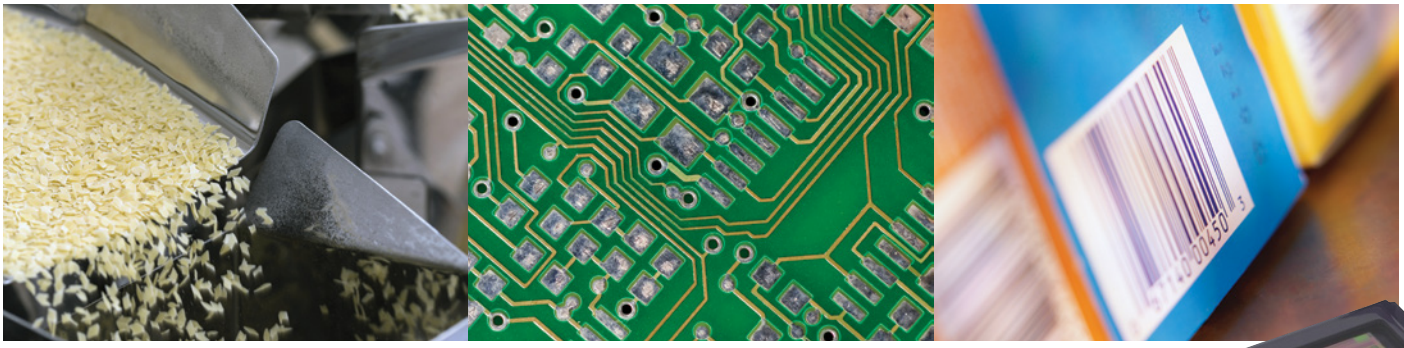
TETRA MONOCHROME IMAGING SENSOR



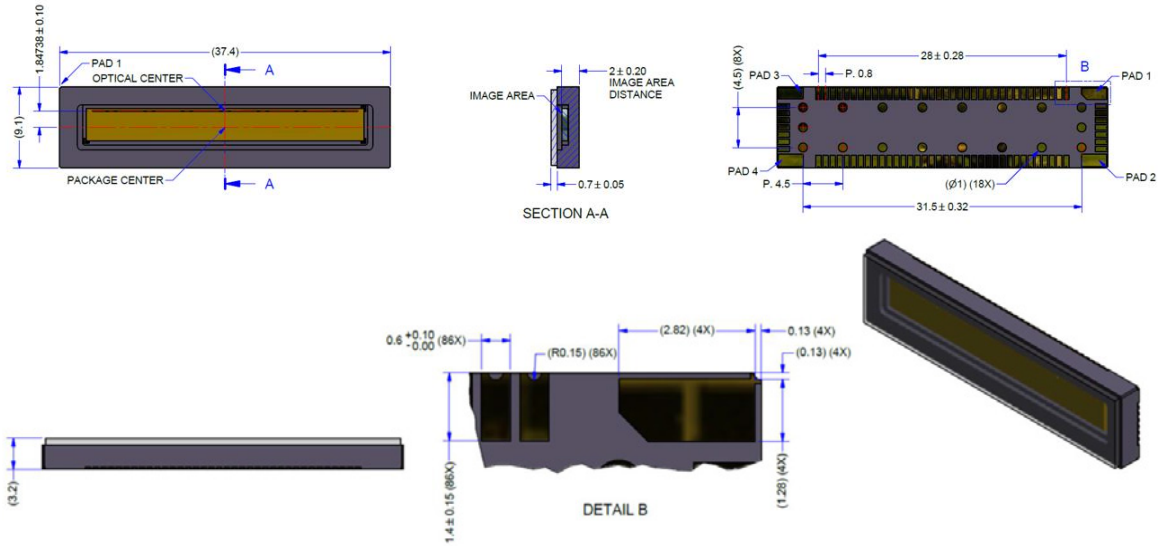
Tetra is a low-cost, high-performance quadlinear CMOS sensor family from Teledyne e2v. This sensor is ideal for food sorting, mineral sorting, recycling, logistics, pick and place, and other machine vision applications that require cost-effective mono, color, and multispectral imaging.

The monochrome sensor has a resolution of 4,096 x 4 pixels with a 7 x 7 µm pixel size and runs at a maximum line rate of 128 kHz aggregate. Based on a synchronized shutter design, the sensor provides low read noise and high dynamic range through the use of digital Correlated Double Sampling (CDS).

It has independent exposure control for each row that can be used to achieve high dynamic range.

The ceramic LCC package offers high performance and high reliability over a wide range of operating temperatures. The sensor data ports have high signal integrity and simple interfacing for quick system integration.

MECHANICAL DRAWING



FIND OUT MORE!

Sensor Characteristics

	EV1S04KB-CLV0100-T
Line Rate – Maximum	128 kHz 1 row; 64 kHz 2 rows, 32 kHz 4 rows
Output – Digital LVDS	12-bits
Resolution	4096 x 4 pixels
Pixel Size – Square	7 x 7 µm
Random Noise	8.5 e-
Dynamic Range	71.5 dB
Conversion Gain	0.13 DN_{12}/e-
Full Well	31.5 ke-
Shutter Type	Synchronized shutter
Responsivity – @ 12 bits, peak	130 DN_{12} / (nJ/cm²) @550nm
Power Consumption	1.7 W
Operating Temperature	-10 to +60°C
Package	Ceramic LCC
Regulatory Compliance	RoHS

KEY ELEMENTS

- Selectable 1, 2 or 4 rows
- High speed: 128 kHz aggregate
- Low noise, high responsivity, high full well
- 100% fill factor
- Independant exposure control for each row
- Ease of integration
- Low cost

TYPICAL APPLICATIONS

- Food and Mineral Sorting
- Recycling
- Logistics
- Pick and Place
- Machine Vision