



# eTurboWare

For Red Hat Linux 7.0

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***User's Guide***

**突破** 光電科技股份有限公司  
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# 1. Preface

The eTurboTouch touch panel is the most intuitive pointing device available for the PC series of computers and monitors. Touch panels make using computers as simple as touching the screen. It is ideal for a variety of applications, including entertainment, training systems, information, point-of-sale, factory automation, laboratory and medical instrumentation, interactive selling demonstrations, educational programs and so on.

To use the Touch panel with your host computer or device, you have to install controller, the touch panel and the corresponding software. For the instruction of installing touch panel, refer to *Sensor Kit Installation Guide*. For the hardware connections for your controller, please refer to the *Controller reference guide*.

## Introduction

eTurboWare converts the data from the touch panel to emulate input from a mouse device. eTurboWare for Windows is the software for the eTurboTouch touch panel. It provides full touch panel functionality for all applications running under Linux.

After you finished installing eTurboWare, you can select and drag objects using the touch panel. To make a selection, simply touch the screen slightly.

This manual provides the following information and will be described later by chapters.

- Install this software
- Use the touch panel (control panel) to customize your work environment
- Troubleshooting

⋯ Important: Before installing software, you must complete the appropriate hardware connections for your controller and touch panel.

## ***Installation***

To install the eTurboWare for Linux, please follow the steps below:

1. Make sure you have left Xwindow system.
2. Under the root directory, **copy** the file “eTurbo.tgz.0613” from the eTurboWare CD to the root directory.
3. Unzip the file by typing “tar -xvzg eTurbo.tgz.0613”. An “eTrubo” directory will be created automatically and the extracted files will be stored on that directory.
4. Go to the directory “eTrubo”. And type “**make**” command. Remember to choose the default setting (#1) for module built-up.
5. Type “**make install**” to initiate the installation.
6. After the installation is finished, please **restart** your system.

When you installed a brand-new controller, you have to do 2-point calibration first before the first reboot. Please use mouse or keyboard to finish the work.

.. Note: Before you using eTurboWare, please open the README file first to have some information that you have to notice.

## 2. *Using eTurboWare*

You can change the software settings for your system, such as changing the calibration methods, touch modes, cursor options, hardware, and diagnostic tools to suit your preferences.

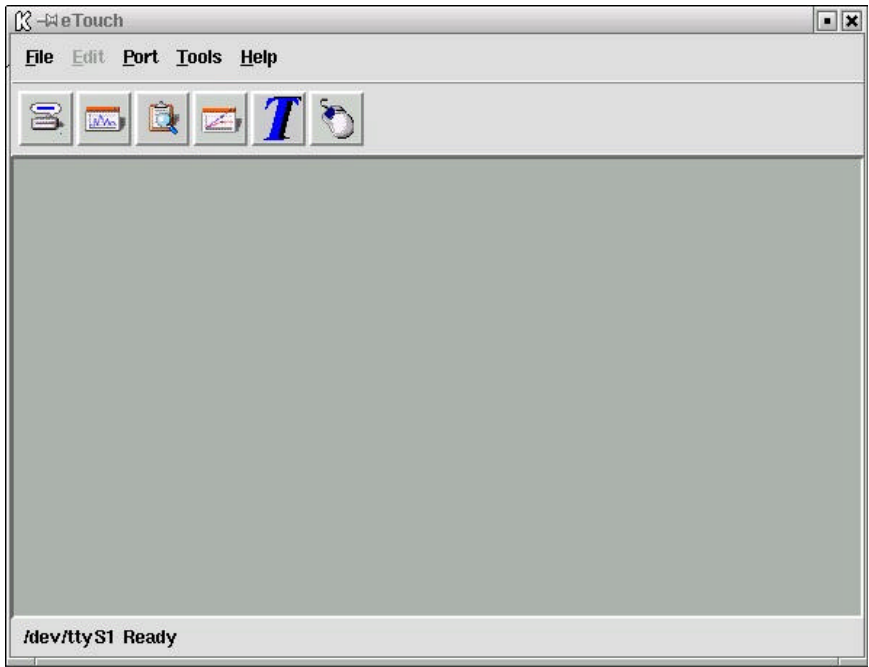
To make sure you can invoke command with a touch, two steps listed below should be done.

