**PL2303 Android USB Host Solution
Application Note for SDK v1.0.0.5**
For Android 3.2 and above

PL2303 USB-to-Serial Controller
Android USB Host Solution
(How to Connect PL2303 Device to Android Tablets & Phones)

Prolific Technology provides the first and only Android USB Host API and driver solution (NO root permission needed) for connecting PL2303 USB-to-Serial devices to Android-powered devices with USB Host mode support (see Figure 1-1). This document provides information on how to help Prolific customers use the PL2303 Android Java Driver Library to develop Android application software (Apps) for communicating with the PL2303 USB-to-Serial device.
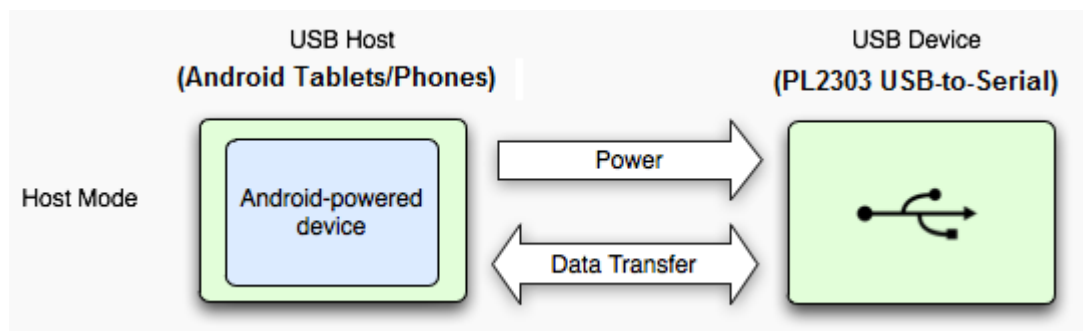

Figure 1-1: Android USB Host Mode

Minimum Requirements

✓ USB Device with PL2303HXD, PL2303EA, PL2303RA, or PL2303SA controller chip

- USB to Serial Cables/Adapters/Converters Devices
- USB GPS Devices
- USB Health/Medical/Fitness Devices
- USB POS Devices
- Other USB-to-Serial (UART/RS232) Interface Devices
- Micro USB Host OTG Cable may be needed for Android Phones
- NOTE: PL2303HXA and PL2303XA are not supported (Discontinued Products)

✓ Android-Powered Device (Tablet/Phones) with USB Host API Mode Support

- Android 3.2 and above OS versions

✓ Know-How in Java Programming and Android App Software Development

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PL2303 Android Software Development Kit (SDK)

Prolific provides the following file package to help customers develop PL2303 Android Apps:

- ✓ PL2303 Sample Test Android App Software `(ap_PL2303HXDSimpleTest.apk)`

| Type		Name	▲	Size	
☐	![icon]	ap_PL2303HXDSimpleTest.apk		171KB	◢

  - • This is demo application to detect PL2303 device in Android and do simple test.

- ✓ PL2303 Android USB Host Solution Application Note
  - • This document which includes User Guide for running the above sample program.

- ✓ PL2303 Sample Test Android App Source Code
  - • Source code for ap_PL2303HXDSimpleTest.apk

- ✓ PL2303 Android Java Driver Library `(pl2303driver.jar)`
  - • PL2303 Android Driver for PL2303HXD, PL2303EA, PL2303RA, and PL2303SA only.

- ✓ PL2303 Android App Development Reference Document
  - • Reference document for writing Android Application Software `(index.html)`

PL2303 Sample Test Program

This section describes how to install and run the PL2303 Android Sample Test program using a USB-to-Serial (RS232 DB9) cable:

PL2303 Android USB Host Solution
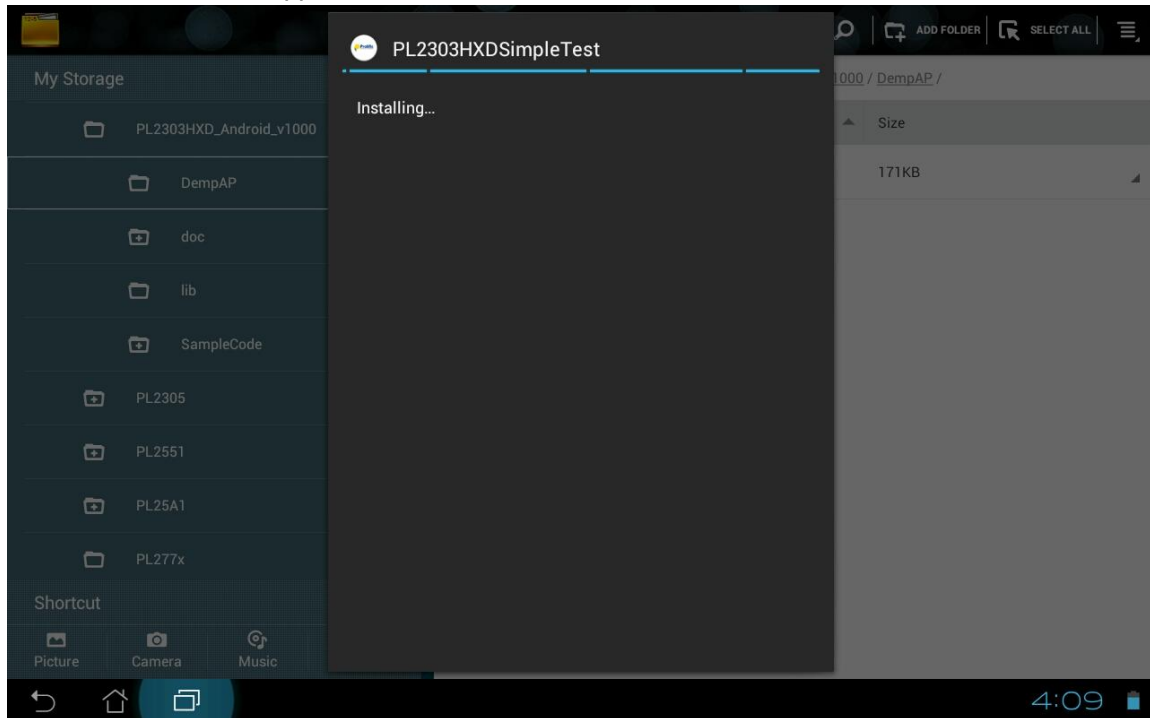Application Note for SDK v1.0.0.5
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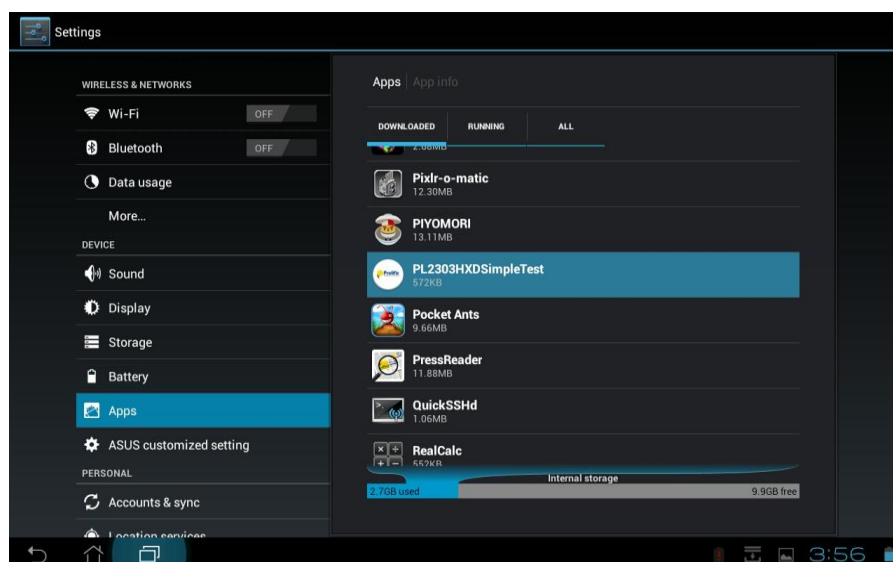
1. Power on your Android device (Android 3.2 and above) with USB host support. Only one PL2303 device is supported.

