

PRODUCT SUMMARY

KODAK KAC-05010 2.2UM 5MP IMAGE SENSOR

2592(H) X 1944(V) QSXGA CMOS RAW COLOR IMAGE SENSOR

DESCRIPTION

The KODAK KAC-05010 2.2 μ m Image Sensor is a high performance 1/2.5" format 5.0 megapixel raw output CMOS image sensor incorporating KODAK PIXELUX technology, including the use of pinned photodiodes and a four-transistor shared-pixel (4T4S) architecture. The sensor offers outstanding image quality while providing unique binning modes of operation for increased sensitivity.

FEATURES

- PIXELUX technology, including pinned photodiodes and 4T4S architecture, for superior imaging performance
- Selectable charge-domain binning for increased sensitivity under low-light operation.
- Horizontal Averaging, sub-sampling and region of interest windowing modes
- Digital Zoom/Crop option
- Progressive programmable scan, electronic rolling shutter, digital video output with Flip and Mirror output options
- Global Reset
- Flexible programming via I²C compatible serial interface
- Dedicated Input Trigger and Output strobe for flash sync (LED and Xenon)
- Digital Output Tri-state
- Row and Column On-Chip Noise Correction

APPLICATIONS

- Digital Still Camera, Mobile Phone

Parameter		Typical Value
Architecture		4T4S pixel CMOS architecture with PIXELUX technology
Digital Video Output		10 bit parallel Bayer Raw
Dimensions	Number of Active Pixels	2592 (H) x 1944 (V) = 5.0 Mpix
	Pixel Size	2.2 μ m (H) x 2.2 μ m (V)
	Active Pixels Optical Size	7.13 mm [diagonal] 1/2.5" optical format
	Effective image area	5.7024 mm (H) x 4.2768 mm (V)
Chief Ray Angle		12.5°
Master Clock		36 MHz (48MHz max)
Maximum Frame Rate	QSXGA (5Mp)	5 fps (7fps at 48MHz)
	VGA	30 fps
Performance	Sensitivity	6900 e ⁻ /lux*s
	Dynamic Range	51 dB
	Quantum Efficiency	(460 nm, 535 nm, 600 nm) 36%, 34%, 38%
Scan mode		Progressive scan
Shutter modes		Continuous Frame Rolling Shutter Single Frame Global Reset
Programmable Gain		Global or RGB: 3.875x analog 5x digital
Power supply	I/O	3.3V \pm 10%
	Analog	1.8V \pm 5%, 3.3V \pm 10%
	Core	1.8V \pm 5%
Power Dissipation	Dynamic	<150 mW total (36MHz, All Resolutions)
	Standby	<3mW
	Powerdown	<100uW
Temperature	Guaranteed Performance	0°C to 60°C
	Operating	-10°C to 65°C
	Storage	-40°C to 125°C
Package Type		48 CLCC

ORDERING INFORMATION

Catalog Number	Product Name	Description
4H0906	KAC-05010-CXB-FB-AA-12 Degree	Standard grade image sensor color in CLCC package
4H0907	KAC-05010-CXB-FB-AE-12 Degree	Engineering grade image sensor color in CLCC package
4H0983	KAC-05010-CXB-FB-AT-12 Degree	Test grade image sensor color in CLCC package
4H0913	KEK-4H0913-KAC-05010	Evaluation Board (Complete Kit)
4H0914	KEK-4H0914-KAC-05010	Evaluation Board (Head Board)

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

Address all inquiries and purchase orders to:

Image Sensor Solutions
Eastman Kodak Company
Rochester, New York 14650-2010

Phone: (585) 722-4385
Fax: (585) 477-4947
E-mail: imagers@kodak.com