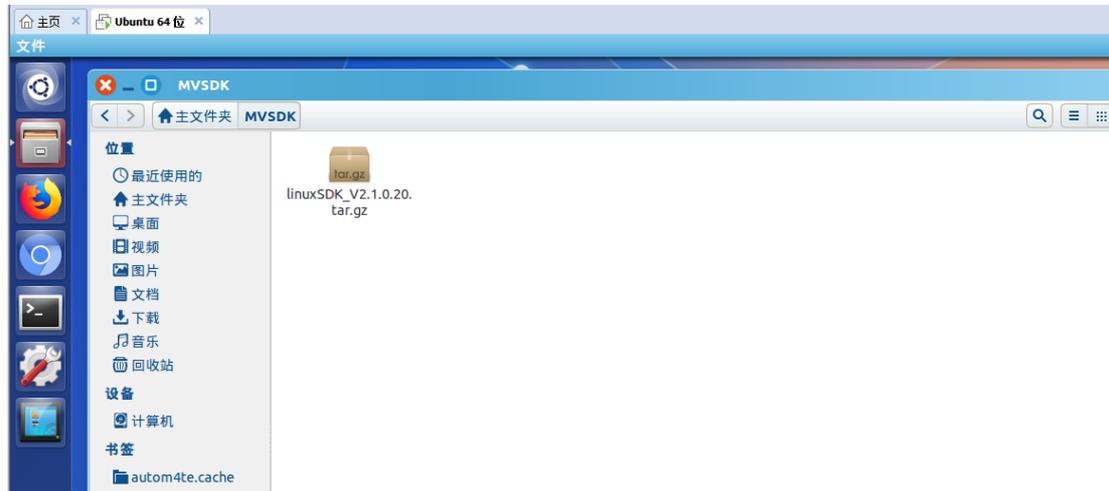


Linux SDK 使用

1. 官网下载 linux SDK

http://www.mindvision.com.cn/rjxz/list_12.aspx?lcid=138

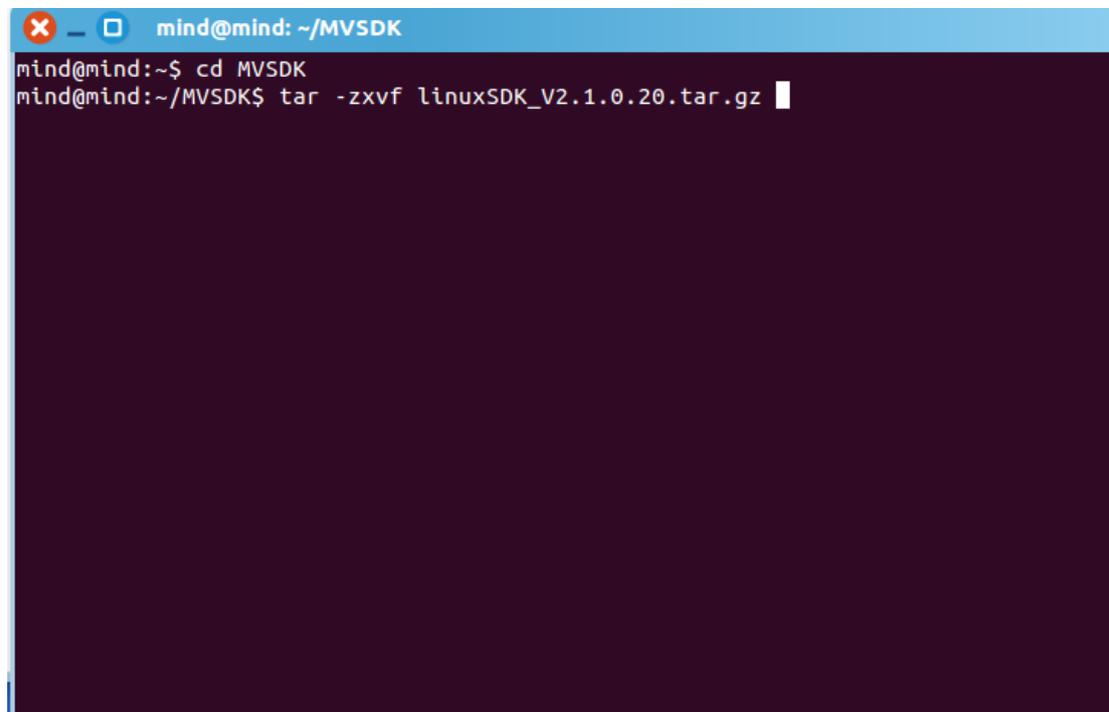
开启虚拟机，创建文件夹 MVSDK,将 linuxSDK 包拷贝到目录下

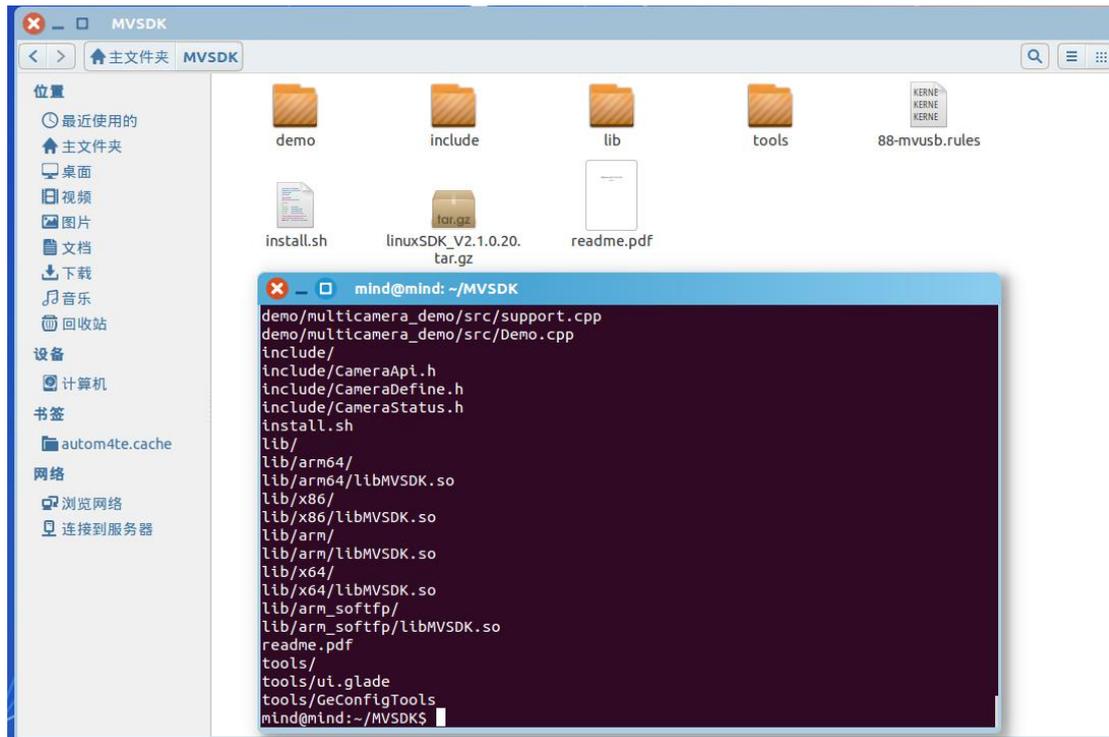


打开终端

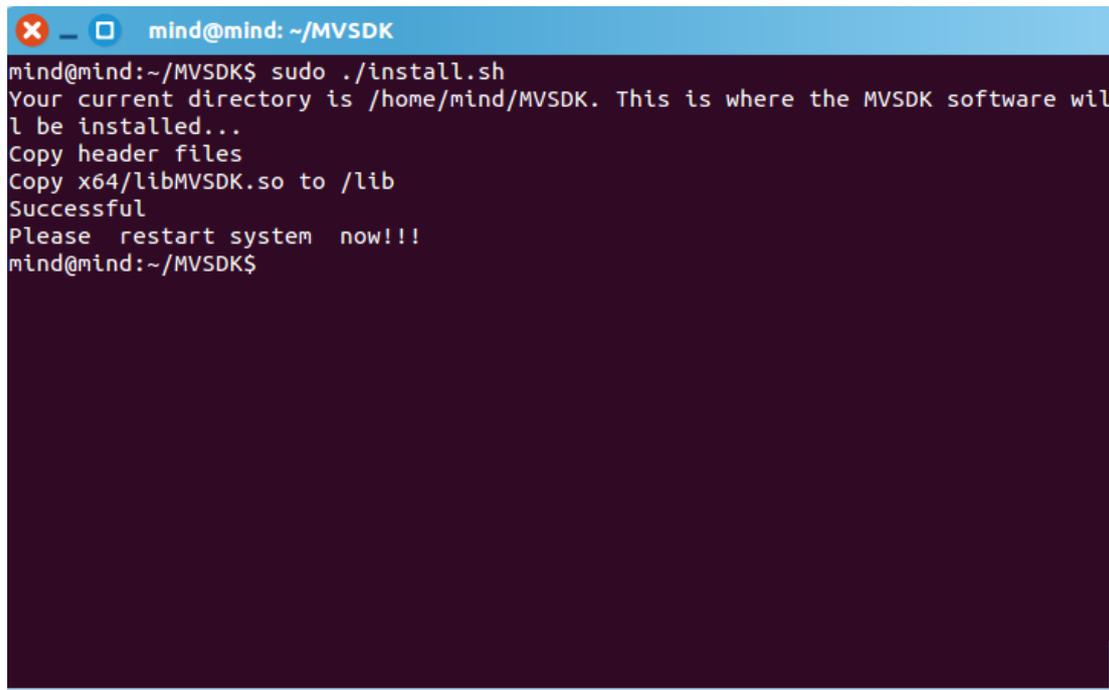
输入 `cd MVSDK` 进入 MVSDK 目录

`tar -zxvf linuxSDK_V2.1.0.20.tar.gz` 解压到当前目录下





执行脚本，将库和头文件拷贝到系统目录下 **sudo ./install.sh**



如果安装脚本失效，可以手动拷贝库和头文件完成安装

#拷贝头文件

```
sudo cp MVSDK/include/* /usr/include/
```

#拷贝对应平台库

```
x86 64 位系统: sudo cp MVSDK/lib/x64/libMVSDK.so /lib
```

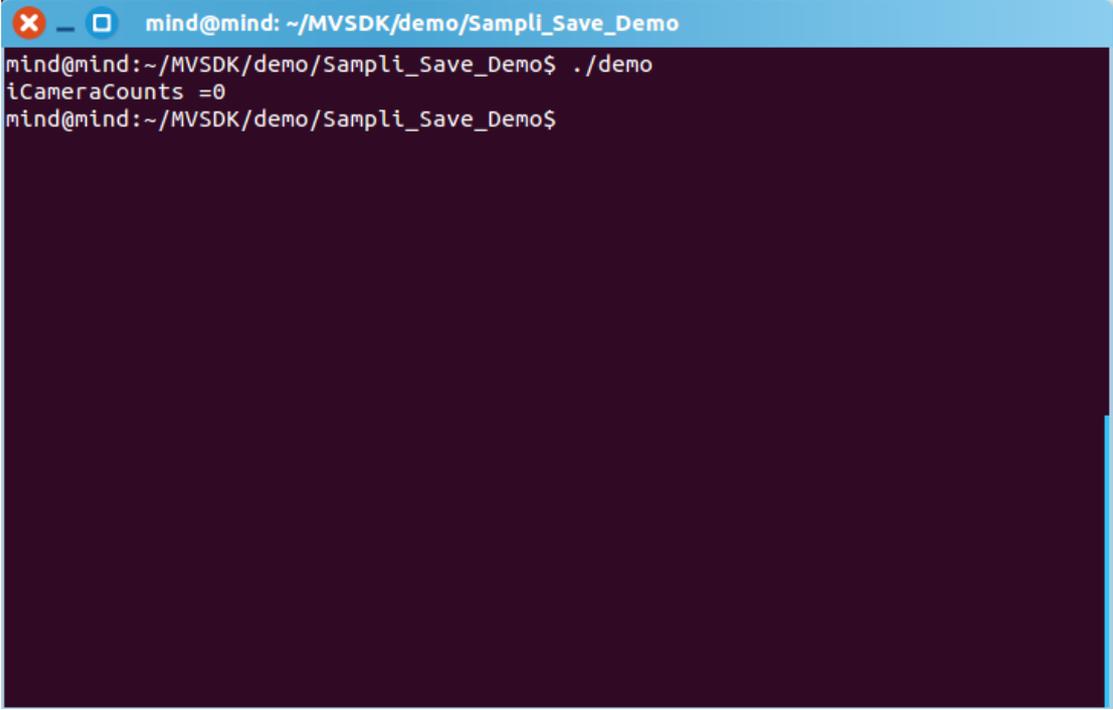
```
arm 32 硬浮点系统: sudo cp MVSDK/lib/arm/libMVSDK.so /lib