2. Click check on the Android Sample Test program (**ap_PL2303HXDSimpleTest.apk**) to run install.
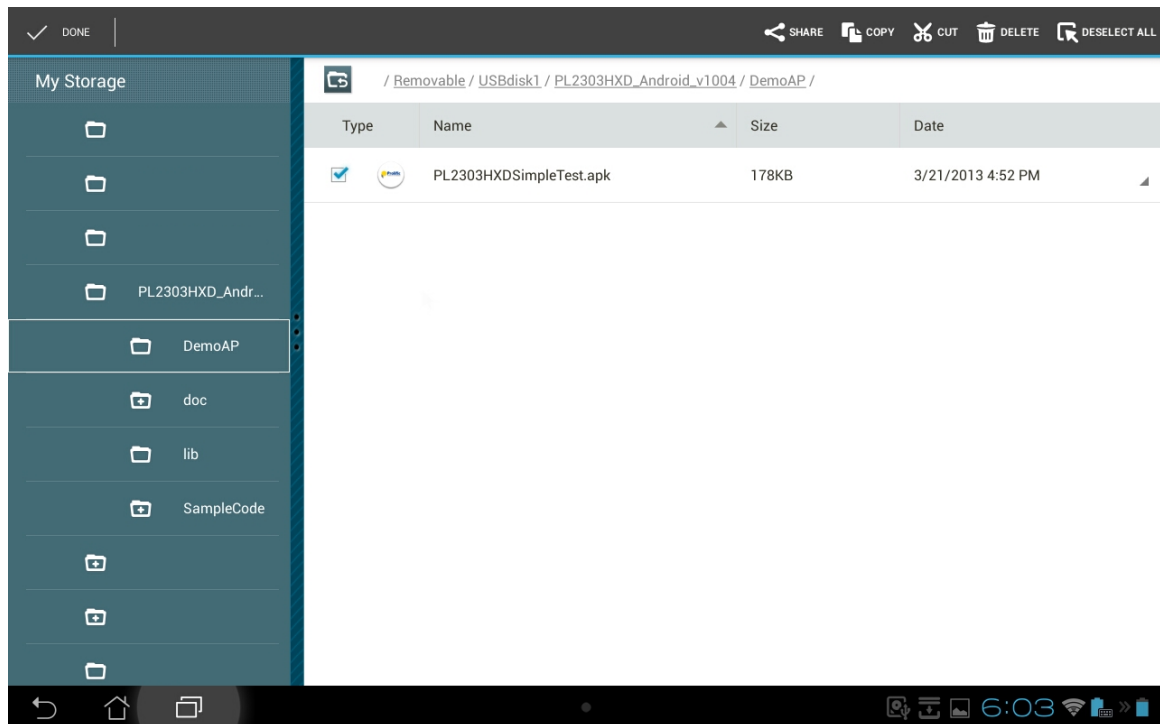

3. Click Install when prompted to install the Android app.

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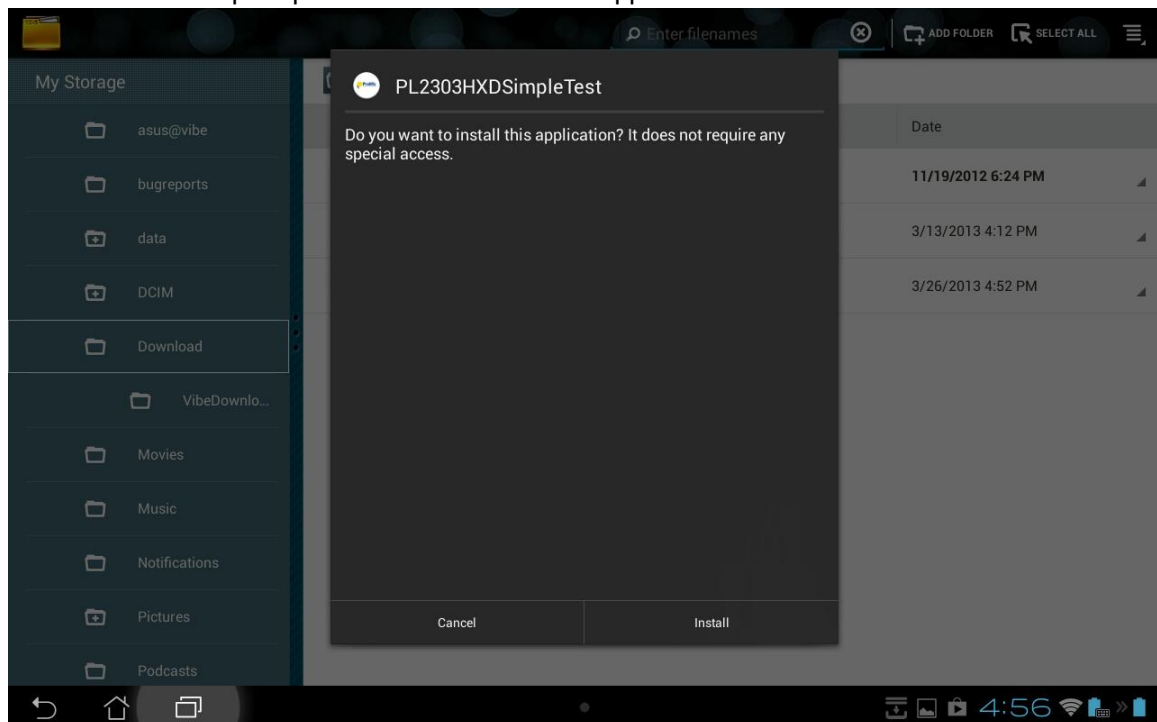
4.   The PL2303 Android app will start to install.

5.   When Application is installed, click OPEN.

PL2303 Android USB Host Solution
Application Note for SDK v1.0.0.5
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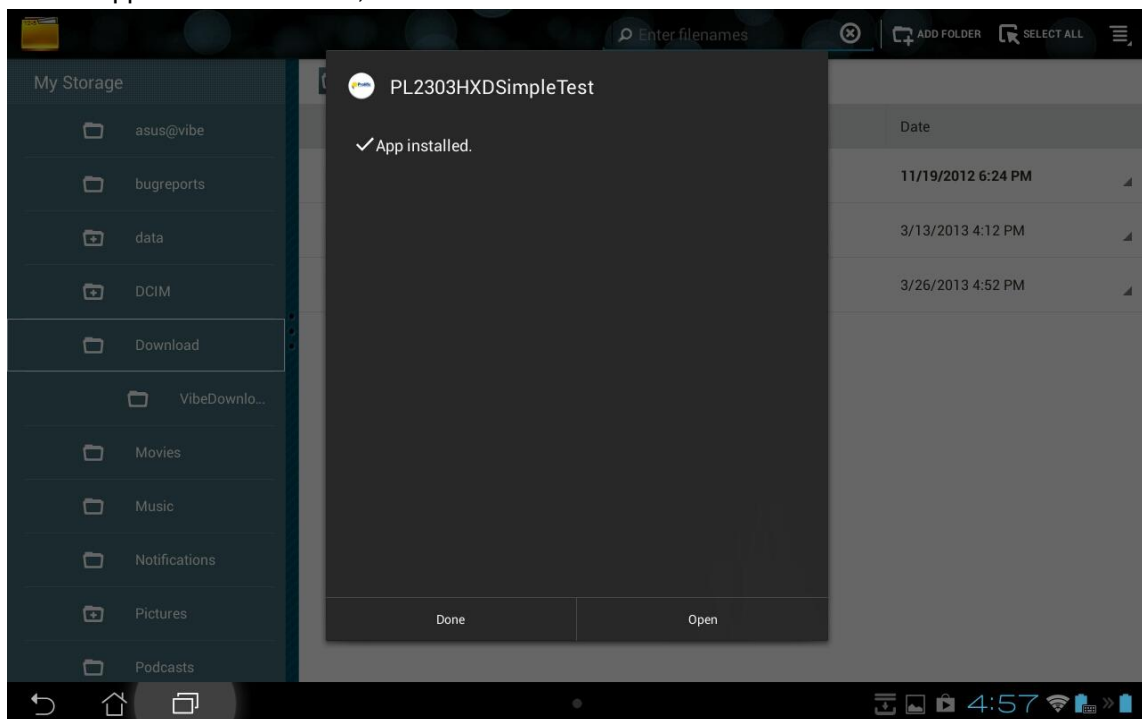
6. Plug in the PL2303 USB to Serial device. Click OK when prompted to allow the app to access the USB device.
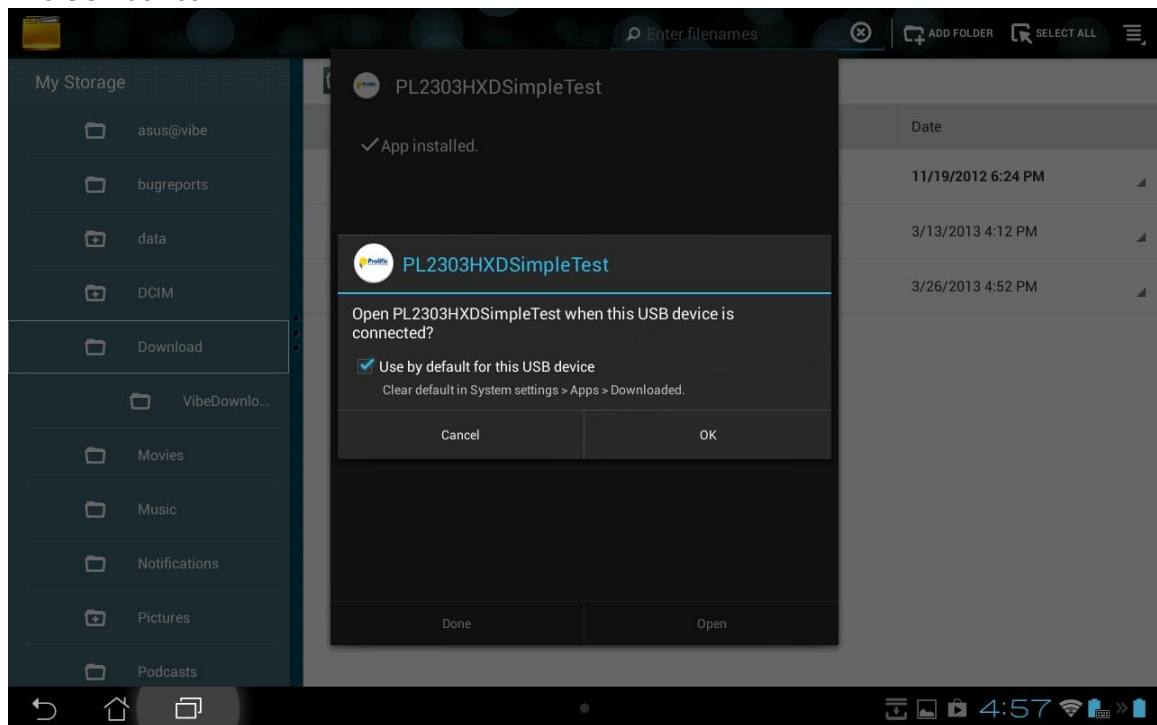

7. If the PL2303 USB device is detected, the app will pop out a connected status message. If not, re-plug the device and click OPEN. Make sure you get a connected pop out message.

PL2303 Android USB Host Solution
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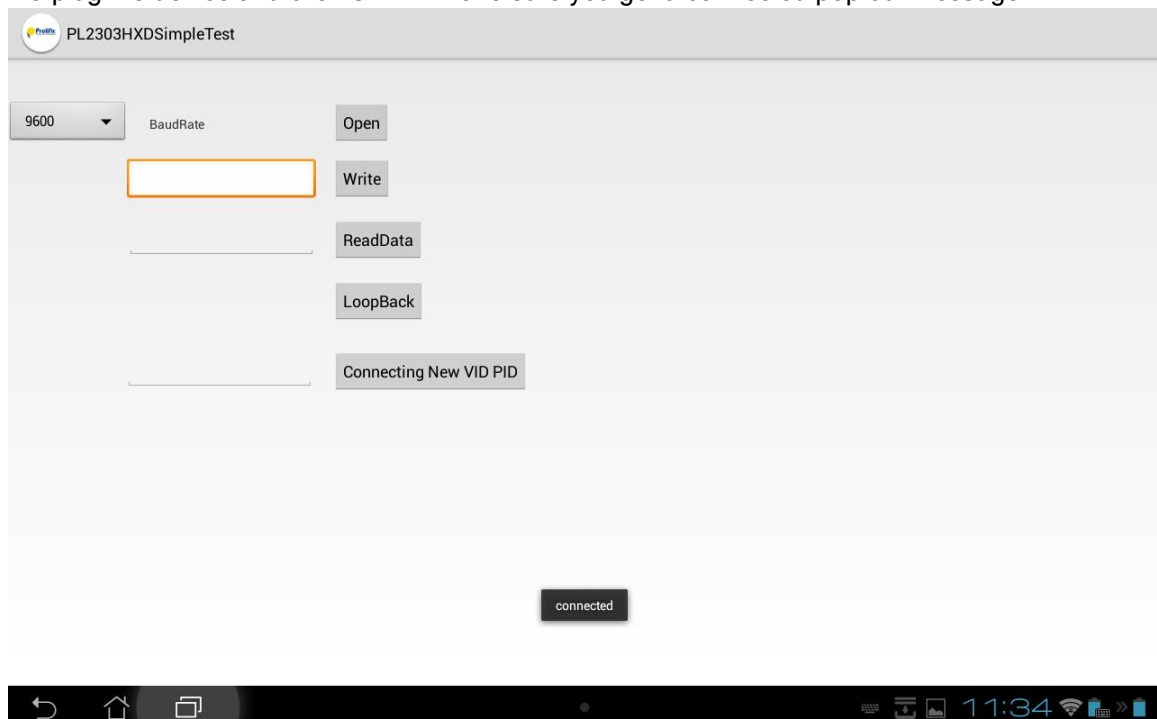
8. There are two ways to run the PL2303 Simple Test app:

   ➢ **Using Loopback Connector:**

   i. Plug a loopback connector (TX-RX pins short) to the USB-to-Serial RS232 cable. Set the desired baud rate settings.

   ii. Click Loopback button.

