Preparation

1. Install SDK

Unzip YDLidar-SDK-master.tar.xz in the source code folder to get YDLidar-SDK-master.

Input following command:

```
mkdir build
cd build
cmake ..
make -j4
sudo make install
```

2. Create a new workspace and compile function packages

Take the creation name ydlidar_ws as an example. Input following command:

```
mkdir ydlidar_ws
cd ydlidar_ws
mkdir src
cd src
catkin_init_workspace
```

Copy the decompressed ydlidar_ros_driver-master function package to the ydlidar_ws/src directory.

Then, in the directory of ydlidar_ws, use catkin_make to compile,

```
cd ~/ydlidar_ws
catkin_make
```

After the compilation is passed, add the path of the workspace to .bashrc.

```
sudo gedit ~/.bashrc
```

Copy the following content to the end of the file.

```
source ~/ydlidar_ws/devel/setup.bash --extend
```

3. Bind lidar port name

Open the terminal, input the following command:

```
cd ~/ydlidar_ws/src/ydlidar_ros_driver-master/startup
sudo chmod 777 initenv.sh
sudo bash initenv.sh
```

Then, re-plug the lidar wiring and enter the command ll /dev/rplidar in the terminal.

```
yahboom@ubuntu:~$ ll /dev/ydlidar
lrwxrwxrwx 1 root root 7 Nov 13 18:07 /dev/ydlidar -> ttyUSB0
yahboom@ubuntu:~$
```

The above content indicates that the binding is successful. The end is not necessarily 0 and changes according to the order in which the devices are inserted.

4. Test Lidar

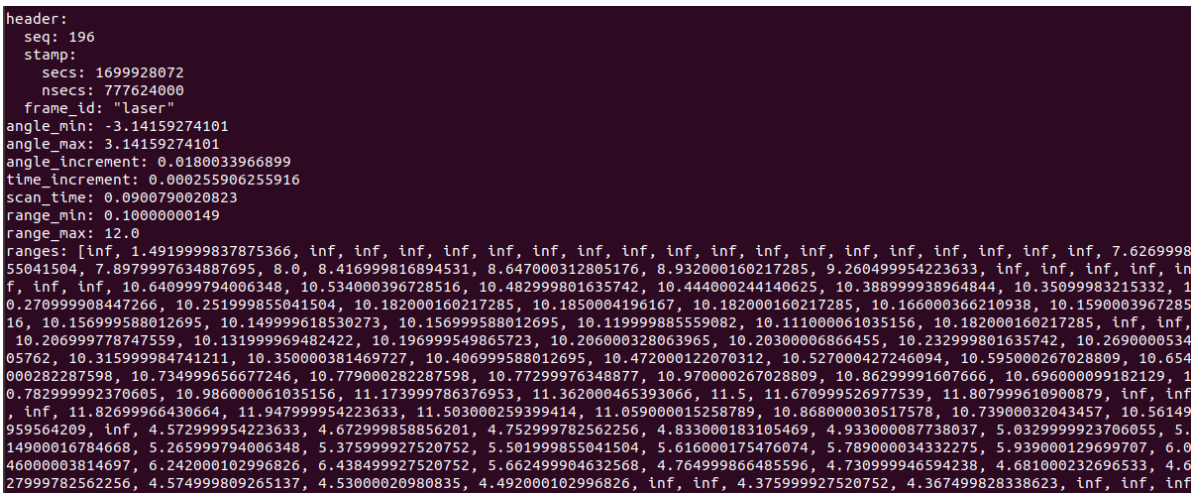
Save and exit.

Reopen a terminal and enter the following statement to open the lidar.

```
#x3/x3pro雷达
roslaunch ydlidar_ros_driver X3.launch
#4ros雷达
roslaunch ydlidar_ros_driver TG.launch
```

View lidar data with rostopic tool.

