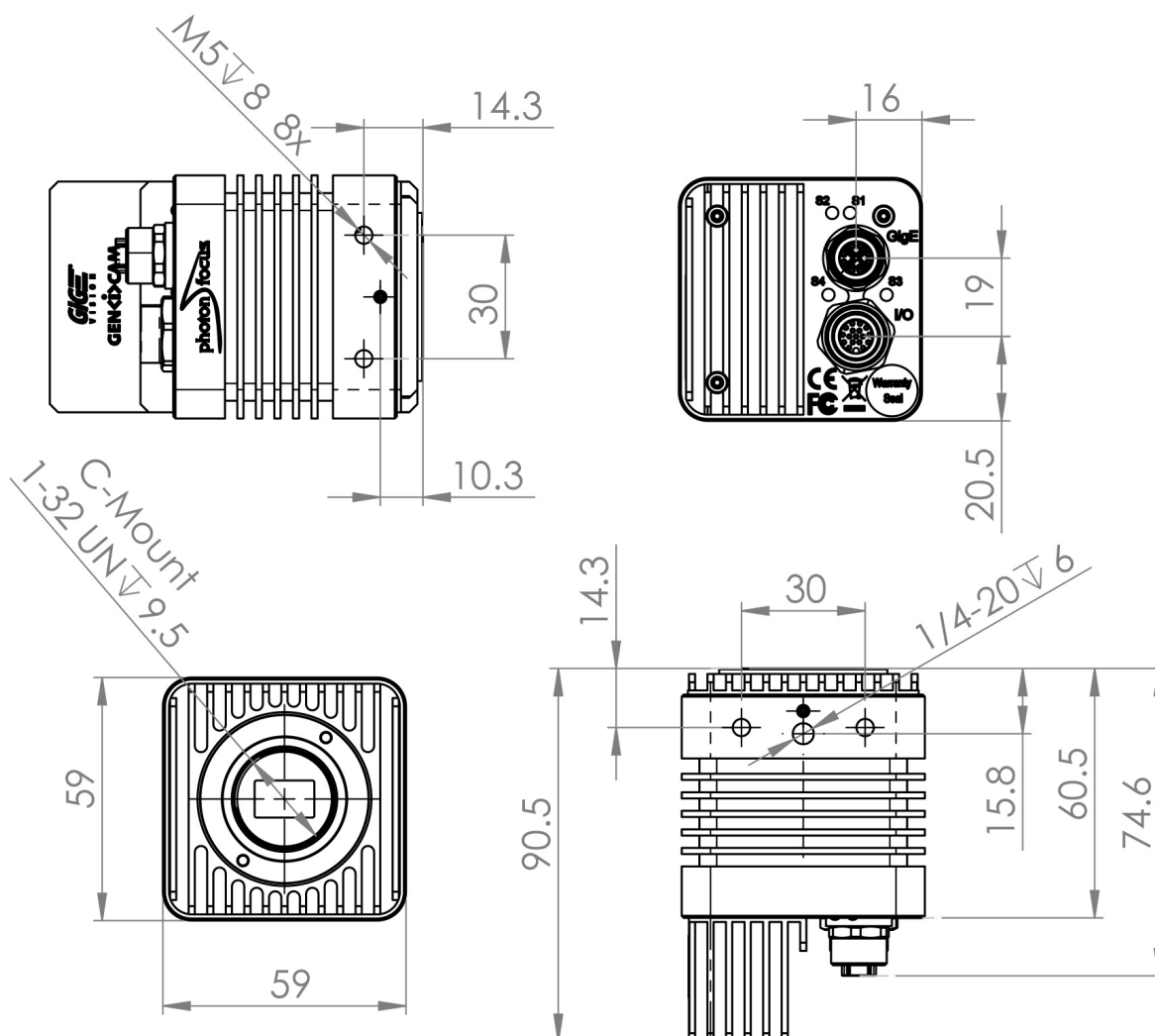
Interface	GigE
Frame rate	18540pps
Pixel clock	n/a
Camera taps	n/a
Greyscale resolution	8Bit
Fixed pattern noise (FPN)	< 1DN RMS @ 8bit
Exposure time range	6 $\mu$ s - 349ms
Analog gain	n/a
Digital gain	0.1 to 15.99 (FineGain)
Trigger Modes	Free running (non triggered), external Trigger, SWTrigger, Encoder
Features	Linear Mode / multiple slope (High Dynamic Range Mode), Configurable region of interest (ROI), 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	PoE (IEEE 802.3bt standard Class 4) or Wall adapter (+12VDC (-10%) ... +24VDC (+10%))
Power consumption	< 8W
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 90.5 mm <sup>3</sup>
Mass	400g
Connector I/O (Power)	17 pin. M12
Connector Interface	X-coded M12
Conformity	CE / RoHS / WEEE
IP Code	IP40

## 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



## Explanation

DN | DigitalNumber (equals to LSB)  
e- | Electrons

## Order Information

MV4-D2048x1088-C01-3D06-G2	BW model
MV4-D2048x1088-C01-3D06-G2-S3	Scheimpflug adapter 3°
MV4-D2048x1088-C01-3D06-G2-S5	Scheimpflug adapter 5°
MV4-D2048x1088-C01-3D06-G2-S7	Scheimpflug adapter 7°
MV4-D2048x1088-C01-3D06-G2-S10	Scheimpflug adapter 10°
MV4-D2048x1088-C01-3D06-G2-S15	Scheimpflug adapter 15°

## Compatibility



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