Scope

The document describes how to test USB Pin detect hid mouse example.

Preparation

Host

A personal computer, which is running Windows Xp or Windows 7.

Device

- A board, i.e. twrk65f180m, which is running pin_detect_hid_mouse demo.
- An Usb mouse device (i.e. a Mitsumi USB mouse device)
- An USB Micro-AB plug to USB-A plug cable with id pin

Libraries dependency

The libraries dependency for various RTOS lists as following,

BM

Library project path:

- *<install_dir>/usb/usb_core/device/lib/bm/<tool_chain>/<soc_name>*
- *<install_dir>/usb/usb_core/host/lib/bm/<tool_chain>/<soc_name>*
- *<install_dir>/lib/ksdk_platform_lib/<tool_chain>/<platform>*

FreeRTOS

Library project path:

- *<install_dir>/usb/usb_core/device/lib/freertos/<tool_chain>/<soc_name>*
- *<install_dir>/usb/usb_core/host/lib/freertos/<tool_chain>/<soc_name>*
- *<install_dir>/lib/ksdk_freertos_lib/<tool_chain>/<platform>*

MQX

Library project path:

- *<install_dir>/rtos/mqx/mqx/build/<tool_chain>/mqx_<board>*
- *<install_dir>/rtos/mqx/mqx_stdlib/build/<tool_chain>/mqx_stdlib_<board>*
- *<install_dir>/usb/usb_core/device/lib/mqx/<tool_chain>/<soc_name>*
- *<install_dir>/usb/usb_core/host/lib/mqx/<tool_chain>/<soc_name>*
- *<install_dir>/lib/ksdk_mqx_lib/<tool_chain>/<platform>*

uCOSii

Library project path:

- *<install_dir>/usb/usb_core/device/lib/ucosii/<tool_chain>/<soc_name>*
- *<install_dir>/usb/usb_core/host/lib/ucosii/<tool_chain>/<soc_name>*
- *<install_dir>/lib/ksdk_ucosii_lib/<tool_chain>/<platform>*

uCOSiii

Library project path:

- *<install_dir>/usb/usb_core/device/lib/ucosiii/<tool_chain>/<soc_name>*
- *<install_dir>/usb/usb_core/host/lib/ucosiii/<tool_chain>/<soc_name>*
- *<install_dir>/lib/ksdk_ucosiii_lib/<tool_chain>/<platform>*

Refer to **Integration of the USB Stack and Kinetis SDK_review.pdf(***<install_dir>/doc***)** on how to build the corresponding libraries.

Steps

Follow the steps to run the pin_detect_hid_mouse demo.

1. Run the pin_detect_hid_mouse example, the board now acts as an USB device mouse, and you will see USB switch to device mode information.
2. Plug-in a mouse to the test board, the board will act as an USB host, and you will see usb will switch to host mode and some device attach information printed out.
3. When you move the mouse, the relevant information will be output to the screen. Such as,

   When the mouse moved up, you can see “UP” on the screen.

   When the mouse moved down, you will get “DOWN”.
4. Plug- out the mouse with cable, the board now acts as an USB device mouse, and you will see the mouse detached and USB switch to device mode information.
5. Plug-in the mouse device into PC. You will see a HID-compliant mouse enumerated in Device Manager.
6. You can see the mouse arrow moving on PC’s screen according to the rectangular rotation.

Note:

Pin detect example need board hardware support, before running the example you need make sure your board support id pin detect feature.