



# C-Series Touchcomputer User Guide

C-Series LCD Multi-function Touchcomputer

[19" and 22" model shown]

**TE Touch Solutions**

**C-Series Touchcomputer User Guide**

**Multi-function Touchcomputer**

**Revision B**

**P/N E826769**

**1-800-ELO TOUCH (1-800-356-8682)**  
**[www.elotouch.com](http://www.elotouch.com)**

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# 1

## SETUP

This chapter discusses how to set up and test your touchcomputer. For information on peripheral options, refer to Chapter 3, “Options and Upgrades.”

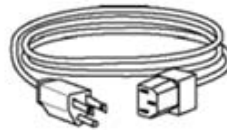
### Unpacking Your Touchcomputer

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Check that the following items are present and in good condition:

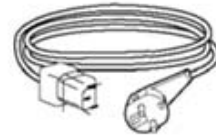


Touchcomputer



Power cable US/Canada

← AND →



Power cable Europe

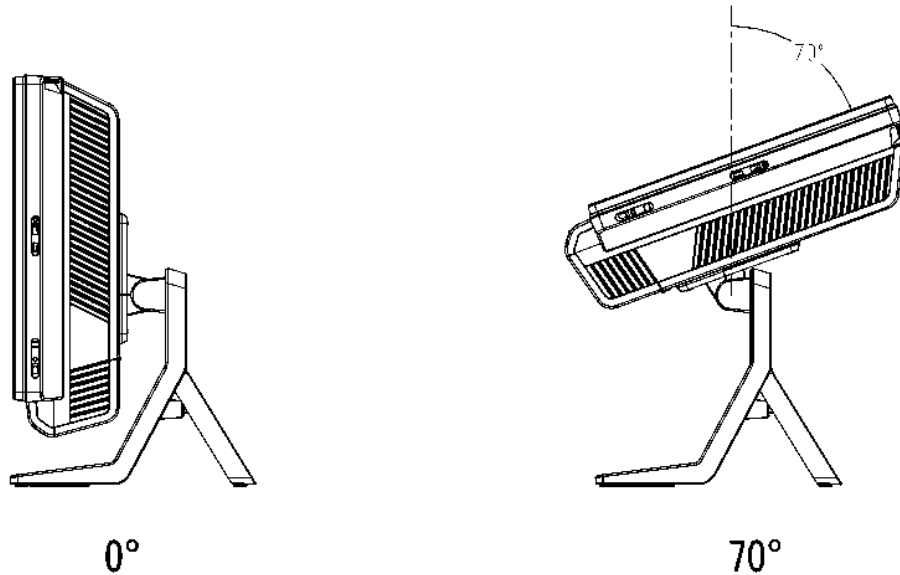


Power Adapter

## Adjusting the Display

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The display screen can be adjusted from 0 to 70 degrees, as shown below.



**CAUTION:** To prevent tipping or dropping, be sure to hold the base when adjusting the display.

## Setting Up the Operating System

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If configured with an operating system, the initial setup of the operating system takes approximately 5-10 minutes. Additional time may be needed depending on touchcomputer hardware configurations and connected devices.

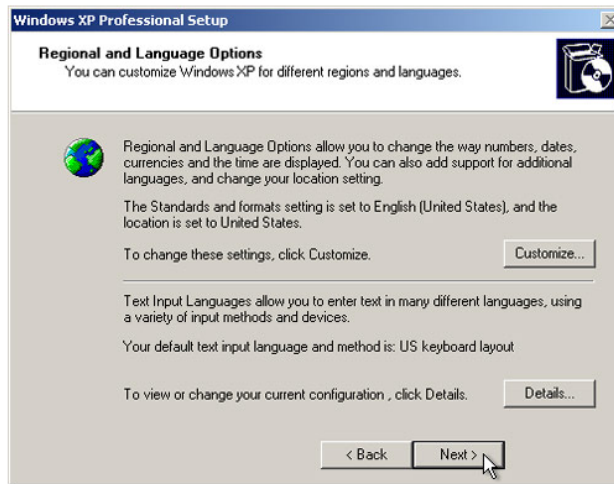
To set up the Microsoft® Windows® Operating System for the touchcomputer, turn on the touchcomputer by pressing the power button, and then follow the instructions on the screen.

### Selecting the Language (For POSReady 2009 Only)

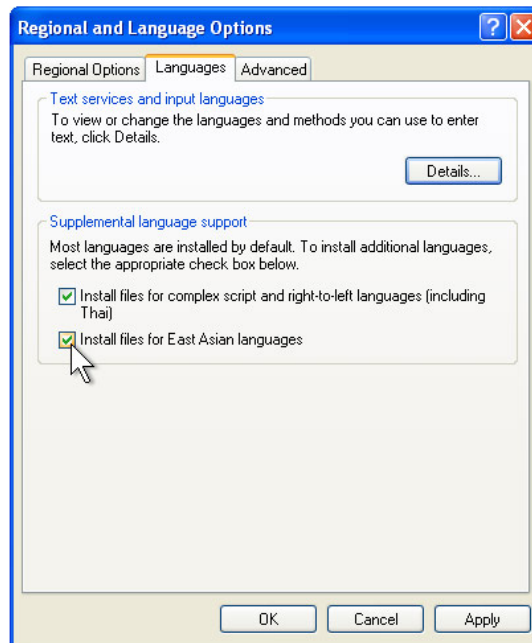
Microsoft Windows® uses English as the default language in menus and dialog boxes. You can change this language to suit your preferences at the screen below.

Note: If you choose to change the language after initial setup, you can follow steps 1-2 to arrive at the same screen below:

1. From the desktop, click **Start > Control Panel**
2. In the Control Panel screen, select **Regional and Language Options**.

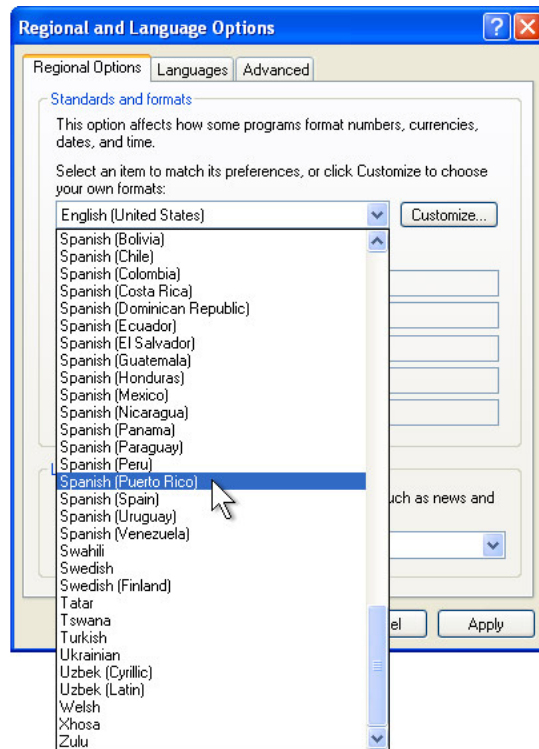


3. Click **Customize**. The Regional and Language Options window appears. Select the **Languages** tab.

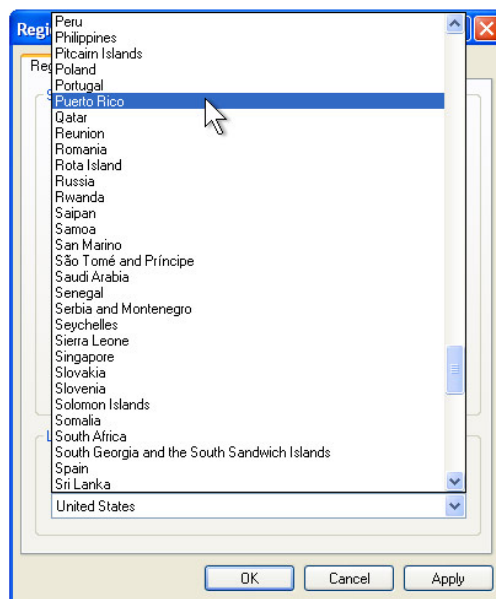


4. If required, check the boxes for “Install files for complex script and right-to-left languages” and “Install files for East Asian languages.”
5. Select the **Regional Options** tab.
6. Select your preferred language from the drop-down list in the Standards and formats pane.





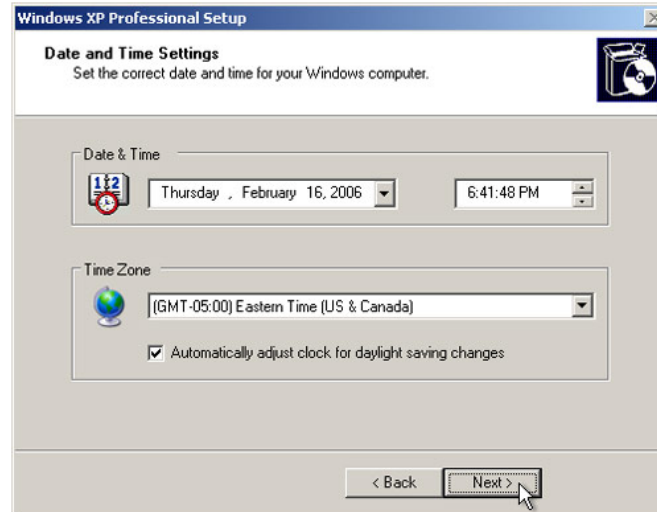
7. Click **Apply**.
8. Select your location from the drop-down list in the Locations pane.



9. Click **OK**.

## Selecting the Time Zone (POSReady 2009 Only)

When the following window appears, you can change the time zone, date, and time of the touchcomputer.

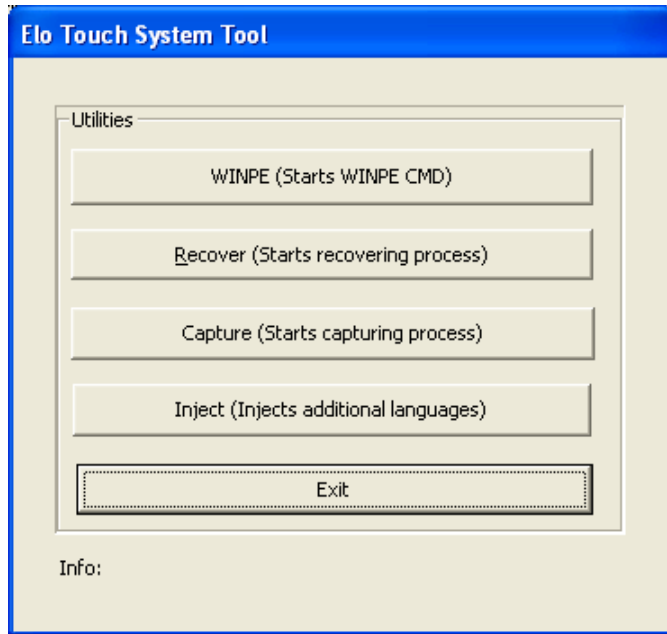


After making any changes, click **Next** to finish. Windows Setup completes the installation of the touchcomputer.

