



Colour

# ELiXA+® 16k/8k pixels

Line scan camera

CIVIL AEROSPACE

DEFENCE

SPACE

INDUSTRIAL

MEDICAL & SCIENCE

SECURITY & RESCUE



The power and speed of vision, enabled by  
e2v multi-line CMOS technology

## KEY FEATURES

- Ultra high resolution up to 16,384 colour pixels, 5µm x 5µm pixel size
- Ultra-fast line rate up to 95,000 lines/s
- e2v multi-line CMOS technology for versatile integration and evolution:
  - 4 active and adjacent CMOS lines arranged in dual line filter configuration
    - Full definition mode: 16,384 interpolated colour pixels, 5µm pixel, 4 active lines
    - True colour mode: 8,192 colour pixels, 10µm pixel, 2 active lines
  - No spacing between the lines
  - Compatible with full exposure control
  - One order of magnitude increase in sensitivity versus a standard Charge Coupled Device (CCD)
- CoaXPress interface
- Power consumption below 19W

## APPLICATIONS

- Printing inspection
- High resolution document scanning
- Flat panel display inspection
- Printed circuit board inspection
- High quality raw material surface inspection

# ELiIXA+® 16k/8k colour pixels

## e2v multi-line CMOS technology

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 95,000 lines/s 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 and dual line filter configuration allows the camera to be operated in several modes. True colour mode with 10µm RGB pixels to provide equivalent colour fidelity to 10µm pixel tri-linear solutions with advanced immunity to web variation or full definition mode with a unique 16,384 RGB pixel resolution.

### Detailed specification

SENSOR CHARACTERISTICS			
Resolution	pixels	16384	8192
Pixel size (square)	µm	5	10
Maximum line rate	kHz	47.5	95
Number of active lines		2 or 4	2
FUNCTIONALITIES			
Maximum analogue gain	dB	12	
Maximum digital gain	dB	8	
White balance gain	dB	8	
Offset correction	LSB8bit	-256 to +256	
Trigger mode		Timed (free run) and triggered modes (Ext Trig, Ext ITC)	
White balance		automatic or manual	
Flat field correction		automatic or manual	
Scan direction		forward or reverse	
TYPICAL PERFORMANCES			
Bit depth	bits	8	
Spectral range	nm	300 - 1100 nm	
Dynamic range	dB	65	
Response at minimum gain	LSB8bit/(nJ/cm²)	5.9 red peak at 610nm 5.6 green peak at 530nm 3.9 blue peak at 450nm	
PRNU	%	1	
Non linearity	%	1	

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	50
Power supply	V	Single 12 to 24
Power consumption	W	<19
CONNECTORS		
Inputs		HR10 5-pins
Power, control & data		4 BNC
GENERAL FEATURES		
Operating temperature	°C	0 to 55 front face
Storage temperature	°C	-40 to 70
Regulatory		CE, FFC and RoHS compliant

### Overview of e2v's line scan camera range

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	512 to 4096	up to 12 bits
AViVA EM4	Monochrome	160	CL	512 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
DiViNA LM1	Monochrome	40	GigE	1024 to 4096	8 bits
DiViNA 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
ELiIXA+ 8k/4k	Colour	820	CL	8192 or 4096	8 bits
ELiIXA+ 16k/8k	Colour	2335	CXP	16384 or 8192	8 bits

Contact us online at:  
[e2v.com/contact-us](http://e2v.com/contact-us)

