ros_astra_camera 매뉴얼

Release v1.1.4

[파라미터 세팅 매뉴얼]

INDEX

깃허브 of `ros_astra_camera`

https://github.com/orbbec/ros_astra_camera

orbbec / ros_astra_camera Public

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Code Issues 55 Pull requests 2 Actions Projects Security Insights

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jian-dong fixed missing file in cmake install b4367e3 7 days ago 146 commits

cfg	release v1.1.4	20 days ago
dependencies	remove lfs	2 months ago
include	release v1.1.4	20 days ago
launch	release v1.1.4	20 days ago
msg	release v1.1.4	20 days ago
params	removed unused file	20 days ago
scripts	release v1.1.4	20 days ago
src	release v1.1.4	20 days ago
srv	release v1.1.4	20 days ago
test	release v1.0.9	3 months ago
.clang-format	release v1.0.9	3 months ago
.gitignore	release v1.0.9	3 months ago
56-orbbec-usb.rules	release v1.0.9	3 months ago
CHANGELOG.rst	release v1.0.9	3 months ago
CMakeLists.txt	fixed missing file in cmake install	7 days ago
LICENSE	Create LICENSE	3 years ago
README.md	fixed readme typo	19 days ago
package.xml	release v1.1.4	20 days ago

README.md

astra_camera

A ROS driver for Orbbec 3D cameras. This package supports ROS Kinetic, Melodic and Noetic distributions

About

ROS wrapper for Astra camera

robot sensor ros 3dcamera

Readme
Apache-2.0 license
221 stars
20 watching
204 forks

Releases 2

v1.1.4 Latest
20 days ago

+ 1 release

Packages

No packages published

Contributors 17

+ 6 contributors

Languages

C++ 88.8% C 10.1%
Other 1.1%

`ros_astra_camera`의 의존성 패키지 설치

Assuming you have sourced the ros environment, same below

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

ROS

- Please refer directly to ROS wiki.

other dependencies

- Install dependencies (be careful with your ROS distribution)

```
# Assuming you have sourced the ros environment, same below
sudo apt install libgflags-dev  ros-$ROS_DISTRO-image-geometry ros-$ROS_DISTRO-camera-info-manag
ros-$ROS_DISTRO-image-transport ros-$ROS_DISTRO-image-publisher libgoogle-glog-dev libusb-1.0-0-
```

- Install libuvc.

