

BMVM-GT20A SDK 使用说明

1.本机设置

手动修改本机 IP 地址为 192.168.99.***，如 192.168.99.23，192.168.99.78 等等。子网掩码 255.255.255.0，网关 192.168.99.1。关闭其他有线网和无线网。

2.安装

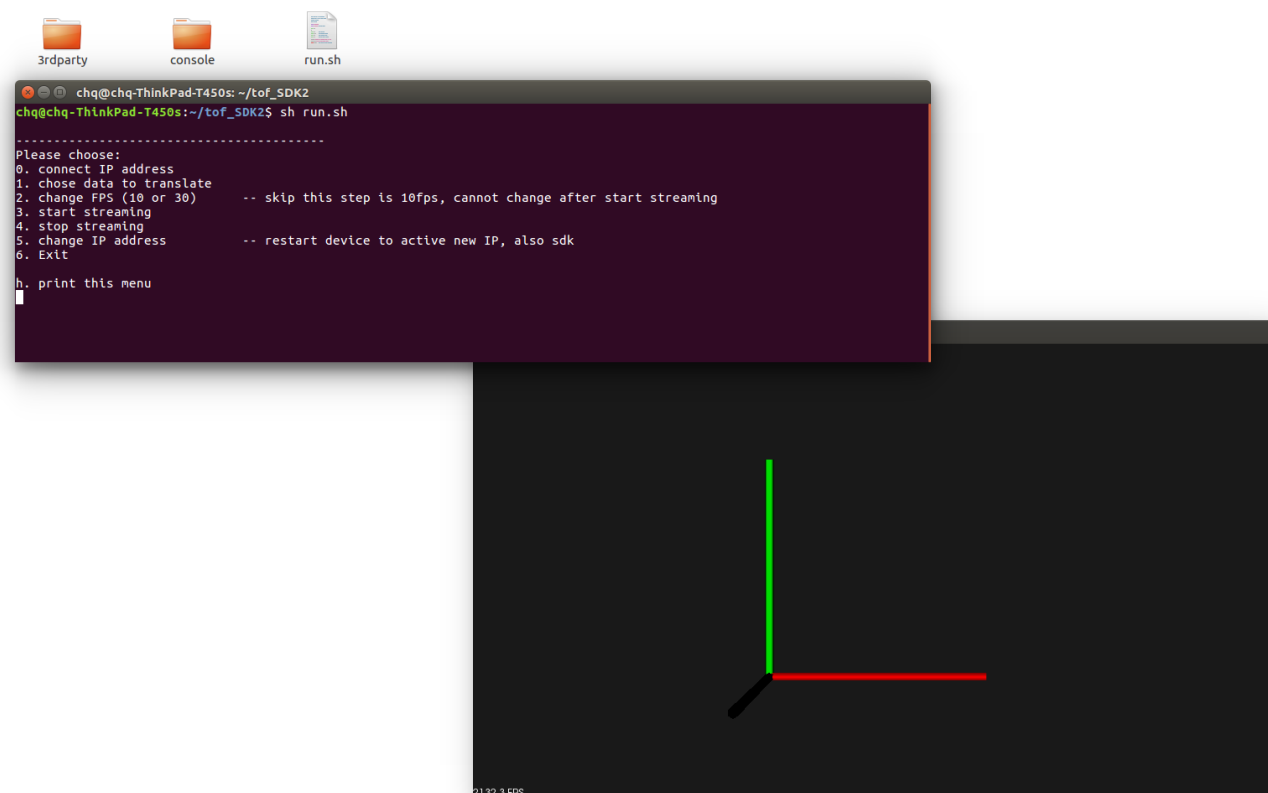
SDK 是免安装的，ubuntu 下直接在目录下开启终端，输入 `sh run.sh` 运行就可以。

如果出现 `glibc` 错误，则删去 `./console/build/` 文件夹下的所有文件，开启终端，输入 `cmake ..`回车后输入 `make` 回车。编译完成后再运行 `sh run.sh`。

3.操作流程

程序刚打开时如图，可选择连接 ip 地址，选择输出的数据，修改 fps，开始输出等等。输入序号并回车，可进入相应菜单。另一个是显示点云的窗口。

默认情况下，依次选择“0.连接 ip”，“1.选择输出数据”，“3.开始输出”就可以了。



0. connect IP address

选择此项后，输入 192.168.99.33 回车，会显示“connect succeeded”提示，连接成功

```
chq@chq-ThinkPad-T450s: ~/tof_SDK2
chq@chq-ThinkPad-T450s:~/tof_SDK2$ sh run.sh
-----
Please choose:
0. connect IP address
1. chose data to translate
2. change FPS (10 or 30)    -- skip this step is 10fps, cannot change after start streaming
3. start streaming
4. stop streaming
5. change IP address       -- restart device to active new IP, also sdk
6. Exit

h. print this menu
0
-----
IP address:
192.168.99.33
aaa host:192.168.99.33 port 1883 keepalive 60 bind_address(null)
host 192.168.99.33
bind_address (null)
-----
Please choose:
0. connect IP address
1. chose data to translate
2. change FPS (10 or 30)    -- skip this step is 10fps, cannot change after start streaming
3. start streaming
4. stop streaming
5. change IP address       -- restart device to active new IP, also sdk
6. Exit

h. print this menu
Connect succeeded

