

## Product Overview

### AR0144AT: 1/4" 1.0 MP Global Shutter CMOS Image Sensor

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

The AR0144AT is a 1/4-inch 1.0 Mp CMOS digital image sensor with an active-pixel array of 1280 (H) × 800 (V). It incorporates a new innovative global shutter pixel design optimized for accurate and fast capture of moving scenes. The sensor produces clear, low noise images in both low-light and bright scenes. It includes sophisticated camera functions such as auto exposure control, windowing, row skip mode, column-skip mode, pixel-binning and both video and single frame modes. It is programmable through a simple two-wire serial interface. The AR0144AT produces extraordinarily clear, sharp digital pictures, and its ability to capture both continuous video and single frames makes it the perfect choice for a wide range of applications, including automotive in-cabin systems.

### Features

- Superior Low-light and IR Performance
- HD Video (720p60)
- 2-Lane MIPI or Parallel data interface
- Automatic Black Level Calibration (ABLC)
- Programmable Control for Region Of Interest (ROI)
- Horizontal and Vertical Mirroring, Windowing and Pixel Binning
- On-chip Auto Exposure Control for Any Programmable ROI
- On-chip Slave or Trigger Mode for Synchronization
- Built in Strobe Control
- On-chip Phase Lock Loop (PLL)

For more features, see the data sheet

### Applications

- Automotive In-Cabin / Driver Monitoring System

## Part Electrical Specifications

Product	Compliance	Status	Type	Megapixels	Frame Rate (fps)	Optical Format	Shutter Type	Pixel Size (µm)	Output Interface	Color	Package Type
AR0144ATSM20XUD20	AEC Qualified	Active		1	60	1/4 inch	Global Shutter	3.0 x 3.0	Parallel MIPI	Mono	
	PPAP Capable										
	Pb-free										
	Halide free										
AR0144ATSM20XUEA0-DPBR	AEC Qualified	Active		1	60	1/4 inch	Global Shutter	3.0 x 3.0	Parallel MIPI	Mono	IBGA-63
	PPAP Capable										
	Pb-free										
	Halide free										
AR0144ATSM20XUEA0-DRBR	AEC Qualified	Active		1	60	1/4 inch	Global Shutter	3.0 x 3.0	MIPI Parallel	Mono	IBGA-63
	PPAP Capable										
	Pb-free										
	Halide free										
AR0144ATSM20XUEA0-TPBR	AEC Qualified	Active		1	60	1/4 inch	Global Shutter	3.0 x 3.0	MIPI Parallel	Mono	IBGA-63
	PPAP Capable										
	Pb-free										
	Halide free										
AR0144ATSM20XUEA0-TRBR	AEC Qualified	Active		1	60	1/4 inch	Global Shutter	3.0 x 3.0	MIPI Parallel	Mono	IBGA-63
	PPAP Capable										
	Pb-free										
	Halide free										

For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com).

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