

CMOS Camera

MV1-D1312 SERIES

1.4 Megapixel resolution with proprietary Photonfocus sensor

Features

- Photonfocus A1312 CMOS image sensor
- 1312 x 1082 pixel resolution
- Good NIR response
- Dynamic range up to 120 dB via LinLog®
- Up to 108 fps @ full resolution
- Global shutter
- Monochrome
- Extended features
- CameraLink® and GigE interface
- 12 bit greyscale resolution



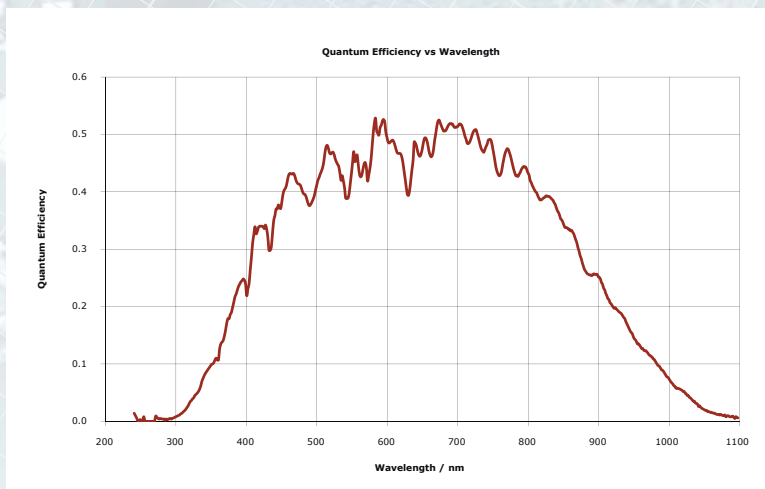
GigE
VISION

CAMERA
Link

Lin
Log®

GEN<i>i>CAM

Spectral response of the Photonfocus A1312 CMOS image sensor





MV1-D1312-40-CL-12 MV1-D1312-40-GB-12	MV1-D1312-80-CL-12 MV1-D1312-80-GB-12	MV1-D1312-160-CL-12 MV1-D1312-100-GB-12
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Image Sensor

Image sensor	Photonfocus A1312 (3. Generation)
Technology	CMOS active pixel (APS)
Scanning system	Progressive scan
Optical format / diagonal	1" (13.6 mm diagonal) maximum resolution 2/3" (11.6 mm diagonal) 1024 x 1024 resolution
Resolution	1312 x 1082 pixels
Pixel size	8 µm x 8 µm
Active optical area	10.48 mm x 8.64 mm (maximum)
Dark current	0.65 fA/pixel
Full well capacity	~100 ke ⁻
Spectral range	< 370 to 1000 nm (to 10 % of peak responsivity) 210 x 10 ³ DN / (J/m ²) @ 625 nm / 8 bit / gain = 1 (approximately 620 DN / (lux s) @ 625 nm / 8 Bit / gain = 1)
Responsivity	> 50 % > 60 %
Quantum Efficiency	60 dB in linear mode; 120 dB with LinLog®
Optical fill factor	Monochrome
Dynamic range	Linear, LinLog®
Colour format	Global shutter
Characteristic curve	
Shutter mode	
Read out mode	Sequential read out or simultaneous read out (read out during exposure only in linear mode) for higher frame rates

Camera

Exposure time	10 µs ... 1.68 s / 100 ns steps	10 µs ... 0.83 s / 50 ns steps	10 µs ... 0.67 s / 40 ns steps (GigE)
Frame rate	27 fps	55 fps	68 fps (GigE) / 108 fps (CL)
Pixel clock	40 MHz		50 MHz (GigE) / 80 MHz (CL)
Camera taps	1		2
Greyscale resolution	8 bit / 10 bit / 12 bit		
Fixed pattern noise (FPN)	< 1 DN @ 8 bit / correction ON		
Analogue gain	1		
Digital gain	1 / 2 / 4 / 8		
Configuration interface	Gigabit Ethernet / CL SERIAL (9600 or 57600 Baud, user selectable)		
Trigger modes	<ul style="list-style-type: none"> • Free running (non triggered) • Interface trigger • External trigger input • Software trigger 		
Features	<ul style="list-style-type: none"> • Region of Interest (ROI) • 512 Multiple ROI (MROI)⁽¹⁾ • Decimation Y⁽¹⁾ • Image correction • 2 Look-up tables (LUT)⁽¹⁾ • Constant frame rate • Crosshair⁽¹⁾ • Convolver 3x3 • Temperature⁽¹⁾ • Image information • Extended trigger input and strobe output functionality 		
Interface	CameraLink® Base or GigE		
Operating temperature	0°C ... +50°C		
Power supply	+12 V DC (±10%)		
Power consumption	2.5 W (CL) / < 4.5 W (GigE)	< 3.0 W (CL) / < 5.0 W (GigE)	< 3.3 W (CL) / < 5.2 W (GigE)
Lens mount	C-Mount (CS-Mount optional)		
Dimensions	60 x 60 x 45 mm ³ (CL) / 60 x 60 x 99 mm ³ (GigE)		
Mass	265 g (CL) / 465 g (GigE)		
Conformity	CE / RoHS / WEEE		
Specials	Adjustable backfocus; Opto-isolated I/Os		

Software

Camera control	PFRemote™ graphical user interface (GUI) and PFLib (SDK) GigE: graphical user interface GEV Player and SDK
OS	win2k; winxp; winvista; other OS (Linux, QNX, etc) on request GigE: win2k; winxp; winvista

⁽¹⁾ Features only available for CameraLink® cameras (for GigE cameras on request)

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