

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.

ON Semiconductor 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 m 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

Product	Pricing (\$/Unit)	Compliance	Status	Type	Megapixels	Frame Rate (fps)	Optical Format	Shutter Type	Pixel Size (μm)	Output Interface	Color	Package Type
AR0220AT4B00 XUD20			Active									IBGA-87
AR0220AT4B00 XUEA2-DPBR			Active									IBGA-87
AR0220AT4B00 XUEA2-VL-TPBR			Product Preview									IBGA-87
AR0220AT4C00 XUEA2-DPBR			Product Preview									IBGA-87
AR0220AT4C00 XUEA2-DPBR-E			Active									IBGA-87
AR0220AT4C00 XUEA2-DRBR			Product Preview									IBGA-87
AR0220AT4C00 XUEA2-DRBR-E			Active									IBGA-87
AR0220AT4C00 XUEA2-TPBR			Product Preview									IBGA-87
AR0220AT4C00 XUEA2-TPBR-E			Active									IBGA-87
AR0220AT4C00 XUEA2-TRBR			Product Preview									IBGA-87
AR0220AT4C00 XUEA2-TRBR-E			Active									IBGA-87
AR0220AT4C00 XUEA2-VL-TPBR			Product Preview									IBGA-87
AR0220AT4C00 XUEA2-VL-TPBR-E			Active									IBGA-87
AR0220AT4R00 XUEA1-DPBM			Active									IBGA-87
AR0220AT4R00 XUEA1-TPBM			Active									IBGA-87
AR0220AT4R00 XUEA1-TRBM			Active									IBGA-87
AR0220AT4R00 XUEA1-VL-TPBM			Active									IBGA-87
AR0220AT4R00 XUEA2-VL-TPBR			Active									IBGA-87