

PS5150 HD-720p CMOS IMAGE SENSOR

General Description

The **PS5150** is a highly integrated CMOS active-pixel image sensor that output of **1280x720 (HD-720p)** pixels. It embedded the new FinePixel™ sensor technology to perform the excellent image quality. **PS5150** outputs 12-bit RGB raw data through a parallel data bus. It is available in **CSP** package.

The **PS5150** 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
- Automatic black-level calibration
- High temperature compensation
- Black sun cancellation
- WOI
- Dummy line & pixel timing
- Output Hsync at Vsync
- PLL(input_clock / PLL_m >= 1MHz)
- Built-in 1.8V regulator



Specifications

Parameter	Typical Value
Active array size	1296(H) x 732(V)
Pixel size	4.2um (H) x 4.2um (V)
Shutter type	Electronic rolling shutter (ERS)
Optical format	1/2.9-inch
Lens chief ray angle	12 degree
ADC	12-bit
Sensitivity	8800 mV/Lux-sec
SNRmax	35dB
Dynamic range	68 dB
Scan mode	Progressive scan
Input clock	Max 50Hz
Pixel clock	Max 91MHz
Max. frame rate	720p: 1280x720 @60fps VGA: 640x480 @180fps
Supply voltage	Analog: 3.3 V Digital: 1.8 V I/O: 1.8V~3.3V
Power consumption	350mW
Operating temperature	-30°C ~ 70°C

Applications

- Surveillance HD-CCTV Camera
- Surveillance IP Camera
- Car Video Recorder
- Automotive Camera
- Video Door Phone
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Ordering Information

Part Number	Description
PS5150LT	46-Ball CSP