

PENMOUNT TOUCHSCREEN 6000 CONTROL BOARD INSTALLATION GUIDE

Revision 1.8
20/November/12



Preface

Disclaimer

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Revision Table

Date	Revision	Changes
29/Dec/'08	1.0	Initial
21/Jul/'09	1.1	Chapter 5. PenMount Gesture AP is added.
04/Sep/'09	1.2	Sections updated are: <ul style="list-style-type: none"> ● <u>3.2.1. Install PenMount Windows Universal Driver (for 2000/XP/2003/VISTA/7)</u> ● <u>3.2.2. > 3.2.2.1. > Setting: Pen Input Emulation & Click on Release</u> are added to <u>Operation Mode</u>.
06/Oct/'09	1.3	● Refinement of Installation Diagrams in section <u>2.2</u> .
21/Oct/'09	1.4	<ul style="list-style-type: none"> ● <u>Chapter 2 > 2.3 > 2.3.1. Install PenMount 6200D Control Board:</u> The picture of PenMount 6200x Control Board Upside is updated. ● <u>Chapter 2 > 2.3 > 2.3.2. Install A PenMount 6202B Control Board:</u> The picture of PenMount 6202x Control Boards Upside are updated. ● PenMount 6202 is changed to “6202x” in this manual. ● To each PenMount 6200x, 6202x, 6300 and 6500 Control Boards, mechanical diagrams are added. See sections <u>2.3.1</u>, <u>2.3.2</u>, <u>2.3.3</u>, and <u>2.3.4</u>.
09/Dec/'09	1.5	● <u>Chapter 2 > 2.2 Installation Diagrams:</u> The installation diagrams are revised for 6200x, 6202x, 6300, and 6500 boards.
01/Mar/'10	1.6	<ul style="list-style-type: none"> ● PM6202X is changed to PM6202B on page <u>Error! Bookmark not defined.</u> and <u>3</u>. ● PM6200X is changed to PM6200A on page <u>4</u> and to PM6200C on page <u>Error! Bookmark not defined.</u>. ● PM6200X is changed to PM6200A or PM6200C and the pictures and mechanical diagrams are updated for PM6200A and 6200C on page <u>9</u>, <u>Error! Bookmark not defined.</u>, and <u>10</u>. ● PM6202X is changed to PM6202B and graphics are rearranged on page <u>11</u>, <u>11</u>, and <u>12</u>. ● PM6300 graphics are changed on page <u>Error! Bookmark not defined.</u>. ● PM6500 graphics are changed on page <u>Error! Bookmark not defined.</u>. ● PM6202X is changed to PM6202B on page <u>Error! Bookmark not defined.</u>. ● Refinement of section <u>3.2</u> starting from page <u>20</u>. ● Graphic of <u>Windows XP 64bit tools</u> is changed on page <u>39</u>. ● The original <u>3.2.5. PenMount Rotating Function</u> is advanced <u>Error! Reference source not found.</u> <u>Error! Reference source not found.</u> on page <u>Error! Bookmark not defined.</u>. And “Vista 32/64bit” is deleted from the description. ● PM6202X is changed to PM6202B. ● <u>PenMount Linux X Window RS-232 and USB Drivers support table</u> is updated on page <u>28</u>. ● To the software function table in <u>Chapter 4 Driver Software Functions</u> on page <u>30</u>, VISTA/7 column and an additional remark are added. In the same table, Stream/Point Mode is changed to Operation Mode.

		<ul style="list-style-type: none"> ● The screenshots of PenMount Control Panel are updated on page <u>Error! Bookmark not defined.</u> ● <u>Error! Reference source not found.</u> is added to PenMount Control Panel functions on page <u>Error! Bookmark not defined.</u> ● 4 points calibration is deleted from Advanced Calibration on page <u>Error! Bookmark not defined.</u> ● “Vista 32/64bit” and “Windows 7 32/64bit” are deleted from the description of 4.2 Multiple Monitors on page 33. ● All screenshots in section 4.2 Multiple Monitors are updated starting from page 33. ● Screenshot of PenMount Control Panel’s Tools tab is updated on page <u>Error! Bookmark not defined.</u> ● Section 4.5 is replaced by <u>The Settings Tab</u> <p style="text-align: center;">The Settings Tab is available for mouse devices, which user can adjust operation modes, enable beep sound, and change press and hold settings.</p> <ul style="list-style-type: none"> ● Operation Mode on page 39. ● The screenshots of AP are updated on page 44. ● The screenshots of PenMount Control Panel and Gestture Setting are updated on page 46. ● The screenshots of PenMount Gestures under Windows XP/Vista/7 are updated on page 47. ● Screenshots of Gestture Setting and the description of General Setting Box are updated on page 48. ● Icons of PenMount gestures are updated on page 49.
10/Sep/’12	1.7	<ul style="list-style-type: none"> ● PM6200A and PM6200C are changed into PM6200D. PM6300 is changed to PM6300A. PM6500 is changed to PM6500A. The correspondent pictures and mechanical diagrams are updated on chapter 2.2 and 2.3. ● The updated drivers on chapter 1.3 and 3.3 support Windows 8, WinCE 7.0 and new Linux system. ● The updated installation guide of PenMount Windows universal driver is on chapter <u>Error! Reference source not found.</u>
20/Sep/’12	1.8	<ul style="list-style-type: none"> ● Change screenshots to Windows 8 ● Add descriptions on Setup.ini and Install.ini in 3.2.2 ● Content of PenMount Universal Driver in Chapter 3 and Chapter 4 is re-organized.

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Chapter 1. Introduction

PenMount Touchscreen Control Board is the most popular touchscreen control board on the market. PenMount control boards, chipsets, and software support a wide range of configurations, applications, and operating systems. Designed for easy configuration and superior touchscreen performance, the PenMount 6000 control board offers both RS-232 and USB interfaces except 6300, which only supports USB interface.

PenMount Touchscreen Control Board is a circuit board that you install between a touchscreen and a host computer. The control board converts touch input into digital data, and the device driver converts the data into mouse events used by the operating systems.

The control boards are comprised of an interface board for mounting on a host computer, a controller chip, other supporting components, and software drivers. The bundled software drivers offer unique functions and support the most popular hardware platforms and operating systems.

The PenMount control boards are designed not only to be user-friendly, but also to support engineers. All PenMount control boards provide a diagnostic LED that allows both users and engineers to check the touchscreen and the control board functions.

1.1. About this Manual

This manual describes the features of the PenMount Touchscreen Control Board series, how to connect a control board, and how to install and use the software drivers and utilities with your operating system.

This manual is for users who are using the PenMount Touchscreen Control Board and software, as well as for engineers who are integrating and customizing the control board for use with other products.

1.2. PenMount 6000 Control Boards

PenMount 6000 control boards are configured for the use with both RS-232 and USB interfaces (except 6300 only supporting USB interface). Depending on design or product requirements, PenMount also provides controller ICs. A 6000 control board connects to a touchscreen, a power supply (when using RS-232 interface) and a computer system's RS-232 or USB port. PenMount 6000 offers four control boards:

Model	Interface	Touchscreen Wire Support
PenMount 6200D	RS-232 & USB	4, 5, 8
PenMount 6202B	RS-232 & USB	4, 5
PenMount 6300A	USB	4, 5, 8
PenMount 6500A	RS-232 & USB	4, 5, 8

1.3. Drivers & Utilities

All of the 6000 control boards come bundled with software drivers and utilities that support the most popular hardware platforms and operating systems. Once you install the drivers and utilities, you can use this software to configure and calibrate your touchscreen. Drivers for PenMount 6000 boards support the following operating systems:

List of Supported Operating Systems

Operating Systems	6200D		6202B		6300A	6500A	
	USB	RS-232	USB	RS-232	USB	RS-232	USB
DOS		•		•		•	
Windows 2000/XP/2003/VISTA/7/8	•	•	•	•	•	•	•
Linux (Kernel 2.6 & X-Window)	•	•	•	•	•	•	•
Windows CE 4.2/5.0/6.0/7.0	•	•	•	•	•	•	•

1.4. After Sales Service

PenMount 6000 control boards and software are modified and updated on a regular basis. For more latest updated information, downloads, and technical support, please refer to our website at: <http://www.penmount.com/>

Chapter 2. Install PenMount 6000 Control Boards

The procedures that follow describe how to install and configure the hardware for each of the PenMount 6000 Control Boards.

2.1. Installation Requirements

You need the following to install a touchscreen using a PenMount 6000 Touchscreen Control Board:

2.1.1. Computer

1. An IBM-compatible host computer
2. A communications port, either RS-232 or USB (For 6300, only USB)
3. A Compact Disc drive
4. Operating systems required: See table "Error! Reference source not found." on page **Error! Bookmark not defined.** for details.

2.1.2. Touchscreen

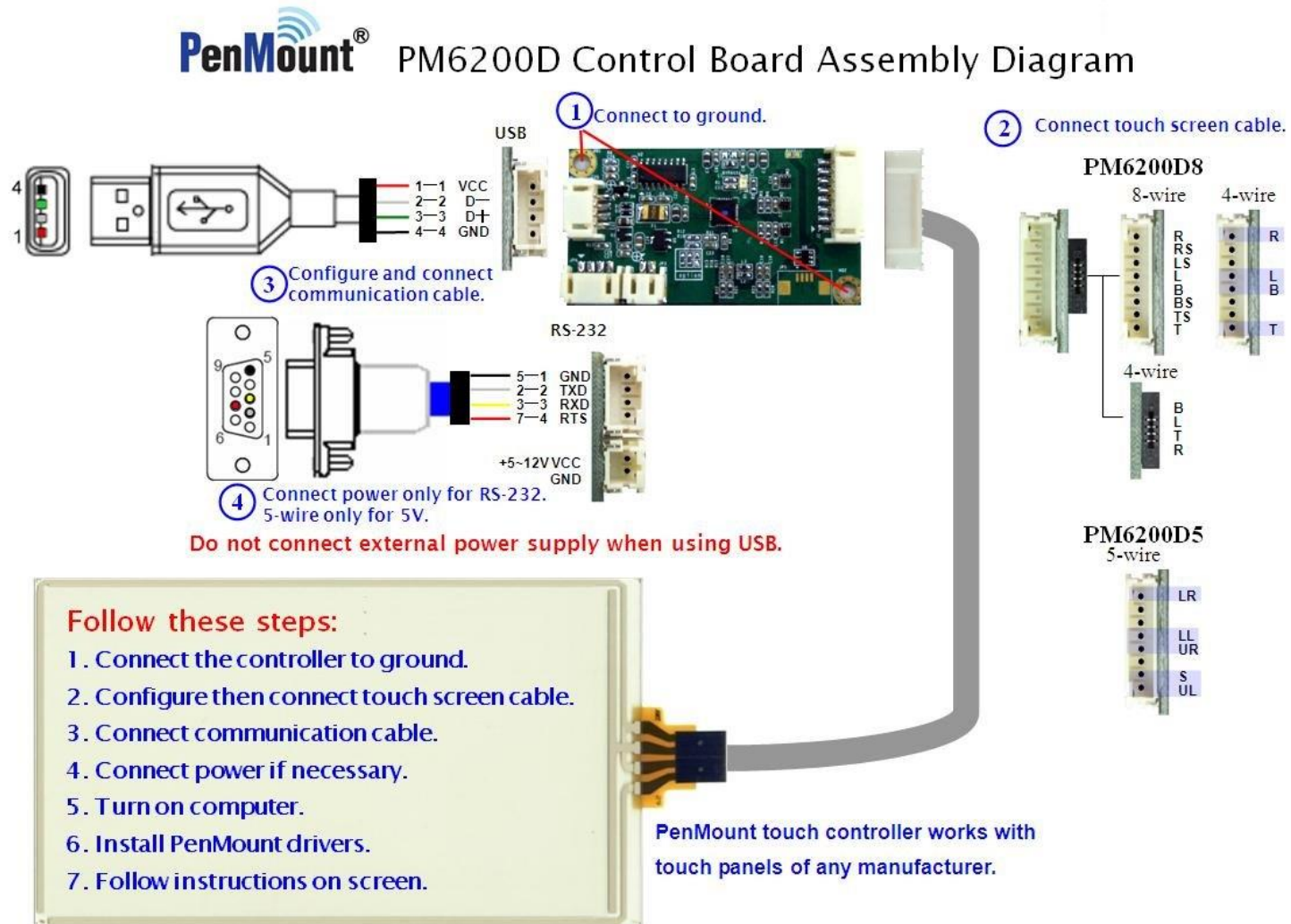
1. A 4-wire tail analog resistive touchscreen (for all 6000 boards)
2. A 5-wire tail analog resistive touchscreen (for all 6000 boards)
3. A 8-wire tail analog resistive touchscreen (for all 6000 boards except 6202B)

2.1.3. Control Board

1. A PenMount 6000 Touchscreen Control Board
2. Cables to connect the control board to the touchscreen and the computer's communications port.
3. The PenMount Drivers & Utilities disk.
4. A cable to connect the power supply. (This is only required when connecting with RS-232 port).

2.2. Installation Diagrams

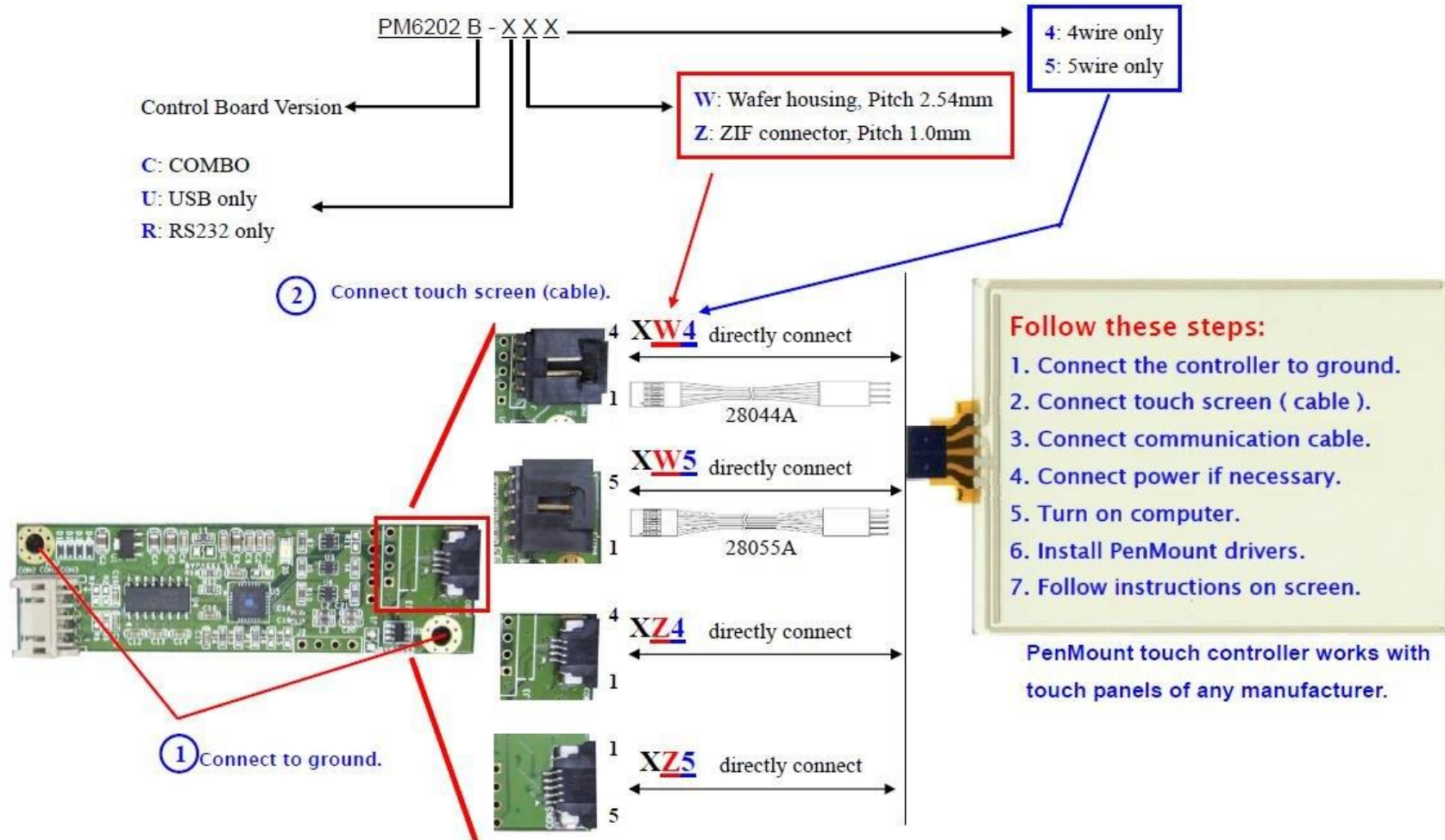
2.2.1. The connection of 6200D Control Board (for both RS-232 & USB Interfaces)



