OPD-1086C/1126A/1156A
Open Frame Design Industrial Display
User Manual

Release Date	Revision
July. 2021	**V1.0**

Revision History

Reversion	Date	Description
1.0	2021/07/21	Official Dimensions

Warning!_____

This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual may cause interference to radio communications.
It has been tested and found to comply with the limits for a Class A computing device pursuant to FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Electric Shock Hazard – Do not operate the machine with its back cover removed. There are dangerous high voltages inside.

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Appendix A: Board Dimensions

Figures

Chapter 1   Getting Started

1.1 Features

- 8", 12.1", 15" Open Frame Design Industrial Display
- Metal Front Panel
- OSD at rear side
- VESA mount 75 x 75
- Optional Resistive Touch Panel, RS-232 or USB interface
- Default DC 9~36V input
- VGA, DVI, HDMI, and DP input

1.2 Specifications

	OPD-1086C	OPD-1126A	OPD-1156A
IO Port			
VGA	1		
DVI-D	1		
DP	1		
HDMI	1		
USB	1 x USB for touch control		
Audio	1 x Line-in phone jack		
Power	1 x 3-pin 11~32 V DC terminal block connector		
Others	1 x RS-232 DB-9 option for touch control 1 x AC inlet for option		
OSD			
OSD Control Membrane	OSD on the rear side		
LCD			
Display Type	8" color TFT LCD	12.1" color TFT LCD	15" color TFT LCD
Resolution	800x600	800x600 1024x768	1024x768
Max. Colors	16.2M	16.2M 16.7M	16.2M
Luminance (cd/m2)	400	450 500	300
Viewing Angle (H/V)	140/120	178/178 178/178	176/176

Contrast Ratio	500: 1	1500: 1	1000:1	2000: 1
Backlight Lifetime	40,000 hrs	50,000 hrs	30,000 hrs	50,000 hrs

Power

Power Input	Default DC 9~36V input, optional AC 100~240V input		
Power Consumption	MAX: 5.2W	MAX: 13.1W	MAX: 13.2W

Mechanical

Construction	Steel chassis		
Mounting	Panel mount / VESA Mount 75 x 75		
Dimensions(mm)	208 x 148 x 42	300 x 250 x 38	357 x 291 x 56.2
Net Weight	1.3 kg	1.9 kg	3.7 kg

Environment Specifications

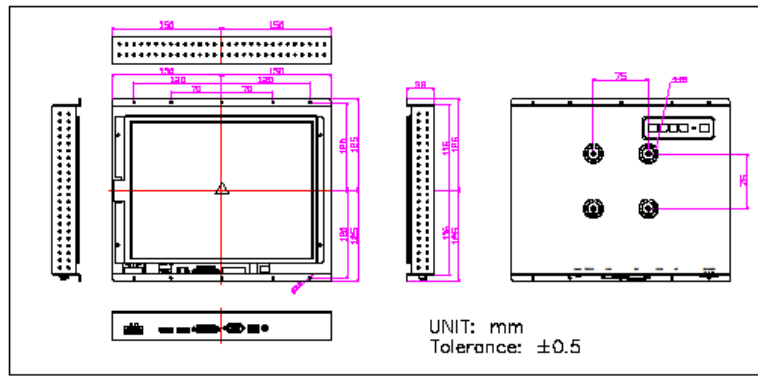| Operating Temperature	0 ~ 50 °C (-20 ~ 60 °C for option)
Storage Temperature	-30 ~ 70 °C
Storage Humidity	10 ~ 90% @40°C Non-condensing
Vibration	1G / 5 ~ 500Hz (Random) / Operation
Shock	15G peak acceleration(11 msec. duration) / Operation
Certificate	CE/FCC Class A

1.3 Dimensions

OPD-1086C USB
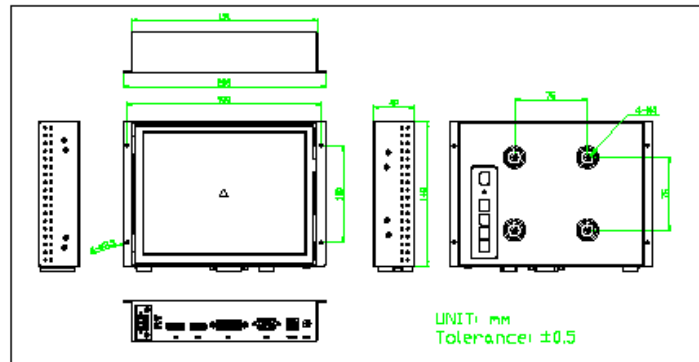
OPD-1086C RS-232
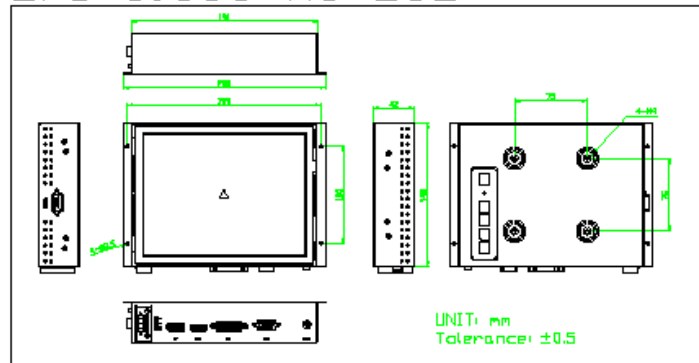
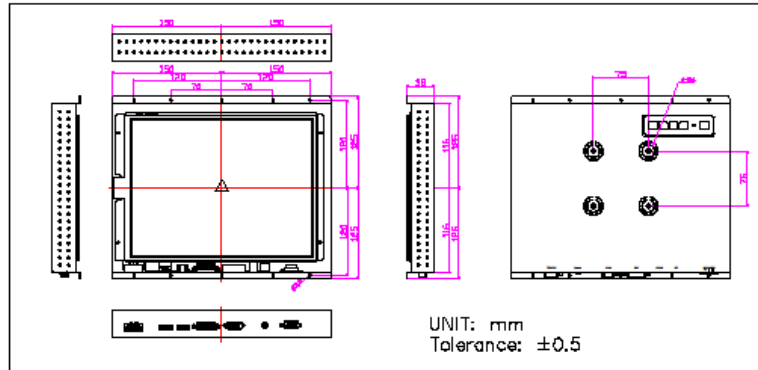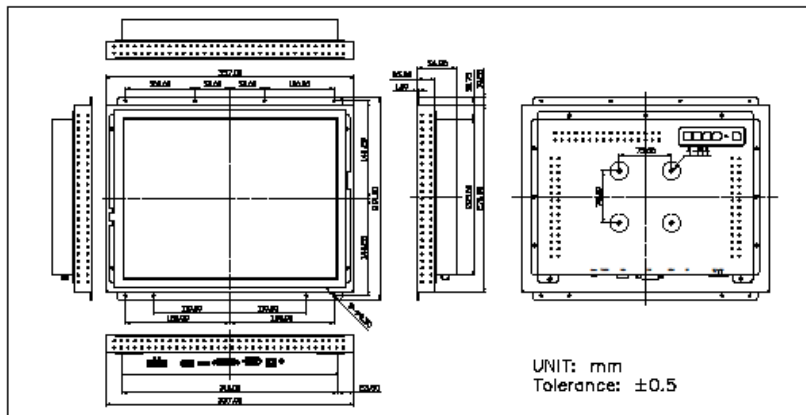**Figure 1.1: Dimensions of OPD-1086C**
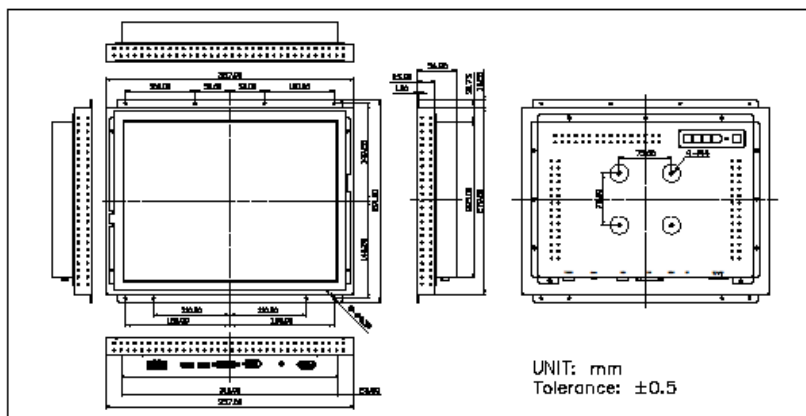
OPD-1126A USB

OPD-1126A RS-232

Figure 1.2: Dimensions of OPD-1126A

OPD-1156A USB

OPD-1156A RS232

Figure 1.3: Dimensions of OPD-1156A

1.4 Brief Description of the OPD-11x6A

The OPD-11x6A offers 8"/12.1/15" LCD open frame display the feature an excellent viewing ability for special monitoring and control applications, especially in Industrial area. It is available with resistive touch screen that is easy to use and maintain.

Figure 1.4: Overall View of OPD-11x6A

Figure 1.5: Rear View of OPD-11x6A

Chapter 2 _____ OSD

2.1 AD Board OSD Functions

Auto Adjust   Up/Left   Down/Right   Power

Menu/Entry   Power Indicator
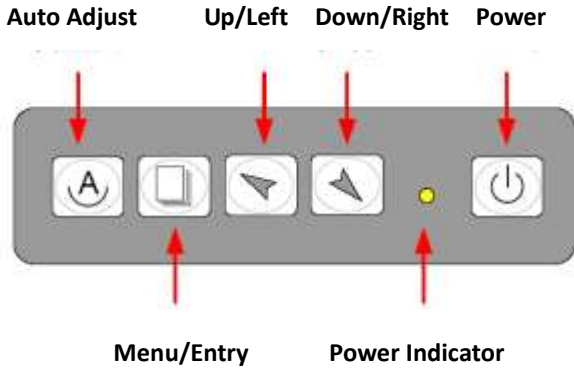
⏻ Power switch: To turn ON or OFF the power

▼ Shift the icon to the right side or shift it up

◀ Shift the icon to the left side or shift it down

🗗 Menu: To enter OSD menu for related icon and item.

Ⓐ Auto Button: One-touch auto adjustment

1.) Getting into Burn-in Mode

Before setting into a burn-in mode, first disconnect the AC power cord. Then press (don't let them go) the ▼ ◀ buttons until the AC power cord is connected and the "RGB" appears on the top left corner of your screen. Now it can be put into the burn-in mode for changing colors.

2.) Getting Out of Burn-in Mode

Before getting out of the burn-in mode, please first disconnect the AC power cord. Then press the ▼ button (If not workable, press the ◀ button and don't let them go) until the AC power cord is connected. Please don't let your fingers go until the AC power cord is connected again and the wording of "RGB" appears on the top left corner of your screen, and wait for 3 second. Under the non-signal entry situation, if is seen, exit is thus successfully made.

Cable Not Connected

When the Burn-in Mode is Unable to Eradicate…

1.) If the "RGB" is still on the top left corner of the screen, press 🗗 to enter "Miscellaneous" and choose "Reset", and then **Yes,** and press 🗗. When the screen goes black, disconnect power and repeat the above steps.

2.) If the "RGB" is not found, disconnect the AC power cord first. Then press the ⟨A⟩ ▲ buttons (don't let them go) until the AC power cord is connected, and wait for 2 to 3 seconds. When "RGB" appears, repeat the above steps.

2.2 OSD Controls

To make any adjustment, select the following:
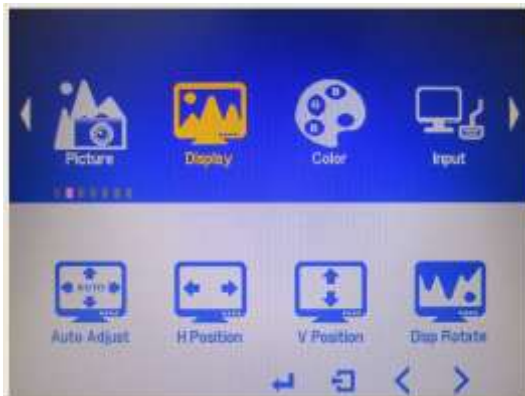
1. Press ▯ (Menu) to show the OSD menu or disable the OSD menu.

2. Select the icon that you wish to adjust with the (▼/▲ or +/-) key in the menu.

3. Press ▯ (Menu) and then choose the item or adjust the numerals with the (▼/▲ or +/-) key.
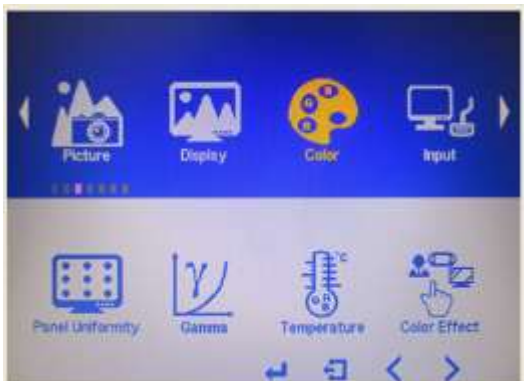
2.3 Main Menu

In the **PICTURE**, there are the following items:

● AutoBacklight

● Backlight

● Brightness:

● Contrast

● Sharpness

● Exit

In the **DISPLAY**, there are the following items:
● AutoAdjust
● H Position
● V Position
● Disp Rotate
● Exit

In the **COLOR**, there are the following items:

● Panel Uniformity
● Gamma
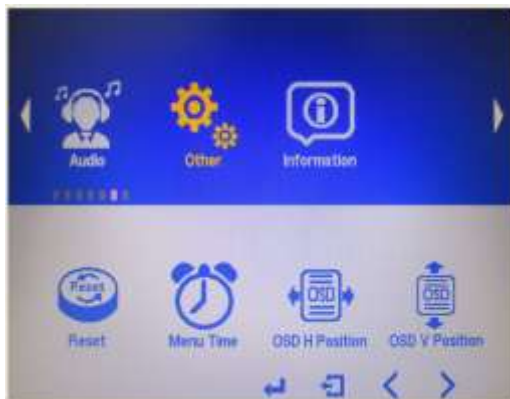● Temperature
● Color Effect
● Exit

In the **INPUT**, there are the following items:

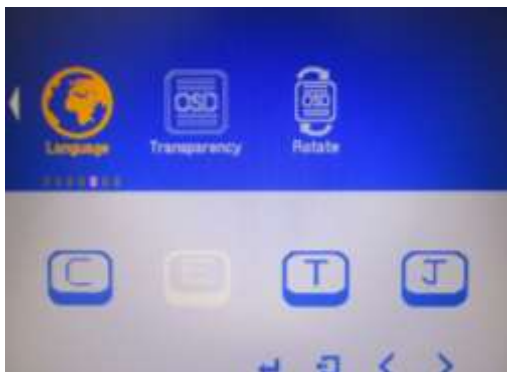● A0:VGA

● D1:DP

● D3:HDMI

● Exit

In the **AUDIO**, there are the following items:

● Volume

● Mute

● Audio Source

● Exit

In the **OTHER**, there are the following items:

● Reset

● Menu Time

● OSD H Position

● OSD V Position

● Language

● Transparency

● Rotate

● Exit

Information part.

