

# PAS106B

## CIF COLOR CMOS IMAGE SENSOR

### General Description

The PAS106B is a highly integrated CMOS active-pixel image sensor that has a CIF resolution of 356H x 292V. To have an excellent image quality, the PAS106B outputs 10-bit RGB raw data through a parallel data bus. It is available in color with 28-pin LCC packages.

The PAS106B can be programmed to set the exposure time for different luminance condition via I<sup>2</sup>C™ serial control bus. By programming the internal register sets, it performs on-chip frame rate adjustment, offset correction DAC and programmable gain control.

### Key Features

- CIF(356 x 292 pixels) resolution, ~1/5" Lens
- Bayer-RGB color filter array
- On-chip 10-bit pipelined A/D converter
- Output format: 10-bit parallel RGB raw data
- On-chip 6-bit (1 sign bit+ 5 magnitude bits) background compensation DAC
- On-chip programmable gain amplifier
  - 5-bit color gain amplifier (x4)
  - 5-bit global gain amplifier (x5)
- Continuous variable frame time (1/2sec~1/30sec)
- Continuous variable exposure time
- I<sup>2</sup>C™ Interface
- Digitally programmable registers
- Single 3.3V supply voltage
- 100 mW low power dissipation

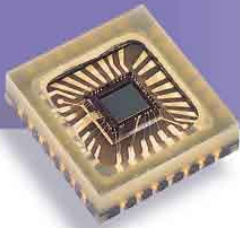
### Applications

- Digital still camera
- Digital camcorder
- PC camera
- Video conferencing system
- Video cellular Phone
- Visual toy
- Security system
- Biometrics system

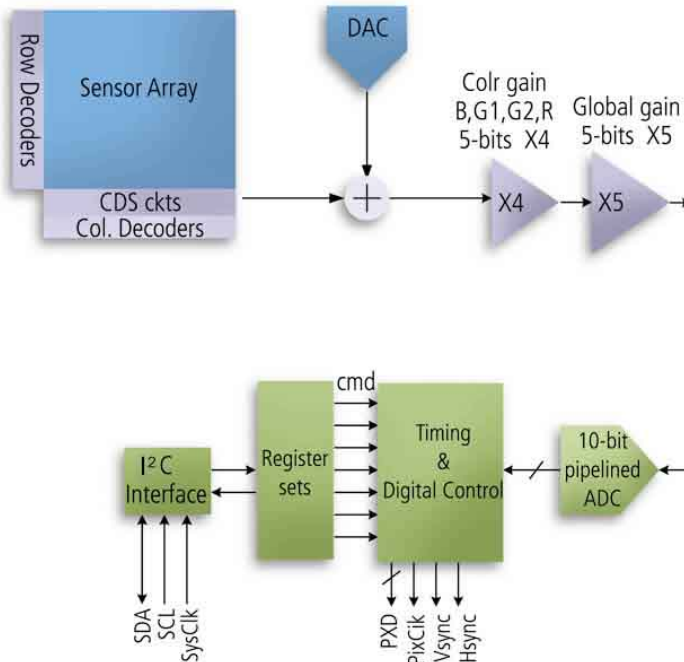
### Technical Specifications

Supply Voltage	3.3V ± 5%
Array format	356(H) x 292(V)
Optical format	~1/5"
Pixel Size	7.25µm x 7.25µm
Frame rate	30 fps
System clock	Up to 48 MHz
Max. pixel rate	4 MHz
Sensitivity	1.0V/Lux-sec
PGA gain	31.6 dB max.
Color filter	RGB Bayer Pattern
Exposure Time	~ Frame time to 1/160000
Scan Mode	Progressive
S/N Ratio	>45dB
Package	28 pins or 32 pins LCC

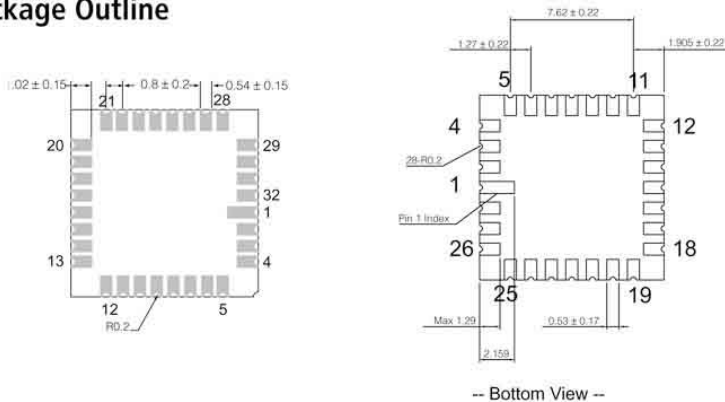
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## Block Diagram



## Package Outline



-- Bottom View --

## Ordering Information

Part No.	Description
PAS106BCB	Color sensor in 28-pin LCC package
PAS106BBB	B&W sensor in 28-pin LCC package
PAS106BCA	Color sensor in 32-pin LCC package
PAS106BBA	B&W sensor in 32-pin LCC package

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