Technical Solutions

Andor SDK for Linux Installation Troubleshooting for USB cameras

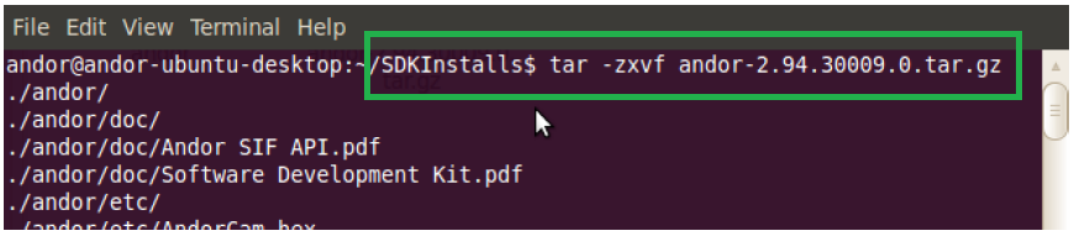
Products Affected: *All USB Andor Cameras*

Software Affected: *Andor SDK for Linux (except sCMOS)*

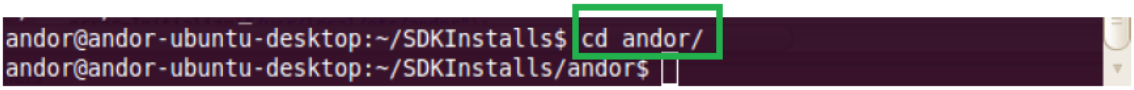
Many Linux users have an issue when using Andor SDK for Linux and Andor USB cameras. This usually occurs when the SDK has been installed and the user then tries to run an example. A common issue for Linux user operate their Andor CCD is the SDK returning an error when attempting to initialise the camera. This document will explain what the common cause usually is and how to get around it.

Note: This document will use Ubuntu to explain this issue as it is the most commonly used OS by our customers. There are slight variations on some of these instructions for other flavours of the Linux OS.

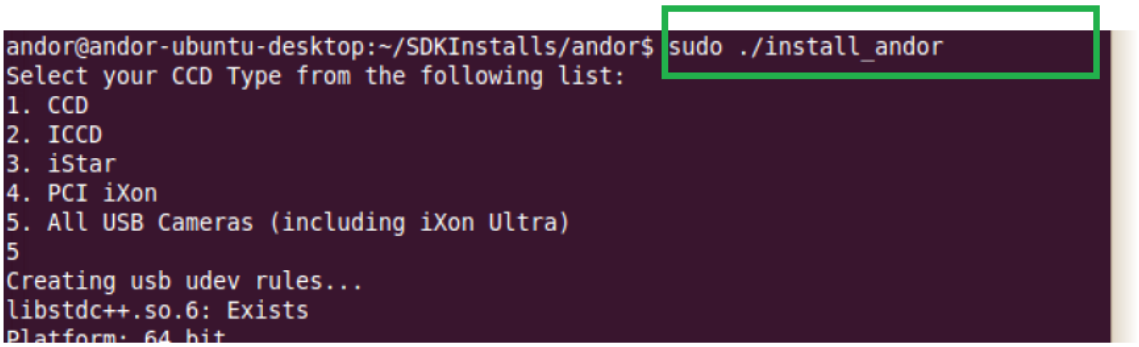
1. Extract SDK Tarball



2. CD into newly created Andor directory

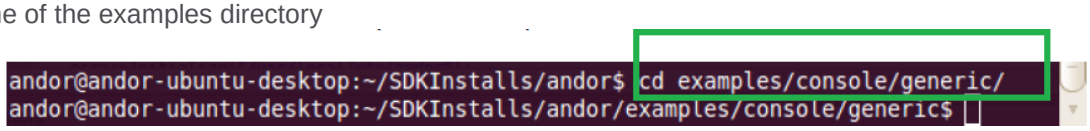


3. Install SDK

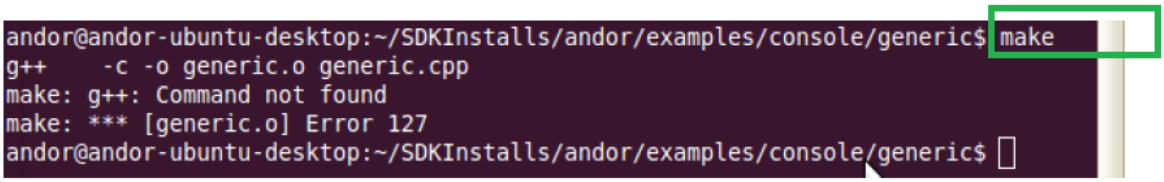


Sudo is prefixed here to elevate privileges. User will be prompted for password at this point. Option 5 is chosen for USB cameras and the install process begins.

