AR0143AT

CMOS Image Sensor, 1.3 MP, 1/4", Rolling Shutter

Product Overview

For complete documentation, see the data sheet.

ON Semiconductor's AR0143AT is a 1/4-inch CMOS digital image sensor with a 1344Hx968V active-pixel array. It captures images in either linear, high dynamic range, or LFM modes, with a rolling-shutter readout. The LFM mode eliminates high frequency LED flicker in the image allowing Traffic Sign Reading (TSR) algorithms to operate in all lighting conditions. It includes sophisticated camera functions such as in-pixel binning, windowing and both video and single frame modes. It is designed for both low light and high dynamic range scene performance, with sensor fault detection features that can enable ASIL B compliance for the camera system. It is programmable through a simple two-wire serial interface. The AR0143AT 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 automotive ADAS, automotive scene viewing, and 720p HDR video.

Features

- Latest 3.0um Back Side Illuminated (BSI) pixel Technology
- Advanced HDR with flexible exposure ratio control
- Up to 4-exposure HDR at 1344 x 968 30fps
- 4-lane MIPI CSI-2, Parallel, or 4-lane high speed pixel interface (HiSPi) serial interface
- Selectable automatic or user controlled black level control
- Frame to frame switching among up to 4 contexts to enable multi-function systems
- Spread-spectrum input clock support
- Multi-Camera synchronization support
- AEC-Q100 Grade 2 Qualified
- Sensor Fault Detection for ASIL-B Compliance

  For more features, see the data sheet

Applications

- Automotive ADAS
- Surround View Camera
- Rear View Camera
- Driving Video Recorder