

Android SDK FAQ

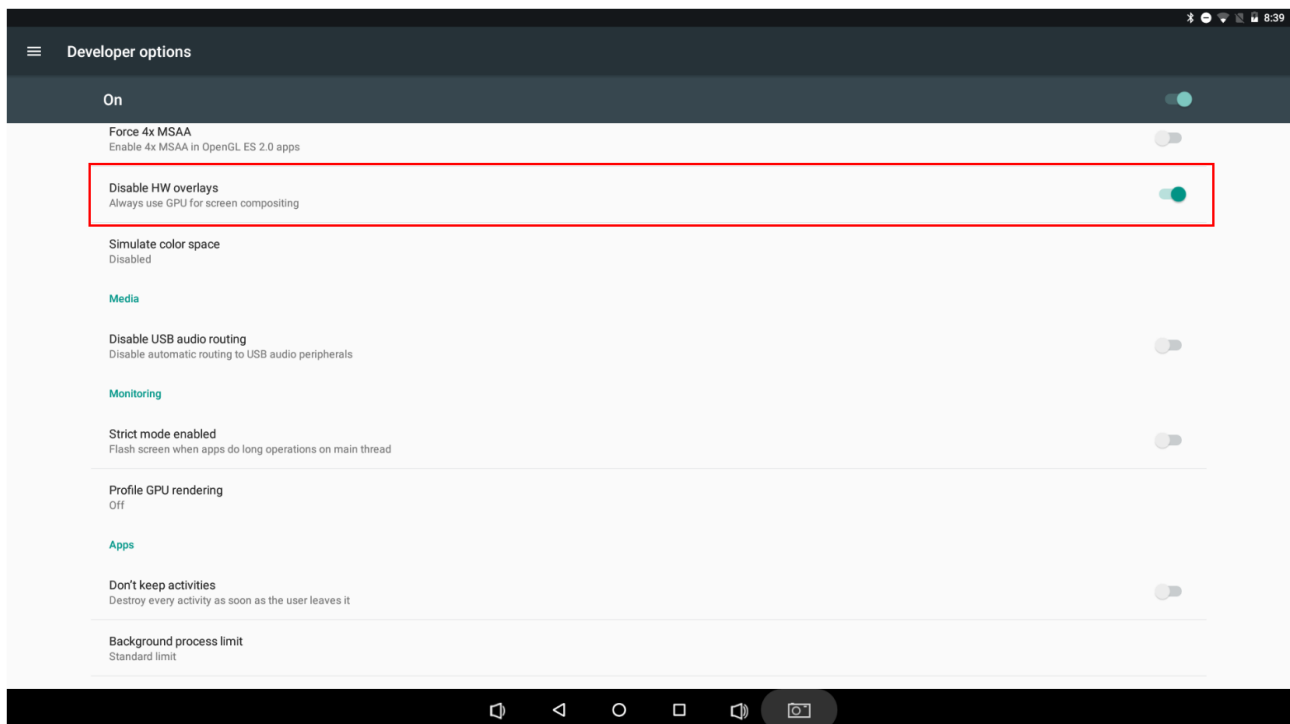
Question 1: System restarts when acquiring images using the getImageBySurface interface

Possible reasons:

The setting of HW overlays is enabled.

Solutions:

Enter the Android settings options, then enter the Developer options, find the Disable HW overlays and set it to On. As shown below.



Question 2: Failed to install Apk program

Possible reasons:

There are two methods to install and uninstall Android Apk:

- 1) Save the Apk file in the specified directory on the PC, and install and uninstall it by executing the adb shell commands "adb install *.apk" and "adb uninstall com.image.gxviewer" respectively.
- 2) Save the Apk file to the specified directory of the file system of the Android system, and select the file to install Apk program under Android system, and also uninstall it in the settings under Android system.

These two installation and uninstallation methods need to be used together, and mixed use may cause installation failure.

Solutions:

When using the "adb" command to install the Apk program, use the "adb" command to uninstall it.

Question 3: Program flashback in a small memory system

Possible reasons:

The SDK library will apply for a certain number of image acquisition buffers (the default is 5) at the beginning of the acquisition, which is used to cache the images that have been acquired but not taken out of the library by the upper layer program in time. When using a camera with a larger resolution and the total amount of buffers applied is too large, the Android system will force the program to quit when the total memory occupied by the program exceeds the maximum system configuration.

Solutions:

1) Modify the program to reduce the number of URB and increase the size of URB. The modification method is shown as below.

```
// open device
device =
DeviceManager.getInstance().openDeviceByIndex(deviceInfo.getIndex());
// Check if the opening is successful
if(device == null) {
    return null;
}
// Setting the number of URBs, the default is (64)
device.getDataStream(0).StreamTransferNumberUrb.set(1);
// Setting the size of a single URB, the default is (64 * 1024)
device.getDataStream(0).StreamTransferSize.set(4 * 1024 * 1024);
```

2) Modify the program to reduce the number of image acquisition buffers applied. The modification method is shown as below.

```
// open device
device =
DeviceManager.getInstance().openDeviceByIndex(deviceInfo.getIndex());
// Check if the opening is successful
if(device == null) {
    return null;
}
// Setting the number of buffers, the default is (5)
device.getDataStream(0).setAcquisitionBufferNumber(2);
```

Question 4: Camera light is off or red when the camera is connected to an Android device

Possible reasons:

- 1) The USB interface of the Android device has insufficient power supply capability, which makes it impossible to drive the camera.
- 2) The Android system restricts the access to the USB interface. For example, some mobile phones cannot recognize the camera when the OTG function is disabled.

Solutions:

- 1) Add a powered hub to connect Android devices and cameras.

2) Check if the Android device has disabled its own OTG function, or if it has restricted the access to the USB interface.

Question 5: Cannot find the libgxiapi.so

Error description:

After adding U3 library files and writing programs according to the Android development guide, the debugging prompts that the library files cannot be found, as shown below:



Reasons:

The issue of compiled applications being unable to find libraries in higher versions of Android Studio Gradle, it is caused by Gradle version upgrades. The Android Studio project configuration has an attribute: android:extractNativeLibs, which determines whether the package installation program will extract the native libraries from APK to the file system.

When AGP>=3.6.0 and minSdkVersion>=23, the default value for this value becomes false, in the previous versions, the default value was true. Therefore, simply add this attribute value to the project app/src/main/AndroidManifest.xml and set it to true.

Solutions:

Create an Android Studio project, find the file app/src/main/AndroidManifest.xml, and add the attribute value: android:extractNativeLibs="true", as shown below:

