

# Preparations Before Use

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## 1. Install the SDK Driver

Based on the specifications of the radar 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 radar. Since using the ROS function package for this radar requires prior SDK installation, the YDLidar-SDK folder contains the radar's driver files. Open a terminal within this folder and type:

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

If no errors occur during the process, the driver installation is successful.

## 2. Creating a new workspace and compiling the package

- (Recommended) The first method involves extracting the ydlidar\_ws.zip file from the source code to your root directory, and then directly using catkin\_make to compile.

```
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, let's say the name is ydlidar\_ws. Enter the following in the terminal:

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

Then copy the extracted source code from ydlidar\_ws/src to the ydlidar\_ws/src directory, and then compile it using catkin\_make in the ydlidar\_ws directory.

```
cd ydlidar_ws
catkin_make
```

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

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

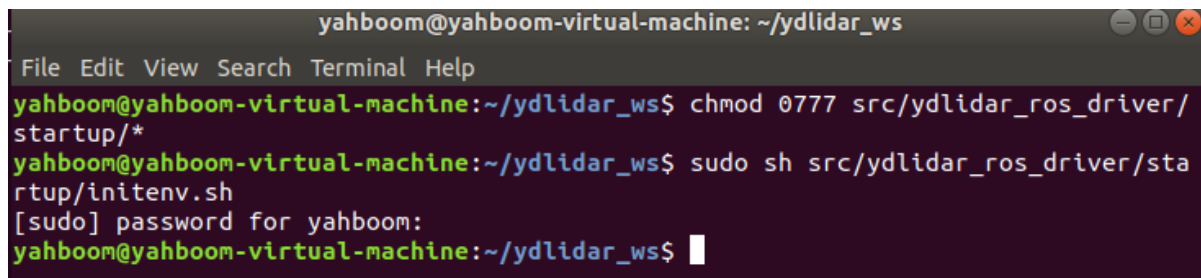
Copy the following content to the end of the file:

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

### 3. Bind the radar port name

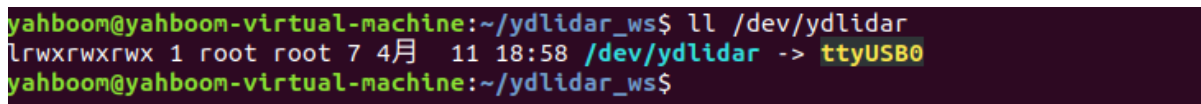
Open a terminal in the ydlidar\_ws workspace and enter the following command:

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



```
yahboom@yahboom-virtual-machine: ~/ydlidar_ws  
File Edit View Search Terminal Help  
yahboom@yahboom-virtual-machine:~/ydlidar_ws$ chmod 0777 src/ydlidar_ros_driver/  
startup/*  
yahboom@yahboom-virtual-machine:~/ydlidar_ws$ sudo sh src/ydlidar_ros_driver/sta  
rtup/initenv.sh  
[sudo] password for yahboom:  
yahboom@yahboom-virtual-machine:~/ydlidar_ws$
```

Then reconnect the radar serial port and enter `ll /dev/ydlidar` in the terminal.



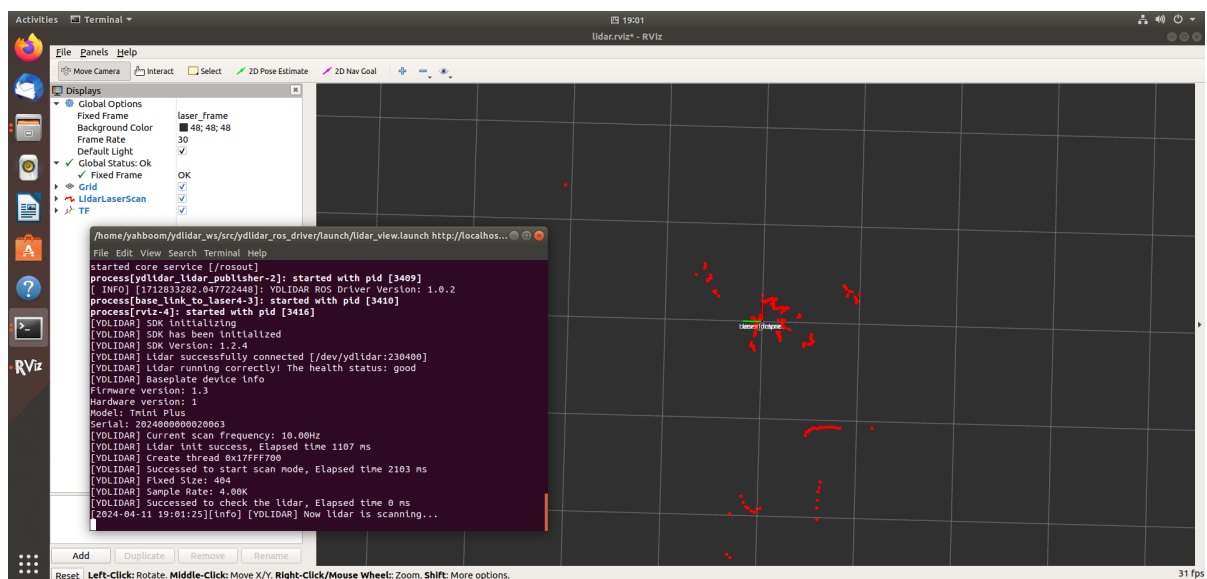
```
yahboom@yahboom-virtual-machine:~/ydlidar_ws$ ll /dev/ydlidar  
lrwxrwxrwx 1 root root 7 4月 11 18:58 /dev/ydlidar -> ttyUSB0  
yahboom@yahboom-virtual-machine:~/ydlidar_ws$
```

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. Driving the Radar

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

```
roslaunch ydlidar_ros_driver lidar_view.launch
```



If the above picture appears, it indicates that all the preparatory work has been completed.

