

PAS5120 HD-720p CMOS IMAGE SENSOR

General Description

The **PAS5120** is a highly integrated CMOS active-pixel image sensor that has output of **1280x720 (HD 720p)** pixels. It embedded the new FinePixel™ sensor technology to perform the excellent image quality. **PAS5120** outputs **8/10-bit** RGB raw data through a parallel or a MIPI data bus. It is available in **CSP** package.

The **PAS5120** 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:
 - 10-bit RAW RGB
- Parallel and serial output (MIPI CSI-2)
- On-chip 10-bit pipelined A/D converter
- On-chip manual analog gain control (16X)
- Continuous variable frame time & exposure time
- I2C™ Interface
- Support 1.7V ~ 3.3V I/O
- Automatic black-level calibration
- High temperature compensation
- Black sun cancellation
- Defect pixel compensation
- WOI & Sub-sampling
- Analog Average Function
- Dummy line & pixel timing
- Output Hsync at Vsync
- PLL (input_clock / PLL_m >= 1MHz)

Specifications

Parameter	Typical Value
Active array size	1296(H) x 724 (V)
Pixel size	3.0um (H) x 3.0um (V)
Shutter type	Electronic rolling shutter (ERS)
Optical format	1/4-inch
Lens chief ray angle	23 degree non-linear
ADC	10-bit
Sensitivity	3300mV
SNRmax	43 dB
Dynamic range	69 dB
Scan mode	Progressive scan
Input clock	27 MHz
Pixel clock	27 MHz
Max. frame rate	720p: 1280x720 @30fps VGA: 640x480 @60fps
Supply voltage	Analog: 2.8 V Digital: 1.8 V I/O: 1.7V~3.3V
Power consumption	100mW
Operating temperature	-30°C ~ 70°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
PAS5120LT	36-Pin CSP