

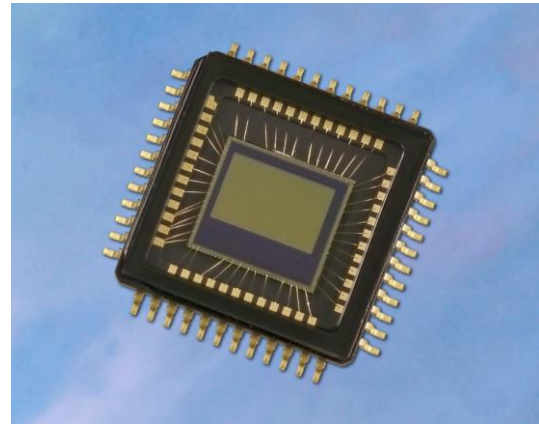
PRODUCT SUMMARY

KODAK KAC-00401 IMAGE SENSOR

1/3" WVGA RAW CMOS IMAGE SENSOR

DESCRIPTION

The KAC-00401 is a high performance, low power, automotive grade image sensor capable of capturing motion and still images. Included on-chip is a video gain amplifier, 12-bit A/D converter, and fixed pattern noise elimination circuits. Also integrated are programmable smart timing and control circuits, which allow maximum flexibility in adjusting gain, frame rate, integration time, and active window size. In addition, the dynamic range of the sensor can be extended >100dB through a high dynamic range response curve.



FEATURES

- WVGA resolution for wider field of view
- Monochrome or Bayer RGB available
- Low noise architecture for increased SNR
- Enhanced near-IR performance
- Extended Dynamic Range via three breakpoint programmable response curve
- Partial Line Integration for superior exposure control under high-light conditions
- High frame rate – 52 fps @ full resolution
- Simple I²C compatible serial interface
- Operating temperature range up to +105°C
- Automotive grade 48-pin PQFP

APPLICATIONS

- Automotive Imaging
- Machine Vision

Parameter	Value
Optical Format	1/3-inch
Active Array	768(H) x 488(V)
Imaging Area	5.15mm(H) x 3.27mm(V)
Pixel Size	6.7µm x 6.7µm
Quantum Efficiency	Monochrome: 60% @ 550nm
Sensitivity	Monochrome: 4.5 V/lux-sec
Dynamic Range	Linear: 60dB Extended: >100dB
Dark Current	0.9nA/cm ²
Read Noise	4.3 LSBs
Frame Rate	52 fps @ 768H x 488V
Readout Rate	6-24 MSPS
Data Format	12-bit parallel Bayer RAW
Scan Mode	Progressive scan
Shutter Modes	Continuous and single frame rolling shutter
Programmable Gain	Fine: 5.7x, 0.075x steps Coarse: 2.35x, 0.19x steps
Power Supply	I/O: 3.3V ±10% Analog: 3.3V ±5% Digital: 1.8V ±5%
Power Consumption	Total: 191mW Analog + I/O: 184mW Digital: 7mW
Temperature Range	Operating: -40°C to 105°C
Package	48-pin PQFP

All parameters above are specified at T = 20°C

ORDERING INFORMATION

Catalog Number	Product Name	Description
4H2104	KEK-4H2104-KAC-00401	CDU Evaluation Kit – Complete System
4H2105	KEH-4H2105-KAC-00401	CDU Evaluation Kit – Headboard only
4H2094	KAC-00401-MBC-LB-A1 Trays	Monochrome, Telecentric Microlens, PQFP Package in Tray, Clear Cover Glass, Standard Grade
4H2099	KAC-00401-CBC-LB-A0 Trays	Bayer RGB, Telecentric Microlens, PQFP Package in Tray, Clear Cover Glass, Standard Grade

Please see ISS Application Note “Product Naming Convention” (MTD/PS-0892) for a full description of naming convention used for KODAK image sensors.

For all reference documentation, please visit our Web Site at www.kodak.com/go/imagers.

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