

Product Overview

AR0521: Image Sensor, CMOS, 1/2.5" 5.1 MP High Performance

For complete documentation, see the [data sheet](#).

The AR0521 is a 1/2.5-inch CMOS digital image sensor with an active-pixel array of 2592 (H) x 1944 (V). It captures images in either linear or high dynamic range modes with a rolling-shutter readout, and includes sophisticated camera functions such as binning, windowing and both video and single frame modes. It is designed for both low light and high dynamic range performance, with line interleaved T1/T2 read out to support off chip HDR in an ISP chip. The AR0521 produces extraordinarily clear, sharp digital pictures, and its ability to capture both continuous video and single frames makes it the perfect choice for a security applications.

Features

- 5 Mp at 60 fps for Excellent Video Performance
- Small Optical Format (1/2.5-inch)
- 1440p Mode for 16:9 Video
- Superior Low-light Performance
- 2.2 μ m Back Side Illuminated Pixel Technology
- Supports Line Interleaved T1/T2 Readout to Enable HDR Processing in ISP Chip
- Support for External Mechanical Shutter
- On-chip Phase-locked Loop (PLL) Oscillator
- Integrated Color and Lens Shading Correction
- Slave Mode for Precise Frame-rate Control

For more features, see the [data sheet](#)

Applications

- Video Surveillance
- High Dynamic Range Imaging

End Products

- Security Camera
- Action camera
- Car DVR

Part Electrical Specifications

| Product | Compliance | Status | Type | Megapixels | Frame Rate (fps) | Optical Format | Shutter Type | Pixel Size (µm) | Output Interface | Color | Package Type |
|------------------------|------------------------|-----------------|------|------------|------------------|----------------|---|-----------------|------------------|-------|--------------|
| AR0521SR2C09SURA0-DP | Pb-free Halide free | NEW | CMOS | 5.1 | 60 | 1/2.5 inch | Electronic Rolling and Global Reset Release | 2.2 x 2.2 | Multi | RGB | PLCC-52 |
| AR0521SR2C09SURA0-DP-E | Pb-free Halide free | Active | CMOS | 5.1 | 60 | 1/2.5 inch | Electronic Rolling and Global Reset Release | 2.2 x 2.2 | Multi | RGB | PLCC-52 |
| AR0521SR2C09SURA0-DR | Pb-free Halide free | NEW | CMOS | 5.1 | 60 | 1/2.5 inch | Electronic Rolling and Global Reset Release | 2.2 x 2.2 | Multi | RGB | PLCC-52 |
| AR0521SR2C09SURA0-DR-E | Pb-free Halide free | Active | CMOS | 5.1 | 60 | 1/2.5 inch | Electronic Rolling and Global Reset Release | 2.2 x 2.2 | Multi | RGB | PLCC-48 |
| AR0521SR2M09SURA0-DP | Pb-free Halide free | Product Preview | CMOS | 5.1 | 60 | 1/2.5 inch | Electronic Rolling and Global Reset Release | 2.2 x 2.2 | Multi | Mono | PLCC-52 |
| AR0521SR2M09SURA0-DP-E | Pb-free Halide free | Active | CMOS | 5.1 | 60 | 1/2.5 inch | Electronic Rolling and Global Reset Release | 2.2 x 2.2 | Multi | Mono | PLCC-52 |
| AR0521SR2M09SURA0-DR | Pb-free Halide free | Product Preview | CMOS | 5.1 | 60 | 1/2.5 inch | Electronic Rolling and Global Reset Release | 2.2 x 2.2 | Multi | Mono | PLCC-52 |
| AR0521SR2M09SURA0-DR-E | Pb-free Halide free | Active | CMOS | 5.1 | 60 | 1/2.5 inch | Electronic Rolling and Global Reset Release | 2.2 x 2.2 | Multi | Mono | PLCC-52 |

For more information please contact your local sales support at www.onsemi.com.

Created on: 10/16/2017