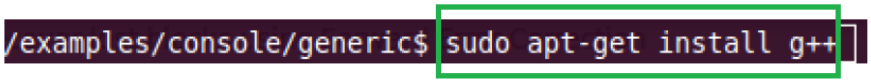
4. CD into one of the examples directory



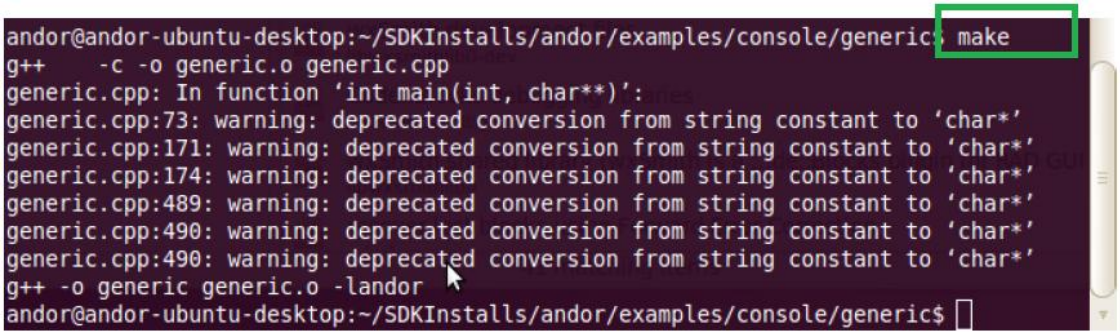
5. Make example in order to run it



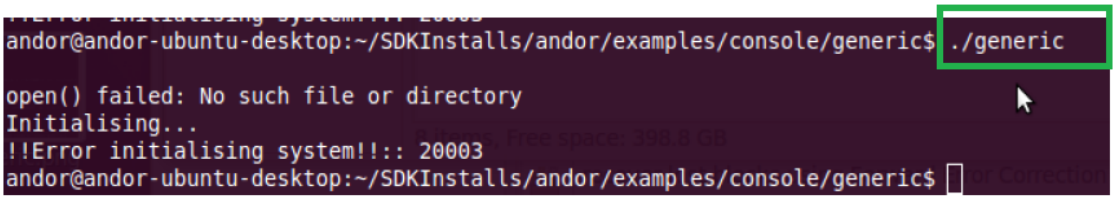
The first issue that may occur here is that the 'make' cannot be completed. This is because g++ is not installed on the system. The way to do this is to issue the following command:



After this the 'make' can be completed



6. Now that the executable exists, it can be called



The second issue that may occur is that the example will complain about no such file or directory and the DRV_XVDNOTINSTALLED error code will be returned. The reason for this is that the libusb source is not installed on the system. The camera relies on libusb in order to interact with the system. This is the most common cause of issues with the Linux SDK and USB cameras. It can easily be fixed!

7. Install libusb-dev

```
andor@andor-ubuntu-desktop:~/SDKInstalls/andor/examples/console/generic$ sudo apt-get install libusb-dev
[sudo] password for andor:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  fakeroot patch nvidia-settings
Use 'apt-get autoremove' to remove them.
The following NEW packages will be installed
  libusb-dev
0 upgraded, 1 newly installed, 0 to remove and 201 not upgraded.
Need to get 0B/40.4kB of archives.
After this operation, 348kB of additional disk space will be used.
```

8. Run generic application

```
File  Edit  View  Terminal  Help

      Acquire Menu
 .------------------------.
 |a. Acquire              |
 | Kinetic Series         |
 | Image                  |
 |                        |
 |b. Change Acquire Mode  |
 |c. Change Read Mode     |
 |                        |
 |d. Set Temperature      |
 |e. Get Temperature      |
 |f. Cooler On            |
 |g. Cooler Off           |
 |                        |
 |h. Set Exposure Time    |
 |i. Set Trigger Mode     |
 |                        |
 |j. Set Accumulation Time|
 |k. Set No. Accumulations|
 |l. Set Kin Cycle Time   |
 |m. Set No. Kin. Cycles  |
 |p. Turn On/Off Spooling |
 |                        |
 |n. Set Image Dimensions |
 |                        |
 |y. Display Acquire Info |
 |                        |
 |z.   Exit               |
 `------------------------'

Enter choice :
```

The purpose of this document is to outline a few of the causes and tackle them but it does not rule out all issues.

Note: In the case of specific OSs such as CentOS or Fedora, it may just be a case of changing ‘libusb-dev’ to ‘libusb-devel’. Also remember that Fedora expects you to add sudoers to the sudo file in order to elevate privileges. Another way of doing it is to type ‘su’ and give password. A lot of the commands above can be run then without the ‘sudo’ prefix in these OSs.

If you require further assistance please contact your local Andor Technology Customer Support Team at www.andor.com