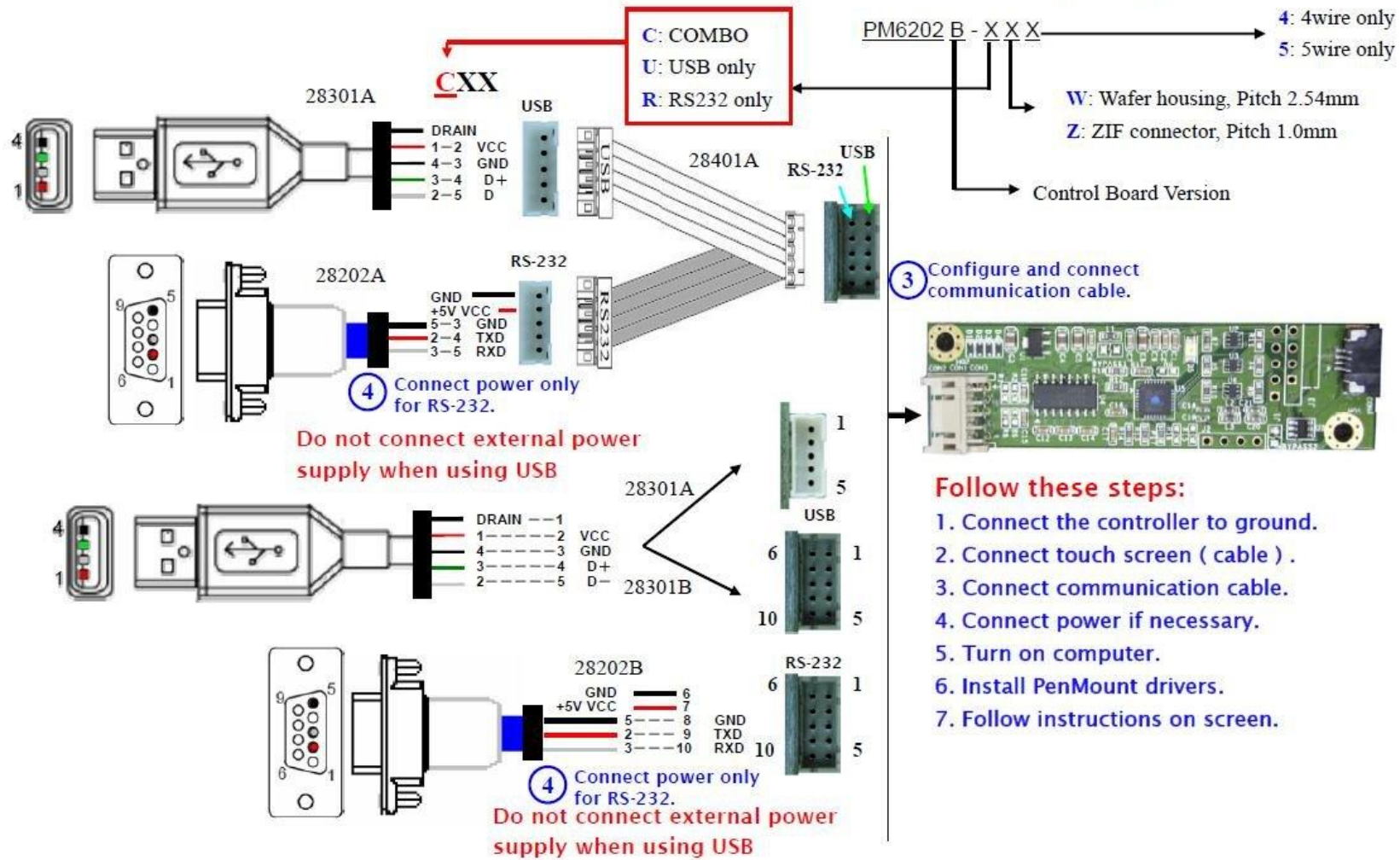
2.2.2. The connection of 6202B Control Board (for both RS-232 & USB Interfaces)

PenMount® PM6202B Control Board Assembly Diagram

P.1

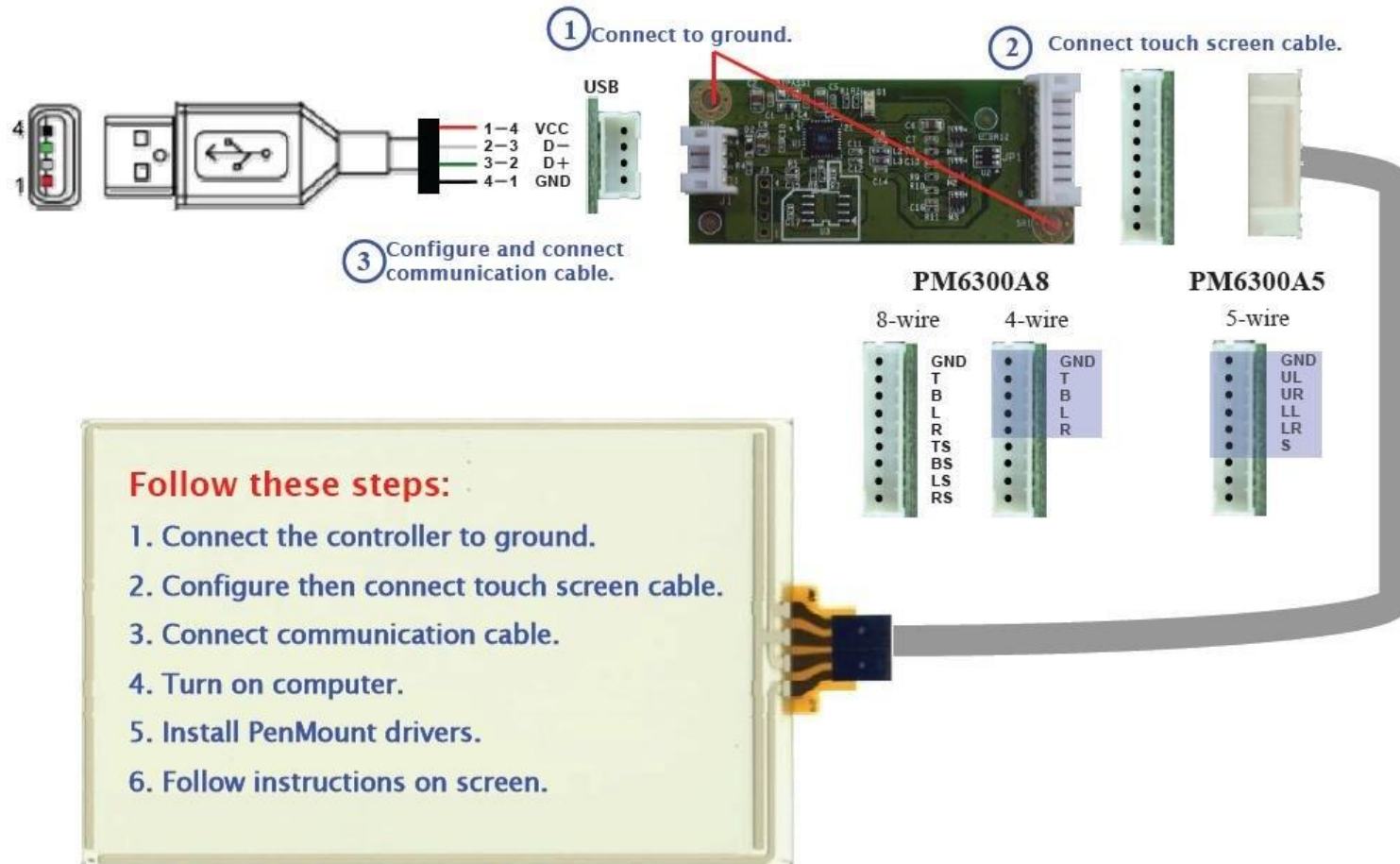


PenMount[®] PM6202B Control Board Assembly Diagram



2.2.3. The connection of 6300A Control Board (for USB Interface Only)

PenMount[®] PM6300A Control Board Assembly Diagram



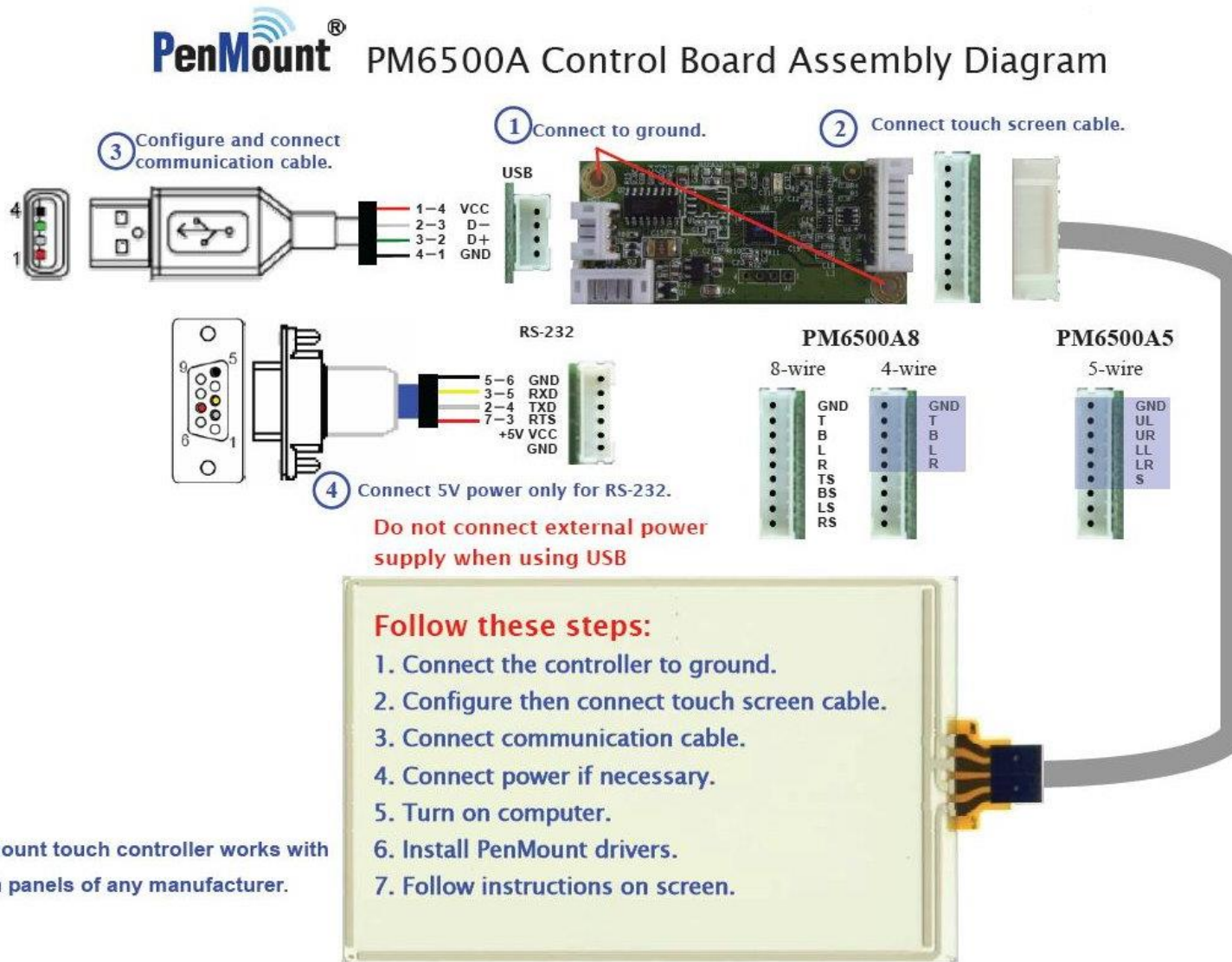
Follow these steps:

1. Connect the controller to ground.
2. Configure then connect touch screen cable.
3. Connect communication cable.
4. Turn on computer.
5. Install PenMount drivers.
6. Follow instructions on screen.

PenMount touch controller works with touch panels of any manufacturer.

Chapter 2 Installing PenMount 6000 Control Boards

2.2.4. The connection of 6500A Control Board (for both RS-232 & USB Interfaces)



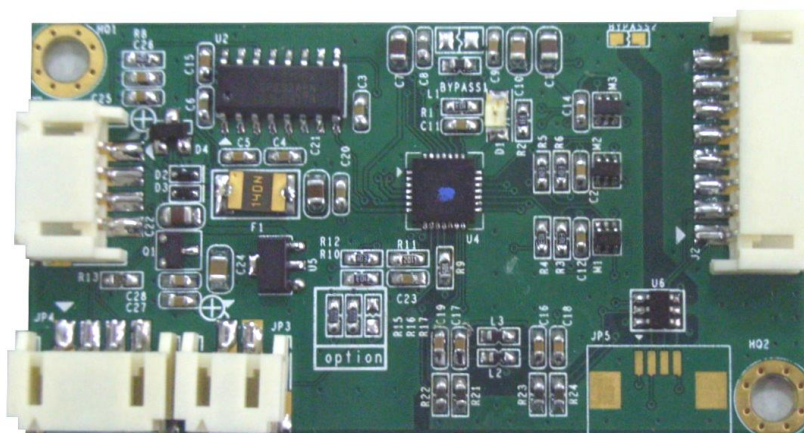
2.3. RS-232 & USB Boards (6000 Series)

All PenMount 6000 control boards use both RS-232 serial interface and USB interface except 6300 which only supports USB connection. There are currently four models in the 6000 Series. The general procedure for board installation is similar, though hardware connection and configuration varies for each board.

2.3.1. Install PenMount 6200D Control Board

PenMount 6200D control boards are touchscreen control boards that use both RS-232 and USB interfaces and supports 4-wire, 5-wire, and 8-wire touchscreens. The size of the board is 62.0 x 33.0 mm and it has five connectors and four dipswitches on-board. Follow the steps below to install the 6200D control board.