```

```
arm 32 软浮点系统: sudo cp MVSDK/lib/arm_softfp/libMVSDK.so /lib
```

```
arm 64 位系统: sudo cp MVSDK/lib/arm64/libMVSDK.so /lib
```

2. 运行 Demo 出现找不到相机情况

相机数量为 0



```
mind@mind: ~/MVSDK/demo/Sampli_Save_Demo
mind@mind:~/MVSDK/demo/Sampli_Save_Demo$ ./demo
iCameraCounts =0
mind@mind:~/MVSDK/demo/Sampli_Save_Demo$
```

1. 网口

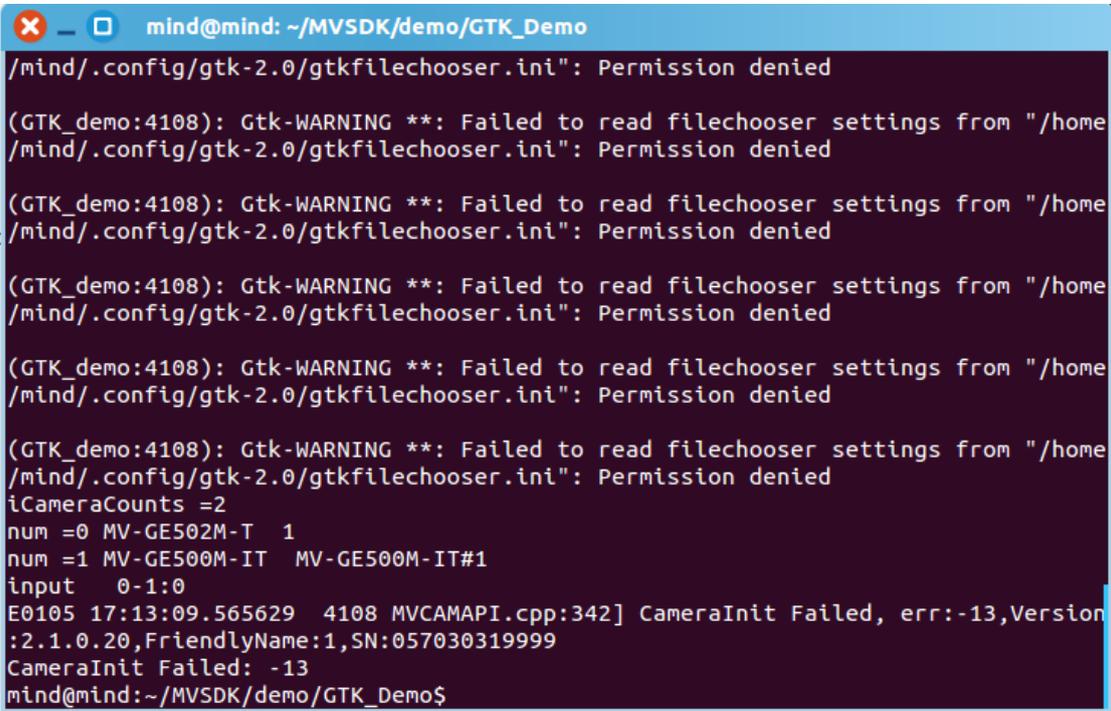
1. 关闭防火墙 `sudo ufw disable`
2. 配置 linux 电脑网卡 IP 为固定 IP
3. 编辑/etc/sysctl.d/10-network-security.conf 文件，将 `rp_filter` 赋为 0，如下：
Turn on Source Address Verification in all interfaces to
prevent some spoofing attacks.
`net.ipv4.conf.default.rp_filter=0`
`net.ipv4.conf.all.rp_filter=0`
重启电脑生效

