

## Product Overview

### AR0234CS: 1/2.6-inch 2.3 Mp CMOS Digital Image Sensor with Global Shutter

For complete documentation, see the data sheet.

The AR0234CS is a 1/2.6-inch 2Mp CMOS digital image sensor with an active-pixel array of 1920 (H) x 1200 (V). It incorporates a new innovative global shutter pixel design optimized for accurate and fast capture of moving scenes at 120 frame per second, full resolution.

The sensor produces clear, low noise images in both low-light and bright scenes. It includes sophisticated camera functions such as auto exposure control, windowing, row skip mode, column-skip mode, pixel-binning, and both video and single frame modes. It is programmable through a simple two-wire serial interface. The AR0234CS produces extraordinarily clear, sharp digital pictures with an industry leading Global Shutter Efficiency, and its ability to capture both continuous video and single frames makes it the perfect choice for a wide range of applications, including scanning, autonomous mobility, surveillance and industrial quality control.

#### Features

- Best in Class Global Shutter Efficiency
- Low Dark Current/Hot Pixels
- High Linear Full Well
- Low Operational Power
- Small Form Factor
- Built-In Statistics Engine
- Multiple Functional Modes - Row & Col Skip Modes, Pixel Binning

#### Applications

- Gesture recognition
- 3D scanning
- Position tracking
- Machine vision
- AR/VR/MR/XR

#### Benefits

- Superior Image Quality for fast-moving objects
- Reduced Total Noise Floor, Higher SNR delivering High Image Fidelity
- High Dynamic Range, delivers higher image clarity
- Suitable of Battery Powered Applications
- Ideal for Space Constrained Applications
- Offloads Image Processor Loads, provides scene details with Prog. ROI
- Application-specific Image Quality Selections with Performance/Power Trade-offs

#### End Products

- Autonomous Mobile Robots
- Autonomous Guide Vehicles (Drones)
- Video Doorbells
- AR/VR/MR Headsets
- Barcode Readers

## Part Electrical Specifications

| Product               | Pricing (\$/Unit) | Compliance                                   | Status         | Type | Megapixels | Frame Rate (fps) | Optical Format | Shutter Type   | Pixel Size (µm) | Output Interface | Color | Package Type |
|-----------------------|-------------------|--|----------------|------|------------|------------------|----------------|----------------|-----------------|------------------|-------|--------------|
| AR0234CSC00SUD20      |                   | Pb-free<br>Halide free<br>non AEC-Q and PPAP | Product review | CMOS | 2.3        | 120              | 1/2.6 inch     | Global Shutter | 3.0 x 3.0       | MIPI<br>Parallel | Color |              |
| AR0234CSC00SUKA0-CP   |                   | Pb-free<br>Halide free<br>non AEC-Q and PPAP | NEW            | CMOS | 2.3        | 120              | 1/2.6 inch     | Global Shutter | 3.0 x 3.0       | MIPI<br>Parallel | Color | ODCSP-83     |
| AR0234CSC00SUKA0-CP1  |                   | Pb-free<br>Halide free<br>non AEC-Q and PPAP | NEW            | CMOS | 2.3        | 120              | 1/2.6 inch     | Global Shutter | 3.0 x 3.0       | MIPI<br>Parallel | Color | ODCSP-83     |
| AR0234CSC00SUKA0-CR   |                   | Pb-free<br>Halide free<br>non AEC-Q and PPAP | NEW            | CMOS | 2.3        | 120              | 1/2.6 inch     | Global Shutter | 3.0 x 3.0       | MIPI<br>Parallel | Color | ODCSP-83     |
| AR0234CSC28SUD20      |                   | Pb-free<br>Halide free<br>non AEC-Q and PPAP | Product review | CMOS | 2.3        | 120              | 1/2.6 inch     | Global Shutter | 3.0 x 3.0       | MIPI<br>Parallel | Color |              |
| AR0234CSC28SUKA0-CP   |                   | Pb-free<br>Halide free<br>non AEC-Q and PPAP | NEW            | CMOS | 2.3        | 120              | 1/2.6 inch     | Global Shutter | 3.0 x 3.0       | MIPI<br>Parallel | Color | ODCSP-83     |
| AR0234CSC28SUKA0-CP1  |                   | Pb-free<br>Halide free<br>non AEC-Q and PPAP | NEW            | CMOS | 2.3        | 120              | 1/2.6 inch     | Global Shutter | 3.0 x 3.0       | MIPI<br>Parallel | Color | ODCSP-83     |
| AR0234CSC28SUKA0-CR   |                   | Pb-free<br>Halide free<br>non AEC-Q and PPAP | NEW            | CMOS | 2.3        | 120              | 1/2.6 inch     | Global Shutter | 3.0 x 3.0       | MIPI<br>Parallel | Color | ODCSP-83     |
| AR0234CSSM00SUD20     |                   | Pb-free<br>Halide free<br>non AEC-Q and PPAP | Product review | CMOS | 2.3        | 120              | 1/2.6 inch     | Global Shutter | 3.0 x 3.0       | MIPI<br>Parallel | Mono  |              |
| AR0234CSSM00SUKA0-CP  |                   | Pb-free<br>Halide free<br>non AEC-Q and PPAP | NEW            | CMOS | 2.3        | 120              | 1/2.6 inch     | Global Shutter | 3.0 x 3.0       | MIPI<br>Parallel | Mono  | ODCSP-83     |
| AR0234CSSM00SUKA0-CP1 |                   | Pb-free<br>Halide free<br>non AEC-Q and PPAP | NEW            | CMOS | 2.3        | 120              | 1/2.6 inch     | Global Shutter | 3.0 x 3.0       | MIPI<br>Parallel | Mono  | ODCSP-83     |
| AR0234CSSM00SUKA0-CR  |                   | Pb-free<br>Halide free<br>non AEC-Q and PPAP | NEW            | CMOS | 2.3        | 120              | 1/2.6 inch     | Global Shutter | 3.0 x 3.0       | MIPI<br>Parallel | Mono  | ODCSP-83     |
| AR0234CSSM28SUKA0-CP  |                   | Pb-free<br>Halide free<br>non AEC-Q and PPAP | NEW            | CMOS | 2.3        | 120              | 1/2.6 inch     | Global Shutter | 3.0 x 3.0       | MIPI<br>Parallel | Mono  | ODCSP-83     |
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| AR0234CSSM28SUKA0-CR  |                   | Pb-free<br>Halide free<br>non AEC-Q and PPAP | NEW            | CMOS | 2.3        | 120              | 1/2.6 inch     | Global Shutter | 3.0 x 3.0       | MIPI<br>Parallel | Mono  | ODCSP-83     |

For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com).

Created on: 1/24/2021