Overview

This pin detect HID MSD example can become a HID mouse device or a MSD host that supports U-disk. The application prints the operation information when the U-disk is attached or is plugged into the PC host.

System Requirement

Hardware requirements

- Mini/micro USB cable

- USB A to micro AB cable

- Hardware (Tower module/base board, and so on) for a specific device

- Personal Computer

Software requirements

- The project files are in:

  <MCUXpresso_SDK_Install>/boards/<board>/usb_examples/usb_pin_detect_hid_msd/<rtos>/<toolchain>.

  Note

  > The <rtos> is Bare Metal or FreeRTOS OS.

Getting Started

Hardware Settings

For detailed instructions, see the appropriate board User's Guide.

Note

> The jumpers of the hardware (Tower system/base module) needs to be set to default setting at first.

Prepare the example

1. Download the program to the target board.

2. Power off the target board and power on again, or press the reset button on your board.

Note

> For detailed instructions, see the appropriate board User's Guide.

Run the example

1. Connect the board UART to the PC and open the COM port in a terminal tool.

2. Run the pin_detect_hid_msd example. The board now acts as an USB device mouse and a USB switch-to-device mode information is displayed.

3. Plug in an U-disk to the test board. The board acts as an USB host. The stack switches to host mode and makes some read/write operations of file system. Meanwhile, some attached-device and the related operation information are printed out.

4. Unplug the mouse with the cable. The board now acts as a USB device mouse. The mouse is detached and the USB switches to the device mode information.

5. Plug in the mouse device into the PC. An HID-compliant mouse is enumerated in the Device Manager.

6. The mouse arrow is moving on the PC screen in a rectangular rotation.

The following figures show a pin detect msd information for the pin detect hid msd demo.

Note

Because the printed information is much long, so the U-disk been plugged out in advance.


```
host init done
mass storage device attached:pid=0x5567vid=0x781 address=1
.............................fatfs test.....................
fatfs mount as logiacal driver 1......success
test f_mkfs......mass storage device detached
error
.............................test done.....................
host deinit done
USB device HID mouse demo
```

Figure 1: Pin detect hid msd demo