

ELiXA+ 8k/4k pixels

Line scan camera



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

Key features

- The two most desired resolutions – available in the same camera for versatile integration and evolution:
 - 8,192 pixels, 5µm pixel, 4 active CMOS lines
 - 4,096 pixels, 10µm pixel, 2 active CMOS lines
- Compatible with standard F-mount lenses
- e2v multi-line CMOS technology offer a one order of magnitude increase in sensitivity versus a standard Charge Coupled Device (CCD)
- e2v multi-line CMOS technology is compatible with full exposure control
- Ultra-fast line rate up to 100,000 lines/s
- Power consumption below 7W

Applications

- Raw material surface inspection
- General web inspection
- Flat panel display inspection
- Printed circuit board inspection
- Solar cell inspection
- Parcel and postal sorting
- Print and paper inspection
- High resolution document scanning

ELiIXA+ 8k/4k 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 100,000 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, ensuring

optimal spatial resolution in both scanning and sensor directions with standard F-mount lenses. Vertical and horizontal binning functions allow the camera to be operated in a 8,192 pixels, 5µm x 5µm pixel pitch, 4 active CMOS lines mode or 4,096 pixels, 10µm x 10µm pixel pitch, 2 active CMOS lines mode depending on the user settings. These versatile features set new standards for the next generation of machine vision systems.

Detailed specification

Sensor characteristics					
Resolution	pixels	8192	4096	8192	4096
Pixel size (square)	µm	5	10	5	10
Maximum line rate	kHz	40	80	100	100
Camera interface		CameraLink Medium	CameraLink Medium	CameraLink Full/Deca	CameraLink Full/Deca
Functionalities					
Maximum analog gain	dB			12	
Maximum digital gain	dB			20	
Offset correction	LSB12bit/			-4096 to +4096	
Trigger mode				Timed (free run) and triggered modes (Ext Trig, Ext ITC)	
Typical performances					
Bit depth	bits			8, 12	
Spectral range	nm			300 - 1100 nm	
Dynamic range	dB			73	
Response at minimum gain	LSB12bit/(nJ/cm²)			450	
PRNU	%			1	
Non linearity	%			1	

Mechanical and electrical interface		
Size (w x h x l)	mm	60 x 125 x 35
Lens mount		F, T2 M42x1
Sensor alignment	µm	± 100
Sensor flatness	µm	± 35
Power supply	V	Single 12 to 24
Power consumption	W	<7

Connectors	
Power	HR10 6-pins
Control & data	Mini Camera Link (SDR 26-pins)

General features		
Operating temperature	°C	0 to 70
Storage temperature	°C	-40 to 70
Regulatory		CE, FCC 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	Monochrome	340	CL Medium	8192 or 4096	up to 12 bits
ELiIXA+ 8k/4k	Monochrome	820	CL Full/Deca	8192 or 4096	up to 12 bits

Contact us online at:

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Issue 1 10/12



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CAMERA Link
REGISTERED PRODUCT

CE



AF AQ
ISO 9001

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