

# AVIIVA® UM4

## Line Scan Camera



## Elegance to vision, uncompromised simplicity...

### Key Features

- Sensor Size 8 192 pixels - 7 x 7 µm
- Interface: Camera Link®  
(medium or base configuration)
- Mechanics: 76 x 76 x 56 mm
- High Dynamic Range: 62 dB
- Data Rate: 160 Mpixels/s
- Bit Depth: 8, 10 or 12 bits
- Automatic Gain Balance
- Flat Field Correction
- High Sensitivity CCD sensor
- Fully Configurable by the User  
with CommCam Software

### Typical Applications

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

# AVIIVA® UM4 Line Scan Camera

The AVIIVA Line Scan family combines superior technical performance and simplicity of use, with e2v manufacturing critical components from the CCD sensor to the complete camera. The AVIIVA UM4 is the latest addition to the AVIIVA family, following on from the highly successful AVIIVA M4.

The UM4 has been designed with ease of use at its heart: including fine automatic tap balancing, flat field correction and a high dynamic range of 62dB, whilst the software provided allows direct upgrading of the camera's firmware. The camera is also RoHS compliant

The AVIIVA UM4 8K includes all of the features that make the AVIIVA family such a success, with key improvements on ease of use and performance.



## Detailed Specifications

Sensor Characteristics at Maximum Pixel Rate			Functionalities (Programmable by Control Interface)		
Resolution	pixels	8192	Gain Range	up to 48 dB (0.035 dB steps)	
Pixel Size (square)	µm	7	Offset (Contrast Expansion)	-4096 to +4095 LSB	
Line Length	mm	57.3	Exposure Time	Up to 6.5 ms	
Max Line Rate	kHz	19	Trigger Mode	Free Run, External Trigger	
Anti-Blooming		x 100	Output Format	2 or 4 taps	
			Tap Balance	Automatic	
			Flat Field Correction	Automatic	
			Regulatory	CE, FFC and RoHS compliant	

  

Radiometric Performances at Maximum Pixel Rate			Mechanical and Electrical Interface		
Bit Depth	bits	8, 10 or 12	Size (w x h x l)	mm	76 x 76 x 56
Spectral Range	nm	250-1100	Lens Mount	M72 x 0.75	
Non-linearity	%	+/- 1	Sensor Alignment	µm	better than +/- 50
Dynamic Range	dB	62	Sensor Flatness	µm	better than +/- 20
			Power Supply	V	single 12 to 24
			Power Dissipation	W	< 10
			Operating Temperature	°C	0 to 65 (front face)
			Storage Temperature	°C	- 40 to 70



## Overview of e2v Line Scan Camera Range

Commercial Name	M/C	Max Data Rate M Pixels/s	Interface	Resolution	Bit Depth
AVIIVA M2	Monochrome	60	CL/LVDS	512 to 4096	up to 12 bits
AVIIVA SM2	Monochrome	60	CL/LVDS	512 to 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 UM4	Monochrome	160	CL	8192	up to 12 bits
AVIIVA UM8	Monochrome	320	CL	12288	up to 12 bits

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### Sales offices

#### Northern Europe

e2v  
106 Waterhouse Lane  
Chelmsford  
Essex CM1 2QU  
England  
T +44 (0)1245 493 493  
F +44 (0)1245 492 492

#### Southern Europe

e2v  
16 Burospace  
F-91572 Bièvres Cedex  
France  
T +33 (0) 1 6019 5500  
F +33 (0) 16019 5529

#### Americas

e2v  
4 Westchester Plaza  
Elmsford  
NY 10523-1482  
USA  
T +1 914 592 6050  
F +1 (914) 592- 5148

#### Asia Pacific

e2v  
Bank of China Tower  
30<sup>th</sup> floor office 7  
1 Garden Rd Central  
Hong Kong  
T +852 2251 8227/8/9  
F +852 2251 8383

### Product Contact

e2v  
Avenue de Rochepleine - BP 123  
F-38521 Saint-Egrève Cedex  
France  
T +33 (0)4 76 58 30 00  
hotline-cam@e2v.com

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