AR0138AT

CMOS Image Sensor, Digital, 1.2 MP, 1/2.6-Inch, 4.2 µm BSI pixel

Product Overview

For complete documentation, see the data sheet.

ON Semiconductor AR0138AT is a 1/2.6inch CMOS digital image sensor with a 1288 H x 968 V activepixel array. This advanced automotive sensor captures images in either linear, or high dynamic range, with rollingshutter readout. AR0138AT is optimized for both low light and challenging high dynamic range scene performance, with a 4.2 m BSI pixel and onsensor 120 dB HDR capture capability. The sensor includes flexible functions such as inpixel binning, windowing, and both video and single frame modes. The sophisticated sensor fault detection features and embedded data on AR0138AT are designed to enable camera ASIL B compliance. The device is programmable through a simple twowire serial interface, and supports multiple output interface options, including MIPI and Parallel. The AR0138AT sensor is also supported by ON Semiconductor automotive coprocessor products, delivering a total HDR video solution for the latest automotive viewing applications (RVC, Surround View, and CMS applications).

Features

- High Performance 4.2 m Automotive Grade Backside Illuminated (BSI) Pixel with DRPix Technology
- Advanced OnSensor HDR Reconstruct with Flexible Exposure Ratio Control
- Fast 69 FPS Video Capture at 1280 x 960 and 3exposure HDR
- Sensor Fault Detection for ASILB Compliance Support
- 2x2 Inpixel Binning Mode
- Data Interfaces: 4lane MIPI CSI2, or Parallel
- Selectable Automatic or User Controlled Black Level Control
- Frame to Frame Switching Among up to 4 Contexts to Enable Multifunction Systems
- Spreadspectrum Input Clock Support
- MultiCamera Synchronization Support

  For more features, see the data sheet

Applications

- 1.2 MP, High Performance ADAS (Automotive Driver Assistant System)
- 960p, 720p Automotive Rear View or Backup
- 960p, 720p Automotive Surround View