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**Application Note for SDK v1.0.0.5**
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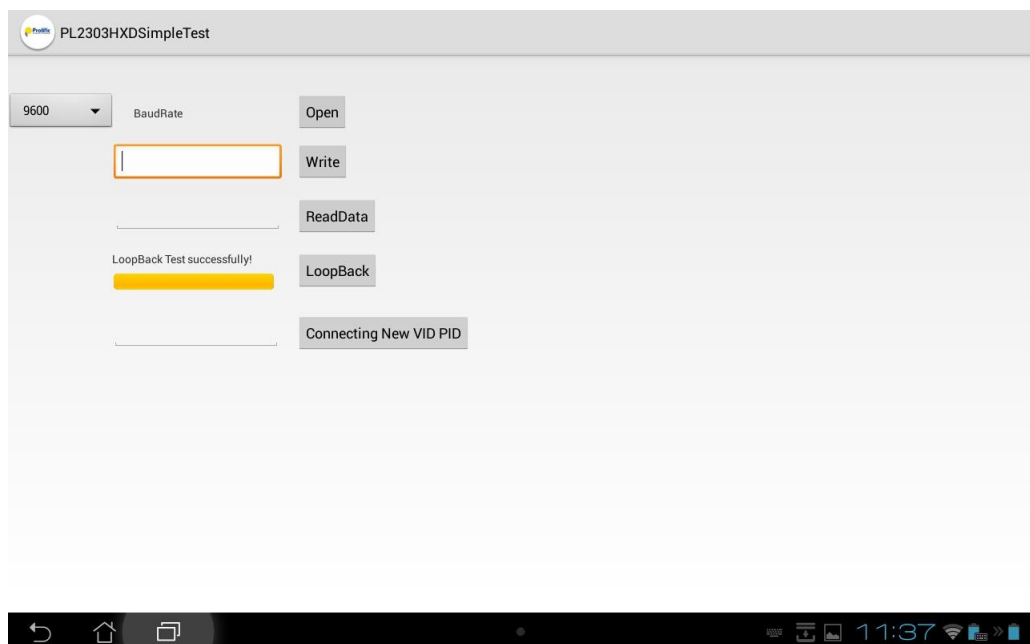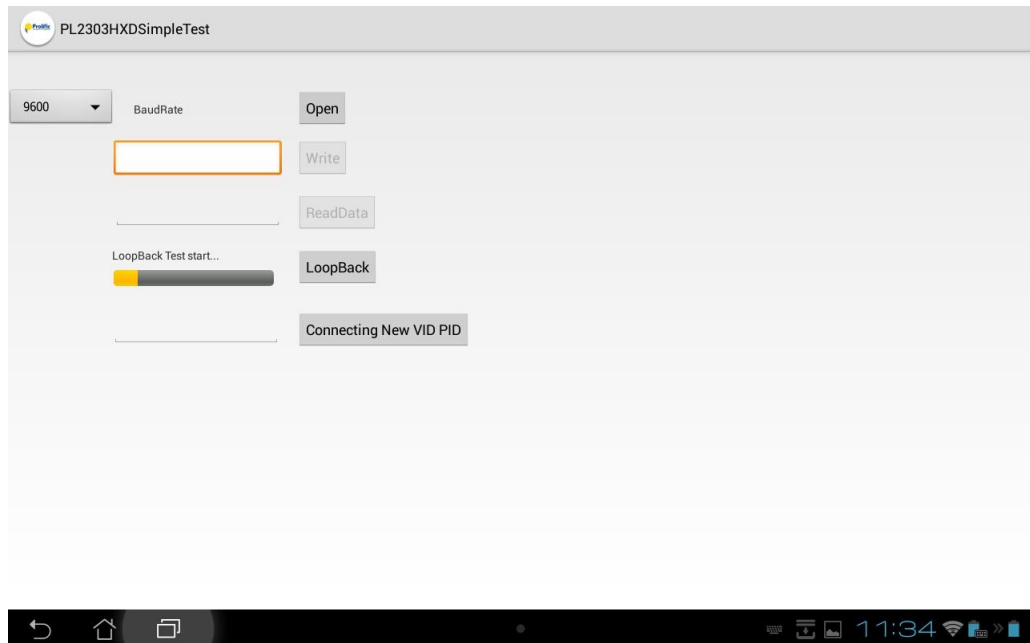
iii. Or type the keyboard on the Write box field and click Write button to send data (TX pin). Click ReadData button to read the data (RX pin).
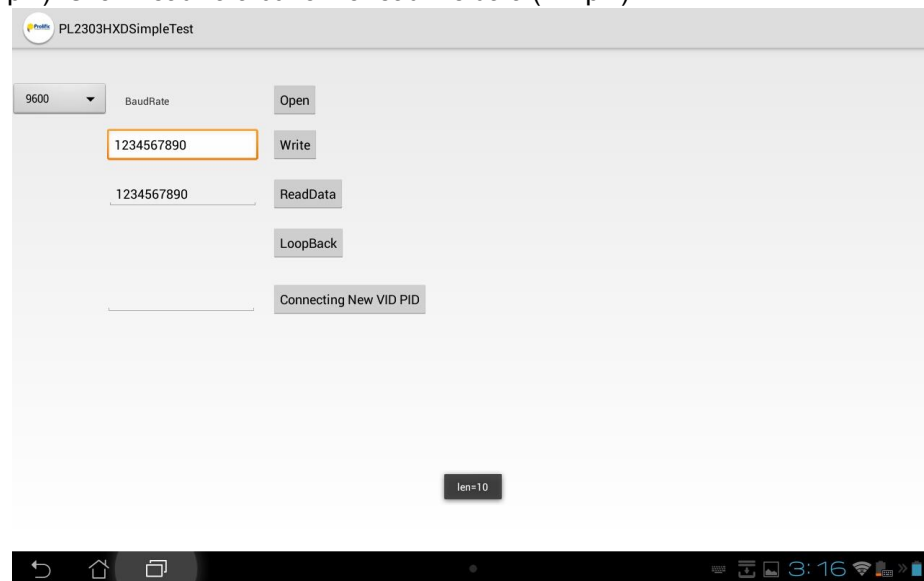

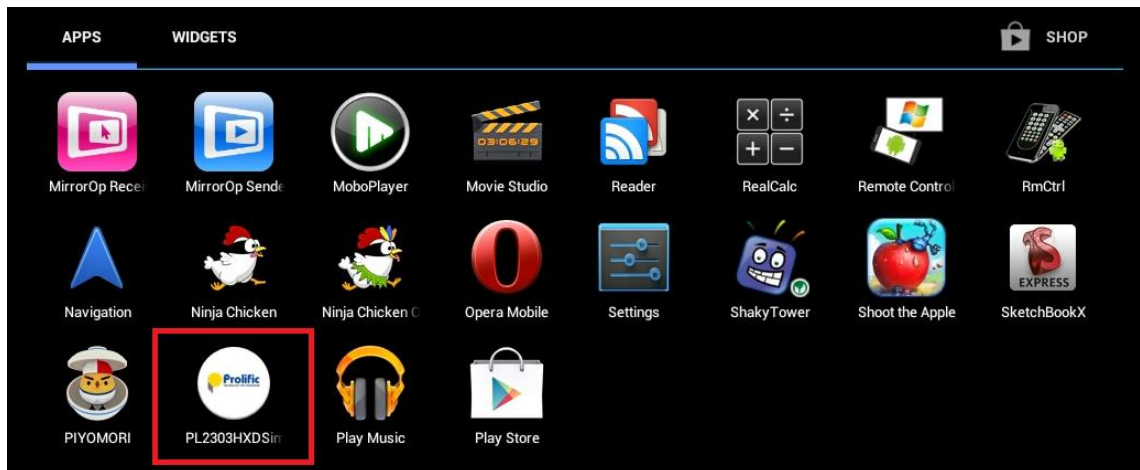➢ **Using Null Modem cable and Windows PC and HyperTerminal program:**

