ON Semiconductor®

AR0430: CMOS Image Sensor, 4 MP, 1/3-inch

The AR0430 has been designed for IoT and security cameras. In standard imaging mode, AR0430 can provide high quality imaging for both day and night lighting conditions perfect for security cameras. It has the ability to record at 120 fps delivering slow motion capable video which can use zoom and retain the resolution quality which is perfect for wearable devices. The innovative depth mode gives the user the ability to develop a depth map of anything within approximately one meter of the camera while still shooting video at 30 fps.

From a single camera, a user is able to participate in a video conference while replacing the background for security purposes. The user can also scan objects to create simple 3D models for use in virtual reality worlds or even interpret hand gestures to control smart devices.

Focused on low power and high performance, it provides options for battery power devices including a monitoring mode which can draw less than 8 mW of active power. In addition, the innovative pixel and depth sensor system design provides the ability to simultaneously take an image and produce a depth map from a single imaging sensor. This technology was built on the latest stacked die technology allowing the pixel array to be built using the latest high-performance 45-nm design rules while the supporting circuitry is built using highly reliable and cost conscious 65-nm design rules for the best of both worlds.

Features

- 4 MP at 120 frames per second

- High linear full well

- Simultaneous color imaging and depth data form a single sensor (30 fps)

- Low power operation and special monitoring mode

- 1/3-inch optical format

- Sensor Synchronization

- Latest stacked pixel technology

Benefits

- Slow Motion video capability

- Great natural dynamic range for challenging lighting conditions

- low cost depth solution requiring only 1 camera

- Power savings, heat savings while fully active or while always on.

- Standard compact sensor size to fit into many IoT type applications

- Allows for multiple camera synchronization for 360 degree cameras or longer range depth solutions

- Compact sensor size and leading color performance

Applications
- 4 MP CMOS Imaging sensor for consumer and industrial end products.

End Products
- IoT Camera
- Wearable Camera
- Security Camera
- AR/VR/MR Camer

Specifications

Produc	Compliance	Status	Description	Type	Megapixels	Frame Rate (fps)	Optical Format	Shutter Type	Pixel Size (µm)	Output Interface	Color	Package Type
AR0430CSSC14SMRA0-DP	Pb-free Halide free	Active	CMOS Image Sensor, 4 MP, 1/3-inch, RGB-Bayer 14 degree CRA mPLCC with protective film (No Depth capability)	CMOS	4	120	1/3.1 inch	Electronic Rolling	2.0 x 2.0	MIPI	Bayer Color	mPLCC-48
AR0430CSSC14SMRA0-DR	Pb-free Halide free	Active	CMOS Image Sensor, 4 MP, 1/3-inch, RGB-Bayer 14 degree CRA mPLCC with no protective film (No Depth capability)	CMOS	4	120	1/3.1 inch	Electronic Rolling	2.0 x 2.0	MIPI	Bayer Color	mPLCC-48
AR0430CSSC34SMD10	Pb-free Halide free	Active	CMOS Image Sensor, 4 MP, 1/3-inch, RGB-Bayer 34 degree CRA Bare Die 150 µm backgrind	CMOS	4	120	1/3.1 inch 1/3 inch	Electronic Rolling	2.0 x 2.0	MIPI	Bayer Color	