2. USB

1. Lsusb 查看是否加载驱动成功 f622:da01 f622 开头代表迈德威视相机加载驱动成功
2. sudo 运行
3. 尝试更换其他 USB 口
4. 虚拟机, 使用 USB3.0 相机时,USB 控制器设置 USB3.0 模式

3. 打开相机常见错误

返回-13, 相机已经被打开, 或者是网卡 IP 和相机 IP 不在同一网段。尝试修改相机 IP, 详见[相机 IP 配置](#)。



```
mind@mind: ~/MVSDK/demo/GTK_Demo
/mind/.config/gtk-2.0/gtkfilechooser.ini": Permission denied
(GTK_demo:4108): Gtk-WARNING **: Failed to read filechooser settings from "/home/mind/.config/gtk-2.0/gtkfilechooser.ini": Permission denied
(GTK_demo:4108): Gtk-WARNING **: Failed to read filechooser settings from "/home/mind/.config/gtk-2.0/gtkfilechooser.ini": Permission denied
(GTK_demo:4108): Gtk-WARNING **: Failed to read filechooser settings from "/home/mind/.config/gtk-2.0/gtkfilechooser.ini": Permission denied
(GTK_demo:4108): Gtk-WARNING **: Failed to read filechooser settings from "/home/mind/.config/gtk-2.0/gtkfilechooser.ini": Permission denied
(GTK_demo:4108): Gtk-WARNING **: Failed to read filechooser settings from "/home/mind/.config/gtk-2.0/gtkfilechooser.ini": Permission denied
iCameraCounts =2
num =0 MV-GE502M-T 1
num =1 MV-GE500M-IT MV-GE500M-IT#1
input 0-1:0
E0105 17:13:09.565629 4108 MVCAMAPI.cpp:342] CameraInit Failed, err:-13,Version:2.1.0.20,FriendlyName:1,SN:057030319999
CameraInit Failed: -13
mind@mind:~/MVSDK/demo/GTK_Demo$
```

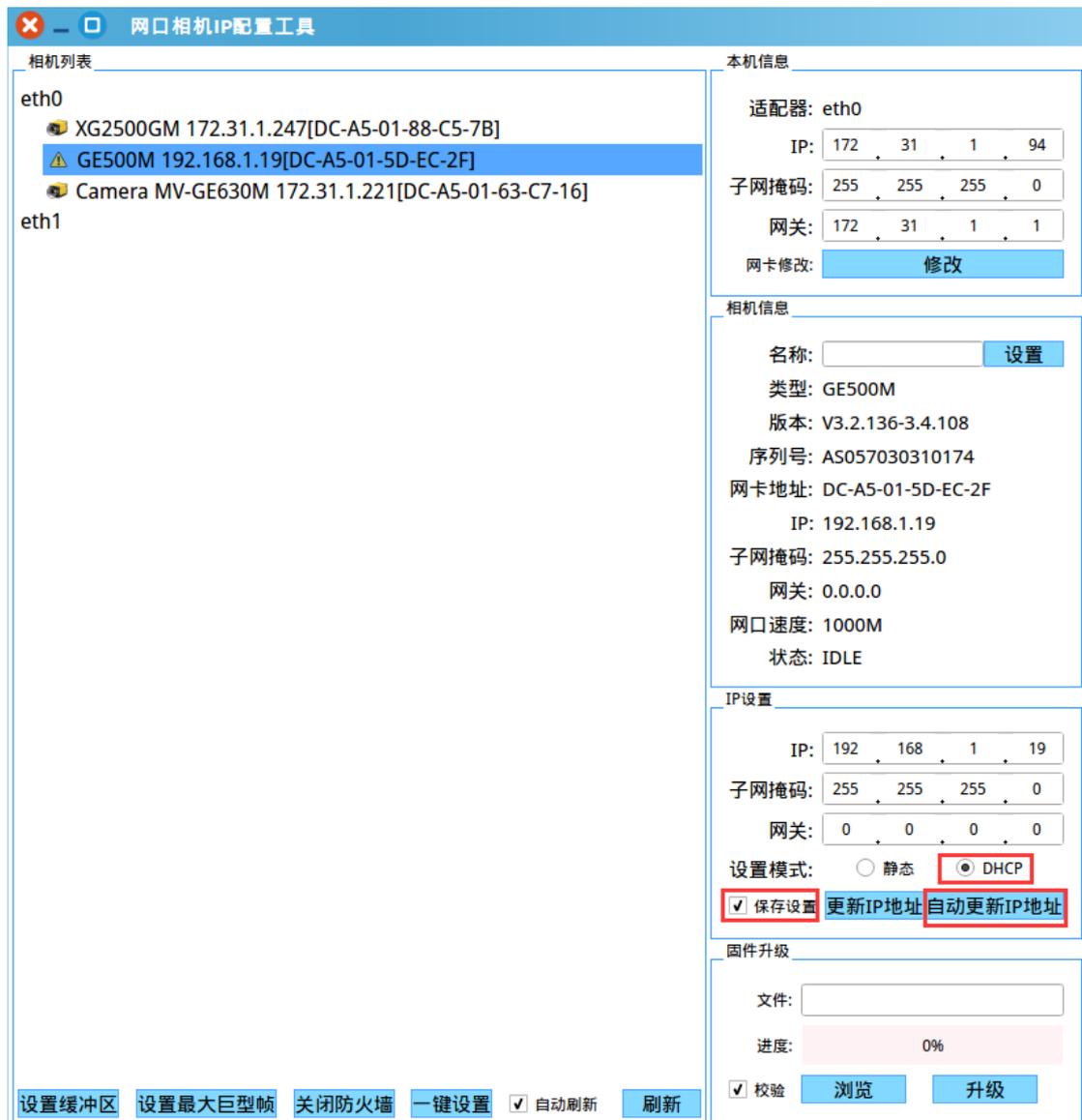
4. 相机 IP 配置

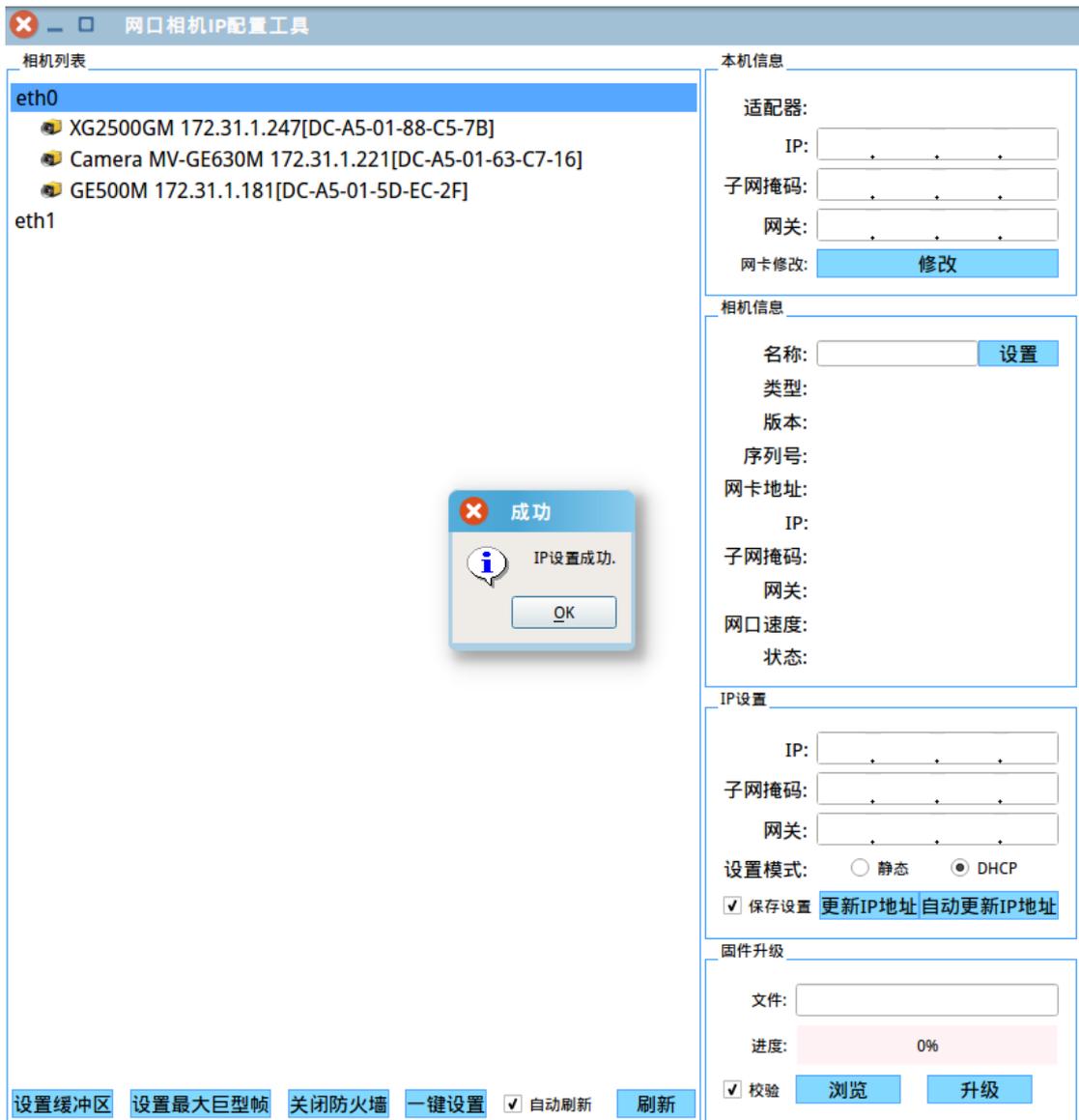
1. QT 工具修改 IP (仅支持 x64)

