

# SPECIFICATION

| ITEM        | INDUSTRIAL PANEL MOUNT TOUCH MONITOR |
|-------------|--------------------------------------|
| MODEL       | NOP                                  |
| PART NUMBER | NOP 150                              |
| BUYER       |                                      |
| DATE        | 2007. 03. 13                         |

| APPROVED BY |
|-------------|
|             |

| NEXIO CORPORATION |         |
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**NEXIO**

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## CONTENTS

|                                |       |     |
|--------------------------------|-------|-----|
| 1. COVER                       | ----- | 1/5 |
| 2. CONTENTS                    | ----- | 2/5 |
| 3. MONITOR CHARACTERISTICS     | ----- | 3/5 |
| 4. TOUCH CHARACTERISTICS       | ----- | 4/5 |
| 5. ELECTRICAL                  | ----- | 4/5 |
| 6. ENVIRONMENT                 | ----- | 5/5 |
| 7. CONTROLLER                  | ----- | 5/5 |
| 8. DRIVER                      | ----- | 5/5 |
| 9. Appendix                    | ----- |     |
| 9-1 Appendix 1 : TOUCH MONITOR |       |     |
| 9-2 Appendix 2 : DRIVER        |       |     |

# NOP-150

## 1.MONITOR CHARACTERISTICS

|                               |                                |   |
|-------------------------------|--------------------------------|---|
| <b>PANEL</b>                  | <b>Housing</b>                 | Black powder coated Metal   |
|                               | <b>MONITOR Size (out line)</b> | 15inch : 397.5(w)x324(h)x61.5(d)mm  |
|                               | <b>Display Type</b>            | XGA TFT   |
|                               | <b>Max. Resolution</b>         | 1024 x768   |
|                               | <b>Display Colors</b>          | 16M Colors  |
|                               | <b>Pixel Pitch</b>             | 0.264 x 0.264mm   |
|                               | <b>Brightness</b>              | 250cd/m <sup>2</sup>  |
|                               | <b>Contrast Ratio</b>          | 400 : 1(Typical)  |
|                               | <b>Viewing Angle (typical)</b> | 80°/80°(L/R) & 80°/80°(U/D)   |
|                               | <b>Display Area</b>            | 304.1 x 228.1mm   |
| <b>INPUT SIGNAL</b>           | <b>Supported Video Signal</b>  | VGA (15Pin D-Sub)   |
| <b>RESOLUTION SUPPORT</b>     | <b>Supported</b>               | 640 x 350 @ 70 Hz<br>720 x 400 @ 70 HZ<br>640 X 480 @ 60Hz ~ 75Hz<br>832 x 624 @ 75Hz (MAC)<br>800 x 600 @ 56Hz ~ 75 Hz<br>1024 X 768 @ 60Hz ~ 75Hz   |
|                               | <b>Recommended</b>             | 1024 x 768@60Hz   |
| <b>POWER CONSUMPTION</b>      | <b>On working</b>              | <36 watt (Max.)   |
|                               | <b>Off</b>                     | <3 watt   |
| <b>OSD CONTROL</b>            | <b>Function</b>                | Brightness, Contrast, Position( H/Position),<br>Clock( Clock, Phase, Use), Color ( Color<br>temperature, User Adjustment), Language,<br>Information, OSD(OSD time, H/V position,<br>Use), Auto Adjust |
|                               | <b>Language</b>                | English, French, German, Italian, Spanish   |
| <b>Plug &amp; Play</b>        |                                | DDC1/DDC2B  |
| <b>POWER SAVING</b>           |                                | VESA DPMS   |
| <b>POWER SUPPLY ADAPTER</b>   | <b>Input</b>                   | AC 100V~240V, 50~60Hz   |
|                               | <b>Output</b>                  | 12V DC  |
| <b>OPERRATING Temperature</b> |                                | 0-50 °C   |
| <b>STORAGE Temperature</b>    |                                | 0-60 °C   |
| <b>OPERRATING Humidity</b>    |                                | 10-95% (Non Condensing)   |
| <b>Weight</b>                 |                                |   |
| <b>STANDARD ACCESSORIES</b>   |                                | 15-PIN VGA cable, AC adapter, Power cord  |
| <b>Options</b>                | <b>Front Bezel</b>             | Aluminum  |
|                               | <b>Touch Screen</b>            | 5 Wire resistive, Capacitive, SAW   |
|                               | <b>Touch Interface</b>         | Resistive – RS232 or USB, Capacitive-<br>RS232 or USB, SAW- RS232   |
| <b>Drawing</b>                |                                | Please refer to Appendix 1  |

## 2.TOUCH CHARACTERISTICS

|   |                                    |
|---|------------------------------------|
| <b>Input Method</b>                     | Finger or gloved hand activation   |
| <b>Touch Activation Force</b>           | No minimum touch activation force  |
| <b>Position Accuracy</b>                | Typical centroid accuracy 2mm      |
| <b>Resolution</b>                       | 3,648x2,752                        |
| <b>Response Time</b>                    | Touch : 10.4ms                     |
|   | Drawing : 18.3ms                   |
| <b>Glass</b>                            | Transmission : 92% Up to 100%      |
|   | Thickness : 5 mm with anti-vandal  |
| <b>Optics Number</b>                    | 57(h)x43(v)                        |
| <b>Optics cell pitch</b>                | 5.35mm                             |
| <b>Available Object Sizes for Touch</b> | Touch : Ø 6mm                      |
|   | Stylus : Ø 7mm                     |
| <b>Touch Intensity</b>                  | Over 60,000,000 single point touch |

