

## MV1-D4096-960-G2

The camera series MV1-D4096-G2 is based on the CMOSIS CMV12000 CMOS image sensor

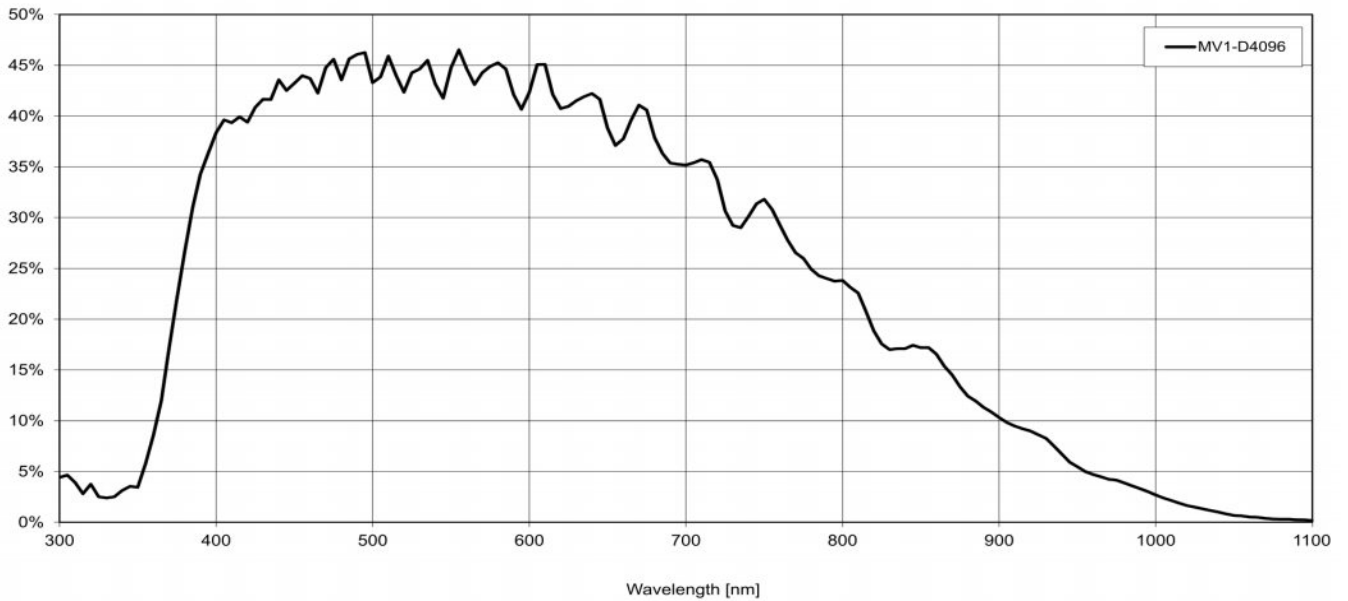
### Features

- CMOSIS CMV12000 CMOS image sensor
- 4096 x 3072 pixel resolution
- Good NIR spectral response
- Suitable for standard and low light applications
- Up to 8.5 / 67fps @ full resolution
- HighSpeed Burst recording mode
- Sensor Binning and X/Y Decimation
- Global shutter
- Available in monochrome, NIR and color
- Extended sensor and camera features
- Up to 10bit greyscale resolution
- Boardlevel and OEM solution available
- GigEVision interface