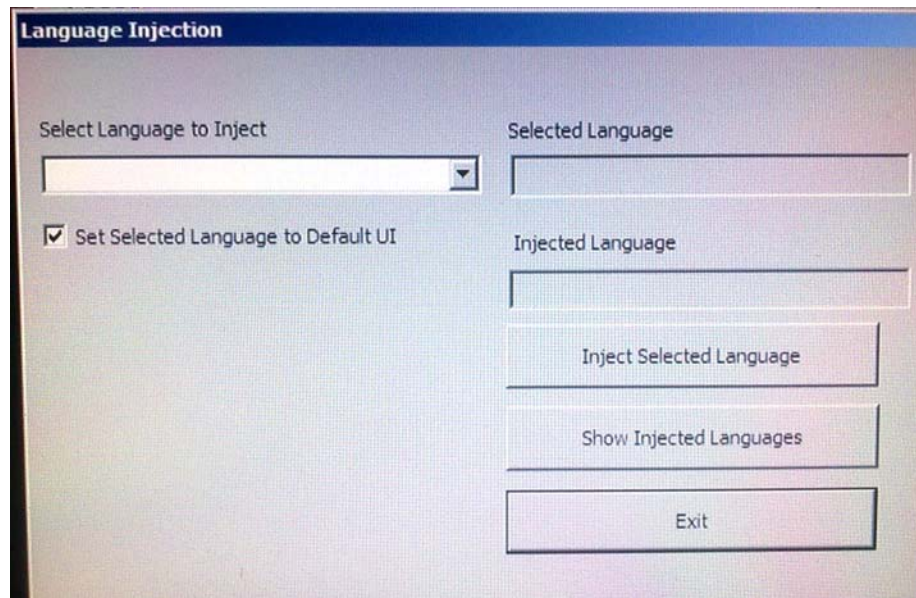
## Injecting the Languages (For Windows 7 Only)

Windows 7 Professional only allows the use of one language at one time. But you can use the Elo TouchSystems language injection tool to update your language preference. English is set as the default language, but you can change this language to suit your preferences.

1. After the TE logo shows up, press **F8** (frequently) to enter Advanced Boot Options.
2. Select **Repair your computer**.
3. Click **Next** → **OK** (Shall not have password) → Click **Elo Touch System Tool**.
4. The following UI shall be presented.



5. Click **Inject**, and the following window will pop out.



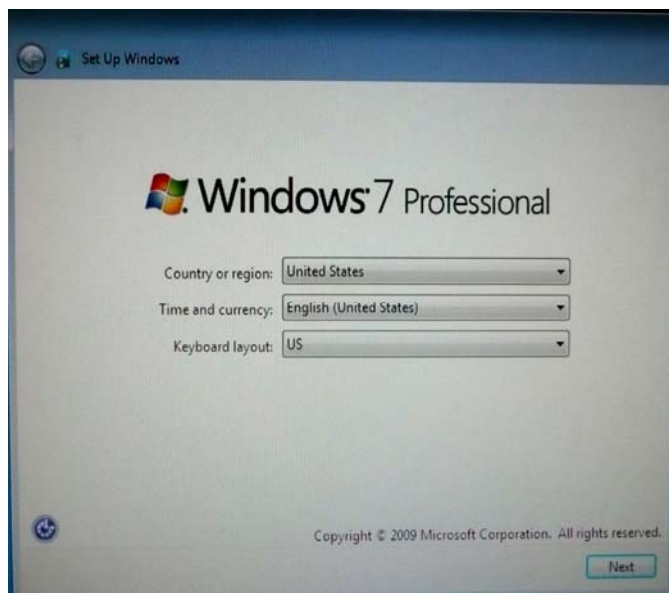
6. Click the drop-down list and select the preference language.
7. Click **Inject Selected Language**
8. The following window shall be presented.

```
X:\windows\system32\cmd.exe
A subdirectory or file D:\scratch already exists.
Deployment Image Servicing and Management tool
Version: 6.1.7600.16385
Image Version: 6.1.7600.16385
Processing 1 of 1 - Adding package Microsoft-Windows-Cl
~31bf3856ad364e35~x86~zh-TW~6.1.7600.16385
[=====
33.3%
```

- 9. After the language package is installed correctly, press any key to exit this window.
- 10. Click **Exit** → **Exit** → **Restart**

### Selecting the Region (For Windows 7 Only)

When the following window appears, you can change the country, time and currency, and keyboard layout of the touchcomputer.



After making any changes, click **Next** to continue.

## Choosing the Computer Name (For Windows 7 Only)

When the following window appears, you can choose a computer name of the touchcomputer.



After making any changes, click **Next** to continue.

## Selecting the Update Options (For Windows 7 Only)

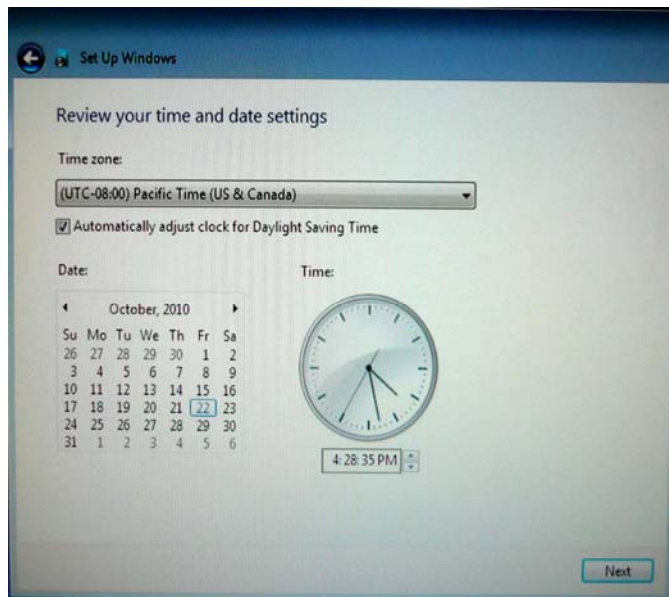
When the following window appears, you can select one of the update options of the touchcomputer. In general, you can choose **Use recommended settings** as your default option.



After making any changes, click **Next** to continue.

## Reviewing the Time and Date Settings (For Windows 7 Only)

When the following window appears, you can set up the time and date of the touchcomputer.



After making any changes, click **Next** to finish. Windows Setup completes the installation of the touchcomputer.

## Calibrating the Touchscreen

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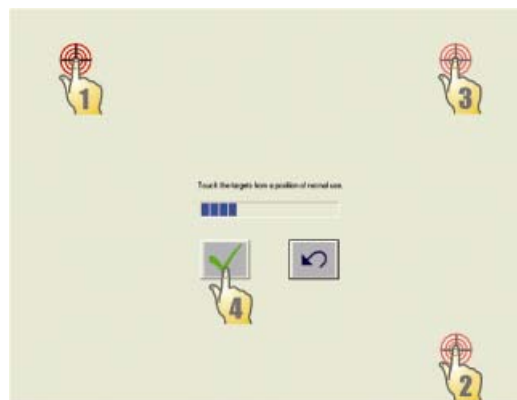
The touchscreen is pre-calibrated for accurate touch response.

If for any reason the touchscreen needs to be recalibrated, right-click the Elo icon in the Taskbar and then click "Properties." The following window opens.

**NOTE:** *Calibration is not applicable on APR touchscreen models.*



Click the **Align** button. This launches the calibration program. The window shown below opens. Follow the instructions to calibrate the touchscreen.





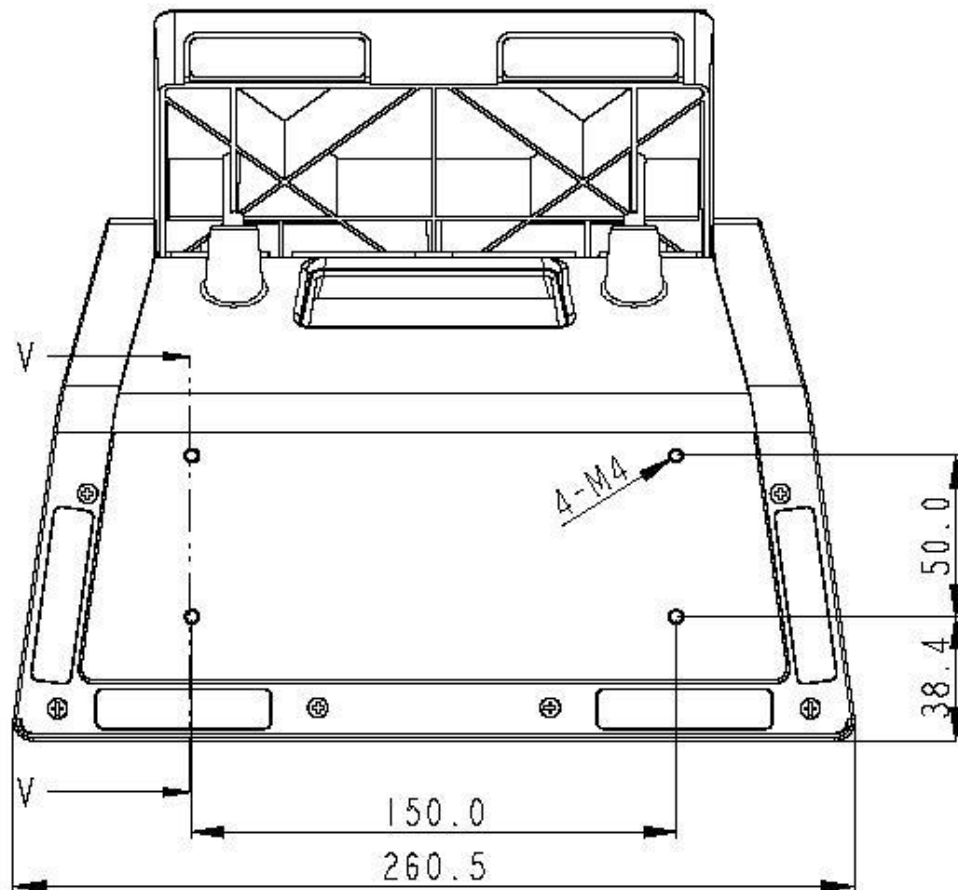
## Securing the Base

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Use the four pretapped holes to secure the touchcomputer from below the mounting surface. The holes are designed to work with ISO metric M4 screws. Mounting screws are not included with the product but should be readily available at any hardware store. Refer to the figure below for the location of the holes. All dimensions are in millimeters.

