

KBLD183002 RPLidar

SDKRPLidar

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- SDK
 - Ultra_simple_multi_touch
 - rplidar_multi_touch
 - Calibration application
- SDK
 - SDK
 - SDK

1. RPLidar



2. RPlidar_multi_touch SDK :



SDKRPLiDAR A2 256000A3multi_touch.json

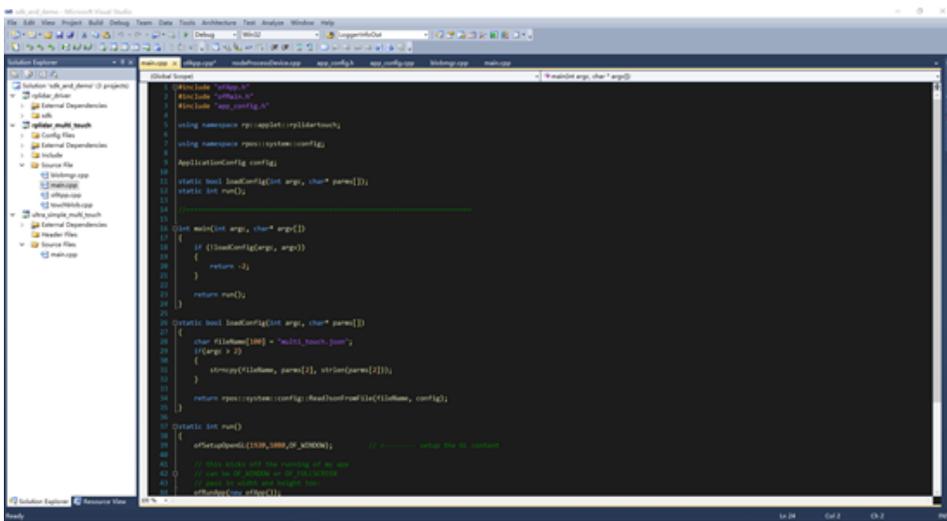
1. USBRPLidarRPLidar0.3mUSB
2. cp210xRPLidar
3. IP
<https://wiki.slamtec.com/pages/viewpage.action?pagelD=10354801>

IPIP192.168.0.7, IP

multi_touch.jsonconnect_pathTCP SDK



1. workspacesvc10 VS sdk_and_demo.sln



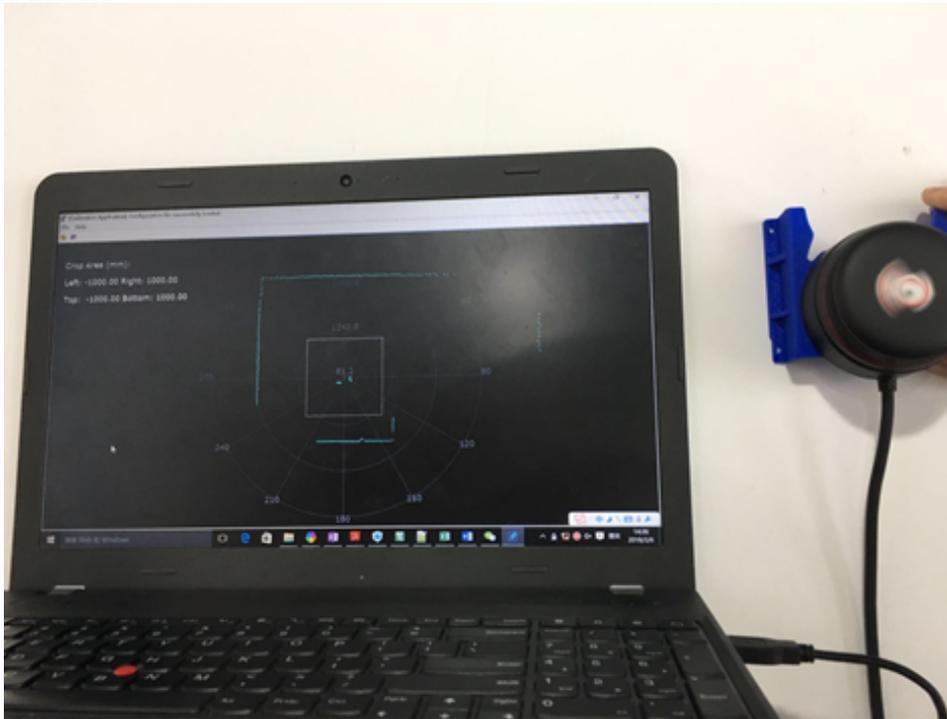
2. Solution Explorer Solution"sdk_and_demo"(5 projects), rebuild solution
3. workspacesvc10\sdk_project\multiTouch_sdk\output multiTouch_sdk.dllmultiTouch_sdk.dll2Solution