## 3.TOUCH ELECTRICAL

|   |                              |
|---|------------------------------|
| <b>Operating Voltage</b>                            | DC 4.6V ~ DC 5V              |
| <b>Power</b>  | 0.6W(Current) 120mA at DC 5V |
| <b>Connector between touch panel and controller</b> | 22pin FPC Cable              |

## 4.TOUCH ENVIRONMENT

|                           |   |
|---------------------------|---|
| <b>Temperature</b>        | Operating -20 °C to 85 °C                           |
|                           | Storage-40 °C to 85 °C                              |
| <b>Humidity</b>           | Operating 20% to 85%                                |
|                           | Storage 0-95%                                       |
| <b>Relative Humidity</b>  | Operating 40 °C at 90% RH, noncondensing            |
| <b>Light Test</b>         | Operating Under Halogen lamp (220V,500W) / Sunlight |
| <b>Altitude Operating</b> | 3,000m  |
| <b>Interface</b>          | RS232(C) or USB 1.1                                 |
| <b>Detection Method</b>   | Infrared rays                                       |
| <b>Seal Ability</b>       | Can be sealed to meet NEMA4 and IP65 standard.      |
| <b>Warranty</b>           | Touch screen : 3 -years limited warranty            |
|                           | Controller : 3 -years limited warranty              |

## 5.TOUCH CONTROLLER

5.1 Interface Connector C(YEON-HO 10008HR-22L) - 22pin FPC Cable

5.2 Input Connector CN2 : Power Connector(Molex.5267-03, YEON-HO YMW023-03R)

| Pin NO. | Symbol | Description        |
|---------|--------|--------------------|
| 1       | GND    | GND                |
| 2       | GND    | GND                |
| 3       | Vin    | Input Voltage : 5V |

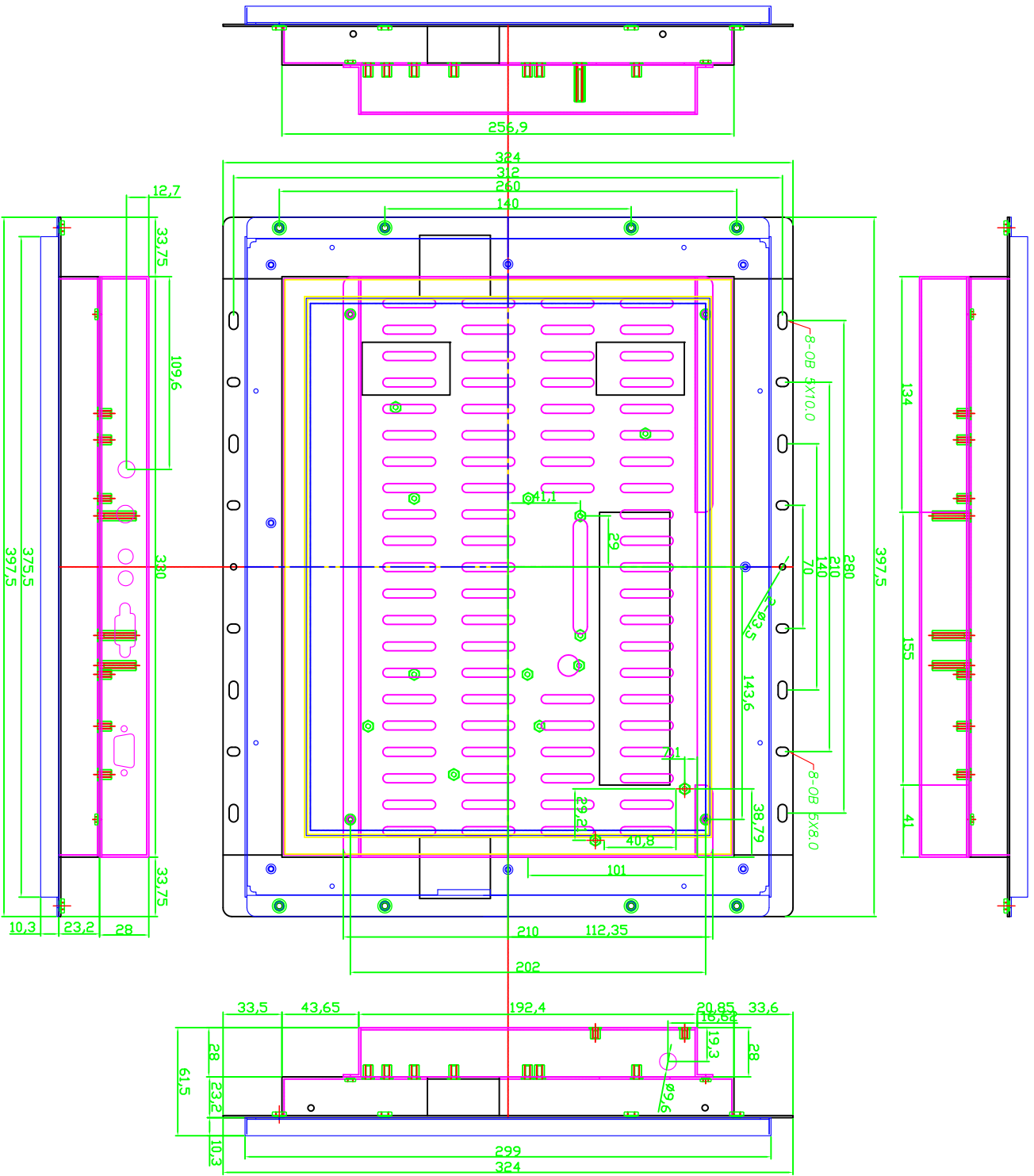
5.3 Interface Connector CN3 : Serial Connector(Molex.53015-0510, YEON-HO 20017WR-05)