### Mounting Diagram

1)





## CHAPTER

# 2

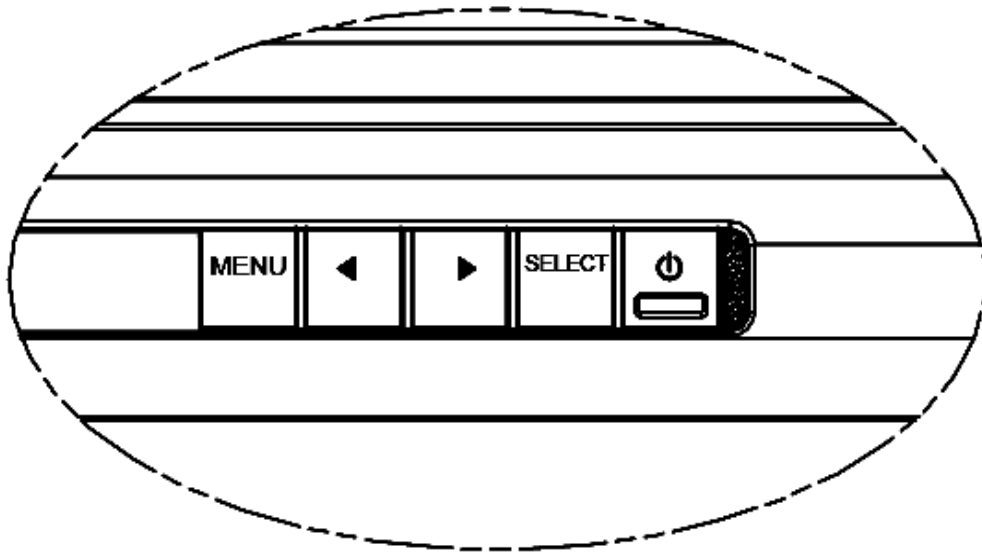
## OPERATION

This chapter describes how to control the On-Screen Display (OSD), power buttons, and I/O panel.

All adjustments made to the OSD and power controls are automatically saved. User settings remain unchanged after powering off/on or in the case of a power failure.

## On-Screen Display (OSD)

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### OSD Menu

1. To display the OSD Menu, press the Menu button.

Press the RIGHT button or LEFT button to toggle and the SELECT button to select from the different OSD sub-menus and functions.

2. When the function you want to change is shown, press the SELECT button.
3. To adjust the value of the function:
4. Pressing the RIGHT button increases the value of the selected OSD control option.
5. Pressing the LEFT button decreases the value of the selected OSD control option.

The OSD provides the following settings.

Feature	Description
Auto adjust	Automatically adjusts system clock.
Brightness	Adjust brightness and contrast. <ul style="list-style-type: none"><li>• Brightness: Adjusts the backlight of the monitor.</li><li>• Contrast: Adjusts the maximum luminance level of the monitor.</li></ul>

Feature	Description
Image setting	<p>Adjusts H position, V position, clock, and phase.</p> <ul style="list-style-type: none"> <li>• H position: Moves the screen horizontally right and left (1 pixel pitch increment).</li> <li>• V position: Moves the screen vertically up and down (1 line increment).</li> <li>• Clock: Adjusts the ratio of dividing frequency of the dot clock.</li> <li>• Phase: Adjusts the phase of the dot clock.</li> </ul>
Color	Sets color temperature (9300K, 7500K, 6500K, 5500K, or User Preset).
OSD	<p>Adjusts H position, V position, and OSD timeout.</p> <ul style="list-style-type: none"> <li>• H position: Adjusts the OSD menu screen position left or right.</li> <li>• V position: Adjusts the OSD menu screen position up or down.</li> <li>• Timeout: Adjusts the amount of time that the OSD menu is displayed.</li> </ul>
Language	Changes language to English, French, Italian, German, Spanish, Japanese, Simplified Chinese, or Traditional Chinese.
Recall	Sets color recall and recall defaults. Restores original factory settings.
Miscellaneous	Adjusts sharpness, enables/disables DDC/CI function.
Exit	Exits the OSD.

## OSD and Power Button Control

The OSD menu and power button are enabled by default.

### To enable or disable the OSD function:

6. Simultaneously press **Menu/Exit** and the Left (<-) key for two seconds. A window appears displaying **OSD ENABLE** or **OSD DISABLE**.
7. When the OSD is disabled, the OSD menu is not visible.

### To enable or disable the power button (PWR) lock function:

8. Simultaneously press **Menu/Exit** and the Right (->) key for two seconds. A window appears displaying **PWR ENABLE** or **PWR DISABLE**.
9. When the power button lock feature is activated, the power button is disabled.

## L.E.D. Functionality

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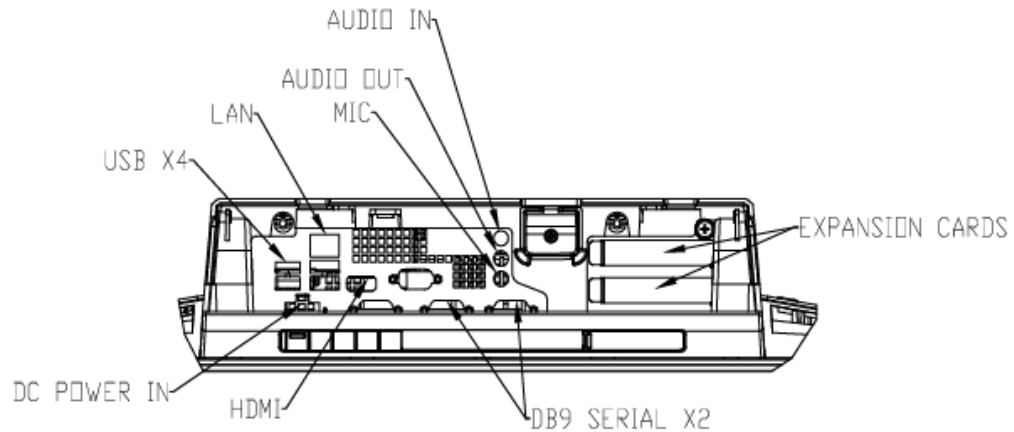
The C-Series base has a LED indicating the state of the touchcomputer. The table below shows LED state and corresponding color.

LED Color to Observer	State
Off	No input power — Off mode
Red	Input power present – Off mode or hibernation
Orange	Input power present — Standby
Green	Input power present — Power On

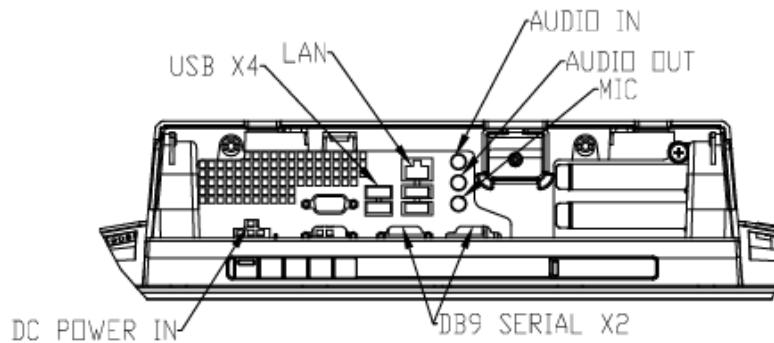
## Using the Input/Output Panel

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To access the input/output (I/O) ports, remove the cable cover at the bottom of the unit. A security screw is included and may be used to secure the cable cover to the touchcomputer. Below are the I/O descriptions by model:



**C1 and C3 models**



**C2 models**

**Note:** The DB9 Serial (COM) ports are defaulted (from left to right) COM5 and COM6

**Note:** As a safety precaution, always leave the cable cover door attached when the system is powered on.

## OPTIONS AND UPGRADES

## Adding Optional Peripherals

---

When adding a peripheral, complete installation and setup instructions are provided with the field-installable kits. The following peripherals are available for purchase separately as field-installable kits:

- Magnetic stripe reader (MSR)\*
- Customer display\*
- Fingerprint reader (FPR)\*
- Wireless adapter
- Cash Drawer Port Expansion Card
- Second VGA port expansion card\*\*
- Second hard disk drive (HDD)
- Solid State Drive (SSD)
- RAID PCI-E\*\*\*
- Modem PCI-E\*\*\*
- Parallel Port PCI-E\*\*\*
- Webcam Kit

\* External Elo Peripheral

\*\* Elo Expansion Card

\*\*\* Elo PCI-E Expansion Card

**Note:** Software drivers and applications for all peripherals are located in the C:\EloTouchSystems directory of the touchcomputer.

