

# AVIIVA SC2

## LINESCAN CAMERA



Open  
the door  
to smarter  
color imaging

### Key Features

- **Sensor Range:** 4096 Pixels, 10  $\mu\text{m}$ , Monoline RGB Pattern Sens
- **Interface:** Camera Link, LVDS
- **Mechanics:** Compact and Accurate
- **Excellent SNR:** 67 dB
- **Data Rate:** up to 60 MHz (scalable)
- **Flat Field Correction**
- **White Balance Correction**
- **Color Space Correction**
- **Output Format:** 8, 10 or 12 Bits  
Serial RGB, 8 Bits Parallel RGB
- **High Sensitivity CCD Sensor**
- **Fully Configurable by the User**  
with CommCam Software.

### Typical Applications

- **Web Inspection**  
(Ceramic, Printing)
- **Parts Inspection or Sorting**  
(Labels, Plastics, Minerals, Wood,  
Waste Management/Recycling)
- **Surface Inspection**  
(PCB, Film Scanning, Document  
Scanning)



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**Product Information:**

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**Literature Request**  
[www.atmel.com/literature](http://www.atmel.com/literature)

**Web Site**  
[www.atmel.com](http://www.atmel.com)

ATMEL manages the entire manufacturing process, from the sensor to the camera. The result is a camera able to work in 8, 10 or 12 bits, with dedicated electronics that offer an excellent signal to noise ratio. ATMEL's detector manufacturing process guarantees excellent PRNU values, a significant element of differentiation from competitors.

This smarter AVIIVA SC2 is the right alternative to those looking for a cost effective color linescan camera. AVIIVA SC2 takes advantage of all the features that made the success of the AVIIVA family. This smarter AVIIVA SC2 integrates flat field correction to compensate for lens and light source non-uniformities. It includes contrast expansion functions and embeds balance and color space correction.

The programmable settings let you work at different illumination conditions and with 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	4096 or 1365 x RGB pattern
Pixel Size (square)	µm	10
Max Line Rate	kHz	14
Anti-Blooming		x 150

Radiometric Performances at Maximum Pixel Rate		
Output Format	bits	8, 10 or 12 in serial RGB 8 in parallel RGB
Spectral Range*	nm	400 - 700
Non-Linearity	%	< 1
SNR	dB	67

\* with BG38 filter

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

Functionalities (Programmable by Control Interface)	
Gain	0 to 25 dB (0.035 dB steps)
Offset (Contrast Expansion)	On all the dynamic
Exposure Time	Up to 32 ms
Clock Selection	20 to 60 MHz
Trigger Mode	Free Run, External Trigger
Flat Field Correction	Auto, Manual
White Balance	Auto, Manual
Color Correction	Coefficient Input
Regulatory	CE and FCC Compliant

Mechanical & Electrical Interface		
Size (w x h x l)	mm	56 x 50 x 39.4
Optional Lens Mount		F, T2, M42x1
Sensor Alignment	µm	Better than ±50
Power Supply	V	Single 12 to 24
Power Dissipation	W	< 6.5
Operating Temperature °C		0 to 65 (non-condensing)
Storage Temperature °C		-40 to 75 (non-condensing)

**Configuration Setting Software**



**Overview of Atmel Linescan Camera Offer**

Commercial Name	M/C	Max Data Rate MPixels/s	Interface	Resolution	Data Format
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 M4	Monochrome	160	CL	2048-6144-8192	up to 10 bits
AVIIVA SC2	Color	60	CL/LVDS	4096	up to 12 bits
AKYLA HD20	Color	3 x 20	CL/LVDS	1024-2048	up to 12 bits
AKYLA HD25	Color	3 x 25	CL/LVDS	1024-2048	up to 12 bits
AKYLA HD33	Color	3 x 33	CL/LVDS	1024-2048	up to 12 bits
AKYLA HD40	Color	3 x 40	CL/LVDS	1024-2048	up to 12 bits



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