Chapter 3   Installation

This chapter describes how to install drivers and other software that will allow your touch screen work with different operating systems.
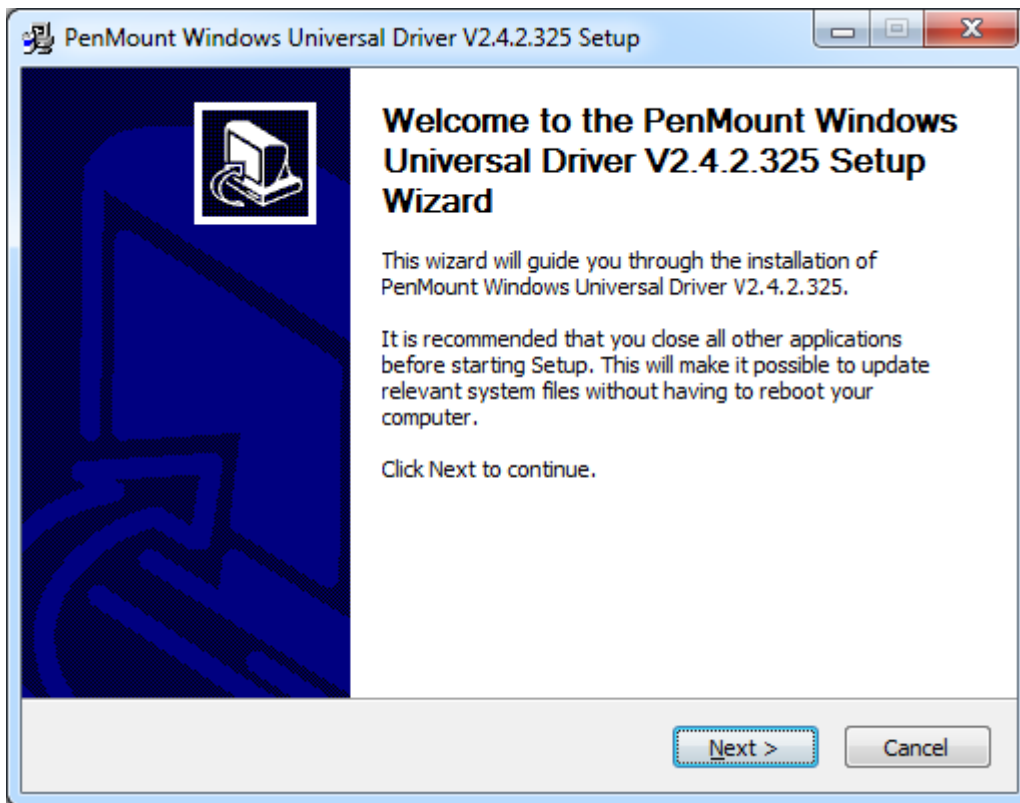
3.1 Windows 7 Universal Driver Installation for PenMount 6000 Series

Before installing the Windows 7 driver software, you must have the Windows 7 system installed and running on your computer. You must also have one of the following PenMount 6000 series controller or control boards installed: PM6500, PM6300.
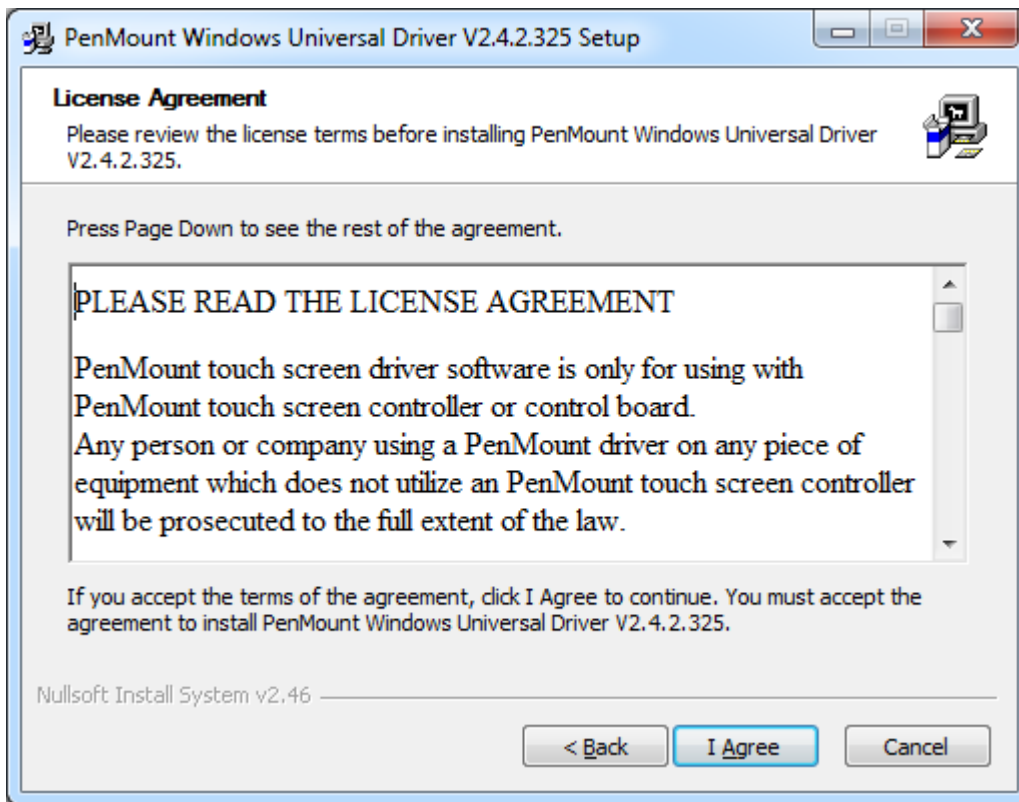
3.1.1 Installing Software(Resistive Touch)

If you have an older version of the PenMount Windows 7 driver installed in your system, please remove it first. Follow the steps below to install the PenMount DMC6000 Windows 7 driver.
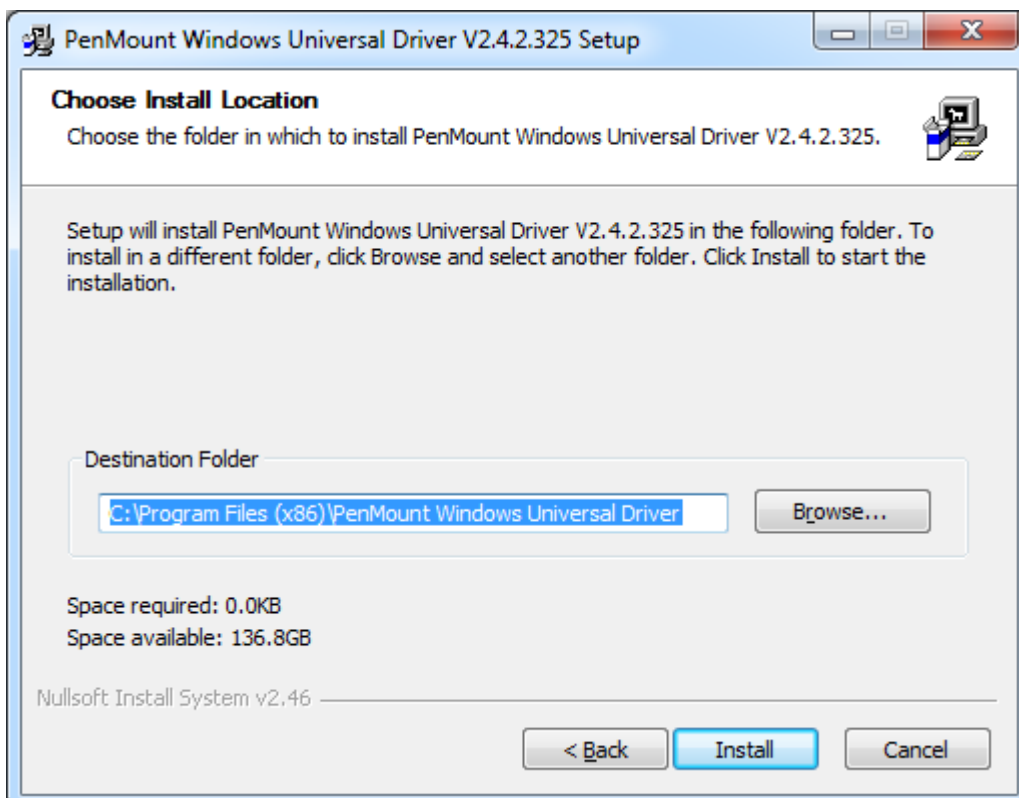
Step 1. Click **Next** to continue.

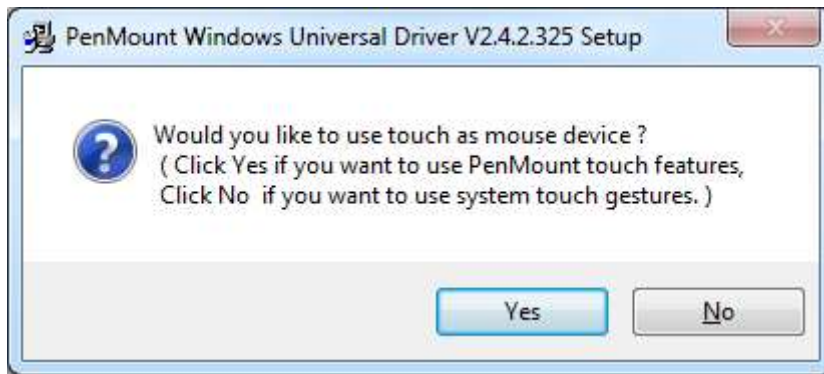**Step 2.** Read the license agreement.   Click **I Agree** to agree the license agreement.

Step 3. Choose the folder in which to install PenMount Windows Universal Driver. Click **Install** to start the installation.