**Note:** May install up to two (2) Elo Expansion Cards OR one (1) Elo Expansion Card + one (1) PCI-E Expansion Card

## Magnetic Stripe Reader (MSR)

---

You can add a magnetic stripe reader (MSR) to the C-Series touchcomputer to any of the 4 mounting locations located on the display head top, bottom, left, and right. Software application and drivers can be found in the following directory or on [www.elotouch.com](http://www.elotouch.com)

C:\EloTouchSystems\SetupFiles\Peripherals

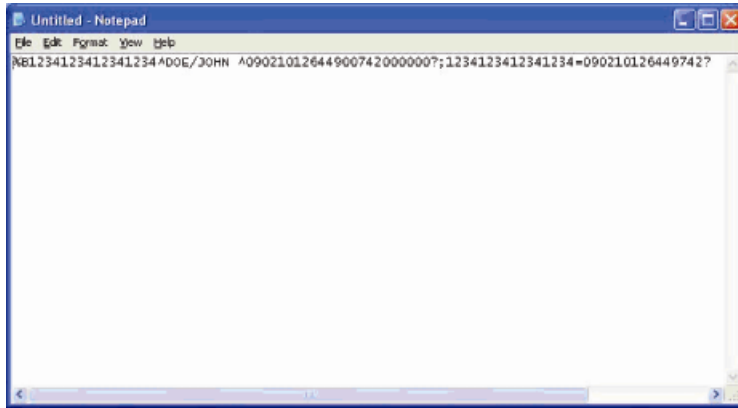
The MSR is a USB 2.0 device that reads all three data stripes on standard credit cards or driver's licenses conforming to ISO/ANSI standards. The MSR has foreign language capability. The credit card is read by sliding the credit card forward or backward through the MSR, stripe side toward the display. The MSR is powered from the USB port; no external power is needed. The MSR features are:

- Reads up to 3 tracks of information
- Bi-directional swipe reading
- Superior reading of high jitter, scratched, and worn MagStripe cards
- Reliable for over 1,000,000 card swipes
- Reads ISO7811, AAMVA, and most other card data formats
- PC software makes configuration changes easy
- Swipe speeds from 3 to 60 inches per second
- Interfaces: USB-KB and USB-HID
- Fully supports USB 2.0
- Part number: E545781

### Testing the MSR

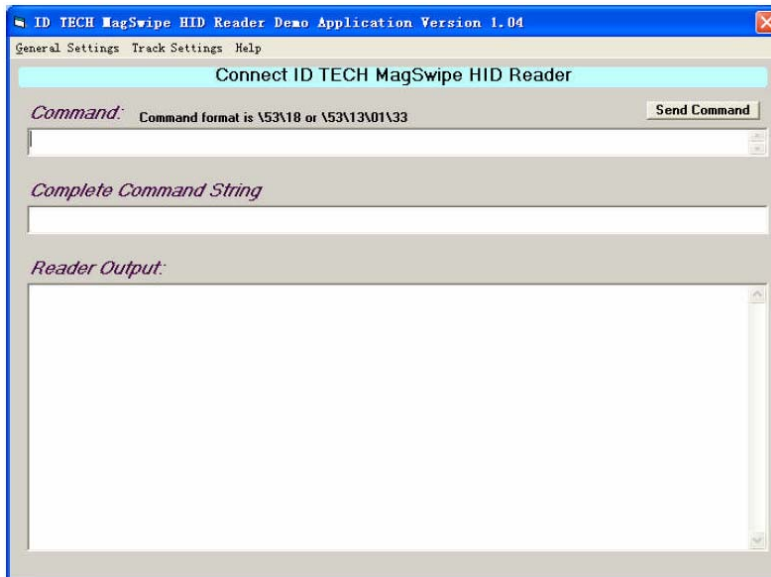
#### Testing in USB MSR Keyboard (KB) Emulation Mode

10. Open the Notepad application (click **Start > Accessories > Notepad**).
11. Slide the card through the MSR and verify that the data is displayed in the application window.



### Testing in USB MSR Human Interface Device (HID) Mode

12. Double-click the **MagSwipe HID Demo** icon to start the test application.



13. Slide a card through the MSR and verify that the data is displayed in the application window.





14. If the card ID appears in the Reader Output window, the reader is functioning.

## Customer Display

---

You can optionally add a customer display to the C-Series touchcomputer to any of the four mounting locations located on the display head top, bottom, left, and right of the touchcomputer. Software application and drivers can be found on [www.elotouch.com](http://www.elotouch.com)

Feature	Description
Display type	Vacuum fluorescent display
Display color	Green
Display pattern	5 x 7 dot matrix
Brightness	350-600 cd/m <sup>2</sup>
Characters available	95 alphanumeric & 32 international characters
Dot size (X x Y)	0.86 x 1.2 mm
Font size	5.5(W) x 10.5(H)
Character number	20 characters by 2 lines, for a 5 x 7 dot matrix font
Interface	USB
Part number	E879762

## Fingerprint Reader (FPR)

---

You can add a fingerprint reader to the C-Series touchcomputer to any of the four mounting locations located on the display head top, bottom, left, and right.

Software application and drivers can be found in the following directory or on [www.elotouch.com](http://www.elotouch.com)

C:\EloTouchSystems\SetupFiles\Peripherals

The fingerprint reader is powered by the USB bus. The reader optically scans the fingerprint when the user touches the glowing window. Optical technology gives the highest quality fingerprint scans and reliability.

Fingerprint reader specifications are shown in the table below.

Feature	Specification
Fingerprint reader	DigitalPersona U.are.U
Power supply	5.0VDC +/- 0.25V
Current draw – scanning mode	190 mA (typical)
Current draw – idle mode	140 mA (typical)
Current draw – suspend mode	1.5 mA (typical)
Image resolution	512 dpi
Image color	8-bit gray level
Scan capture size	14.6mm (nominal width) x 18.1mm (nominal length)
Image capture speed	100 ms
USB type	1.0, 1.1, or 2.0
Operating temperature	0 to 40°C
Electrostatic discharge (ESD)	Up to 15kV mounted in case
Part number	E375206

### Testing the FPR

15. Double-click the **Fingerprint Reader Test** icon to start the test application.
16. Place your finger on the fingerprint reader sensor and verify that the image of your fingerprint is displayed on the application window.



## Cash Drawer Port Card

---

A Cash Drawer Port Card can be installed in any available expansion slot. This card provides:

- 2 x 12V Powered USB ports
- 1 x 12V or 24V selectable cash drawer RJ11 port. The voltage setting can be set via jumper on the card prior to installing into the touchcomputer.

Test applications can be found in the following directory or on [www.elotouch.com](http://www.elotouch.com) :

C:\EloTouchSystems\SetupFiles\Peripherals

Part number: E318237

## Second VGA Port Card

---

A second VGA video card can be added to any available expansion slot. This card provides a VGA port to drive another VGA display. Software application and drivers can be found in the following directory or on [www.elotouch.com](http://www.elotouch.com)

C:\EloTouchSystems\SetupFiles\Peripherals

Part number: E017487

## Wireless Card

---

A wireless adapter can be installed as an option in the C-Series touchcomputer in the I/O area under the cable cover.

Typical specifications for the wireless card are:

- USB module
- Compliant to USB 2.0 industry standards
- IEEE 802.11b/g/n compliant
- RoHS compliant
- Part number: E249774

## Testing the Wireless Card

To test the wireless card:

1. From the desktop, click **Start > Control Panel > Network Connections**
2. Double-click the **Wireless Network Connections** icon to display available networks and verify that the wireless network is detected.

**NOTE:** *If a wireless network needs to be initialized, please see your system administrator.*



## Second Hard Disk Drive

---

A second hard disk drive can be added via the second hard drive mounting kit. This addition provides extra data storage or can be used in conjunction with the RAID controller card for RAID functionality. This option occupies a single expansion slot.

Part number: E596876

## Solid State Drive

---

A solid state drive can be added to (or used to replace) the original hard disk drive. This addition provides additional performance and more mechanically reliability in harsh environments.

Part number: E112963

## Modem Card

---

A modem card can be added to any expansion slot. This provides modem/fax functionality. Software drivers can be found in the following directory or on [www.elotouch.com](http://www.elotouch.com) :

C:\EloTouchSystems\SetupFiles\Peripherals

Part number: E763313

Note: To use this option ALSO requires the purchase and installation of the Elo PCI-E Expansion Card Option Kit, part number E827958.

## Parallel Port Card

---

A parallel port card can be added to any Expansion slot. This option provides a parallel port for printer interfaces only. Software drivers can be found in the following directory or on [www.elotouch.com](http://www.elotouch.com) :

C:\EloTouchSystems\SetupFiles\Peripherals

Part number: E368899

Note: To use this option ALSO requires the purchase and installation of the Elo PCI-E Expansion Card Option Kit, part number E827958.

## RAID Controller Card

---

A RAID controller card can be added when used in conjunction with a second HDD kit to provide RAID 0 and 1 functionality. Software drivers can be found in the following directory or on [www.elotouch.com](http://www.elotouch.com):

C:\EloTouchSystems\SetupFiles\Peripherals

Part number: E383216

Note: To use this option ALSO requires the purchase and installation of the Elo PCI-E Expansion Card Option Kit, part number E827958.

## Webcam Kit

---

An integrated webcam kit with a built-in microphone is available for the C-Series touchcomputer. The Webcam module is a USB-powered device that includes a 2.0 megapixel camera, with stereo microphones built in. This webcam is capable of 2.0MP video at 5fps. This webcam can run on the drivers that are already preset in Windows Vista and Windows 7, and POSReady 2009. The built-in digital microphone for this webcam module is compliant with USB Audio Class 1.0. Webcam module specifications are shown in the table below:

Feature	Description
2.0MP Webcam w/2 x Digital Microphone	MIT-AA20DA1
USB Type	1.0, 1.1 or 2.0
Video Resolution	1600x1200, 1280x1024, 640x480, 352x388, 320x240, 176x144, 160x120
Auto Frame Rate	5fps max @ 2.0 megapixels (1600x1200); 24fps max @ VGA mode (640x480)
Field Of View (FOV)	66°
Focus Range	40cm ~ Infinity
Input Voltage	5.0VDC ± 0.25V
Operation Current	Under 150mA
Standby Mode	40mA ± 5mA
Operating Temperature	0 to 40°C

Supported Operating Systems	Windows XP, Windows 7, Windows Vista, POSReady 2009
Part Number	E682058

## Elo POS Demo Software

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POS demo software created by Elo TouchSystems is located on the desktop in the **Demos** folder.

## 4

## SAFETY AND MAINTENANCE

## Safety

---

Important information regarding the proper setup and maintenance of your touchcomputer:

- To reduce the risk of electric shock, follow all safety notices and never open the touchcomputer case.
- Turn off the product before cleaning (refer to “Care and Handling” on page 30 for proper cleaning methods).
- Your touchcomputer is equipped with a 3-wire, grounding power cord. The power cord plug only fits into a grounded outlet. Do not attempt to fit the plug into an outlet that has not been configured for this purpose. Do not use a damaged power cord. Only use the power cord that comes with your Elo TouchSystems touchcomputer. Use of an unauthorized power cord might invalidate your warranty.
- The slots located on the sides and top of the touchcomputer case are for ventilation. Do not block or insert anything inside the ventilation slots.
- It is important that your touchcomputer remains dry. Do not pour liquid into or onto your touchcomputer. If your touchcomputer becomes wet, do not attempt to repair it yourself. Contact Elo Customer Service for instructions.



## Care and Handling

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The following tips help keep your touchcomputer functioning at the optimal level.

To avoid risk of electric shock, do not disassemble the power adapter or display unit cabinet. The unit is not user serviceable. Remember to unplug the display unit from the power outlet before cleaning.