4. workspaces\vc10\demo_project 3demo\bin3demo app

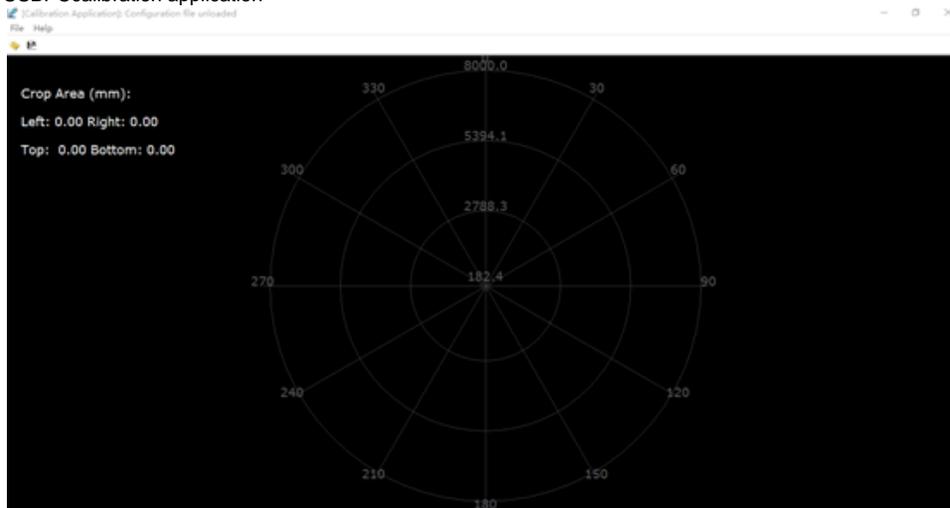
名称	修改日期	类型	大小
data	2018/3/6 11:29	文件夹	
Assimp32.dll	2017/3/14 13:50	应用程序扩展	4,519 KB
fmodex.dll	2017/3/14 13:50	应用程序扩展	283 KB
fmodexL.dll	2017/3/14 13:50	应用程序扩展	323 KB
FreeImage.dll	2017/3/14 13:50	应用程序扩展	2,650 KB
FreeType-6.dll	2017/3/14 13:50	应用程序扩展	357 KB
glut32.dll	2017/3/14 13:50	应用程序扩展	232 KB
multi_touch.json	2018/3/6 14:49	JSON 文件	1 KB
multiTouch_sdk.dll	2018/3/6 11:49	应用程序扩展	511 KB
rplidar_multi_touch_debug.exe	2018/3/6 14:40	应用程序	5,164 KB
rplidar_multi_touch_debug.exp	2018/3/6 14:40	Exports Library ...	45 KB
rplidar_multi_touch_debug.ilc	2018/3/6 14:40	Incremental Link...	12,043 KB
rplidar_multi_touch_debug.lib	2018/3/6 14:40	Object File Library	81 KB
rplidar_multi_touch_debug.pdb	2018/3/6 14:40	Program Debug...	17,363 KB
Zlib.dll	2017/3/14 13:50	应用程序扩展	68 KB