i. Plug a serial null modem cable to the PL2303 USB Serial cable and the other end to a RS232 COM port (or another PL2303 USB-Serial cable) of another computer. Run HyperTerminal program on PC or other serial terminal program and open COM port.
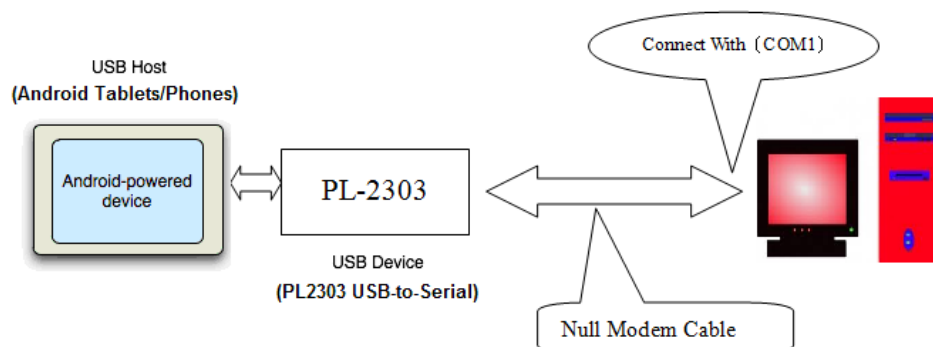
ii. Enter keyboard on Write box field and click Write. Check PC HyperTerminal program if data is received. Enter keyboard on HyperTerminal program and click ReadData button on Android app to receive data if OK.
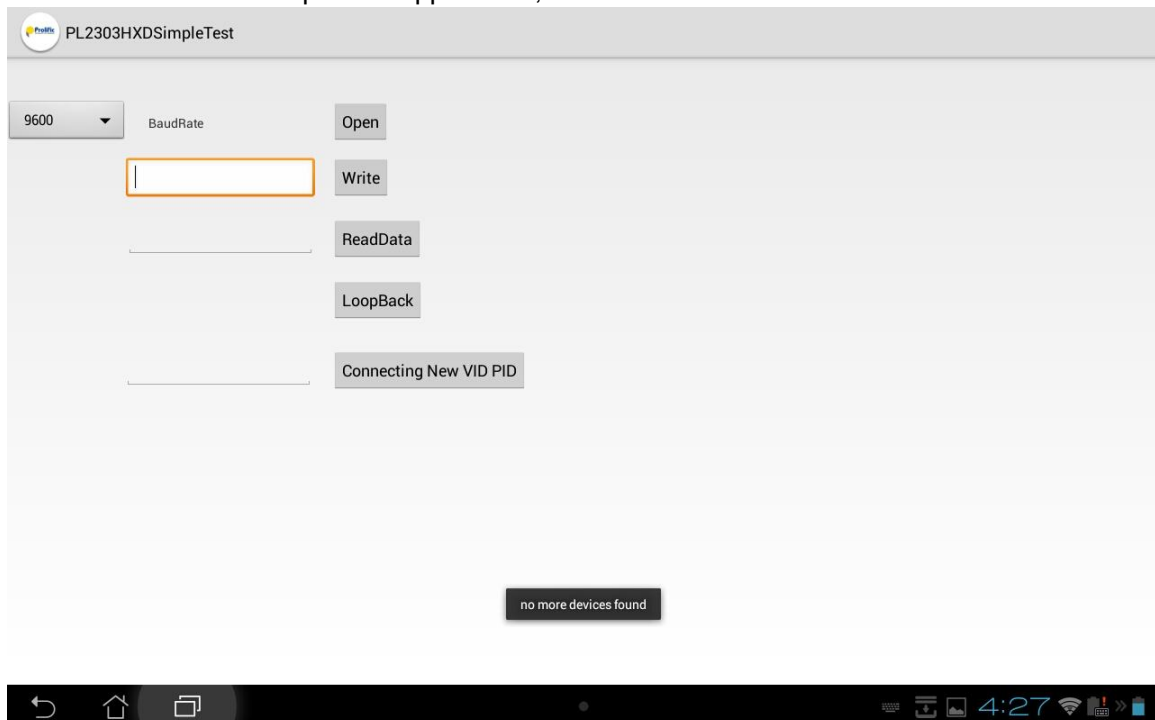

PL2303 Android USB Host Solution
Application Note for SDK v1.0.0.5
For Android 3.2 and above
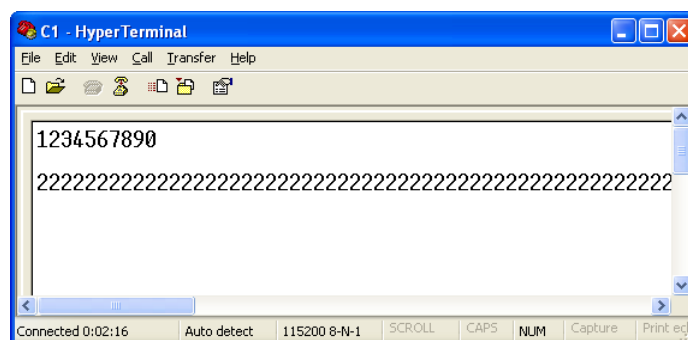
9. To run the Android app again, simply go to Apps folder and look for PL2303HXDSimpeTest app.


Supporting Different VID/PID

This section describes how to support PL2303HXD chip with different VID/PID written. Developers can refer to the sample app source code on how to add support for different VID/PID.

1. Plug PL2303HXD device with different VID/PID written in OTPROM. {Example: 0557:2008}

2. Run the PL2303HXDSimpleTest App. At first, it will show "no more devices found".

PL2303 Android USB Host Solution
Application Note for SDK v1.0.0.5
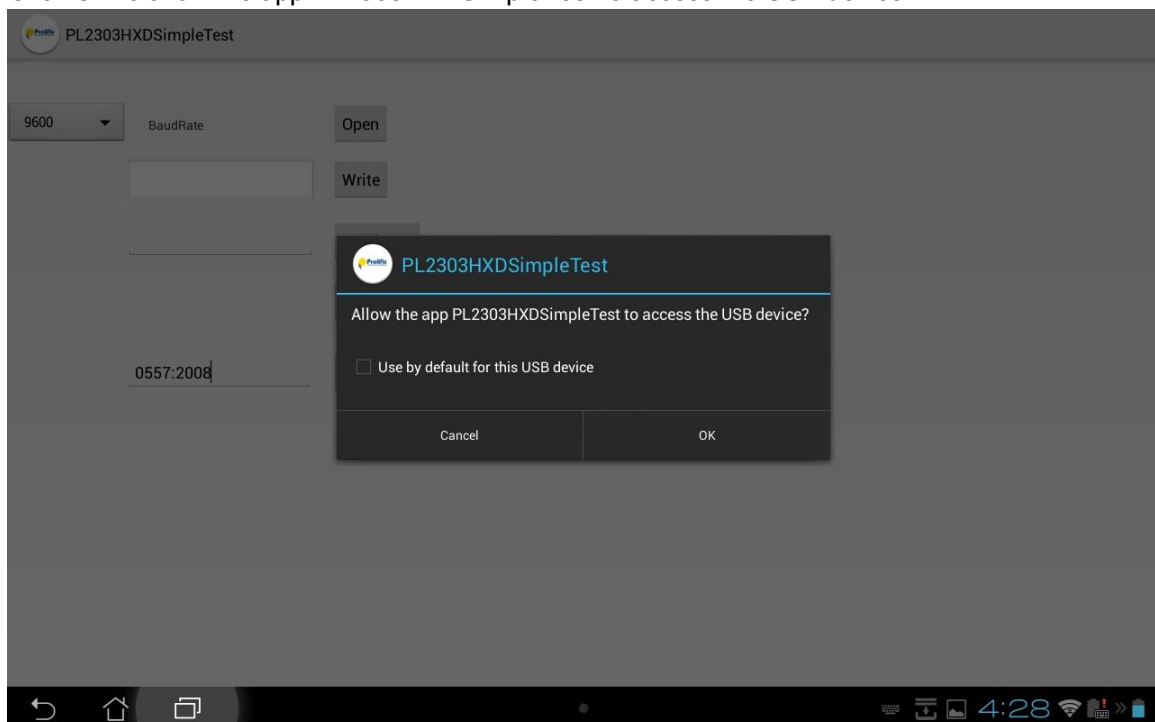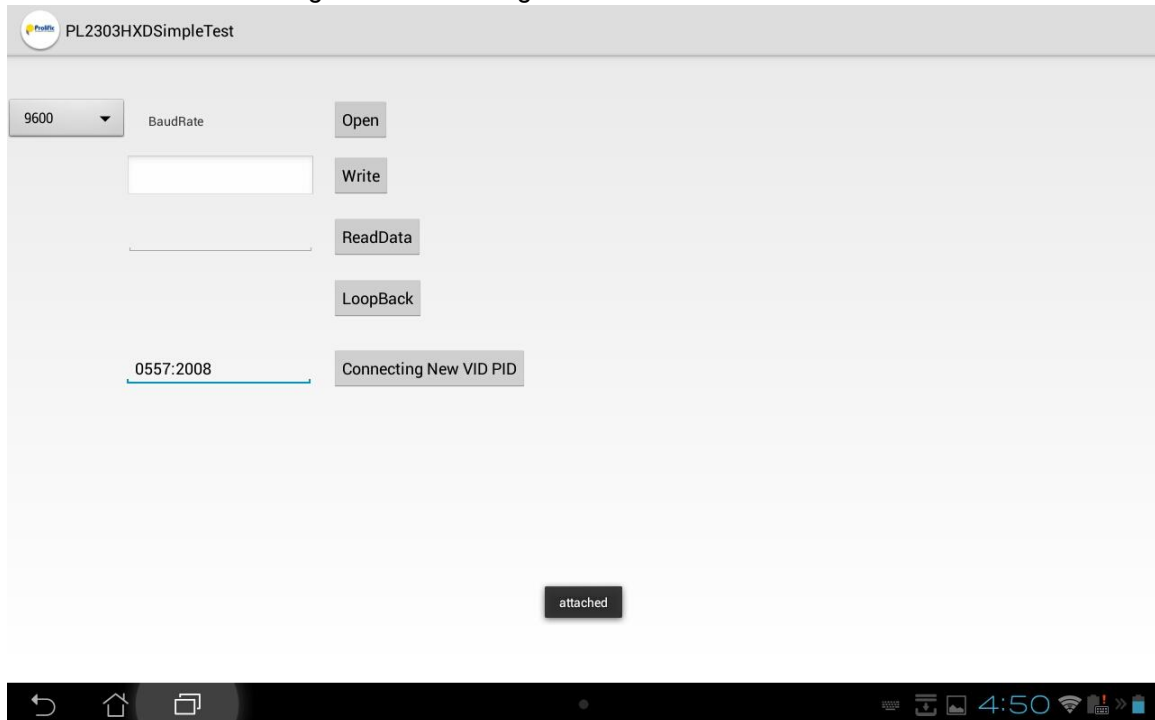*For Android 3.2 and above*

