

PAS109B

QQVGA COLOR CMOS IMAGE SENSOR

General Description

The PAS109B is a color and monochrome digital CMOS image sensor with resolution of 164(H) x 124(V). The PAS109B outputs 8, 4, 2 or 1-bit digital raw data or 8-bit formatted data per pixel. The PAS109B performs automatic gain control, automatic exposure control and automatic de-flicker. The PAS109B can also be programmed via I²C™ serial control bus. By programming the internal register settings, it performs on-chip frame rate adjustment, exposure control, offset correction DAC, programmable gain control as well as output formatting. By proprietary technology, FPN, smear and blooming are drastically reduced.

The PAS109B is available in color or monochrome in 32-pin LCC chip-with-lens package.

Features

- 164x124 pixels, 1/11" Lens
- Automatic/Manual exposure-gain control
- On chip 10-bit ADC
- On chip PGA
- On chip 9-bit DAC
- User selectable output data formats:
 - ◆ 8-bit formatted data
 - ◆ 8/4/2/1-bit raw data
- Output tri-state through /CSB pin or register
- AE report
- Horizontal mirror output
- Flash light application allowable
- Automatic de-flicker
- External oscillator
- I²C Interface
- Wide operating supply range: 2.4 - 3.6V
- Low power dissipation: 16mW @ 60fps
- Low power down dissipation: 200µW

Applications

- Digital still cameras
- PC cameras
- Cellular phones
- PDAs
- Watch cameras
- Key-chain Cameras
- Toys

Technical Specifications

Power supply	Wide operating supply range 2.4V ~ 3.6V
Array Elements	164 x 124
Optical Format	1/11"
Pixel Size	7.25µm x 7.25µm
System clock	Up to 48MHz
Max. pixel Rate	1.5MHz
FPN	< 0.2% of saturation
PGA Gain	16X (24dB)
Frame Rate	60fps
Scan Mode	Progressive
Package	32-pin LCC chip-with-lens

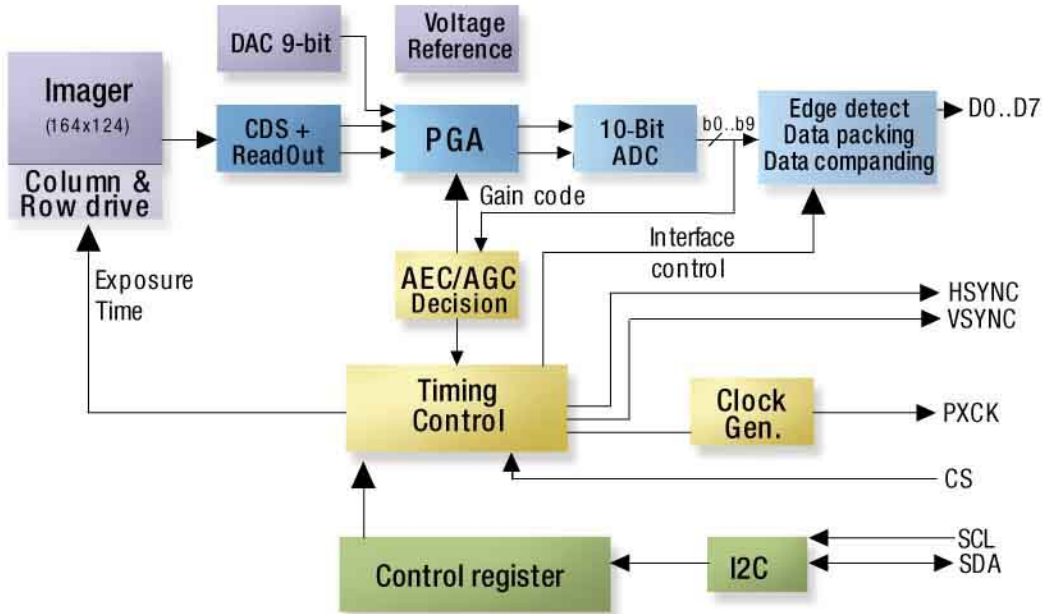


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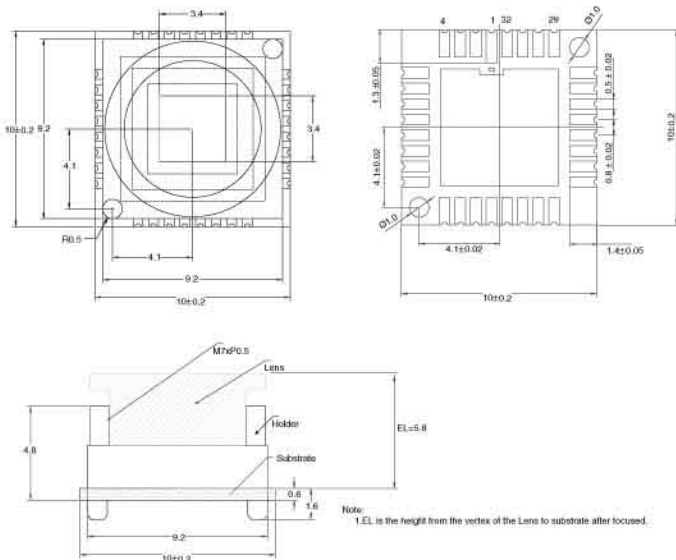


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Block Diagram



Package Outline



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