IMPORTANT NOTES:

Full product details, pricing and product data sheet must be requested here:
https://www.sony-semicon.com/en/products/is/industry/evs.html

Evaluation tools and software sales are handled by PROPHESEE:
Event Camera Evaluation Kit 4 HD IMX636 Prophesee-Sony

IMX647-AAMR-C
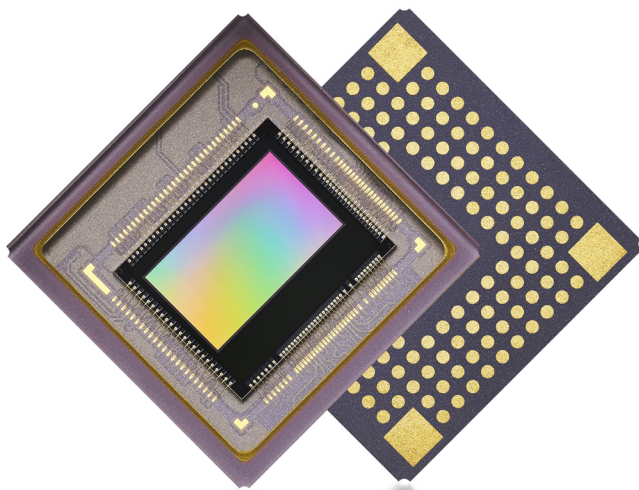
TOP LEVEL SPECIFICATIONS (TYP)		
Pixel array		640 x 512
Pixel size	µm	4.86 x 4.86
Contrast Threshold	%	25
Latency at 1000 lux	µs	‹800
Latency at 5 lux	µs	‹9000
Dynamic range	dB	›110 (30mlux–100klux)
Maximum clock frequency	MHz	100
Standby power	mW	5
Maximum power	mW	123
Control Interface		I²C, SPI
Data Interface		MIPI, SLVS
Package		LGA 156 pins

OVERVIEW

- Number of effective pixels: 640 (H) x 521 (V) approx. 0.32 M pixels
- Built-in logarithmic I/V converter circuit, Illuminance-change detection unit
- Pixel ROI
- External trigger
- Pixel reset
- MIPI (1 Lane / 2 Lane switching) output
- SLVS (2 ch / 4 ch switching) output
- EVT 2.1 (64-bit based event output format), EVT 3.0 (16-bit encoding event output format) Event compression
- Contrast threshold adjustment, Latency adjustment, Dead time adjustment, Analog noise filter
- Thermometer, Illuminometer (absolute Illuminometer, relative Illuminometer)
- Readout wait function
- Number of events monitor
- Region of events monitor
- Event signal processing functions: Anti-flicker, Event filter, Event rate

APPLICATIONS

- Entertainment/Gaming
- IoT
- Smart Home

DESCRIPTION

The IMX647-AAMR-C is a diagonal 3.9 mm (Type 1/4.5) approx. 0.32 M effective pixels (640 (H) x 512 (V)) event based vision sensor. This sensor detects brightness changes that exceed the set thresholds independently for each pixel, and asynchronously outputs the coordinates (X, Y) of detected pixels, the detected times (timestamp), and the brightness change polarity information in the order detected. This enables high-speed, low-latency (800 μs or less at 1000 lux) output. Output of only brightness changes enables to swiftly capture moving subjects, and areas without brightness changes are not output, realizing a sensor that enables efficient data extraction. The sensor also features pixel characteristics where the output voltage is output logarithmically relative to the input light intensity, which enables event output with a high dynamic range. This chip operates with analog 3.0 V, digital 1.1 V, and 1.8 V triple power supply.

ORDER INFORMATION

IMX647-AAMR-C must be ordered directly from Sony:
https://www.sony-semicon.com/en/products/is/industry/evs.html
or Sony's channel partners.