

## Product Overview

### AS0140AT: CMOS Image Sensor and Signal Processor, 1 MP, 1/4-Inch

For complete documentation, see the data sheet.

The ON Semiconductor AS0140AT is a 1.0 MP format digital image sensor and image sensor processor for automotive viewing applications. The device includes full auto-functions support (AWB and AE) and ALTM (Adaptive Local Tone Mapping) to enhance HDR video. The AS0140AT implements a high-sensitivity 3.0  $\mu\text{m}$  pixel with DR-Pix technology, and advanced noise reduction, to enable excellent low-light performance. It can be operated in interlaced (NTSC or PAL) or progressive modes, and captures images in either linear or high dynamic range modes. The AS0140AT may be operated in video (master) mode or in single frame trigger mode, providing flexibility for multi-camera systems.

### Features

- 3.0  $\mu\text{m}$  Pixel with ON Semiconductor DR-Pix Technology
- Superior Low-light Performance
- 45 fps at 1.0 MP, 60 fps at 720p
- Linear or High Dynamic Range Video
- Color Processing Optimized for HDR Video Operation
- Color and Gamma Correction
- Auto Exposure, Auto White Balance, 50/60 Hz Auto Flicker Detection and Avoidance
- Adaptive Local Tone Mapping (ALTM)
- Programmable Spatial Transform Engine (STE)
- Pre-rendered Graphical Overlay

For more features, see the data sheet

### Applications

- Surround, Rear and Front View Cameras
- Blind Spot/Side Mirror Replacement Cameras
- Automotive Viewing/Processing Fusion Cameras

### Part Electrical Specifications

Product	Compliance	Status	Type	Megapixels	Frame Rate (fps)	Optical Format	Shutter Type	Pixel Size ( $\mu\text{m}$ )	Output Interface	Color	Package Type
AS0140AT2C00XUSM 0-DPBR-E	Pb-free	Active	CMOS	1	60 fps	1/4 inch	Electronic Rolling	3.0 x 3.0	Parallel	RGB	IBGA-130
	Halide free								Analog	Bayer Color	
AS0140AT2C00XUSM 0-DRBR-E	Pb-free	Active	CMOS	1	60 fps	1/4 inch	Electronic Rolling	3.0 x 3.0	Parallel	Bayer Color	IBGA-130
	Halide free								Analog	RGB	
AS0140AT2C00XUSM 0-TPBR	AEC Qualified	Active									IBGA-130
	PPAP Capable										
	Pb-free										
	Halide free										
AS0140AT2C00XUSM 0-TPBR-E	Pb-free	Active	CMOS	1	60 fps	1/4 inch	Electronic Rolling	3.0 x 3.0	Analog	RGB	IBGA-130
	Halide free								Parallel	Bayer Color	
AS0140AT2C00XUSM 0-TRBR-E	Pb-free	Active	CMOS	1	60 fps	1/4 inch	Electronic Rolling	3.0 x 3.0	Parallel	Bayer Color	IBGA-130
	Halide free								Analog	RGB	

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

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