**GigE**<sup>®</sup>  
VISION  
GEN<i>CAM

## Quantum Efficiency Image Sensor



## Image Sensor Specifications

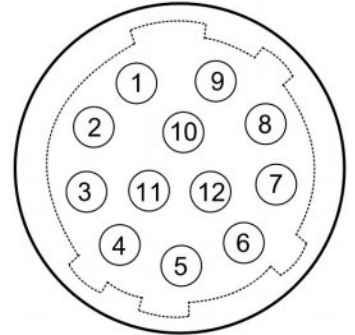
Manufacturer / Type	CMOSIS / CMV12000
Technology	CMOS
Optical format	APS-like
Optical diagonal	28.14mm
Resolution	4096 x 3072
Pixel size	5.5µm x 5.5µm
Active optical area	22.5mm x 16.9mm
Dark current	125e <sup>-</sup> /s
Read out noise	13e <sup>-</sup>
Full well capacity / SNR	11ke <sup>-</sup> / 105: 1
Spectral range	Monochrome: < 370 to 900nm (to 10% of peak responsivity)
Responsivity	Monochrome: 1100 x 10 <sup>3</sup> DN / (J/m <sup>2</sup> ) @ 520nm / 8bit
Quantum Efficiency	Monochrome: > 45%
Optical fill factor	42% without micro lenses
Dynamic range	60dB
Characteristic curve	Linear, Piecewise linear
Shutter mode	Global shutter

## Camera Specifications

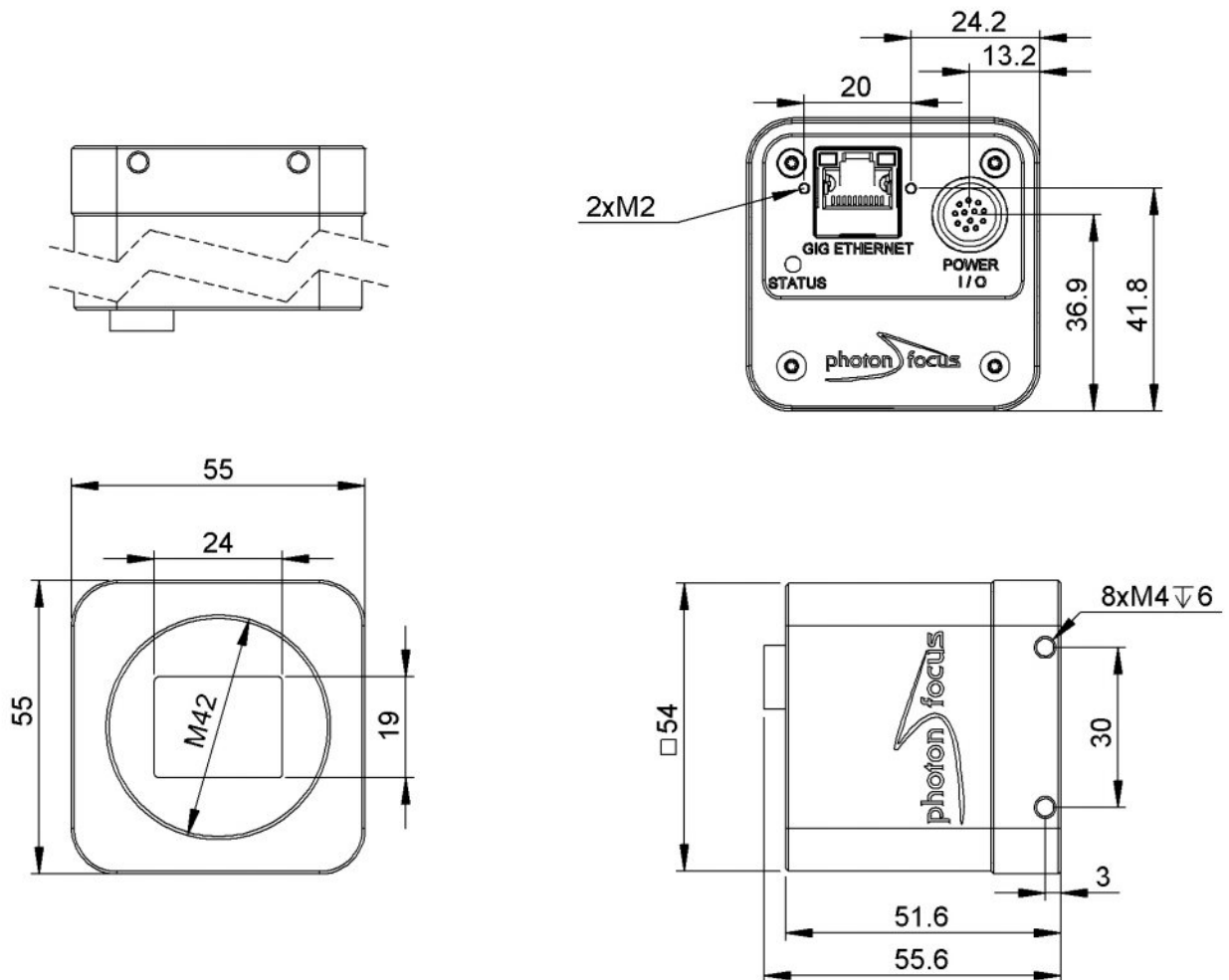
Interface	GigE
Frame rate	8.5 / 67fps
Pixel clock	48MHz
Camera taps	2
Greyscale resolution	8Bit / 10Bit
Fixed pattern noise (FPN)	< 1DN RMS @ 8Bit
Exposure time range	17µs - 310ms
Analog gain	yes
Digital gain	0.1 to 15.99 (FineGain)
Trigger Modes	Free running (non triggered), external Trigger, SWTrigger
Features	Configurable region of interest (ROI), Up to 32 regions of interest (MROI), Sensor Binning and X/Y Decimation, HighSpeed Burst recording mode, 2 look-up tables (12-to-8Bit) on user-defined image region (Region-LUT), Constant frame rate independent of exposure time, Crosshairs overlay on the image, Temperature monitoring of camera, Camera informations readable over SDK, Ultra low trigger delay and low trigger jitter, Extended trigger input and strobe output functionality, Status line in picture
Operation temperature / moisture	0°C ... + 40°C / 20% ... 80%
Storage temperature / moisture	-25°C ... 60°C / 20% ... 95%
Power supply	+12VDC (-10%) ... +24VDC (+10%)
Power consumption	< 8.5W
Lens mount	M42x1, F-Mount, C-Mount 1.3"
I/O Inputs	2x Opto-isolated 2x RS-422 Opto-isolated
I/O Outputs	2x Opto-isolated
Dimensions	55 x 55 x 52mm <sup>3</sup>
Mass	252g
Connector I/O (Power)	Hirose 12-pole (mating plug HR10A-10P-12S)
Connector Interface	RJ-45
Conformity	CE / RoHS / WEEE
IP Code	IP20

