

## Eliixa 4S



# For **Ultra High-Sensitivity** ELiXA goes Monochrome

### Key Features

- Sensor size: 4 x 4096 pixels - 10x10µm
- 1,2,3 or 4 lines to be summed with this multi-line sensor
- Row spacing of 2 pixels (center to center)
- Linerate of 18kHz
- Enhanced sensitivity thanks to back side illumination
- Bi-directional scanning
- Camera Link interface (Base or Medium)
- Mechanics: 70 x 76 x 54 mm<sup>3</sup>
- Fully configurable by the user with CommCam software

### Applications

- Web inspection: wood, paper, metallurgy
- Surface inspection: wafer, DVD/CDROM, PCB, flat panel display
- OCR and barcode reading: document scanning, checks sorting, data archiving, postal sorting

The ELIIXA 4S 4096 pixel camera is the ideal candidate for the most demanding of applications requiring high responsivity detection. Using e2v's unique technology, the CCD sensor features unmatched performance: line rate up to 18 KHz, row spacing of two pixels center to center between the four lines and enhanced response with the back side illumination technology.

- Easy calibration (Automatic tap balance and flat field correction, line balance)
- Versatile implementation (trigger modes, output modes, bidirectional scanning, spatial correction)

## Detailed Specifications

Sensor Characteristics		
Resolution	pixels	4 x 4096
Pixel Size (square)	µm	10 x 10
Spacing between rows	µm	20 (center to center)
Line Length	mm	41
Max Line Rate	kHz	18

Functionalities (Programmable via Control Interface)	
Gain up to 25.4 dB (0.035 dB Steps)	
Offset -4096 to +4096 LSB	
Line Balance automatic or manual	
Flat Field Correction automatic or manual	
Scan Direction reverse and forward	
Synchronization Modes: free run, external trigger	
Output Format:	
- Base Camera Link 1 or 2 channels 8/10/12 bits	
- Medium Camera Link 4 channels 8/10/12 bits	
Regulatory CE, FCC and RoHS compliant	

Radiometric Performance		
Bit Depth	bits	8, 10 or 12
Spectral Range	nm	300 - 1100
Non-linearity	%	+/- 1
Responsivity LSB	nJ/cm <sup>2</sup>	546

Mechanical and Electrical Interface		
Size (w x h x l)	mm	70 x 76 x 54
Lens Mount		F, T2, M42 x 1
Sensor Alignment	µm	better than +/-100
Sensor Flatness	µm	better than +/-35
Power Supply	V	single 12 to 24
Power Dissipation	W	< 15
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
AVIIVA SM2	Monochrome	60	CL/LVDS	512 to 4096	up to 12 bits
AVIIVA SC2	Colour	60	CL/LVDS	4096	up to 12 bits
AVIIVA UM2	Monochrome	62	GigE	512 to 4096	up to 12 bits
AVIIVA UC2	Colour	62	GigE	4096	up to 12 bits
AVIIVA UM4	Monochrome	160	CL	8192	up to 12 bits
AVIIVA UM8	Monochrome	320	CL	12 288	up to 12 bits
ELIIXA UC8	Colour	320	CL	4 x 4096	up to 12 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



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