

Subscriber For Path.

Topic Name :- /zed/mapPath

Message Type :-

```
std_msgs/Header header
uint32 seq
time stamp
string frame_id
geometry_msgs/PoseStamped[] poses
std_msgs/Header header
uint32 seq
time stamp
string frame_id
geometry_msgs/Pose pose
geometry_msgs/Point position
float64 x
float64 y
float64 z
geometry_msgs/Quaternion orientation
float64 x
float64 y
float64 z
float64 w
```

geometry_msgs/PoseStamped []
it's a list

Callback Function

Execute when a new message received

Start listening for topic messages

Spin to listen forever

ZED Camera

→ L One button

ON
Jebson - start
whole prog.

Start.

Altium
Eagle
KiCad

Eagle
tutorial

→ Indication - LED → if ZED
Recording
LED indication if ZED

is Recording

L LED off if ZED is
not recording

→ Button on ZED saves
CSV file.

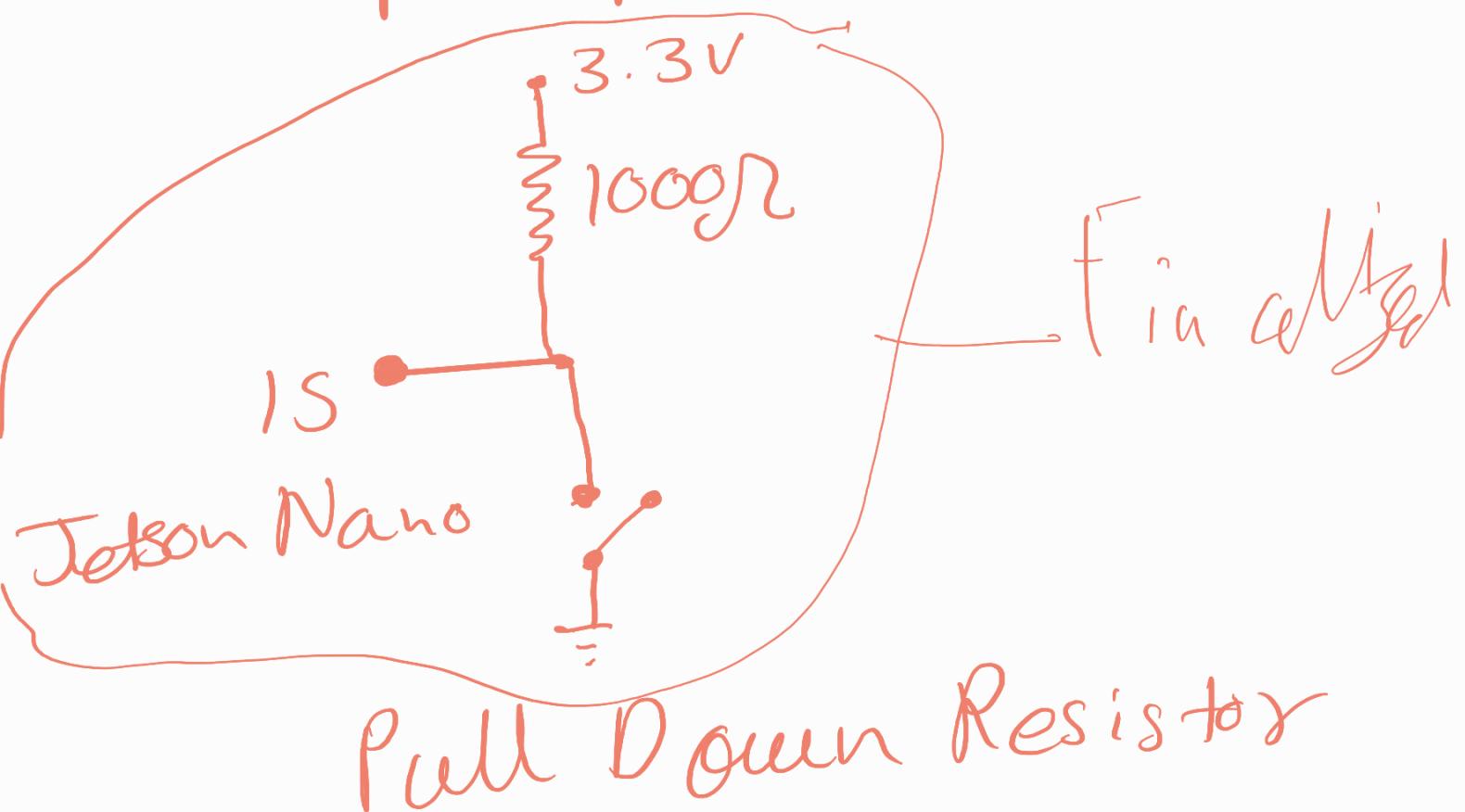
L ROS Service

L different CSV file

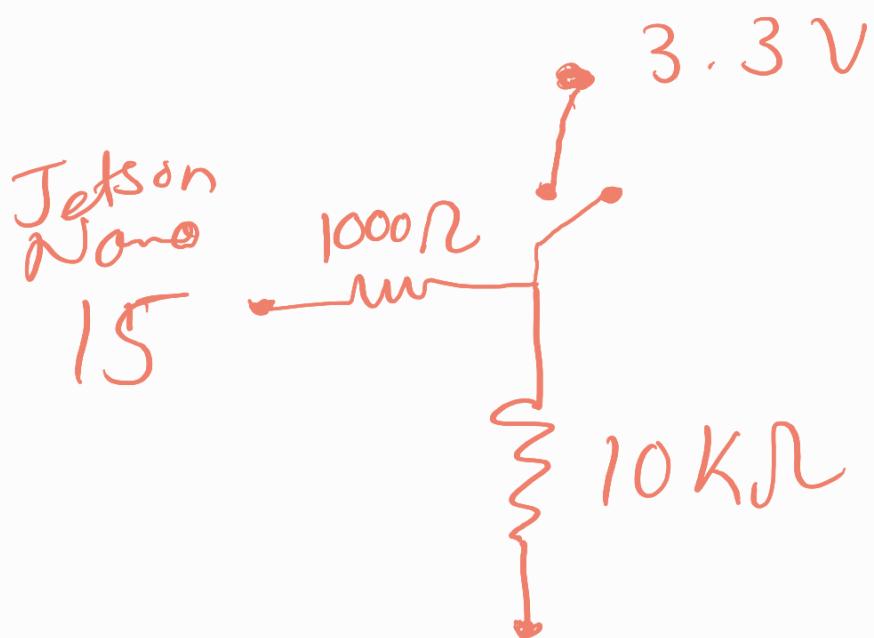
L Unique Name.

Jetson NANO

1 push Button on GPIO with pull up resistor.



Pull Down Resistor



Zed_wrapper_nodelet.cpp

line 3638.

line 218 Ctrl+C check.

line 3651 - 3691

 └ Positional tracking

line 3241 - line 3848.

 └ Main Loop

line 3186 - Code write

 └ GPIO declaration.

