AlpsenTek
锐思智芯

APX002

1/4", 120dB, 1000fps, ultra-low power
Event-based Vision Sensor

EVS Edge AI | Low Power | 1000 fps | 120 dB

APX002 is an ultra-cost-effective Event-Based Vision Sensor (EVS) featuring high frame rate, wide dynamic range, ultra-low response latency, and computility-friendly architecture. With a pixel array of 256 × 256, 20 μm × 20 μm pixel size, and 1/4'' optical format, it outperforms conventional frame-based cameras for applications demanding high efficiency and edge AI processing. Ideal for XR headsets (enabling precise eye-tracking and gesture recognition), AIoT devices (on-device fall detection, presence monitoring, and anomaly recognition), and professional care solutions, it delivers privacy-enhanced perception by eliminating full-image capture while significantly reducing computational load and power consumption. This sensor enhances user experience through responsive, energy-efficient AI capabilities.

Product Brief

EVS

Ultra-low power EVS modes
High dynamic range
High frame rate
High sensitivity

Functions

Supports event-based vision sensing
Outputs EVS signals

Features

Brand-new IN-PULSE DiADC architecture
Compatible with main-stream low-power MCU/SoC
Supports low power Always-On

Interface

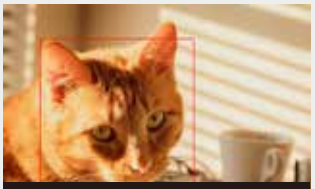
Data interface: DVP
Control interface: I^2C

Applications

Eye tracking

Gesture recognition

Pose (Fall) detection



Presense monitoring

End Products

XR headsets

Edge AON Cameras

AIOT devices

Smart-care cameras

Specifications

Resolution	256 × 256
Pixel size	20μm × 20μm
Optical format	1/4" , CRA 0°
Mode	EVS mode
Contrast sensitivity	0-100% configurabel
Min. illumination	0.1lux
Dynamic range	~120 dB

Operating voltage	Analog/Digital: 1.2V
Data format	EVS: Frame Mode
Data efficiency	EVS: 1000fps @ 256×256
Chip size	5.7mm × 6.1mm
Data interface	DVP
Power consumption	< 4mW @1000fps

* Specifications might vary in different applications. Actual performance must be validated by customer's technical experts. Please contact us for morew information.

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