

Product Overview

AR0220AT: CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-Inch, 4.2 μm BSI pixel

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

ON Semiconductor AR0220AT is a 1/1.8-inch CMOS digital image sensor with an 1828 H x 948 V active-pixel array. This advanced automotive sensor captures images in either linear or high dynamic range, with rolling-shutter readout. AR0220AT is optimized for both low light and challenging high dynamic range scene performance, with a 4.2 μm BSI pixel and on-sensor 120 dB HDR capture capability. The sensor includes flexible functions such as in-pixel binning, windowing, and both video and single frame modes. The sophisticated sensor fault detection features and embedded data on AR0220AT are designed to enable camera ASIL B compliance. The device is programmable through a simple two-wire serial interface, and supports MIPI output interface.

Features

- High Performance 4.2 μm Automotive Grade Backside Illuminated (BSI) Pixel with DR-Pix technology
 - Advanced On-Sensor HDR Reconstruct with Flexible Exposure Ratio Control
 - Fast 60 FPS Video Capture at 1820 x 940 and 4-exposure HDR
 - Sensor Fault Detection for ASIL-B Compliance Support
 - 2x2 In-pixel Binning Mode and Color Binning Mode
 - Data Interfaces: 4-lane MIPI CSI-2
 - 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
- For more features, see the data sheet

Applications

- 1.7 MP, High Performance ADAS (Automotive Driver Assistant System)
- Automotive Rear View or Backup
- Automotive Surround View

End Products

- Automotive Camera Systems

Part Electrical Specifications