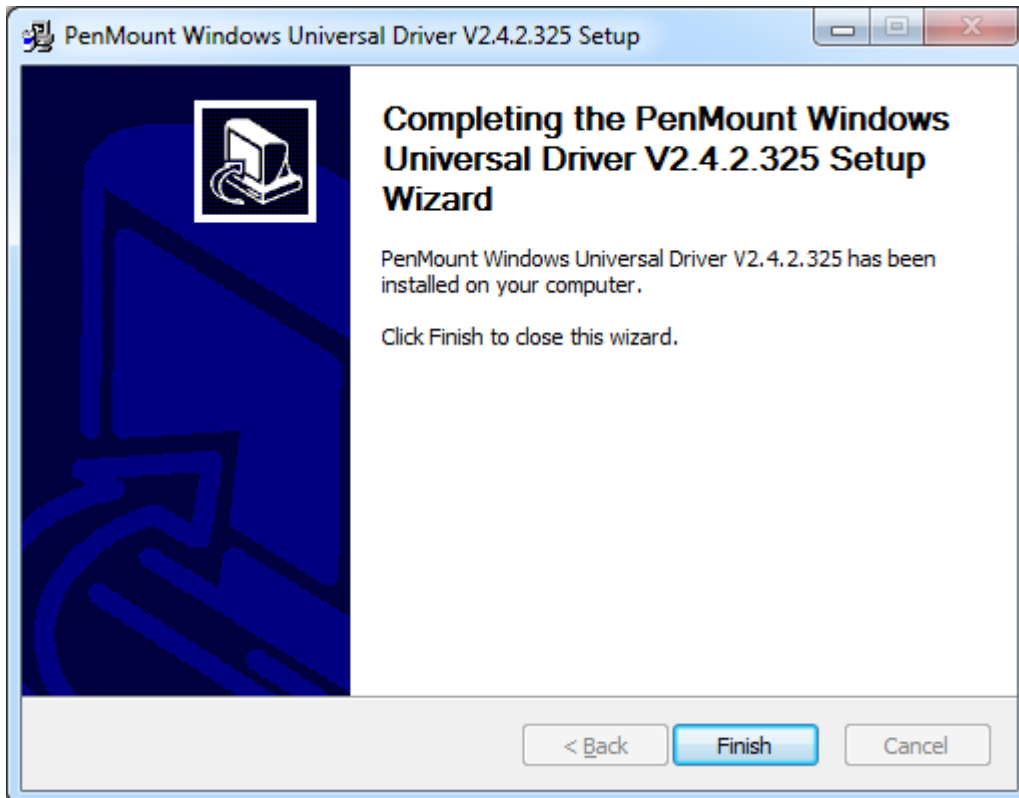
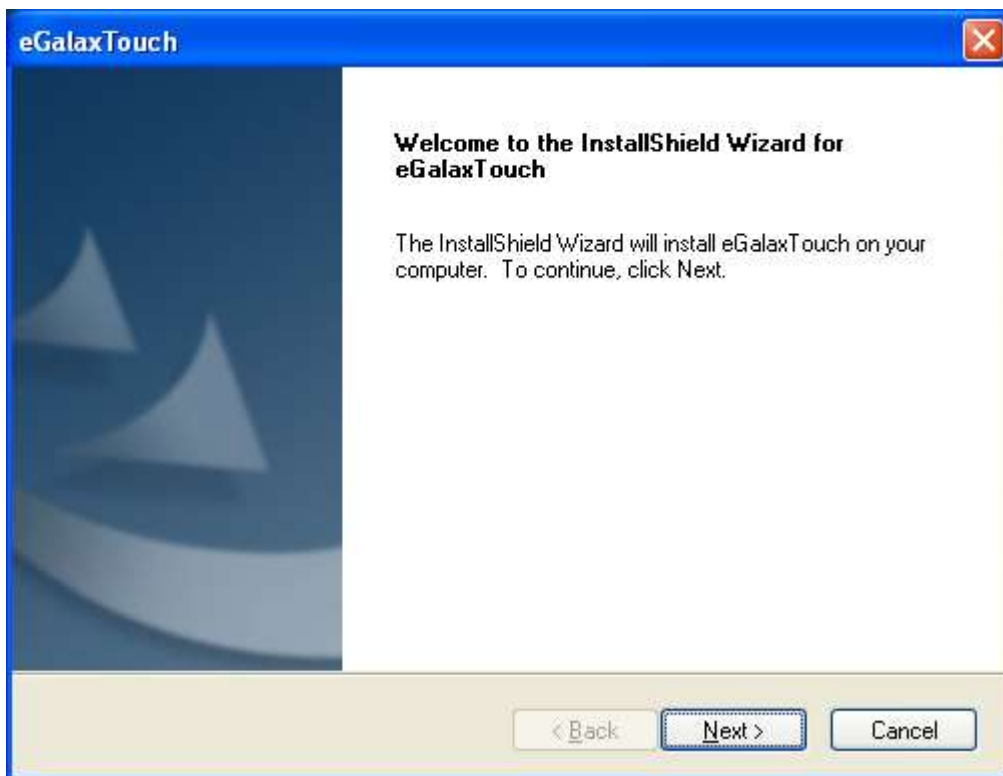**Step 4.** Click **Yes** to continue.

Step 5. Click **Finish** to complete installation.

3.1.2 Installing Software (Projected Capacitive)
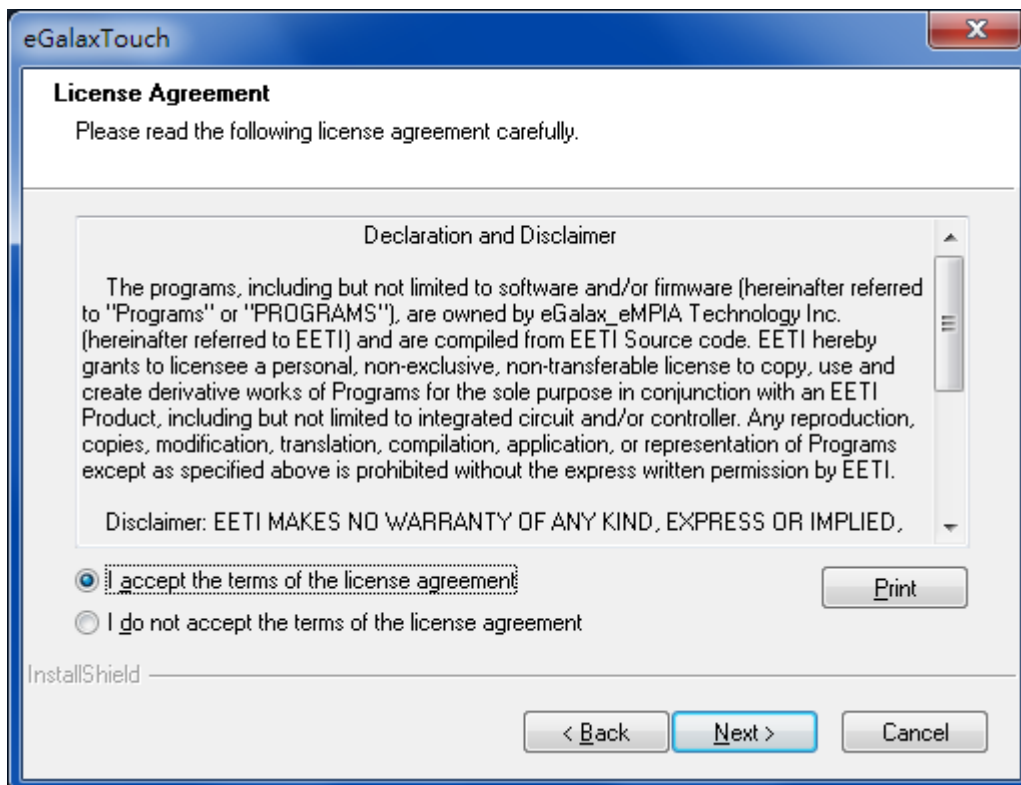
Step 1. Click **Next** to continue.

Step 2. Select **I accept the terms of the license agreement**.   Click **Next.**

Step.3. Click **Next** to continue.
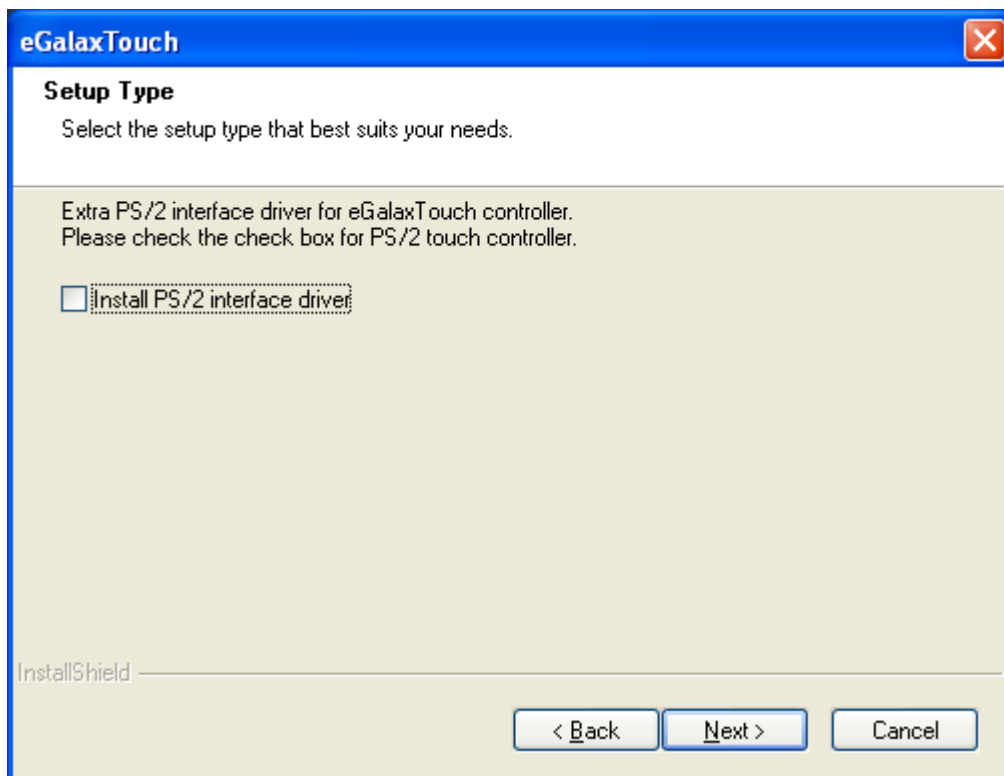
Step 4. Click **Install RS232 interface driver**.
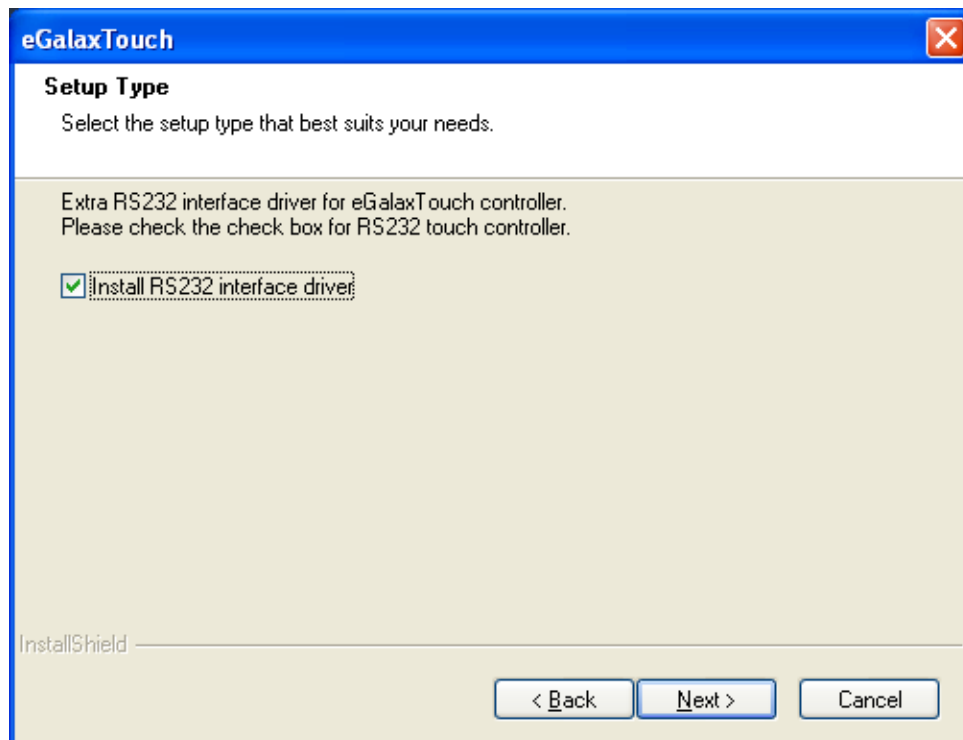
Step 5. Select **None**.　Click **Next**.
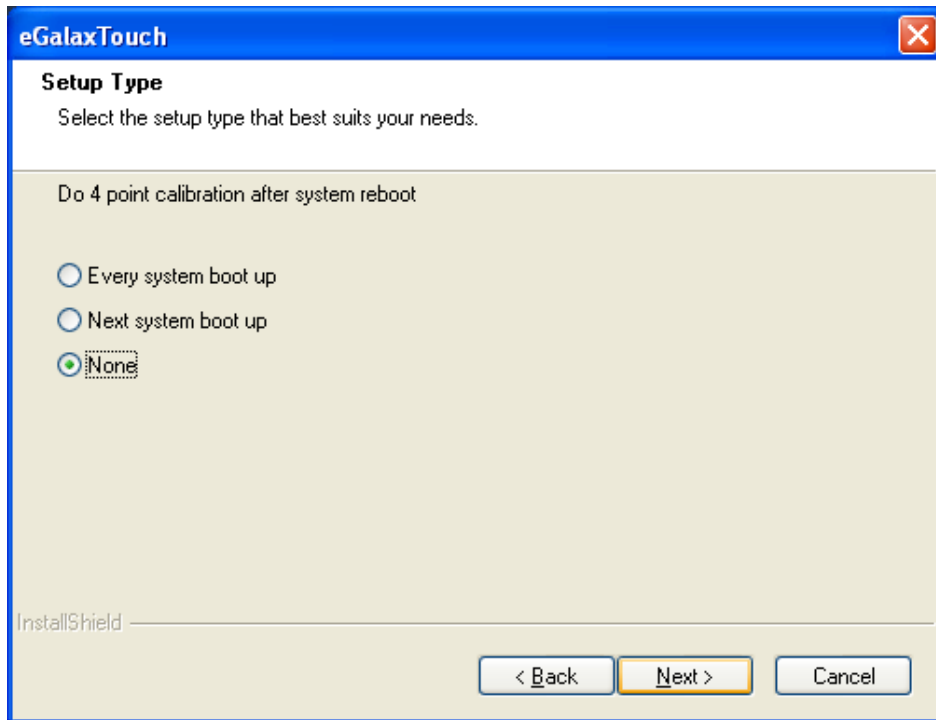
Step 6. Click **OK.**
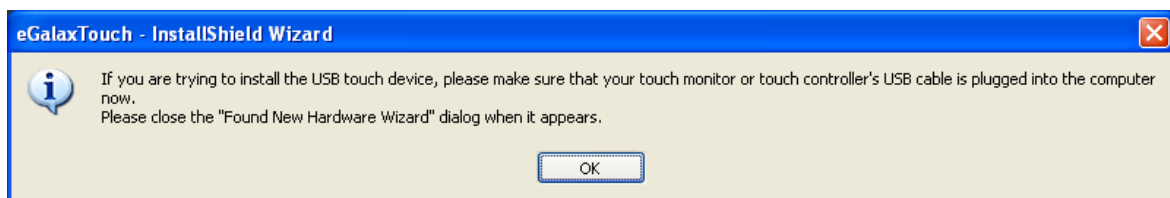
Step 7. Click **Support Muti-Monitor System**.　Click **Next.**
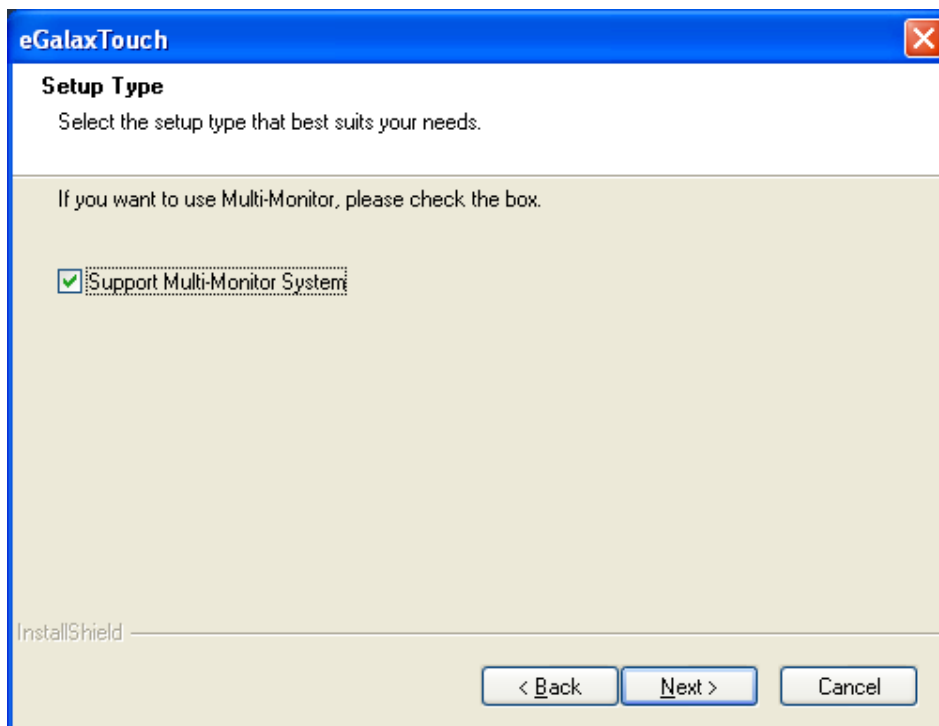
Step 8. Go to **C:\Program Files\eGalaxTouch**.   Click **Next**.

