CMOS Camera

MV1-D2080 SERIES

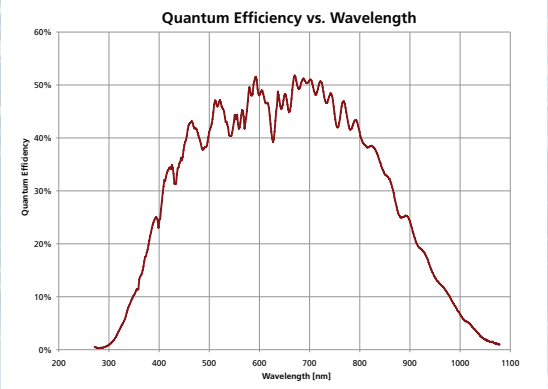
4.3 Megapixel resolution with Photonfocus sensor

Features

- Photonfocus A2080 CMOS image sensor
- 2080 x 2080 pixel resolution
- Good NIR spectral response
- Exceptional SNR up to 300:1
- Dynamic range up to 120 dB via LinLog®
- Up to 51 fps @ full resolution
- Global shutter
- Monochrome
- Extended features
- CameraLink® and GigE interface
- Up to 12 bit greyscale resolution
- Configuration via register based ASCII protocol
- Boardlevel or OEM solution available

Compatible with

Spectral response of the Photonfocus A2080 CMOS image sensor



	MV1-D2080-160-CL-12 MV1-D2080-160-G2-12	MV1-D2080-240-CL-8*
Image Sensor		
Image sensor	Photonfocus A2080 (3. Generation)	
Technology	CMOS active pixel (APS)	
Scanning system	Progressive scan	
Optical format / diagonal	23.5 mm diagonal @ max. resolution (< 25 mm image circle)	
Resolution	2080 x 2080 pixels	
Pixel size	8 µm x 8 µm	
Active optical area	16.64 mm x 16.64 mm (maximum)	
Dark current	0.65 fA/pixel	
Full well capacity / SNR	~90 ke^- (Max SNR > 300:1)	
Spectral range	< 370 to 1000 nm (to 10 % of peak responsivity)	
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)	
Quantum Efficiency	> 50 %	
Optical fill factor	> 60 %	
Dynamic range	60 dB in linear mode; 120 dB with LinLog®	
Colour format	Monochrome	
Characteristic curve	Linear, LinLog®	
Shutter mode	Global shutter	
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 … 0.41 s / 25 ns steps	10 µs … 0.279 s / 16.67 ns steps
Frame rate	25 fps sustained, 34 fps for 5 frames, (GigE) / 34 fps (CL)	51 fps
Pixel clock	80 MHz	
Camera taps	1 (GigE) / 2 (CL)	3
Greyscale resolution	8 bit / 10 bit / 12 bit	8 bit
Fixed pattern noise (FPN)	< 1 DN @ 8 bit / correction ON	
Analogue gain	1	
Digital gain	0.1 to 15.99 (Fine Gain)	
Configuration interface	CL SERIAL (Baudrate user selectable) (CL) / Gigabit Ethernet (GigE)	
Trigger modes	• Free running (non triggered) • Interface trigger • External trigger input • Software trigger	
Features	• Region of Interest (ROI) • 512 Multiple ROI (MROI) • Decimation Y • Image correction • 2 Look-up tables (LUT) • Constant frame rate • Convolver • Crosshair • Temperature & Image information • Extended trigger input and strobe output functionality • Status line	
Interface	CameraLink® Base or GigE (GigE Vision & GenICam compliant)	
Operating temperature	0°C … +50°C	
Power supply	+12 V DC (±10 %) (CL) / +12 V … +24 V DC (±10 %) (GigE)	
Power consumption	< 3.3 W (CL) / < 5.2 W (GigE)	< 5.2 W (CL)
Lens mount	M42x1, F-Mount, C-Mount 1.3"	
Dimensions (H x W x L)	60 x 60 x 38 mm^3 (CL) / 60 x 60 x 47 mm^3 (GigE)	
Mass	222 g (CL) / 294 g (GigE)	
Conformity	CE / RoHS / WEEE	
Specials	Adjustable backfocus; Opto-isolated I/Os; Dual RS-422 Inputs (GigE)	
Software		
Camera control	PFRemote™ graphical user interface (GUI) and PFLib (SDK); GigE: graphical user interface GEV Player and SDK; All 3rd party tools providing full support for GigE Vison and GenICam	
OS	Windows and Linux (32 & 64 Bit); other OS (QNX, etc) on request	

* Model available upon request