

# Environment build

This section introduces how to build a camera running environment on your own controller. Take the workspace `orbbec_ws` as an example, the workspace directory is under the `~` directory, and modify it according to the actual situation.

## 1、Install related dependencies

```
sudo apt install libgflags-dev ros-$ROS_DISTRO-image-geometry ros-$ROS_DISTRO-  
camera-info-manager ros-$ROS_DISTRO-image-transport ros-$ROS_DISTRO-image-publisher  
libgoogle-glog-dev libusb-1.0-0-dev libeigen3-dev
```

```
git clone https://github.com/libuvc/libuvc.git  
cd libuvc  
mkdir build && cd build  
cmake .. && make -j4  
sudo make install  
sudo ldconfig
```

## 2、Compile feature pack

Unzip the file `orbbec_ws_src.zip` to get a `src` folder, then copy `orbbec-ros-sdk` to the `orbbec_ws/src` directory (the previous operation of initializing the workspace will not be repeated here), then open the terminal and enter the following command to compile

```
cd ~/orbbec_ws  
catkin_make  
echo "source ~/orbbec_ws/devel/setup.bash" >> ~/.bashrc
```

## 3、Create a serial port rule file

Enter the following command to create,

```
cd ~/orbbec_ws/src/orbbec-ros-sdk/script  
sudo chmod 777 *  
sudo sh install.sh
```

Then re-plug the camera, enter the following command to check whether the creation is successful,

```
ll /dev/OrbbecGemin2
```

```
yahboom@VM:~$ ll /dev/OrbbecGemin2  
lrwxrwxrwx 1 root root 6 Jun 12 20:57 /dev/OrbbecGemin2 -> video5  
yahboom@VM:~$
```

If the above screen appears, it means that the creation is successful. As long as there is `ll /dev/OrbbecGemin2`, it means that the binding is successful.

## 4、run camera

Gemini2 camera running:

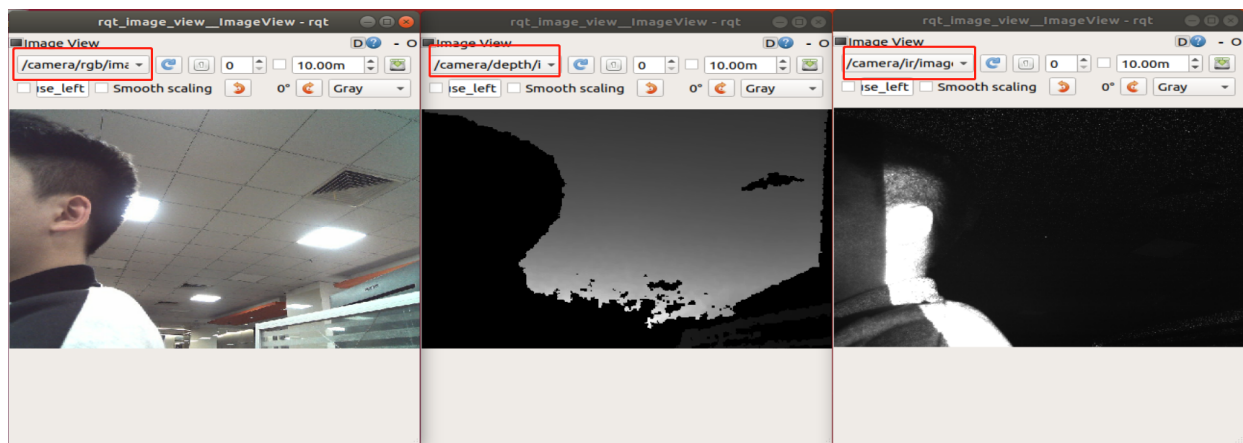
```
roslaunch orbbec_camera gemini2.launch
```

```
/home/yahboom/orbbec_ws/src/orbbec-ros-sdk/launch/gemini2.launch http://localhost:11311
/home/yahboom/orbbec_ws/src/orbbec-ros-sdk/launch/gemini2.launch http://localhost:11311 158x42
orbbec_camera orbbec_ws/ orocos_kdl
yahboom@VM:~$ roslaunch orbbec_camera gemini2.launch
... logging to /home/yahboom/.ros/log/737e7ce8-0923-11ee-a48c-000c297e26fa/roslaunch-VM-14737.log
Checking log directory for disk usage. This may take a while.
Press Ctrl-C to interrupt
Done checking log file disk usage. Usage is <1GB.

started roslaunch server http://VM:44193/

SUMMARY
=====
PARAMETERS
* /camera/camera/camera_name: camera
* /camera/camera/color_format: RGB
* /camera/camera/color_fps: 30
* /camera/camera/color_height: 480
* /camera/camera/color_info_urt:
* /camera/camera/color_width: 640
* /camera/camera/connection_delay: 100
* /camera/camera/depth_format: Y14
* /camera/camera/depth_fps: 30
* /camera/camera/depth_height: 480
* /camera/camera/depth_precision: 0.8mm
* /camera/camera/depth_registration: True
* /camera/camera/depth_width: 640
* /camera/camera/device_num: 1
* /camera/camera/device_trigger_signal_out_delay: 0
* /camera/camera/enable_color: True
* /camera/camera/enable_color_auto_exposure: True
* /camera/camera/enable_colored_point_cloud: True
* /camera/camera/enable_d2c_viewer: False
* /camera/camera/enable_depth: True
* /camera/camera/enable_lr: True
* /camera/camera/enable_lr_auto_exposure: True
* /camera/camera/enable_ldp: True
* /camera/camera/enable_pipeline: True
* /camera/camera/enable_point_cloud: True
* /camera/camera/enable_soft_filter: True
* /camera/camera/flip_color: False
* /camera/camera/flip_depth: False
* /camera/camera/flip_lr: False
```

Enter `rqt_image_view` to see if there is image data,



If there is an image display, it means that the environment is built successfully.