

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



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 10-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 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 1828 x 940 and 4-exposure HDR
- Sensor Fault Detection for ASIL-B Compliance Support
- 2x2 10-pixel Binning Mode and Color Binning Mode
- Data Interface: 4-lane MPI C1-2
- 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 RCCC

Applications

- 1.7 MP, High Performance ADAS (Automotive Driver Assistant Systems)
- 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)
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Availability & Samples

Specifications

Product	Status	Compliance	Description	Package		MSL*	Container		Budgetary Price/Unit
				Type	Case Outline		Type	Qty.	
AR0220AT4B000UEA3-030	Product Preview	AEC Qualified PPAP Capable Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503BF	NA	MTRM	1	Contact Sales Office
AR0220AT4B000UEA3-030-E	Active	Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel			NA	MTRM	1	Contact Sales Office
AR0220AT4B000UEA3-030B	Product Preview	AEC Qualified PPAP Capable Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503CH	3	Tray JEDEC	2160	Contact Sales Office
AR0220AT4B000UEA3-030B-E	Active	Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503CH	3	Tray JEDEC	1	Contact Sales Office
AR0220AT4B000UEA3-030B1	Product Preview	AEC Qualified PPAP Capable Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503CH	3	Tray JEDEC	2160	Contact Sales Office
AR0220AT4B000UEA3-030B1-E	Active	Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503CH	3	Tray JEDEC	1	Contact Sales Office
AR0220AT4B000UEA3-030B2	Product Preview	AEC Qualified PPAP Capable Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503CH	3	Tape and Steel	2000	Contact Sales Office
AR0220AT4B000UEA3-030B2-E	Active	Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503CH	3	Tape and Steel	1	Contact Sales Office
AR0220AT4B000UEA3-030B3	Product Preview	AEC Qualified PPAP Capable Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503CH	3	Tape and Steel	2000	Contact Sales Office
AR0220AT4B000UEA3-030B3-E	Active	Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503CH	3	Tape and Steel	1	Contact Sales Office
AR0220AT4B000UEA3-030B4	Product Preview	AEC Qualified PPAP Capable Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503CH	3	Tape and Steel	1500	Contact Sales Office
AR0220AT4B000UEA3-030B4-E	Active	Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503CH	3	Tape and Steel	1	Contact Sales Office
AR0220AT4C000UEA3-030B	Product Preview	AEC Qualified PPAP Capable Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503CH	3	Tray JEDEC	2160	Contact Sales Office
AR0220AT4C000UEA3-030B-E	Active	Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503CH	3	Tray JEDEC	1	Contact Sales Office
AR0220AT4C000UEA3-030B1	Product Preview	AEC Qualified PPAP Capable Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503CH	3	Tray JEDEC	2160	Contact Sales Office
AR0220AT4C000UEA3-030B1-E	Active	Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503CH	3	Tray JEDEC	1	Contact Sales Office
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AR0220AT4C000UEA3-030B3-E	Active	Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503CH	3	Tape and Steel	1	Contact Sales Office
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AR0220AT4C000UEA3-030B4-E	Active	Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503CH	3	Tape and Steel	1	Contact Sales Office
AR0220AT4D000UEA3-030B	Product Preview	AEC Qualified PPAP Capable Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503BF	3	Tray JEDEC	2160	Contact Sales Office
AR0220AT4D000UEA3-030B-E	Active	Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503BF	3	Tray JEDEC	1	Contact Sales Office
AR0220AT4B000UEA3-030B1	Product Preview	AEC Qualified PPAP Capable Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503BF	3	Tape and Steel	2000	Contact Sales Office
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AR0220AT4B000UEA3-030B5	Product Preview	AEC Qualified PPAP Capable Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503BF	3	Tape and Steel	1500	Contact Sales Office
AR0220AT4B000UEA3-030B5-E	Active	Pb-free Halide free	CMOS Image Sensor, Digital, 1.7 MP, 1/1.8-inch, 4.2 μm BSI pixel	8GA-87	503BF	3	Tape and Steel	1	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)