

Vanjee 720 + cartographer 2D mapping

1、 Operating environment

Ubuntu 18.04

Ros melodic

2、 Source code path

cartographer Source code path:

```
src/cartographer
```

```
src/cartographer_ros
```

Vanjee 720 16-line radar driver:

```
src/vanjees_lidar_720
```

3、 Parameter configuration

The example workspace name is wlr_720_cartographer_ws, and the workspace name can be customized. Place the src folder of the data folder under the wlr_720_cartographer_ws folder.

2D mapping launch file path

```
~/wlr_720_cartographer_ws/src/cartographer_ros/cartographer_ros/launch/wlr_720_cartographer_2d.launch
```

2D mapping lua file path

```
~/wlr_720_cartographer_ws/src/cartographer_ros/cartographer_ros/launch/wlr_720_2d_no_imu.lua
```

4、 Run mapping

Open the terminal on the host and enter the command:

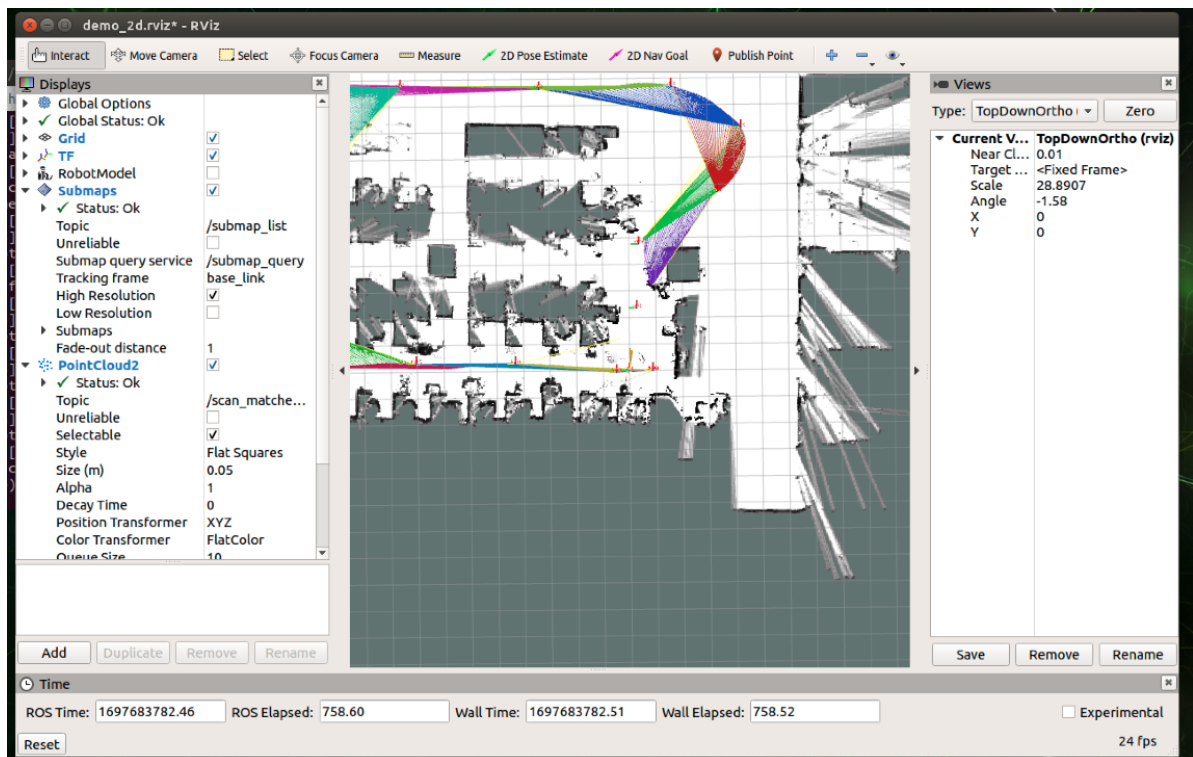
```
cd ~/wlr_720_cartographer_ws

source devel/setup.bash

roslaunch cartographer_ros wlr_720_cartographer_2d.launch
```

```
Enter the following command in the terminal
cd ~/wlr_720_cartographer_ws
source devel/setup.bash
roslaunch cartographer_ros wlr_720_cartographer_2d.launch
```

Completed mapping effect



To save the map, enter the following command in the terminal

```
cd ~/wlr_720_cartographer_ws

source devel/setup.bash

rosservice call /finish_trajectory 0

rosservice call /write_state /home/yahboom/wlr_720_cartographer_ws/mymap.pbstream
0

roslaunch cartographer_ros cartographer_pbstream_to_ros_map -
map_filestem=/home/yahboom/wlr_720_cartographer_ws/mymap -
pbstream_filename=/home/yahboom/wlr_720_cartographer_ws/mymap.pbstream
```

```
yahboom@yahboom-desktop: ~/wlr_720_cartographer_ws
/home/yahboom/wlr_720_cartographer_w... x yahboom@yahboom-desktop: ~/wlr_720_... x
yahboom@yahboom-desktop:~/wlr_720_cartographer_ws$
yahboom@yahboom-desktop:~/wlr_720_cartographer_ws$
yahboom@yahboom-desktop:~/wlr_720_cartographer_ws$
yahboom@yahboom-desktop:~/wlr_720_cartographer_ws$ rosservice call /finish_trajectory 0
status:
  code: 0
  message: "Finished trajectory 0."
yahboom@yahboom-desktop:~/wlr_720_cartographer_ws$ rosservice call /write_state /home/yahboom/wlr_720_cartographer_ws/mymap.pbstream 0
status:
  code: 0
  message: "State written to '/home/yahboom/wlr_720_cartographer_ws/mymap.pbstream'."
yahboom@yahboom-desktop:~/wlr_720_cartographer_ws$ roslaunch cartographer_ros carto
grapher_pbstream_to_ros_map -map_filestem=/home/yahboom/wlr_720_cartographer_ws/
mymap -pbstream_filename=/home/yahboom/wlr_720_cartographer_ws/mymap.pbstream
I1019 10:58:04.132023 24385 pbstream_to_ros_map_main.cc:43] Loading submap slice
s from serialized data.
I1019 10:58:04.929256 24385 pbstream_to_ros_map_main.cc:50] Generating combined
map image from submap slices.
I1019 10:58:05.198446 24385 ros_map.cc:40] /home/yahboom/wlr_720_cartographer_ws
/mymap.png
yahboom@yahboom-desktop:~/wlr_720_cartographer_ws$
```

The picture below is the map file we saved