- Calibrating your screen, refer to page 9
- Configuring your mouse, refer to page 11 – *Touch Setting*

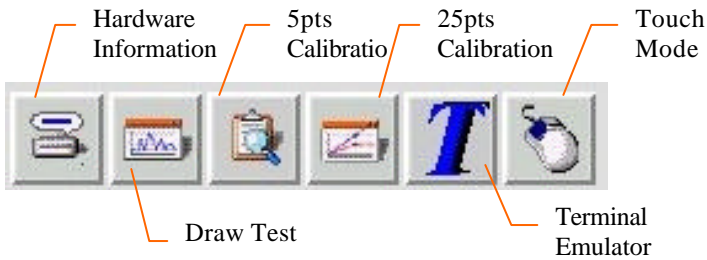
### ***Using eTurboWare***

To open eTurboWare, please follow the steps below:

1. Launch Xwindow.
2. Locate and click the “touchcfg” icon on the desktop. Click Ok after the system finished searching all devices.
3. The eTurboWare main screen will appear as follow:



## Knowing the Tool Bar



### Hardware Information

It displays the Linearization Parameters. The function of this tool is the same as Setting – Hardware Parameter menu item.

### Draw Test

The function of this tool is the same as Tools – Draw test menu item.

### 5pts Calibration

The function of this tool is the same as Tools – 5pts Calibration menu item.

## **25pts Calibration**

The function of this tool is the same as Tools – 25pts Calibration menu item.

## **Terminal Emulator**

This tool allows you to type firmware command on the command line. The result will be shown on the terminal message window.

## **Touch Mode**

This tool allows you to set some touch mode for your touch panel.

## ***Calibrating Your Screen***

To make the touch panel to locate the correct position for each touch, you have to do calibration after the hardware and software installation are finished.

When should you calibrate the screen:

- The first time you run eTurboWare, you have to do 2 points calibration first.
- Each time you change the video resolution (for example 640x480 or 800x600) or video mode of your monitor.
- Any time you change the size of the video image by adjusting the horizontal and vertical controls on your monitor.
- If the cursor does not follow the movement of your finger (pointing device), or can not reach the edges of the screen.

## **2-Point Calibration**

To have a 2-point calibration, please

1. Click the “2Pcal” icon on the desktop window to initiate the 2-point calibrate.



2. The screen with 2 points for your calibration appears.
3. Touch on the blinking one with your finger or pointing device for a while. If it is OK, the point will change into green “X” and keep steadily.

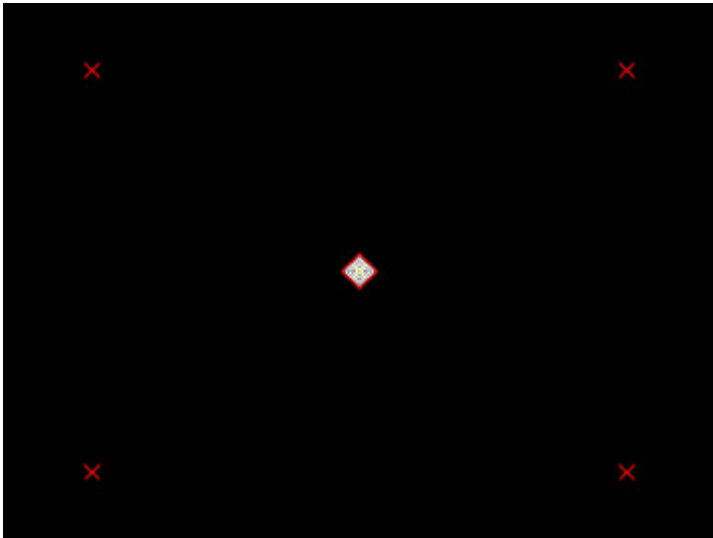
4. Now, finish the second point calibration.
5. You have done the panel mapping.

## 5-Point Calibration

To have a simple mapping with linearization compensation, execute 5-point calibration to get the result. When you select this function, 5 points display on your screen. Please touch on it in a while until it changed color into green (means calibration of that point is OK) and then release your finger or pointing device.

To have a 5-point calibration, please

1. Select **“5 pts Calibrate”** command from the Tools menu. The screen with 5 points for your calibration appears. The center point blinks to push you to do the calibration.



2. Touch on the blinking one with your finger or pointing device for a while. If it is OK, the point will change into green “X” and keep steadily.
3. Follow the instruction on the screen to touch every point..
4. When you finish these steps, you have done the panel mapping.