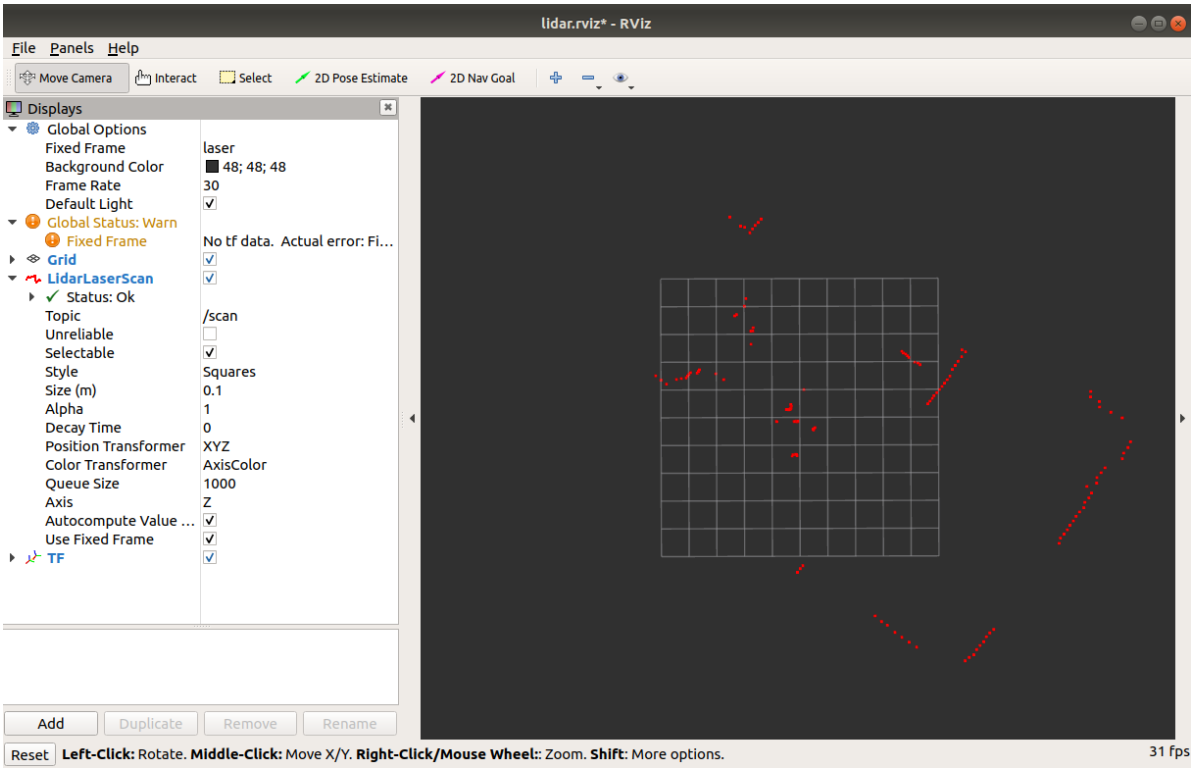
```
rostopic echo /scan
```



ctrl c closes the terminal that just drove the lidar.

Then enter the following statement in the terminal to drive the radar, and open rviz to display the point cloud.

```
#x3/x3pro lidar
roslaunch ydlidar_ros_driver x3_lidar_view.launch
#4ros lidar
roslaunch ydlidar_ros_driver 4ros_lidar_view.launch
```


lidar.rviz* - RViz
File Panels Help
Move Camera
Interact
Select
2D Pose Estimate
2D Nav Goal
Displays
Global Options
Fixed Frame laser
Background Color 48; 48; 48
Frame Rate 30
Default Light
Global Status: Warn
Fixed Frame No tf data. Actual error: Fi…
Grid
LidarLaserScan
Status: Ok
Topic /scan
Unreliable
Selectable
Style Squares
Size (m) 0.1
Alpha 1
Decay Time 0
Position Transformer XYZ
Color Transformer AxisColor
Queue Size 1000
Axis Z
Autocompute Value …
Use Fixed Frame
TF
Add
Duplicate
Remove
Rename
Reset
Left-Click: Rotate. Middle-Click: Move X/Y. Right-Click/Mouse Wheel:: Zoom. Shift: More options.
31 fps