

24. Streamlining the optical flow algorithm

24.1. Use

Source launch file path: /opt/ros/noetic/share/opencv_apps/launch

Step 1: Start the camera

```
roslaunch ascam_visual opencv_apps.launch img_flip:=false
```

- `img_flip` parameter: whether the image needs to be flipped horizontally, the default is false.

The [usb_cam-test.launch] file opens the [web_video_server] node by default, and you can directly use the [IP:8080] web page to view the image in real time.

Step 2: Start the simplified optical flow function of Opencv_apps

```
roslaunch opencv_apps simple_flow.launch # Simplified optical flow algorithm
```

Each functional case will have a parameter [debug_view], Boolean type, whether to use Opencv to display the image, the default is displayed.

If you don't need to display, set it to [False], for example

```
roslaunch opencv_apps simple_flow.launch debug_view:=False
```

However, after starting in this way, some cases may not be displayed in other ways, because in the source code, some [debug_view] is set to [False], which will turn off image processing.

24.2, Display method

- `rqt_image_view`

Enter the following command and select the corresponding topic

```
rqt_image_view
```

- `opencv`

The system displays by default, and no processing is required.

- Web viewing

(Under the same LAN) Enter IP+port in the browser, for example:

```
192.168.2.116:8080
```

For specific IP, use your current virtual machine IP.

24.3, Effect display

Effect diagram:

