



Digital Signage  
Touch  
Panel PC

# USER MANUAL

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This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference
- (2) This device must accept any interference received, including interference that may cause undesired operation.

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## Important safety notice

Please read this manual carefully and save to use in the future.



Make sure to unplug the power lead before cleaning the product. Unplug the power lead from the power outlet and wipe the product using a soft, dry cloth.



Do not use components except those recommended by the manufacturer, failure to do so may cause damage.



Do not try to move the monitor by pulling only the cord nor touch the plug with wet hands.



Do not excessively bend the plug and wire nor place heavy objects upon them, which could cause damage.



Keep the product away from places exposed to oil, smoke or moisture; do not install inside a vehicle, this may cause malfunction, an electric shock or fire. Especially avoid operating the monitor near water or outdoors where it could be exposed to snow or rain.



Do not cover the vents on the monitor case, do not place the monitor or power adapter on the bed, sofa, carpet etc, as bad ventilation may cause a breakdown or fire.



When installing the product, make sure to keep it away from the wall (more than 76mm (3 inch) for ventilation purposes.



Only the type of power listed in the label of the LCD can be used. If you have questions of power type, please contact local dealer or power supply department.



Use only a properly grounded plug and receptacle. An improper ground may cause electric shock or equipment damage. If you can't insert the plug into outlet, please change the outlet.



Make sure the outlet can support total electricity of products be plug into it, do not connect too many extension cords or plugs to an outlet. Otherwise it may cause fire.



Do not place the product on an unstable or small surface area. Place the product on an even, stable surface, as the product may fall and cause harm

to someone walking by, specifically children.



Do not try to extend the power wire, otherwise it may cause fire.



Do not open the monitor cabinet by yourself, if monitor needs to be examined or repaired, please contact the professional service.



Firstly pull out the power plug and connect the professional service when it happens following:

- a. power wire or power cable is damaged.
- b. monitor fall into ground or monitor cabinet is damaged.
- c. monitor displays obviously out of the way, needs to be repaired.



Unplug the power cord from the power outlet when monitor is not used.



Do not install the product in places with poor ventilation, high light, high temperature or moisture.



Do not install the product PORTRAIT, specially the size over 42". If you need Portrait screens, please contact us.

# 1

## INTRODUCTION

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### About this Manual

This manual is intended as a reference guide for the **BROTEK Technology INC. LTD.** A.I.O. Touch Panel PC.

This Manual provides the information needed to install, set up and maintain the **BROTEK Technology INC. LTD.** A.I.O. Touch Panel PC. In addition, this manual describes basic technical information about the Touch Panel, troubleshooting and contact information.

## Contact information

Representatives of **BROTEK Technology INC. LTD.** can be contacted on the numbers/emails below for further information and to resolve any issues you might have with our products.

BROTEK Technology INC. LTD.

9F-1, NO.11 Jingguo Rd.

Taoyuan City, 330, Taiwan (R.O.C)

Tel: 886-3-3251135

Fax: 886-3-3578375

<http://www.brotek.com.tw>

Please check our web site on a regular basis for updates, press information, application notes, latest software drivers and utilities.

## Overview

Thank you for purchasing the BROTEK A.I.O. Touch Panel PC, it is a smart multi-functional PC monitor with an active matrix TFT LCD that displays sharp and brilliant images of text and graphics. The embedded Touch Panel manufactured by Next Window, will enhance the whole interface between man and machine in multimedia application.



# 2

## SPECIFICATION

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### About Specification

BROTEK Panel PC designed in all size, 19" 26" 32" 42" 47" 52" and even 65", BROTEK also provides High-Tech solutions for different customers needs and to fit different environment, such as Sunlight solution, PID Control, PMMA & Tempered Glass Protection sheet, and Touch Screen.

This chapter provides the information about LCD Panel, Touch Screen and PC system which you might using now, and descriptions about the OSD control function.

## TFT Features

Size	19"	26"	32"	42"
LCD Maker	AUO	AUO	AUO	LG
Resolution	1440x900	1366x768	1366x768	1366x768 1920x1080
Lifetime	50,000	50,000	50,000	50,000
Color	16.7(million)	16.7(million)	16.7(million)	16.7(million)
Contract	1000 : 1	2500 : 1	2500 : 1	1400 : 1
R.t.	5ms	6.5ms	6.5ms	6ms
V.a. (HxV)	160°	170°	170°	176°
Cd/m <sup>2</sup>	300	550	550	500

Size	47"	52"	65"
LCD Maker	LG	SHARP	SHARP
Resolution	1920x1080	1920x1080	1920x1080
Lifetime	50,000	50,000	50,000
Color	16.7(million)	16.7(million)	16.7(million)
Contract	2000 : 1	1500 : 1	2000 : 1
R.t.	8ms	6ms	6ms
V.a. (HxV)	176°	176°	176°
Cd/m <sup>2</sup>	500	450	450

※Subject to change without notice, please contact us and confirm.

※All information provided by AUO, LG, and SHARP.

## SYSTEM Features

### Mini ITX Intel GM45

#### System

<b>CPU</b>	Intel Core 2 Duo / Celeron M
<b>FSB</b>	667 / 800 / 1066 MHz (Celeron M only 667)
<b>BIOS</b>	AWARD 16 Mbit, SPI
<b>System Chipset</b>	GM45 + ICH9M
<b>System Memory</b>	DDR3 800 / 1066 MHz SDRAM, 204-pin SODIMM type, MAX Capacity 4GB
<b>H/W Status Monitor</b>	Monitoring CPU temperature, voltage, and fan status with auto throttling control
<b>SmartFan Control</b>	Yes

#### I/O

<b>Rear I/O</b>	1 x VGA, 1 x DVI, 2 x Ethernet, 4 x USB 2.0, 3 x Audio, 2 x Serial, 2 x PS/2
-----------------	--

#### Display

<b>Chipset</b>	Intel GM45 GMCH integrated Graphics Media Accelerator X4500
<b>VRAM</b>	Shared system memory up to 384 MB video memory
<b>Dual Display</b>	CRT + LVDS; CRT + DVI; DVI + LVDS
<b>LVDS</b>	Single channel 18/24-bit/Dual channel 36/48-bit LVDS

#### Audio

<b>Audio Interface</b>	Mic in, Line in, (CD Audio in), Line out
------------------------	--

## Mini ITX 945 ATOM

### System

<b>Processor</b>	Intel® Atom™ processor 270
<b>Main Memory</b>	<ul style="list-style-type: none"> <li>• One 240-pin SDRAM Dual Inline Memory Module (DIMM) socket</li> <li>• 667/533 MHz single channel DDR2 SDRAM interface</li> <li>• Supports up to 2 GB of system memory</li> </ul>
<b>Chipset</b>	Intel® 945GC Express Chipset consisting of: <ul style="list-style-type: none"> <li>• Intel® 82945GC Express Chipset Graphics and Memory Controller Hub (GMCH)</li> <li>• Intel® 82801GB I/O Controller Hub (ICH7)</li> </ul>
<b>Graphics</b>	Intel® 945GC Express Chipset with Intel® Graphics Media Accelerator 950 (Intel® GMA 950)
<b>Audio</b>	<ul style="list-style-type: none"> <li>• RealTek* ALC662 audio codec</li> <li>• Support for Intel® High Definition Audio</li> <li>• Support for 4-channel audio (two independent 2-channel audio streams)</li> </ul>
<b>Peripheral Interfaces</b>	<ul style="list-style-type: none"> <li>• Up to six USB 2.0 ports               <ul style="list-style-type: none"> <li>— Four ports routed to the back panel</li> <li>— Two ports routed to an onboard USB header</li> </ul> </li> <li>• One IDE interface with ATA-100/66 support (two devices)</li> <li>• Two Serial ATA (3.0 Gb/s) interfaces</li> <li>• One VGA connector</li> <li>• One parallel port</li> <li>• One serial port</li> <li>• PS/2* keyboard and mouse ports</li> </ul>
<b>BIOS</b>	<ul style="list-style-type: none"> <li>• Intel® BIOS</li> <li>• Support for SMBIOS</li> <li>• Intel® Rapid BIOS Boot</li> <li>• Intel® Express BIOS Update</li> </ul>
<b>LAN Support</b>	• 10/100 Mb/s LAN Subsystem
<b>Power Management</b>	<ul style="list-style-type: none"> <li>• Support for Advanced Configuration and Power Interface (ACPI)</li> <li>• Wake on USB, PCI, PS/2, LAN, and front panel</li> </ul>
<b>Supported Operating Systems</b>	<ul style="list-style-type: none"> <li>• Microsoft Windows Vista* Starter Edition</li> <li>• Microsoft Windows Vista Basic Edition</li> <li>• Microsoft Windows* XP Professional</li> <li>• Microsoft Windows XP Home</li> </ul>

For more information about Desktop Board DG945GCLF, including the Technical Product Specification (TPS), BIOS updates, and device drivers, go to :

<http://support.intel.com/support/motherboards/desktop/>.

## Monitor Features

Configure Graphics card

Configure the graphics card of the PC System to the native resolution of the supplied monitor (or less than) and make sure the timing frequency is set to the standard frequency to ensure the LCD display will function.

HD or FHD Timing Modes depends on the Panel which you are using.

### *HD Preset Timing Modes*

Mode	Resolution	H Freq.(KHz)	V Freq.(Hz)
<b>1</b>	<b>640*480@60</b>	<b>31.469</b>	<b>59.940</b>
<b>2</b>	<b>800*600@60</b>	<b>37.879</b>	<b>60.317</b>
<b>3</b>	<b>1024*768@60</b>	<b>48.363</b>	<b>60.004</b>
<b>4</b>	<b>1280*768@60</b>	<b>47.776</b>	<b>59.870</b>
<b>5</b>	<b>1360*768@60</b>	<b>47.720</b>	<b>59.799</b>

※Subject to change without notice, please contact us and confirm.

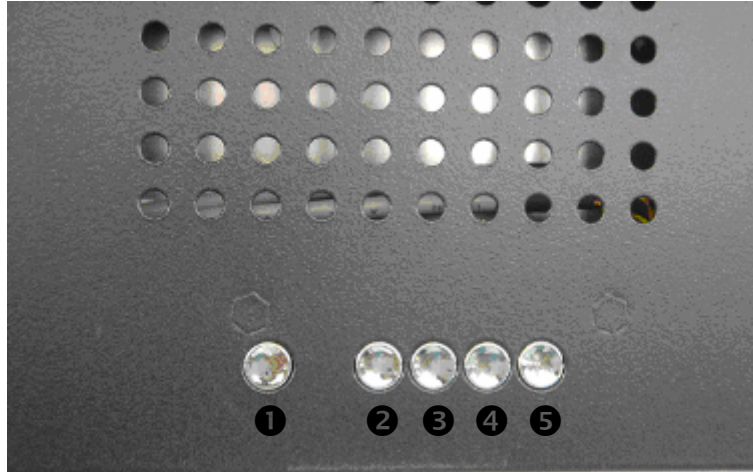
### *FHD Preset Timing Modes*

Mode	Resolution	H Freq.(KHz)	V Freq.(Hz)
<b>1</b>	<b>640*480@60</b>	<b>31.469</b>	<b>59.940</b>
<b>2</b>	<b>800*600@60</b>	<b>37.879</b>	<b>60.317</b>
<b>3</b>	<b>1024*768@60</b>	<b>48.363</b>	<b>60.004</b>
<b>4</b>	<b>1280*768@60</b>	<b>47.776</b>	<b>59.870</b>
<b>5</b>	<b>1280*1024@60</b>	<b>63.980</b>	<b>60.000</b>
<b>6</b>	<b>1360*768@60</b>	<b>47.700</b>	<b>60.000</b>
<b>7</b>	<b>1440*900@60</b>	<b>59.9</b>	<b>75</b>
<b>8</b>	<b>1600*1200@60</b>	<b>75.0</b>	<b>60</b>
<b>9</b>	<b>1680*1050@60</b>	<b>65.3</b>	<b>60</b>
<b>10</b>	<b>1920*1080@60</b>	<b>74.3</b>	<b>60</b>
<b>11</b>	<b>1920*1200@60</b>	<b>74.6</b>	<b>60</b>

※Subject to change without notice, please contact us and confirm.

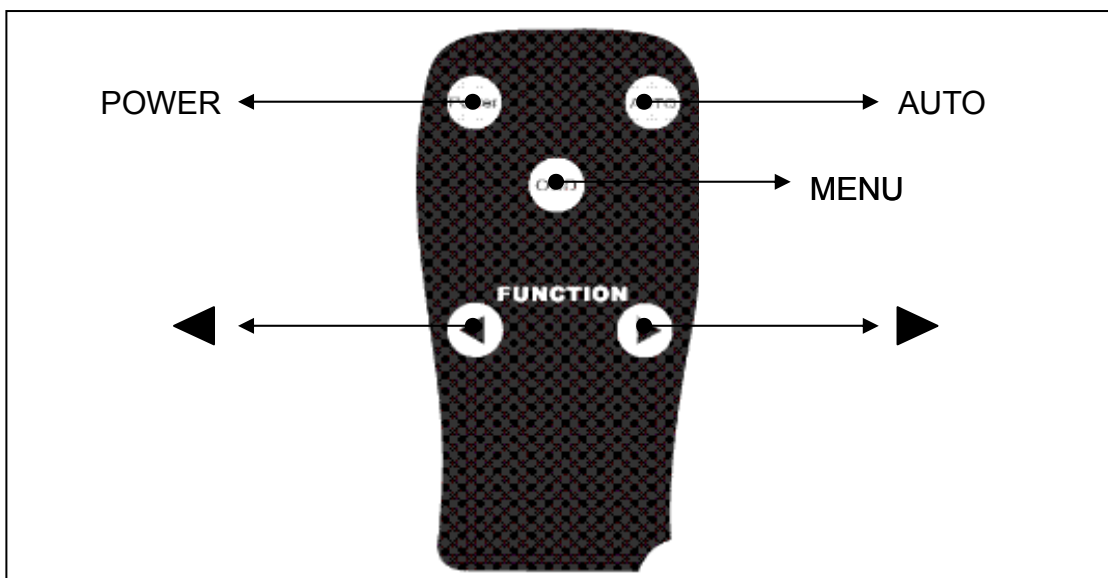
# Monitor OSD Control Guide

## MONITOR BUTTON OVERVIEW



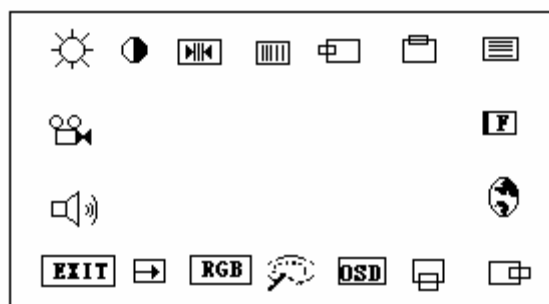
○,1 POWER	There is a 3-second wait between on/off cycles.
○,2 MENU	Use the MENU key to display the OSD (On-Screen Display) menu of monitor. Note : 1) Confirm the selection of OSD 2) Exit the selection of OSD
○,3 AUTO	This function is for Auto Adjust
○,4 ~ ○,5 ◀ ▶	Use both buttons to toggle between selections in the On Screen Display (OSD), or to adjust settings (i.e. volume, brightness, etc).

## Monitor Remote Control OVERVIEW



## ON SCREEN DISPLAY FUNCTIONS

### *FHD OSD Control Function List*



Press ◀ / ▶ to locate the item you desire to change, then press “Menu” to make the adjustment, then press “Menu” again to go back main menu.

#### 1) ☀ **Brightness**

Press “MENU” to enter OSD function. Press ◀ / ▶ to make a selection to choose ” **Brightness** ”. Use the ◀ / ▶ buttons to adjust their values. After the adjustments are done, press “AUTO” to exit.

#### 2) 🌑 **Contrast**

Press “MENU” to enter OSD function menu. And use the ◀ / ▶ to choose ” **Contrast** ”. Use the ◀ / ▶ buttons to adjust the difference between the light and dark areas. When the adjustments are done, press “ AUTO” to exit.

#### 3) 🕒 **Clock**

Press “MENU” to enter OSD function menu. And use the ◀ / ▶ to choose ” **Clock** ”. Use the ◀ / ▶ buttons to adjust the video distortion. It will appear horizontal noise on the screen while adjust the Clock.

#### 4) 📏 **Phase**

Press “MENU” to enter OSD function menu. And use the ◀ / ▶ to choose ” **Phase** ”. Use the ◀ / ▶ buttons to adjust the video distortion. It will appear vertical noise on the screen while adjust the Phase.

#### 5) 📺 **Horizontal Position**

Press “MENU” to enter OSD function menu. And use the ◀ / ▶ to choose ” **Horizontal Position** ”. Moves the display picture left or right.

## 6) Vertical Position

Press “**MEUN**” to enter OSD function menu. And use the ◀ / ▶ to choose ” **Vertical Position**”. Moves the display picture up or down.

## 7) Sharpness

Press “**MEUN**” to enter OSD function menu. And use the ◀ / ▶ to choose ” **Sharpness**”. Use the ◀ / ▶ buttons to adjust the sharpness(available in scaling –up mode).

## 8) Text Mode

Press “**MENU**” to enter OSD function. Press ◀ / ▶ to make a selection to choose ” **Text Mode** ”. Zoom ratio change between VGA and Text mode Press “Menu” to executing.

## 9) OSD Language

Press “**MENU**” to enter OSD function. Press ◀ / ▶ to make a selection to choose ” **OSD Language** ”. Change the OSD language, and press “Menu” to executing.

## 10) OSD H-Position

Press “**MENU**” to enter OSD function. Press ◀ / ▶ to make a selection to choose ” **OSD H-Position** ”. Adjusts the OSD position.

## 11) OSD V-Position

Press “**MENU**” to enter OSD function. Press ◀ / ▶ to make a selection to choose ” **OSD V-Position** ”. Adjusts the OSD position.

## 12) OSD Transparency

Press “**MENU**” to enter OSD function. Press ◀ / ▶ to make a selection to choose ” **OSD Transparency** ”. Adjust the OSD transparency.

## 13) Switch Color

Press “**MENU**” to enter OSD function. Press ◀ / ▶ to make a selection to choose ” **Switch Color** ”. Adjusts color temperature.



## 14) Set Color USER

Press “**MENU**” to enter OSD function. Press ◀ / ▶ to make a selection to choose “**Set Color USER**”. Adjust color temperature for User mode.

## 15) Reset

Press “**MENU**” to enter OSD function. Press ◀ / ▶ to make a selection to choose “**Reset**”. Restore the default value(factory mode). Press “Men u” to executing.

## 16) Exit

Press “**MENU**” to enter OSD function. Press ◀ / ▶ to make a selection to choose “**Exit**”. Exit the OSD menu and save the values. Press “Menu” to executing.

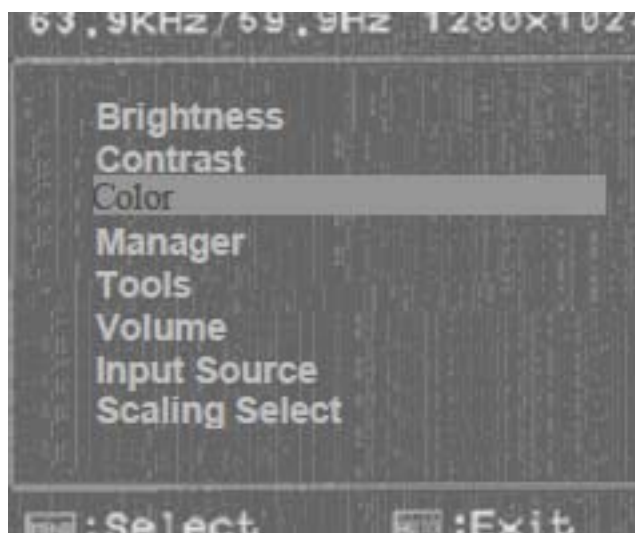
## 17) Volume

Press “**MENU**” to enter OSD function. Press ◀ / ▶ to make a selection to choose “**Volume**”. Use the ◀ / ▶ buttons to adjust the volume setting.

## 18) Input Source

Press “**MENU**” to enter OSD function. Press ◀ / ▶ to make a selection to choose “**Input Source**”. Use the ◀ / ▶ buttons to select input source, and press “Menu” to executing.

## ***HD OSD Control Function List***



### **1) Brightness**

Press “**MENU**” to enter OSD function. Press ◀ / ▶ to make a selection to choose “**Brightness**”. Use the ◀ / ▶ buttons to adjust their values. After the adjustments are done, press “**AUTO**” to exit.

