AR0147AT

Hayabusa CMOS Digital Image Sensor, 1.3 MP, 1/4", HDR + LFM

Product Overview

For complete documentation, see the data sheet.

The AR0147AT is a 1/4inch CMOS digital image sensor with a 1344 H x 968 V activepixel array. This advanced automotive sensor captures images in either linear, or high dynamic range, with rollingshutter readout. AR0147AT is optimized for both low light and challenging high dynamic range scene performance, with a 3 um BSI pixel and onsensor up to 140 dB HDR capture capability. The sensor includes flexible functions such as inpixel binning, windowing, and both video and single frame modes. The sophisticated sensor real-time safety mechanism and fault detection features on AR0147AT enable ASILB compliance. The device is programmable through a simple twowire serial interface, and supports both MIPI CSI2 and Parallel output interfaces.

Features

- Combined HDR RAW Output, up to 20bit (>140 dB)
- Support for fullresolution 120 dB to 140 dB HDR+LFM
- New HighPerformance 3 um BSI Pixel with SuperExposure HDR+LFM Mode
- Advanced HDR Image Combination with Flexible Exposure Ratio Control
- ASILB and Safety Design
- Selectable Automatic or User Controlled Black Level Control
- Spreadspectrum Input Clock Support
- Realtime Functional Safety Mechanisms and Fault Detection
- 1344 x 968 at up to 60fps
- 2x2 Inpixel Binning

  For more features, see the data sheet

Applications

- Automotive ADAS
- ADAS and Viewing Fusion
- In−Cabin Monitoring
- Surround View Systems
- Rear View Systems

End Products

- Automotive Surround and Rear−View Cameras
- E-mirror (Camera Monitoring System)
- Digital Video recorder (DVR)

Part Electrical Specifications

Product	Status	Compilance	Type	Megapixels	Frame Rate (fps)	Optical Format	Shutter Type	Pixel Size (µm)	Output Interface	Color	Family	Package Type	Case Outline	MSL Type	MSL Temp (°C)	Container Type	Container Qty.
AR0147ATSC00XUEA5-DPBR	Active		CMOS	1.3	60	1/4 inch	Electronic Rolling	3.0 x 3.0	Multi	RGB	Hayabusa	IBGA-80	503CB.PDF	3	260	JTRAY	2600
AR0147ATSC00XUEA5-DRBR	Active		CMOS	1.3	60	1/4 Inch	Electronic Rolling	3.0 x 3.0	Multi	RGB	Hayabusa	IBGA-80	503CB.PDF	3	260	JTRAY	2600
AR0147ATSC00XUEG5-DPBR	Active		CMOS	1.3	60	1/4 inch	Electronic Rolling	3.0 x 3.0	Multi	RGB	Hayabusa	IBGA-89	503CC.PDF	3	260	JTRAY	3000
AR0147ATSC00XUEG5-DRBR	Active		CMOS	1.3	60	1/4 inch	Electronic Rolling	3.0 x 3.0	Multi	RGB	Hayabusa	IBGA-89	503CC.PDF	3	260	JTRAY	3000

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ON Semiconductor:

NCP1566MNTXG NCS20081MUTAG NCV5501DT33RKG MC33077DR2G FDMS7608S FOD2741AV LA4440J-E MC74LCX02DTR2G MC74ACT541DWG NCP1397BDR2G NB3N853531EDTG TLV431CSN1T1G UC2845BD1R2G MC34152DR2G CS8182YDPSR5G KSA1156OSTSTU LM393NG LV8014T-TLM-E NCP1342ENDCEAD1R2G SZ1SMA5913BT3G 1SMA5938BT3G CNY17-3V-M FDMA7672 NCP114AMX250TCG LM385BD-2.5R2G MOC212R2M NC7WV07P6X NTBG060N090SC1 LB1861M-TLM-H MMBTH81