工具路径: [tools/QGeConfigTools/QGeConfigTools](#)

1. 自动更新 IP

选择要修改的相机，选择 DHCP 模式，勾选保存配置，点击自动更新 IP 地址按钮，修改 IP 成功





2. 手动更新 IP

如果需要修改成特定 IP，选择静态模式，输入 IP 地址，子网掩码，网关，勾选保存配置，点击更新 IP 地址按钮，修改 IP 成功

网口相机IP配置工具

相机列表

eth0

- XG2500GM 172.31.1.247[DC-A5-01-88-C5-7B]
- Camera MV-GE630M 172.31.1.221[DC-A5-01-63-C7-16]
- GE500M 172.31.1.181[DC-A5-01-5D-EC-2F]**

eth1

本机信息

适配器: eth0

IP: 172 . 31 . 1 . 94

子网掩码: 255 . 255 . 255 . 0

网关: 172 . 31 . 1 . 1

网卡修改: [修改](#)

相机信息

名称: [设置](#)

类型: GE500M

版本: V3.2.136-3.4.108

序列号: AS057030310174

网卡地址: DC-A5-01-5D-EC-2F

IP: 172.31.1.181

子网掩码: 255.255.255.0

网关: 172.31.1.1

网口速度: 1000M

状态: IDLE

IP设置

IP: 172 . 31 . 1 . 182

子网掩码: 255 . 255 . 255 . 0

网关: 172 . 31 . 1 . 1

设置模式: 静态 DHCP

保存设置 [更新IP地址](#) [自动更新IP地址](#)

固件升级

文件:

进度: 0%

校验 [浏览](#) [升级](#)

[设置缓冲区](#) [设置最大巨型帧](#) [关闭防火墙](#) [一键设置](#) 自动刷新 [刷新](#)

网口相机IP配置工具

相机列表

- eth0
 - XG2500GM 172.31.1.247[DC-A5-01-88-C5-7B]
 - Camera MV-GE630M 172.31.1.221[DC-A5-01-63-C7-16]
 - GE500M 172.31.1.182[DC-A5-01-5D-EC-2F]
- eth1

本机信息

适配器: []

IP: []

子网掩码: []

网关: []

网卡修改: [修改](#)

相机信息

名称: [] [设置](#)

类型: []

版本: []

序列号: []

网卡地址: []

IP: []

子网掩码: []

网关: []

网口速度: []

状态: []

IP设置

IP: []

子网掩码: []

网关: []

设置模式: 静态 DHCP

保存设置 [更新IP地址](#) [自动更新IP地址](#)

固件升级

文件: []

进度: 0%

校验 [浏览](#) [升级](#)

成功

IP设置成功.

[OK](#)

[设置缓冲区](#) [设置最大巨型帧](#) [关闭防火墙](#) [一键设置](#) 自动刷新 [刷新](#)

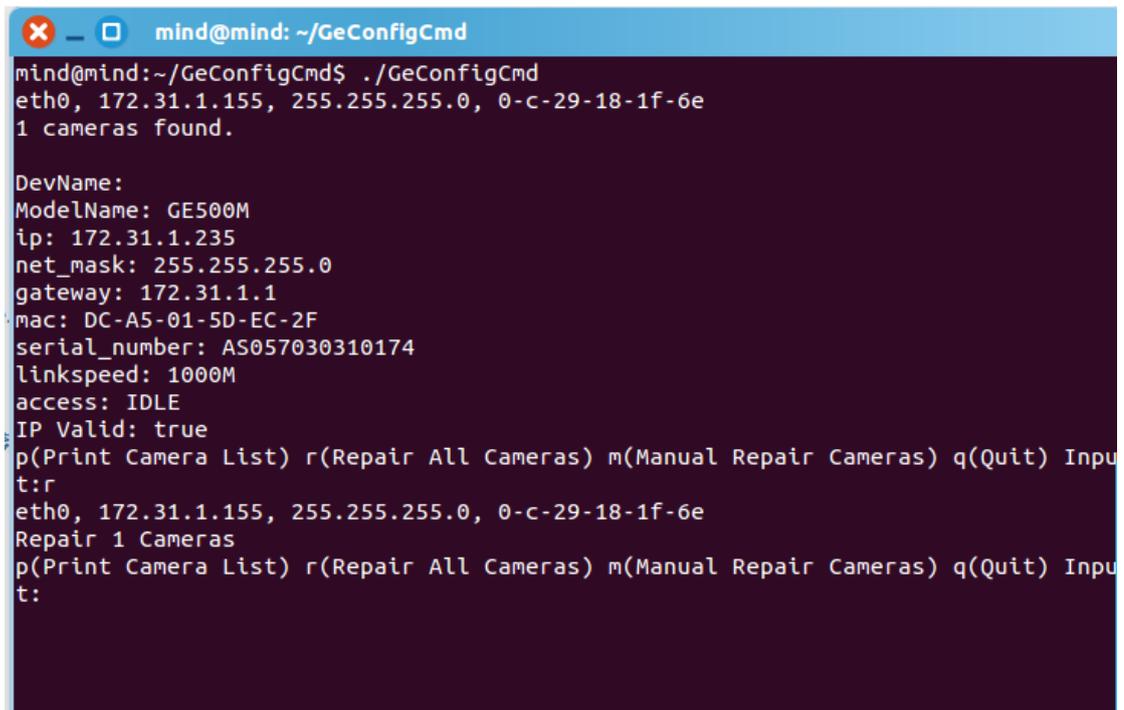
2. 命令行工具修改 IP(支持 x86、 x64、 arm、 arm64)

工具路径:

x86: tools/GeConfigCmd/x86/GeConfigCmd
x64: tools/GeConfigCmd/x64/GeConfigCmd
arm: tools/GeConfigCmd/arm/GeConfigCmd
arm64: tools/GeConfigCmd/arm64/GeConfigCmd

运行工具, 输入 r 自动修改 IP

`./GeConfigCmd`



```
mind@mind: ~/GeConfigCmd
mind@mind:~/GeConfigCmd$ ./GeConfigCmd
eth0, 172.31.1.155, 255.255.255.0, 0-c-29-18-1f-6e
1 cameras found.

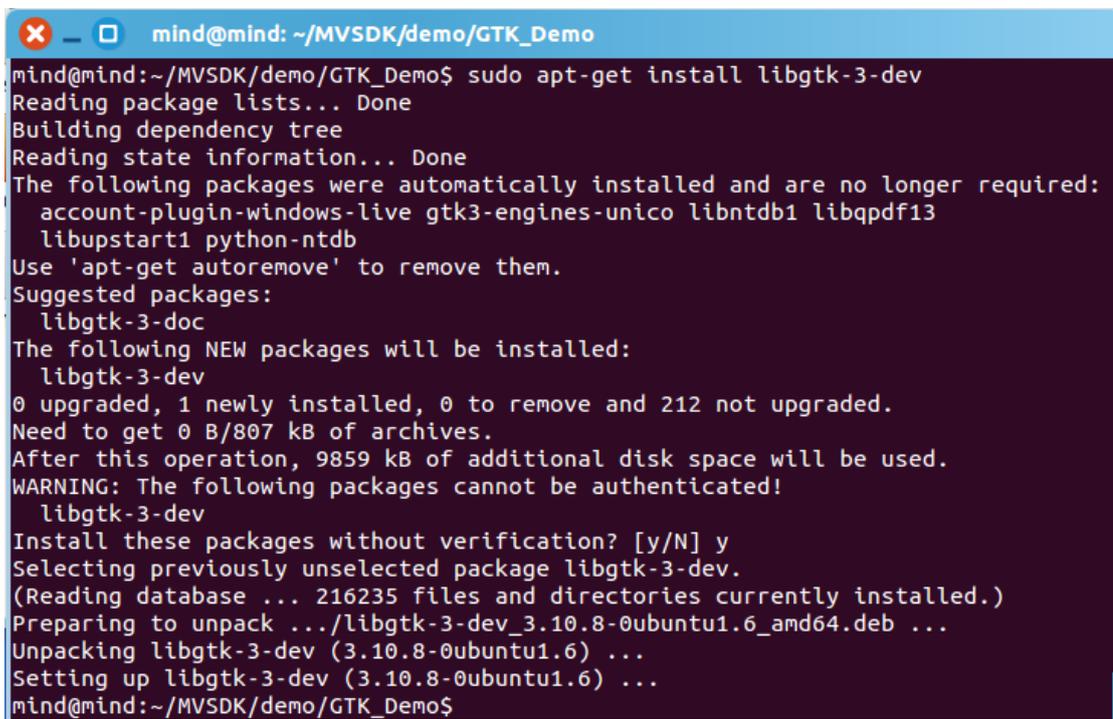
DevName:
ModelName: GE500M
ip: 172.31.1.235
net_mask: 255.255.255.0
gateway: 172.31.1.1
mac: DC-A5-01-5D-EC-2F
serial_number: AS057030310174
linkspeed: 1000M
access: IDLE
IP Valid: true
p(Print Camera List) r(Repair All Cameras) m(Manual Repair Cameras) q(Quit) Input:
t:r
eth0, 172.31.1.155, 255.255.255.0, 0-c-29-18-1f-6e
Repair 1 Cameras
p(Print Camera List) r(Repair All Cameras) m(Manual Repair Cameras) q(Quit) Input:
t:
```