### **2) Contrast**

Press “**MEUN**” to enter OSD function menu. And use the ◀ / ▶ to choose “**Contrast**”. Use the ◀ / ▶ buttons to adjust the values. When the adjustments are done, press “**AUTO**” to exit.

### **3) Color**

Press “**MENU**” to enter OSD function. Press ◀ / ▶ to make a selection to choose “**Color**”. Press ◀ / ▶ to choose from the selections (9300°K,6500°K,User color) settled. Press “**MENU**” to confirm the selections. Press “**AUTO**” back to the main menu.

#### **3-1 (Sub menu) User color**

Use the ◀ / ▶ buttons to toggle among sub-choices (Red, Green, Blue) and press “**MENU**” to enter. Use the ◀ / ▶ buttons to adjust the values of each color. When the adjustments are done, press “**AUTO**” to exit.

## 4) Manager

Press **"MENU"** to enter OSD function. Press ◀ / ▶ to make a selection to choose **"Manager"**. Press **"MENU"** to enter **"Manager"** settings and then use ◀ / ▶ buttons to select the sub-item (H. Position, V.Position, Clock, Phase) you would adjust and press **"MENU"** to enter. Use ◀ / ▶ buttons to adjust the values. When the adjustments are done, press **"AUTO"** to exit.

## 5) Tools

Press **"MENU"** to enter OSD function and use the ◀ / ▶ buttons to choose **"Tools"**. Press **"AUTO"** to return to the main menu.

### 5-1 (Sub menu) OSD Timer

To choose the **"OSD Timer"** function and then use ◀ / ▶ buttons to toggle between the selections. Press the ◀ / ▶ button to select the time you want the OSD menu to remain on the screen when it is not in use. Press **"MENU"** to confirm the selections. Press **"AUTO"** back to the main menu.

### 5-2 (Sub menu) Reset

If you choose to **"Reset"** option which will return settings to the default settings. The monitor will turn off, then power up again to adjust to the default setting. Press **"MENU"** to confirm the selections. Press **"AUTO"** back to the main menu.

### 5-3 (Sub menu) Power Save

Choosing the **"Power Save"** function, use ◀ / ▶ buttons to toggle between the selections. Press the ◀ / ▶ button to make a selection. Press **"MENU"** to confirm the selections. Press **"AUTO"** back to the main menu.

### 5-4 (sub menu) Language

If you choose the language sub-menu, use ◀ / ▶ buttons to toggle between the Language selections. Press ◀ / ▶ button to select a language. Press the **"AUTO"** to exit.

## 6) Volume :

Press **"MENU"** to enter OSD function and use the ◀ / ▶ buttons to choose **"Volume"**. Press **"AUTO"** to return to the main menu.

※Note:

You can use the remote control to adjust "Volume".

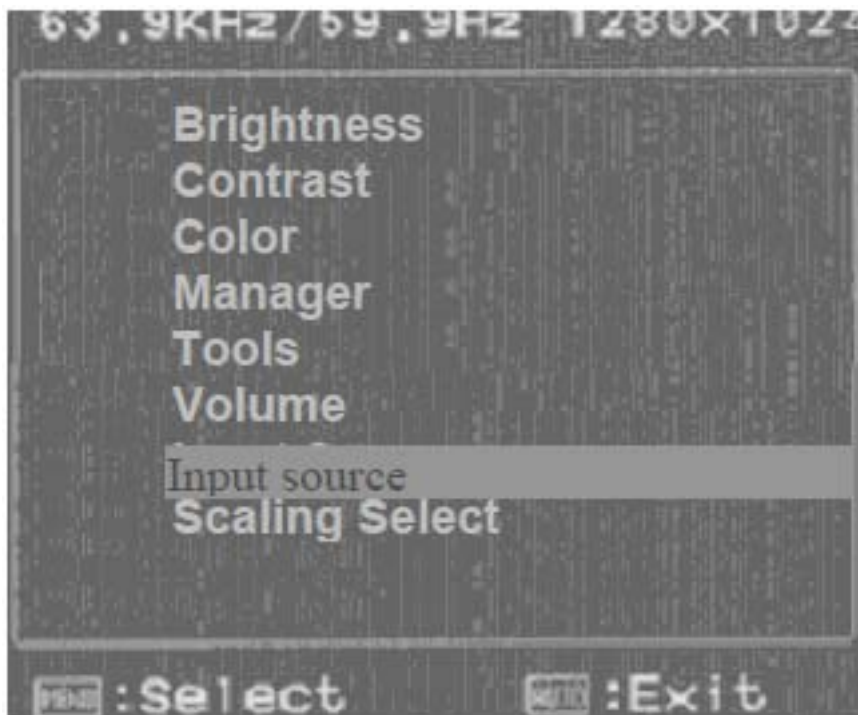
(No require to press through **"MENU"**)

◀ increase volume

▶ decrease volume

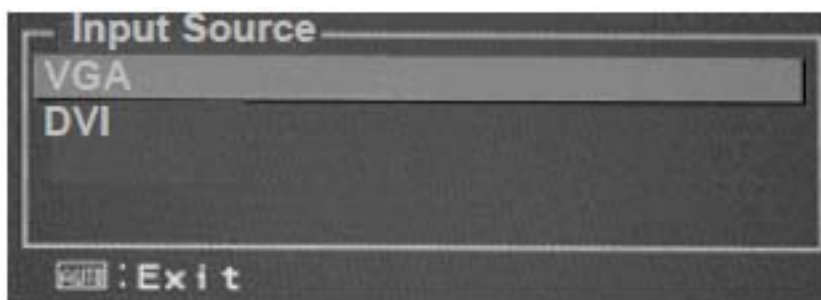
7) **Input source :**

Press “**MENU**” to enter OSD function and use the ◀ / ▶ buttons to choose “**Input source**”. Press “**AUTO**” to return to the main menu.



7-1 (sub menu) **Input Source**

If you choose the “**Input Source**” sub-menu, use ◀ / ▶ buttons to toggle between the Input Source selections. Press ◀ / ▶ button to select “**VGA**” or “**DVI**”. Press “**MENU**” to confirm. Press the “**AUTO**” to exit.



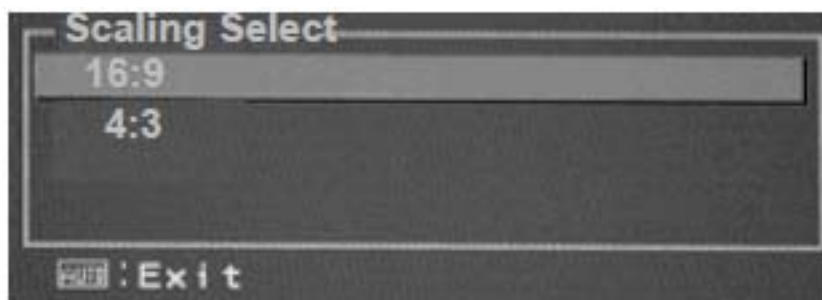
8) **Scaling Select** :

Press “**MENU**” to enter OSD function and use the ◀ / ▶ buttons to choose “**Scaling Select**”. Press “**AUTO**” to return to the main menu.

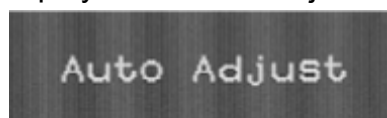


8-1 (sub menu) **Scaling Select**

If you choose the Scaling Select sub-menu, use ◀ / ▶ buttons to toggle between the scaling source selections. Press ◀ / ▶ button to select “**16:9**” or “**4:3**”. Press the “**AUTO**” to exit.



9) Press “**AUTO**” that the display will be auto adjusted to its optimal performance.



# 3

## Installation & Mounting

---

### System Installation

Before OS(Operating System) Installation, you need to prepare following equipments in order to make Installation smooth.

- ✧ **Small size Monitor x 1. (for 65" Installation only)**
- ✧ **VGA wire x 1.**
- ✧ **Keyboard, Mouse x 1.**
- ✧ **O.S. CD x 1.**
- ✧ **USB type DVD/CD ROM.**

#### **Step 1**

Connect **PC VGA Output** and **Monitor VGA Input** on your Panel PC by using VGA wire.



#### **Step 2**

Connect your USB DVD/CD ROM with the USB port on your Panel PC, put OS Disc in the DVD/CD ROM. Enter Bios settings and select your USB DVD/CD ROM as 1st boot device. Save Bios settings, Reboot Panel PC and start your Installation.

## ※ **Step 3 (Display troubleshooting)**

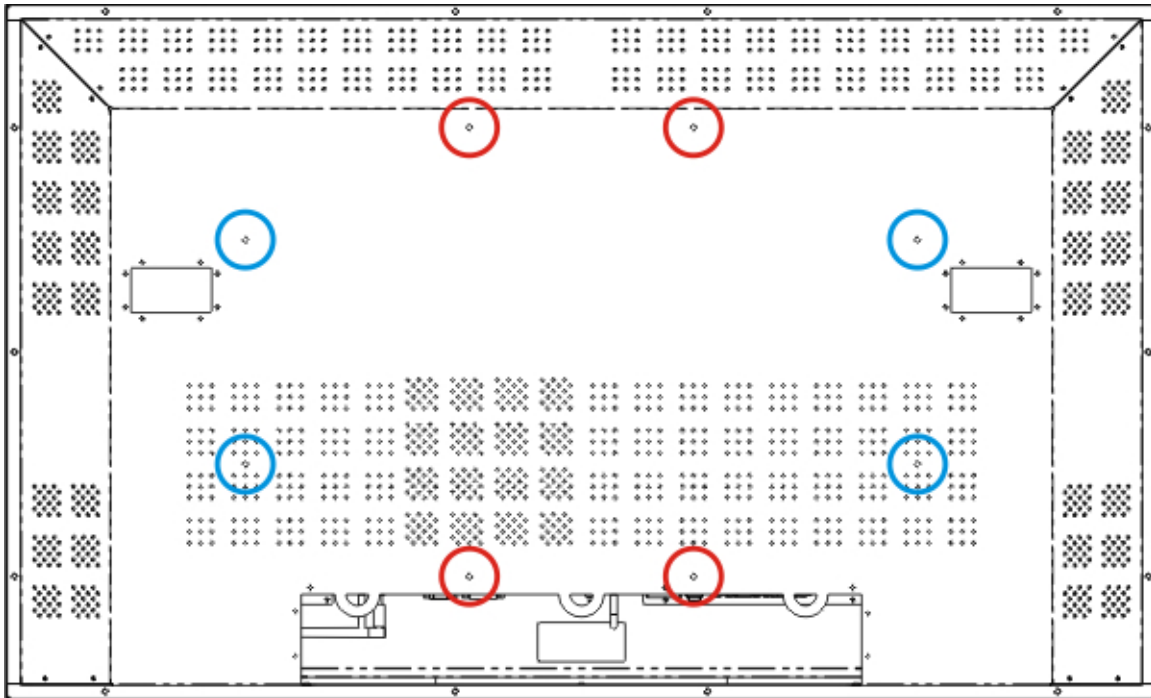
In the first time you start the Panel PC system, you might can't see anything after you seen the photo as below.



