



ELiXA+ 16k pixels

## The power and speed of vision

Enabled by e2v multi-line CMOS technology

### Key features

- 16,384 pixels,  $5\mu\text{m} \times 5\mu\text{m}$  pixel pitch, 4 active CMOS lines
- Line rate up to 100k lines/s
- Data rate up to 1.6G pixels/s
- Interface: CameraLink or CoaXPress
- Up to 12-bit depth
- Power consumption below 16W
- Vertical and horizontal binning
- Fast and easy configuration

### Applications

- Flat panel display inspection
- Printed circuit board inspection
- Solar cell inspection
- Parcel and postal sorting
- High resolution document scanning

## ELIIXA+ 16k pixels e2v multi-line CMOS technology

e2v

e2v's next generation of line scan cameras are setting new, high standards for line rate and image quality. Thanks to e2v's recently developed multi-line CMOS technology, the camera provides an unmatched 100,000 lines/s in a 16k pixel format and combines high response with an extremely low noise level; this delivers high signal to noise ratio even when short integration times are required or when illumination is limited. The 5µm pixel size is arranged in four active lines, ensuring optimal spatial resolution in both scanning and sensor directions with off-the-shelf lenses. An outstanding data rate in excess of 1.6G pixels per second, delivered via a new CoaXPress interface, allows for extremely high throughput and opens up an array of new possibilities for the next generation of inspection systems for demanding applications such as flat panel display, PCB and solar cell inspection.

### Detailed specification

Sensor characteristics			
Resolution	pixels	16384	16384
Pixel size (square)	µm	5	5
Max line rate	kHz	50	100
Camera interface		CameraLink	CoaXPress

Typical performances			
Bit depth	bits	8, 10 or 12	
Spectral range	nm	300 - 1100 nm	
Dynamic range	dB	73	
Response at minimum gain	LSB/12bit/(nl/cm <sup>2</sup> )	450	
PRNU	%	1	
Non linearity	%	1	

Functionalities:			
Maximum analog gain	dB	12	
Maximum digital gain	dB	20	
Offset correction	LSB/12bit/	-4096 to +4096	
Trigger mode		Timed (free run) and triggered modes (Ext Trig, Ext ITC)	

Mechanical and electrical interface			
Size (w x h x l)	mm	100 x 156 x 36	
Lens mount		M95 x 1	
Sensor alignment	µm	±100	
Sensor flatness	µm	±35	
Power supply	V	Single 12 to 24	
Power consumption	W	16	

General features:			
Operating temperature	°C	0 to 55 (Front face)	
Storage temperature	°C	-40 to 70	
Regulatory		CE, FCC and RoHS compliant	

Connectors			
Power (CL version)		HR10 6-pins	
Inputs (CXP version)		HR10 5-pins	
Control & data		Camera Link:	MDR 26-pins
		CoaXPress:	4 BNC

### Overview of e2v line scan camera offer

Commercial name	M/C	Max data rate M Pixels/s	Interface	Resolution	Bit depth
AViVA EM1	Monochrome	120	GigE	512 to 4096	up to 12 bits
AViVA EM2	Monochrome	80	CL	2048 to 4096	up to 12 bits
AViVA EM4	Monochrome	160	CL	2048 to 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
AViVA SC2	Colour	60	CL/LVDS	4096	up to 12 bits
AViVA UC2	Colour	62	GigE	4096	up to 12 bits
DIVIINA LM1	Monochrome	40	GigE	1024 to 4096	8 bits
DIVIINA LM2	Monochrome	40	CL	1024 to 4096	8 bits
ELIIXA UC4/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
ELIIXA+ 16k	Monochrome	819	CL	16384	up to 12 bits
ELIIXA+ 16k	Monochrome	1638	CXP	16384	up to 12 bits

CAMERA  
Link

CoaXPress

CE



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