

DATA SHEET FLYER

PAS5130 HD-960p CMOS IMAGE SENSOR

General Description

The **PAS5130** is a highly integrated CMOS active-pixel image sensor that has output of **1280x960** (**HD-960p**) pixels. It embedded the new FinePixel™ sensor technology to perform the excellent image quality. **PAS5130** outputs 12-bit RGB raw data through a parallel data bus. It is available in **CSP** and **CLCC** package.

The **PAS5130** can be programmed to set the exposure time for different luminance condition via I2CTM serial control bus. By programming the internal register set, it performs on-chip frame rate adjustment, offset correction DAC and programmable gain control.

Features

- Bayer-RGB color filter array
- Output format:
 - 12-bit RAW RGB
- Parallel output
- On-chip 12-bit pipelined A/D converter
- On-chip manual analog gain control
- Continuous variable frame time & exposure time
- I2CTM Interface
- Support 1.8V I/O
- Automatic black-level calibration
- High temperature compensation
- Black sun cancellation
- Defect pixel compensation
- WOI
- Dummy line & pixel timing
- Output Hsync at Vsync
- PLL (input_clock / PLL_m >= 1MHz)



Specifications

| D (1871 | |
|-----------------------|----------------------------------|
| Parameter | Typical Value |
| Active array size | 1296(H) x 964(V) |
| Pixel size | 3.75um (H) x 3.75um (V) |
| Shutter type | Electronic rolling shutter (ERS) |
| Optical format | 1/3-inch |
| Lens chief ray angle | 12 degree |
| ADC | 12-bit |
| Sensitivity | 5500 mV/Lux-sec |
| SNRmax | 44dB |
| Dynamic range | 68 dB |
| Scan mode | Progressive scan |
| Input clock | Max 50Hz |
| Pixel clock | Max 91MHz |
| | 960p: 1280x960 @50fps |
| Max. frame rate | 720p: 1280x720 @60fps |
| | VGA: 640x480 @180fps |
| Supply voltage | Analog: 2.8 V |
| | Digital: 1.8 V |
| | I/O: 1.8V |
| Power consumption | 280mW |
| Operating temperature | -40°C ~ 85°C |

Applications

- Surveillance HD-CCTV Camera
- Surveillance IP Camera
- Car Video Recorder
- Automotive Camera
- Video Door Phone
- PC/Notebook Camera

Ordering Information

| Part Number | Description |
|-------------|-------------|
| PAS5130CA | 48-Pin CLCC |
| PAS5130LT | 46-Ball CSP |

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