| Pin NO. | Symbol | Description   |
|---------|--------|---------------|
| 1       | RX     | Receive Data  |
| 2       | TX     | Transmit Data |
| 3       | GND    | GND           |
| 4       | NC     | No Connection |
| 5       | NC     | No Connection |

5.4 Interfacet Connector CN4 : USB B type.

**6.TOUCH DRIVER** Please refer to Appendix 2

\* Note : The specification subject to change without prior notice.



| NO. | REVISION | RECORD | DATE | APP. |
|-----|----------|--------|------|------|
|     |          |        |      |      |

NOTE

| NO. | PART NAME | PART NO. | QTY | DESCRIPTION | REMARK |
|-----|-----------|----------|-----|-------------|--------|
|     |           |          |     |             |        |

|          |       |       |             |
|----------|-------|-------|-------------|
| DRW'D BY | SCALE | 1 / 1 | DRW'G NAME  |
| CHK'D BY | UNIT  | mm    |             |
| ENG BY   | TOLER | ±0.05 | NIP 150 set |
| PROJ BY  | PROJ  |       |             |

|      |              |
|------|--------------|
| size | DRWG'ND.     |
| AI   | SHEET 1 OF 1 |

**NEXIYO** Nexio Co., Ltd.

## Appendix 2

# **iNEXIO**

## **Driver's User Guide**



Note : This information in this document is subject to change without notice.

# Contents

|   |       |           |
|---|-------|-----------|
| <b>Chapter 1</b>                                  |       |           |
| <b>Introduction</b>                               | ----- | <b>3</b>  |
| <b>Chapter 2</b>                                  |       |           |
| <b>Installing iNexio</b>                          | ----- | <b>5</b>  |
| <b>Uninstalling iNexio</b>                        | ----- | <b>7</b>  |
| <b>Control Panel</b>                              | ----- | <b>7</b>  |
| <b>Chapter 3</b>                                  |       |           |
| <b>Nexio Device Setting<br/>&amp; Information</b> | ----- | <b>8</b>  |
| <b>Chapter 4</b>                                  |       |           |
| <b>Setup</b>                                      | ----- | <b>10</b> |
| <b>Option/Tools</b>                               | ----- | <b>12</b> |
| <b>Multi Monitor Display</b>                      | ----- | <b>15</b> |



# Chapter 1

## Introduction

iNexio Touch Driver is the software for the Infrared Touch Screen of Nexio Co, Ltd. It provides full touch screen functionality for all software applications running under Microsoft Windows.

This version of iNexio Touch Driver software for your Nexio touch screen supports Serial, USB controllers.

Once you install iNexio Touch Driver, you can select, launch, and drag objects using the touch screen. To make a selection, you simply touch the screen. It's that easy and natural – just touch to select.

iNexio Touch Driver includes :

### **iNexio Touch Driver**

iNexio Touch Driver is the software that the system uses to communicate with the touch screen. The driver enables you to use the Nexio touch screen with applications running in Windows environments. You can run Windows programs and use touch (finger or pen) input without any program modifications.

(Touch screen Control Panel)

You can use the touch screen control panel to set your preferences for the touch screen. For example, you can define the following preferences:

- Whether the touch action occurs when you touch the screen or when you lift your finger (or pen) off the screen.
- Whether you hear a sound when you touch the screen
- How fast you need to touch to produce a double-click

You can also use the control panel to calibrate the touch screen, to stabilize the cursor, and define where the cursor appears relative to your touch(an offset).

### **Touch Click Control**

Touch Click Control has the same function of Windows right mouse button. Any touch on the monitor on which Right Button is running will produce a right button click.

### **Uninstalling iNexio Touch Driver**

The Uninstall utility automatically deletes all iNexio Touch Driver components from your computer and removes all iNexio entries from the system files.