Step 9. Click **Next.**

Step 10. Click **Create a eGalaxTouch Utility shortcut on desktop**.　Click **Next**.

Step 11. Wait for installation.

Step 12. Click **Yes** to do 4 point calibration.

3.2 Software Functions

3.2.1 Software Functions(Resistive Touch)

Upon rebooting, the computer automatically finds the new 6000 controller board. The touch screen is connected but not calibrated. Follow the procedures below to carry out calibration.

1. After installation, click the PenMount Monitor icon "PM" in the menu bar.
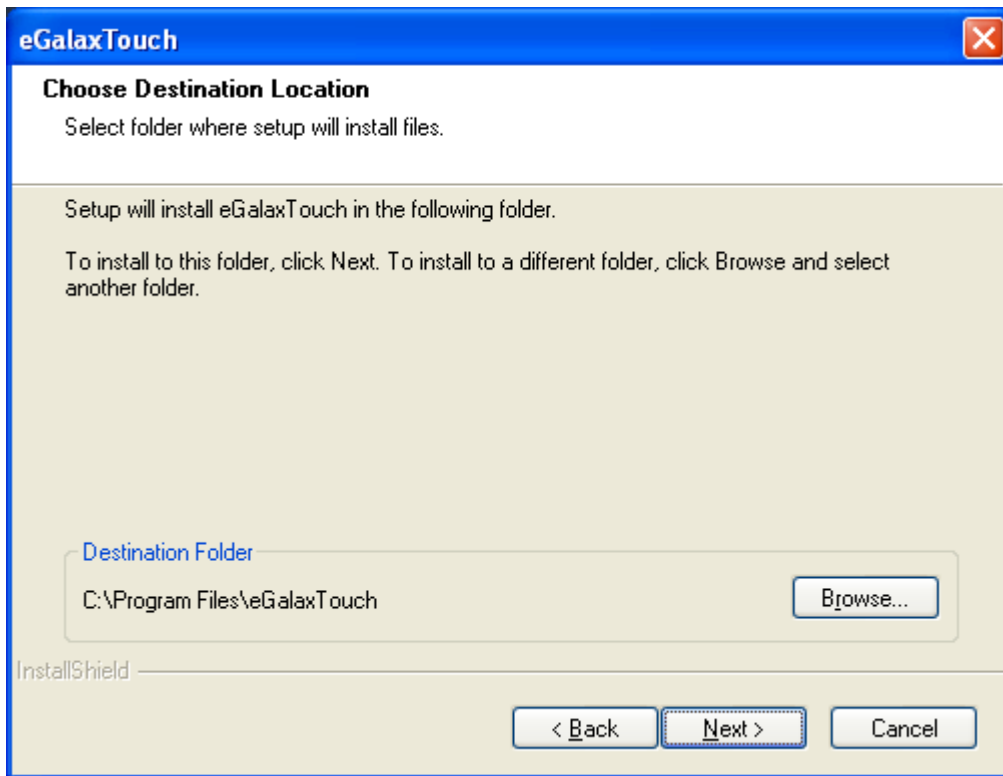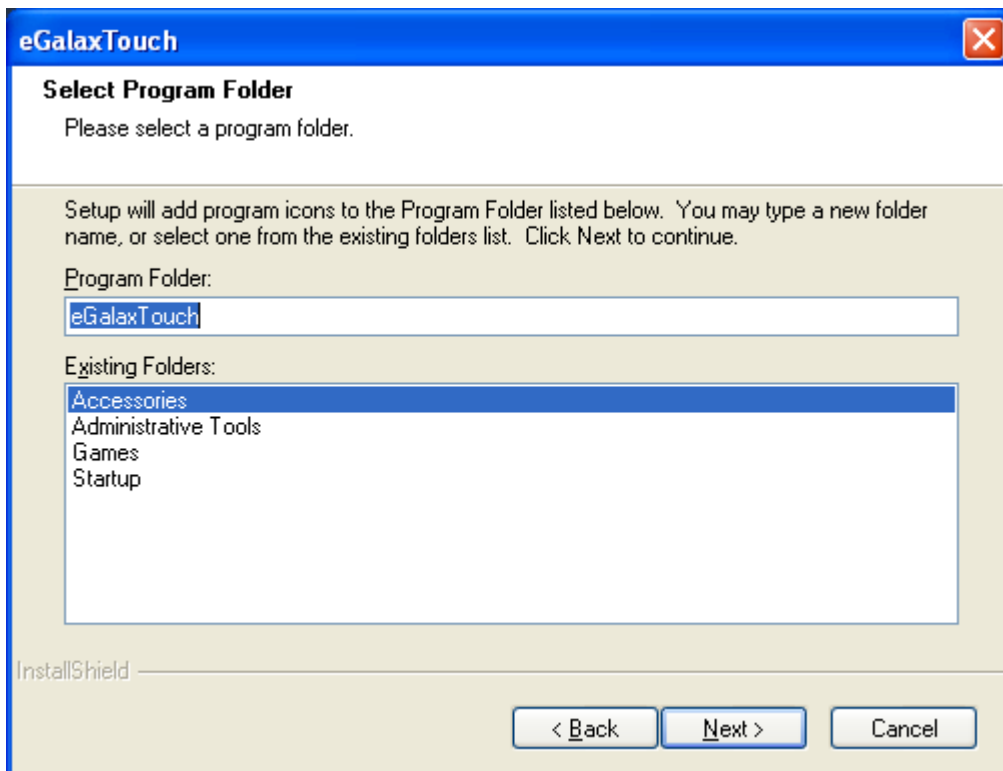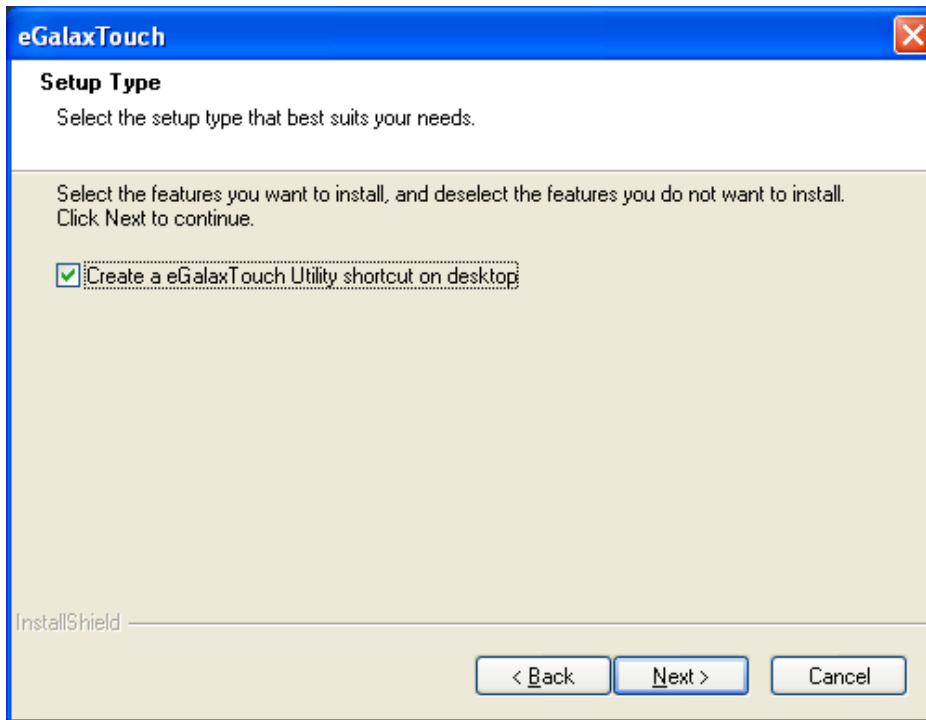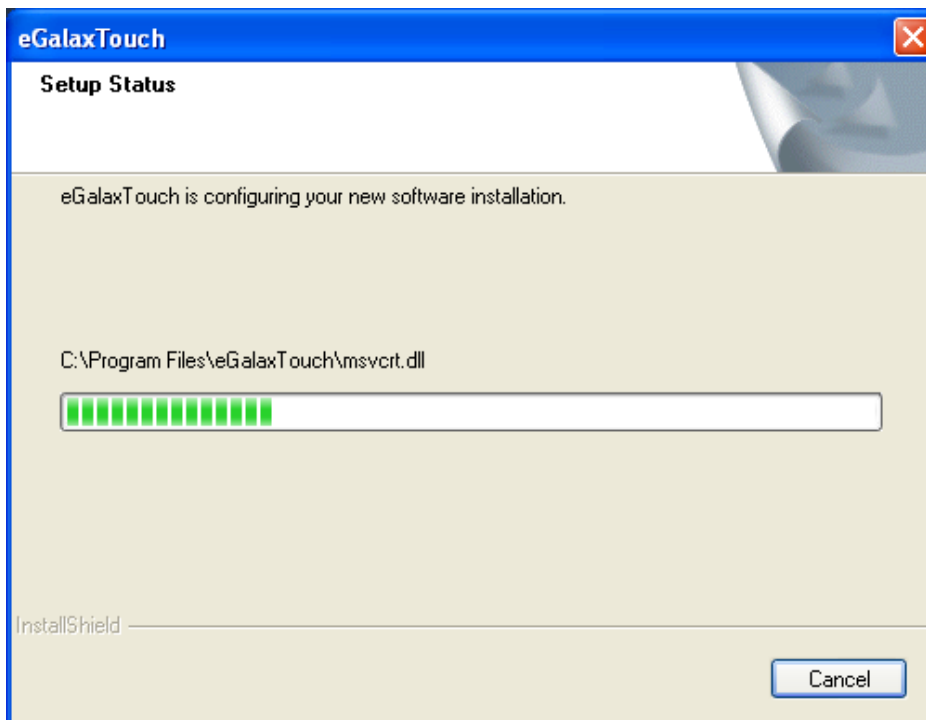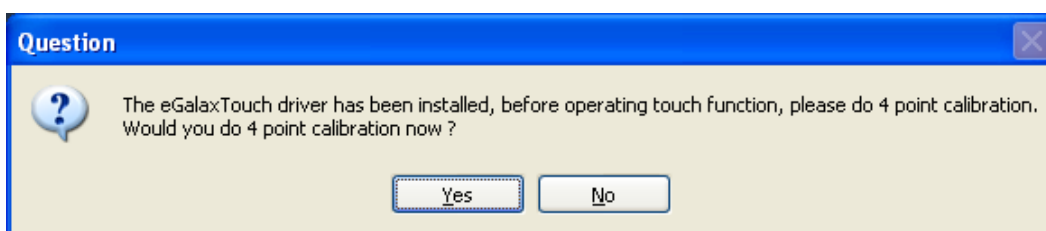2. When the PenMount Control Panel appears, select a device to "Calibrate."

PenMount Control Panel(Resistive Touch)

The functions of the PenMount Control Panel are **Device, Multiple Monitors** ,**Tools** and **About**, which are explained in the following sections.

