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 I2C™ 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**
- **I2C™ 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

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
Max. frame rate	960p: 1280x960 @50fps 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	-40ºC ~ 85ºC

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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