

APX014

Global Shutter HVS Sensor for Edge AI and motion perception



6 Modes

LP

Low Power



High Frame Rate



Global Shutter

APX014 is a high frame rate, low power, global-shutter Hybrid Vision sensor that supports image, event, hybrid and motion detection mode, with a 1.3MP image resolution, a $2.79\ \mu\text{m} \times 2.79\ \mu\text{m}$ pixel size and a 1/4" optical size. As the first HVS sensor which enables global shutter, it greatly reduces exposure time, improves SNR and avoids the jelly effect caused by rolling shutter. It high time resolution, low power and high dynamic range event sensing, accurately records movement trajectory enhances imaging quality. Combined with the HVS® featured algorithms, ALPIX-Pizol® is fairly suitable for XR Headsets, drones, robots, smart cars, industrial inspection and so forth, providing more competitive solutions for spatial intelligence and computing.

Product Brief

EVS

Low power EVS
High dynamic range
High sensitivity

Features

3D Stacking, BSI
Supports EVS/APS/HVS modes
In-Pixel CDS
Ultra-low noise

APS

Excellent imager quality
High frame rate
Solid low light performance

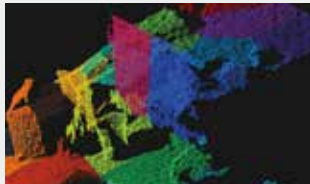
Interface

Date interface: MIPI
Control interface: I²C

Functions

HVS® /APS only/EVS only
ULPMD on chip, LPMD on chip
AON-ALS
FASE-AE

Applications



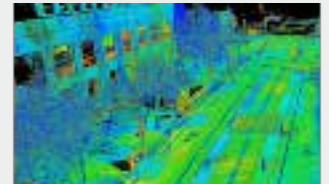
Structured light



Detection and Tracking



Scan, measure and reconstruct



Obstacle avoidance/SLAM

End Products



XR headsets



Drones and robots



Automotive



Machine vision

Specification

Resolution	APS: 1.3MP, EVS: 1.3MP	ROI	Support APS/EVS mode
	HVS-APS: 0.65MP, HVS-EVS: 0.65MP	Operatin voltage	Analog: 3V, 1.8V, Digital: 1.1V
Pixel size	2.79μm × 2.79 μm		I/O: 1.8V
Optical format	1/4", CRA 25°	Image data format	Raw8/Raw10
Operation mode	GS-APS/EVS/HVS/MD	Frame rate	APS: 120FPS @ Full size
EVS contrast sensitivity	Configurable, 0-100%	Chip size	EVS: 1000FPS @ Full size
Exposure mode	Global shutter	Data Interface	5.4mm × 4.05mm
Minimal illumination	< 0.1lux	Data Interface	MIPI, DVP, QSPI
Dynamic range	APS: > 68 dB EVS: > 120 dB	Package	COB

*Specs vary in different applications. Actual performance must b validated by customer's technical experts. Please contact us for more information.

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Scan for more HVS* info