Do not use alcohol (methyl, ethyl, or isopropyl) or any strong solvent. Do not use thinner or benzene, abrasive cleaners, or compressed air.

To clean the display unit cabinet, use a cloth lightly dampened with a mild detergent.

Avoid getting liquids inside your touchcomputer. If liquid does get inside, have a qualified service technician check it before you power it on again.

Do not wipe the screen with a cloth or sponge that could scratch the surface.

To clean the touchscreen, use window or glass cleaner. Put the cleaner on the rag and wipe the touchscreen. Never apply the cleaner directly on the touchscreen.



### Warning

This product consists of devices that might contain mercury, which must be recycled or disposed of in accordance with local, state, or federal laws. (Within this system, the backlight lamps in the monitor display contain mercury.)

## WEEE Directive



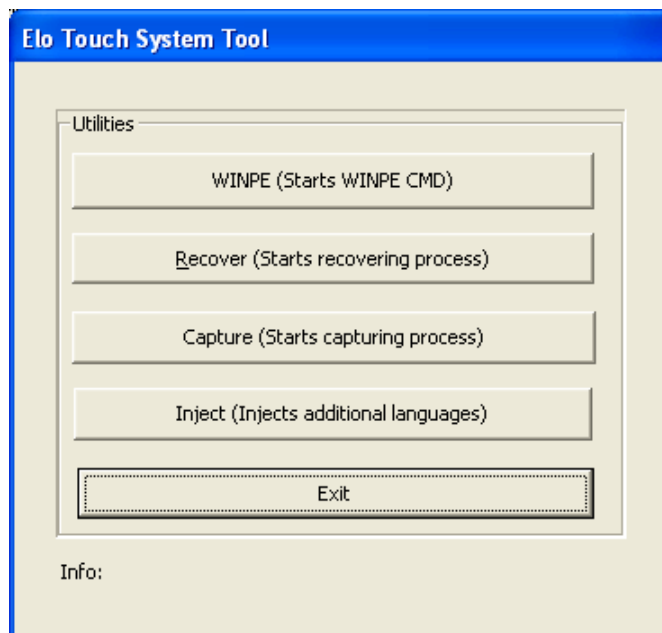
In the European Union, the Waste Electrical and Electronic Equipment (WEEE) directive label shown to the left indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility for recovery and recycling.

## Recovering the Operating System

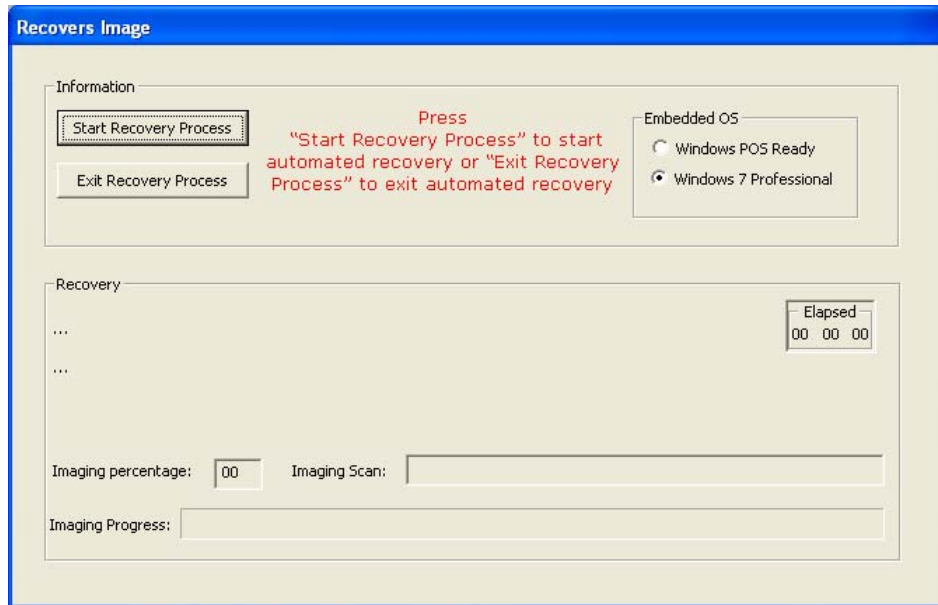
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If for any reason the touchcomputer's operating system and software need to be recovered, there are two ways you can recover your system:

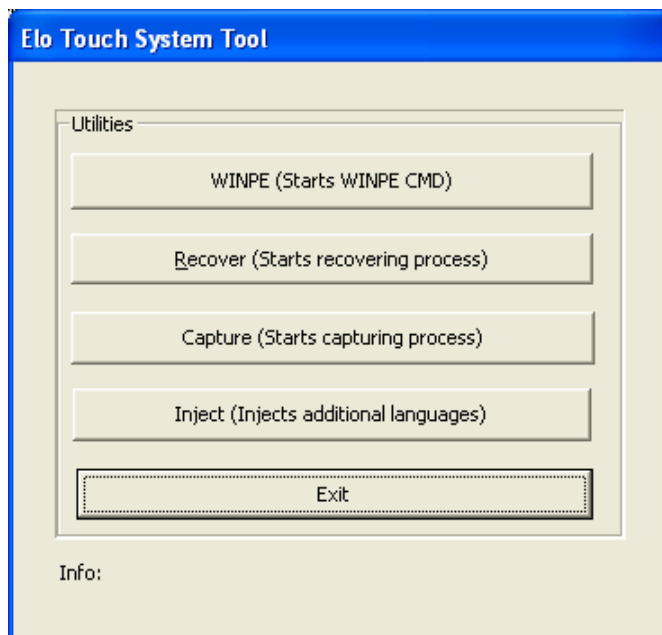
- i. For POSReady 2009: Use the included image to recover the touchcomputer.
  1. After the TE logo shows up, press **DOWN** (frequently) to enter Windows Boot Manager.
  2. Select **OS Recovery**
  3. The following UI shall be presented



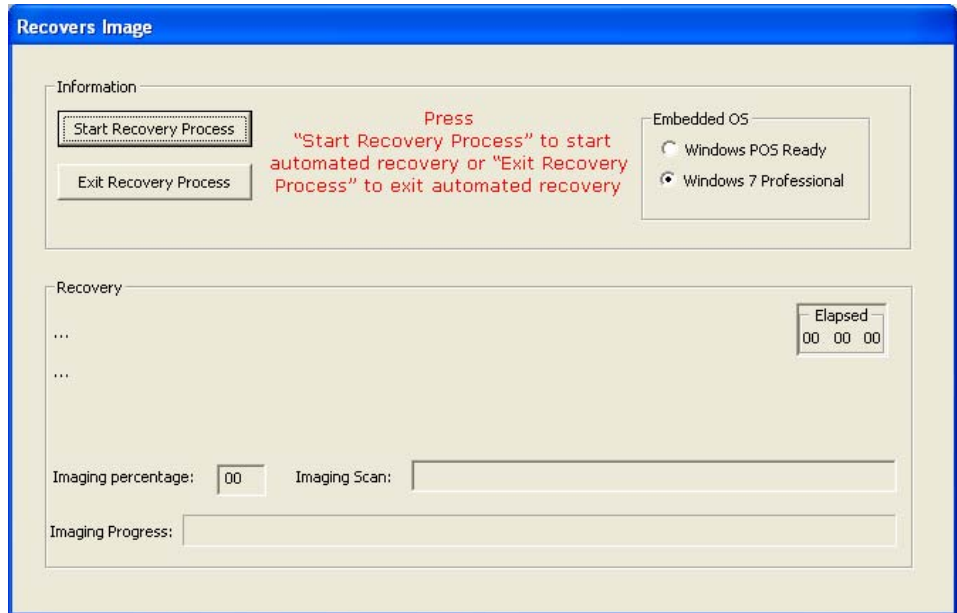
4. Click **Recover** → **Start Recovery Process**



5. After finished, click **Exit** → **Exit** → System will restart automatically
- ii. For Windows 7: Use the included image to recover the touchcomputer.
  1. After the TE logo shows up, press **F8** (frequently) to enter Advanced Boot Options.
  2. Select **Repair your computer**
  3. Click **Next** → **OK** (Shall not have password) → **Elo Touch System Tool**
  4. The following UI shall be presented

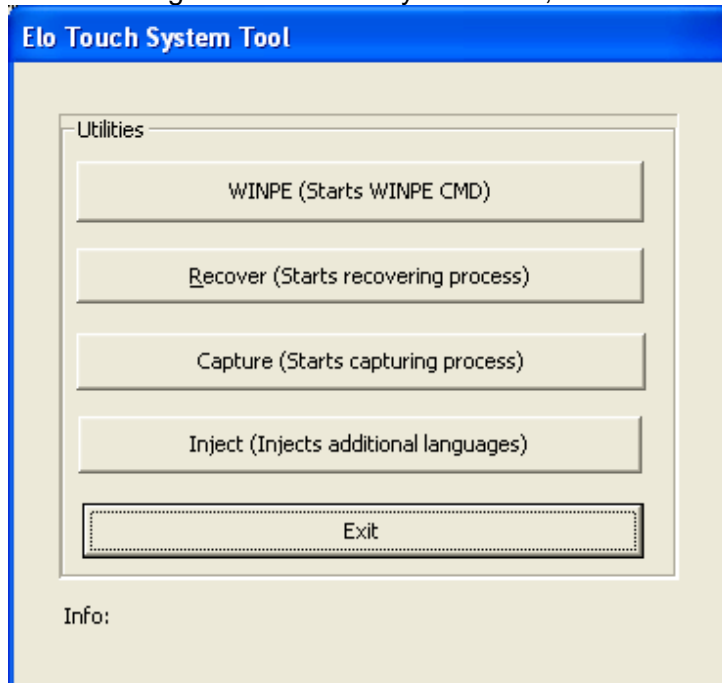


5. Click **Recover** → **Start Recovery Process**

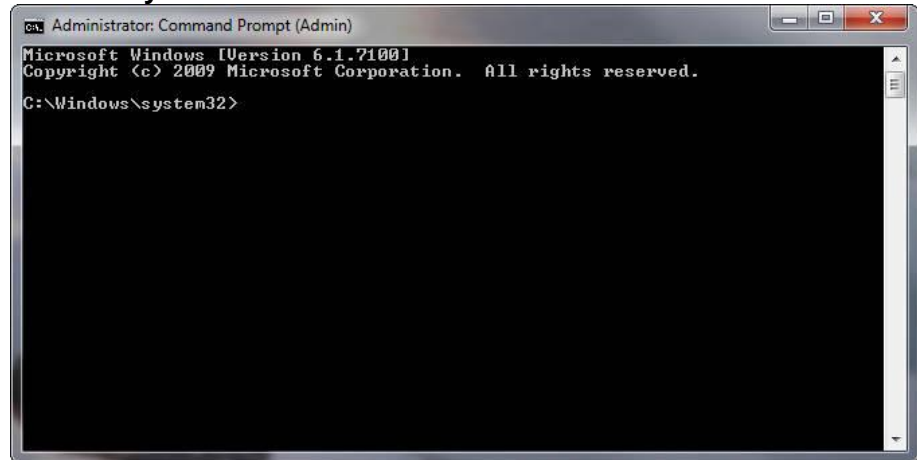


6. After finished, click **Exit** → **Exit** → **Restart**

- iii. Use the recovery DVD to recover the touchcomputer. Recovery DVD's can be ordered if necessary from TE Touch Solutions customer service.
  1. Connect the USB DVD drive to the touchcomputer.
  2. Place the recovery DVD in the DVD drive.
  3. Press "F11" to enter Device Boot Menu and boot touchcomputer from DVD.
  4. After entering the Elo Touch System Tool, click "WINPE" button.



