

AVIIVA® M4

Line Scan Camera



Come into the **world** of **high resolution**

Key Features

- ❖ Sensor Range: 2k, 6k or 8k, 14 μm (2k), 7 μm (6k, 8k)
- ❖ Interface: Camera Link
- ❖ Mechanics: Compact and Accurate
- ❖ High Dynamic Range: 60 dB
- ❖ Data Rate:
 - up to 120 MHz for 2k
 - up to 160 MHz for 6k & 8k
- ❖ Flat Field Correction
- ❖ Bit Depth: 8 or 10 bits
- ❖ High Sensitivity CCD Sensor
- ❖ Fully Configurable by the User with CommCam software

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Typical Applications

- ❖ Web Inspection (printing, textile, paper...)
- ❖ Surface Inspection (semiconductors, PCB, DVD, flat panel display...)
- ❖ OCR and Bar Codes Reading (document scanning, postal sorting...)

e2v

e2v manages the entire manufacturing process, from the sensor to the camera. The result is a camera able to work in 8 or 10 bits, with dedicated electronics that offer excellent dynamic range. The programmable settings let you work in different illumination conditions and with different integration time, gain and offset. The external trigger allows synchronization of several cameras, either at line or pixel level. e2v's detector manufacturing process guarantees excellent PRNU values, a significant element of differentiation from competitors. Whereas this is still true with these high data rate chips, the AVIIVA M4 cameras integrate flat field correction to compensate for lens and light source non-uniformities.



Detailed Specifications

Sensor Characteristics at Maximum Pixel Rate

Resolution	pixels	2048	6144	8192
Pixel Size (square)	µm	14	7	7
Line Length	mm	28.7	43	57.3
Maximum Line Rate	kHz	52	25	19
Anti-Blooming			x 100	

Radiometric Performances at Maximum Pixel Rate

Bit Depth	bits	8 or 10
Spectral Range	nm	250 - 1100
Non-linearity	%	< 1
Dynamic Range	dB	60

Functionalities (Programmable by Control Interface)

Dark Level	Automatic Correction
Gain	-2 to 28 dB (0.035 dB steps)
Digital Gain	0 to 30 dB (258 steps)
Offset (contrast expansion)	On all the dynamic
Exposure Time	Up to 32 ms
Clock Selection	20 or 40 MHz per taps
Trigger Mode	Free Run, External Trigger
Flat Field Correction	Manual Calibration
Output Format	8,10 bits on four or two taps
Regulatory	RoHS, CE and FFC compliant

Configuration Setting Software



Mechanical and Electrical Interface

Size (w x h x l)		
• 2k	mm	56 x 60 x 54
• 6k & 8k	mm	82 x 60 x 54
Optional Lens Mount		F or T2 Mount
• 2k & 6k		M72 x 0.75
• 8k		
Sensor Alignment	µm	better than ± 50
Power Supply	V	Single 12 to 24
Power Dissipation	W	< 9
Operating Temperature	°C	0 to 65 (front face)
Storage Temperature	°C	-40 to 75

Connectors

Power	HR10 6-pin
Control & Data	2 x MDR 26 Camera Link



Overview of e2v Line Scan Camera Offer

Commercial Name	M/C	Max Data Rate M Pixels/s	Interface	Resolution	Bit Depth
AVIIVA M2	Monochrome	60	CL/LVDS	512-1024-2048-4096	up to 12 bits
AVIIVA SM2	Monochrome	60	CL/LVDS	512-1024-2048-4096	up to 12 bits
AVIIVA SC2	Color	60	CL/LVDS	4096	up to 12 bits
AVIIVA UM2	Monochrome	60	GigE	512 to 4096	up to 12 bits
AVIIVA UC2	Color	60	GigE	4096	up to 12 bits
AVIIVA M4	Monochrome	160	CL	2048-6144-8192	up to 10 bits
AVIIVA UM8	Monochrome	320	CL	12288	up to 12 bits

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