Device

In this window, you can find out that how many devices be detected on your system.
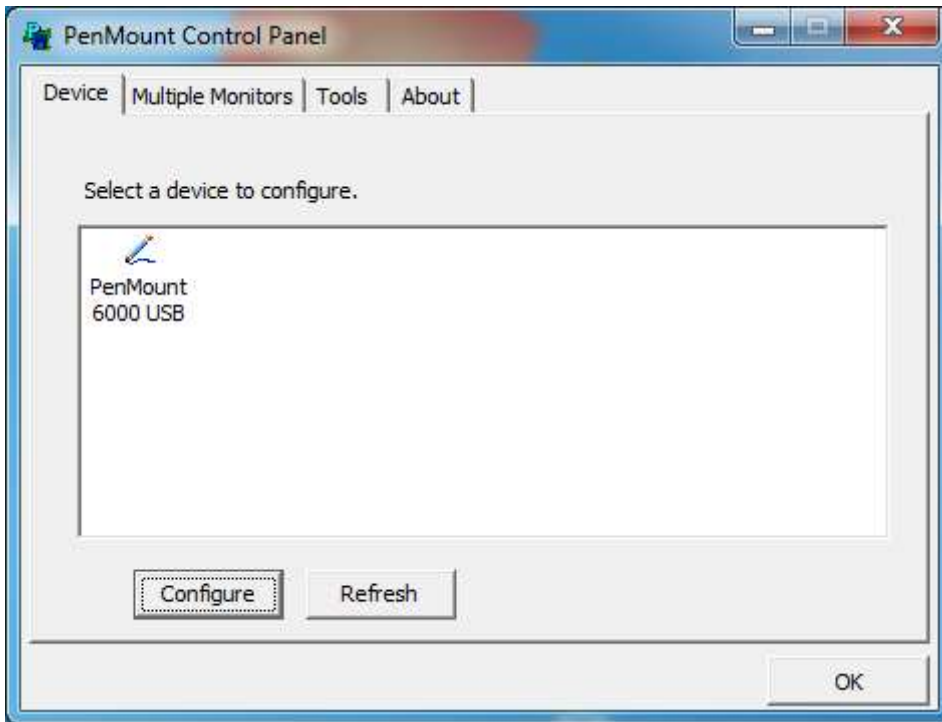
Calibrate

This function offers two ways to calibrate your touch screen. 'Standard Calibration' adjusts most touch screens. 'Advanced Calibration' adjusts aging touch screens.

Standard Calibration	**Click this button and arrows appear pointing to red squares. Use your finger or stylus to touch the red squares in sequence. After the fifth red point calibration is complete. To skip, press 'ESC'.**

Advanced Calibration	**Advanced Calibration uses 4, 9, 16 or 25 points to effectively calibrate touch panel linearity of aged touch screens. Click this button and touch the red squares in sequence with a stylus. To skip, press ESC'.**

Step 1. Please select a device then click "Configure". You can also double click the device too.
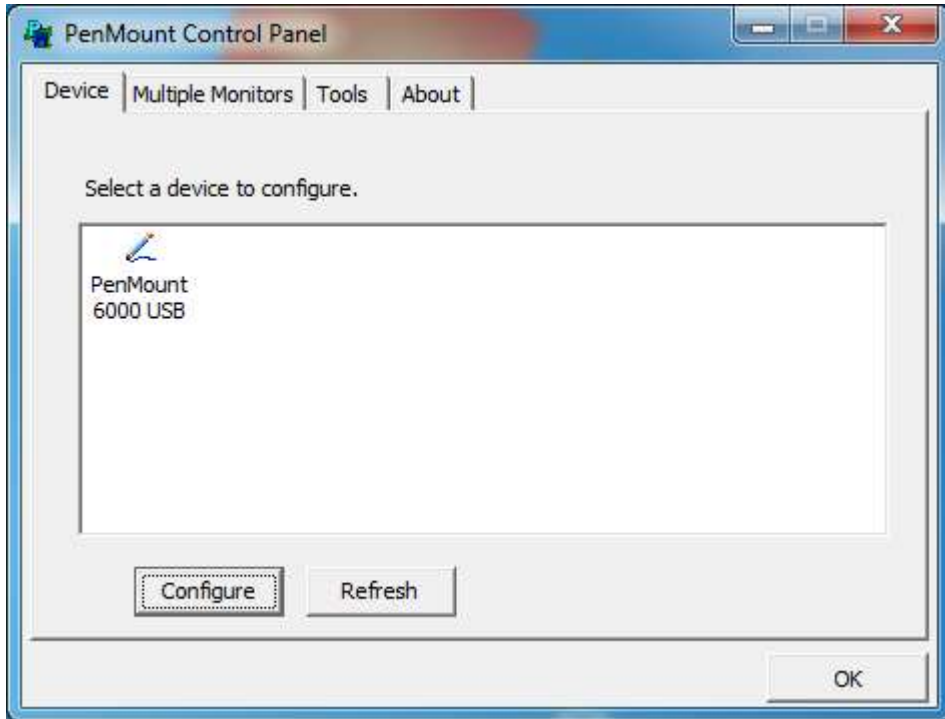
Step 2. Click "**Standard Calibration**" to start calibration procedure
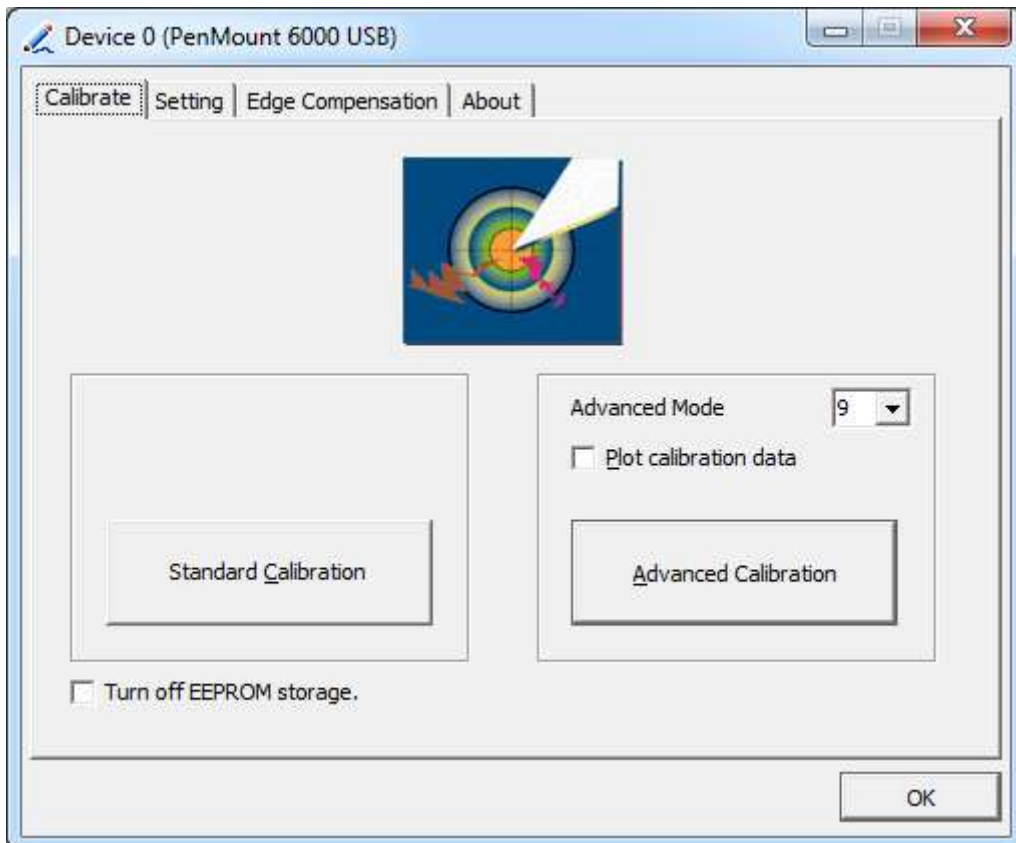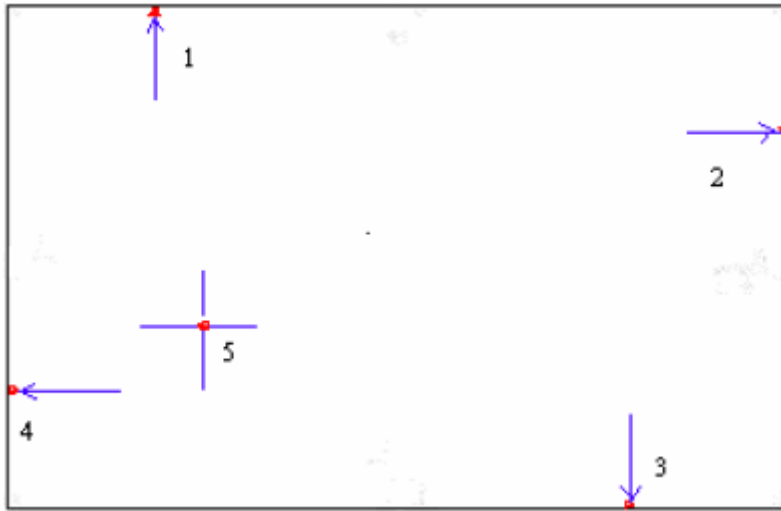
NOTE: The older the touch screen, the more Advanced Mode calibration points you need for an accurate calibration. Use a stylus during Advanced Calibration for greater accuracy. Please follow the step as below:

Step 3. Select **Device** to calibrate, then you can start to do **Advanced Calibration**.
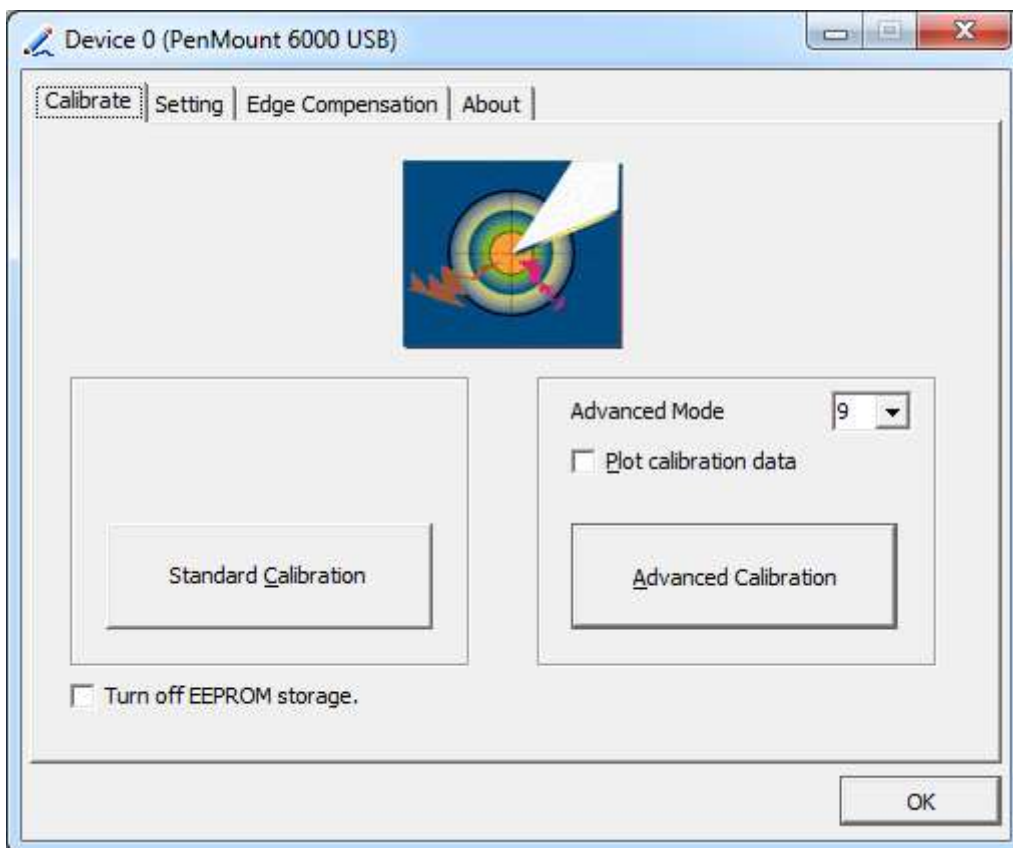
NOTE: Recommend to use a stylus during Advanced Calibration for greater accuracy.
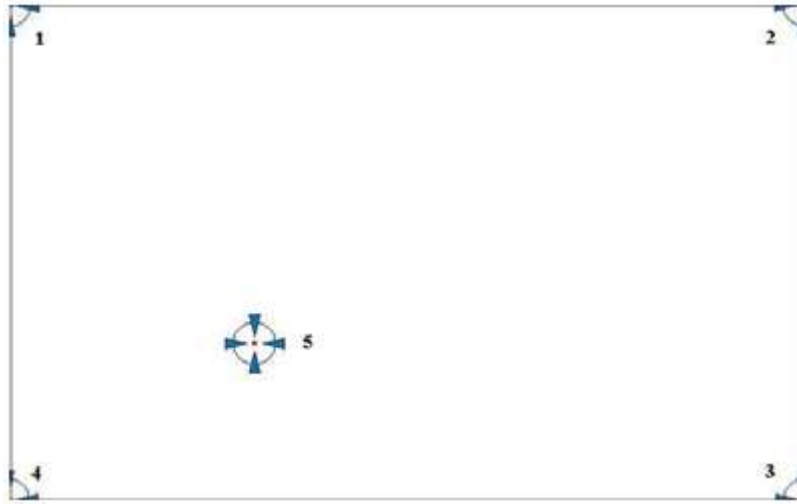
Plot Calibration Data	**Check this function and a touch panel linearity comparison graph appears when you have finished Advanced Calibration. The blue lines show linearity before calibration and black lines show linearity after calibration.**
Turn off EEPROM storage	**The function disable for calibration data to write in Controller. The default setting is Enable.**

Setting

Touch Mode	**This mode enables and disables the mouse's ability to drag on-screen icons – useful for configuring POS terminals. Mouse Emulation – Select this mode and the mouse functions as normal and allows dragging of icons. Click on Touch – Select this mode and mouse only provides a click function, and dragging is disables.**
Beep Sound	**Enable Beep Sound – turns beep function on and off** **Beep on Pen Down – beep occurs when pen comes down** **Beep on Pen Up – beep occurs when pen is lifted up** **Beep on both – beep occurs when comes down and lifted up** **Beep Frequency – modifies sound frequency** **Beep Duration – modifies sound duration**
Cursor Stabilizer	**Enable the function support to prevent cursor shake.**
Use press and hold as right click	**You can set the time out and area for you need.**