3. Enter the VID and PID of the PL2303HXD device in the field "Connecting New VID PID" and click the button.
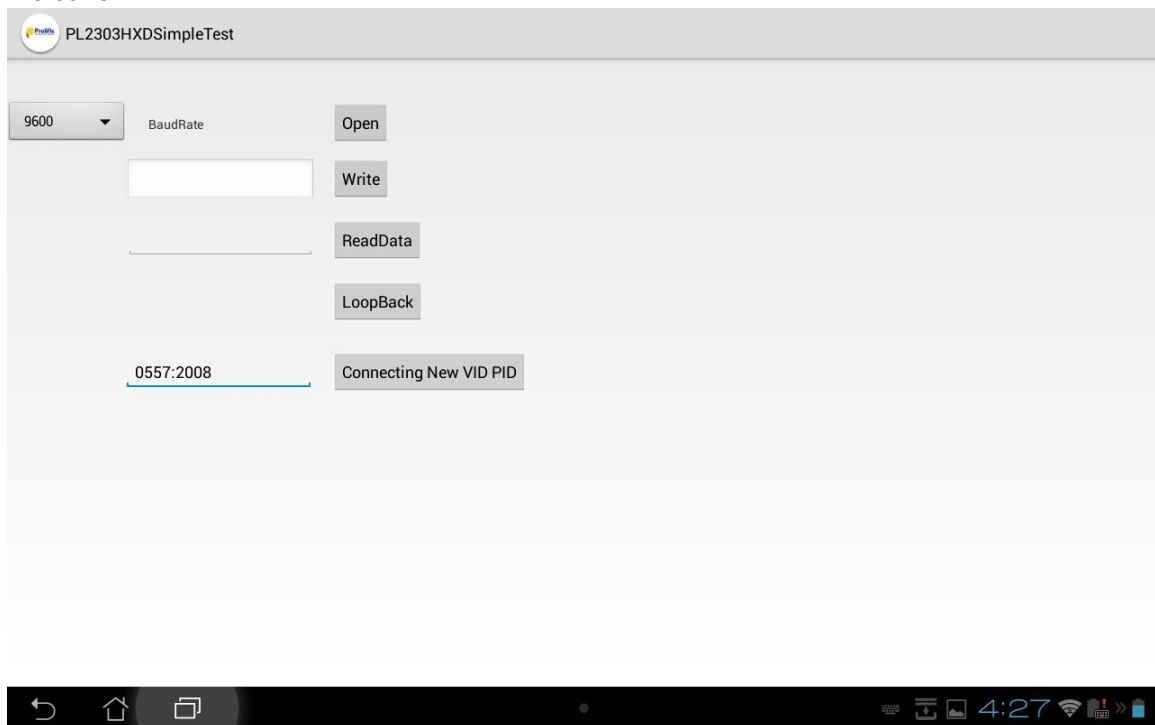
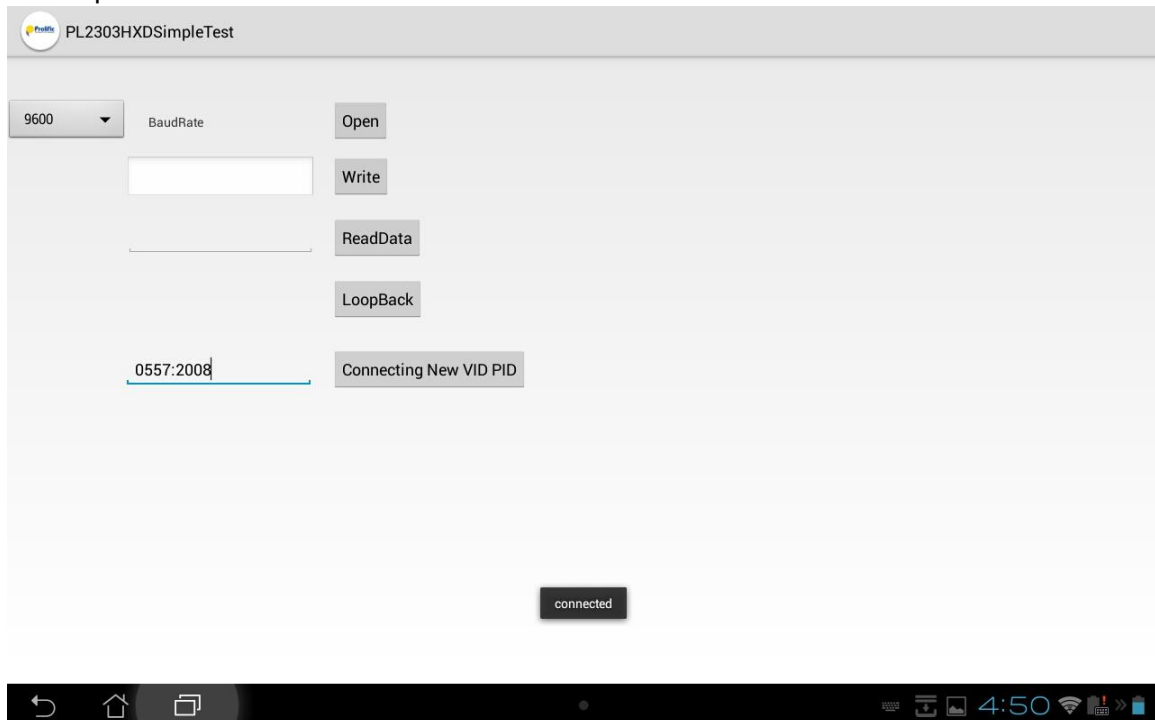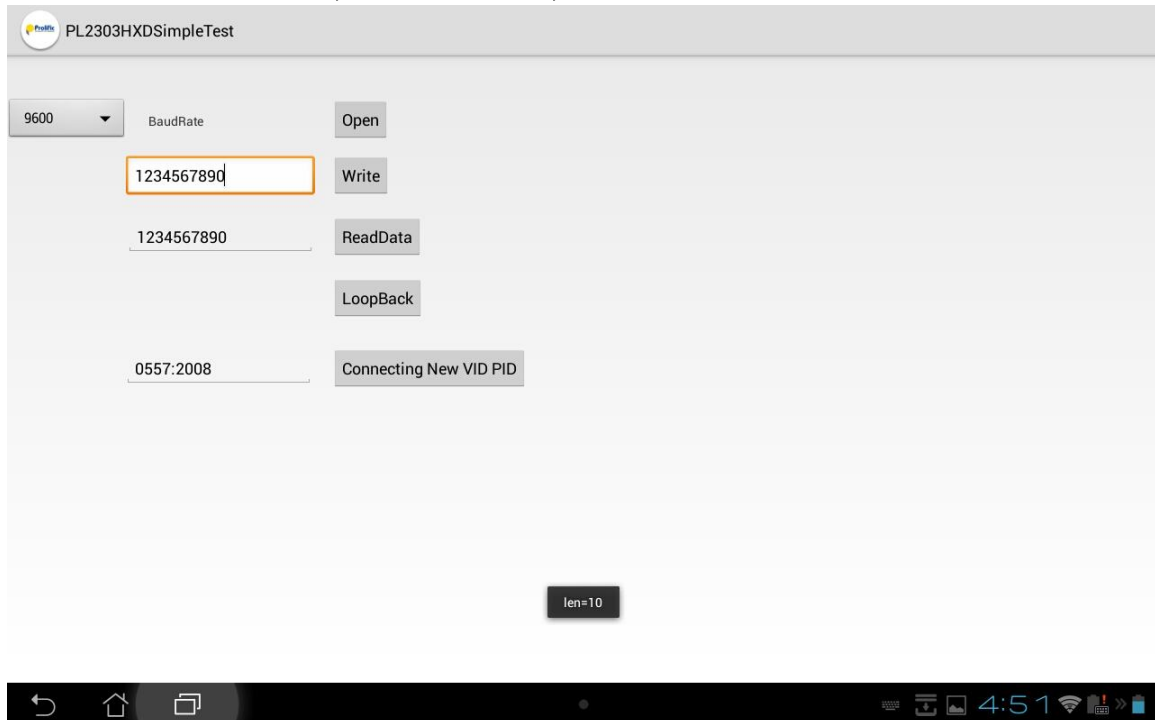4. Click OK to allow the app PL2303HXDSimpleTest to access the USB device.

