



PS5220 Full-HD 1080p CMOS IMAGE SENSOR

General Description

The **PS5220** is a highly integrated CMOS image sensor that output of **1920x1080** (Full HD-1080p) pixels with rolling shutter readout. It embedded the new FinePixel™ sensor technology to perform the excellent image quality. **PS5220** outputs 10-bit RGB raw data through a parallel data bus. It is available in **CLCC** and **CSP** package.

The **PS5220** 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

- 1936 x 1096 pixels with Bayer-RGB color filter array and micro-lens
- Output format:
 - 10-bit RAW RGB
- Output interface
 - 10bit parallel DVP output
- On-chip column A/D converter
- On-chip manual analog gain control
- Continuous variable frame time & exposure time
- I2CTM Interface
- Automatic black-level calibration
- Black sun cancellation
- Programmable fast-switch configuration
- Support WOI and subsampling
- Support dummy line & pixel timing
- Support output Hsync at Vsync
- Support 1.7V~3.3V I/O
- On-chip PLL (input_clock / PLL_m >= 1MHz)

Specifications Parameter

Parameter	Typical Value
Active array size	1936(H) x 1096(V)
Pixel size	3.0um (H) x 3.0um (V)
Shutter type	Electronic rolling shutter (ERS)
Optical format	1/2.7-inch
Lens chief ray angle	17 degree
ADC	10-bit
Sensitivity	3300 mV/Lux-sec
SNRmax	39 dB
Dynamic range	70 dB
Scan mode	Progressive scan
Input clock	Max 64Hz
Pixel clock	Max 81MHz
Max. frame rate	1080p: 1920x1080 @30fps 720p: 1280x720 @60fps VGA: 640x480 @120fps
Supply voltage	Analog: 3.3 V Digital: 1.2 V I/O: 1.7V~3.3V
Power consumption	85mW
Operating temperature	-30°C ~ 70°C



Applications

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

Ordering Information

Part Number	Description
PS5220CA	48-Pin CLCC
PS5220LT	60-Ball CSP

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