5. Once you see the “Command Prompt” window, type “win7” to start recovery process for **Windows 7** and type “pos9” for **Windows POSReady 2009**.



6. Follow the on-screen instruction to complete recovery.

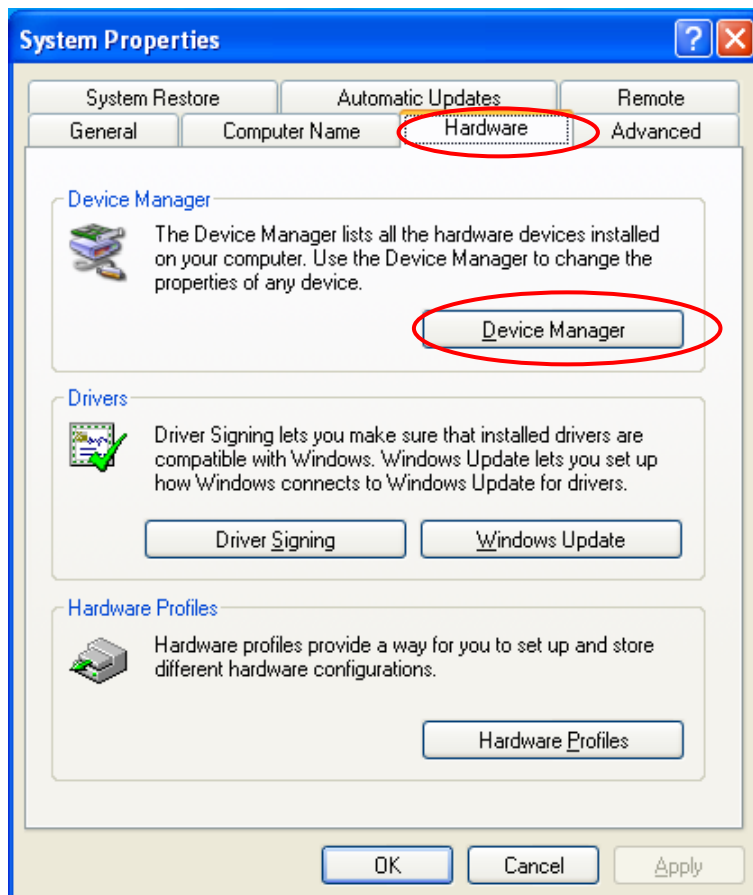
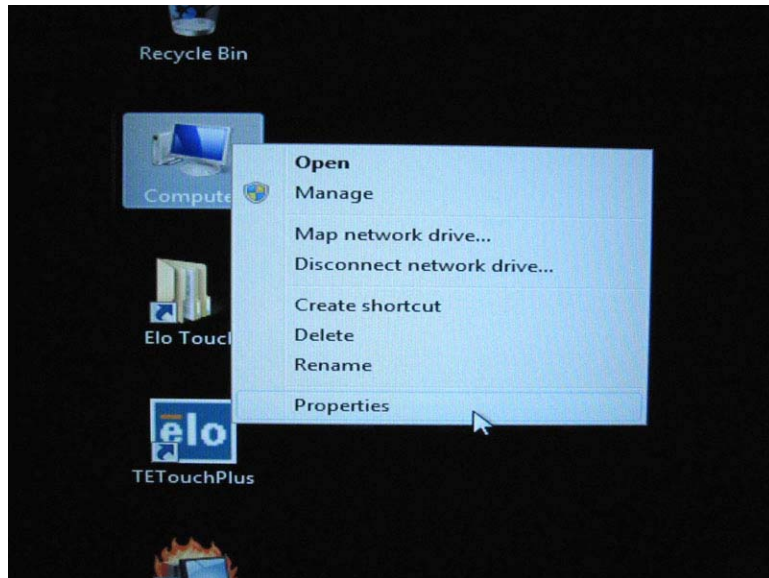
**NOTE:** *All data is deleted during the recovery process. The user must back up files when necessary. TE Touch Solutions does not accept liability for lost data or software.*

**NOTE:** *If using POSReady 2009 or Windows 7 and your hard disk is corrupted, you can request a Recovery DVD from TE Touch Solutions customer service.*

**NOTE:** *The end user must adhere to Microsoft's Licensing Agreement.*

**NOTE:** *After you recovered your touchcomputer by using the included image, the operating system might reassign your USB Serial Ports during the first bootup. You can follow the instructions below to reassign it manually.*

- Instructions to reassign the **USB Serial Port**
  1. For POSReady 2009, right click the “Computer” → Click “Properties” → “Hardware” → “Device Manager”.  
For Windows 7, right click the “Computer” → Click “Properties” → “Device Manager”.

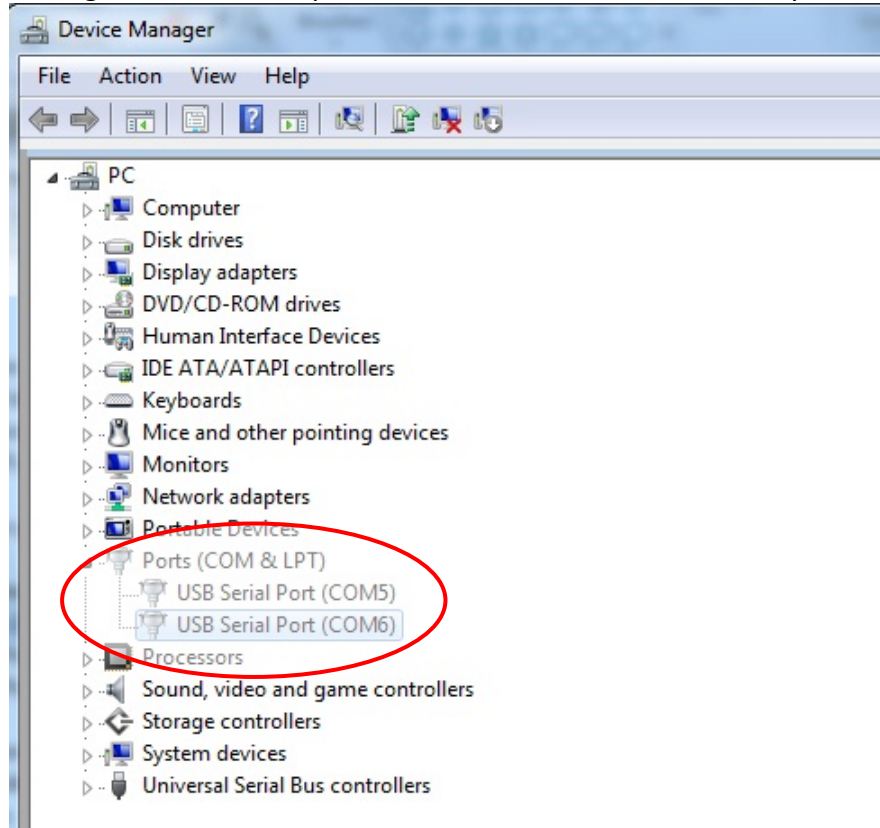


2. Double click the “Ports (COM & LPT)” and check all of these “USB Serial Port” settings must be **IDENTICAL** as the following table.

Description	Location
-------------	----------

USB Serial Port (COM3)	On USB Serial Converter A
USB Serial Port (COM4)	On USB Serial Converter B

3. If you see a situation as below, it shows the operating system has reassigned these serial ports. You need to correct it manually.

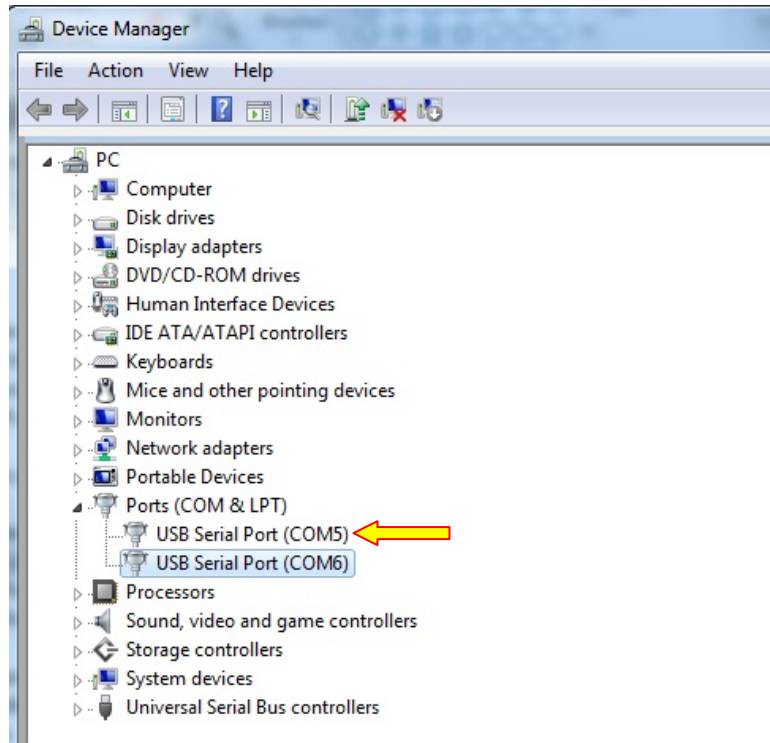


In usual, even if the operating system reassigns these serial ports, they are still in order. In this case, you should change it as the following table.

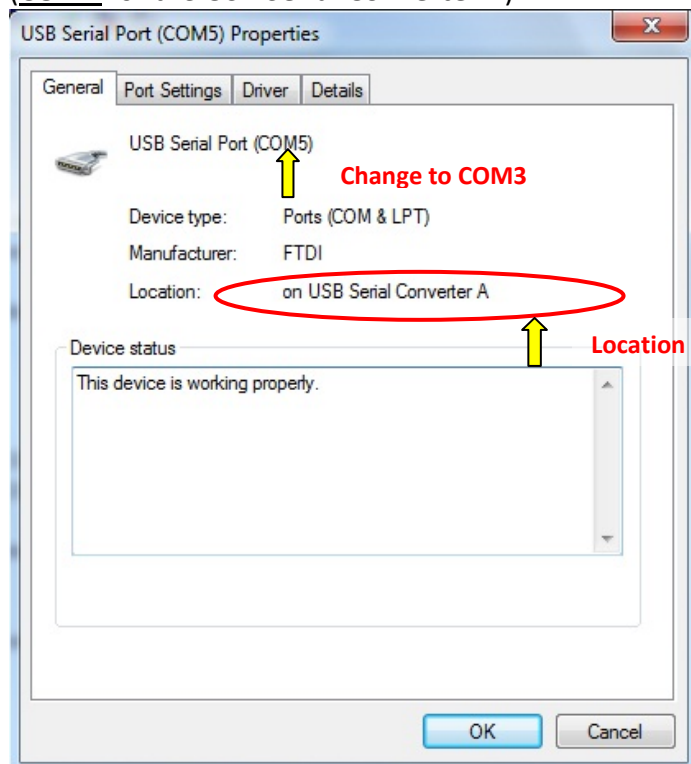
Original one	Change to
USB Serial Port (COM5)	USB Serial Port (COM3)
USB Serial Port (COM6)	USB Serial Port (COM4)

Thus, the settings for these USB Serial Ports should begin at **COM3** and end at **COM4** in order.

4. To correct it, please follow the instructions below:  
 Double click the port you need to change. In this case, it is **COM5**.

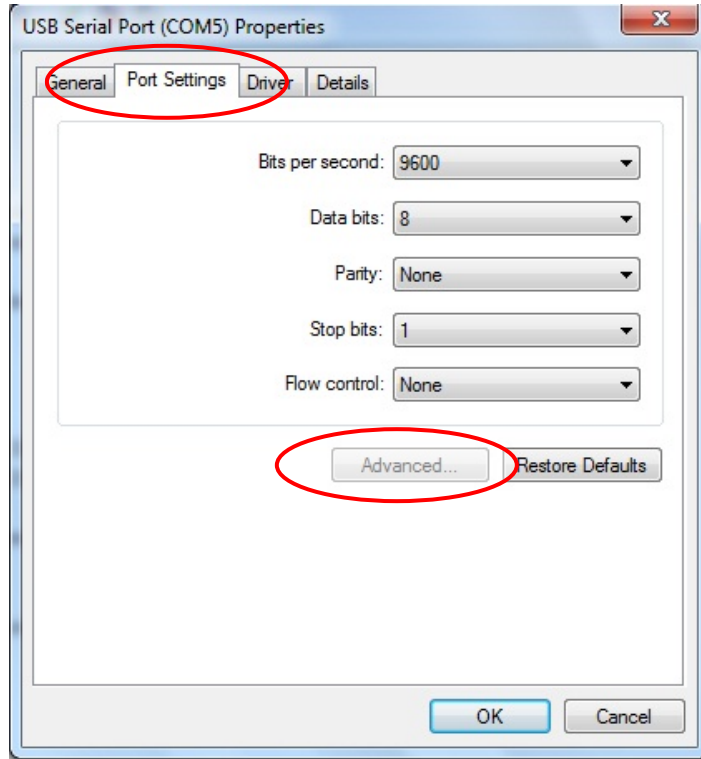


**COM5** is the 1<sup>st</sup> port of these USB serial ports so the “**Location:**” should be “**on USB Serial Converter A**”. Please assign this serial port to **COM3**. (**COM4** for the **USB Serial Converter B**).

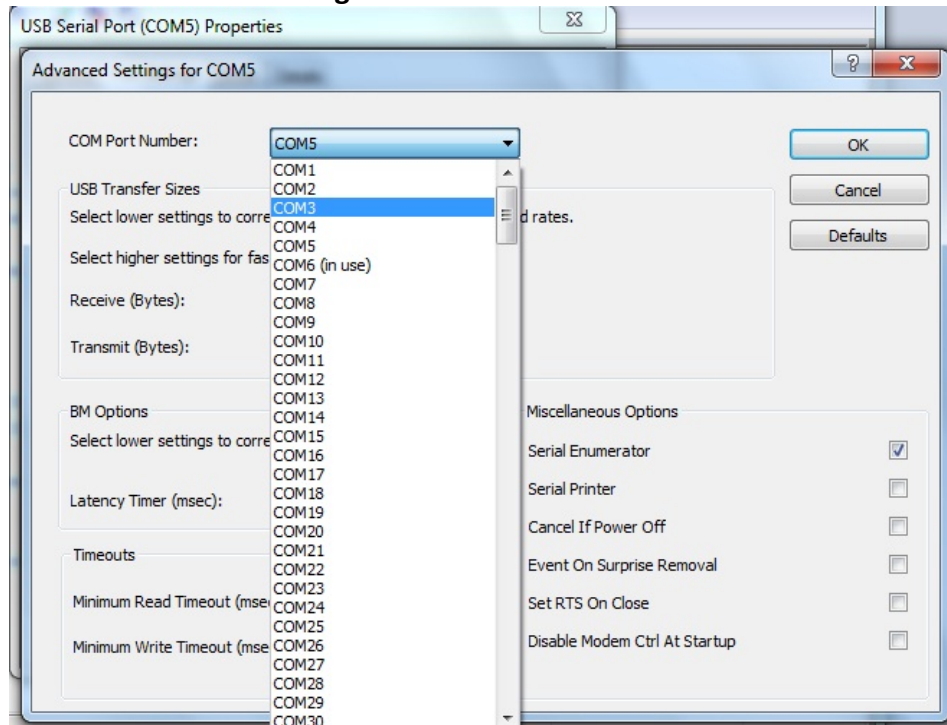


Select “**Port Settings**” → Click “**Advanced...**”



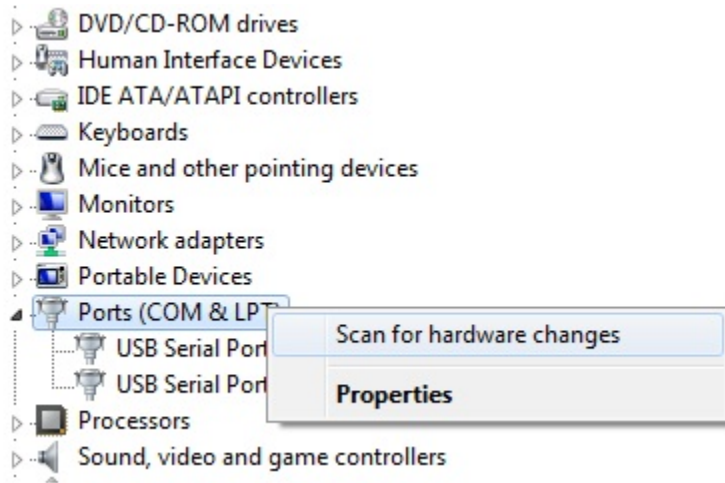


In this case, select **COM3** from the drop-down menu → click **OK** → **OK** back to the **Device Manager**.

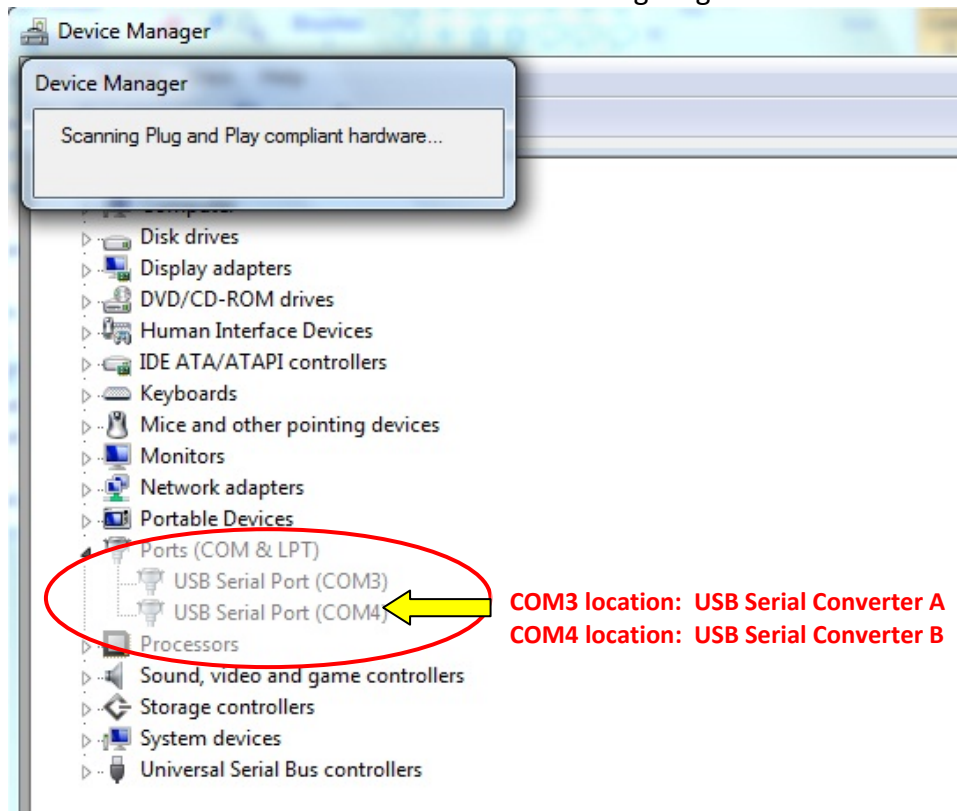


Follow the same steps to accomplish these settings for other ports.

After finished, right click on “Ports (COM & LPT)” and click **Scan for hardware changes**.