## 25-Point Calibration

This command defines the X and Y axis position for a touch. When you select this command, 25 points with black background will display on your system screen. The point to the left-bottom side will blink to ask you to do the calibration. Please touch on it by your finger or any point device in a while until it changed from blinking into steady “X”. For calibration, you have to touch 25 points one by one.

.. Note: As this command is used for compensation if the touch panel got some problem of bad linear, it is not recommended to invoke it.

For 25-point calibration was done by factory as a default setting, in general, you do not need to execute this action again. Yet, if you really want to do, please follow the steps below:

1. Select “**25 pts Linearization**” command from the Tools menu. The screen with 25 points for your calibration appears.
2. Touch on the blinking one with your finger or pointing device for a while. If it is OK, the point will change into green “X” and keep steadily.
3. Follow the instruction on the screen to touch every point.
4. When you finish these steps, you have done the panel mapping.

## Draw Test Window

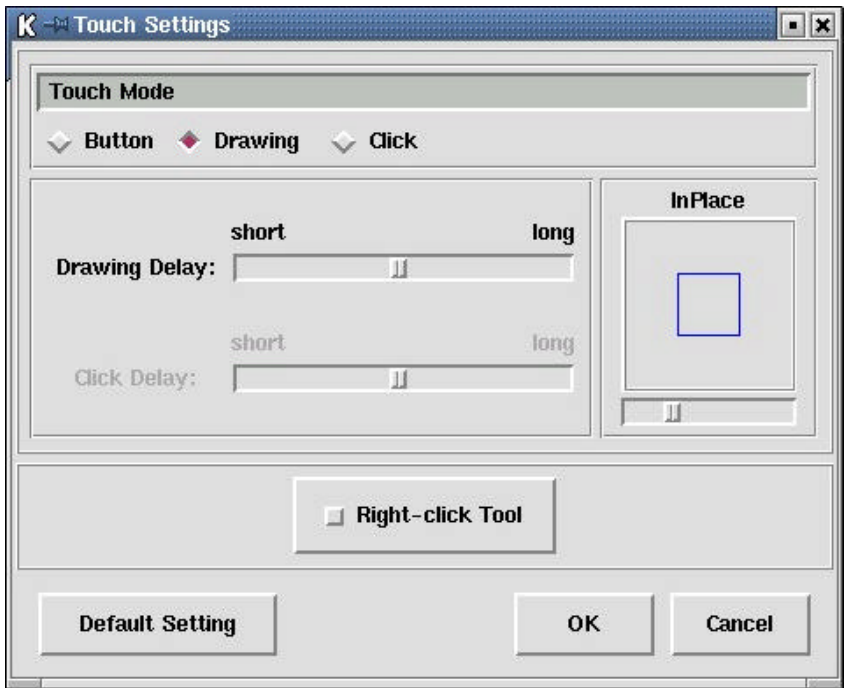
The Draw Test Window is provided for you to do simple test of finger touch. You can draw lines with your finger or any pointing device.

To invoke this window, please select “**Draw Test**” command from the Tools menu.

To exit this window and back to the Diagnostic dialog box, please press <ALT> +<F4> simultaneously.

## Touch Setting

You might want to configure some settings after installing eTurboWare. Touch Setting allows you to set your touch mode such as Touch Mode, Right Click Tool, InPlace, Drawing Delay and Click Delay.



## Touch Mode

There are three selections for the Touch Mode,

- Button Mode** - In Button mode, touching the screen is equal to pressing and/or releasing the mouse button.
- Drawing Mode** - Drawing mode is useful for draw and graphics applications. In Drawing mode, a touch is equal to pressing and holding down the mouse button. Lifting off your touch is the same as releasing the mouse button.
- Click Mode** - It is useful for general-purpose desktop applications. In this mode, a touch positions the cursor much like a mouse. Holding the touch is equal to pressing and holding the mouse button. Lifting the touch off is equal to releasing the mouse button.

## Right Click Tool

This command applies the right mouse button function for a touch. The limitation is that it can be used just once. If you want to apply the function for next use, you

must choose this command again.

## **Drawing Delay**

Defines the time that you must touch the screen for your system to interpret your actions as a click. Adjust it to the right to set the range for each touch be larger; adjust it to the left to set the range for each touch be smaller.

## **Click Delay**

Defines how quickly you must touch the screen for your system to interpret your actions as a click. Adjust it to the right to set the speed for each touch be slower; adjust it to the left to set the speed for each touch be faster.