Please press **Ctrl + Alt + F1** on your keyboard to switch display mode. Then you can see your desk-top again.

※ Every time you re-connect **PC VGA Output** and **Monitor VGA Input**, you will need to do **Step 3**.

## Mounting



**Blue** Circle : Landscape wall mount hole.

**Red** Circle : Portrait wall mount hole.

※ Screw for wall mount : 19", 26", 32", 42"— M4  
47", 52", 55", 60", 65"— M6

※ Panels for Landscape and Portrait are totally different, please make sure your usage before you purchase the screens or mount them on the wall. We won't take any responsibility if there is any damage caused by incorrect usage of the units.



# 4

## Touch Screen

---

### Touch Screen Specification

#### SAW Touch

##### Features

- Plug and play compatible.
- Support complete line of Windows and Linux OS.
- Support panels of flat type for LCD.
- Character recognition for English, Chinese and Japanese.
- Can support any special request for panel, controller or driver.

##### SAW Touch Environmental Conditions

##### SAW Tempered Glass

Operating Temp.	-20°C ~ 50°C.
Operating Hum.	90% RH at 40°C. (no dew falls)
Storage Temp.	-40°C ~ 70°C.
Touch Activation Force	Less than 85 grams.
Positional Accuracy	Deviation of error less than ±1%.
Touch Life	More than 50 million touches.
Input Medium	Finger, gloved hand, rubber, cloth or leather.
Break Resistance	6mm Heat Tempered Glass. Meets UL-1950 Steel Ball Drop Test.
Surface Hobs' hardness rating	7.
Light Transmission	90%. (per ASTM D1003)

## SAW Control Board

Operating Temp.	0°C ~ 65°C.
Operating Hum.	10% ~ 90% RH. (no dew falls)
Storage Temp.	-25°C ~ 85°C.
Operating Altitude	10,000 feet. (3048 m)
Electrostatic Protection	Per EN 61000-4-2, 1995 : Meets Level 4.
Interface	USB 1.1. (Plug and play compatible)
Touch Resolution	4096 x 4096, size independent.
Reliability	MTBF greater than 300,000 hours.

## Optical Touch

### Features

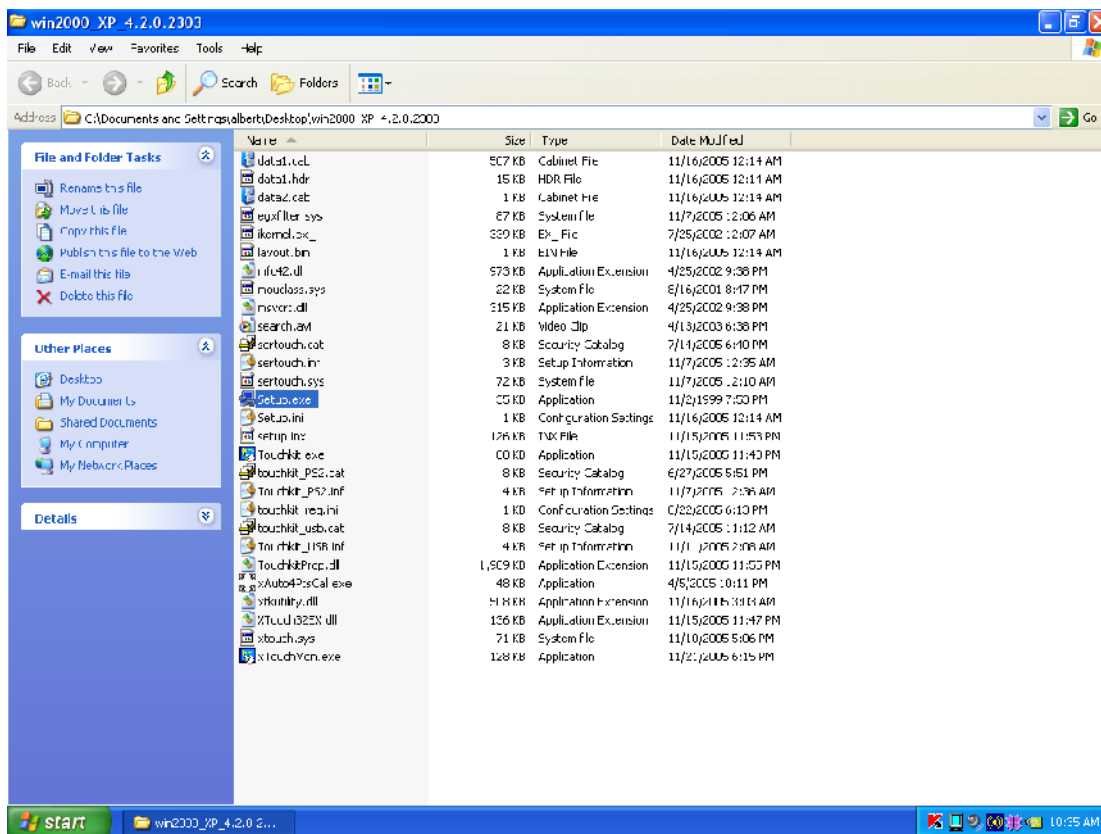
- Plug and play compatible. **(HID for XP, VISTA)**
- Support complete line of Windows, Mac OSX and Linux OS (requires drivers).
- Support panels of flat type for LCD.
- Support Windows 7 Two-point touch. **(need Driver)**

### Optical Touch Specifications

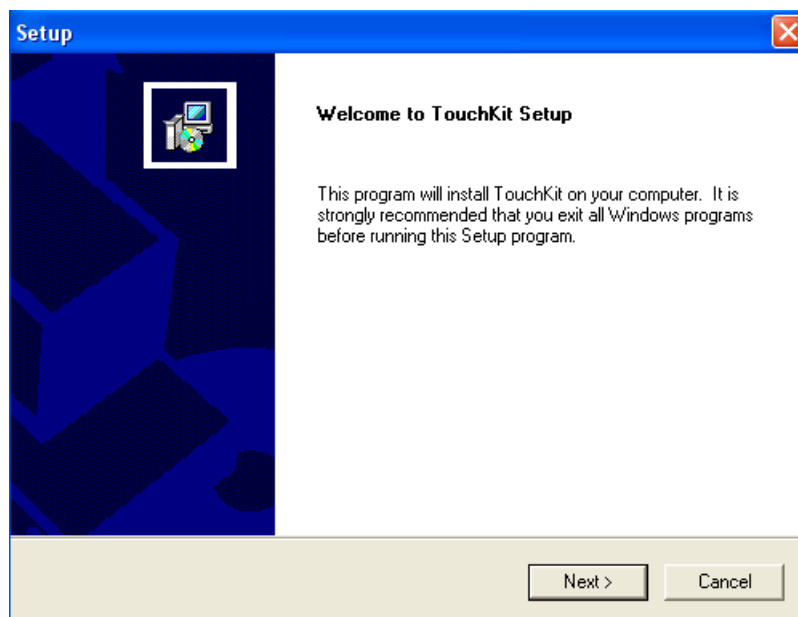
Operating Temp.	-20°C ~ 60°C.
Operating Hum.	90% RH at 40°C. (non-condensating)
Storage Temp.	-25°C ~ 85°C.
Touch Activation Force	No pressure required.
Positional Accuracy	Deviation of error less than $\pm 1\%$ .
Touch Life	Unlimited.
Input Medium	Finger, Rubber, Pen or leather.
Break Resistance	6mm Heat Tempered Glass. Meets UL-1950 Steel Ball Drop Test.
Surface Hobs' hardness rating	7.
Light Transmission	>92%. (per ASTM D1003)
Touch Technology	NextWindow Optical Imaging.
Touch Accuracy	$\pm 2$ mm (for 40" screen) over 90% of the touch sensitive area.
Response time	9ms to 22ms, typical 14ms.
Calibration	4-point driverless calibration. (Mac and Linux need to use the external calibration button.)
Software	Works with Windows native HID mouse driver.

## SAW Touch Screen Installation and Calibration guide

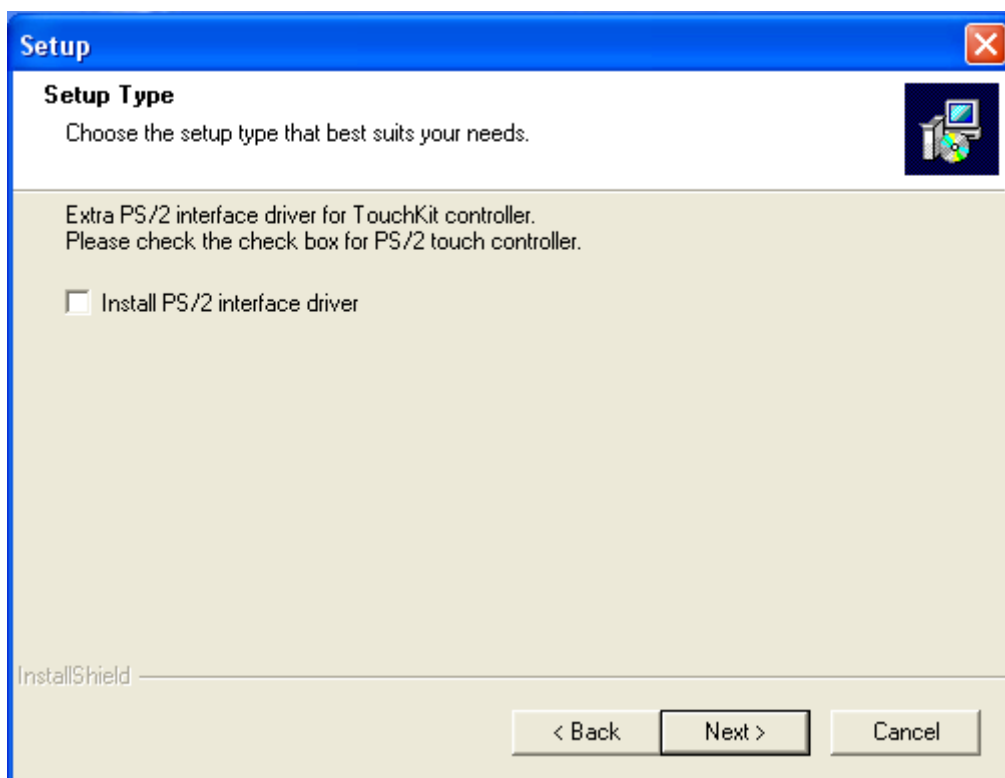
Touchkit driver software installation package was created with Installshiled tool. The installation package contains files as below.



