

Product Overview

AR0144CS: CMOS Image Sensor, Digital, Global Shutter, 1.0 MP, 1/4-Inch

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

The AR0144 is a 1/4-inch 1.0 Mp CMOS digital image sensor with an active-pixel array of 1280H x 800V. It incorporates a new innovative global shutter pixel design optimized for accurate and fast capture of moving scenes. 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 AR0144 produces extraordinarily clear, sharp digital pictures, and its ability to capture both continuous video and single frames makes it the perfect choice for a wide range of applications, including scanning and industrial inspection.

Features

- Best Global Shutter Efficiency
- Low Dark Current/Hot Pixels
- High Linear Full Well
- Low Operational Power
- Small Form Factor

Applications

- Barcode Scanning
- 3D Scanning
- Virtual/Augmented Reality
- Positional Tracking
- Gesture Recognition

Benefits

- Improved image quality for fast moving objects
- Total Noise Floor Reduction, SNR Improvement
- High Dynamic Range
- Ideal for battery powered applications
- Ideal for space constrained applications like Handheld Scanners

End Products

- Barcode Scanners
- Head Mounted Displays
- Biometric Scanners
- Virtual Reality/Augmented Reality Glasses
- Drones

Part Electrical Specifications

| Product | Compliance | Status | Type | Megapixels | Frame Rate (fps) | Optical Format | Shutter Type | Pixel Size (µm) | Output Interface | Color | Package Type |
|-------------------------|-------------|--------|------|------------|------------------|----------------|----------------|-----------------|------------------|-------|--------------|
| AR0144CSSC00SUD20 | Pb-free | Active | CMOS | 1MP | 60 | 1/4 Inch | Global Shutter | 3.0 x 3.0 | Multi | RGB | |
| | Halide free | | | | | | | | | | |
| AR0144CSSC00SUKA0-CPBR | Pb-free | Active | CMOS | 1MP | 60 | 1/4 Inch | Global Shutter | 3.0 x 3.0 | Multi | RGB | ODCSP-69 |
| | Halide free | | | | | | | | | | |
| AR0144CSSC00SUKA0-CRBR | Pb-free | Active | CMOS | 1MP | 60 | 1/4 Inch | Global Shutter | 3.0 x 3.0 | Multi | RGB | ODCSP-69 |
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| AR0144CSSC20SUKA0-CRBR | Pb-free | Active | CMOS | 1MP | 60 | 1/4 Inch | Global Shutter | 3.0 x 3.0 | Multi | RGB | ODCSP-69 |
| | Halide free | | | | | | | | | | |
| AR0144CSSM00SUD20 | Pb-free | Active | CMOS | 1MP | 60 | 1/4 Inch | Global Shutter | 3.0 x 3.0 | Multi | Mono | |
| | Halide free | | | | | | | | | | |
| AR0144CSSM00SUKA0-CPBR | Pb-free | Active | CMOS | 1MP | 60 | 1/4 Inch | Global Shutter | 3.0 x 3.0 | Multi | Mono | ODCSP-69 |
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| AR0144CSSM00SUKA0-CRBR | Pb-free | Active | CMOS | 1MP | 60 | 1/4 Inch | Global Shutter | 3.0 x 3.0 | Multi | Mono | ODCSP-69 |
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| AR0144CSSM20SUD20 | Pb-free | Active | CMOS | 1MP | 60 | 1/4 Inch | Global Shutter | 3.0 x 3.0 | Multi | Mono | |
| | Halide free | | | | | | | | | | |
| AR0144CSSM20SUKA0-CPBR | Pb-free | Active | CMOS | 1MP | 60 | 1/4 Inch | Global Shutter | 3.0 x 3.0 | Multi | Mono | ODCSP-69 |
| | Halide free | | | | | | | | | | |
| AR0144CSSM20SUKA0-CPBR1 | Pb-free | Active | CMOS | 1MP | 60 | 1/4 Inch | Global Shutter | 3.0 x 3.0 | Multi | Mono | ODCSP-69 |
| | Halide free | | | | | | | | | | |
| AR0144CSSM20SUKA0-CRBR | Pb-free | Active | CMOS | 1MP | 60 | 1/4 Inch | Global Shutter | 3.0 x 3.0 | Multi | Mono | ODCSP-69 |
| | Halide free | | | | | | | | | | |
| AR0144CSSM20SUKA0-CRBR1 | Pb-free | Active | CMOS | 1MP | 60 | 1/4 inch | Global Shutter | 3.0 x 3.0 | Multi | Mono | ODCSP-69 |
| | Halide free | | | | | | | | | | |
| AR0144CSSM28SUD20 | Pb-free | Active | CMOS | 1MP | 60 | 1/4 Inch | Global Shutter | 3.0 x 3.0 | Multi | Mono | |
| | Halide free | | | | | | | | | | |

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

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