

# S.E.S

## SPIKE EVENT SENSOR BIO-INSPIRED SMART CAMERA

The SES camera is an intelligent, autonomous and low-power sensor based on a bio-inspired model. Operating in event-driven mode, this camera, like the human eye, can detect and extract the relevant characteristics from the scene observed.



### Intelligent

At the cutting edge of technology, the SES camera provides an operational response for the detection and recognition of moving objects.



### Innovative

Thanks to the concept of spike neural networks which are inspired by the working of the brain, the embedded processing of data in the camera essentially involves the salient information contained in the image. The amount of data to be processed is ten times less than with conventional solutions.



### Independent

The SES camera does not need to be connected to the 4G network (cloud), detection, processing and transmission of the results are built-in.



### PRINCIPLE OF OPERATION OF OUR SOLUTION

- Image acquisition and processing based on a native mode 752 x 480 @ 60 fps sensor
- High speed object detection in 128 x 120 @ 240 fps mode
- Operates in event-driven mode
- Gets rid of 90% of irrelevant data
- Easy adjustment, use and acquisition through a user interface
- Fast interface (via user API)
- Complies with image rights with the option of cutting the video stream.

### CONNECTION, MOUNTING

- Very small footprint
- Compact size 80 x 50 x 34 mm
- Universal mounting with a 1/4" thread (photo foot)
- Low power use
- Ethernet communication

## SES CHARACTERISTICS

### Video sensor specifications

- Cs lens mount (C compatible with the supplied optical ring)
- Resolution:
  - 752 x 480 @60fps
  - 128 x 120 @240fps
- Frame rate: adjustable from 0 to 240 fps

### Communication features

- Ethernet connection
- TCP communication on 3 ports (656, 657, 658)

### GUI features

- QT graphical interface
- Required dependency: Qt 5.12.2 (installer available in the archive)
- Multi-platform compatible:
  - Windows (Windows 10)
  - Linux (Ubuntu 16.4 and higher)

### Supply voltage

- DC 5 V

### Power draw

- Typique : 2.5 W

### General characteristics

- Power connector: 2.5 mm jack
- Communication connector: RJ45 connector
- Weight: 90 g (without lens)
- Dimensions: 80 mm x 50 mm x 34 mm

Due to changes in standards and equipment, the characteristics given in the texts and images in this document are only binding after confirmation by our services.



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## POSSIBLE APPLICATIONS



**Vehicle counting** (cars, lorries, buses, bikes, motorcycles)



**Detection of driver awareness** (falling asleep, inattention)



**Detection of people falling** (elderly people at home)



**Gesture recognition** (robot control, smart remote controls)



**Trajectory analysis** (automatic detection of the direction of movement of moving objects)



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