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5. Then click the "Connecting New VID PID" again to attach. You should see "attached" status.

6. Click Open button to connect. You should see "connected" status.

PL2303 Android USB Host Solution
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7. Enter text on Write field box, click Write button, and click ReadData to test if OK.

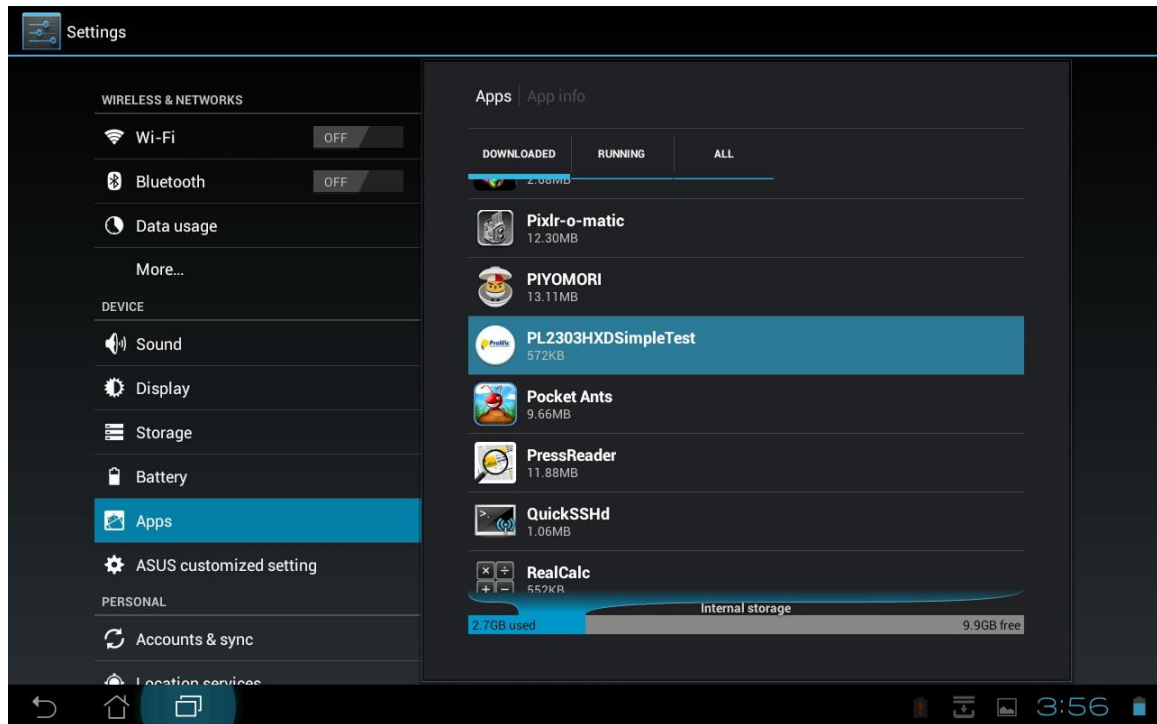8. You can also click Loopback button by adding jumper switch on TX and RX pin.
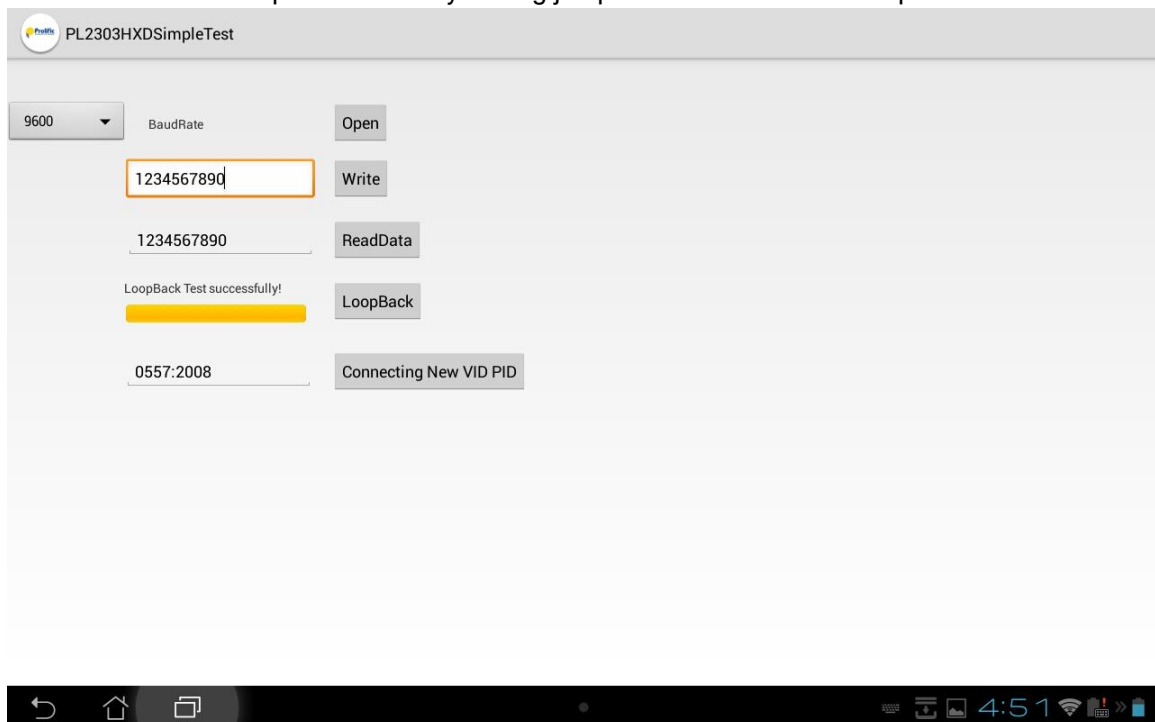
9. Note that once you unplug the device, you will need to set the VID/PID again.
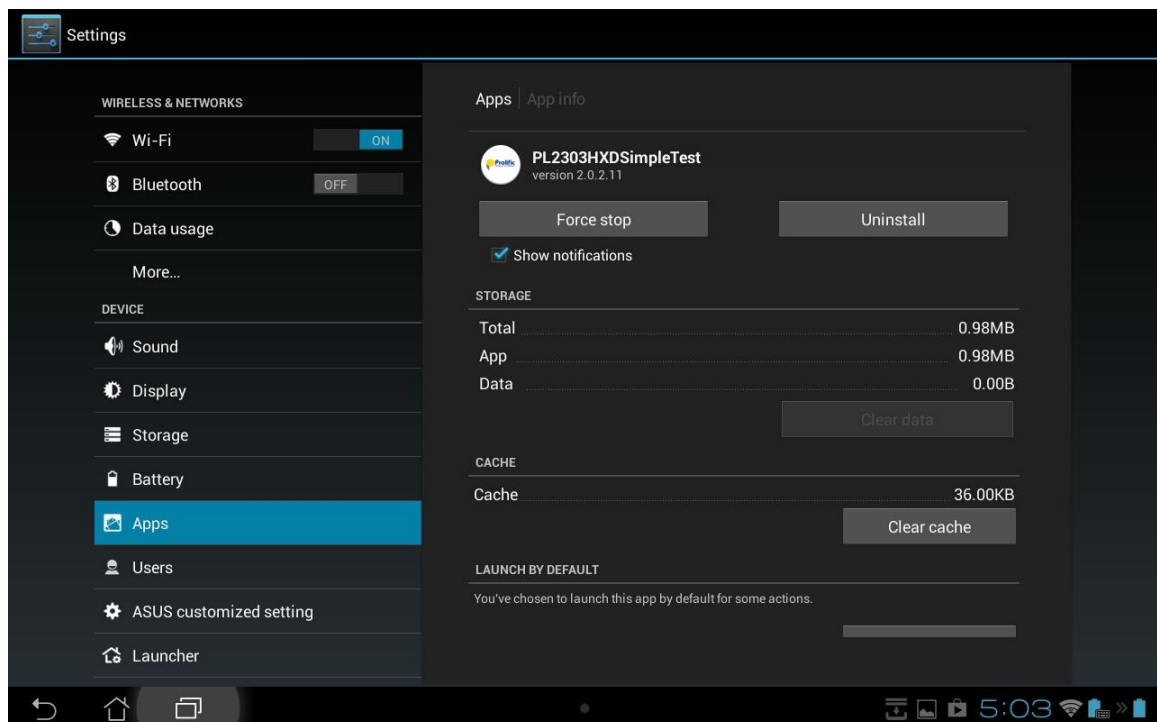
PL2303 Android USB Host Solution
Application Note for SDK v1.0.0.5
For Android 3.2 and above

