



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



Request Datasheet



Product Overview

- View Material Composition
- Product Change Notification

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 MPI 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 Interface at 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
- Multiple CFA Options including RGB, and BCC

Applications

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

End Products

- Automotive Camera Systems

Previously Viewed Products

Select Product...

Associated Products

- Do you also need Image Processors?
- Do you also need EEPROM Memory?
- Do you also need LDO Regulators & Linear Voltage Regulators?

Support

- Technical Documentation
- Design Resources & Documents
- Technical Support
- Sales Support

Technical Documentation & Design Resources

Application Notes (1)	Package Drawings (2)
-----------------------	----------------------

Availability & Samples		Specifications								
Product	Status	Compliance	Description	Package Type	Case Outline	MSL*	Container Type	Qty.	Budgetary Price/Unit	
AR0220AT4B000UEC0	Product Preview	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503BF	NA	MTBM	1	Contact Sales Office	
AR0220AT4B000UEC0-E	Active	Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel			NA	MTBM	1	Contact Sales Office	
AR0220AT4B000UEA3-DP8B	Product Preview	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tray JEDEC	2160	Contact Sales Office	
AR0220AT4B000UEA3-DP8B-E	Active	Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tray JEDEC	1	Contact Sales Office	
AR0220AT4B000UEA3-DP8B	Product Preview	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tray JEDEC	2160	Contact Sales Office	
AR0220AT4B000UEA3-DP8B-E	Active	Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tray JEDEC	1	Contact Sales Office	
AR0220AT4B000UEA3-TF8B	Product Preview	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tape and Reel	2000	Contact Sales Office	
AR0220AT4B000UEA3-TF8B-E	Active	Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tape and Reel	1	Contact Sales Office	
AR0220AT4B000UEA3-TS8B	Product Preview	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tape and Reel	2000	Contact Sales Office	
AR0220AT4B000UEA3-TS8B-E	Active	Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tape and Reel	1	Contact Sales Office	
AR0220AT4B000UEA3-VL-TF8B	Product Preview	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tape and Reel	1500	Contact Sales Office	
AR0220AT4B000UEA3-VL-TF8B-E	Active	Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tape and Reel	1	Contact Sales Office	
AR0220AT4C000UEA3-DP8B	Product Preview	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tray JEDEC	2160	Contact Sales Office	
AR0220AT4C000UEA3-DP8B-E	Active	Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tray JEDEC	1	Contact Sales Office	
AR0220AT4C000UEA3-TF8B	Product Preview	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tape and Reel	2000	Contact Sales Office	
AR0220AT4C000UEA3-TF8B-E	Active	Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tape and Reel	1	Contact Sales Office	
AR0220AT4C000UEA3-TS8B	Product Preview	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tape and Reel	2000	Contact Sales Office	
AR0220AT4C000UEA3-TS8B-E	Active	Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tape and Reel	1	Contact Sales Office	
AR0220AT4C000UEA3-VL-TF8B	Product Preview	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tape and Reel	1500	Contact Sales Office	
AR0220AT4C000UEA3-VL-TF8B-E	Active	Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tape and Reel	1	Contact Sales Office	
AR0220AT4B000UEA3-DP8B	Active	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503BF	3	Tray JEDEC	2160	Contact Sales Office	
AR0220AT4B000UEA3-DP8B-E	Active	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503BF	3	Tray JEDEC	2160	Contact Sales Office	
AR0220AT4B000UEA3-TF8B	Active	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503BF	3	Tape and Reel	2000	Contact Sales Office	
AR0220AT4B000UEA3-TF8B-E	Active	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503BF	3	Tape and Reel	2000	Contact Sales Office	
AR0220AT4B000UEA3-VL-TF8B	Active	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503BF	3	Tape and Reel	1500	Contact Sales Office	
AR0220AT4B000UEA3-VL-TF8B-E	Active	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503BF	3	Tape and Reel	1500	Contact Sales Office	
AR0220AT4B000UEA3-DP8B	Active	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tray JEDEC	2160	Contact Sales Office	
AR0220AT4B000UEA3-DP8B-E	Active	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tray JEDEC	2160	Contact Sales Office	
AR0220AT4B000UEA3-TF8B	Active	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tape and Reel	2000	Contact Sales Office	
AR0220AT4B000UEA3-TF8B-E	Active	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tape and Reel	2000	Contact Sales Office	
AR0220AT4B000UEA3-VL-TF8B	Active	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tape and Reel	1500	Contact Sales Office	
AR0220AT4B000UEA3-VL-TF8B-E	Active	ASC Qualified PPAP Capable Pb-free Halide-free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 µm BSI pixel	86A-87	503CH	3	Tape and Reel	1500	Contact Sales Office	

Moisture Sensitivity Level (MSL) for surface mount devices (lead free measured at 250°C reflow, non lead free at 235°C reflow)



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[onsemi:](#)

[AR0220AT4R00XUEA1-TRBM](#) [AR0220AT4R00XUEA2-TPBR](#) [AR0220AT4R00XUEA2-DPBR](#)
[AR0220AT4R00XUEA1-DPBM](#) [AR0220AT4R00XUEA2-TRBR](#) [AR0220AT4R00XUEA2-DRBR](#)
[AR0220AT4R00XUEA1-TPBM](#) [AR0220AT4R00XUEA1-DRBM](#)