3. 编译 GTK_Demo

1. 安装 GTK 库

安装 GTK 库，清理项目，make 编译，./Gtk_Demo 运行，输入 0 打开第 1 个相机
`sudo apt-get install libgtk2.0-dev`

```
cd MVSDK/demo/GTK_Demo      #进入目录
make clean                  #清理项目
make                        #编译 GTKdemo
```



```
mind@mind: ~/MVSDK/demo/GTK_Demo
mind@mind:~/MVSDK/demo/GTK_Demo$ sudo apt-get install libgtk-3-dev
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  account-plugin-windows-live gtk3-engines-unico libntdb1 libqpdf13
  libupstart1 python-ntdb
Use 'apt-get autoremove' to remove them.
Suggested packages:
  libgtk-3-doc
The following NEW packages will be installed:
  libgtk-3-dev
0 upgraded, 1 newly installed, 0 to remove and 212 not upgraded.
Need to get 0 B/807 kB of archives.
After this operation, 9859 kB of additional disk space will be used.
WARNING: The following packages cannot be authenticated!
  libgtk-3-dev
Install these packages without verification? [y/N] y
Selecting previously unselected package libgtk-3-dev.
(Reading database ... 216235 files and directories currently installed.)
Preparing to unpack .../libgtk-3-dev_3.10.8-0ubuntu1.6_amd64.deb ...
Unpacking libgtk-3-dev (3.10.8-0ubuntu1.6) ...
Setting up libgtk-3-dev (3.10.8-0ubuntu1.6) ...
mind@mind:~/MVSDK/demo/GTK_Demo$
```

```

mind@mind: ~/MVSDK/demo/GTK_Demo
size [-Wint-to-pointer-cast]
  ECT(audio_speed[i]), "released", G_CALLBACK(on_radio_speed_clicked), (gpointer)i);

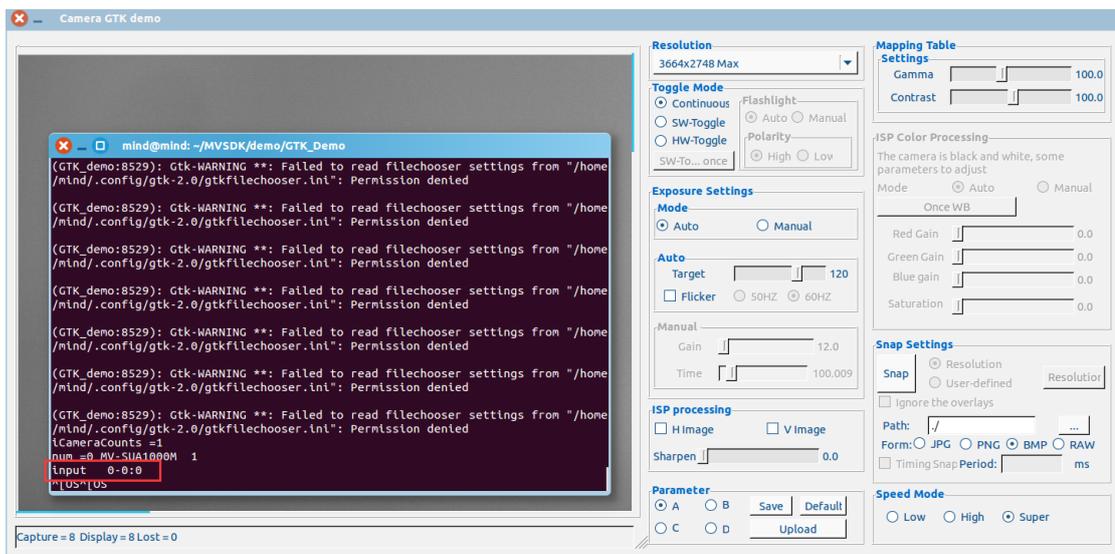
/usr/include/glib-2.0/gobject/gsignal.h:472:73: note: in definition of macro 'g_
signal_connect'
  g_signal_connect_data ((instance), (detailed_signal), (c_handler), (data), NULL
  ^
mv -f .deps/interface.Tpo .deps/interface.Po
g++ -DHAVE_CONFIG_H -I. -I./inc -I../include -pthread -I/usr/include/gtk-2.
0 -I/usr/lib/x86_64-linux-gnu/gtk-2.0/include -I/usr/include/gio-unix-2.0/ -I/us
r/include/cairo -I/usr/include/pango-1.0 -I/usr/include/atk-1.0 -I/usr/include/c
airo -I/usr/include/pixman-1 -I/usr/include/libpng12 -I/usr/include/gdk-pixbuf-2
.0 -I/usr/include/libpng12 -I/usr/include/pango-1.0 -I/usr/include/harfbuzz -I/u
sr/include/pango-1.0 -I/usr/include/glib-2.0 -I/usr/lib/x86_64-linux-gnu/glib-2.
0/include -I/usr/include/freetype2 -g -O2 -MT support.o -MD -MP -MF .deps/su
pport.Tpo -c -o support.o `test -f './src/support.cpp' || echo './'`./src/suppor
t.cpp
mv -f .deps/support.Tpo .deps/support.Po
g++ -g -O2 -L/lib -o GTK_demo GTK_demo.o callbacks.o Demo.o interface.o suppor
t.o -lgtk-x11-2.0 -lgdk-x11-2.0 -lpangocairo-1.0 -latk-1.0 -lcairo -lgdk_pixbuf-
2.0 -lgio-2.0 -lpangoft2-1.0 -lpango-1.0 -lgobject-2.0 -lglib-2.0 -lfontconfig -
lfreetype -lpthread -lrt -lthread-2.0 -lmvSDK -lpthread
make[1]: Leaving directory `/home/mind/MVSDK/demo/GTK_Demo'
mind@mind:~/MVSDK/demo/GTK_Demo$

```

无明显错误，可以直接执行 GTK_DEMO

`sudo ./GTK_demo`

选择第几个相机，默认按 0 开始 输入 0 回车打开第 1 个相机



4. 编译 multicamera_demo

清理项目，make 编译，运行程序，打开 2 个相机

`cd MVSDK/demo/multicamera_demo`

`make clean`

`make`

```
mind@mind: ~/MVSDK/demo/multicamera_demo
from /usr/include/gtk-2.0/gdk/gdk.h:32,
from /usr/include/gtk-2.0/gtk/gtk.h:32,
from ./src/interface.cpp:2:
/usr/include/glib-2.0/glib/gmacros.h:229:0: note: this is the location of the previous definition
#define FALSE (0)
^
mv -f .deps/interface.Tpo .deps/interface.Po
g++ -DHAVE_CONFIG_H -I. -I./inc -I../include -pthread -I/usr/include/gtk-2.0 -I/usr/lib/x86_64-linux-gnu/gtk-2.0/include -I/usr/include/gio-unix-2.0/ -I/usr/include/cairo -I/usr/include/pango-1.0 -I/usr/include/atk-1.0 -I/usr/include/cairo -I/usr/include/pixman-1 -I/usr/include/libpng12 -I/usr/include/gdk-pixbuf-2.0 -I/usr/include/libpng12 -I/usr/include/pango-1.0 -I/usr/include/harfbuzz -I/usr/include/pango-1.0 -I/usr/include/glib-2.0 -I/usr/lib/x86_64-linux-gnu/glib-2.0/include -I/usr/include/freetype2 -g -O2 -MT support.o -MD -MP -MF .deps/support.Tpo -c -o support.o `test -f './src/support.cpp' || echo './src/support.cpp'
mv -f .deps/support.Tpo .deps/support.Po
g++ -g -O2 -L/lib -o multicamera_demo multicamera_demo.o callbacks.o Demo.o interface.o support.o -lgtk-x11-2.0 -lgdk-x11-2.0 -lpangocairo-1.0 -latk-1.0 -lcairo -lgdk_pixbuf-2.0 -lgio-2.0 -lpangoft2-1.0 -lpango-1.0 -lobject-2.0 -lglib-2.0 -lfontconfig -lfreetype -pthread -lrt -lgthread-2.0 -lMVSDK -lpthread
make[1]: Leaving directory `/home/mind/MVSDK/demo/multicamera_demo'
mind@mind:~/MVSDK/demo/multicamera_demo$
```