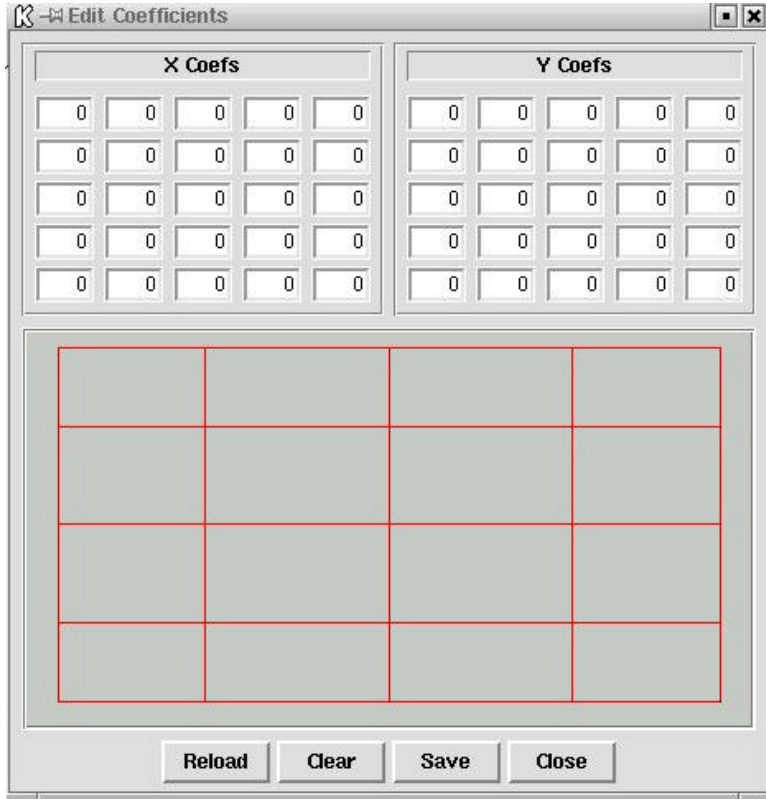
## **InPlace**

The *Inplace* defines the area (range) in which you must touch the screen for your system to interpret your actions as a click.

## 25pt Parameters

This command provides the hardware information of X and Y coefficients.

Please select “Linearization Coefficients” command from Tools menu, a dialog box appears as follows:



- Reload** – The information that you erased by clicking on Clear button can be reloaded with this button.
- Clear** – Erase current information.
- Save** – Save the settings.
- Close** – Close this dialog box.

## ***On-Line Help***

eTurboWare will offer an on-line help for your reference whenever you want to know the detailed information about each commands.

## ***Exiting the eTurboWare***

When you finish all the setting adjustments, you can exit the eTurboWare main screen. Choose **Exit** from the File menu to make all the settings take effect.

# 3. *Troubleshooting*

This chapter will provide you some notice and specific information for your reference.

## ***Important Notice***

- If you have rotated the sensor for some reason, before using it, please execute 2-point calibration. The 2-point calibration will not affect 5-point and 25-point calibration unless re-calibrated.
- The power for controller is supplied by keyboard PS/2 power. For Wind9X OS, when the system goes into suspend mode, it can be waken up by mouse or keyboard but can not be waken up by a touch (which can call back the system when goes into display protection). To avoid such problem, please provide another DC-5V to the controller.
- For LCD video rotation, it is not necessary to do re-calibrate with 2-point. The LCD video coordinate is separate from touch coordinate.
- The driver/utility v1.05 is compatible with firmware 1.00 and later. Before you install a new driver /utility to your system, please check the controller firmware' s version. Choose About Touch button from the Controller List dialog box to get the firmware and driver version information.
- The touch panel provides less 1.5accuracy fail message. The 1.5% length of sensor active area and 1.5% wide of sensor active area offset is acceptable. However, the calibration accuracy will affect this result and sensor size. Besides, the larger offset distance will appear.
- Before you install a new driver into your system, please remove the old version first if it exists on your system. The new driver will not replace the old one but create another folder instead.

## **Q & A**

**Q: The eTurboWare can not be closed by your touch.**

A: As the application utility window (main screen) will interrupt the comport, we strongly recommend – do not launch the application software without a mouse or keyboard installed. Otherwise, you might not close the software properly.

**Q: I change a new controller for my touch panel. What thing should I take care?**

A: For a brand-new controller, please do 2 points calibration first. Due to the new one has not any data of your touch panel, you have to launch 2 points (panel mapping) calibration by using a mouse or keyboard.