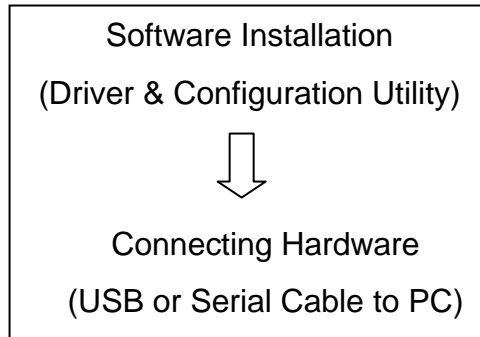
# Chapter 2

Installing

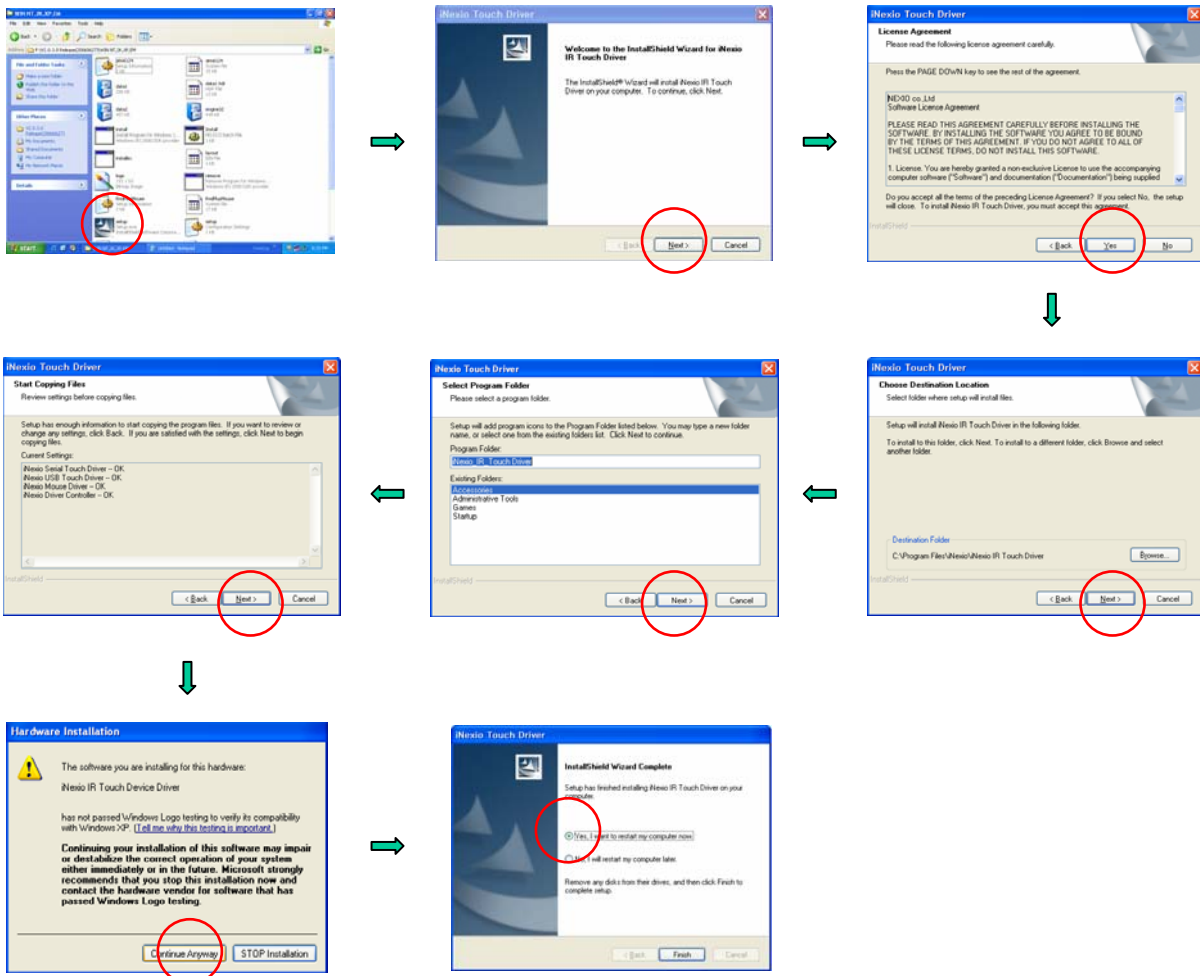
Uninstalling

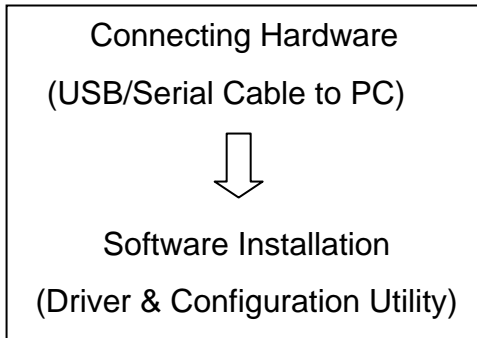
Control Panel

# Installing iNexio Touch Driver

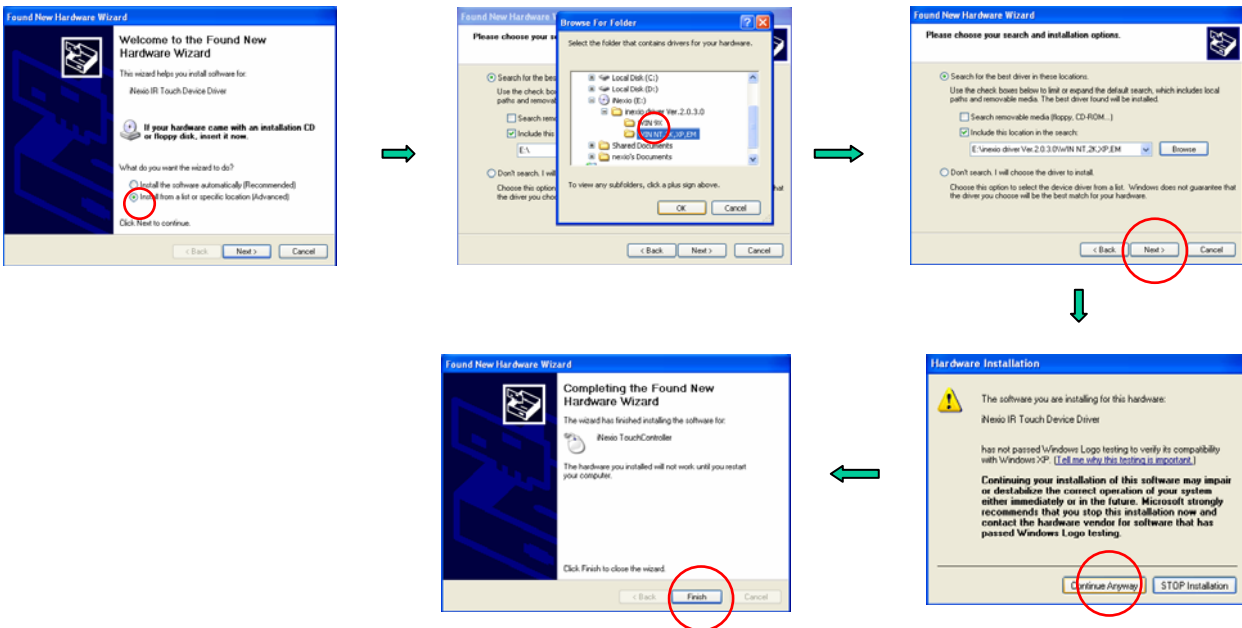


1. Insert the Driver CD-ROM into your PC.
2. Browse to the folder and double-click the "Setup.exe" file.
3. Follow the onscreen instructions to begin the installation.