无明显错误，运行程序

`sudo ./multicamera_demo`



5. 编译 OpenCv

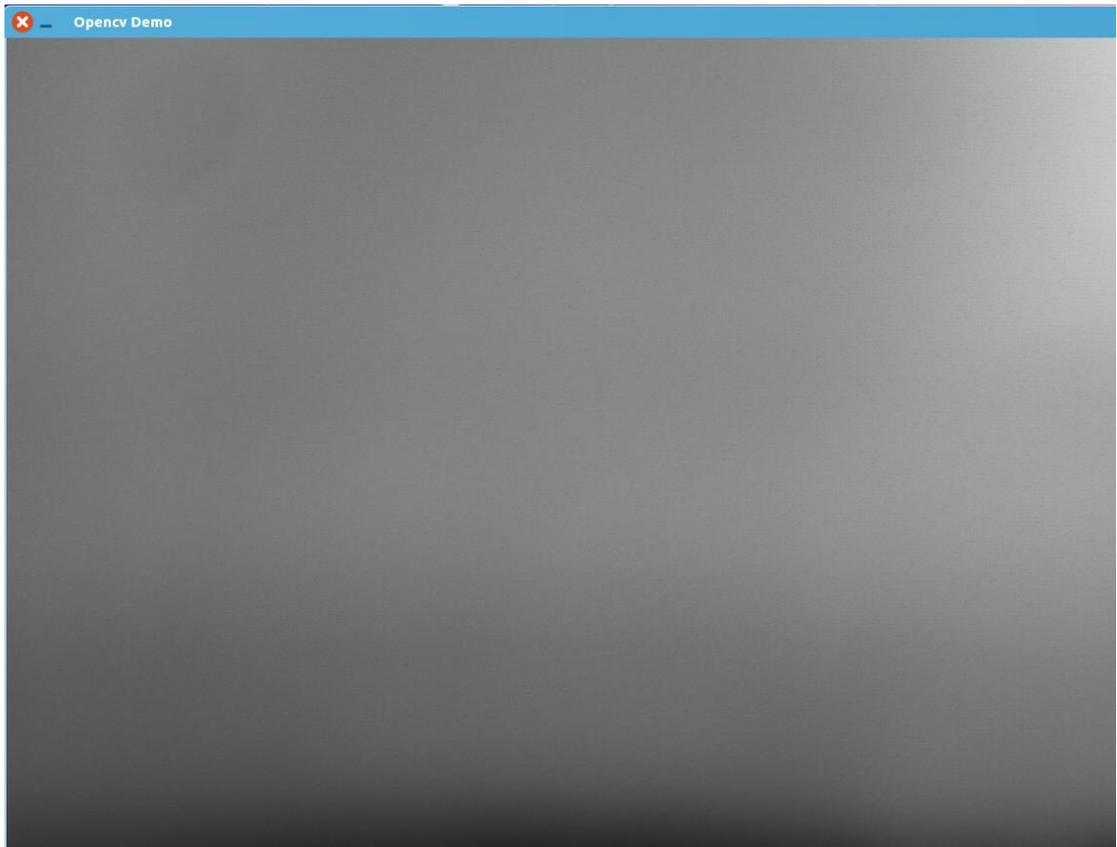
先安装 `opencv`，或者官网下载源码，进行编译

进入目录，编译，运行

`cd MVSDK/demo/OpenCv`

`make`

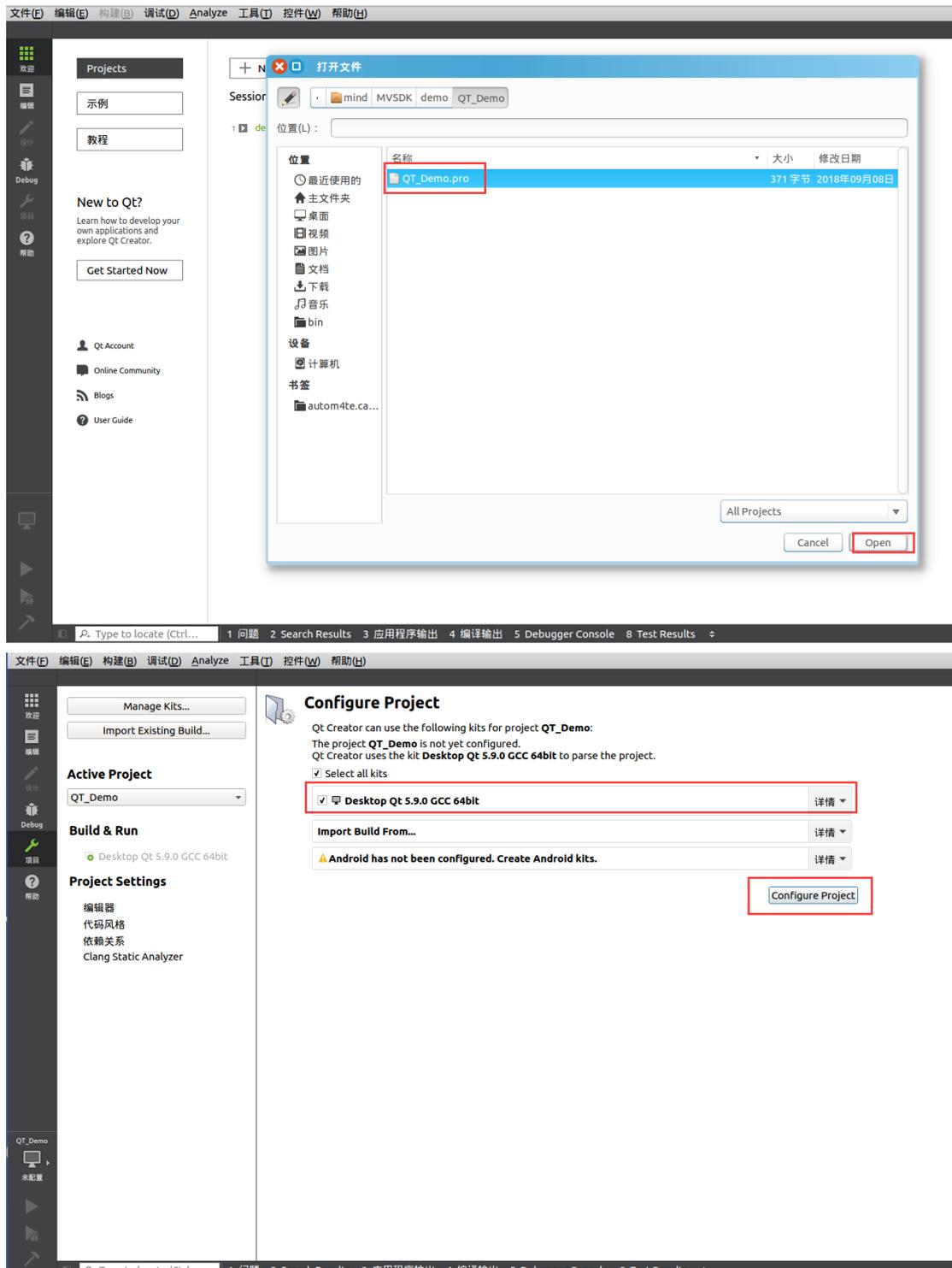
`sudo ./main` #运行



6. 编译 QT_Demo4

1. 需要先安装 Qt

打开 Qt，打开项目，选择 pro 文件，打开，选择对应的构建器（QT_Demo4 改 QT5）

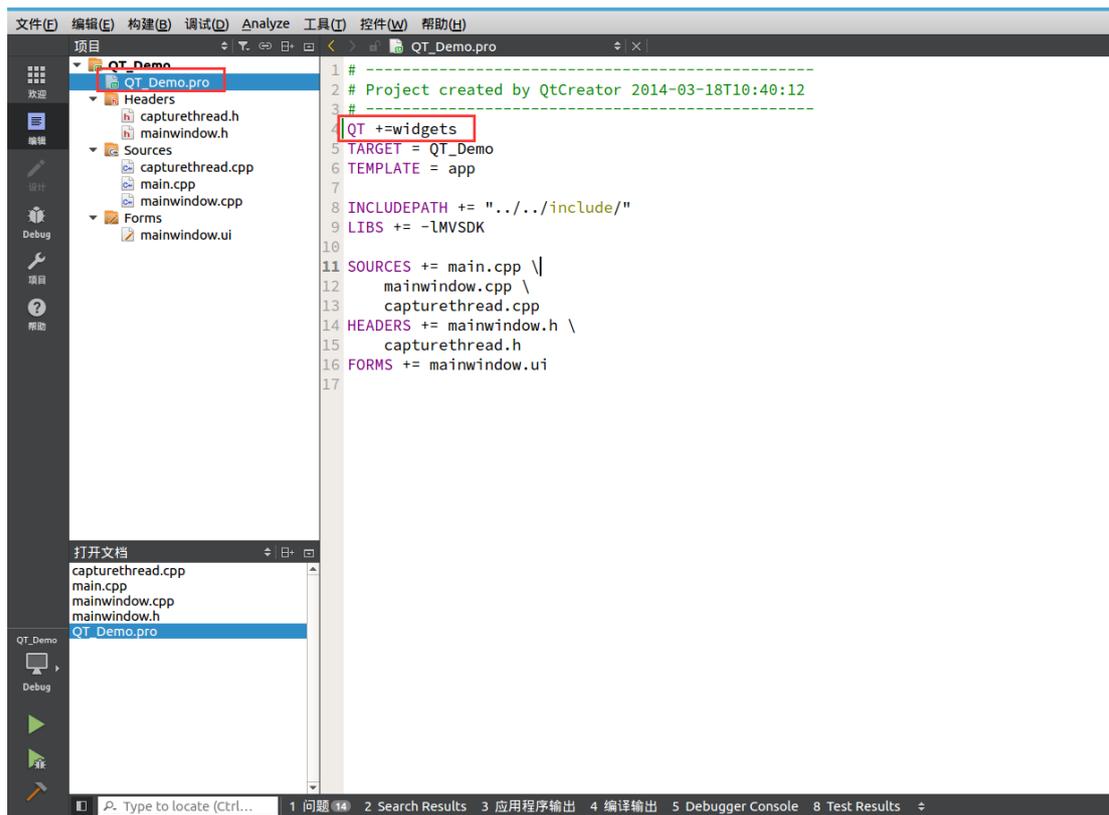


开始构建

Pro 文件 添加 `QT += widgets`

`INCLUDEPATH += ../include` #修改