## Connectors

Pin	I/O Type	Name	Description
1	PWR	CAMERA_GND	Camera GND 0V
2	PWR	CAMERA_PWR	Camera Power 12V... 24V
3	O	ISO_OUT0	Default Strobe out, internally Pulled up to ISO_PWR with 4k7 Resistor
4	I	ISO_INC0_N	INC0 differential input (G2: RS-422, H2: HTL), negative polarity
5	I	ISO_INC0_P	INC0 differential input (G2: RS-422, H2: HTL), positive polarity
6	PWR	ISO_PWR	Power supply 5V... 24V for output signals
7	I	ISO_IN0	IN0 input signal
8	O	ISO_OUT1 (MISC)	Q1 output from PLC, no Pull up to ISO_PWR; can be used as additional output (by adding Pull up) or as controllable switch (max. 100mA, no capacitive or inductive load)
9	I	ISO_IN1(Trigger IN)	Default Trigger IN
10	I	ISO_INC1_N	INC1 differential input (G2: RS-422, H2: HTL), negative polarity
11	I	ISO_INC1_P	INC1 differential input (G2: RS-422, H2: HTL), positive polarity
12	PWR	ISO_GND	I/O GND 0V



## Dimensions



## Explanation

DN	DigitalNumber (equals to LSB)
e <sup>-</sup>	Electrons

## Order Information

MV1-D4096-960-G2-10-42	BW model (M42)
MV1-D4096-960-G2-10-CM	BW model (C-Mount)
MV1-D4096-960-G2-10-FM	BW model (F-Mount)

## Compatibility



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