



Product Overview

KAI-02170: Interline Transfer CCD Image Sensor, 2.1 MP

For complete documentation, see the [data sheet](#)

Product Description

The KAI-02170 Image Sensor is a 2-megapixel CCD in a 1 inch optical format. Based on the TRUESENSE 7.4 micron Interline Transfer CCD Platform, the sensor provides very high smear rejection and up to 82 dB linear dynamic range through the use of a unique dual-gain amplifier. Flexible readout architecture enables use of 1, 2, or 4 outputs for full resolution readout up to 60 frames per second, while a vertical overflow drain structure suppresses image blooming and enables electronic shuttering for precise exposure control.

The sensor is available with the TRUESENSE Sparse Color Filter Pattern, a technology which provides a 2x improvement in light sensitivity compared to a standard color Bayer part.

The sensor shares common pin-out and electrical configurations with a full family of Truesense Imaging Interline Transfer CCD image sensors, allowing a single camera design to be leveraged in support of multiple devices.

Features

- Superior smear rejection
- Up to 82 dB linear dynamic range
- Bayer Color Pattern, TRUESENSE Sparse Color Filter Pattern, and Monochrome configurations
- Progressive scan & flexible readout architecture
- High frame rate
- High sensitivity - Low noise architecture
- Package pin reserved for device identification

Applications

- Intelligent Transportation Systems
- Machine Vision
- Surveillance

Part Electrical Specifications

Product	Compliance	Status	Type	Megapixels	Frame Rate (fps)	Optical Format	Shutter Type	Pixel Size (μm)	Color	Package Type
KAI-02170-ABA-JD-AE	Pb-free Halide free	Active	Interline CCD	2.1	60	1 inch	Electronic	7.4 x 7.4	Mono	CPGA-67
KAI-02170-ABA-JD-BA	Pb-free Halide free	Active	Interline CCD	2.1	60	1 inch	Electronic	7.4 x 7.4	Mono	CPGA-67
KAI-02170-CBA-JD-AE	Pb-free Halide free	Active	Interline CCD	2.1	60	1 inch	Electronic	7.4 x 7.4	Bayer Color	CPGA-67
KAI-02170-CBA-JD-BA	Pb-free Halide free	Active	Interline CCD	2.1	60	1 inch	Electronic	7.4 x 7.4	Bayer Color	CPGA-67
KAI-02170-PBA-JD-AE	Pb-free Halide free	Active	Interline CCD	2.1	60	1 inch	Electronic	7.4 x 7.4	Sparse CFA	CPGA-67
KAI-02170-PBA-JD-BA	Pb-free Halide free	Active	Interline CCD	2.1	60	1 inch	Electronic	7.4 x 7.4	Sparse CFA	CPGA-67

For more information please contact your local sales support at www.onsemi.com

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