1. Cut off the power of your computer and display, then open the case of the display or the system. Find space on your system and attach the control board to your system with screws. The control board has industry standard 3φ screw holes.
2. For the other installation details, see 2.2.1 on page 4: **The connection of 6200D Control Board (for both RS-232 & USB Interfaces)**.

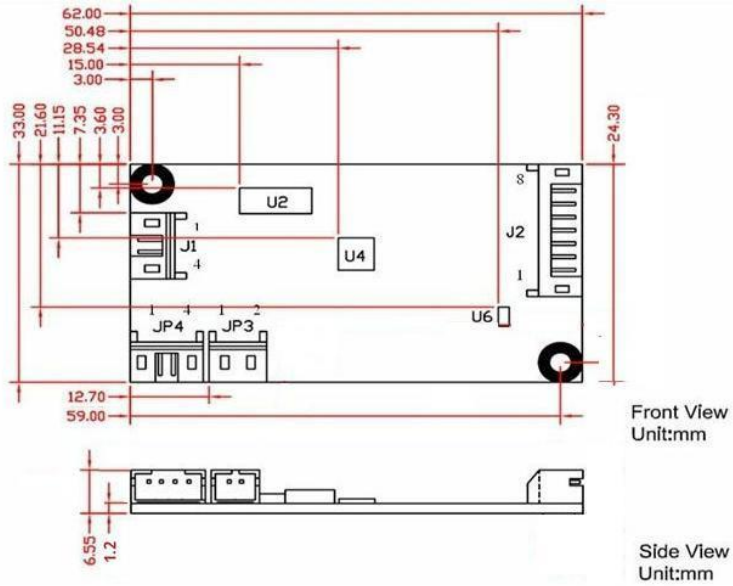


PenMount 6200D Touchscreen Control Board Upside

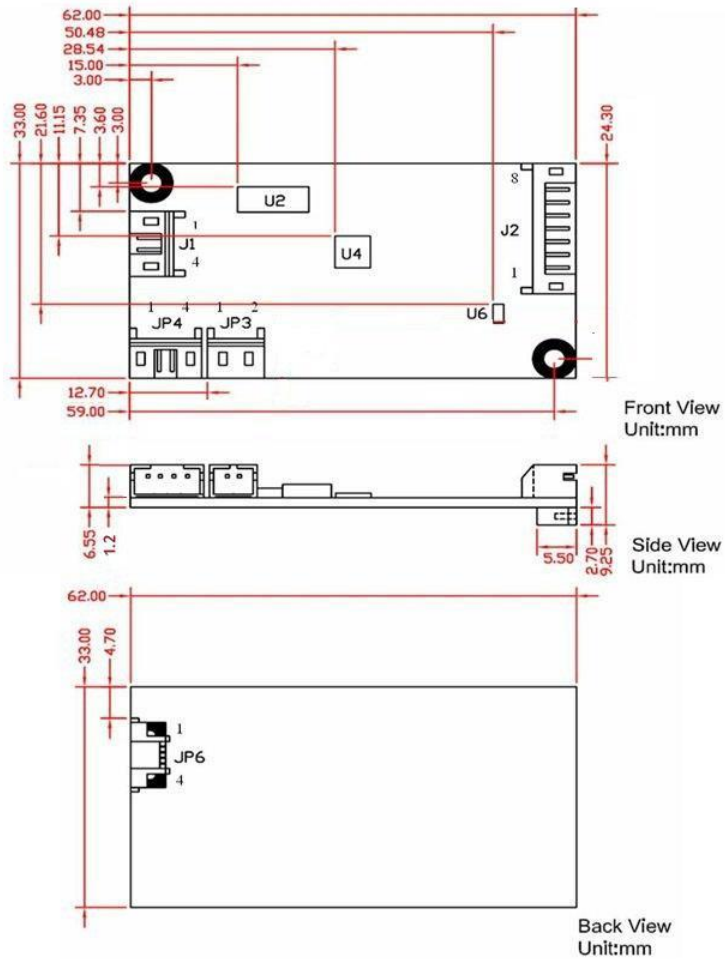
3. Turn on the computer and the display. Install the software drivers and utilities and calibrate the touchscreen. See **Chapter 3. Install Drivers for 6000 Boards** for details.

Chapter 2 Installing PenMount 6000 Control Boards

4. The mechanical diagrams of PenMount 6200D Control Boards:



PenMount 6200D5 Touchscreen Control Board Mechanical Diagram



PenMount 6200D8 Touchscreen Control Board Mechanical Diagram

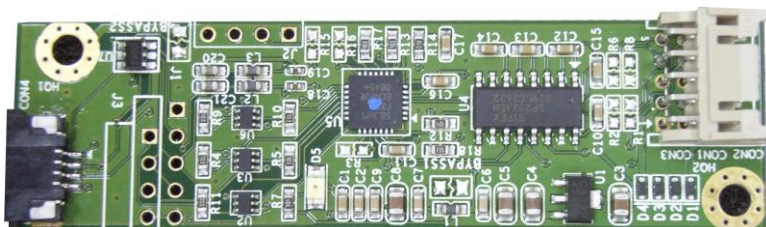
Installing PenMount 6000 Control Boards

2.3.2. Install A PenMount 6202B Control Board

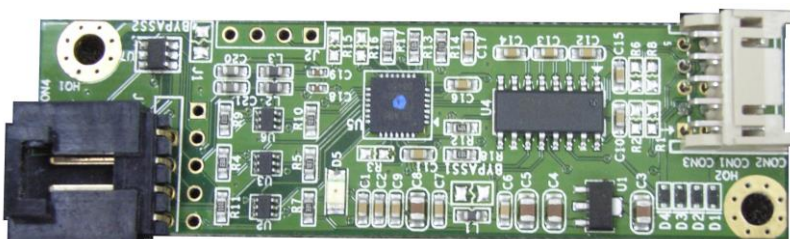
PenMount 6202B control boards are touchscreen control boards that use both RS-232 and USB interfaces and supports 4-wire and 5-wire touchscreens. The size of the board is 70.0 x 20.0 mm and it was designed-in with two kinds of connector. One is connected with touchscreen directly for 4-wire or 5-wire selective while the other is supported by both of RS-232 and USB interfaces.

Follow the steps below to install PM6202B control boards.

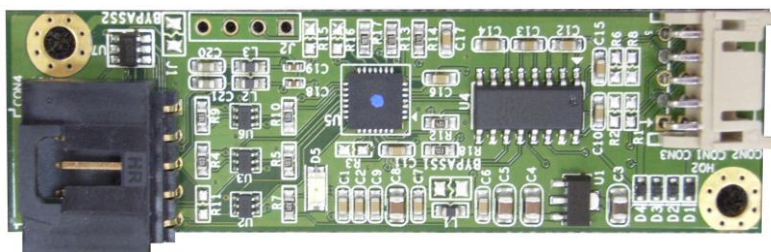
1. Cut off the power of your computer and display, then open the case of the display or the system. Find space on your system and attach the control board to your system with screws. The control board has industry standard 3φ screw holes.
2. For other installation details, see 2.2.2 on page 5: The connection of 6202B Control Board (for both RS-232 & USB Interfaces).



PenMount 6202B CZ4 Touchscreen Control Boards Upside



PenMount 6202B CW4 Touchscreen Control Boards Upside

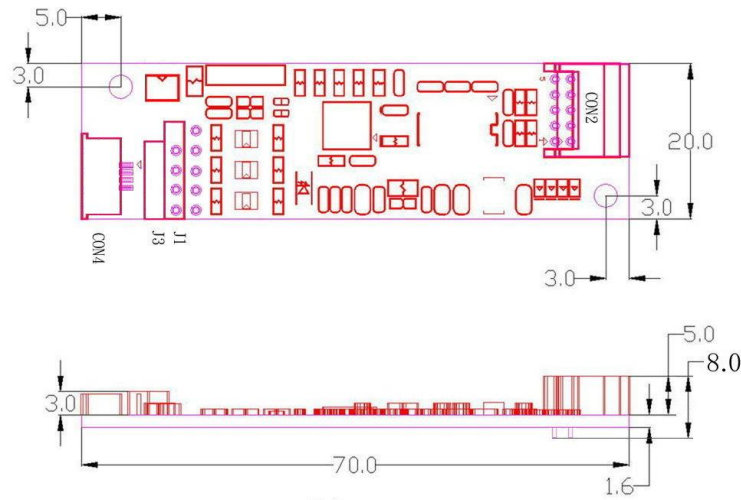


PenMount 6202B CW5 Touchscreen Control Boards Upside

3. Power on the computer and the display. Install the software drivers and utilities and calibrate the touchscreen. See **Chapter 3. Install Drivers for 6000 Boards** for details.

Chapter 2 Installing PenMount 6000 Control Boards

4. The mechanical diagrams of PenMount 6202B Control Boards



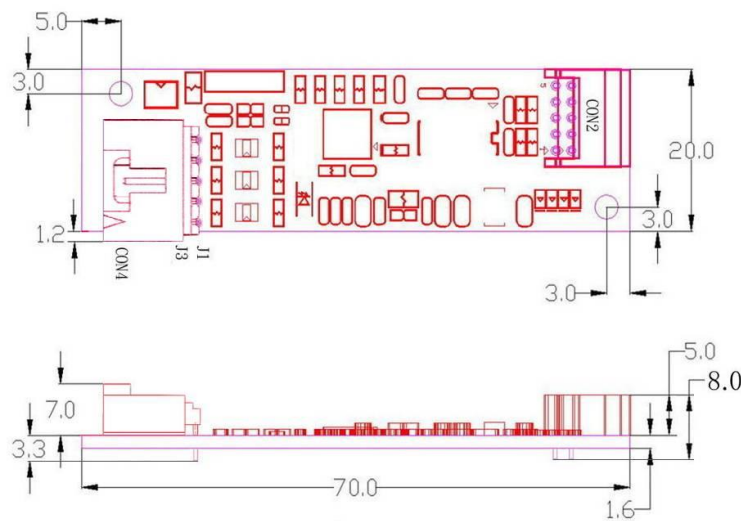
Unit : mm

PenMount 6202B CZ4 Control Board Mechanical Diagram



Unit : mm

PenMount 6202B CW4 Control Board Mechanical Diagram



Unit : mm

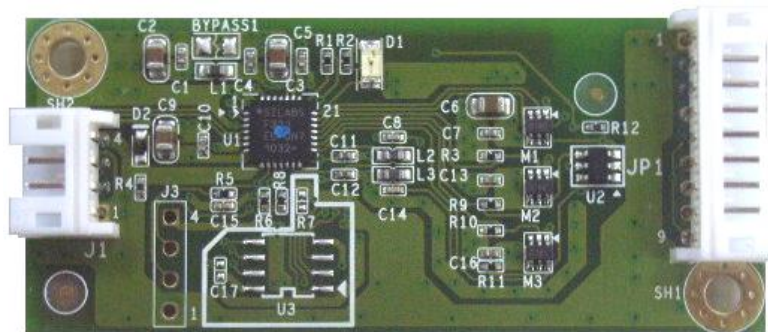
PenMount 6202B CW5 Control Board Mechanical Diagram

Installing PenMount 6000 Control Boards

2.3.3. Install A PenMount 6300A Control Board

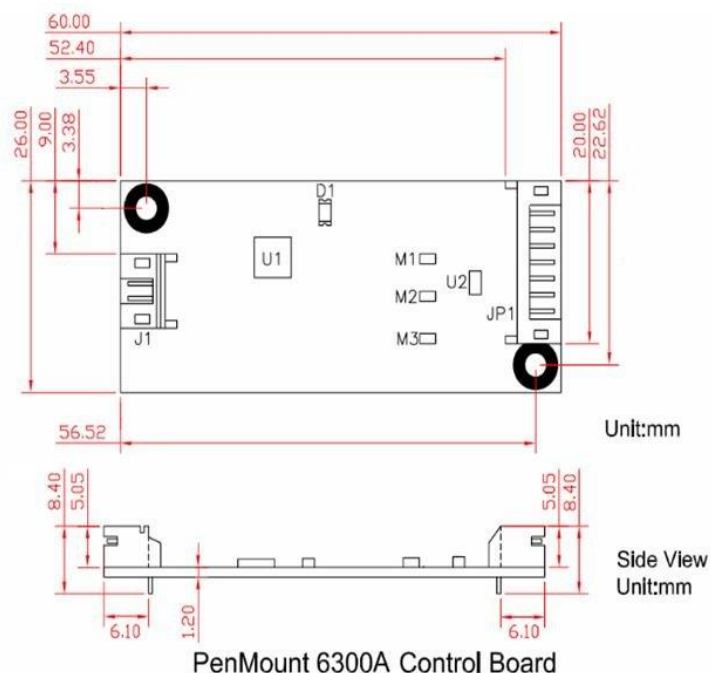
The PenMount 6300A control board is a touchscreen control board that uses USB interface only. It supports 4-wire, 5-wire and 8-wire touchscreens. The size of the board is 26 x 60mm and it has two connectors and two dipswitches on-board. Follow the steps below to install the 6300A control board.

1. Cut off the power of your computer and display, then open the case of the display or the system. Find space on your system and attach the control board to your system with screws. The control board has industry standard 3φ screw holes.
2. For other installation details, see 2.2.3 on page 7: The connection of 6300A Control Board (for USB Interface Only).



PenMount 6300A Touchscreen Control Board Upside

3. Power on the computer and the display. Install the software drivers and utilities and calibrate the touchscreen. See **Chapter 3. Install Drivers for 6000 Boards** for details.
4. The mechanical diagram of PenMount 6300A Control Board:



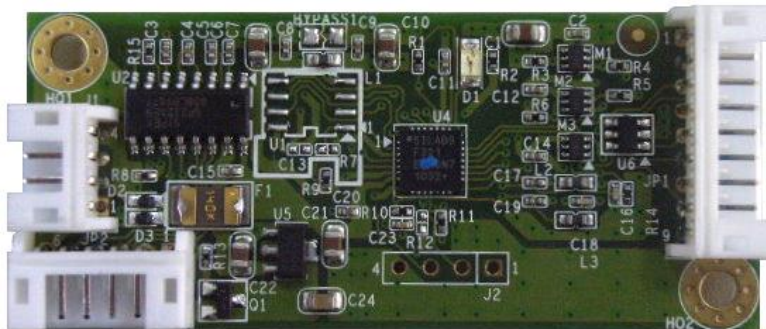
PenMount 6300A Touchscreen Control Board Mechanical Diagram

Chapter 2 Installing PenMount 6000 Control Boards

2.3.4. Install A PenMount 6500A Control Board

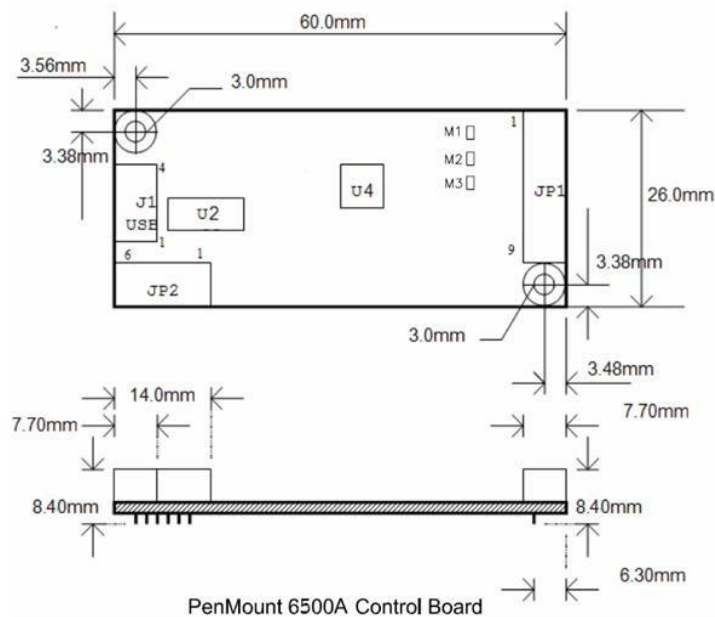
The PenMount 6500A control board is a touchscreen control board that uses both RS-232 and USB interfaces and supports 4-wire, 5-wire, and 8-wire touchscreens. The size of the board is 26 x 60 mm and it has two connectors and four dipswitches on-board. Follow the steps below to install the 6500A control board.