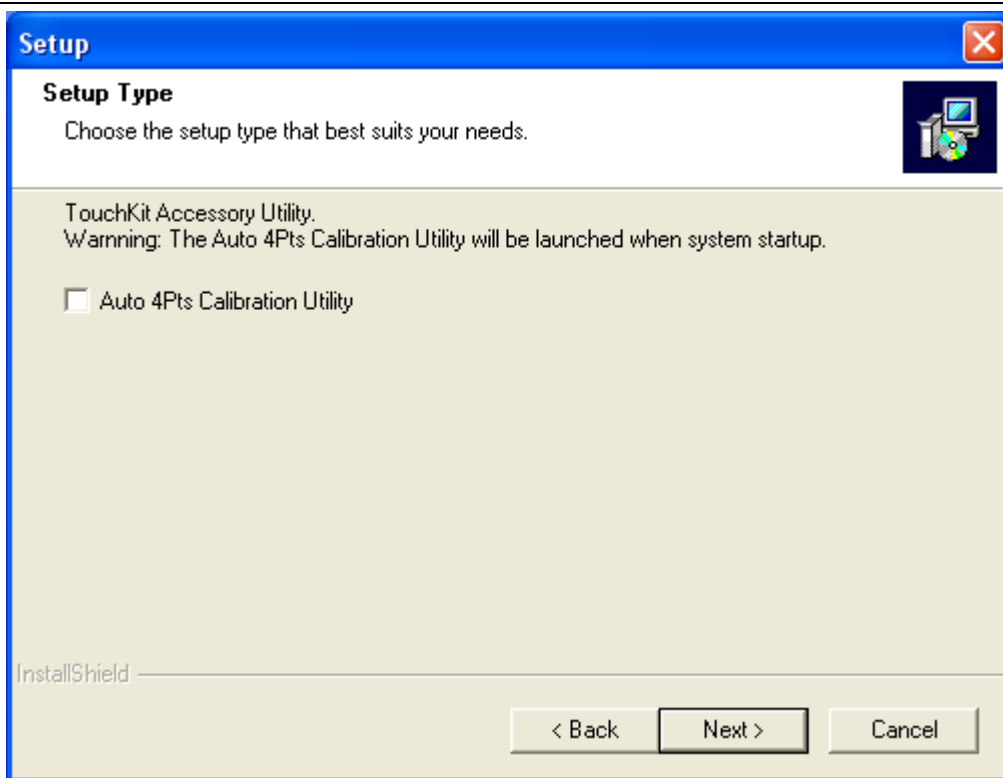
Double click at the setup.exe file to start software driver installation. Then, the setup program will guide user to complete software installation.



Press **Next** button to continue installation, then, a new dialog popped up as below,

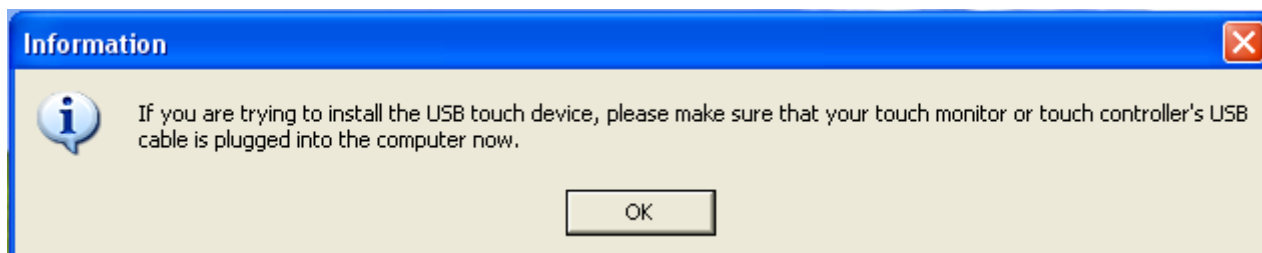


This dialog shows to ask user if the PS2 filter driver for touch screen to be installed. User can check this check for PS2 filter driver installation. The standard PS2 mice can still work well after this filter driver installed because Touch kit PS2 filter driver can work with both standard PS2 mice and PS2 touch screen. But, this filter driver may does not work with other devices with the PS2 mouse port. After check or uncheck this check box, press **Next** button to continue installation. Then, it shows new dialog as below,

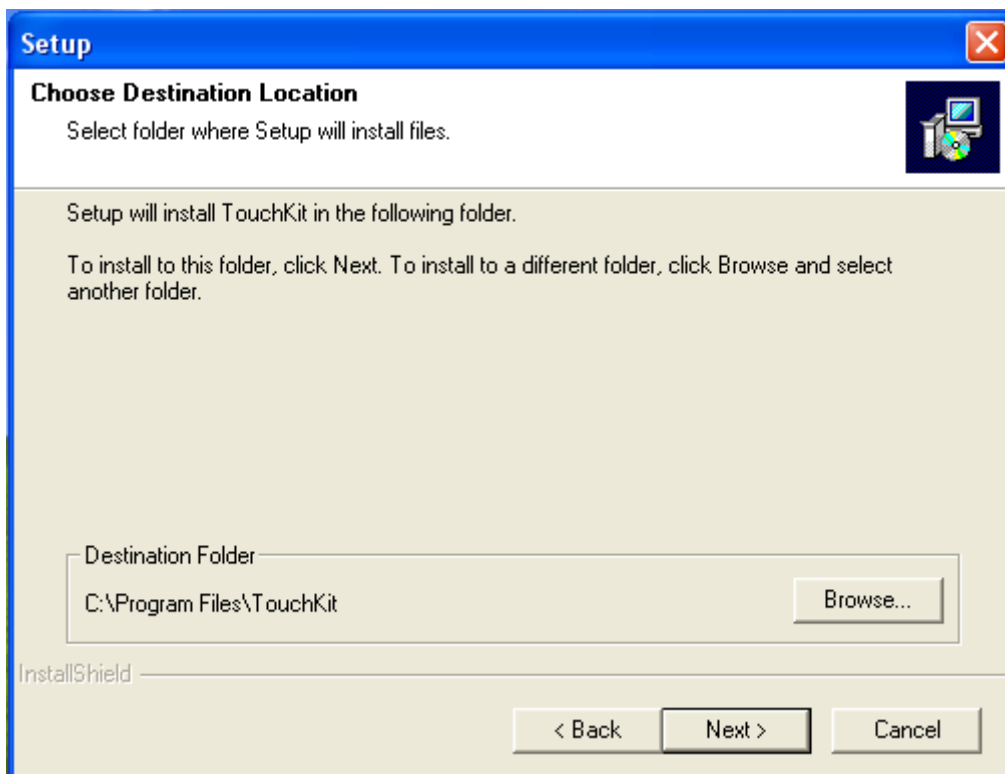


Also, Touchkit software provides user with a fast 4 points calibration. If the system needs 4 points calibration to make sure the touch accuracy every system reboot, user can check this check box. The 4 points calibration window will be popped up for calibration whenever system boot up if this check box was checked during driver software installation.

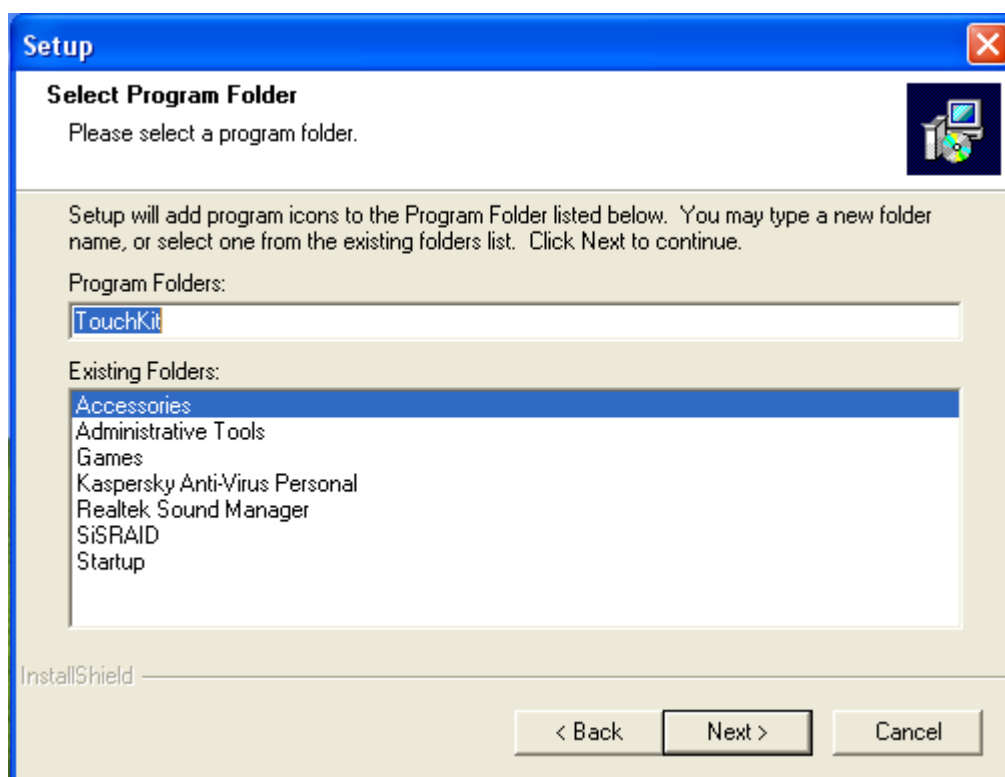
Press **Next** button to continue installation. The setup program prompts a message box to hint