rplidar_multi_touchapp\bin2multiTouch_sdk.dll

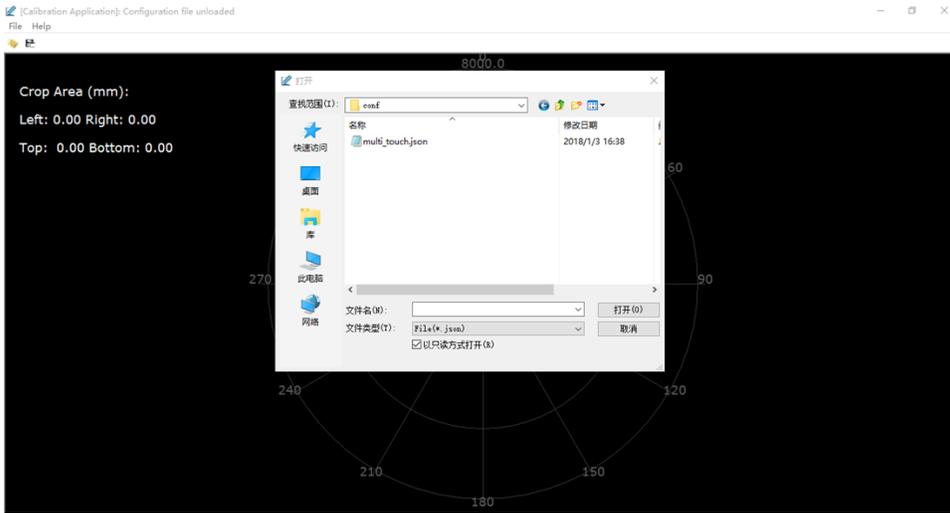
5. RPLidar 180



6. USBPCcalibration application



fileload configuration



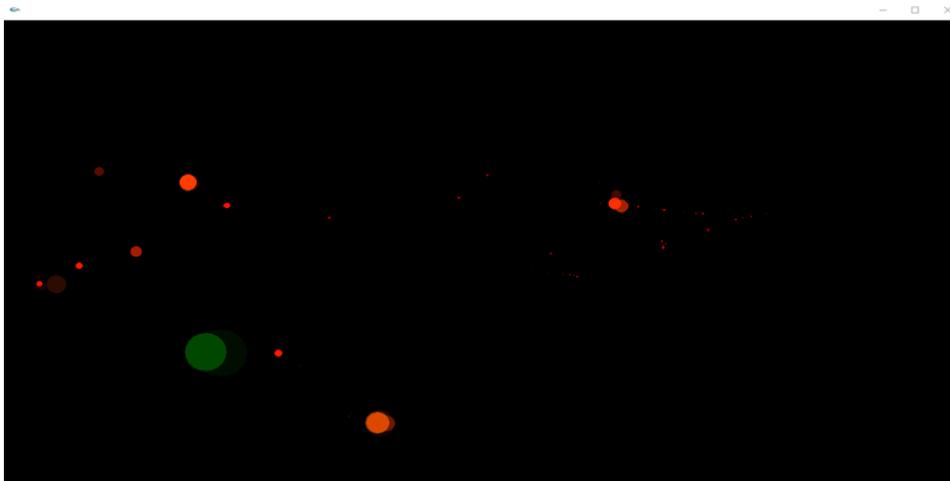
i multi_touch.json, Debug..\conf\Releaseworkspaces\vc10\demo_project\rplidar_multi_touch\bin

7.



confmulti_touch.json15

8. workspaces\vc10\demo_project\rplidar_multi_touch\bin\rplidar_multi_touch_debug.exe TouchPoints1m*1m1920*1080





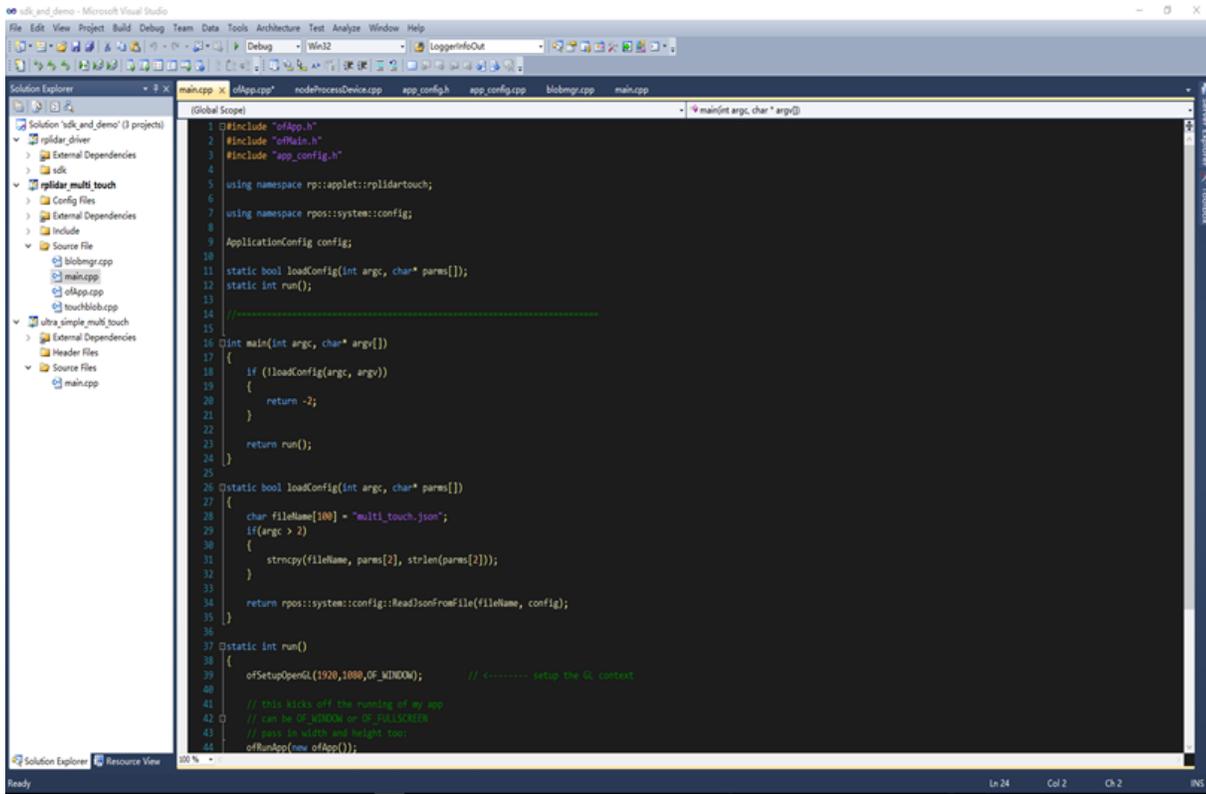
TouchPoints?