Edge Compensation

You can use Edge Compensation to calibrate more subtly.
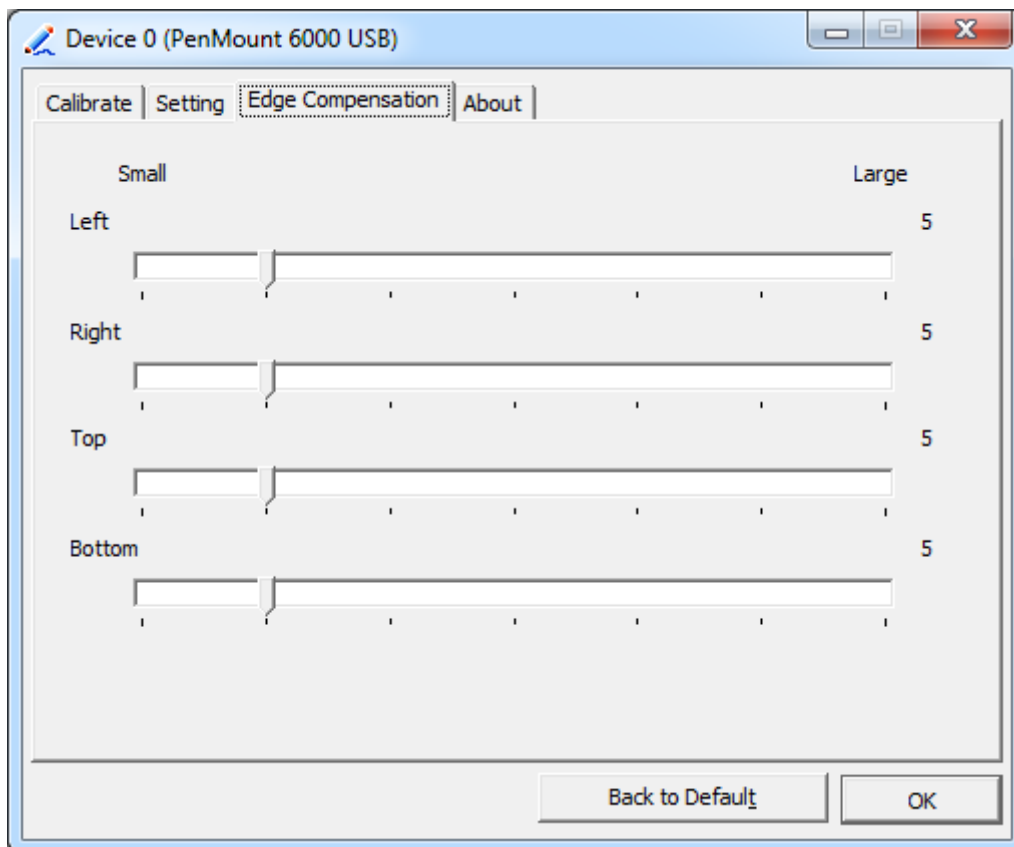
About

This panel displays information about the PenMount controller and driver version.

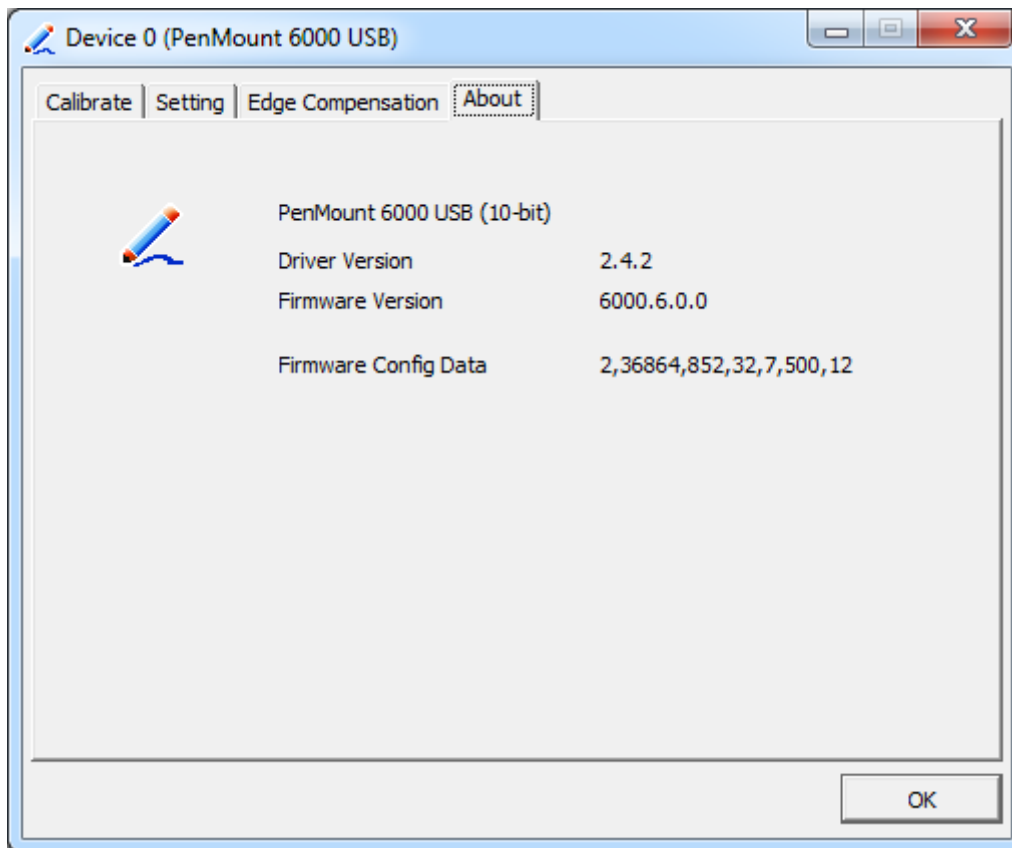## Multiple Monitors

Multiple Monitors support from two to six touch screen displays for one system. The PenMount drivers for Windows 7 support Multiple Monitors. This function supports from two to six touch screen displays for one system. Each monitor requires its own PenMount touch screen control board, either installed inside the display or in a central unit. The PenMount control boards must be connected to the computer COM ports via the USB interface. Driver installation procedures are the same as for a single monitor. Multiple Monitors support the following modes:

> Windows Extends Monitor Function
> Matrox DualHead Multi-Screen Function
> nVidia nView Function

- **NOTE:** The Multiple Monitor function is for use with multiple displays only. Do not use this function if you have only one touch screen display. Please note once you turn on this function the rotating function is disabled.

Enable the multiple display function as follows:

1. Check the **Enable Multiple Monitor Support** box; then click **Map Touch Screens** to assign touch controllers to displays.
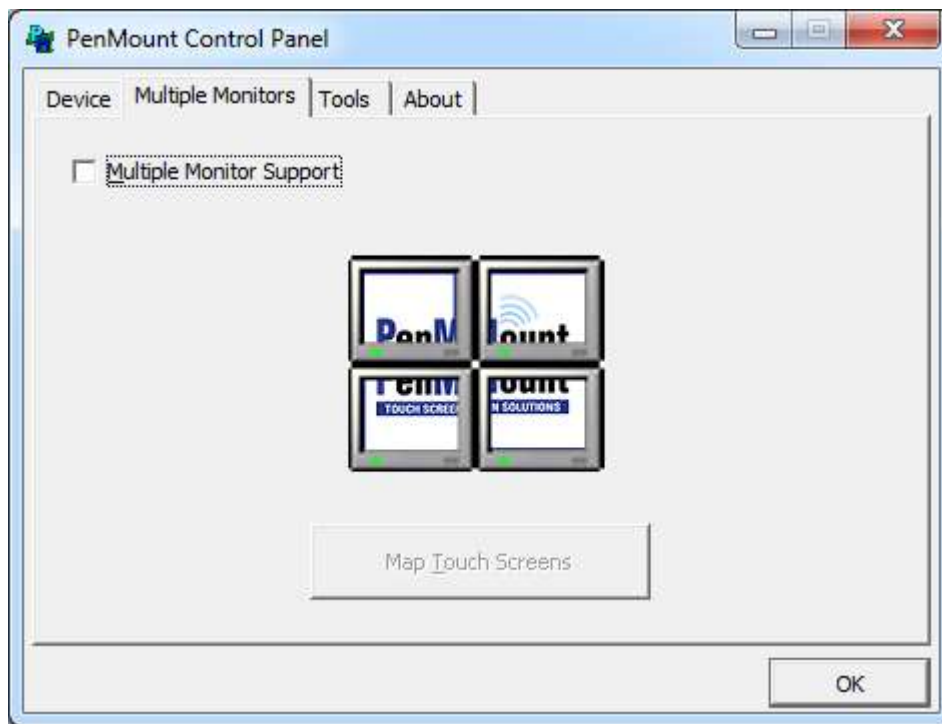
2. When the mapping screen message appears, click **OK.**
3. Touch each screen as it displays "Please touch this monitor". Following this sequence and touching each screen is called **mapping the touch screens.**

Please touch this monitor

4. Touching all screens completes the mapping and the desktop reappears on the monitors.
5. Select a display and execute the "Calibration" function. A message to start calibration appears. Click **OK.**


Calibrate

To start calibration, please touch the panel to calibrate in the following screen.

OK

6. "Touch this screen to start its calibration" appears on one of the screens. Touch the screen.
7. "Touch the red square" messages appear. Touch the red squares in sequence.
8. Continue calibration for each monitor by clicking **Standard Calibration** and touching the red squares.

NOTES:

1. If you use a single VGA output for multiple monitors, please do not use the **Multiple Monitor** function. Just follow the regular procedure for calibration on each of your desktop monitors.

2. The Rotating function is disabled if you use the Multiple Monitor function.

3. If you change the resolution of display or screen address, you have to redo **Map Touch Screens,** so the system understands where the displays are.
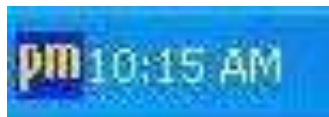
About

This panel displays information about the PenMount controller and this driver version.
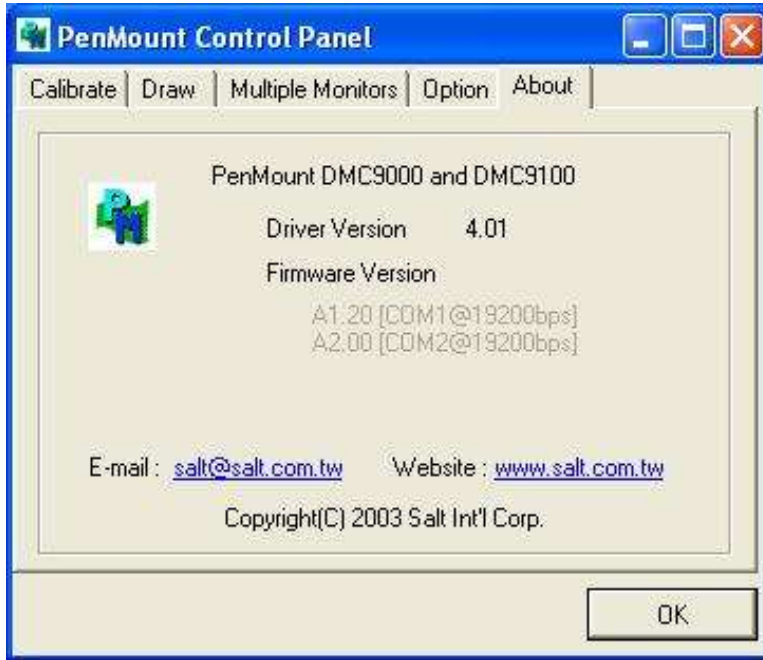
PenMount Monitor Menu Icon

The PenMount monitor icon (PM) appears in the menu bar of Windows 7 system when you turn on PenMount Monitor in PenMount Utilities.


PenMount Monitor has the following function

Control Panel	**Open Control Panel Windows**
Beep	**Setting Beep function for each device**
Right Button	**When you select this function, a mouse icon appears in the right-bottom of the screen.**

	Click this icon to switch between Right and Left Button functions.
Exit	Exits the PenMount Monitor function.

