1. Preparation

1.1. Compile and install YDLidar-SDK

Copy the YDLidar-SDK in the ROS package folder to the terminal directory, enter the folder, and input in the terminal,

```
cd YDLidar-SDK
mkdir build
cd build
cmake ..
make
sudo make install
```

1.2. Create ROS workspace

1.2.1 Take the workspace name as ydlidar_ws as an example, enter the terminal,

```
mkdir ydlidar_ws
cd ydlidar_ws
mkdir src
cd src
catkin_init_workspace
cd ..
catkin_make
```

1.2.2 Add the workspace to the system environment variable, input the terminal,

```
echo "source ~/ydlidar_ws/devel/setup.bash" >> ~/.bashrc
source ~/.bashrc
```

1.3 Add the ROS package to the workspace

Copy all the files in the src directory under the ROS package folder to the src folder in the workspace you just created, and then in the workspace directory, open the terminal and enter,

```
catkin_make
```

1.4 Remap the USB serial port

This step is to bind the port of the radar to avoid identifying port errors when multiple usb devices are connected.

```
chmod 0777 ~/ydlidar_ws/src/ydlidar_ros_driver/startup/*
sudo sh src/ydlidar_ros_driver/startup/initenv.sh
```

Note: After completing the previous operation, please re-plug the radar again.

1.5, run ydlidar_ros_driver

1.5.1、Use the startup file to run ydlidar_ros_driver, input the terminal,

```
roslaunch ydlidar_ros_driver TG.launch
```

We can print the topic data through the terminal to check whether the radar is started normally, the terminal input,

```
rostopic echo /scan
```

1.5.2, RVIZ View the scan results, terminal input,

```
roslaunch ydlidar_ros_driver lidar_view.launch
```