

e-Yantra Robotics Competition (eYRC 2019-20)

Camera Testing

This file contains instructions to test only the camera.

Required Hardware:

1. USB Camera
2. USB Extension Cable

Required Package:

1. usb_cam: This package contains 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
```

3. Next install “guvview”, this software is used here as a webcam viewer.

```
>> sudo apt-get install guvview
```

Testing instruction:

Please follow the given instruction to test the USB camera:

1. Connect the camera to your system using the USB extension cable.

Note: Find the video device for the camera by typing the following command and note it for future debugging:

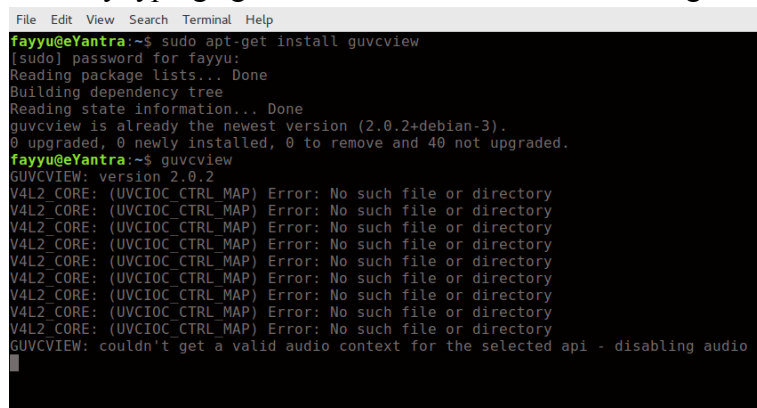
```
>> ls /dev/video*
```



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

Figure 1: video device for camera

2. Start guvview by typing “guvview” in the terminal. Refer Figure 2.



```
File Edit View Search Terminal Help
fayyu@eYantra:~$ sudo apt-get install guvview
[sudo] password for fayyu:
Reading package lists... Done
Building dependency tree
Reading state information... Done
guvview is already the newest version (2.0.2+debian-3).
0 upgraded, 0 newly installed, 0 to remove and 40 not upgraded.
fayyu@eYantra:~$ guvview
GUVVIEW: version 2.0.2
V4L2_CORE: (UVCIOC_CTRL_MAP) Error: No such file or directory
V4L2_CORE: (UVCIOC_CTRL_MAP) Error: No such file or directory
V4L2_CORE: (UVCIOC_CTRL_MAP) Error: No such file or directory
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V4L2_CORE: (UVCIOC_CTRL_MAP) Error: No such file or directory
V4L2_CORE: (UVCIOC_CTRL_MAP) Error: No such file or directory
GUVVIEW: couldn't get a valid audio context for the selected api - disabling audio
```

Figure 2: Installation and Starting guvview

- After launching guvcview, a panel pop, as shown in Figure 3.

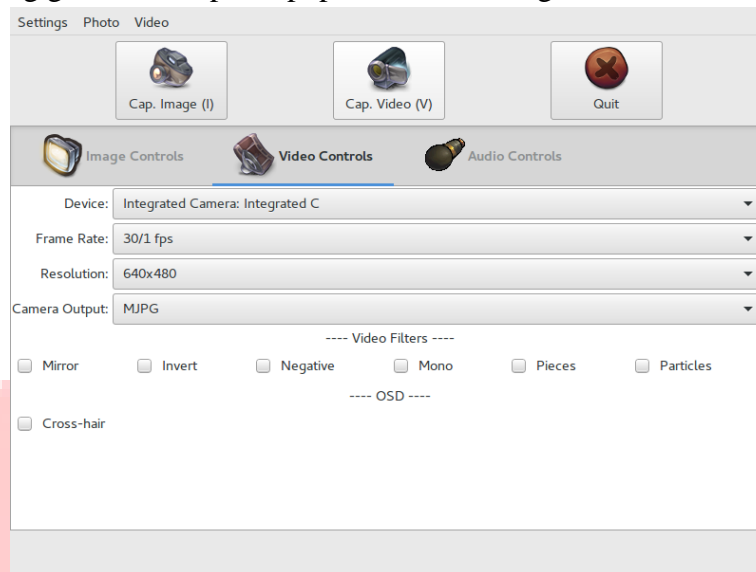


Figure 3: guvcview Panel

- Select Device, “USB 2.0 Camera: HD USB Camera”. as shown in Figure 4:

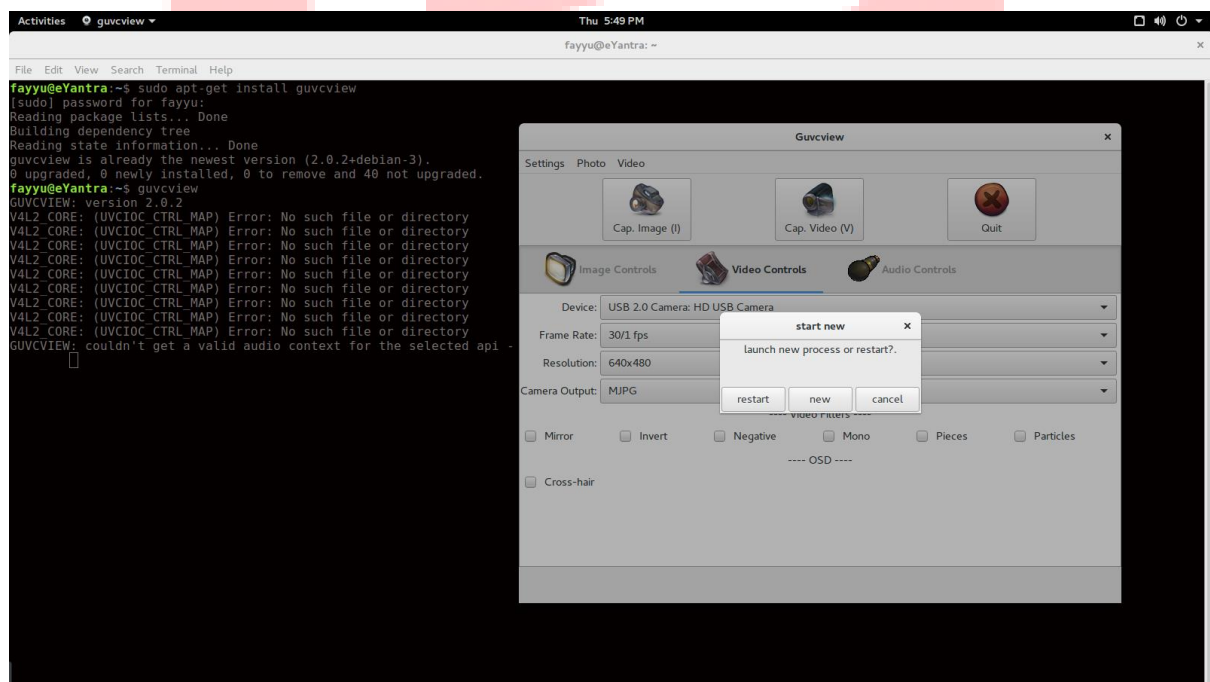


Figure 4: Device List Inside guvcview

- After selecting the appropriate option, press *restart* option from the drop box as seen in Figure 3. Now, you should view video feed from the USB Camera.
- For more details about the package please visit the wiki page of usb_cam