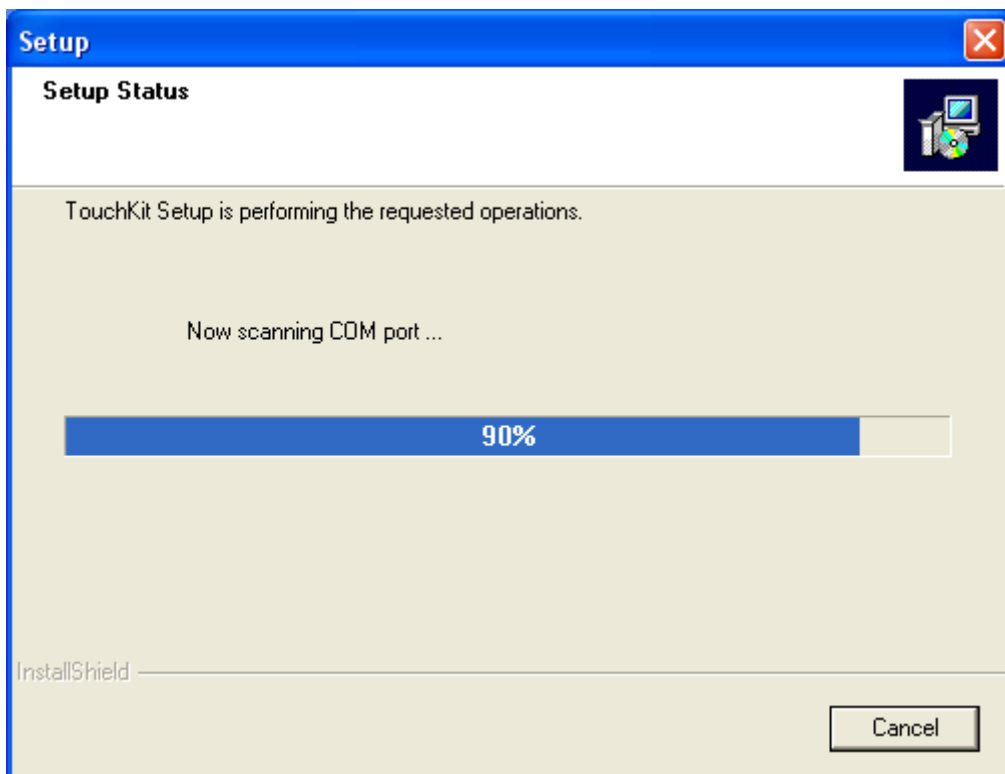
user to make sure that the Touchkit USB controller devices were well connected with system USB ports to guarantee the USB touchkit device drivers updated after driver installation. Then, just press **OK** to continue,



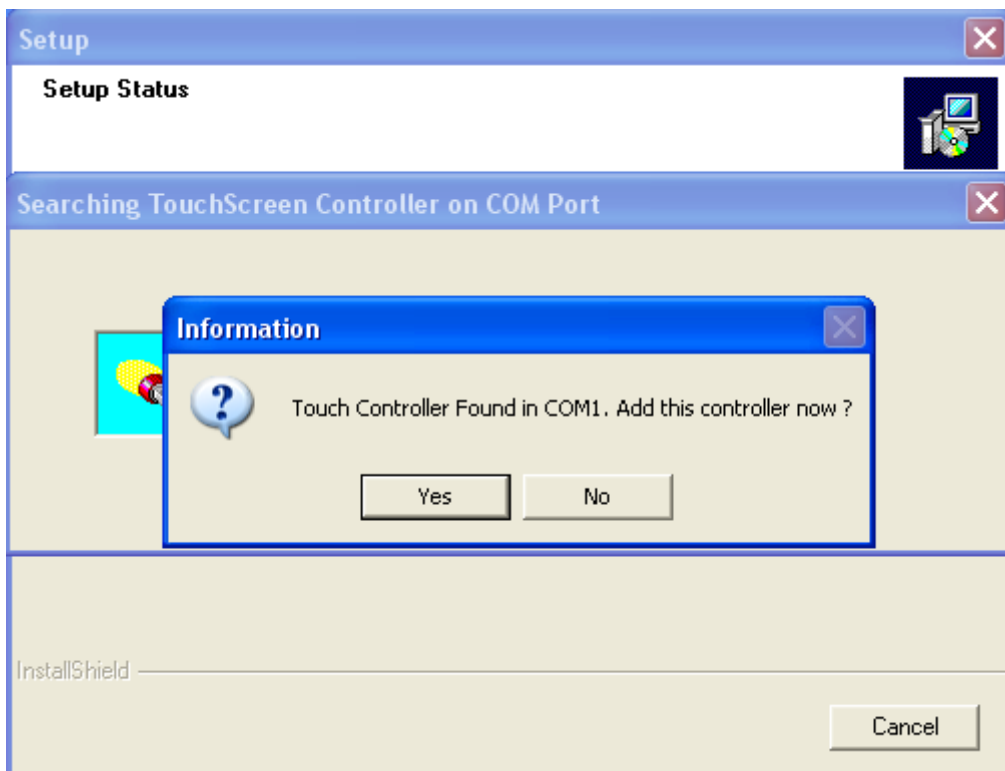
A pop up window for user to choose the target path the files will be copied to. Then, Press **Next** to continue,



A dialog popped up for user to assign the target program folder. Press Next



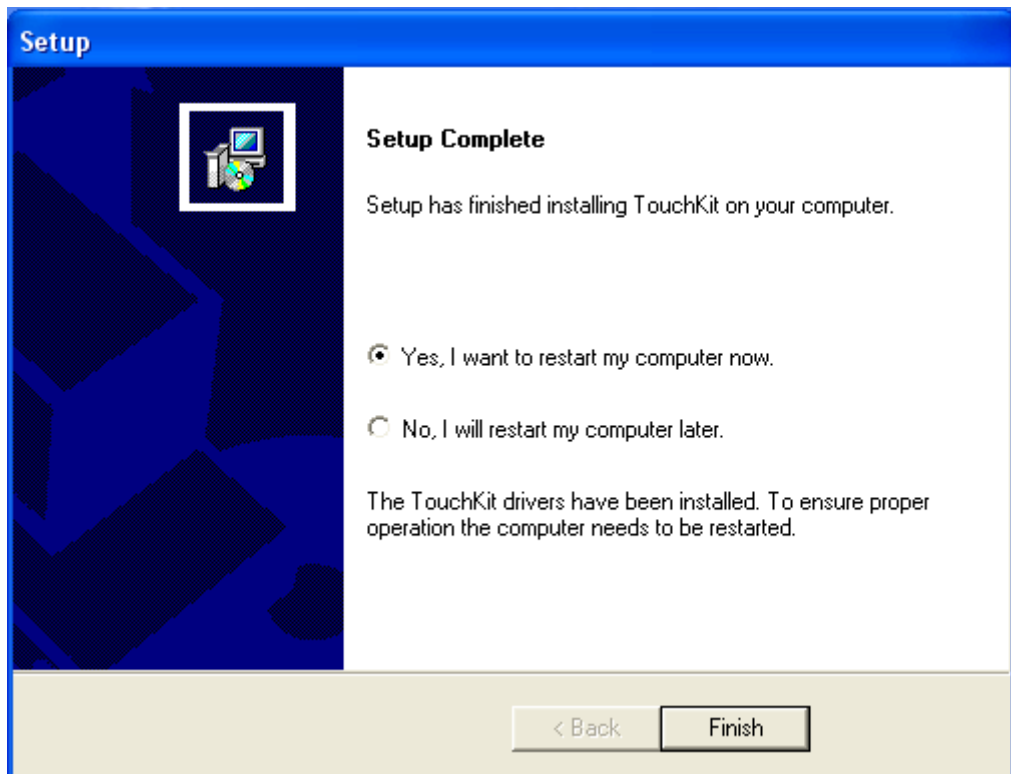
The setup program will scan system COM ports to detect if any Touchkit serial device was connected. If yes, it also pops up a message box for user to make sure if setup program install driver for this new found device.



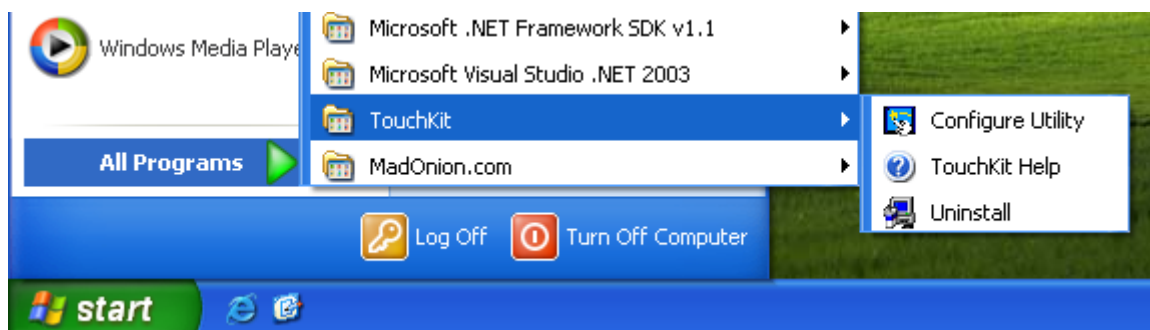
Just Press **Yes** or **No** to confirm driver installation for this new found device. Finally, if PS2 filter driver was installed during this software installation, a reboot dialog is

popped up for system reboot request to complete driver installation.



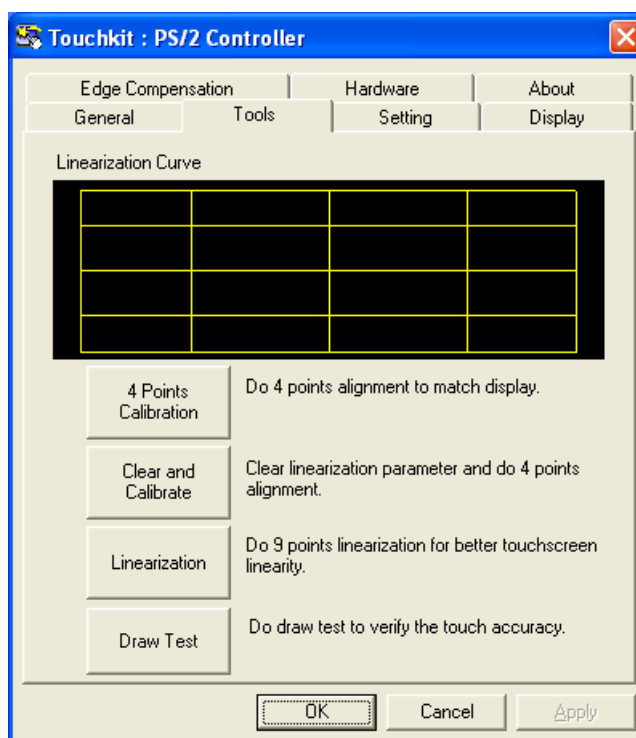


After driver installation, a shortcut will be generated and shown on the desktop. And, a new file group generated for Touchkit as below,



## SAW Touch Calibration

Calibration, draw test tools and the linearity curve of the touchscreen were list in this property page shown as below for user to do touchscreen calibration and touch position test.