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

`ros_astra_camera`의 rules file 등록

./scripts/create_udev_rules

`ros_astra_camera`의 launch 파라미터 1

$ cd astra_camera/params

$ vim camera_params_template.yaml

위 명령어를 통해 파라미터를 변경할 수 있음

`ros_astra_camera`의 launch 파라미터 2

enable_pointcloud_xyzrgb : false

color_height: 400

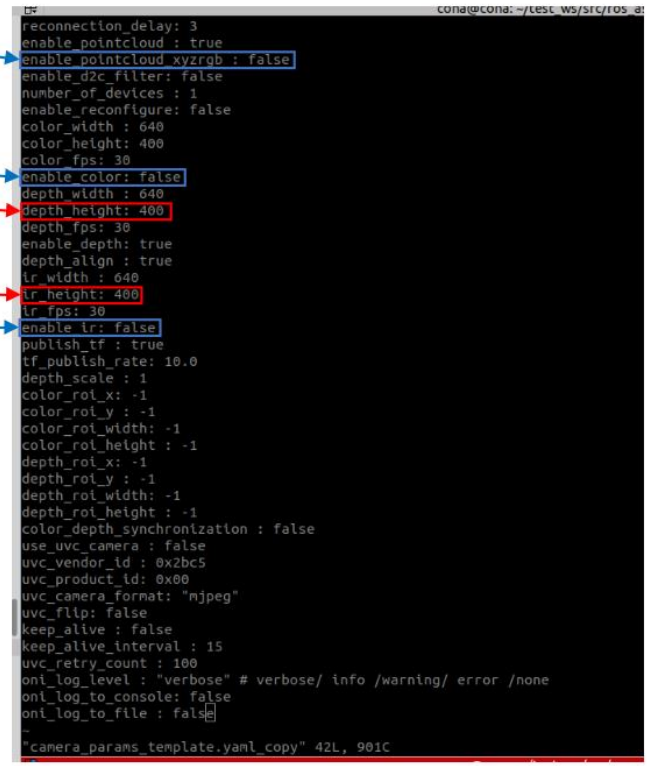
depth_height: 400

ir_height: 400

enable_color: false

enable_ir: false

```
reconnection_delay: 3
enable_pointcloud : true
enable_pointcloud_xyzrgb : true
enable_d2c_filter: false
number_of_devices : 1
enable_reconfigure: false
color_width : 640
color_height: 480
color_fps: 30
enable_color: true
depth_width : 640
depth_height: 480
depth_fps: 30
enable_depth: true
depth_align : true
ir_width : 640
ir_height: 480
ir_fps: 30
enable_ir: true
publish_tf : true
tf_publish_rate: 10.0
depth_scale : 1
color_roi_x: -1
color_roi_y : -1
color_roi_width: -1
color_roi_height : -1
depth_roi_x: -1
depth_roi_y : -1
depth_roi_width: -1
depth_roi_height : -1
color_depth_synchronization : false
use_uvc_camera : false
uvc_vendor_id : 0x2bc5
uvc_product_id: 0x00
uvc_camera_format: "mjpeg"
uvc_flip: false
keep_alive : false
keep_alive_interval : 15
uvc_retry_count : 100
oni_log_level : "verbose" # verbose/ info /warning/ error /none
oni_log_to_console: false
oni_log_to_file : false
```



세팅 수정본

해상도 (width)
480 → 400

enable
true → false

`ros_astra_camera`의 launch 파라미터 3

$ cd ros_astra_camera

$ cd launch

$ vim stereo_s_u3.launch

위 명령어를 통해 파라미터를 변경할 수 있음

`ros_astra_camera`의 launch 파라미터 4

```
<launch>
    ...
    <param name="camera_name" value="$(arg camera_name)" />
    <param name="serial_number" value="$(arg serial_number)" />
    <param name="use_uvc_camera" value="false" />
    <param name="uvc_product_id" value="0x0511" />
    ...
</launch>
```

stereo_s_u3.launch에서 use_uvc_camera의 value가 false인지 확인하고,

true인 경우에는 false로 바꾸어 줄 것

```
<launch>
  <!-- unique camera name-->
  <arg name="camera_name" default="camera" />
  <!-- Hardware depth registration -->
  <arg name="depth_registration" default="false" />
  <arg name="serial_number" default=""/>
  <group ns="$(arg camera_name)">
    <node name="camera" pkg="astra_camera" type="astra_camera_node" output="screen">
      <rosparam command="load" file="$(find astra_camera)/params/camera_params_template.yaml" />
      <param name="camera_name" value="$(arg camera_name)" />
      <param name="serial_number" value="$(arg serial_number)" />
      <param name="use_uvc_camera" value="false" />
      <param name="uvc_product_id" value="0x0511" />
      <remap from="/$(arg camera_name)/depth/color/points" to="/$(arg camera_name)/depth_registered/points"/>
    </node>
  </group>
</launch>
```

세팅 수정본

카메라 관련 토픽(Topic)

/camera/depth/camera_info

/camera/depth/image_raw

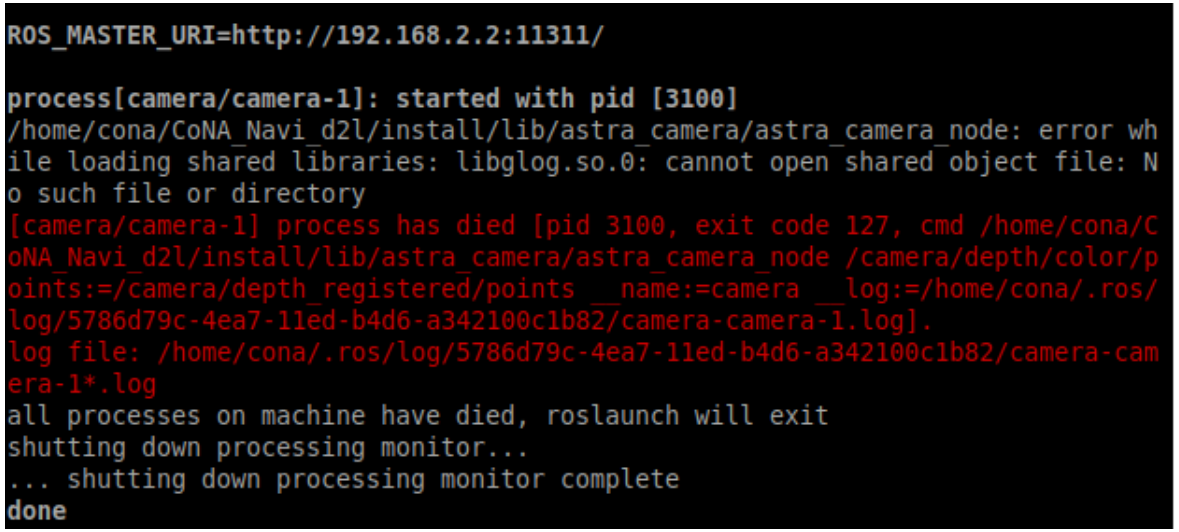
/camera/depth/points

/camera/extrinsic/depth_to_color

/camera/reset_device

`ros_astra_camera` 에러 처리

[error_image_01]



- [error_image_01]의 에러가 발생하는 경우,
- INDEX 2번의 dependency 파일 설치로 해결 가능

$ sudo apt install libgoogle-glog-dev