Rplidar_multi_touch0.05m (BlobCombinationThreshold)xy0.05m0.05.

TouchPoints

SDK

Windowsworkspaces\vc10 VS sdk_and_demo.sln SDK



VS SDK Debug Release output\win32\Debug output\win32\Release

Ultra_simple_multi_touch

PC RPLIDAR RPLIDAR

1) USB RPLIDAR PC USB

2) workspace\vs10\demo_project\ultra_simple_multi_touch \bin\ultra_rplidar_multi_touch.exe

COM COM3

```
ultra_simple_multi_touch.exe
C:\multi_touch_demo_1215\multi_touch_demo_1215\demoapps\multi_touch\workspaces\vs10\ultra_simple_multi_touch\bin>ultra_s
imple_multi_touch.exe
Successfully create and connect to the rplidar device
Scan frequency: 0
the touch point x: 1212, y: 830, radius: 91.86
the touch point x: 886, y: 753, radius: 1.00
the touch point x: 678, y: 592, radius: 1.00
the touch point x: 843, y: 539, radius: 19.18
the touch point x: 905, y: 394, radius: 1.00
the touch point x: 1195, y: 66, radius: 6.30
the touch point x: 1210, y: 269, radius: 14.17
the touch point x: 1168, y: 411, radius: 3.82
the touch point x: 1408, y: 400, radius: 21.45
the touch point x: 1578, y: 386, radius: 1.00
the touch point x: 1545, y: 546, radius: 22.95
the touch point x: 1252, y: 683, radius: 1.00
the touch point x: 1423, y: 757, radius: 1.00
the touch point x: 1168, y: 736, radius: 1.00
the touch point x: 1114, y: 729, radius: 1.00
the touch point x: 1212, y: 830, radius: 91.86
the touch point x: 886, y: 753, radius: 1.00
the touch point x: 678, y: 592, radius: 1.00
the touch point x: 843, y: 539, radius: 19.18
the touch point x: 905, y: 394, radius: 1.00
the touch point x: 1195, y: 66, radius: 6.30
the touch point x: 1210, y: 269, radius: 14.17
the touch point x: 1168, y: 411, radius: 3.82
the touch point x: 1545, y: 546, radius: 22.59
```