1. Cut off the power of your computer and display, then open the case of the display or the system. Find space on your system and attach the control board to your system with screws. The control board has industry standard 3 ϕ screw holes.
2. For other installation details, see 2.2.4 on page 8: The connection of 6500A Control Board (for both RS-232 & USB Interfaces).



PenMount 6500A Touchscreen Control Board Upside

3. Power on the computer and the display. Install the software drivers and utilities and calibrate the touchscreen. See **Chapter 3. Install Drivers for 6000 Boards** for details.
4. The mechanical diagram of PenMount 6500A Control Board:



PenMount 6500A Control Board Mechanical Diagram

Chapter 3. Install Drivers for 6000 Boards

This chapter describes how to install drivers and other software that enables your PenMount 6000 control boards to work with various operating systems.

PenMount 6000 boards support the following connections:

	6200D	6202B	6300A	6500A
RS-232	▪	▪		▪
USB	▪	▪	▪	▪

RS-232 driver and USB driver for PenMount 6000 boards support the following operating systems:

	DOS	Windows XP	Linux (Kernel 2.6 & X-Window)	Windows CE (4.2/5.0/6.0/7.0)
RS-232 Driver	▪	▪	▪	▪
USB Driver		▪	▪	▪

3.1. Install for DOS Systems

Before installing DOS driver, you must have DOS system installed and running on your computer. You must also have PenMount Serial Interface either 6200x, 6202x or 6500 control boards installed.

3.1.1. PenMount DOS Driver Installation

PenMount DOS Driver version 2.10 diskette contains the following files:

INSTALL.EXE	-- PenMount installation program
PM2.EXE	-- PenMount Utility, to configure or test the PenMount touchscreen
PMOUSE.EXE	-- Driver loader, to load or unload driver.
PMTSR.COM	-- PenMount DOS Driver
PMOUSE.CFG	-- The configuration file for PenMount DOS driver
README.TXT	-- The file you're reading now.
PMINIT.BAT	-- Reload DOS driver batch file
PMUNLOAD.BAT	-- Unload DOS driver batch file
PMTEST.EXE	-- PenMount driver test utility to verify PenMount driver working.
MOUSETST.COM	-- Mouse Test utility

If you have an older version of **PenMount DOS Driver** installed in your system, remove it first. PenMount 6000 control board has an optional cable for 9-pin D-sub connector. And whenever RS-232 port is used, be sure to plug the control board into the COM port of PC (e.g. COM1, COM2, COM3 or COM4) before installing driver.

Follow the steps below to install **PenMount DOS Driver**.

Step 1: Decompress the driver package. (e.g. C:\TEMP)

Installing Drivers for 6000 Boards

Step 2: Go to the working directory. (e.g. cd \TEMP)

Step 3: Run the installation program 'install.exe" at DOS prompt.

Step 4: The install.exe will lead you to complete the installation.

Step 5: Restart computer (Recommended)

or

press 'ESC' key and issue 'SET
PENMOUNT=<penmount_installation_path>' at DOS prompt.

Step 6: Driver will be loaded after restarting computer.

Note:

1. Environment Variable – PENMOUNT

The environment variable, PENMOUNT, is needed for PenMount driver v2.10.

The installation program will put the command line 'SET
PENMOUNT=<penmount_install_path>' into the AUTOEXEC.BAT, like:

```
SET PENMOUNT=C:\PM2    (e.g. PenMount installation path is  
C:\PM2)
```

The driver can't be loaded, if the environment variable is not configured properly and the utility can't be run. Issue the command 'set' at DOS prompt to check the environment variable.

● **Environment Variable - PATH**

The installation program will put the installation path into the environment PATH. You can run program in any working directory at DOS prompt regardless of where the working directory is.

3.1.2. PenMount DOS Driver Functions

PenMount DOS driver offers several functions. You can change the settings with the following utilities:

1. PM2 Panel

Run the batch file 'PM2.EXE'. Type the command at DOS prompt:

```
PM2
```

Before running PM2, you must remove PenMount driver or another mouse driver, if you have installed one.

There are several functions to select, and the launch key is in brackets. (e.g. press '2' key to do calibration)

Chapter 3 Installing Drivers for 6000 Boards

Use <arrow key> (up/down) to select, and <Enter> to launch the following functions:

- (1) Draw
- (2) Calibrate
- (3) Detect
- (4) Configure
- (5) Packet
- (6) Help
- (7) Exit

2. Draw

Run the 'Draw' in PM2 Panel, and use the arrow keys or hot keys (A~Y) to choose one of 25 video modes.

Supported Video modes

mode	width	height	colors
0Dh	320	200	16
13h	320	200	256
10Dh	320	200	32K
10Eh	320	200	64K
10Fh	320	200	16M
0Eh	640	200	16
10h	640	350	16
100h	640	400	256
12h	640	480	16
101h	640	480	256
110h	640	480	32K
111h	640	480	64K
112h	640	480	16M
103h	800	600	256
113h	800	600	32K
114h	800	600	64K
115h	800	600	16M
105h	800	768	256
116h	1024	768	32K
117h	1024	768	64K
118h	1024	768	16M
107h	1280	1024	256
119h	1280	1024	32K
11Ah	1280	1024	64K
11Bh	1280	1024	16M

There are several function keys in the drawing screen:

[ESC] - exit

[Space] - clear screen and information

[F1] - help, list the function keys

[F2] - style, toggle line or dot.

Line mode is default.

Dot mode is not to draw line between dot and next dot.

Installing Drivers for 6000 Boards

- [F3]** - frame, show / hide the frame
- [F4]** - dock, show / dock the status bar at bottom of screen
- [F5]** - pen color

There are 16 colors of pen color:

rainbow, blue, green, cyan, red, magenta, brown, lightgray, darkgray, lightblue, lightgreen, lightcyan, lightred, lightmagenta, yellow and white.

- [F6]** - highlight, highlight the dot in the line mode.
- [F9]** - camera, you can get the snapshot, and store it in bitmap file.

The filename is 'PM<HHMMSS>.BMP', <HHMMSS> is hour, minute and second. The resolution of bitmap file is the same as video mode, and the color depth is 4 bits. (16colors)

Status bar:

- 640x480 - screen resolution (320x200, 640x480....etc)
- S: - number of dots were received per second.
- Pen - pen color
- P: - the counter of received dots
- D: - the counter of pen down
- U: - the counter of pen up
- (x,y) - current coordinate of dot
- x:y: - minimum value of coordinate
- X:Y: - maximum value of coordinate

3. Calibrate

Run the 'Calibrate' in PM2 Panel, and choose one of the 25 video modes.

The purpose of calibration is to adjust the touchscreen mapping to properly meet the display screen.

You will be asked to select a video mode number. Select your display mode by using keyboard to start calibration.

Touch the upper point, then touch the right point, bottom point and left point, and press **<Enter>** key to pass the point. After calibration, the calibrated data will be showed in the screen.

After calibration, we recommend you to do drawing test to verify the touchscreen and monitor mapped properly.

Function Keys:

- [Enter]** - pass current point
- [F9]** - camera, see above.

4. Detect

Detect PenMount automatically. You can press any key to interrupt the detection.

Chapter 3 Installing Drivers for 6000 Boards

Use the following list to detect PenMount:

COM1 (Base 03F8) (Baud 19200): IRQ 3, 4

COM2 (Base 03F8) (Baud 19200): IRQ 3, 4

COM3 (Base 03F8) (Baud 19200): IRQ 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

COM4 (Base 03F8) (Baud 19200): IRQ 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

COM1 (Base 03F8) (Baud 9600): IRQ 3, 4

COM2 (Base 03F8) (Baud 9600): IRQ 3, 4

COM3 (Base 03F8) (Baud 9600): IRQ 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

COM4 (Base 03F8) (Baud 9600): IRQ 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

If you cannot find the PenMount, come 'configure' to set your COM port.

5. Configure

COM Port:	COM5~COM9 is for setting customization.
IRQ no.:	IRQ3~IRQ15
I/O base:	COM1~COM4 are fixed while COM5~COM9 are for customization.
Baud:	19200 / 9600
Calibrate:	left, right, top, and bottom point.
POMODE:	the relationship between touch panel and monitor.
Beep Duration:	beep duration time (0ms~5500ms), 0ms = turn off the beep
Beep Freq:	beep frequency (20Hz ~10000 Hz)

Other configurations for customization in PenMount 6000:

- . jitter threshold
- . SSD threshold
- . Z threshold
- . pen-up threshold
- . digital filter

Function Key:

- [ESC]** - exit
- [Tab]** - toggle the fields
- [up]** - increase value
- [down]** - decrease value
- [right]** - increase value by 100 (Beep Freq)
- [left]** - decrease value by 100 (Beep Freq)
- [Enter]** - save configuration and exit

6. Packet

By using this function, you can get the touch data. Simply touch the screen and you will see the data gotten.

The output format is as follows:

Installing Drivers for 6000 Boards

<counter> : counter of raw data
* : current dot
<raw data> : the raw data of touch
<coordinate>: the X, Y of A/D
<offset> : the offset between last dot

Function Key:

[ESC] - exit

7. Help

See 'README.TXT' file

8. Test

Before test, make sure the driver is loaded.

<1> The test program is named 'MOUSETST.EXE'. You can run it with parameter:

MOUSETST 18

The parameter is video mode number:

mode 18 (12h) : 640x480x16color

mode 19 (13h) : 320x240x256color

....

or run:

MOUSETST

to see what the parameters are

<2> run pmtest.exe

<3> edit

You can also run 'EDIT', the editor bundle in MS-DOS.

3.2. Install for Windows 2000/XP/7/8 Systems

3.2.1. Supported Systems

The PenMount Windows Universal Driver supports the following Windows operating systems.

	Operating System
Windows Workstation	Windows 2000
	Windows XP
	Windows XP Tablet PC Edition
	Windows Vista
	Windows 7
	Windows 8
Windows Server	Windows Server 2003
	Windows Server 2008
	Windows Server 2008 R2
	Windows Server 2012
Windows Embedded	Windows XP Embedded
	Windows Embedded Standard 2009
	Windows Embedded Standard 7
	Windows Embedded Standard 8

3.2.2. Installation Options

Setup.ini

The options in the setup.ini file

Section	Option	Value	Description
Setup	Name	---	Reserved, please do not change the value
	Driver	1	Install the device driver files
		0	Do not install the device driver files
	Utility	1	Install the utility files
		0	Do not install the utility files
	Gesture	1	Install the gesture recognizer files
0		Do not install the gesture recognizer files	
Option	ShowInfo	1	Show the PenMount contact information in the "PenMount Control Panel"
		0	Do not show the PenMount contact information in the "PenMount Control Panel"
Version	Major	---	Reserved, please do not change the value
	Minor	---	Reserved, please do not change the value
	Build	---	Reserved, please do not change the value
	QFE	---	Reserved, please do not change the value

Driver\Install.ini

The options in the install.ini file affects the behavior of the PenMount device driver installer. The following table lists the supported options in install.ini, and the values in blue color are the default settings.

Installing Drivers for 6000 Boards

Section	Option	Value	Description
Install	USB	1	Install the PenMount USB driver.
		0	Skip the PenMount USB driver installation.
	COM	1	Install PenMount RS232 driver.
		0	Skip the PenMount RS232 driver installation
	MMonitor	1	Install PenMount for multiple monitor mapping
		0	Disable the PenMount multiple monitor support
ENUM	1	Install PenMount non-PnP RS-232 device detection	
	0	Disable PenMount non-PnP RS-232 device detection	
Option	TouchReport*	1	Install device as mouse device.
		2	If system supports Tablet PC Input, install device as digitizer device; if not, install as mouse device
	EdgeOffset	0	The value used by edge compensation
		5	
		10	
		15	
		20	
		25	
		30	
	Smoothing	1	Enables line smoothing, might affect performance
		0	Disables line smoothing
	Operation**	0	Touch operates in "Pen Input Emulation" mode
		1	Touch operates in "Click on Touch" mode
		2	Touch operates in "Mouse Emulation" mode
3		Touch operates in "Click on Release" mode	
CalibOffset	---	Reserved, please do not change the value	
RBtnPressNHold**	1	Enables press and hold for right button	
	0	Disables press and hold for right button	
Serial	ScanAllPorts	1	Scans all available COM ports for detecting PenMount RS-232 devices. The detection on some systems might take a few time to finish.
		0	Do not scan ports
	COMx	<mode> ,<baud>	Manually set up a PenMount non-PnP RS-232 on a specific COM port, operates in the baud rate specified. For example, "COM1=6000,19200" means installing PenMount 6000 with 19200 bps on COM1.

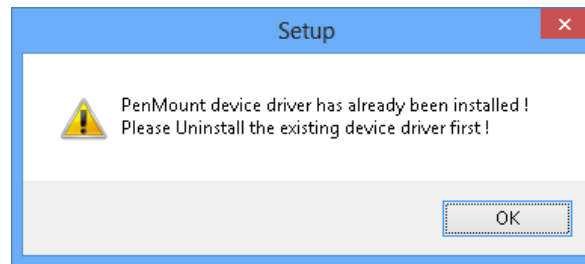
* The Windows XP Tablet PC Edition / Windows Vista / Windows 7 / Windows 8 supports digitizer devices.

** These options will only work when installed as mouse device.

3.2.3. Device Driver Installation

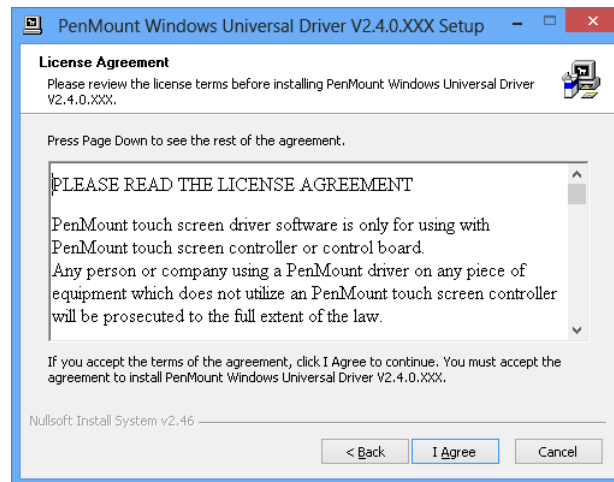
Chapter 3 Installing Drivers for 6000 Boards

If there is an older PenMount device driver installed on the system, a warning message box will appear when trying to install a new device driver. Please click the OK button and perform device driver uninstallation before proceeding.

