# KBLD183002 RPLidar

SDKRPLidar



1. RPLidar



2. RPlidar\_multi\_touch SDK :



- 1. USBRPLidarRPLidar0.3mUSB
- cp210xRPLidar
   IP

https://wiki.slamtec.com/pages/viewpage.action?pageId=10354801

IPIP192.168.0.7, IP

multi\_touch.jsonconnect\_pathTCPSDK

Internet 协议版本 4 (TCP/IPv4) 属性	>
常规	
如果网络支持此功能,则可以获取自动推 络系统管理员处获得适当的 IP 设置。	派的 IP 设置。否则,你需要从网
○ 自动获得 IP 地址(O)	
● 使用下面的 IP 地址(S):	
IP 地址(I):	192.168.0.201
子网掩码(U):	255.255.255.0
默认网关(D):	192.168.0.7
│ ○ 自动获得 DNS 服务器地址(B)	
● 使用下面的 DNS 服务器地址(E):	
首选 DNS 服务器(P):	
备用 DNS 服务器(A):	
□退出时验证设置(L)	高级(V)
	确定 取消

1. workspaces\vc10 VS sdk\_and\_demo.sln

VS201	0 VS			
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	P - C + C + Debug - Well - Million -	Image: 10 - 10		
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42 maintain	19 ( 20 return -1) 20 )			
	2 b 3 b 3 b 3 county web hadfeeting and short secondly			
	27 { 18 char #jinfame[100] = "milti_timeth.jum"; 29 if(argi > 2) 30 {			
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	n [] N N potentic det eve()			
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	40 // pers in which and helper too: 41 effective/env effectils			

- Solution Explorer Solution"sdk\_and\_demo"(5 projects), rebuild solution
   workspaces\vc10\sdk\_project\multiTouch\_sdk\output multiTouch\_sdk.dllmultiTouch\_sdk.dll2Solution

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

> 🔥 obj	^	名称	修改日期	类型	大小	
> 📙 output		data	2018/3/6 11:29	文件夹		
> 📙 sdk		Assimp32.dll	2017/3/14 13:50	应用程序扩展	4,519 KB	
🗸 📙 workspaces		imodex.dll	2017/3/14 13:50	应用程序扩展	283 KB	
makefile		🔄 fmodexL.dll	2017/3/14 13:50	应用程序扩展	323 KB	
> obj		🗟 FreeImage.dll	2017/3/14 13:50	应用程序扩展	2,650 KB	
v vc10		🚳 FreeType-6.dll	2017/3/14 13:50	应用程序扩展	357 KB	
v demo project		🔄 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	
> calibration_app		multiTouch_sdk.dll	2018/3/6 11:49	应用程序扩展	511 KB	
✓ rplidar_multi_touch		📧 rplidar_multi_touch_debug.exe	2018/3/6 14:40	应用程序	5,164 KB	
> bin		🗐 rplidar_multi_touch_debug.exp	2018/3/6 14:40	Exports Library	45 KB	
- Debug		剜 rplidar_multi_touch_debug.ilk	2018/3/6 14:40	Incremental Link	12,043 KB	
> ultra_simple_multi_touch		鱍 rplidar_multi_touch_debug.lib	2018/3/6 14:40	Object File Library	81 KB	
> ipch		🐏 rplidar_multi_touch_debug.pdb	2018/3/6 14:40	Program Debug	17,363 KB	
> sdk_project		🗟 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



## 1

multi\_touch.json, Debug..\confReleaseworkspaces\vc10\demo\_project\rplidar\_multi\_touch\bin



confmulti\_touch.json15 8. workspaces\vc10\demo\_project\rplidar\_multi\_touch\binrplidar\_multi\_touch\_debug.exeTouchPoints1m\*1m1920\*1080



(i) 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 \binultra\_rplidar\_multi\_touch.exe

COM COM3

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\binrplidar\_multi\_touch\_debug.exe

8

### **Calibration application**

PC RPLIDAR GUI,.

1) USB RPLIDAR PC USB

2) workspace\vs10\demo\_project\calibration\_app\binrplidar\_multi\_touch\_debug.exe

3fileload configuration..\confDebugworkspace\vs10\demo\_project\calibration\_app\binReleasejsonfilesave configuration

Û



## SDK

SDK:



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

 $RPLidarNode Process Devicer plidar\_multi\_touch of AppNode Process Device \ proDev\_\ .$ 

#### RPLidar

NodeProcessDevicecreateAndStartRPLidar() RPLidar(serial) TCP true

startUp()JsonCropArea

setLidarPwm()66060%1023.

getLidarScan()RPLidar\_drivergrabScanData()processScan()

setScreenSize1920\*1080.

getTouchPoints().

getScanNodeDrawPoints()