```

1. chose data to translate

SDK 包含点云传输和箱体识别算法。可选只输出点云，只输出检测盒子，只输出盒子长宽和相对位姿。或者三个的组合。如输入 111 回车，则三个都输出。程序默认识别相机前方的盒子的长宽。

识别定位的算法针对特殊场景定制，如无特殊使用场景，请用 100 选项（只出点云）来做相机的评估。

```
chq@chq-ThinkPad-T450s: ~/tof_SDK2
Please choose:
0. connect IP address
1. chose data to translate
2. change FPS (10 or 30)    -- skip this step is 10fps, cannot change after start streaming
3. start streaming
4. stop streaming
5. change IP address       -- restart device to active new IP, also sdk
6. Exit

h. print this menu
Connect succeeded
1
-----
chose data to translate, raw pointcloud, box front image, box size and pose
Example: 100 ---- only pointcloud
         010 ---- only box front image
         001 ---- only box size and pose
         110 ---- raw pointcloud and box front image
         101 ---- raw pointcloud and box size and pose
         011 ---- box front image and box size and pose
         111 ---- raw pointcloud and box front image and box size and pose
111
-----
Please choose:
0. connect IP address
1. chose data to translate
2. change FPS (10 or 30)    -- skip this step is 10fps, cannot change after start streaming
3. start streaming
4. stop streaming
5. change IP address       -- restart device to active new IP, also sdk
6. Exit

h. print this menu

```

3.start streaming

输入 3 回车后，开始传输数据。

```
chq@chq-ThinkPad-T450s: ~/tof_SDK2
Example: 100 ---- only pointCloud
         010 ---- only box front image
         001 ---- only box size and pose
         110 ---- raw pointCloud and box front image
         101 ---- raw pointCloud and box size and pose
         011 ---- box front image and box size and pose
         111 ---- raw pointCloud and box front image and box size and pose
111

-----
Please choose:
0. connect IP address
1. chose data to translate
2. change FPS (10 or 30)    -- skip this step is 10fps, cannot change after start streaming
3. start streaming
4. stop streaming
5. change IP address      -- restart device to active new IP, also sdk
6. Exit

h. print this menu
3

-----
start streaming

-----
Please choose:
0. connect IP address
1. chose data to translate
2. change FPS (10 or 30)    -- skip this step is 10fps, cannot change after start streaming
3. start streaming
4. stop streaming
5. change IP address      -- restart device to active new IP, also sdk
6. Exit

h. print this menu
```

回车后过一会儿，可在点云窗口看到原始点云，终端显示盒子的长宽，相对位姿 xyz 和 roll pitch yaw。

长宽的单位是 mm，位姿 xyz 单位是 m，rpy 单位是 rad。

```
chq@chq-ThinkPad-T450s: ~/tof_SDK2
r: 0 p: -14.3017 y: 16.8364
u: 251.005 v: 70.6714
x: 0.0713838 y: 0.00108504 z: 0.411994
r: 0 p: -13.7324 y: 17.1969
u: 255.07 v: 68.6726
x: 0.0731694 y: -0.00264134 z: 0.414773
r: 0 p: -14.118 y: 17.4224
u: 250.964 v: 68.892
x: 0.0743055 y: -0.00526479 z: 0.416785
r: 0 p: -16.4423 y: 16.674
u: 256.03 v: 68.9312
x: 0.0748246 y: -0.0066509 z: 0.41623
r: 0 p: -13.7679 y: 17.5491
u: 246.611 v: 71.5173
x: 0.0786449 y: -0.0137199 z: 0.416144
r: 0 p: -15.5199 y: 16.8745
u: 249.439 v: 71.621
x: 0.07686 y: -0.0169809 z: 0.417959
r: 0 p: -14.7374 y: 17.2708
u: 237.564 v: 70.019
x: 0.0852012 y: -0.0193474 z: 0.419909
r: 0 p: -9.72395 y: 16.3392
u: 246.652 v: 69.7601
x: 0.0842946 y: -0.0206579 z: 0.418019
r: 0 p: -7.86062 y: 20.4158
u: 236.239 v: 73.8245
x: 0.0838789 y: -0.0188006 z: 0.414628
r: 0 p: -15.6318 y: 15.1191
```