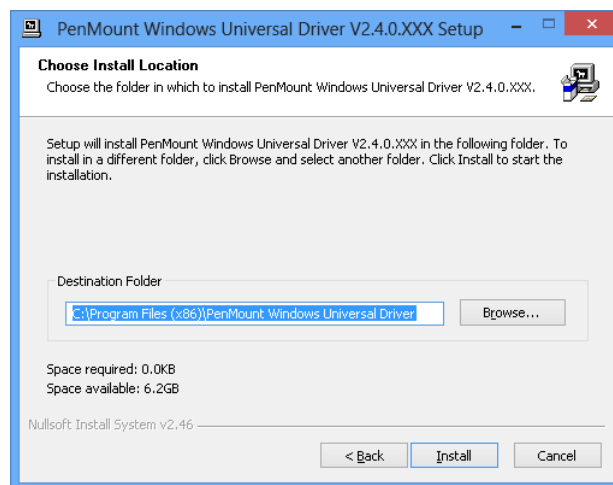


Please follow the steps below to install PenMount Windows Universal Driver:

1. Connect the PenMount 6000 control board.
2. Open File Explorer, change to the PenMount Universal Driver and double click on the "Setup.exe" file.
3. In the **License Agreement** window, click on the "**I Agree**" button and proceed.



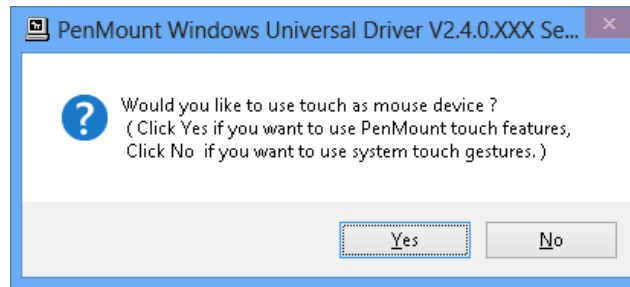
4. The setup program will install the device driver files to the Program Files directory by default. Please click on the "**Install**" button to confirm installation.



5. Starting from PenMount Universal Driver V2.4, the setup program will

Installing Drivers for 6000 Boards

allow user to choose to install the device as “Mouse Device” or “Digitizer Device” on systems that supports Digitizer. A message box will show up.



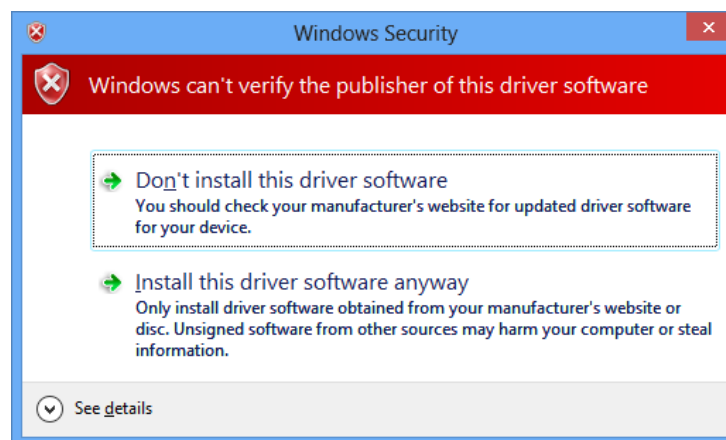
Please select “Yes” for installing PenMount as mouse mode; select “no” for digitizer mode. The later section describes more detail on these two modes.

6. The device driver installation will take some time. When installing PenMount device driver without WHQL, a warning message box might appear. Please click the “**Continue Anyway**” button to proceed.

Warning messages in Windows 2000 / XP



Warning messages in Windows Vista / Windows 7 / Windows 8



7. A window notifying of installation completion appears. Please click on the “**Finish**” button.

8. Please restart the operating system.

3.2.4. PenMount Device Types

The PenMount device driver supports two types of device type configurations: mouse and digitizer. The mouse device type is compatible to all Windows operating systems, while the digitizer device only works on systems that supports Tablet PC Input.

In general, installing the PenMount controller as mouse device is recommended. If you wish to use the Tablet PC Input features on Windows 7 / 8, you may also choose the digitizer type.

For more information on Windows 7 / 8 Tablet PC features, please check the following web page.


<http://windows.microsoft.com/en-US/windows7/help/videos/using-windows-to-uch>

This section compares several differences between installing the PenMount 6000 as mouse and digitizer devices.

3.2.4.1. Summary

Device Type	Mouse Device	Digitizer Device
Supported Operating System	Windows 2000/XP/Vista/7/8	Windows XPT/ Vista/7/8
PenMount Monitor	Installed	Not Installed
PenMount Control Panel	Launch in PenMount Monitor Menu	Launch with desktop icon
Calibration	Supported PenMount 4/9/16/25 calibration	Supported PenMount 4/9/16/25 calibration
Multiple Monitor	Supported (Use PenMount monitor mapping)	Supported (Configured in Tablet PC Settings)
Flicks (Windows Vista / 7)	Not supported	Supported
Right Button	Supported (Use PenMount Press and Hold / Right Click utility)	Supported (Use system Press and Hold gesture)
Edge Compensation	Supported	Supported
Touch Beep Sound	Supported	Not Supported
Operating Modes	Supported	Not Supported

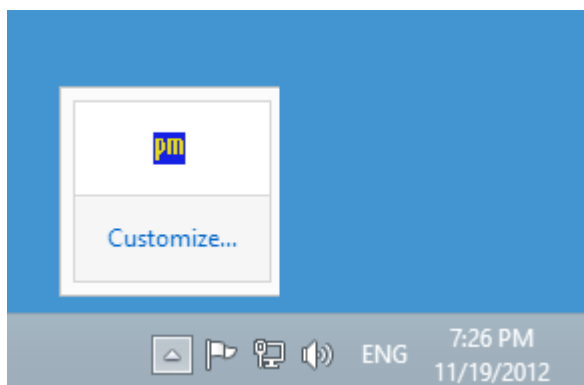
3.2.4.2. PenMount Monitor

The PenMount Monitor is a utility designed for mouse modes. It will automatically be launched when system starts, and the PenMount Monitor icon  will appear in the notification area.

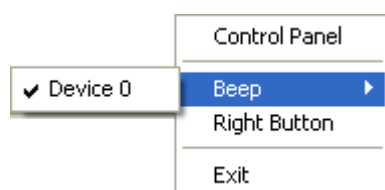
PenMount Monitor in Windows 2000/XP



PenMount Monitor in Windows 7 and Windows 8



By clicking on the  icon, a shortcut menu will appear as below:



Item	Description
Control Panel	Open PenMount Control Panel.
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.

3.2.4.3. PenMount Control Panel

The PenMount Control Panel is the utility for configuring touch settings. Please refer to Chapter 4 for more detailed information on configuring PenMount.

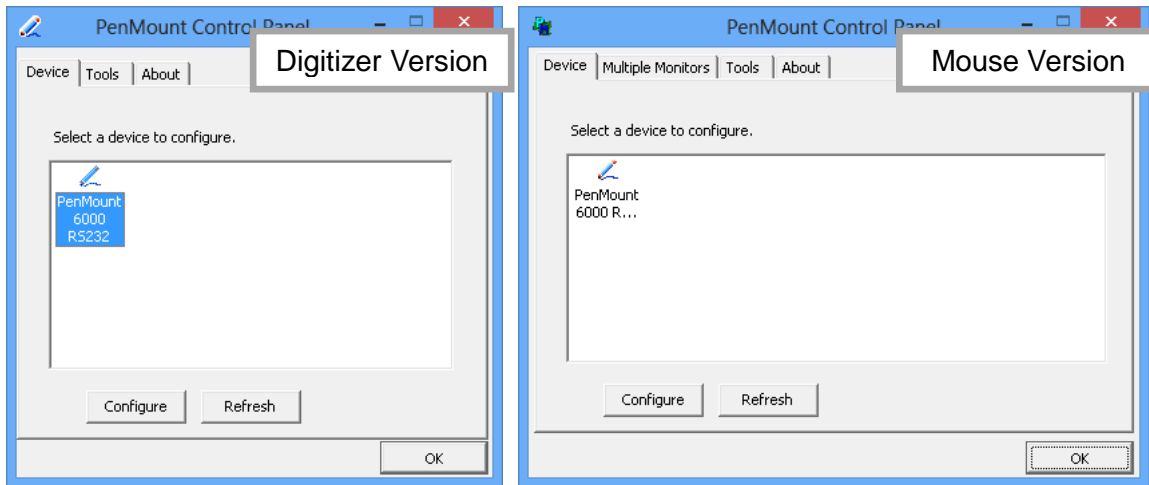
There are several difference between the mouse version and the digitizer version PenMount Control Panel.

1. When installed as digitizer, a shortcut icon will be created on the Windows Desktop.

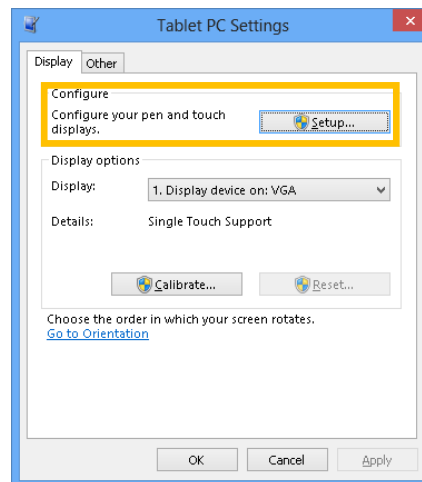


Chapter 3 Installing Drivers for 6000 Boards

2. There is a “Multiple Monitor” tab in the mouse version for configuring monitor mapping.

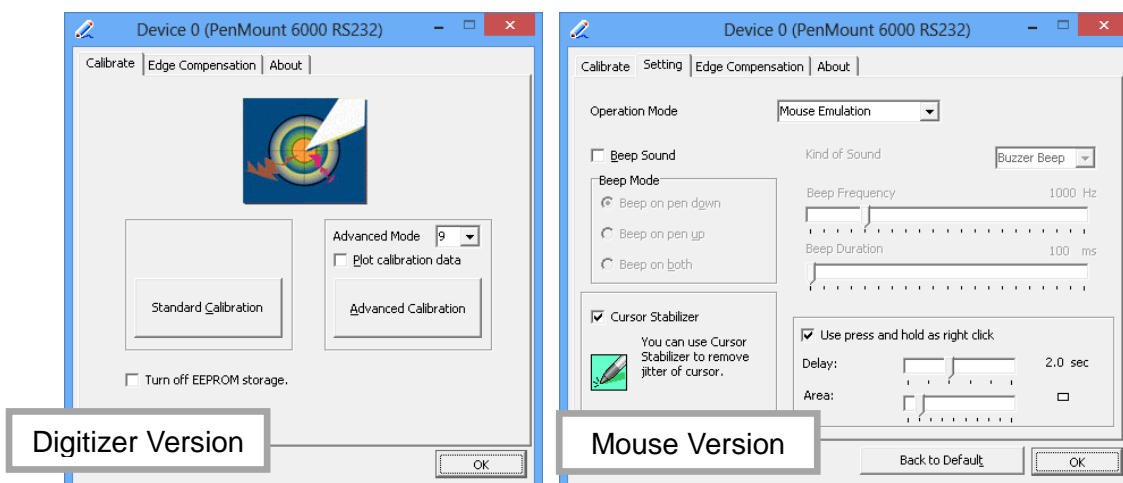


For digitizer devices, please check the “Tablet PC Settings” in the system Control Panel for mapping monitors.



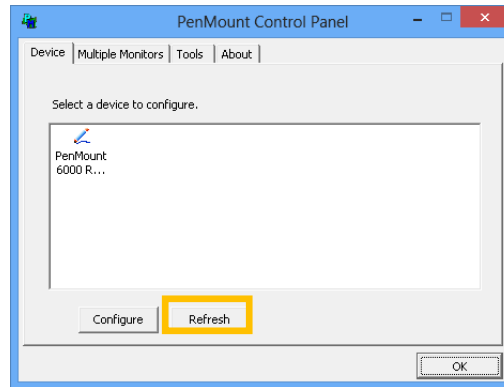
3. A device configuration window will appear by clicking on the “PenMount 6000 USB” or “PenMount 6000 RS232” icon in the PenMount Control Panel.

Only the mouse version has the “Setting” Tab.



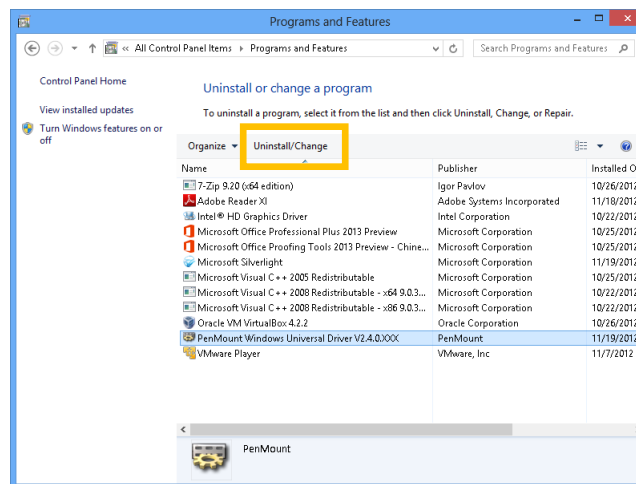
3.2.5. Refresh Device

If a PenMount device is not attached during device driver installation, user can still install by using the **Refresh** feature in the PenMount Control Panel.



3.2.6. Uninstall PenMount Windows Universal Driver

1. Go to Control Panel. Click “Add/Remove program”. Select “PenMount Windows Universal Driver”, and click on the “Change/Remove” (Windows XP) or “Uninstall/Change” (Windows 7 / 8) button.



2. Select ‘Uninstall’ to remove PenMount Windows Universal Driver.

3.3. Install PenMount X Window Driver on Linux

Before installing **PenMount Linux X Window RS-232/USB Driver** for PenMount 6000 boards, you must have had Linux X Window installed and running on your computer. **You must also have installed one of PenMount 6200D, 6202B, 6300A or 6500A control boards.**

PenMount Linux X Window RS-232 and USB Drivers for 6000 boards support the following operating systems:

Linux Distributions

RS232

USB

Ubuntu 6.06 / 6.10 / 7.04 / 7.10 / 8.04 / 8.10 / 9.04 / 9.10 / 10.04 / 10.10 / 11.04 / 11.10 / 12.04 / 12.10	•	•
Debian 4.0 / 5.0 / 6.0	•	•
Debian 3.1		
Fedora 4/5/6/7/8/9/10/11/12/13/14/15/16/17 32_64bit	•	•
Fedora Core3	•	
Fedora Core2	•	
Slackware12.0/12.1	•	•
Slackware10.0		
Red Hat 9.0	•	
Red Hat 7.3 / 8.0	•	•
OpenSuse 10.1/ 10.2/ 10.3/ 11/ 11.1/ 11.2/ 11.3/ 11.4/ 12.1 / 12.2	•	•
Suse 10.0	•	
Suse 9.2/9.3		
Suse 8.0/9.0/9.1		
Cent OS 5.2/ 5.3/ 5.4/ 5.5/ 6.0/ 6.2 32_64bit	•	•
Linux XFree86 4.x.x		
Linux XFree86 3.3.6		
Linux For GPM	•	•
QNX 6.4.1/ 6.5	•	•
QNX 6.3.2		
QNX 6.2	•	
Android	•	•

3.3.1. Install PenMount Linux X Window RS-232 Driver and USB Driver

See the readme file included in the driver folder.

3.3.2. Calibration Utilities

See the readme file included in the driver folder.

3.4. Install PenMount Windows CE Driver

Before installing **PenMount WinCE Driver**, you must have WinCE system installed and running in your device. You must also have had either PenMount USB control boards 6200D, 6202B, 6300A or 6500A installed.