4. Connect Touch screen monitor cable(USB or Serial) into your PC



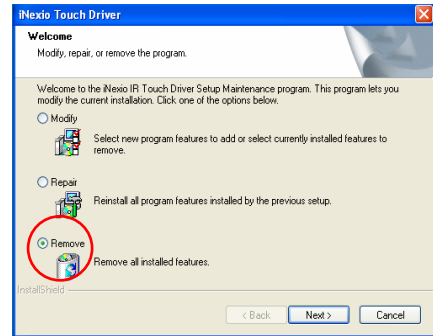
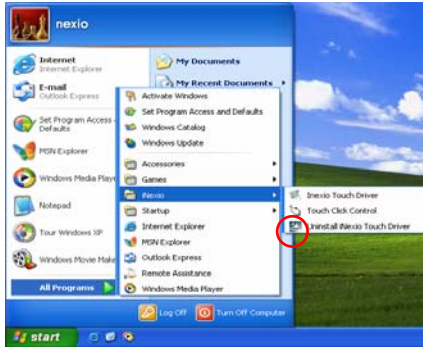


1. Upon your system's reboot, the 'Found New Hardware Wizard' appears. Select [Advanced] installation - Click [Next].
2. Follow the onscreen instructions to begin the installation.
3. Double-click "Setup.exe" file in the install CD as described on the previous page.



