

THE POWER AND SPEED OF VISION



KEY BENEFITS

- 16,384 pixels, 5µm x 5µm pixel pitch, 4 active CMOS lines
- Line rate up to 200kHz at 11008 pixels ROI; up to 140kHz in 16384 pixels
- 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

TYPICAL 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'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 140,000 lines/s in a 16k pixel format and 200,000 lines/s in 11k resolution. It also 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. The new ELiIXA+[®] also features a high dynamic range mode to enable high contrast materials imaging, which greatly benefits high reflectivity metallic surfaces inspection.

DETAILED SPECIFICATION

SENSOR CHARACTERISTICS						MECHANICAL AND ELECTRICAL INTERFACE		
Resolution	pixels	16k/8k	16k/8k	16k/8k	11k/8k	Size (W x H x L)	mm	100 x 156 x 36
Pixel size (square)	µm	5/10	5/10	5/10	5/10	Lens mount		M95 x 1
Maximum line rate	kHz	50/100	100/100	140/140	200/200	Sensor alignment	µm	± 100
Camera interface		CameraLink	CoaXPress	CoaXPress	CoaXPress	Sensor flatness	µm	± 35
FUNCTIONALITIES						CONNECTORS		
Maximum analogue gain	dB			12		Power (CL version)		HR10 6-pins
Maximum digital gain	dB			20		Inputs (CXP version)		HR10 5-pins
Offset correction	LSB12bit/			-4096 to +4096		Control & data		CameraLink: MDR 26-pins CoaXPress: 4 BNC
Trigger mode				Timed (free run) and triggered modes (Ext Trig, Ext ITC)		GENERAL FEATURES		
RADIOMETRIC PERFORMANCES						Operating temperature	°C	0 to 55 (front face)
Bit depth	bits	8, 10 or 12	8, 10 or 12	8	8	Storage temperature	°C	-40 to 70
Dynamic range	dB	68	68	70	70	Regulatory		CE, FCC and RoHS compliant
High dynamic range mode		no	no	yes	yes			
Spectral range	nm		300 – 1100 nm					
Response at minimum gain	LSB12bit/(n)/cm2)		450					
PRNU	%		1					
Non linearity	%		1					

OVERVIEW OF e2V'S HIGH-SENSITIVITY & HIGH-SPEED LINE SCAN CAMERAS RANGE

COMMERCIAL NAME	M/C	MAX DATA RATE M PIXELS/S	INTERFACE	RESOLUTION	BIT DEPTH
ELiIXA+ 12k 200KHz	Monochrome	2293	CXP	Up to 11008 at 200KHz Up to 16384 at 140KHz	8bits
ELiIXA+ 16k 140KHz	Monochrome	2293	CXP	16384 or 8192	8bits
ELiIXA+ 16k/8k 100KHz	Monochrome	1638	CXP	16384 or 8192	Up to 12bits
ELiIXA+ 16k/8k 50KHz/100KHz	Monochrome	819	CL	16384 or 8192	Up to 12bits
ELiIXA+ 8k/4k 100KHz	Monochrome	819	CL	8192 or 4096	Up to 12bits
ELiIXA+ 8k/4k 40KHz/80KHz	Monochrome	409	CL	8192 or 4096	Up to 12bits
ELiIXA+ 8K/4k Colour	Colour	820	CL	8192 or 4096	8bits
ELiIXA+ 16K/8k Colour	Colour	2335	CXP	16384 or 8192	8bits

OVERVIEW OF e2V'S MEDIUM-SENSITIVITY & MEDIUM-SPEED LINE SCAN CAMERAS RANGE

COMMERCIAL NAME	M/C	MAX DATA RATE M PIXELS/S	INTERFACE	RESOLUTION	BIT DEPTH
UNiiQA+ High-speed	Monochrome	409	CL	4096 or 2048 or 1024 or 512	Up to 12bits
UNiiQA+ Essential	Monochrome	81	CL	4096 or 2048 or 1024 or 512	Up to 12bits
UNiiQA+ High-resolution	Monochrome	819	CL	16384	Up to 12bits
UNiiQA+ High-speed Colour	Colour	409	CL	4096 or 2048 or 1024 or 512	8bits
UNiiQA+ Essential Colour	Colour	81	CL	4096 or 2048 or 1024 or 512	8bits
AViiVA 2 EM1	Monochrome	120	GigE	512 to 4096	8bits
DiViINA LM1	Monochrome	40	GigE	1024 to 4096	8bits

Contact us online at:

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