User can do calibration or draw test by pressing the function push buttons.

### 1. Linearization Curve

Linearization curve of the touchscreen is list in this page for reference and trouble shooting purpose.

### 2. 4 points calibration

It needs calibration before the touchscreen can work accurately. Whenever the user feel the accuracy lost, user can do calibration again to get a more accuracy touch function.

Pressing this button, a new window will be popped-up at the location when the touchscreen was mapped to area for this touch system to guide the user do 4 points calibration.

User should follows the guide to touch and hold the blinking X symbol in the calibration window until it does not blink to make sure that the utility can gather enough data for computation. In addition, a time line bar is shown in the bottom of the window to indicate time elapsed. If the touchscreen was not touched before the time line bar going to right end, the calibration task will be terminated automatically.

Press the blinking X symbol until stop blinking.



### **3. Clear and Calibration**

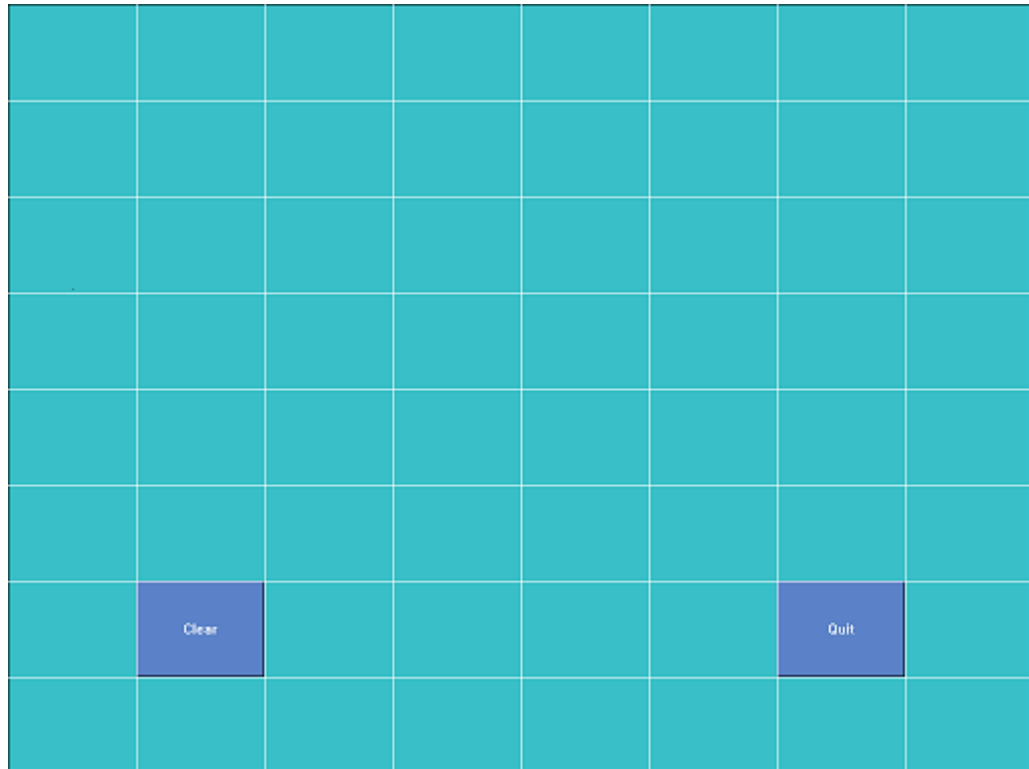
Press this button to erase the 25 points calibration/linearization parameters and force user to do 4 points calibration again. After 25 points calibration data was clear, the 4 points calibration data will be invalid. It needs to do 4 points calibration.

### **4. Linearization**

Linearization ( 25 or 9 points calibration ) function is used to compensate the touchscreen linearity. After linearization completed, the linearity of the touchscreen will be shown in the Linearity curve window. Pressing this button, a new window will be popped-up at the location when the touchscreen was mapped to area for this touch system to guide the user do 25 points calibration. User should follows the guide to touch and hold the blinking X symbol in the calibration window until it does not blink to make sure that the utility can gather enough data for computation. In addition, a time line bar is shown in the bottom of the window to indicate time elapsed. If the touchscreen was not touched before the time line bar going to right end, the calibration task will be terminated automatically.

## 5. Draw Test

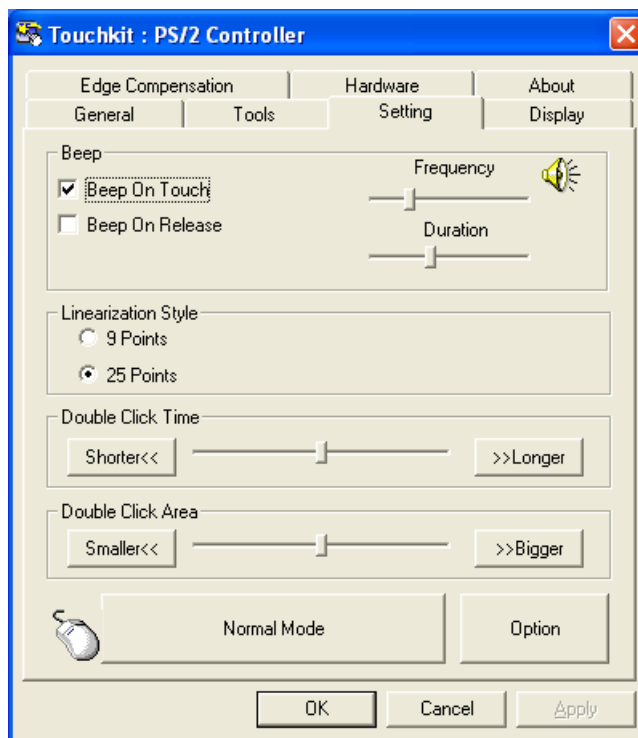
This function is used for accuracy and performance check. Press this button and a new pop up window will be popped up in the location where the touchscreen was mapped to the touch system as below,



User can press the Clear button to clear the window. Press Quit button to terminate this draw test.

## SAW Touch-kit Setting Property

The Setting property page can be shown both in Windows Device Manager and Touchkit Utility as below,



There are function buttons and check boxes described as below

### 1. Beep

#### 1-1 ) Beep On Touch

Check this check box to enable driver to generate a beep sound when touch touchscreen state is switched from untouched to touched state.

#### 1-2 ) Beep On Release

Check this check box to enable driver to generate a beep sound when touchscreen state is switched from touched state to untouch state.

#### 1-3 ) Frequency

Adjust this frequency to control the beep sound frequency generated by the driver.

## **1-4 ) Duration**

Adjust this duration to control the beep sound duration.

## **2 Linearization Style**

Touchkit utility provides user with both 9 points and 25 points calibration for linearization. User can select the suitable kind of linearization type.

## **3 Double Click Time**

The double Click Time group is used to set system double click time. Change this value will affects the double click behavior for all of the mice devices in the system. Two continuous clicks at the same area.

Within this specified time period will be recognized as a double click event.

## **4 Double Click Area**

The double click area group is used to set the system double click area. Change this value will affects the double click behavior for all of the mice devices in the system. Two continuous click with this specified area in the specified double click time will be recognized as a double click event.

## **5 Mouse Emulation mode**

There are 5 mouse emulation modes for Touchkit touchscreen controllers. Press on the button to change the emulation mode,

### **4-1) Normal Mode**

Normal mode behaves mouse button down and mouse move. User can select this mode to select object, and dragging the object.

### **4-2) Click On Touch**

With this Click On Touch mode, the driver emulates a mouse click event when the touchscreen state was switched from un-touched state to touched state. Then, the driver always generate mouse move event and is tracking the touch position until the touchscreen state switched to un-touch state.

### **4-3)Click On Release**

With this Click On Release mode, the driver emulates a mouse click event when the touchscreen state was switched from touched state to un-touched state.

**4-4) Click On Touch without moving cursor**

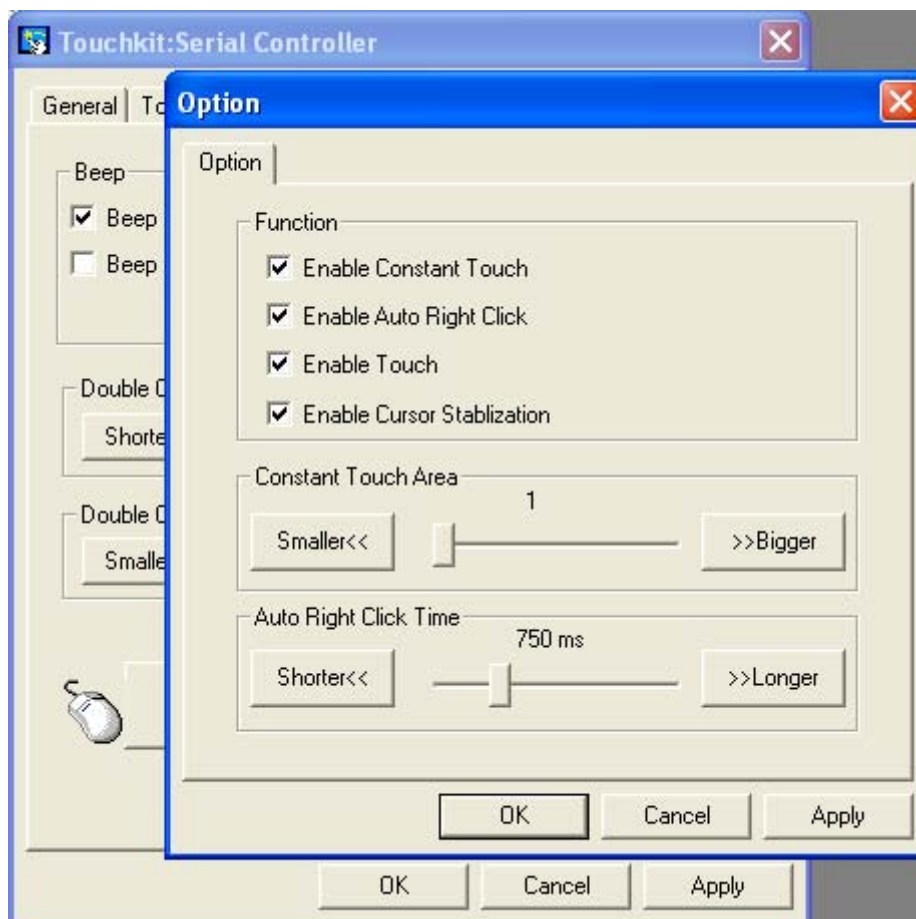
With this mode, the driver behaves similar as Click On Touch mode. The cursor does not move to the touch position except the first touch point.