Configuring the Rotate Function

1. Install the rotation software package.

2. Choose the rotate function (0°, 90°, 180°, 270°) in the 3rd party software. The calibration screen appears automatically. Touch this point and rotation is mapped.
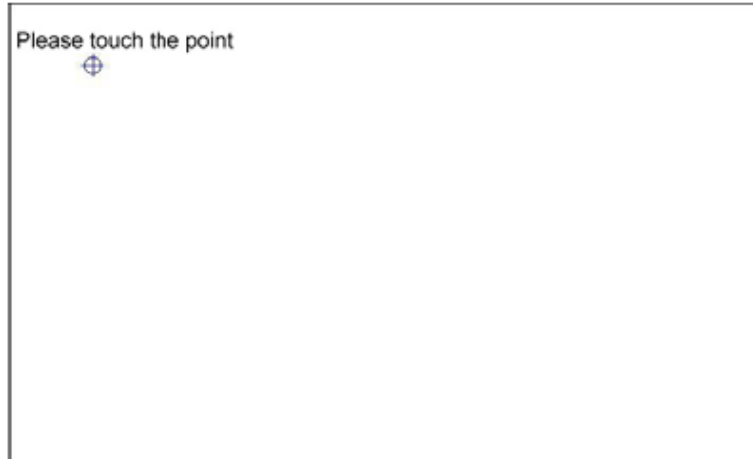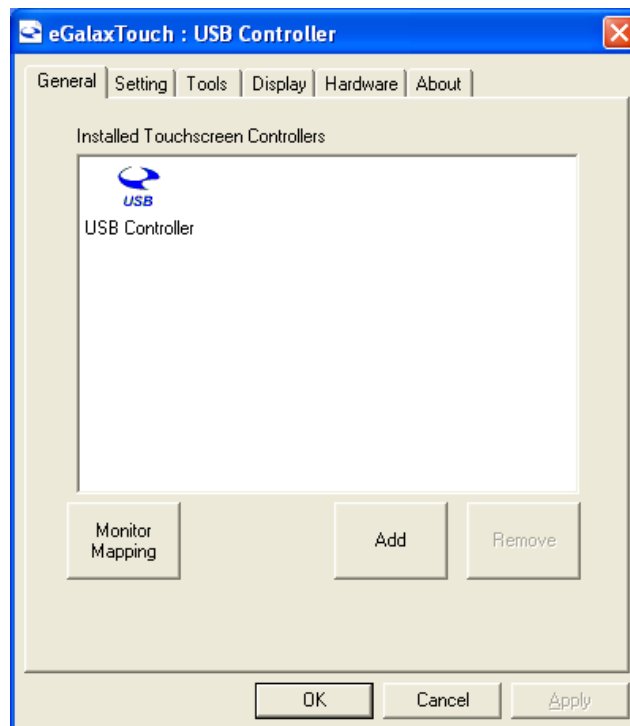

NOTE: The Rotate function is disabled if you use Monitor Mapping

3.2.2 Software Functions(Projected Capacitive)

General

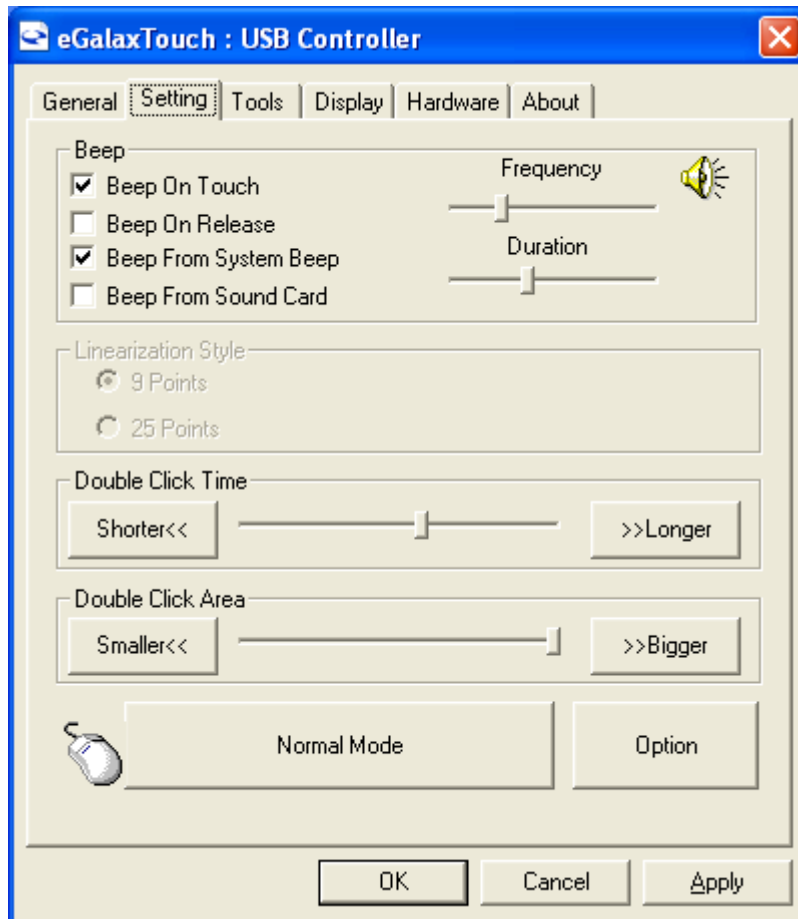In this window, you can see there is USB Controller.   Click **OK** to continue.

Monitor Mapping

    to adjust touch panel

Add

    to search for device

Setting

Beep

    Beep On Touch

    Beep On Release

    Beep From System Beep

    Beep From Sound Card

Linearization Style

    9 points

    25 points

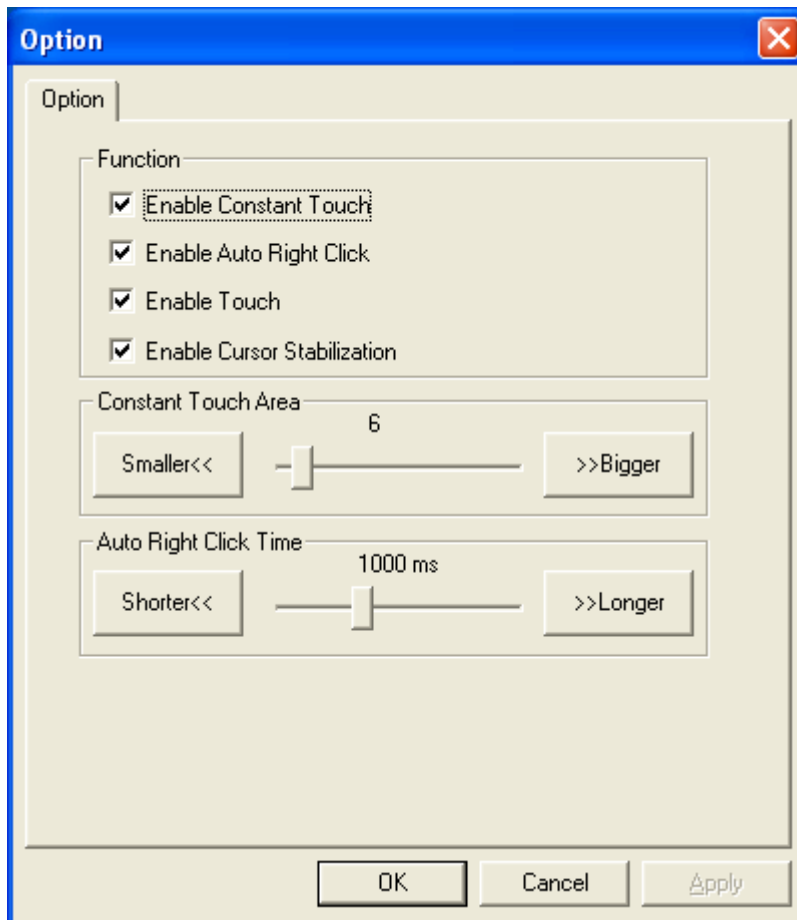**Double Click Time**

    Shorter

    Longer

Double Click Area

    Smaller

    Bigger

Normal mode

Simulate the mouse mode

Option

Function

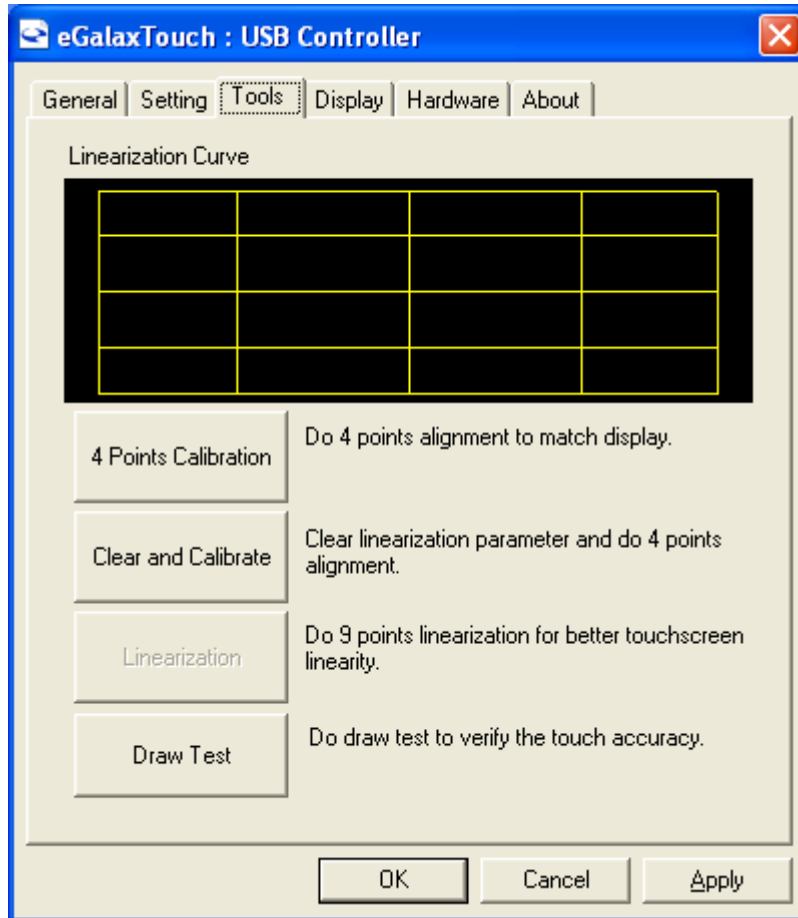Enable Constant Touch

Enable Auto Right Click

Enable Touch

Enable Cursor Stabilization

Constant Touch Area

Auto Right Click Time

Tools

Click **OK** to continue the settings.

4 Points Calibration
   Do 4 points alignment to match display.

Clear and Calibrate
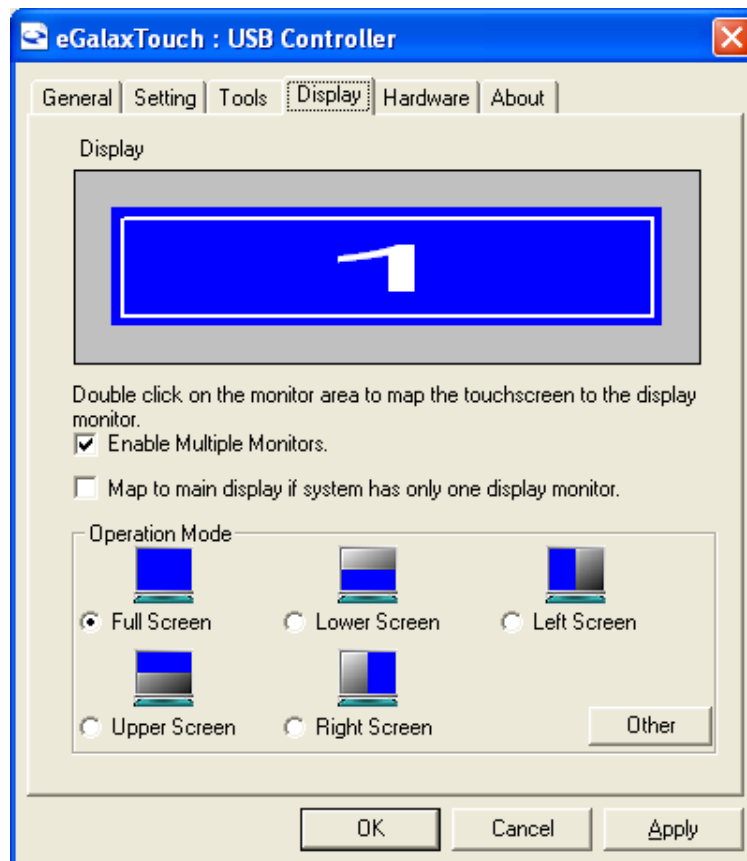   Clear linearization parameter and do 4 points alignment.

Linearization
   Do 9 points linearization for better touchscreen linearity.

Draw Test
   Do draw test to verify the touch accuracy.

Display

In this window, it shows the mode of display.

Enable Multiple Monitors.

Map to main display if system has only one display monitor
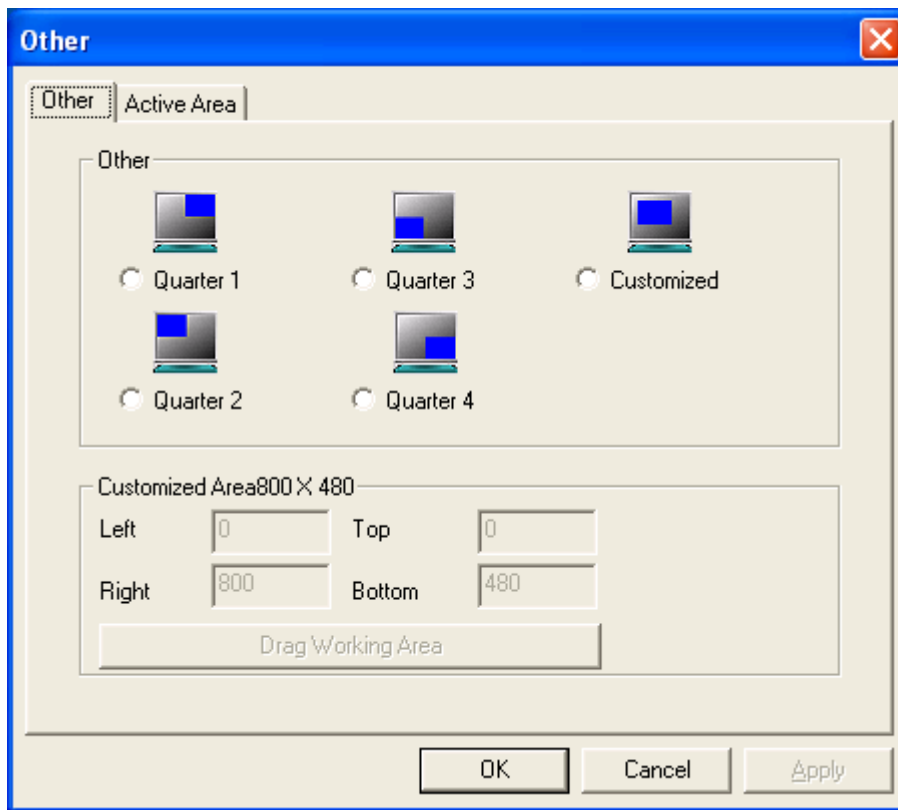
     Full Screen

