

AVIIVA® SM2 Line Scan Camera



Come into a **smarter** **imaging world**

Key Features

- Sensor Range: 512 to 4096 Pixels, 10 μm or 14 μm
- Interface: Camera Link, LVDS
- Mechanics: Compact and Accurate
- Excellent Dynamic Range: 67 dB
- Data Rate: up to 60 MHz (scalable)
- Flat Field Correction
- Bit Depth: 8, 10 or 12 bits
- High Sensitivity CCD Sensor
- Fully Configurable by the User with CommCam Software

Typical Applications

- Web Inspection (printing, textile, paper...)
- Parts Inspection or Sorting (food, pharma, container...)
- Surface Inspection (semiconductor, PCB, DVD, flat panel display...)
- OCR and Bar Codes Reading (document scanning, postal sorting...)
- 3D Metrology

AVIIVA® SM2 Line Scan Camera

e2v manages the entire manufacturing process, from the sensor to the camera. The result is a camera able to work up to 12 bits, with dedicated electronics that offer an excellent dynamic range. e2v's detector manufacturing process guarantees excellent PRNU values, a significant element of differentiation from competitors.

The smarter AVIIVA SM2 takes advantage of all the features that made the success of the AVIIVA M2, but integrates flat field correction to compensate for lens and light source non-uniformities.

The programmable settings let you work at different integration time, gain and offset. An external clock and trigger enable synchronization of several cameras.



Detailed Specifications

Sensor Characteristics at Maximum Pixel Rate

Resolution	pixels	512	1024	2048	4096
Pixel Size (square)	µm	14	10 or 14	10 or 14	10
Maximum Line Rate	kHz	98	53	28	14
Anti-Blooming		x 100			

Radiometric Performances at Maximum Pixel Rate

Bit Depth	bits	8, 10 or 12			
Spectral Range	nm	250 - 1100			
Non-linearity	%	< 2			
Dynamic Range	dB	66			

Functionalities (Programmable by Control Interface)

Gain	-2 to 28 dB (0.035 dB steps)
Offset (contrast expansion)	On all the dynamic
Exposure Time	Up to 32 ms
Clock Selection	20 or 60 MHz per taps
Trigger Mode	Free Run, External Trigger
Flat Field Correction	Auto, Manual
Output Format	One or two taps
Regulatory	RoHS, CE and FFC compliant

Mechanical and Electrical Interface

Size (w x h x l)	56 x 60 x 39.4
Optional Lens Mount	C, F, T2, M42 x 1
Sensor Alignment	µm Better than ± 50
Power Supply	Single 12 to 24
Power Dissipation	< 7
Operating Temperature	0 to 65 (front face)
Storage Temperature	-40 to 75

Connectors

Power	HR10 6-pin
Control & Data:	
Camera Link	MDR 26-pin
LVDS	D-SubHD 44-pin



Configuration Setting Software



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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