

AViVA EM4

Line Scan Camera



The precision instrument for high speed inspection

Key Features

- ❖ Sensor range: 2048 pixels 14 μm or 4096 10 μm
- ❖ Excellent dynamic range >66dB
- ❖ High sensitivity CCD sensor
- ❖ Up to 12 bits depth
- ❖ Line rate up to 70 klines/s
- ❖ Flat field correction
- ❖ Easy configuration
- ❖ Interface: CameraLink
- ❖ Mechanics: Compact and accurate, compatible with all the AViVA range

Typical Applications

- ❖ Web inspection: Metallurgy, wood, paper, textile...
- ❖ Process control: Pick and place, positioning
- ❖ Print inspection
- ❖ Sorting: Food, postal, parcel, checks...
- ❖ Surface inspection: Wafers, PCB...
- ❖ Document archiving, data archiving

The AViIVA EM4 sets new standards for line scan cameras in term of speed and image quality. With resolutions of up to 4096 pixels, and the design of new CCD image sensors, it delivers state of the art performance, without compromise.

Its comprehensive built-in feature, including automatic FCC, LUT or automatic tap balance, are positioning it as the perfect choice for high demanding machine vision applications.

The EM4 benefits from e2v's long experience in imaging, and the proven qualities of the AViIVA family : performance, reliability and high precision mechanical design.

Detailed Specifications

Sensor Characteristics			
Resolution	pixels	2048	4096
Pixel Size (square)	µm	14	10
Maximum Line Rate	kHz	70	37

Functionalities (Programmable by Control Interface)	
Gain range	32 dB
Offset	-4096 to 4096 LSB
Exposure Time	Up to 6.55 ms
Trigger Mode	Free Run, External Trigger
Regulatory	RoHS, CE and FCC compliant

Radiometric Performances	
Bit Depth	bits 8, 10 or 12
Spectral Range	nm 250 - 1100
Non-linearity	% < +/- 1
Dynamic Range	dB > 66

Mechanical and Electrical Interface		
Size (w x h x l)	mm	56 x 60 x 43
Lens Mount		C, F, T2, M42 x 1
Sensor Alignment	µm	Better than ± 100
Power Supply	V	Single 12 to 24
Power Dissipation	W	< 11
Operating Temperature	°C	0 to 60 (front face)
Storage Temperature	°C	-40 to 70

Connectors	
Power	HR10 6-pin
Control & Data: CameraLink	MDR 26-pin



Overview of e2v's Line Scan Camera offer

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 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
DiViINA LM2	Monochrome	40	CL	1024 to 4096	8 bits
AViIVA EM2	Monochrome	80	CL	2048 to 4096	up to 12 bits
AViIVA EM4	Monochrome	160	CL	2048 to 4096	up to 12 bits

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