CMOS Camera

MV1-D1280 SERIES

1.3 Megapixel resolution with CMOS image sensor

Features

– E2V EV76C560 and EV76C660 CMOS image sensors
– 1280 x 1024 pixel resolution
– Good NIR spectral response
– Suitable for standard and low light applications
– Up to 60 fps @ full resolution
– Global shutter
– Monochrome
– Extended features
– CameraLink® and GigE interface
– 10 bit greyscale resolution
– Binning possibility
– Configuration via register based ASCII protocol possible
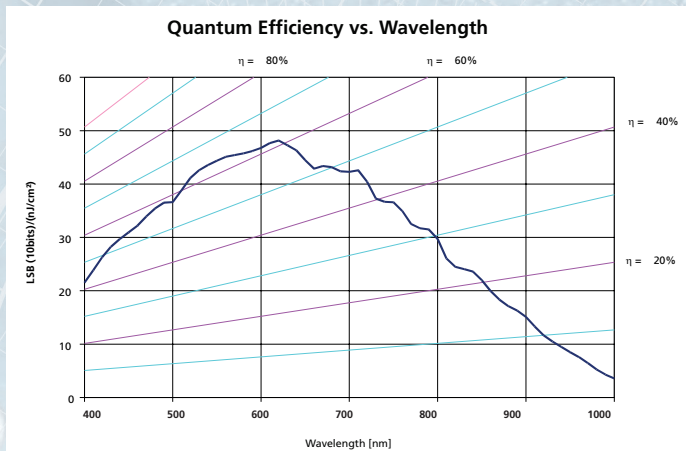– Boardlevel or OEM solution available

Spectral response of the EV76C560 CMOS image sensor

Quantum Efficiency vs. Wavelength

	MV1-D1280-120-CL-10 MV1-D1280-80-G2-10	MV1-D1280I-120-CL-10 MV1-D1280I-80-G2-10	MV1-D1280C-120-CL-10 MV1-D1280C-80-G2-10
Image Sensor			
Image sensor	EV76C560	EV76C660	EV76C560 Colour
Technology	CMOS active pixel (APS)		
Scanning system	Progressive scan		
Optical format / diagonal	1/1.8" (8.7 mm diagonal)		
Resolution	1280 x 1024 pixels		
Pixel size	5.3 µm x 5.3 µm		
Active optical area	6.9 mm x 5.5 mm (maximum)		
Dark current	< 420 LSB_{10} / s @ ta 25°C		
Full well capacity / SNR	~12 ke⁻ / 109:1		
Spectral range	< 370 to 930 nm [1]	< 370 to 1000 nm [1]	< 370 to 670 nm [1]
Responsivity	6600 LSB_{10} / (Lux.s)		
Quantum Efficiency	> 47 %		
Optical fill factor	TBD		
Dynamic range	~ 60 dB		
Colour format	Monochrome	enhanced NIR	Colour
Characteristic curve	Linear, HDR		
Shutter mode	Global shutter		
Read out mode	Sequential read out or simultaneous read out (read out during exposure) for better SNR and dynamic range		

Camera			
Exposure time	TBD	TBD	TBD
Frame rate	60 fps (CL) / 40 fps (GigE)		
Pixel clock	60 MHz (CL) / 80 MHz (GigE)		
Camera taps	2 (CL) / 1 (GigE)		
Greyscale resolution	8 bit / 10 bit		
Fixed pattern noise (FPN)	< 1 DN @ 8 bit		
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) • binning • Image correction • • Constant frame rate • Crosshair • Temperature • Image information • Extended trigger input and strobe output functionality		
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	TBD W (CL) / < TBD W (GigE)		
Lens mount	C-Mount (CS-Mount optional)		
Dimensions (H x W x L)	55 x 55 x 32 mm³ (CL) / 55 x 55 x 44 mm³ (GigE)		
Mass	TBD g (CL) / TBD 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 Vision and GenICam
OS	Windows and Linux (32 & 64 Bit); other OS (QNX, etc) on request

[1] to 10 % of peak responsivity