

Camera Testing

This file contains instructions to test the camera.

Required Hardware:

1. USB Camera
2. USB extension cable

Required Package:

1. usb_cam: This package contain the basic driver of the USB camera
2. If package is not installed run the following command to install the package

```
>> sudo apt-get install ros-kinetic-usb-cam
```

Testing instruction:

Please follow the given instruction to test the USB camera:

1. Connect the camera to PC/laptop using the USB extension cable.
2. Find the video device for the camera by typing the following command:

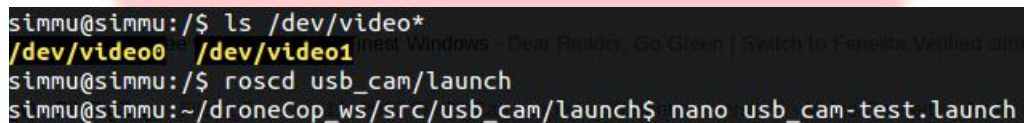
```
>> ls /dev/video*
```



```
simmu@simmu:/$ ls /dev/video*  
/dev/video0 /dev/video1  
simmu@simmu:/$
```

Figure 1: video device for camera

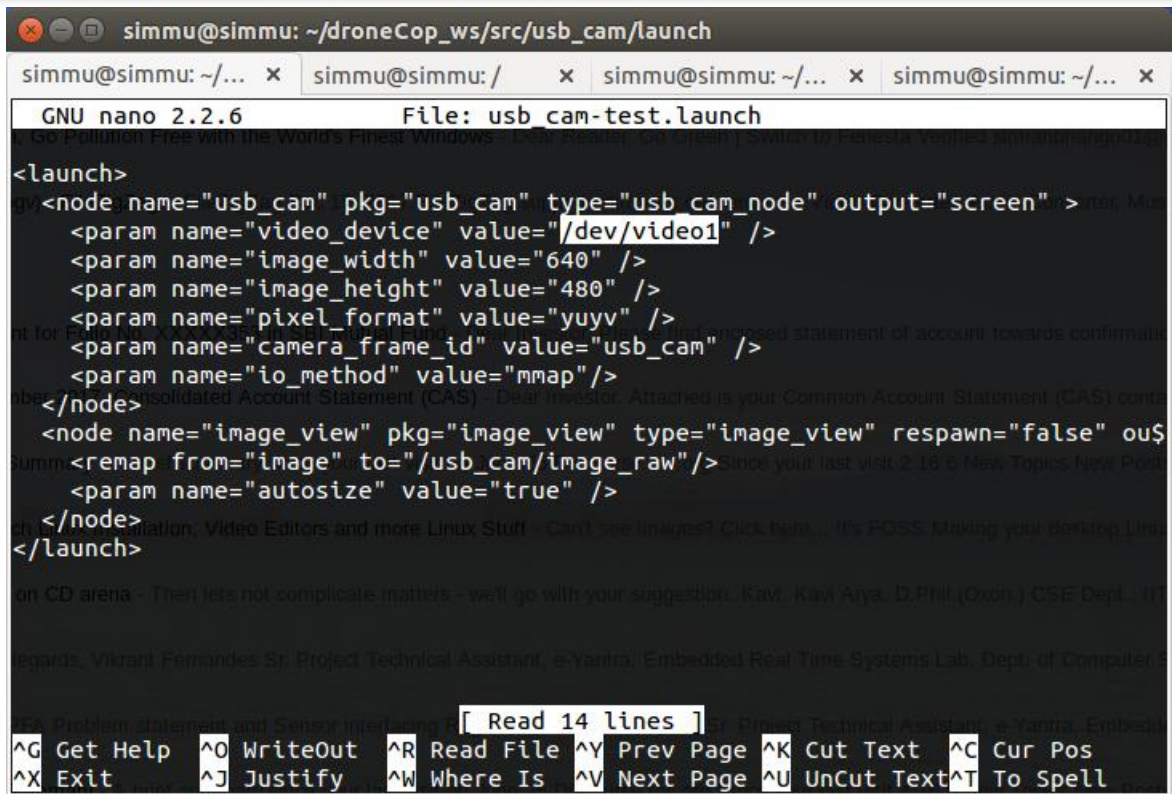
3. Navigate to the usb_cam package launch file and open the file in your favorite editor to edit the file.



```
simmu@simmu:/$ ls /dev/video*  
/dev/video0 /dev/video1  
simmu@simmu:/$ roscd usb_cam/launch  
simmu@simmu:~/droneCop_ws/src/usb_cam/launch$ nano usb_cam-test.launch
```

Figure 2: Opening the launch file in editor

4. Edit the launch file with the new video device you have received in step 2 (Figure 1).



```

simmu@simmu: ~/droneCop_ws/src/usb_cam/launch
GNU nano 2.2.6 File: usb_cam-test.launch
<launch>
<node name="usb_cam" pkg="usb_cam" type="usb_cam_node" output="screen">
  <param name="video_device" value="/dev/video1" />
  <param name="image_width" value="640" />
  <param name="image_height" value="480" />
  <param name="pixel_format" value="yuyv" />
  <param name="camera_frame_id" value="usb_cam" />
  <param name="io_method" value="mmap" />
</node>
<node name="image_view" pkg="image_view" type="image_view" respawn="false">
  <remap from="image" to="/usb_cam/image_raw" />
  <param name="autosize" value="true" />
</node>
</launch>
[ Read 14 lines ]
^G Get Help ^O WriteOut ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos
^X Exit ^J Justify ^W Where Is ^V Next Page ^U UnCut Text ^T To Spell
  
```

Figure 3: Editing the usb_cam-test.launch file

5. Source the ROS environment by executing the following command:

```
>> source /opt/ros/kinetic/setup.bash
```

6. Execute the launch file after editing and sourcing using the following command:

```
>> roslaunch usb_cam usb_cam-test.launch
```

The above command will launch a new window and show the output of the camera.

7. For more details about the package please visit the wiki page of [usb_cam](http://wiki.ros.org/usb_cam)