NOTE: Make sure you can move the WinCE cursor with a serial mouse attached to the target COM port (e.g. COM2) before connecting the 6000 control board by RS-232 port.

3.4.1. Install PenMount Windows CE Driver

Please see the readme file included in the driver folder.

Chapter 4. Driver Software Functions

This chapter will guide you to the special software functions that configure and adjust the PenMount control boards and touchscreen hardware. Please note that not all of the functions are available for every driver. See the following table for drivers' software functions and their availability for specific interface and systems:

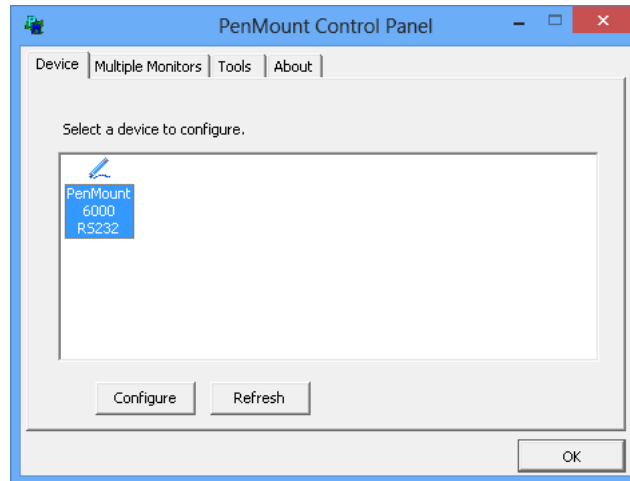
Software Function	DOS	Windows 2000/XP	Windows VISTA/7/8	Windows CE	Linux
Standard Calibration	•	•	•	•	•
Advanced Calibration		•	•	•	•
Multiple Monitors		•	•		
Multi Device		•	•		
Rotation		•	•		
Operation Mode		•	•		
Drawing mode	•	•	•	•	
Beep Sound	•	•	•		•
Beep sound adjustable		•	•		
Wake up function		•	•		
Showing linearity		•	•		
Right button		•	•	•	•
Hide cursor	•				
Double click area and speed adjustable		•	•		
About		•	•		
Edge Compensation		•	•		
Refresh		•	•		

Remark: With PenMount Windows Universal V2.2.0.283 and later versions, since the touchscreen is automatically installed as a digitizer device in Windows Vista/7/8, the functions which are built within Windows Vista/ 7/ 8 such as rotation, multi-monitors, flicks, and context menu function (which launches a context menu by user's long-pressing on touchscreen rather than clicking the right-mouse button or pressing the application key on the keyboard) will be supported.

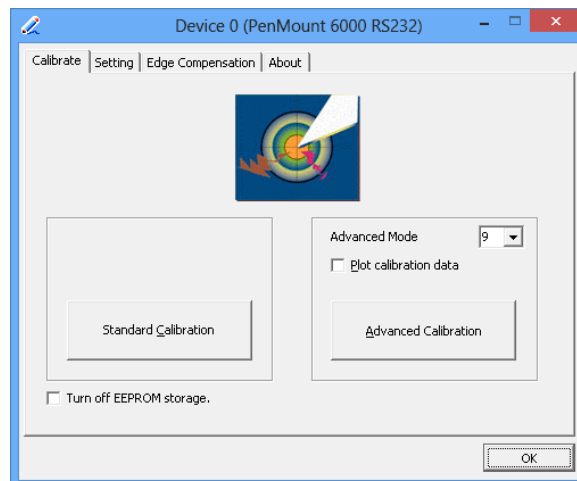
The following content in this chapter deals mainly with PenMount Windows Universal Driver (for 2000/XP/2003/VISTA/7/8). The PenMount Control Panel, which can be launched either in the start menu, or by double click on the desktop icon, is the major configuration utility.

4.1. Calibration

The most important feature that PenMount Control Panel provides is calibration. Please click on the "PenMount 6000 USB" or "PenMount 6000 RS232" icon to open the device specific configuration window.

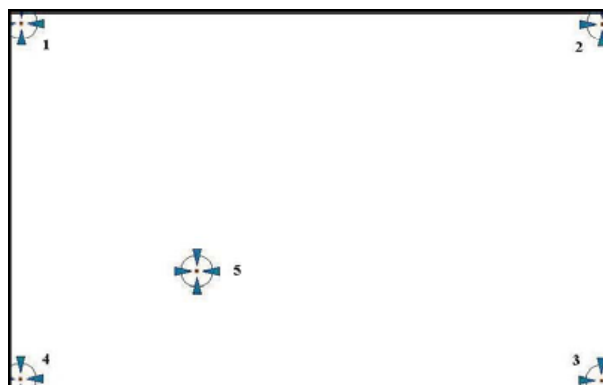


The first tab is the calibration tab, which consists of four features: “Standard Calibration”, “Advanced Calibration”, “Plot calibration data” and “Turn off EEPROM storage”.



4.1.1. Standard Calibration

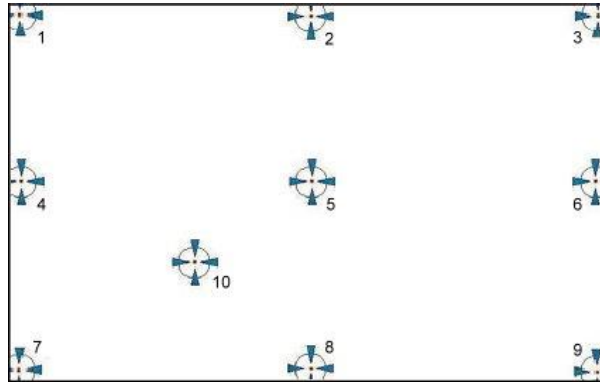
The Standard calibration function uses four points for calibration and one point for confirmation. Under normal circumstances, the standard calibration is all you need to perform an accurate calibration.



Chapter 4 Driver Software Functions

4.1.2. Advanced Calibration

The Advanced Calibration function improves the accuracy of calibration by using more involved engineering calculations. Use this function only if you have tried the Standard Calibration and there is still a discrepancy in the way the touchscreen maps to the display. You can choose 9, 16 or 25 points to calibrate, though we suggest that you first try 9 points, if it is still not tracking well then try 16 or 25 points.



The more points you use for calibration, the greater the accuracy. Errors in calibration may occur due to viewing angle, or individual skill, and there may be little difference in using 16 or 25 points. Note that a stylus is recommended for the most accurate results.

4.1.3. Plot Calibration Data

Check this function to have touch panel linearity comparison graph appear when you finish Advanced Calibration. The black lines reflect the ideal linearity assumed by PenMount's application program while the blue lines show the approximate linearity calculated by PenMount's application program as the result of user's execution of Advance Calibration.

4.1.4. Turn off EEPROM storage

This function disables the write-in of calibration data in the PenMount controller. This function is enabled by default.

4.1.5. Calibration in Command Line

In some cases, users might want to launch calibration directly in command line. Please use the following command:

```
%PROGRAMFILES%\PenMount Universal Driver\DMCCtrl.exe -calibration <mode>
```

Supported Modes:

4= Standard Calibration 4

9= Advanced Calibration 9

16= Advanced Calibration 16

4.2. Multiple Monitors

PenMount supports two or more touchscreen displays for one system. Each monitor requires its own PenMount touchscreen control board, either installed inside the display or in a central unit. Multiple Monitors supports the following modes:

Windows Extend Monitor Function
Matrox DualHead Multi-Screen Function
nVidia nView Function

NOTE: The **Multiple Monitors** function is for the use with multiple displays only. Do not use this function if you have only one touchscreen display. Please note once you turn on this function the **Rotating** function is disabled.

4.2.1. Requirements

Before using the **Multiple Monitors** function you need the following:

- A display card that supports multiple monitors such as the Matrox, nVidia, ATI, etc.
- (Two or more display cards supported by Windows are also ok.)
- Two or more touchscreens
- Two or more Serial Ports or USB ports.
- Two or more PenMount 6000 control boards such as 6200D, 6202B, 6300A or 6500A.
- The PenMount Windows Universal Driver (for 2000/XP/2003/VISTA/7/8).

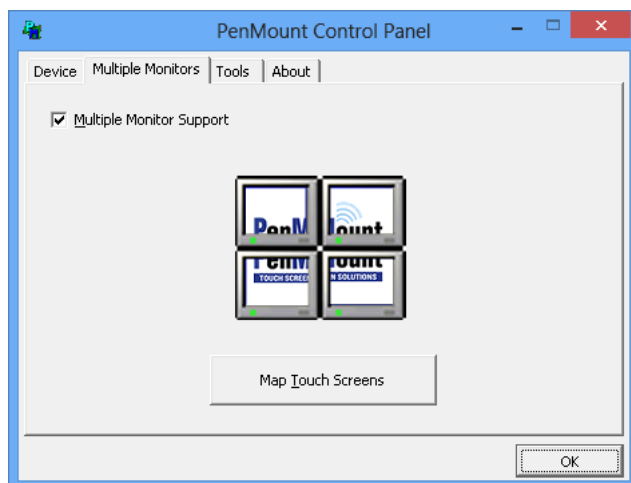
Before using **Multiple Monitors** you must have two or more monitors that are in extension mode. For display cards that support multiple monitors, we suggest you consider Matrox, nVidia, or ATI cards and inquire about operation and usability issues.

Note: Before you can use multiple monitors you need to map each monitor.

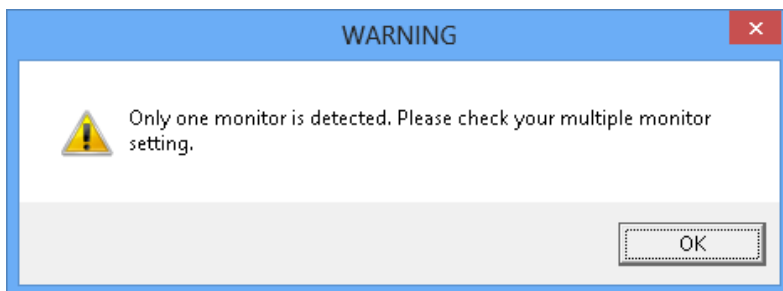
Enable the Multiple Monitors

Enable the multiple display function as follows:

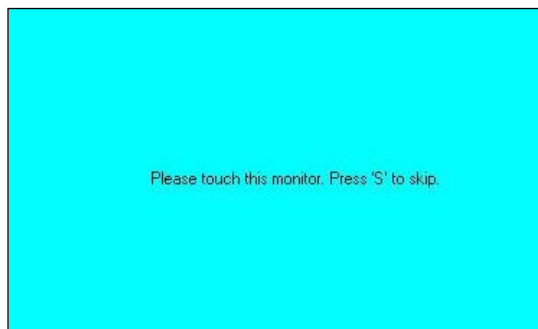
1. In PenMount **Control Panel**, under **Multiple Monitors** tag, check the "**Multiple Monitor Support**" box. Then click on the "**Map Touchscreens**" button to start assigning touch controllers to displays.



2. If there is only one monitor attached, a warning message box will show up.



3. Touch each screen as it displays "Please touch this monitor. Press 'S' to skip", or wait for 10 second to skip automatically.
4. Follow this sequence and touch each screen to map the touchscreens.



5. After the setting procedure is finished, maybe you need to calibrate for each panel and controller.

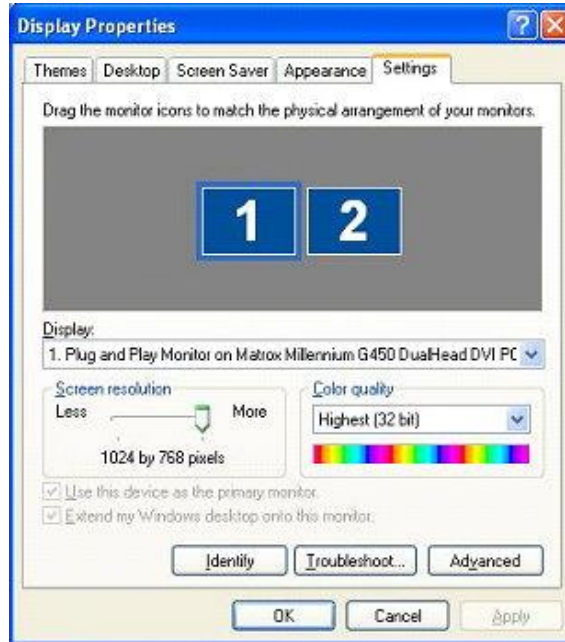
NOTES:

1. If you use a single VGA output for multiple monitors, please do not use the **Multiple Monitors** 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 Monitors** function.
3. If you change the resolution of display or screen address, you have to redo **Map Touchscreens** so the system understands where the displays are.

4. If you have multiple monitors but only one touchscreen, press 'S' to skip mapping step.

4.2.2. Example: Mapping Two Touch Monitor in Windows XP

1. Please make sure the touch monitor had plugged in and detected.

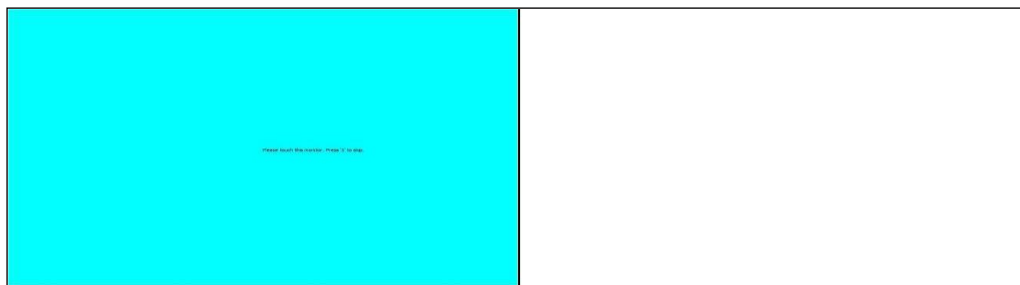


2. In PenMount **Control Panel**, under **Multiple Monitors** tag, click “**Map Touchscreens**” then click “**OK**”.

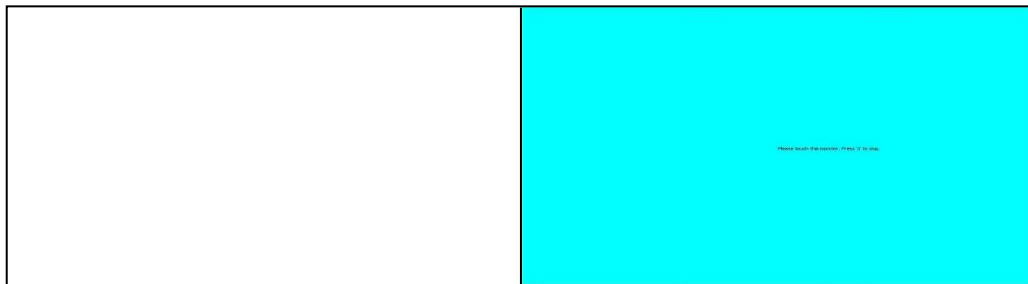


3. Please follow the message show the display to match the controller and touchscreen.
3-1. Please click “**S**” to skip if the monitor without use touchscreen.

Chapter 4 Driver Software Functions

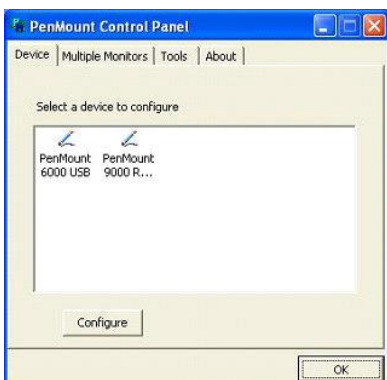


- 3-2. When screen jump to Screen 2, please touch it. If screen 2 has no touch function, press “S” to skip it.

