

ELiXA® UC4 / UC8

Line Scan Camera



Capturing all, even hidden colours

Key Features

- ❖ Sensor: 4 x 4096 pixels 10 x 10 µm
 Quadriline: red, green, blue and either monochrome or near infra-red
- ❖ Rows spacing of 2 pixels (center to center)
- ❖ Boosted blue response
- ❖ Line rate of 18 KHz
- ❖ Bi-directional scanning
- ❖ Camera Link® interface (dual base, medium)
- ❖ Automated white balance, flat field correction
- ❖ Tunable Spatial Correction

Typical Applications

- ❖ Web Inspection: printing, currency
- ❖ High-end Inspection: food, pharmaceutical, medical, packaging
- ❖ Surface Inspection: ceramic tiles, wood, printed circuit board
- ❖ Scanning: high-end document process, film scanning, postal sorting

The ELiIXA 4096 pixel camera is the ideal candidate for the most demanding applications requiring multi wavelength detection (including NIR).

Using e2v's unique technology, the CCD sensor features unmatched performance: line rate of 18 KHz, row spacing of two pixels center to center, enhanced blue response and four lines (RGB and fourth line either monochrome or NIR).

The camera package is designed to increase efficiency and save cost at vision system level:

- easy calibration (test pattern, flat field correction, white balance, excellent mechanical alignment)
- versatile implementation (trigger modes, output modes, bi-directional scanning, spatial correction)
- optimal mechanical design (70 mm width)

and with an all-in-one approach, a single ELiIXA camera can replace a two camera system of a conventional colour camera and a monochrome or NIR camera.

Detailed Specifications

Sensor Characteristics at Maximum Pixel Rate			Functionalities (Programmable via Control Interface)		
Resolution	pixels	4 x 4096	Gain	up to 33 dB (0.035 dB Steps)	
Pixel Size (square)	µm	10 x 10	Offset	-4096 to +4096 LSB	
Spacing between rows	µm	20 (center to center)	White Balance	automatic or manual	
Line Length	mm	41	Flat Field Correction	automatic or manual	
Max Line Rate	kHz	18	Spatial Correction	tunable, up to 7 lines	
			Scan Direction	reverse and forward	
			Trigger Mode	free run, external trigger	
			Output Format		
			- Dual Base Camera Link	3 channels (RGB) 8 bits	
				1 channel (BW or NIR) 8 to 12 bits	
			- Medium Camera Link	4 channels 8/10/12 bits	
			Regulatory	CE, FCC and RoHS compliant	
Radiometric Performance at Maximum Pixel Rate			Mechanical and Electrical Interface		
Bit Depth	bits	8, 10 or 12	Size (w x h x l)	mm	70 x 76 x 54
Spectral Range	nm		Lens Mount	F, T2, M42 x 1	
- If fourth line monochrome		BW: 250 - 1100 Red: 580 - 850	Sensor Alignment	µm	better than +/-100
- If fourth line Near Infrared		NIR: 800 - 1100 Red: 580 - 650	Sensor flatness	µm	better than +/-35
- For both versions		Green: 500 - 580 Blue: 250 - 500	Power Supply	V	single 12 to 24
Non-linearity	%	+/- 1	Power Dissipation	W	< 15
Dynamic range	dB	62	Operating Temperature	°C	0 to 65 (front face)
			Storage Temperature	°C	-40 to 70

Overview of e2v Line Scan Camera Range

Commercial Name	M/C	Max Data Rate M Pixels/s	Interface	Resolution	Bit Depth
AViVA SM2	Monochrome	60	CL/LVDS	512 to 4096	up to 12 bits
AViVA SC2	Colour	60	CL/LVDS	4096	up to 12 bits
AViVA UM2	Monochrome	62	GigE	512 to 4096	up to 12 bits
AViVA UC2	Colour	62	GigE	4096	up to 12 bits
AViVA UM4	Monochrome	160	CL	8192	up to 12 bits
AViVA UM8	Monochrome	320	CL	12 288	up to 12 bits
DiViVA LM2	Monochrome	40	CL	1024 to 4096	8 bits
ELiIXA 3V	Monochrome	320	CL	3 x 4096	up to 12 bits
ELiIXA 4S	Monochrome	80	CL	4 x 4096	up to 12 bits
ELiIXA UC4/UC8	Colour	320	CL	4 x 4096	up to 12 bits

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ELiIXA



CAMERA Link

Comcam

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