3749 → GPIO_i: Low

3656 → GPIO_i: High

Publisher

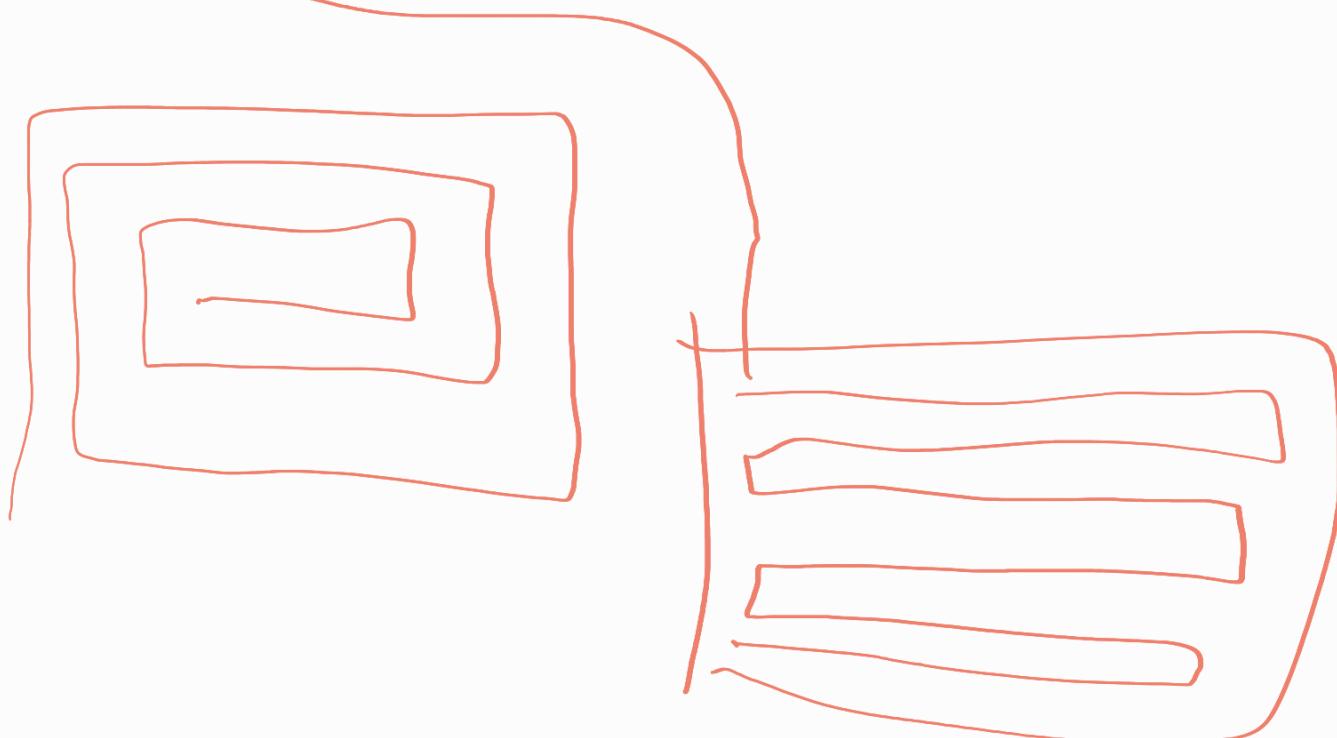
GPIO state

Subscriber

Create File
with coordinate + date + time.

① Work with liveZed ROS wrapper
sdor path (i) Lines 5m, 10m, 15m.
(ii) Squares & Rectangles.
(iii) Path Coming Inside from outer rectangle.

② Same experiments SVO will be recorded.
plot Rtabmap Path
zed odom path
zed path.



HID buttons

1. Turn on (whole script) ✓
2. LED (to show if camera is recording) ✓
3. Button to save coordinates from ZED /path_map (Date and time naming) with LED indication.

Work need to be done

1. Button to turn on SVO(Normal Video) file recording and LED to indicate if its happening ✓
2. Button to turn off SVO(Normal Video) file recording and LED to indicate it its done ✓

A switch to record the corners (Normal)

Switch: On → Begin recording in thread 2

Switch: Off → End recording in thread 2, save as file with incremental names (Timestamp or something else)

Have an LED showing that the turn switch is on

3. Button to terminate whole program
4. Button to shutdown the Jetson
5. Button to turn on the Jetson

1. (i) For SVO file, I need to enable ROS
Ros Service calling using GPIO
through bash throughService-client

(ii) image-view OR video recorder
Video file record with time & date
try to do it with Switch

- 2 button to turn off Video Recording
(i) RosService to called by GPIO
- ↓
- through bash through ServiceClient
- or
- (ii) terminate image View Video recorder program
rosnode kill or in the programs
a condition
3. Switch ON Rec on another thread
↳ same approach but diff program
4. Bash GPIO - Rosnode kill all
5. Bash Sudo Poweroff
6. Button at 5V GPIO to turn Jetson On.