`LIBS += -L/lib -lMVSdk` #修改



如果出现 `#include <QtGui/QApplication>` 报错 改成 `#include <QApplication>`

出现大量报错，添加头文件引用

`mainwindow.h` 头文件添加引用

`#include <QLabel>`

`#include <QGraphicsScene>`

`#include <QGraphicsPixmapItem>`

`#include <QRadioButton>`

`#include <QDesktopWidget>`

`#include <QFileDialog>`

`#include <QTextCodec>`

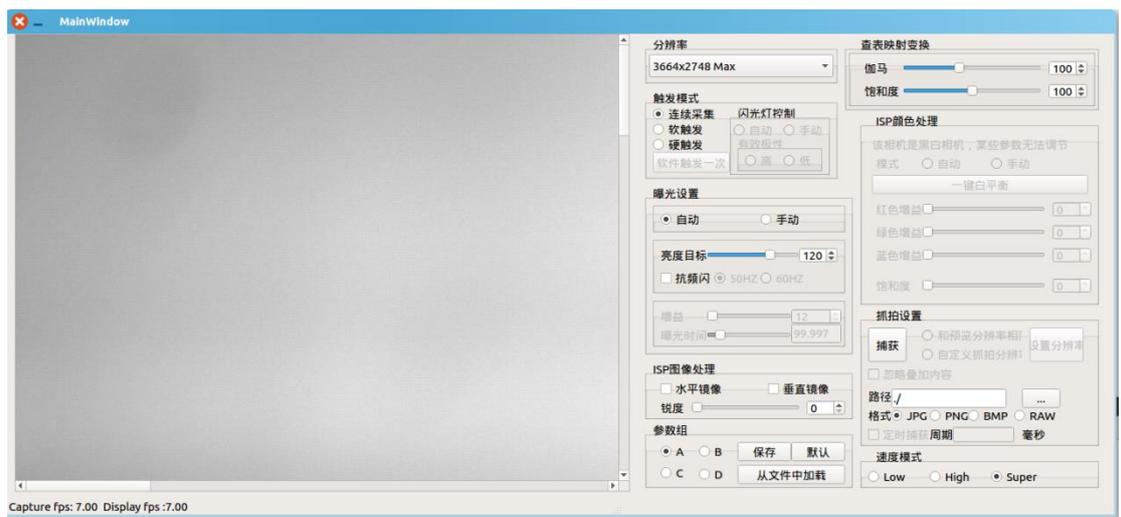
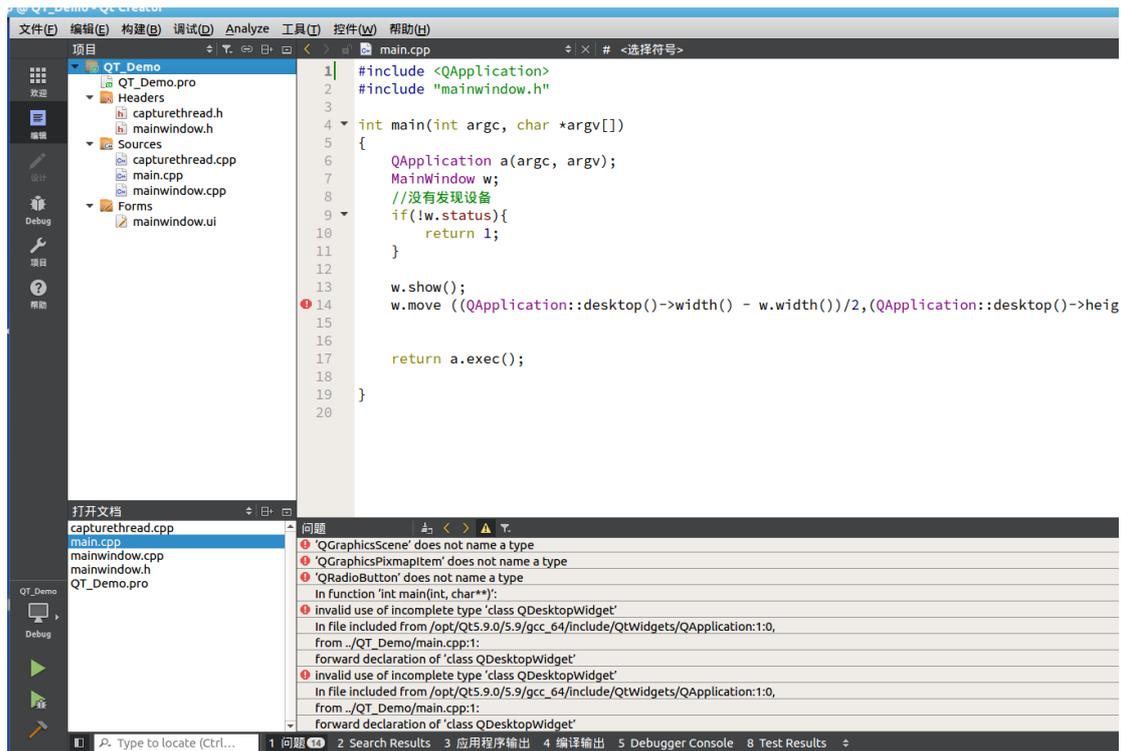
`#include <QMessageBox>`