rplidar_multi_touch

PC RPLIDAR GUI

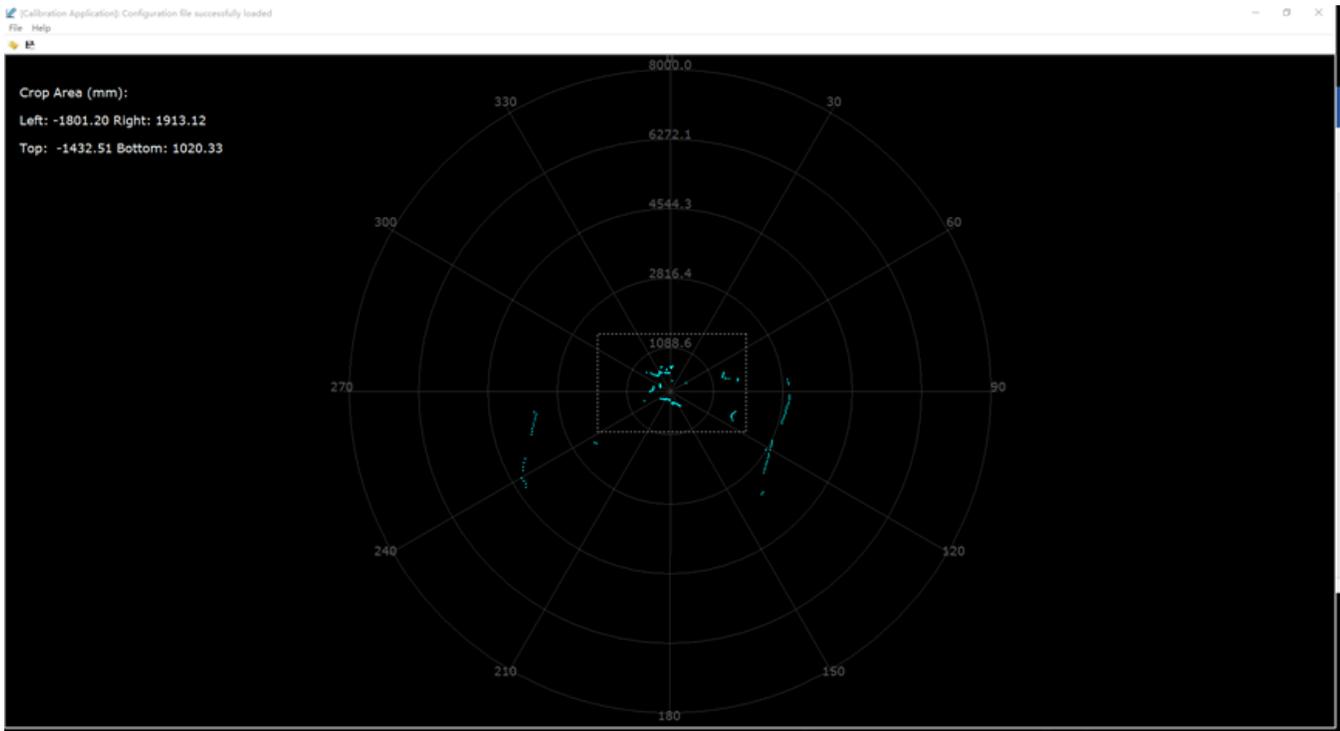
- 1) USB RPLIDAR PC USB
 - 2) workspace\vs10\demo_project\rplidar_multi_touch\bin\rplidar_multi_touch_debug.exe
- 8

Calibration application

PC RPLIDAR GUI ,.

- 1) USB RPLIDAR PC USB
 - 2) workspace\vs10\demo_project\calibration_app\bin\rplidar_multi_touch_debug.exe
- 3fileload configuration..\conf\Debug\workspace\vs10\demo_project\calibration_app\bin\Release\jsonfiles\save configuration





SDK

SDK:

- conf
- demo_app
 - calibration_application
 - rplidar_multi_touch
 - ultra_simple_multi_touch
- obj
- output
- sdk
 - MultiTouch_SDK
 - RPLIDAR_SDK
- workspaces
 - makefile
 - obj
 - vc10
 - xcode

SDK

- Jsoncpp Json
- Open frameworks

confjson

- "connect path"TCP
- "touch_area"
- "show_lidar_scan"
- "show_touch_point_coordination"touchpoint
- "angle_offset"180

demo_app

- rplidar_multi_touch

win32GUI

- Ultra_simple_multi_touch

SDKmulti_touchincludeSDKsrc

WorkspaceSDKVS

SDK 2 obj output output SDK (.lib .a) (exe elf)obj

SDKRPLIDARMulti_touch SDKrplidar_multi_touchTouchPoints

Multi_touch SDKSDK

SDK

app_config.h

Json

message.h

nodeProcessDevice.h

NodeProcessDevice

rplidar.h

RPLidar SDK

rplidar_driver.h

RPLidar SDK: RPLidarDriver

rplidar_protocol.h

RPLidar

rplidar_cmd.h

RPLidar /

rptypes.h

SDK

SDK

RPLidarNodeProcessDevice rplidar_multi_touchofAppNodeProcessDevice proDev_ .

RPLidar

NodeProcessDevicecreateAndStartRPLidar()RPLidar(serial)TCPtrue

startUp(JsonCropArea

setLidarPwm(66060%1023.

getLidarScan()RPLidar_drivergrabScanData()processScan()

setScreenSize1920*1080.

getTouchPoints().

getScanNodeDrawPoints()