     Lower Screen

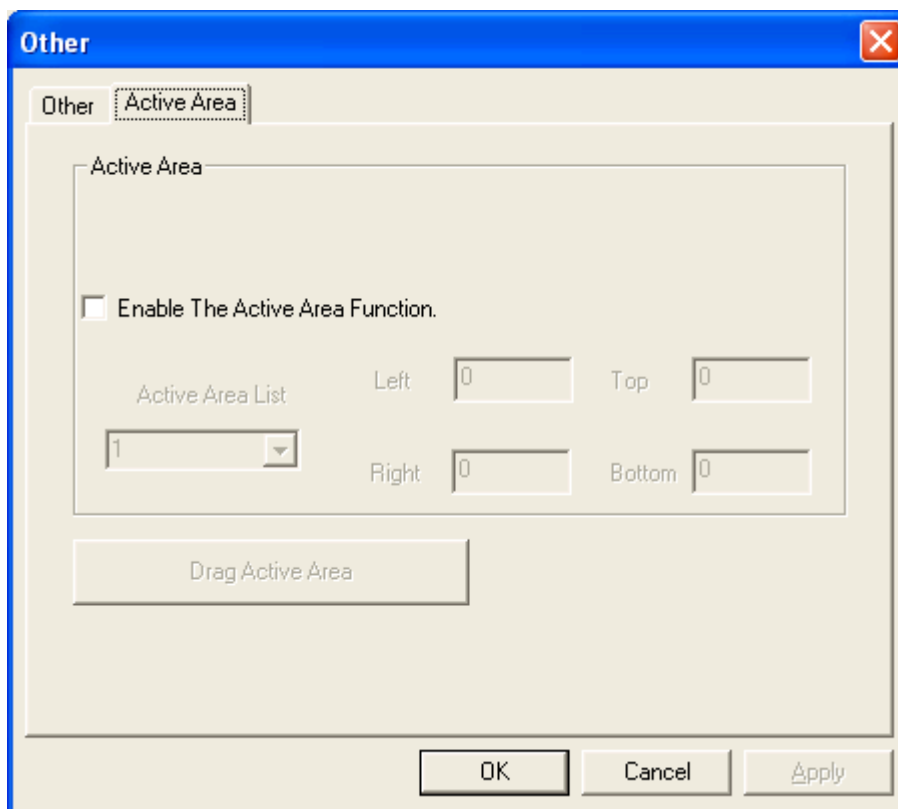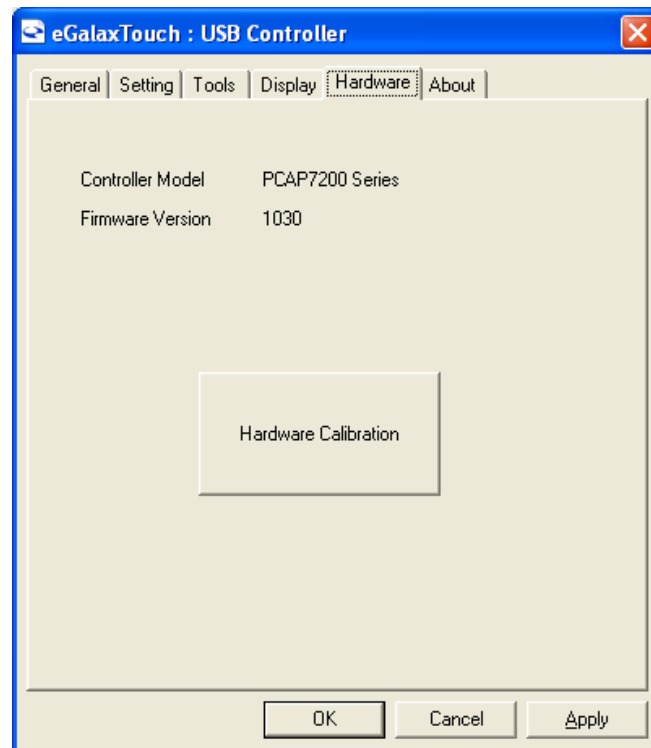   Left Screen

     Upper Screen

     Right Screen

Other

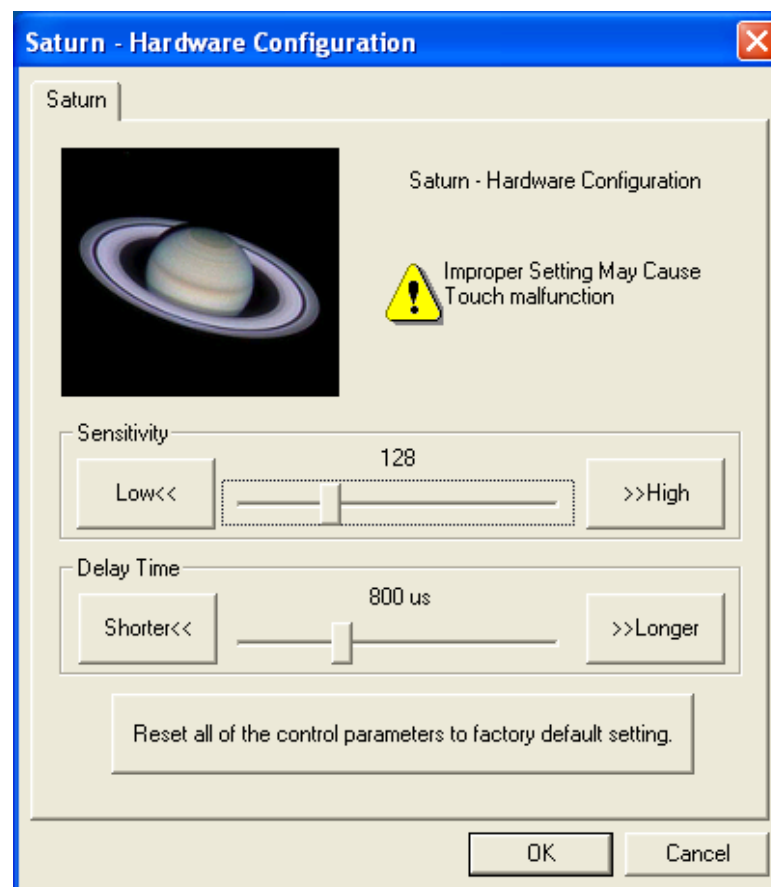   Other mode of display. Quarter1~4 and Customized area.

Active Area

   Drag active area to enable Active Area Function.
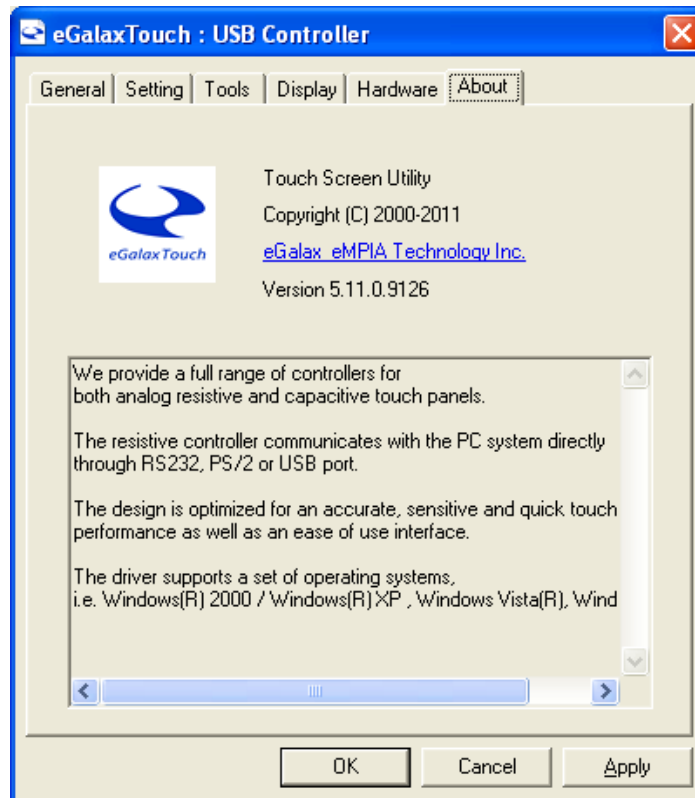
Hardware

Saturn Hardware Configuration

About

To display information about eGalaxTouch and its version.

Appendix A: Board Dimensions

Specifications

Specifications	
Board Size	170 x 113 mm
Chipset	Realtek RTD2556T-CG
Input	1 x VGA Port 1 x HDMI (Share with DVD-D) 1 x DVI-D (Share with HDMI) 1 x DP Port 1 x USB 2.0 (Type B)
Output	1 x 24bit LVDS Full HD interface 1 x eDP 1 x Line out (Audio jack)
Resolution	Up to 1920 x 1080 @60Hz for LVDS Up to 1920 x 1080 @60Hz for eDP
Power input	DC 9~36V input
Temperature	Operating: -20℃ to 70℃ Storage: -40℃ to 85℃
Humidity	10~90%, non-condensing, operating
EMI/EMS	Meet CE/FCC class A

Board Dimensions
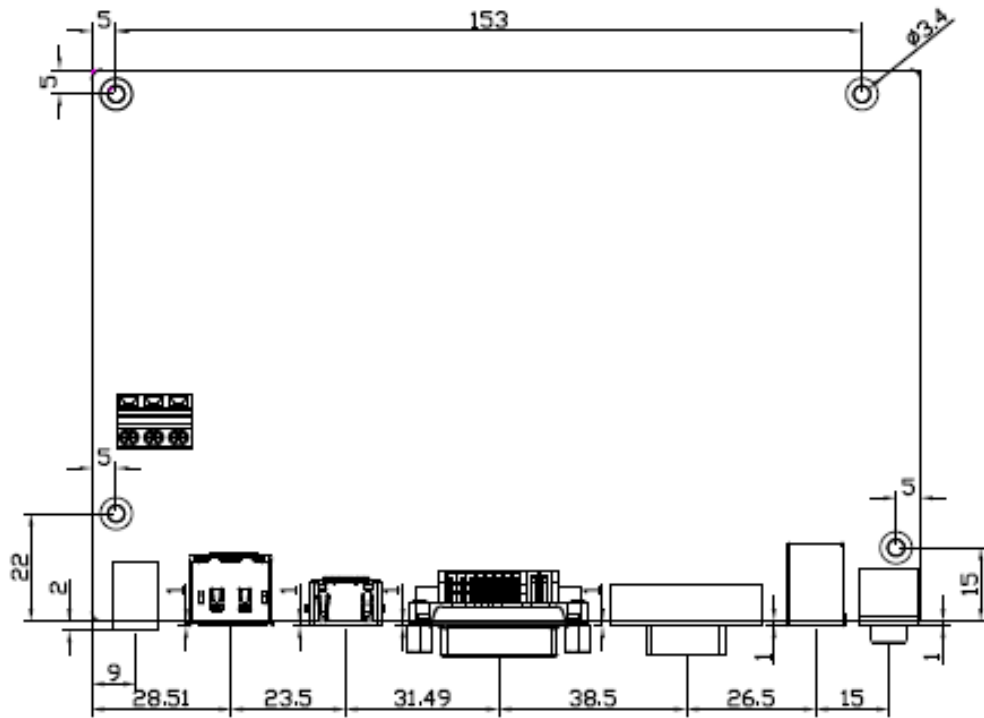
(units: mm)

Figure A: Dimensions of TB-6802 (Top)
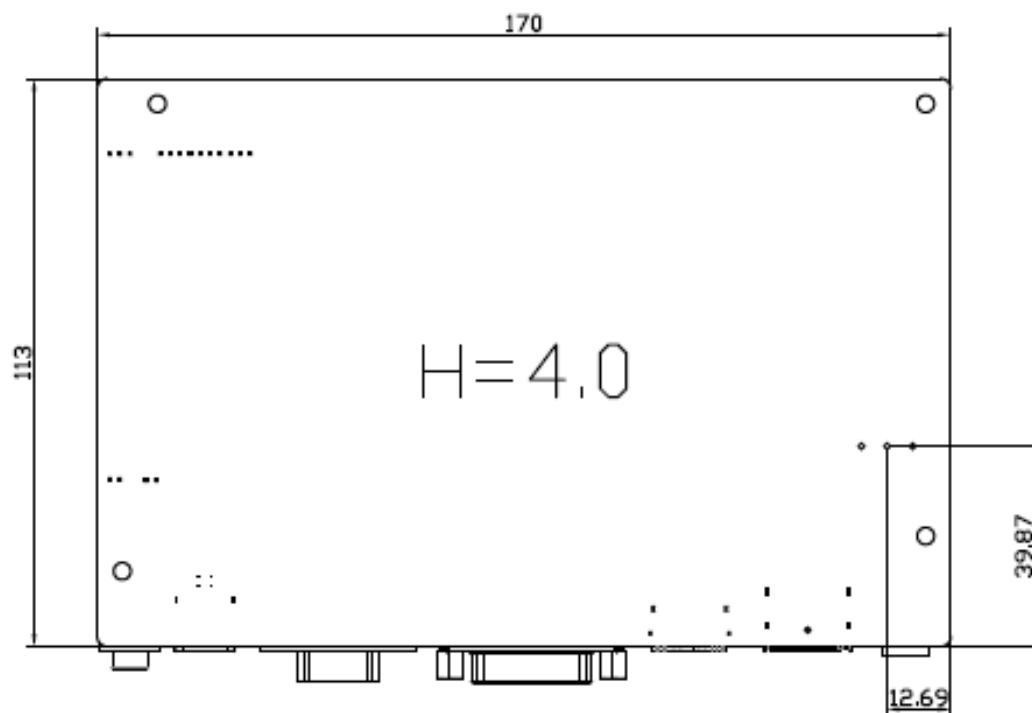
Figure B: Dimensions of TB-6802 (Bottom)