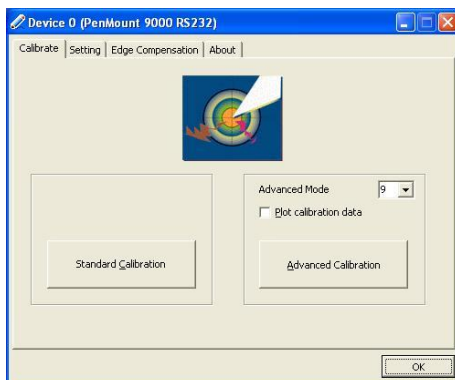


4. Before proceeding to calibrate, you have to finish the procedure of “**Map touchscreens**”.

- 4-1. Please do the calibration for each device in sequence.

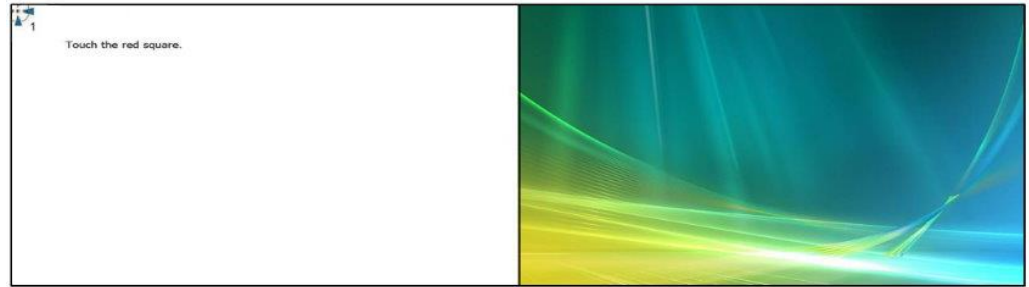


- 4-2. Press each device & start to do **Standard Calibration**, for instance, device 0.



- 4-3. After you press device 0, one of screens will show calibration map.

Please follow the points to calibrate it. When you completed one device, please do others with the same way.

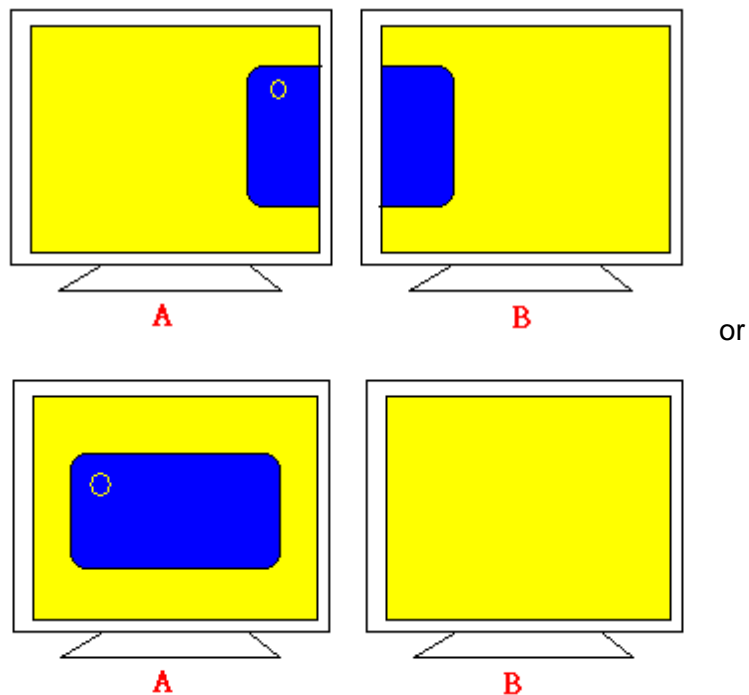


4.3. Multiple Devices

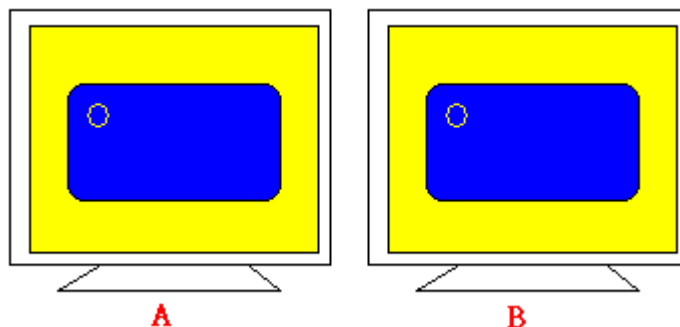
Multiple Devices function is designed to let you use two or more monitors to display the same image. Software that supports this function includes the PenMount Windows Universal Driver (for 2000/XP/2003/VISTA/7/8) only. This driver for PenMount 6000 can support up to sixteen control boards.

4.3.1. Compare Functions

The difference between the **Multiple Monitors** function and the **Multiple Devices** function are illustrated below.



Multiple Monitors function shown above extends the screen into 2 or more monitors.



Multiple Devices function displays the same image on two or more monitors.

4.3.2. Requirements

To use **Multiple Devices** with 6000 Control Boards, you need to do the following:

To connect with RS-232 ports:

1. Configure your computer hardware. See **Chapter 2. Install PenMount 6000 Control Boards.**
2. Attach each 6000 board to a different computer's serial port.
3. Install the PenMount Windows Universal Driver (for 2000/XP/2003/VISTA/7) in each computer – see **Chapter 3. Install Drivers for 6000 Boards** for details.
4. Use driver's **Calibration** function to calibrate each computer's touchscreen. You must calibrate each touchscreen before configuration is complete.

To connect with USB ports:

1. Configure your computer hardware and the Control Board ID Dipswitch – refer to your control board's hardware description in **Chapter 2. Install PenMount 6000 Control Boards.**
2. Install the PenMount Windows Universal Driver (for 2000/XP/2003/VISTA/7) in each computer – see **Chapter 3. Install Drivers for 6000 Boards** for details.
3. Use driver's Calibration function to calibrate each computer's touchscreen. You must calibrate each touchscreen before configuration is complete.

Note: Be sure to set the Control Board ID Dipswitches. Do not use the same setting on different control boards; otherwise the hardware will not operate correctly.

4.4. Screen Rotation

There are currently a number of software packages on the market that support rotating monitors 0°, 90°, 180°, and 270°. However you will not be able to use a touchscreen unless it is matched to the appropriate rotation. Our rotation configuration function allows you to easily match the touchscreen when you rotate your monitor.

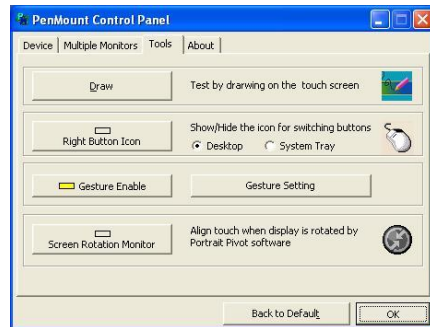
If you use a rotating monitor you will need a display card such as from **nVidia, Intel, SMI**

or **ATI** and software such as **Portrait Pivot Pro**. For software operation and features, please refer to your software manual.

PenMount supports rotation detection of 90, 180 and 270 degrees, and automatically adjust the touch position. On Windows XP 64 bit systems, however, users still need to manually turn on the rotation detection support with the instructions described below.

Configure Rotate Function in Windows XP 64bit

1. There is a **“Screen Rotation Monitor”** button that appears only in the PenMount driver utilities for Windows XP 64bit system.



2. On enabling **“Screen Rotation Monitor”**, you will see a screen like below:

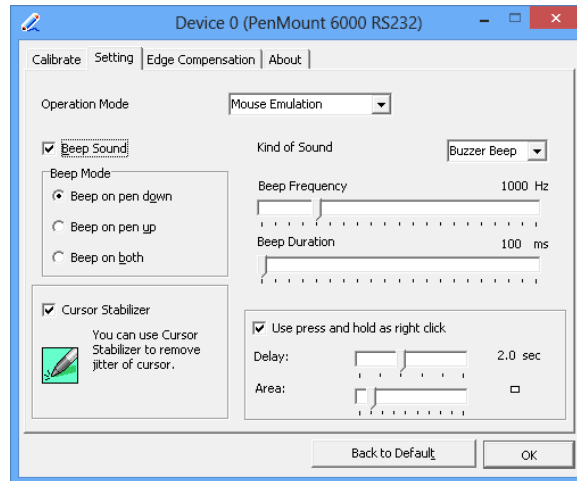


3. Choose rotate function (0°, 90°, 180°, 270°) in the 3rd party software. The calibration screen will appear automatically. Touch this point and rotation is mapped.

NOTE: Rotate function is disabled if you use **Monitor Mapping**.

4.5. The Settings Tab

The Settings Tab is available for mouse devices, which user can adjust operation modes, enable beep sound, and change press and hold settings.



4.5.1. Operation Mode

By specifying different operation modes, users can change the input mode for different application usages.

Operation Mode	Description
Pen Input Emulation	Select this mode and mouse will emulate Windows Vista pen input device operation, by which no mouse event will be sent until the touch is dragged out of range or released from the screen.
Mouse Emulation	Select this mode and 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 disabled.
Click on Release	Select this mode and mouse only provides a click function when the touch is released.

4.5.2. Beep Sound

All of PenMount's drivers support the beep sound function; however, some PC systems may only offer a fixed buzzer sound.

Beep Settings	Description
Enable Beep Sound	Turns beep function on and off
Beep Mode	Change the beep timing on pen down, pen up, or both.
Kind of Sound	Choose beep from Buzzer or Audio. Choose Audio beep requires PC Speaker.
Beep Frequency	Choose the desired beep frequency.
Beep Duration	Choose the desired beep duration.

4.5.3. Right Button

In Windows, user frequently uses the right button for showing the popup menu. For digitizer devices, the system already supports the press and hold gesture for simulating

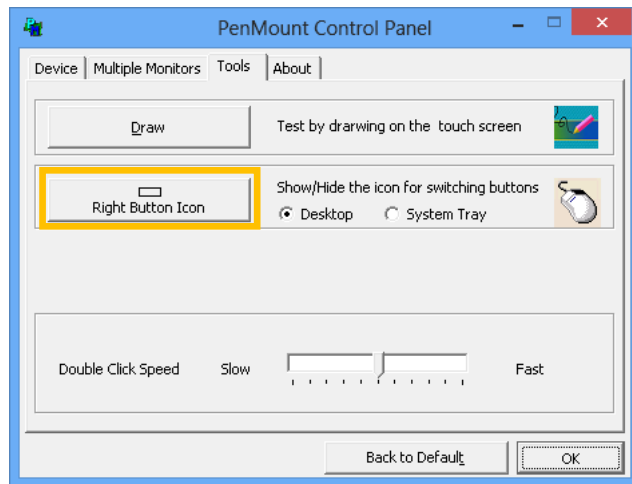
right button. For mouse devices, the PenMount supports two ways for simulating right mouse button.

1. Press and Hold as Right Click

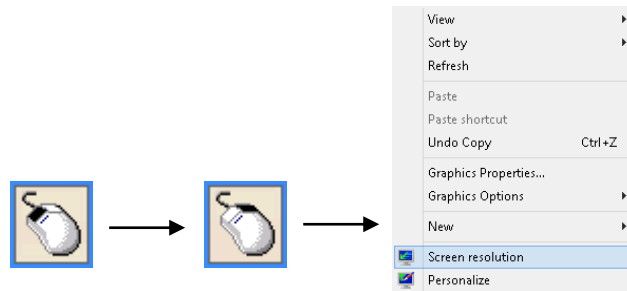
The press and hold delay and allowed area is adjustable in the “Settings” tab of the PenMount Control Panel.

2. Use Right Button Utility

The right button utility can be launched in PenMount Monitor, PenMount Control Panel, or by the shortcuts in the start menu.



A mouse icon as below will show up on the Windows desktop or in the system tray. Touching on the icon will trigger the right click mode in device driver, and next touch will become a right mouse click.

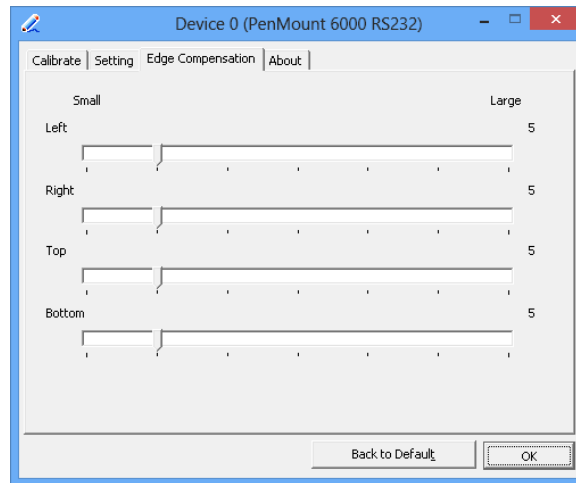


4.6. Edge Compensation

The edge compensation settings can be found in the “Edge Compensation” Tab in the PenMount Control Panel.

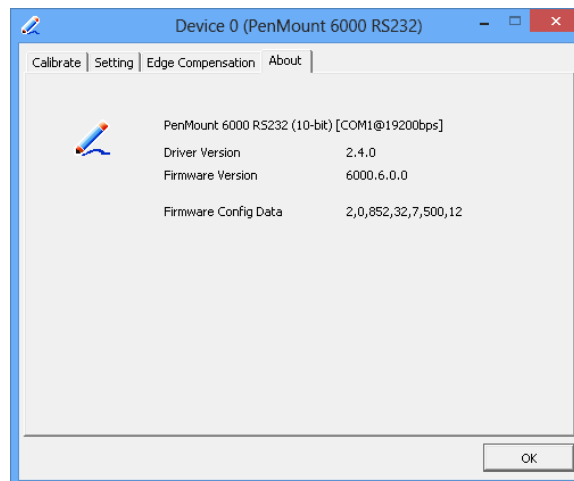
Chapter 4 Driver Software Functions

You can adjust the settings from 0 to 30 for accommodating the difference of each touch panel. The larger the value, the easier that the touch point reaches the edge of screen.



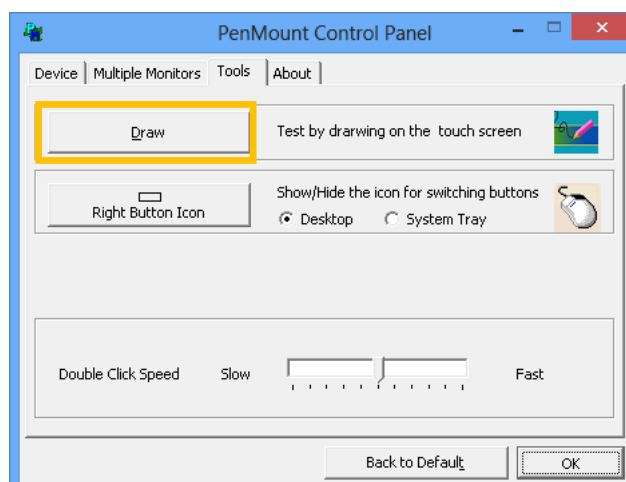
4.7. The Device Information

The "About" Tab in the device configuration table shows information about the PenMount device, such as baud rate used, firmware version, and firmware configuration data.