Uninstalling the PL2303 Android App

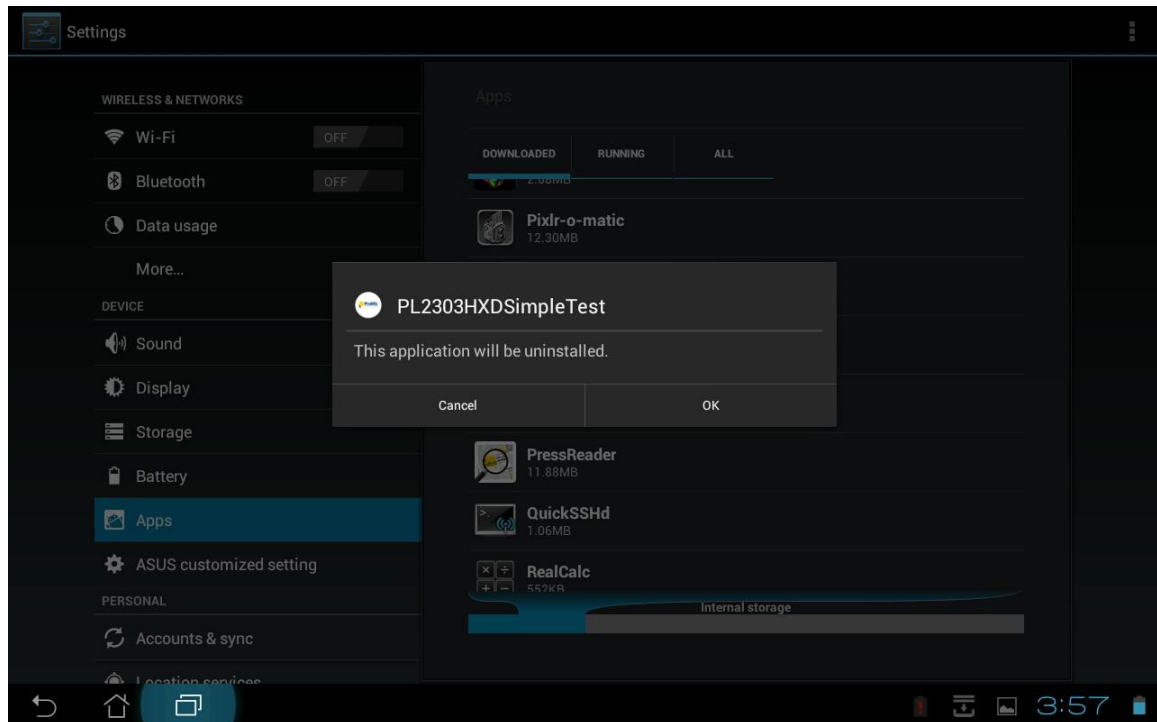To uninstall the PL2303 Android App, follow the below steps:

1. Go to Settings – Apps folder. Look for the PL2303HXDSimpleTest app.

2. Click on the PL2303HXDSimpleTest program and click Uninstall button.

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3.   Click OK to uninstall the PL2303HXDSimpleTest app.

4.   Click OK when uninstall is finished.

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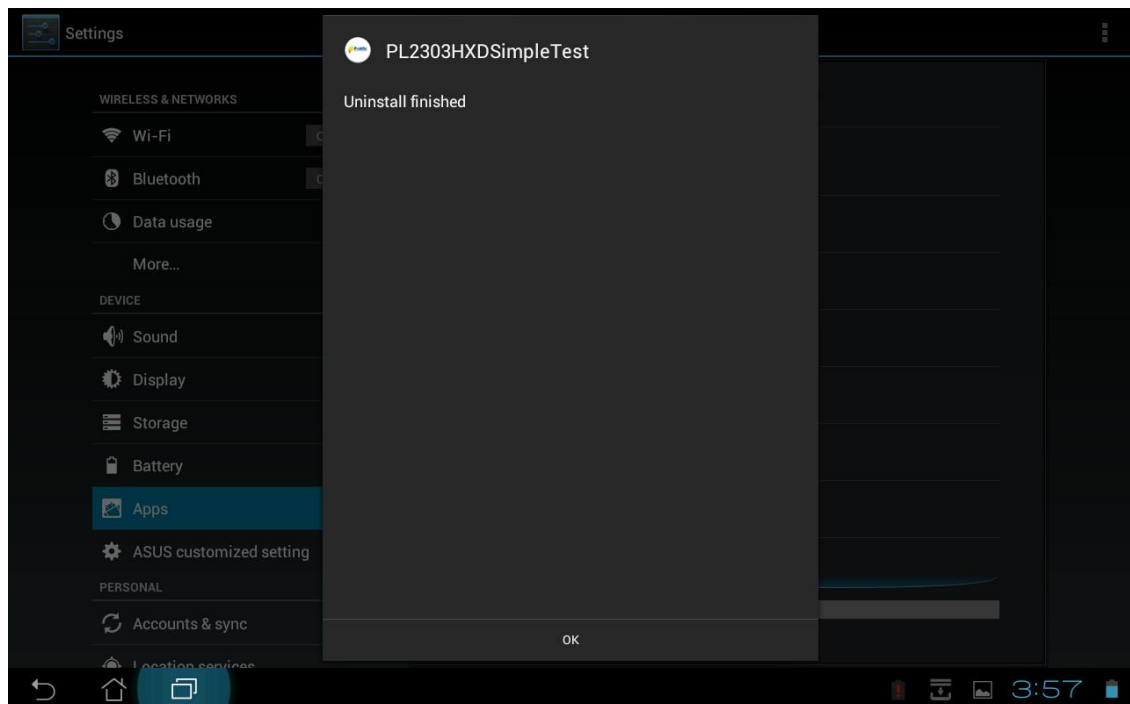
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