`QTextCodec::setCodecForCStrings(QTextCodec::codecForName("GB2312"));` 删除

`fileDialog->setFilterst(tr("config Files(*.config)"));`

改成

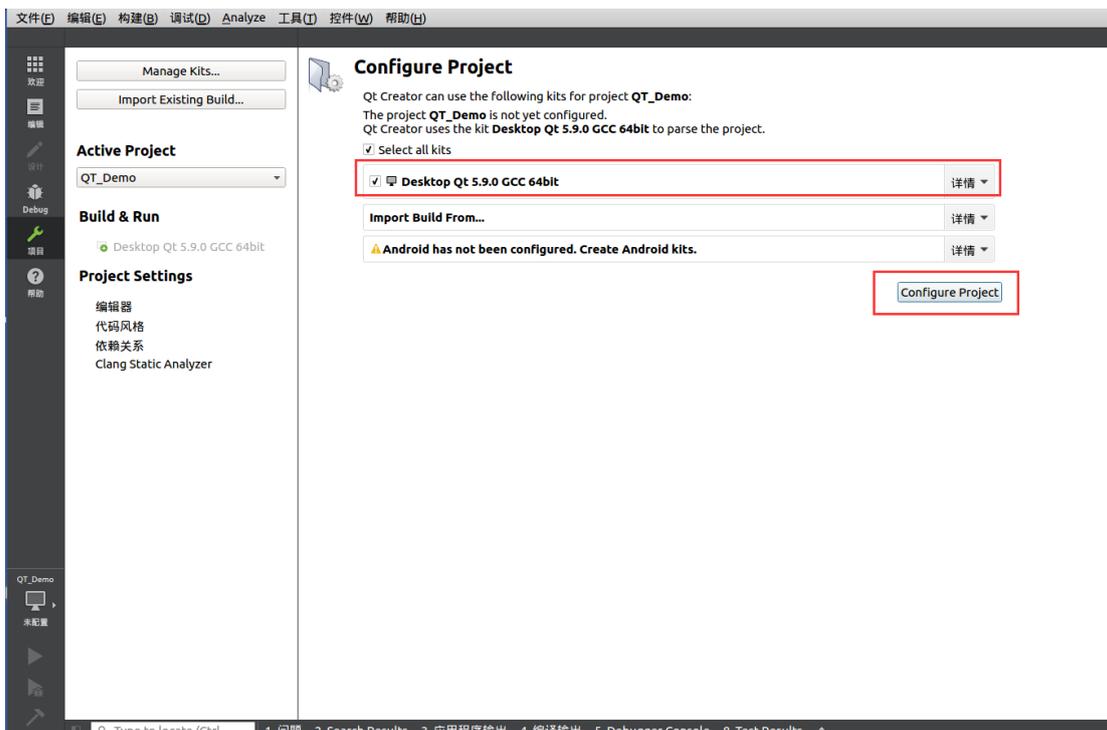
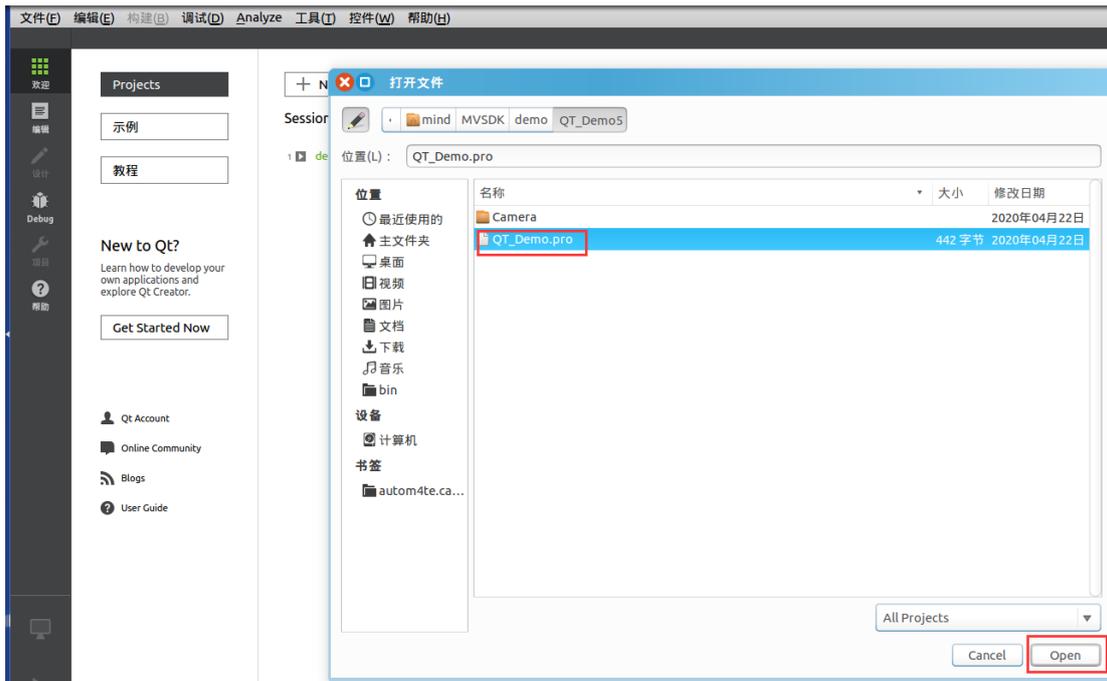
`fileDialog->setNameFilters(QStringList()<<tr("config Files(*.config)"));`

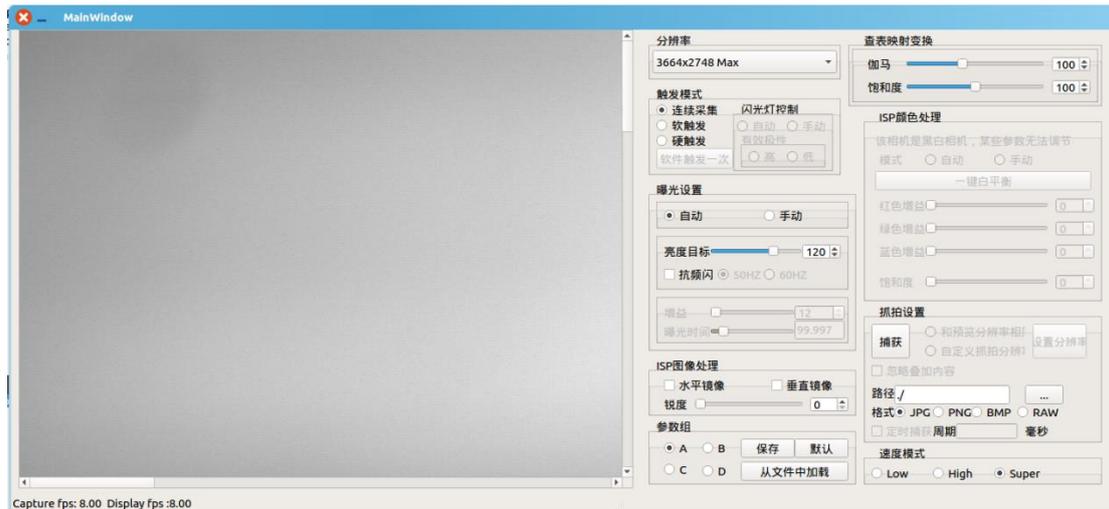


7. 编译 QT_Demo5

1. 需要先安装 Qt

打开 Qt，打开项目，选择 pro 文件，打开，选择对应的构建器编译运行，即可





8. 编译 Sampli_Save_Demo

进入目录，清理项目，make 编译./demo 运行，输入0，打开第0个相机，保存一张图像

```
cd MVSDK/demo/Sampli_Save_Demo
```

```
make clean
```

```
make
```

```
sudo ./demo
```

```
mind@mind: ~/MVSDK/demo/Sampli_Save_Demo
make all-am
make[1]: Entering directory `/home/mind/MVSDK/demo/Sampli_Save_Demo'
g++ -DHAVE_CONFIG_H -I. -I./inc -I../include -g -O2 -MT main.o -MD -MP
-MF .deps/main.Tpo -c -o main.o main.cpp
main.cpp: In function 'int main()':
main.cpp:51:22: warning: ignoring return value of 'int scanf(const char*, ...)',
declared with attribute warn_unused_result [-Wunused-result]
scanf("%d", &num);
^
mv -f .deps/main.Tpo .deps/main.Po
g++ -g -O2 -L/lib -o demo main.o -lMVSDK -lrt -lpthread -lpthread
make[1]: Leaving directory `/home/mind/MVSDK/demo/Sampli_Save_Demo'
mind@mind:~/MVSDK/demo/Sampli_Save_Demo$ ./demo
camera counts = 2
num = 0 MV-SUA1000M 1
num = 1 MV-GE500M-IT MV-GE500M-IT#0
input 0-1:0
you input num 0
CameraInit iStatus = 0
CameraGetCapability
CameraPlay
CameraSetIspOutFormat
end
mind@mind:~/MVSDK/demo/Sampli_Save_Demo$
```