# Uninstalling iNexio Touch Driver

1. Click on Start - Programs - iNexio - Uninstall iNexio Touch Driver
2. Select [Remove] and click [Next]



# Control Panel

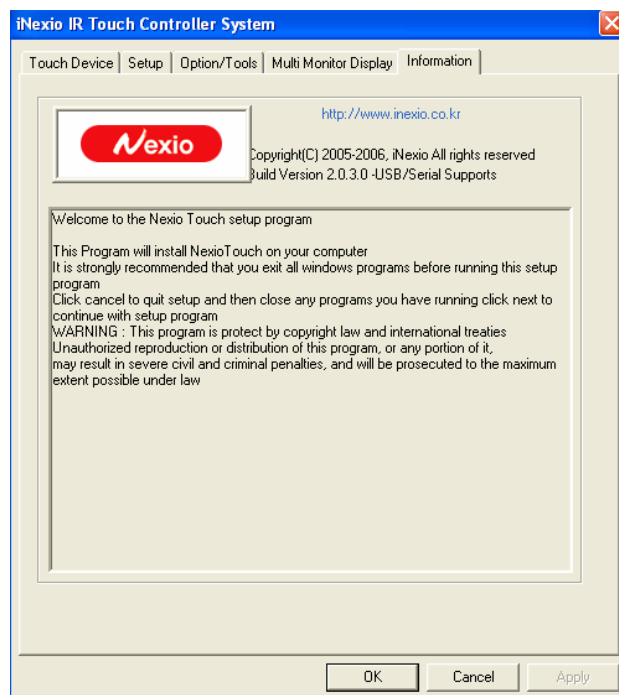
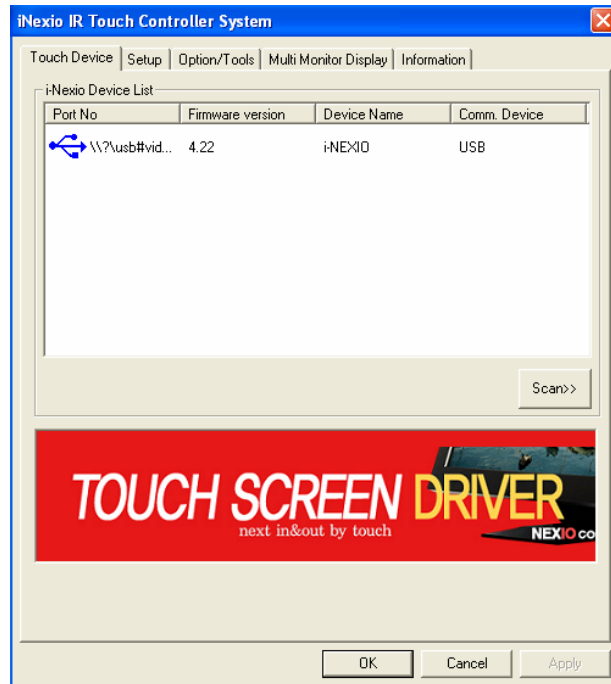
1. Double-click the "iNexio Driver" icon on the screen or Click on Start - Programs - iNexio - iNexio Touch Driver



# Chapter 3

## Nexio Device Setting & Information

Shows the Port No., Firmware Version, Device name, Comm. Device



# Chapter 4

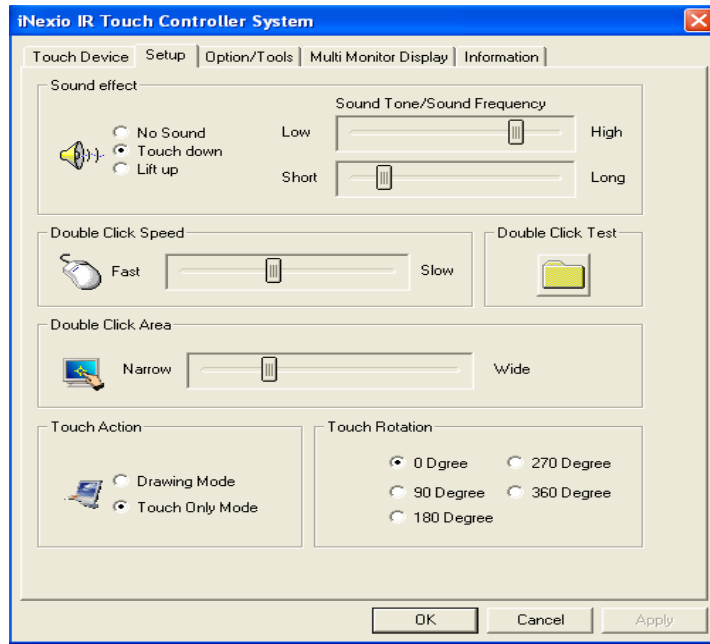
Control Panel

Setup

Option/Tools

Multi Monitor Display

# Setup



## Sound effect

No Sound

No Sound

Touch down Sound occurs when you touch down

Lift up

Sound occurs when you lift up

## Touch down Mode

Touchdown Mode enables you to create an immediate button action as soon as you touch the screen. In Touchdown Mode, you cause a button down at the cursor location, with a short pause and then a button up. You can leave your finger on the screen but only a single touch is registered until you lift your finger off the screen and touch down again.

Touching the screen is equivalent to pressing and releasing the mouse button. The action occurs as soon as you touch the screen. This mode is best for button based applications (like a calculator)

