

YDLIDAR ROS MANUAL

DOC#: 01.13.000000



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CREATE A YDLIDAR ROS DRIVER PACKAGE

(1) Use the command to create the catkin_ws workspace, the terminal switches to a ROS workspace src directory, and catkin_ws to replace your ROS workspace.

```
$ mkdir -p ~/catkin_ws/src
$ cd ~/catkin_ws/src
$ catkin_init_workspace
$ cd ~/catkin_ws && catkin_make
```

(2) Add the catkin environment variable to the ~/.bashrc file and make it take effect.

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

(3) Cloning the corresponding Lidar types ydlidar project to the src directory under your ROS workspace.



Note: git checkout followed by the corresponding Lidar model

(4) Compile and generate ydlidar_node and ydlidar_client.

\$catkin_make

RUN YDLIDAR ROS DRIVER PACKAGE

Create a serial port alias [/dev/ydlidar] for Lidar

\$roscd ydlidar/startup
\$sudo chmod 0777 *

\$sudo sh initenv.sh

Note: After creating a serial port alias, you need to re-plug the USB to take effect.

There are two ways to run the YDLIDAR ROS driver package.

(1) Run ydlidar_node and rviz

\$roslaunch ydlidar lidar_view.launch

###You can see the scan results in the rviz



图 1 YDLIDAR RVIZ 运行显示



(2) Run ydlidar_node and ydlidar_client

\$roslaunch ydlidar lidar.launch
\$rosrun ydlidar ydlidar_client

Lidar data output visible at the terminal



FIG2 YDLIDAR TERMINAL DISPLAY STEP 1

	jacky@ja	cky-eai: ~		
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[YDLIDAR [YDLIDAR	INFO]: INFO]:	angle-distance angle-distance	:	[2.970299, 0.000000, 462] [3.366327, inf, 463]
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FIG2 YDLIDAR TERMINAL DISPLAY STEP 2

YDLIDAR COORDINATE SYSTEM

YDLIDAR rotates clockwise. The SDK data output is left-handed data with distance and angle information. The ROS driver package output has converted it to a right-handed coordinate system output.



FIG4 YDLIDAR G2/G4/G6 COORDINATE SYSTEM



FIG5 YDLIDAR X4 COORDINATE SYSTEM





FIG6 YDLIDAR S2/X2/X2L COORDINATE SYSTEM