**4-4)Click On Release without moving cursor**

With this mode, the driver behaves similar as Click On Release mode. The cursor does not move to the touch position except the lift-off point.

**6 Option**

User can set configuration for some advanced functions with this option button. Press this button, a pop up property sheet window will be popped up and shown as below.



The advanced functions are

## **5-1) Enable Constant Touch( Hold )**

Constant Touch is the function to check if the most recent touched position is same as the previous touched point. If the points difference is smaller than the defined area, the driver does not generate any mouse event to reduce system loading.

Check this check box to enable this function ( Hold ) and un-check it to disable this function.

## **5-2) Enable Auto Right Click**

If the touchscreen was kept touched for a specified time, the driver will generate a mouse right button click event if this function was enabled.

Check the check box to enable this function and uncheck it to disable this function.

## **5-3) Enable Touch**

The driver read the data input from controller to generate mouse event. However, it can be enabled or disabled to generate the mouse event.

Check this check box to make driver to generate the mouse event when it receives the touch point input from Touchkit touchscreen control and un-check it to stop driver generating the mouse event.

## **5-4) Enable cursor stabilization**

A software filter was implemented inside the driver to filter some noise to stabilize and smooth the touch points. Then, the user can see a more stable cursor.

Check this check box to enable this software filter and un-check it to disable this function.

## **5-5) Constant Touch Area ( Hold area )**

Adjust the parameter for Constant Touch( Hold ) function. This is a criterion to judge if the most recent touched point is same as the previous touched point. If the points difference is within this area, it will be recognized as the same touch point and the driver does not generate new mouse event for this new touch point.



### 5-6) Auto Right Click Time

Adjust the Right click time for auto right click function. If the touchscreen was touched and hold for this period of time, the driver generates a mouse right click event.

## OPTICAL Touch Setting Property

### Installation Procedure

- Download the NextWindow Multi-Touch Device Driver from this URL: 5 <http://www.nextwindow.com/windriver>
- Run the installation file and follow the installation instructions.
- After the installation, your touch screen is ready for use with multi-touch and Windows 7.
- To verify that the driver has been installed correctly, open a command prompt and type regedit and check that NWFilter (with Enum under NWFilter) exists under HKEY\_LOCAL\_MACHINE > SYSTEM > CurrentControlSet > Services.

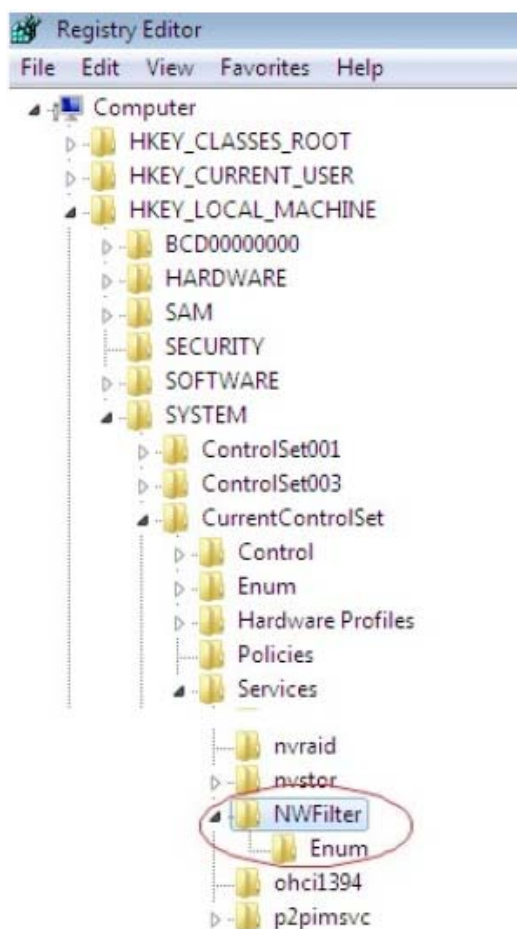


Figure 2.NWFilter in Registry screen shot.

- This completes the installation procedure.

## **Touch Calibration**

- Press “Scroll Lock” key on your keyboard for **6** times.  
(Mac or Linux need to use the external calibration button)
- The Mouse pointer will move to the calibration point automatically.
- Press the calibration point by your finger or object such as Pan or Pencil.
- After you press the calibration point, the mouse pointer will move to next point automatically.
- The calibration procedure will be completed after you finish 4 points calibration.

# 5

## Troubleshooting

---

### No picture

- ✧ The signal cable should be fully connected to the PC system.
- ✧ Press **Ctrl + Alt + F1** to switch VGA signal output mode.
- ✧ Power Button and computer power switch should be in the ON position.
- ✧ Check to make sure that a supported mode has been selected on the graphics card or system being used. (Please consult graphics card or system manual to change graphics mode).
- ✧ Check the monitor and your graphics card with respect to compatibility and recommended settings.
- ✧ Check the signal cable connector for bent or pushed-in pins.
- ✧ Check that the BNC or D-SUB button is in the correct position.

### Power Button does not respond

- ✧ Unplug the power cord of the monitor from the AC outlet to turn off and reset the monitor, or simultaneously press the RESET and Power buttons.

### Image is unstable, unfocused

- ✧ Signal cable should be fully connected to the computer.
- ✧ Use the OSD Image Adjust controls to focus and adjust display by increasing or decreasing the Fine control. When the display mode is changed, the OSD Image Adjust settings may need to be re-adjusted.
- ✧ Check the monitor with respect to compatibility and recommended signal timings.

If your text is garbled, change the video mode to non-interlace and use 60Hz refresh rate.

### LED on monitor is not lit (no green or amber color can be seen)

- ✧ Power Button should be in the ON position and power lead should be connected.
- ✧ Make certain the computer is not in a power-saving mode (touch the keyboard, mouse or Touch screen if present).

## **Display image is not properly sized**

- ✧ Use the OSD Image Adjust controls to increase or decrease the H. Size.
- ✧ Check to make sure that a supported mode and signal timing has been selected on the graphics card or system being used (Please consult the graphics card or system manual to change graphics mode or refresh rate).

## **Selected resolution is not displayed properly**

- ✧ Select the Display Resolution in the OSD Information menu to confirm that the appropriate resolution has been selected. If not, select corresponding option by pressing the control button.

## **Cursor jumping problem**

The possible reasons for cursor jumping are:

- 1 Reflection stripe area is covered by something. Please clean the reflection stripe on touchscreen (see last section).
- 2 Controller is faulty; the unit will need to be returned to the Service department of Brotek Technology.

## **Mist on the Glass inside the screen**

The possible reasons for this problem:

- 1 The big difference of temperature, and high Humidity of the environment.

Turn on the screen and run for 2~3 hours, the mist will evaporate automatically.

# Appendix A

## Panel PC Specifications (standard)

Model		VB-32965	VB-42965	VB-47965	VB-52965
Item					
Display	Size	32"	42"	47"	52"
	Type	Active matrix TFT LCD			
	Aspect ratio	16:9	16:9	16:9	16:9
	Supplier	AUO	LG	LG	SHARP
	Resolution	1366x768	1366x768	1920x1080	1920x1080
			1920x1080		
	Lifetime(hrs)	50,000	50,000	50,000	50,000
	Color(million)	16.7	16.7	16.7	16.7
	Contrast	2500:1	1400:1	2000:1	1500:1
	Response	6.5ms	6ms	8ms	6ms
	ViewAngle	170°	176°	176°	176°
Brightness	550	500	500	450	
Dimensions		790(L)	1028(L)	1132(L)	1272(L)
		485(W)	620(W)	675(W)	768(W)
		124(D)	124.5(D)	124.5(D)	134.5(D)
Optimal resolution	1360 x 768 @ 60 Hz	1360 x 768 @ 60 Hz	1920 x 1080 @ 60 Hz	1920 x 1080 @ 60 Hz	
Case Material	Metal				
Power input	110V / 220V AC				
Operating Temp.	0° ~ 50° C				
Storage Temp.	-20° ~ 60° C				
Relative Humidity	5~90% @40° C non-condensing				
Certificate	CE / FCC				
System	CPU	Intel ATOM 1.6GHz up to Core 2 Duo 2.4GHz			
	RAM	1GB up to 4GB			
	Storage	Space for 1x 2.5" HDD Expansion PCI slot x 1 , MiniPCI slot x 1(optional)			
	Fan	NO FAN			
	Touch(optional)	SAW Touch—19",26",32" Optical Touch—42",47",52",65"			
	Standard I/O	Power Input , 1 x PS/2 keyboard & mouse, 1 x Ethernet Port (or 2 for Optional), 4 x USB 2.0			
	Optional I/O	1 x COM(or 2 for optional), 1 x VGA, 1 x Line-out, 1 x HDMI(optional), 1 x DVI			

※Subject to change without notice, please contact us and confirm.

	Speaker	5w x 2
Options	<b>Intel GM45 Motherboard</b>	
	CPU	Intel Core 2 Duo/Celeron M.
	RAM	2G or 4G
	Protection Sheet	P.M.M.A. or TEMPERED GLASS (AR or AG)
	H.D.D.	160GB, 250GB, 320GB
	TOUCH SCREEN	SAW Touch—19",26",32"    Optical Touch—42",47",52",65"
	WIFI	YES
	WEBCAM	YES
	<b>GME 945 ATOM N270 Motherboard</b>	
	CPU	N/A
	RAM	2G (Maximum)
	Protection Sheet	P.M.M.A. or TEMPERED GLASS (AR or AG)
	H.D.D.	160GB, 250GB, 320GB
	Touch Screen	SAW Touch—19",26",32"    Optical Touch—42",47",52",65" (TOUCH , WIFI , WEBCAM , THREE CHOOSE TWO)
	WIFI	YES (TOUCH , WIFI , WEBCAM , THREE CHOOSE TWO)
	WEBCAM	YES (TOUCH , WIFI , WEBCAM , THREE CHOOSE TWO)

※Subject to change without notice, please contact us and confirm.