Preparation

1. Install the SDK Driver

Based on the specifications of the lidar you purchased, locate the compressed file labeled "YDLidar-SDK" in the provided source code package. Extract the "YDLidar-SDK" folder; this folder contains the SDK files for this lidar. Since using the ROS function package for this lidar requires the SDK to be installed beforehand, the "YDLidar-SDK" folder contains the lidar's driver files. Open a terminal in this folder and type:

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

If no errors are reported during the process, it means that the driver has been successfully installed.。

2. Creating a New Workspace and Compiling Packages

- (Recommended) The first method involves extracting the ydlidar_ws source code to your root directory and then directly using catkin_make to compile it.

```
cd ydlidar_ws
catkin_make
```

After successful compilation, add the workspace path to your .bashrc file.

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

Copy the following content to the end of the file:

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

- The second method involves creating a self-named workspace, for example, named oradar_ws. In the terminal, type:

```
mkdir oradar_ws
cd oradar_ws
mkdir src
cd src
catkin_init_workspace
```

Then copy the extracted source code from ydlidar_ws/src to the oradar_ws/src directory, and then compile it using catkin_make in the oradar_ws directory.

```
cd oradar_ws
catkin_make
```

After successful compilation, add the workspace path to your .bashrc file.

```
sudo gedit ~/.bashrc
```
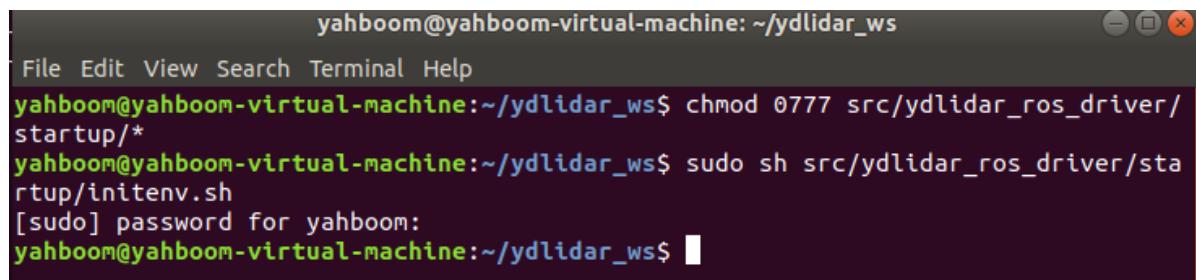
Copy the following content to the end of the file:

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

3. Bind lidar port name

Open a terminal in the ydlidar_ws workspace and enter the following command.

```
chmod 0777 src/ydlidar_ros_driver/startup/*
sudo sh src/ydlidar_ros_driver/startup/initenv.sh #Tmini-plus-12m uses this
sudo bash src/ydlidar_ros_driver/startup/initenv.sh  #Tmini-plus-25m uses this
```


Then reconnect the lidar serial port and enter `ll /dev/ydlidar` in the terminal.
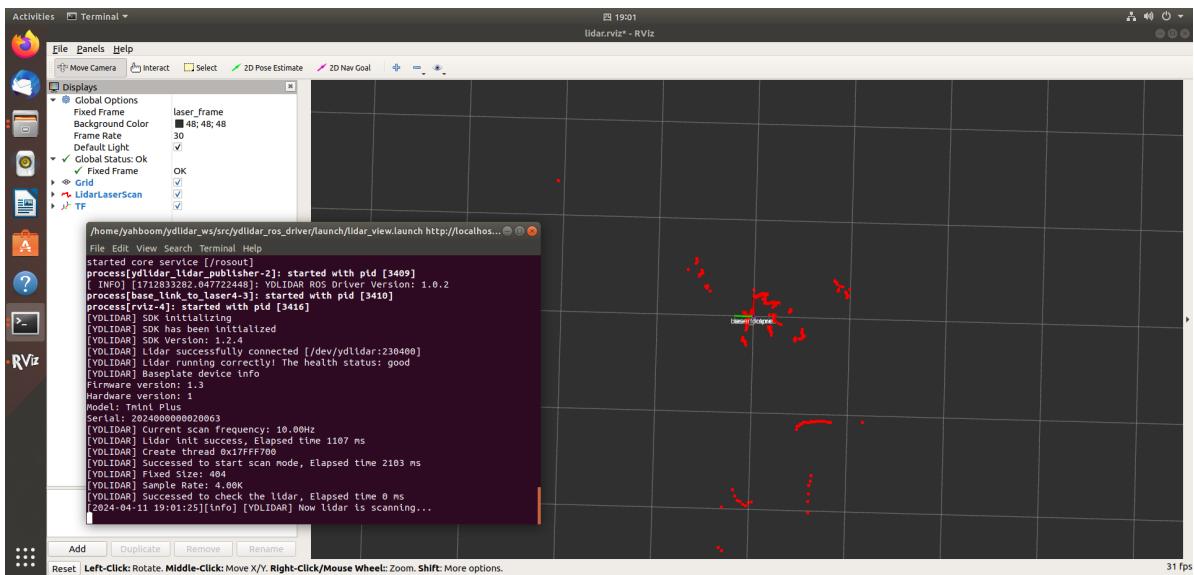
If the above content appears, it means that the binding was successful. The last character is not necessarily 0; it will change depending on the order in which the devices are inserted.

4. Drive lidar

Save and exit, then open a new terminal and enter the following command to enable lidar and display it in rviz.

```
roslaunch ydlidar_ros_driver lidar_view.launch
```

If the above screen appears, it means that all preparations are complete.