

AR0220AT

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

Product Overview

For complete documentation, see the data sheet.

onsemi AR0220AT is a 1/1.8inch CMOS digital image sensor with an 1828 H x 948 V activepixel array. This advanced automotive sensor captures images in either linear or high dynamic range, with rollingshutter readout. AR0220AT is optimized for both low light and challenging high dynamic range scene performance, with a 4.2 μm 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 AR0220AT are designed to enable camera ASIL B compliance. The device is programmable through a simple twowire serial interface, and supports MIPI output interface.

Features

- High Performance 4.2 μm Automotive Grade Backside Illuminated (BSI) Pixel with DRPix technology
- Advanced OnSensor HDR Reconstruct with Flexible Exposure Ratio Control
- Full Resolution Video Capture at 60 fps in 3exposure HDR and 36 fps in 4exposure HDR
- Sensor Fault Detection for ASILB Compliance Support
- 2x2 Inpixel Binning Mode and Color Binning Mode
- Data Interfaces: 4lane MIPI CSI2
- 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

- High Performance ADAS (Automotive Driver Assistant System)
- Automotive Rear View or Backup
- Automotive Surround View
- Electronic Mirror Replacement
- ADAS + Viewing Fusion

End Products

- Automotive Camera Systems

Part Electrical Specifications

Product	Status	Compliance	Type	Megapixels	Frame Rate (fps)	Optical Format	Shutter Type	Pixel Size (µm)	Output Interface	Color	Family	Package Type	Case Outline	MSL Type	MSL Temp (°C)	Container Type	Container Qty.
AR0220AT4B00 XUEA2-DPBR	Lifetime		CMOS	1.7	60	1/1.8 inch	Electronic Rolling	4.2 x 4.2	MIPI	Bayer Color	-	IBGA-87	503 CH. PDF	3	260	JTRAY	2000
AR0220AT4R00 XUEA1-DPBM	Lifetime		CMOS	1.7	60	1/1.8 inch	Electronic Rolling	4.2 x 4.2	MIPI	White	-	IBGA-87	503 BF. PDF	3	260	JTRAY	2000
AR0220AT4R00 XUEA1-TPBM	Lifetime		CMOS	1.7	60	1/1.8 inch	Electronic Rolling	4.2 x 4.2	MIPI	White	-	IBGA-87	503 BF. PDF	3	260	REEL	1500
AR0220AT4R00 XUEA1-TRBM	Lifetime		CMOS	1.7	60	1/1.8 inch	Electronic Rolling	4.2 x 4.2	MIPI	White	-	IBGA-87	503 BF. PDF	3	260	REEL	1500