

# 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

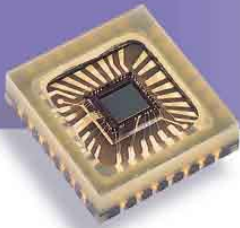
### Applications

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

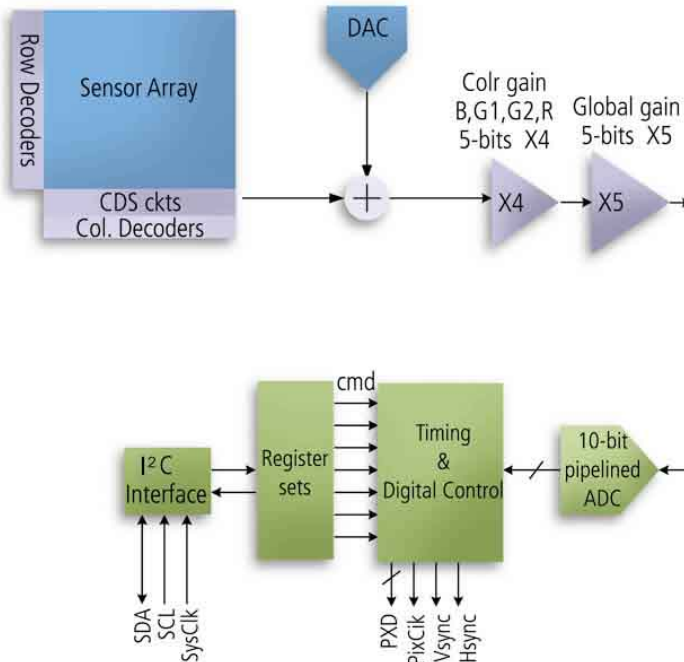
### Technical Specifications

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

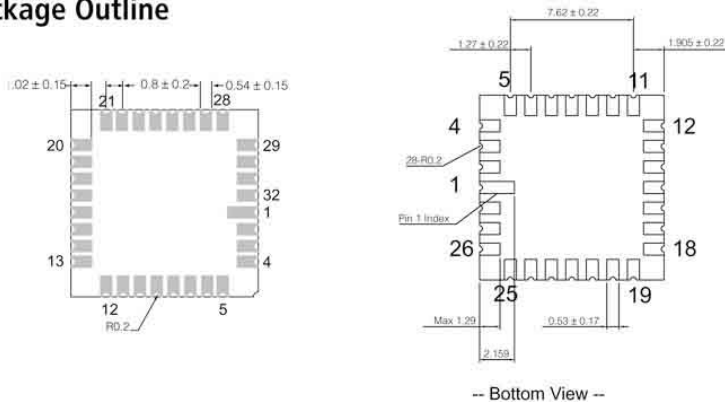
# PAS106B CIF COLOR CMOS IMAGE SENSOR



## Block Diagram



## Package Outline



## 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

**PixArt Imaging Inc.**

5th Floor, # 5, Innovation Road I, Science-Based Industrial Park, Hsin-Chu 300, Taiwan, R.O.C.  
 Tel: 886-3-5795317 Fax: 886-3-5795305  
 E-mail: fae\_service@pixart.com.tw  
 Http://www.pixart.com.tw

All rights reserved. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.