PenMount USB Touch Controller Users' Guide for QNX Neutrino RTOS 6

Revision B
13/Nov/'17

PenMount®
TOUCH SCREEN SOLUTIONS

Preface

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Revision Table

Date	Revision	Changes
26/Sep/2016	A	Initial Release.
13/Nov/2017	B	Add descriptions for QNX 6.6

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1 QNX Neutrino RTOS 6.4.1 / 6.5

1.1 Description

PenMount 6000 USB touch screen controllers are standard HID compliant devices, therefore they are directly supported by the QNX HID device driver and calibration utility.
To enable PenMount USB touch screen input, please follow the steps described in the following section.

1.2 Device Setup

1.2.1 Touch Screen Setup

Check if the file **/etc/system/trap/input.${HOSTNAME}** exists.
(A) If yes, append the following text at the end of the file:

```
devi-hid touch
```

(B) If no, create a new file by using the following command:

```
#inputtrap query > /etc/system/trap/input.${HOSTNAME}
```

After the file is created, use text editor and add the following text:

```
devi-hid mouse kbd touch
```

Save the file and restart the system to make the changes take effect.

1.2.2 Touch Screen Calibration

To calibrate the touch screen, please open Terminal, then run the following command:

```
#calib
```

This will launch the QNX calibration utility. By default, the utility will use 3 point calibration algorithm.

1.3 Reference

If you need more control on calibration, please read the documentation on QNX website

http://www.qnx.com/developers/docs/6.4.0/neutrino/utilities/c/calib.html

2 QNX Neutrino RTOS 6.6

2.1 Description

PenMount 6000 USB touch screen controllers are standard HID compliant devices, therefore they are directly supported by the QNX HID device driver and calibration utility.
Please notice that since PenMount 6000 USB is mouse device type, it will be automatically attached by the screen graphics subsystemof QNX 6.6. This will require additional steps to make touch work properly.

2.2 Device Setup

2.2.1 Touch Screen Setup

(1) Edit "/etc/screen_start"
Setup “io-hid” and “devi-hid” before running “/sbin/screen”

```
io-hid -dusb
devi-hid -R 1024,768 touch
```

Please replace 1024 with the display width, and 768 with the display height.

(2) Edit "$GRAPHICS_ROOT/graphics.conf"
Configure the mtouch section with driver set to “devi”.

```
begin winmgr
   begin mtouch
        driver    = devi
        options = height=768,width=1024
   end mtouch
end
```

Please replace 1024 with the display width, and 768 with the display height.

(3) Restart system.

2.2.2 Touch Screen Calibration

(1) Disable mouse input (Required if using PenMount 6000 USB)
Please edit "$GRAPHICS_ROOT/graphics.conf", find globals section, and set input to keyboard only.

```
begin winmgr
   begin globals
     input = keyboard
   end globals
end winmgr
```

(2) Enable touch by launching the "calib-touch" application.
Please edit "/etc/screen_start", launch "calib-touch" after "/sbin/screen"

```
export GRAPHICS_ROOT=/usr/lib/graphics/iMX6X
export LD_LIBRARY_PATH=:/proc/boot:/lib:/usr/lib:/lib/dll:/opt/lib:/usr/lib/grap
hics/iMX6X:/opt/qt5/lib:/opt/qt5/plugins:/lib/icu

/sbin/screen &
# to force screen to run on third core, use this line instead
#on -R8 /sbin/screen &
waitfor /dev/screen 10

/usr/bin/calib-touch
```

This will launch the QNX calibration utility after system restarts.
Please notice that "calib-touch" will only starts the calibration process if the following calibration file missing:

```
/etc/system/config/calib.localhost
```

2.3 Reference

If you need more control on calibration, please read the documentation on QNX website

http://www.qnx.com/developers/docs/6.6.0_anm11_wf10/#com.qnx.doc.neutrino.utilities/topic/c/calib-touch.html