Aptina Apbase Library Setup

Build/Test environments

Ubuntu versions 10.04, 12.04 (32/64-bit)
MacOS 10.7 (64-bit)

LibUSB Web Site

http://www.libusb.org/
http://libusb.sourceforge.net/api-1.0/index.html - documentation

Build Instructions

Apbase Platform Setup Instructions

- Download the Github Aptina/DevSuiteSDK directory to the target Linux/Mac machine.
- Verify that the LibUSB include and library files are installed on the Linux/Mac machine.
- Aptina Apbase and midlib2 libraries used LibUSB 1.0.0 but there are newer versions
  - o To install in Linux:
    - sudo apt-get install libusb-dev   // general download
    - sudo apt-get install libusb-1.0-0-dev   // version specific download

  - o To install in MacOS (with Macports):
    - sudo port install libusb   // general download
  - o To install in MacOS (without Macports):
    - Download and double click the "libusb-1.0.8.pkg" file in the Github Aptina /DevSuiteSDK/external/macos

Required run-time libraries

- libusb-1.0. (please see above)
- libtbb. (sudo apt-get install libtbb) please check: http://www.threadingbuildingblocks.org
- libpython3.3
  - o User needs to download and build the python source code for the Ubuntu earlier than 13.04.
  - o User needs to activate the shared object option and set prefix to /usr (or your path settings) in the python configuration (e.g. ./configure --enable-shared --prefix=/usr)
  - o For MacOS: download the Mac dmg file from http://www.python.org/download/
    (Note: MacOS default set to version 2.7. Remember create a symbolic link for libpython3.3m.dylib)
    (e.g. sudo ln –s /Library/Frameworks/Python.framework/Versions/3.3/Python /usr/lib/libpython3.3m.dylib)

Test Application (SimpleQt) Build Instructions

SimpleQt\SimpleQt.cpp is a sample test program that opens Aptina Demo kits and sensors, initializes it and display captured images. User needs Administrator account to access the USB devices. (sudo ./SimpleQt). Build instructions:

- To build SimpleQt in Linux/MacOS: Use Qt Creator and open the SimpleQt.pro file then build all.
  The two .so files required for 32-bit Linux are:
    /DevSuiteSDK/lib/linux/x32/libmidlib2.so and
    /DevSuiteSDK/lib/linux/x32/libapbase.so
  The two .so files required for 64-bit Linux are:
    /DevSuiteSDK/lib/linux/x64/libmidlib2.so and
    /DevSuiteSDK/lib/linux/x64/libapbase.so
  The two .dylib files required for MacOS (64-bit only) are:
    /DevSuiteSDK/lib/macos/libmidlib2.so and
    /DevSuiteSDK/lib/macos/libapbase.so
  Note:1. export LD_LIBRARY_PATH=SimpleQt_directory before execute the binary
      2. Modify the SimpleQt.pro file based on your System (Linux 32/64 or MacOS X)

Directory Structure

- /DevSuiteSDK/data/apps_data - contains Aptina sensor setting (.ini) files for the different supported sensors.
- /DevSuiteSDK/data/board_data - contains Aptina Demo boards (.cdat) files.
- /DevSuiteSDK/data/sensor_data - contains the Aptina sensor data (.sdat/.xsdat) files.
- /DevSuiteSDK/lib/linux/x32 - contains Aptina shared object (.so) files for the 32-bit Linux (Intel CPU) System.
- /DevSuiteSDK/ lib/linux/x64 - contains Aptina shared object (.so) files for the 64-bit Linux (Intel CPU) System.
- /DevSuiteSDK/lib/macos - contains Aptina shared object (.so) files for the MacOS X (Intel CPU) System.
- /DevSuiteSDK/doc - contains the document for installation and API development guide.
- /DevSuiteSDK/include - contains apbase and midlib2 C/C++ header (.h) files.
- /DevSuiteSDK/samples - contains C/Qt sample files with apbase and midlib2 libraries.

Note: Please keep the same directory structure. Apbase use relative directory to search the data files.
Required files in data directories: "sensor_data", "apps_data" and "board_data"