## Lift up Mode

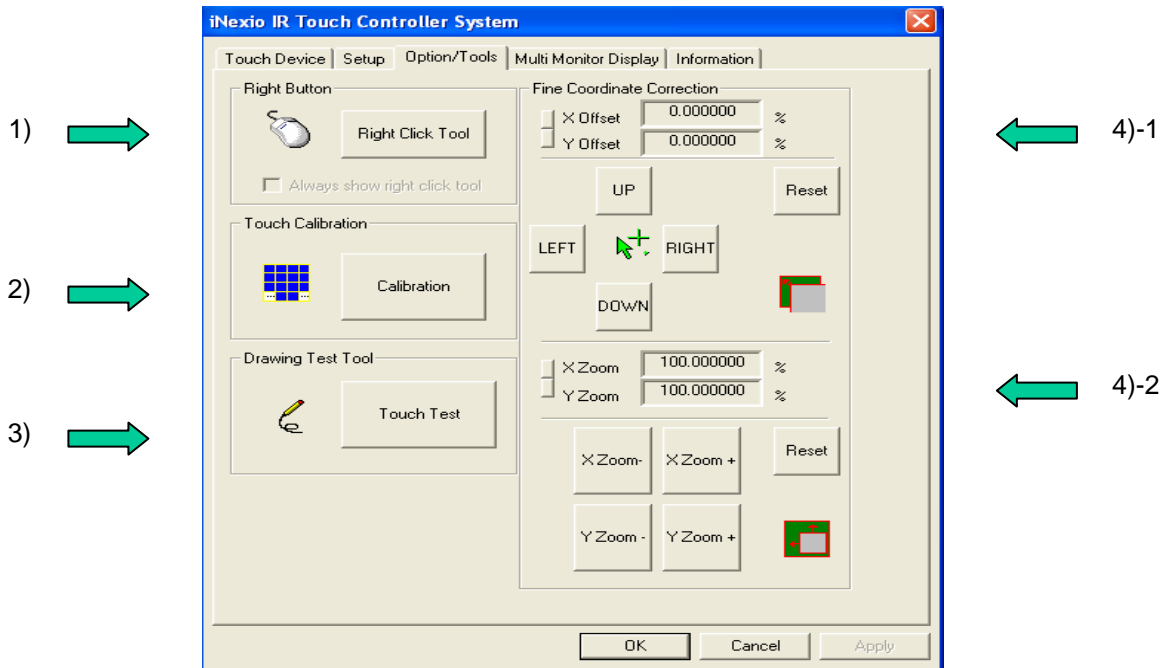
Lift up Mode enables you to position the cursor where you want before creating a button action. In Lift up Mode, the cursor will follow your finger for more accurate touch. When you want to select an item, lifting your finger off the screen will cause a button down, short pause, and then a button up to occur.

Touching the screen is equivalent to moving the mouse position. The button down/button up action occurs when you remove your finger from the screen. This mode is useful for applications requiring greater accuracy because it lets you carefully position the cursor prior to acting on it.



|                           |  |
|---------------------------|--|
| Sound Tone/Sound          | The frequency (Tone) and the Duration of the sound can be adjusted by moving the appropriate slider with the touch screen or mouse, or by using the keyboard arrow keys.   |
| Double Click Speed & Area | Define how fast you need to touch and the space in which you must touch in order to produce a double-click.  |
| Double Click Test         | Enables you to test the double-click speed and area.   |
| Touch Action              |  |
| Drawing Mode              | Drawing mode is most useful for draw, paint, illustrator, and graphics applications. In Drawing Mode, a touch is equivalent to pressing and holding down the mouse button. This is considered the easiest mode to use with immediate reaction to touch. Lifting off is equivalent to releasing the mouse button. |
| Touch Only Mode           | Drawing or dragging is not supported in this mode.   |
| Touch Rotation            | In case of putting the touch screen not properly on the display(e.g. upside down), you can select proper degree to adjust the touch(cursor) position.  |

# Option/Tools



## 1) Right Button



Right Button tool allows a Windows right mouse button simulation on the touch screen. A representation of a typical two-button mouse is displayed in a small window on the desktop, when this application is run. The Right Button shows the left button shaded, indicating that the left button is active. Any touch on the desktop or an application will produce a left button click consistent with the Button settings in the Control Panel.

A touch in the Right Button will change the shading to show the right mouse button active. Now any touch on this monitor on which Right Button is running will produce a right button click.

## 2) Touch Calibration

The calibration process aligns the touch screen with the underlying video. Specifically, calibration defines the dimensions of the active area of the touch screen and locates the center of the touch screen. If the screen is not calibrated, the active area of the touch screen may not be aligned properly or may be unnecessarily small in size.

Once calibrated, the information is saved by the touch screen for each video resolution. Therefore, you only need to recalibrate the touch screen the first time you change to a particular video resolution.

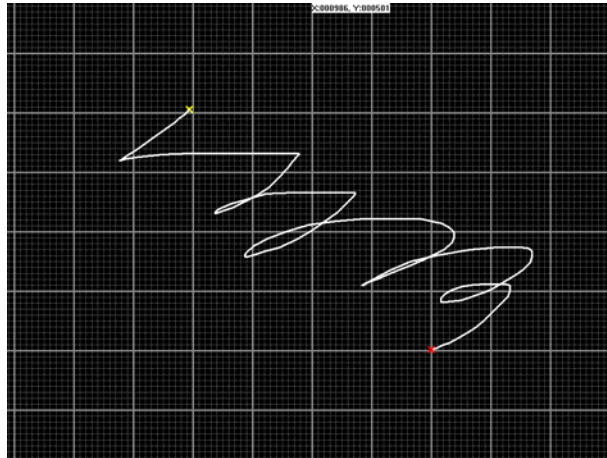
Calibration process is running automatically based on the resolution. For more accuracy, follow the below instruction and also refer to Fine Coordinate Correction function 4)-2.

