

# PAS202B

## VGA COLOR CMOS IMAGE SENSOR

### General Description

The PAS202B is a highly integrated CMOS active-pixel image sensor that has a VGA resolution of 644H x 484V. To have an excellent image quality, the PAS202B outputs 10-bit RGB raw data through a parallel data bus. It is available in color or monochrome and in 28-pin LCC.

The PAS202B 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

- VGA(644 x 484 pixels) resolution, ~1/4" Lens
- Bayer-RGB color filter array
- On-chip 10-bit pipelined A/D converter
- Output format: 10-bit parallel RGB raw data
- On-chip 9-bit background compensation DAC
- On-chip programmable gain amplifier
  - 4-bit color gain amplifier(x3)
  - 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
- 350 uW low power down dissipation
- Flash light timing
- Mirror readout

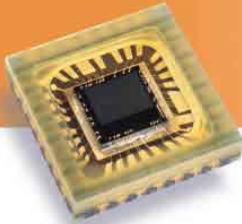
### Applications

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

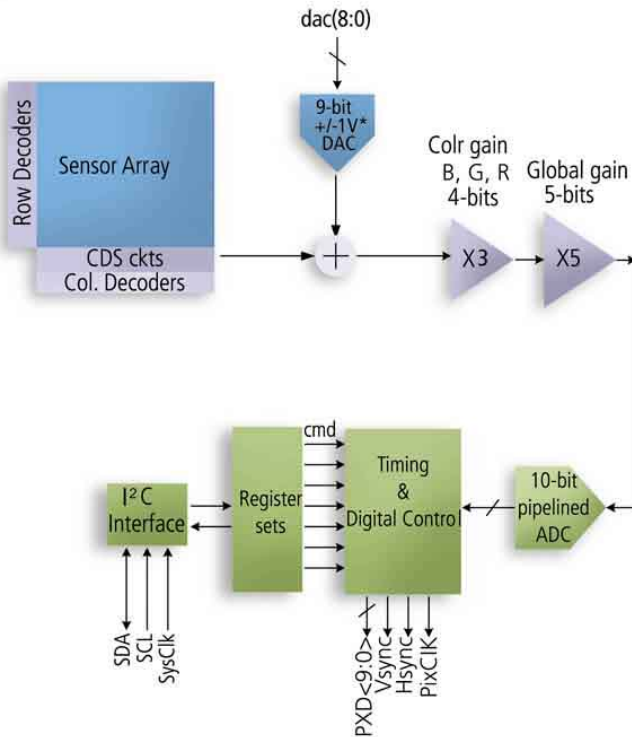
### Technical Specifications

Supply Voltage	3.3V ± 10%
Array format	644(H) x 484(V)
Optical format	~1/4"
Pixel Size	5.6umX5.6um
Frame rate	~30 fps
System clock	Up to 48 MHz
Max. pixel rate	12MHz
Sensitivity	0.6V/Lux-sec(green)
PGA gain	29.5 dB max.
Color filter	RGB Bayer Pattern
Exposure Time	~ Frame time to 4 pixel CLK
Scan Mode	Progressive
S/N Ratio	>42dB
Package	28 pins or 32 pins LCC

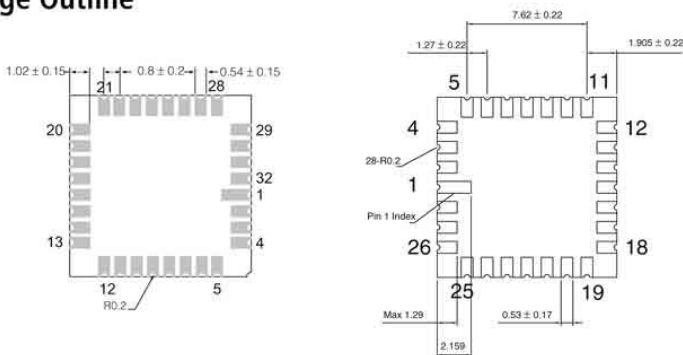
- ESD Machine Mode > 350V
- ESD Human-Body Mode > 4000V



### Block Diagram



### Package Outline



### Ordering Information

Part No.	Description
PAS202BCB	Color sensor in 28-pin LCC package
PAS202BBB	B&W sensor in 28-pin LCC package
PAS202BCA	Color sensor in 32-pin LCC package
PAS202BBA	B&W sensor in 32-pin LCC package

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