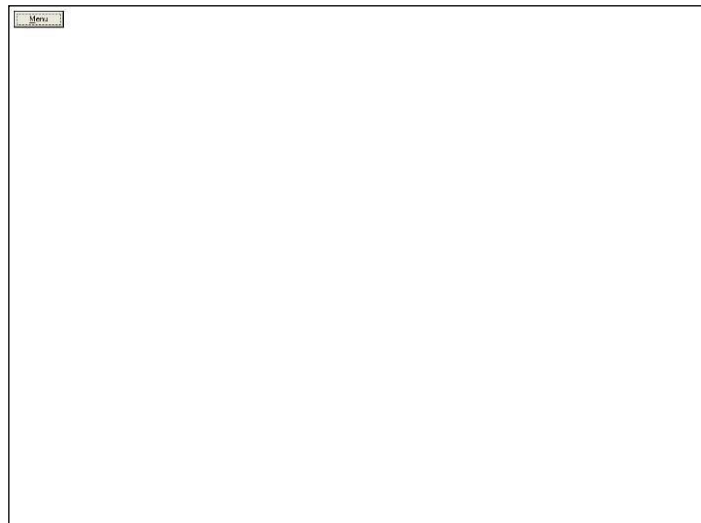


4.8. Draw Utility

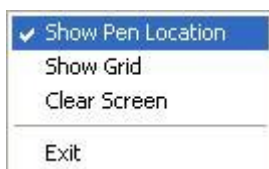
Tests or demonstrates the PenMount touchscreen operation. The display shows touch location. Click **Draw** to start. Touch the screen with your finger or a stylus and the drawing screen registers touch activity such **left**, **right**, **up**, **down**, **pen up**, and **pen down**.



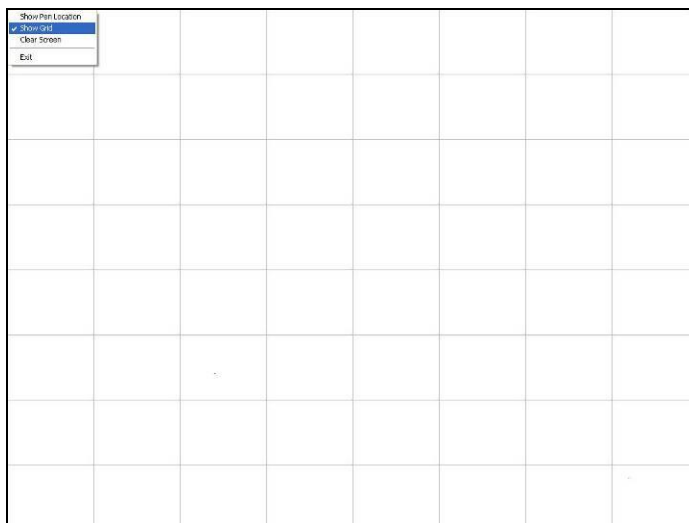
Touch the screen with your finger or a stylus and the drawing screen registers touch activity such **left, right, up, down, pen up, and pen down.**



Click **Menu** button for more functions.



Show Pen Location is to show the locations where pen comes down and lifted up on the monitor.



Show Grid is to show grid on the entire monitor. This is for linearity test.



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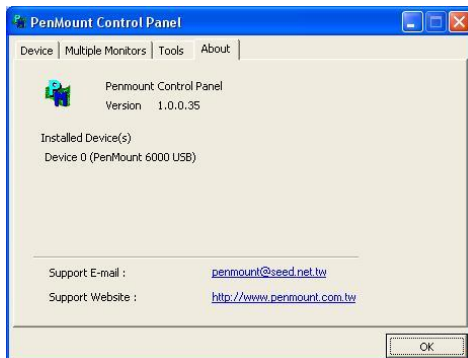
Select **Clear Screen** to clear drawing.



Select **Exit** to quit draw function

4.9. The Contact Information

This option shows the exact version of the drivers and controller firmware. Updated drivers are available for downloading on the PenMount website at <http://www.penmount.com/> .



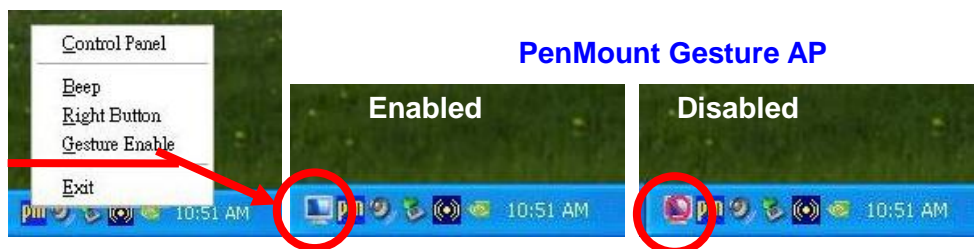
Chapter 5. PenMount Gesture AP for Windows 2000/XP/VISTA/7/8

This chapter will guide you to the PenMount Gesture AP that is applicable in Windows 2000/XP/Vista/7.

5.1. Invoke PenMount Gesture AP

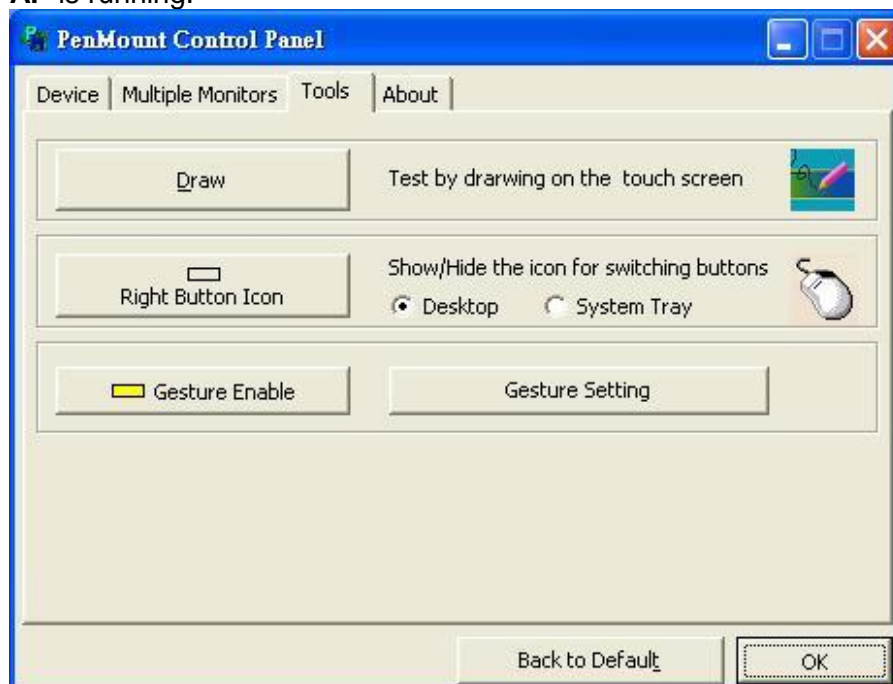
1. Make sure you have installed PenMount touchscreen control boards (either 6000 or 9000 series).
2. Make sure you have installed PenMount Universal Driver V2.1.0.263 or later versions on your system.
3. To run PenMount Gesture AP.

In the notification, right-click on the PenMount icon and select **Gesture Enable** from the menu. A **PenMount Gesture AP** icon will show up in the notification area. See the illustration below. **PenMount Gesture AP** is running.



or

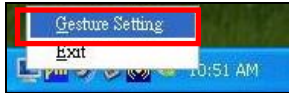
In **PenMount Control Panel**, select **Tools** tab and press **Gesture Enable** button. **PenMount Gesture AP** icon shows up in the notification area. **PenMount Gesture AP** is running.



5.2. Configure PenMount Gesture AP

To configure PenMount Gesture AP.

1. Right-click on the **PenMount Gesture AP** icon in the notification area, select **Gesture Setting** from the menu that appears. See the illustration below.

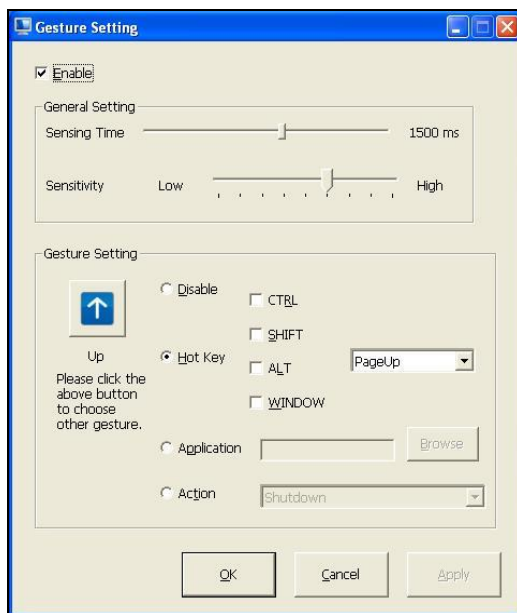


or

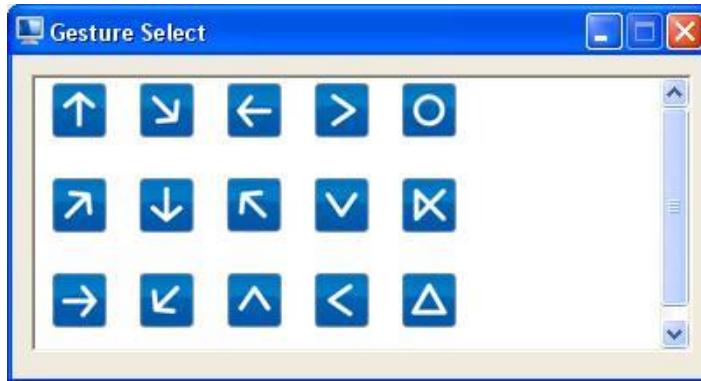
Select **Tools** tab and click **Gesture Setting** button in **PenMount Control Panel**.



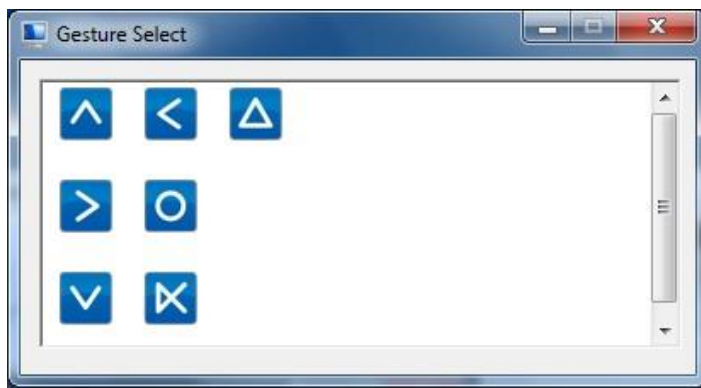
2. **[Gesture Setting]** window displays.



3. 15 **PenMount Gestures** are provided in total.



PenMount Gestures for Windows XP

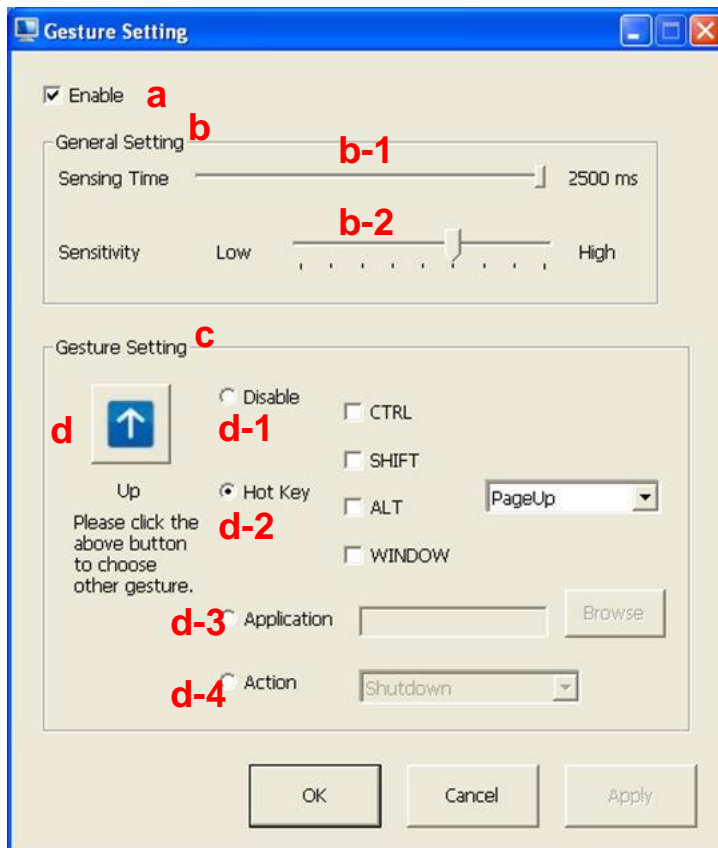


PenMount Gestures for Windows Vista / 7 / 8

4. In the [**Gesture Setting**] window, you can proceed to configure **PenMount Gesture AP**:

See picture below.

PenMount Gesture AP



a. Enable/disable Check Box. Select/deselect the box to enable/disable PenMount Gestures.

b. General Setting Box

b-1. Sensing Time - Move the slider to adjust PenMount Gestures Sensing Time between 200 ms (0.2 sec) and 2500 (2.5 sec). The shorter the sensing time is configured, the faster the gesture has to be done.

b-2. Sensitivity – Move the slider to adjust how sensitive you want your finger stroke on the touchscreen to be sensed.

c. Gesture Settings Group Box. This group box allows you to individually configure each gesture.

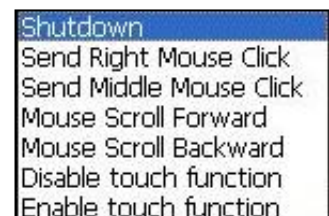
d. Gesture Select Button. Press this button to select the specific gesture you are going to configure. When the gesture icon turns to blue, it is enabled. When it is gray, it is disabled. See the following for details.

d-1. Disable Button. When this button is selected, the gesture is disabled.

d-2. Hot-key Configure Button. Configure the hot-keystrokes for specific gesture. The hot-key can include up to 5 keystrokes. When that gesture is sensed, the configured keystrokes will be reported.

d-3. Application Invoke Button. Configure to invoke a specific application with particular gesture. So that when the gesture is sensed, the specific application will run.
















d-4. Action Configure Button. Configure to make use of PenMount Gesture AP's built-in shortcuts. So that when a particular gesture is sensed, a specific action will be taken. PenMount Gesture AP have the following shortcuts built in:



Note: For **Disable touch function**, after touch function is disabled, the mouse-pointer won't move following your finger sliding on the touchscreen and your finger tapping won't trigger any action, however, gestures will still be sensed.

(Note: If you select Disable touch function, the cursor will not react to finger movement on the touch screen and the tapping will not trigger any program action. However, the gesture recognition is still functioning.)

5.3. PenMount Gestures' Default Values in Windows XP

	Page Up		Page Down
	Backward (Left Arrow)		Forward (Right Arrow)
	Copy (Ctrl + C)		Paste (Ctrl + V)
	Undo (Ctrl + Z)		Delete
	Zoom in ([Pad] +)		Zoom out ([Pad] -)
	Rotate Counter Clockwise (Ctrl + L)		Rotate Clockwise (Ctrl + K)
	Open On-Screen Keyboard (Execute OSK.EXE)		Save Document (Ctrl + S)
	Close Program (Alt + F4)		