1. Click [Calibration] button. Calibration targets appear on the screen. A circle guides you through the calibration process pointing to the appropriate target.
2. Touch the touch screen and position your fingertip to the center of the circle
3. Repeat for additional calibration target(s).
4. If you accidentally touched the screen in the wrong place during calibration, you will distort the touch screen calibration. Test to make sure you are satisfied with the calibration results.



### 3) Drawing Test Tool

Slide your finger on the screen and test drawing(Drawing Mode only).



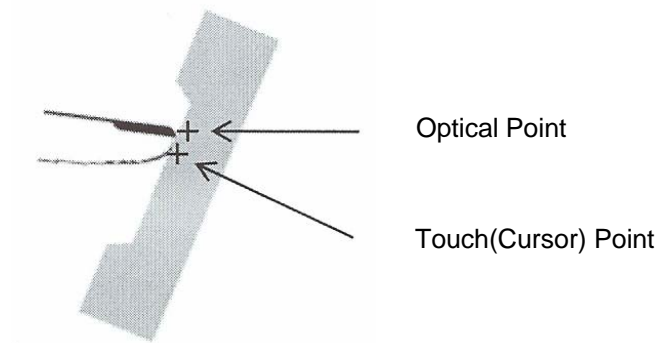
### 4)-1 Fine Coordinate Correction

After you calibrate the touch screen, the cursor should be located directly underneath your finger when you touch the screen. However, you may prefer to offset the cursor slightly above your touch so you can see the cursor and point more easily and precisely to small objects.

Touch Cursor Shift option lets you define the distance between your fingertip and the position of the cursor on the screen.

Offsetting the cursor is helpful when selecting small items, such as single letters in word processing, check boxes, or radio buttons.

Click [Up][Down][Left][Right] to make X or Y offset.

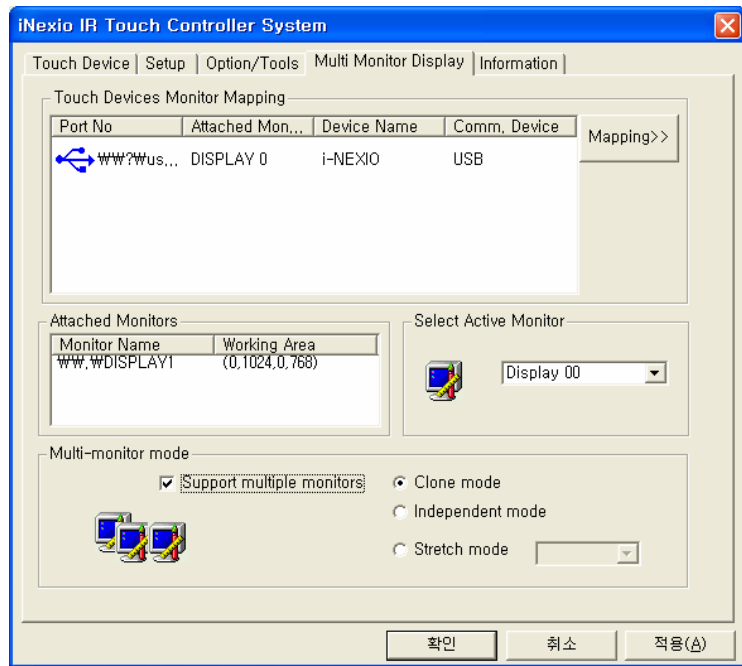


### 4)-2

Sometimes the screen image extends beyond the edge of the monitor bezel. In these cases, it may be difficult to touch items at the left and right edges of the screen. Normally monitor has auto scaling function itself. 4)-2 function is required to adjust the auto scaled image for more accuracy.

Click [X Zoom -(or +)][Y Zoom -(or +)] to adjust the screen image.

# Multi Monitor Display



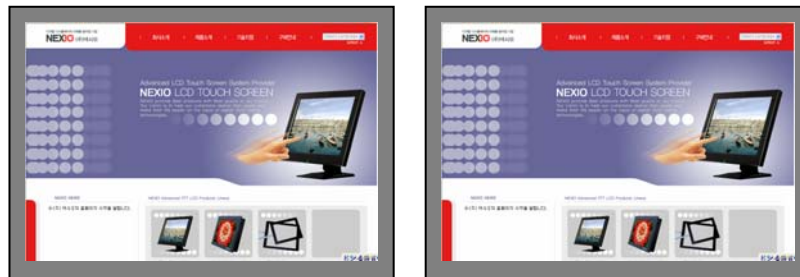
## Mapping Multiple Monitors

You must map each touch screen to a monitor using the [Mapping] button. You must do this in order to individually calibrate and configure each touch screen connected to your system. Once you have properly mapped the touch screens, you set the current touch screen by selecting the icon of the desired monitor.

## Clone mode & Independent mode

In the clone mode, one of the monitor is selected as the primary one. All other monitors usually have the same image as the primary monitor.

In the clone and independent mode, all screens show same image and the touch screen on each monitor functions independently.



## Stretch mode

The stretch mode makes all screens combine for a single image. In this mode the touch screen on each monitor functions as a single image.