5. The outcome should be **identical** as the following diagram.



## TECHNICAL SPECIFICATIONS

## Touchcomputer Specifications

**NOTE:** *Not all operating systems or options are supported in all regions. Please contact your local Elo TouchSystems representative for details.*

Feature	C2 models	C3 models
<b>Case/Bezel color</b>	Dark Grey or White	
<b>Screen Size</b>	19" / 22"	19" / 22"
<b>Processor</b>	Intel 1.66GHz Atom Dual-Core D510	Intel 3.0GHz Core 2 Duo E8400
	1MB L2 Cache	6MB L2 Cache
	533MHz System Bus	1333MHz System Bus
<b>Chipset</b>	Intel NM10 Express	Intel G41 Express
<b>Video</b>	Intel GMA 3150	Intel GMA X4500
<b>BIOS</b>	AMI	AMI
<b>Memory (RAM) 800 MHz min</b>	2GB DDR2 DIMM on 1 of 2 slots (Expandable to 4GB maximum <sup>1</sup> on 2 slots)	2GB DDR2 DIMM on 1 of 1 slot (Replaceable with 4GB maximum <sup>2</sup> on 1 slot)
	<sup>1</sup> Maximum memory using 2 slots. Expandable up to 4GB maximum, DIMM DDR2-800 (PC2-6400, dual channel).	<sup>2</sup> Maximum memory using 1 available slot; replacement for single, pre-installed memory module. Replaceable up to 4GB maximum, DIMM DDR2-800 (PC2-6400, dual channel).
<b>Hard Disk Drive</b>	160GB 2.5" SATA HDD <sup>3</sup>	
	<sup>3</sup> GB equals one billion bytes when referring to storage capacity. Accessible capacity may be less.	

<b>USB Ports</b>	6 x USB 2.0 (4 on I/O, 2 x USB Front Access) Additional internal ports available for optional Elo peripherals.
<b>Serial Ports</b>	2 x USB-to-Serial RS-232 (standard)
<b>Parallel Port</b>	Optional parallel port card kit available
<b>PS/2 Ports</b>	N/A
<b>Ethernet Port</b>	1 x LAN RJ45 (Gigabit)
<b>Wireless</b>	Optional USB wireless kit available (802.11b/g/n)
<b>Cash Drawer Port</b>	Optional cash drawer kit available (12V/24V default; selectable via jumper)
<b>Additional Ports</b>	See "Expansions & Upgrades" tab
<b>Additional Video Out</b>	Optional 2nd VGA port expansion card Standard HDMI out Optional 2nd VGA port expansion card
<b>Audio Ports</b>	1 x 3.5mm line in 1 x 3.5mm line out
<b>Speakers</b>	1 x 3.5mm mic in Two 2W internal speakers
<b>Operating System Options</b>	No Operating System Microsoft Windows POSReady 2009 Microsoft Windows 7 Professional (32-bit only)
<b>Languages</b>	<b>Windows POSReady 2009</b> - 32 Language groups; <b>Windows 7</b> - 35 Language groups
<b>Display</b>	<b>19" models:</b> 18.5" diagonal, active matrix TFT LCD <b>22" models:</b> 21.5" diagonal, active matrix TFT LED LCD
<b>Aspect Ratio</b>	<b>19" models:</b> 16:9 (standard) <b>22" models:</b> 16:9 (standard)
<b>Useful Screen Area (H x V)</b>	<b>19" models:</b> 16.1" x 9.1" (409.8mm x 230.4mm) <b>22" models:</b> 18.8" x 10.6"(476.6mm x 268.1mm)
<b>Native (optimal) Resolution</b>	<b>19" models:</b> 1366 x 768 @ 60Hz <b>22" models:</b> 1920 x 1080 @ 60Hz
<b>Colors</b>	16.7 million <b>LCD panel:</b> 250 nits <b>AccuTouch:</b> 200 nits <b>IntelliTouch Plus:</b> 225 nits <b>iTouch:</b> 225 nits
<b>Brightness (typical)</b>	
<b>Response Time (typical)</b>	<b>19" models:</b> Total: 5 msec <b>22" models:</b> Total: 5 msec
<b>Viewing Angle (typical)</b>	<b>19" models:</b> Horizontal: ± 85° or 170° total Vertical: ±80° or 160° total <b>22" models:</b> Horizontal: ± 85° or 170° total

	Vertical: ±80° or 160° total	
<b>Contrast Ratio (typical)</b>	<b>19" models:</b> 1000:1 <b>22" models:</b> 1000:1	
<b>On-Screen Display (OSD)</b>	<b>Controls (bottom):</b> menu, up, down, select, power <b>Settings:</b> brightness, contrast, phase, auto adjust, H-position, V-position, clock, sharpness, RGB, OSD H-position, OSD V-position, OSD time, OSD language, recall, power button <b>Languages:</b> English, French, Italian, German, Spanish, Japanese, Traditional Chinese, Simplified Chinese <b>Lockouts:</b> user controls	
<b>Available Touch Technologies</b>	AccuTouch (Zero-bezel Resistive) IntelliTouch Plus (Multi-touch Surface Acoustic Wave) iTouch (Zero-bezel Surface Acoustic Wave)	
<b>Power Supply</b>	External 12VDC universal-type power supply brick AC input voltage: 100-240VAC Input frequency: 50-60Hz Maximum output power: 240W (Max draw: 270W)	
<b>Maximum Touchcomputer Dimensions (W x H x D)</b>	<b>19" models:</b> 18.7" x 14.2" x 12.4" (475mm x 360mm x 316mm) <b>22" models:</b> 21.2" x 14.3" x 12.7" (540mm x 364mm x 323mm)	
<b>Maximum Touchcomputer Dimensions With Stand (Display at 0° tilt, W x H x D)</b>	<b>19" models:</b> 18.7" x 14.9" x 8.9" (475mm x 380mm x 226mm) <b>22" models:</b> 21.2" x 15.3" x 8.9" (540mm x 389mm x 226mm)	
<b>Maximum Touchcomputer Dimensions Without Stand (W x H x D)</b>	<b>19" models:</b> 18.7" x 11.9" x 3.8" (475mm x 302mm x 98mm) <b>22" models:</b> 21.2" x 13.1" x 3.8" (540mm x 333mm x 98mm)	
<b>Shipping Box Dimensions (W x H x D)</b>	<b>19" models:</b> 23.2" x 19.5" x 14.2" (590mm x 495mm x 360mm) <b>22" models:</b> 26" x 14.2" x 20.3" (660mm x 360mm x 516mm)	
<b>Weight (with stand)</b>	<b>19" models:</b> 19.5lbs (8.8kg) <b>19" models:</b> 20.2lbs (9.2kg) <b>22" models:</b> 21.8lbs (9.9kg) <b>22" models:</b> 21.8lbs (9.9kg)	
<b>Weight (without stand)</b>	<b>19" models:</b> 13.7lbs (6.2kg) <b>19" models:</b> 16.3lbs (7.4kg) <b>22" models:</b> 17.9lbs (8.1kg) <b>22" models:</b> 17.9lbs (8.1kg)	
<b>Shipping Weight</b>	<b>19" models:</b> 30.3lbs (13.8kg) <b>19" models:</b> 31.2lbs (14.2kg) <b>22" models:</b> 33.4lbs (15.2kg) <b>22" models:</b> 33.4lbs (15.2kg)	
<b>Temperature</b>	<b>Operating:</b> 0°C to 35°C (32°F to 95°F) <b>Storage:</b> -30°C to 60°C (-22°F to 140°F)	
<b>Humidity (non-condensing)</b>	<b>Operating:</b> 20% to 80% <b>Storage:</b> 5% to 95%	

<b>Form Factor</b>	Desktop
<b>Mounting Options</b>	100mm VESA mount or secure base to tabletop/desktop
<b>Enclosure Color</b>	Dark grey ( <i>*Medical/Japan versions are white</i> )
<b>Real-Time Clock</b>	Replaceable lithium-ion battery for clock
<b>Backlight Lamp Life</b>	Minimum 50,000 hours to half brightness
<b>MTBF</b>	50,000 hours demonstrated
<b>Sealing</b>	Touchscreen sealed to bezel (IntelliTouch Plus) Touchscreen sealed to sub-bezel (AccuTouch, iTouch) Touchscreen sealed to LCD (all) Serviceable internal components Removable base with 100mm VESA mounting
<b>Other Features</b>	Threaded holes on bottom of base for mounting
<b>Power Cables</b>	Kensington security lock North American and European power cables included  Wireless Adapter (USB, 802.11b/g/n)
<b>Expansion Options</b>	Cash Drawer Port (12V/24V) Elo expansion card Second VGA Port Elo expansion card RAID PCI-E Card <sup>1</sup> Modem PCI-E Card <sup>1</sup> Parallel Port PCI-E Card <sup>1</sup> <sup>1</sup> Elo PCI-E Expansion Card Notes: (a) May install up to two (2) Elo expansion cards OR one (1) Elo expansion card plus one (1) PCI-E expansion card. (b) Use of PCI-E option cards requires purchasing of PCI-E Expansion Card Option Kit E827958. Second 160GB Hard Disk Drive (HDD)  64GB Solid State Drive (SSD)
<b>Upgrade Options</b>	2GB DDR2 Memory DIMM Kit  4GB DDR2 Memory DIMM Kit
<b>Accessories</b>	<b>Power Cables:</b> North American and European power cables included. <b>Replacement DC Power Brick:</b> 12V DC power brick, part number E409391, is available at additional cost. <b>IntelliTouch/iTouch Stylus Pen:</b> Stylus pen with rubber tip, designed specifically for use with IntelliTouch or iTouch surface wave touch technology. Part number D82064-000, available at additional cost.

	Magnetic Stripe Reader (MSR)
<b>Optional Peripherals</b>	Customer Display (2x20 VFD) Biometric Fingerprint Reader (FPR) Webcam Kit (2.0 MP)
<b>Warranty</b>	3 years
<b>Optional Product Coverage</b>	Advance Unit Replacement program (North America only) Extended Warranty (North America and EMEA only)
<b>MTBF</b>	MTBF 50,000 hours demonstrated
	UL/cUL
	FCC
	TUV
	CE
<b>Agency Approvals</b>	NOM COC
	AR
	GOST-R
	C-Tick
	VCCI
	CB

## 6

## TECHNICAL SUPPORT

## Technical Assistance

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There are three methods to obtain contact information for technical assistance on the touchcomputer:

- The touchcomputer
- The web
- The phone

### Using the Touchcomputer

You can access support information in System Properties by clicking the **Support Information** button. You can get to System Properties by either of the following methods:

Right-click **My Computer** and choose **Properties**.

OR

Click the **Start** button, select **Control Panel**, and double-click the **System** icon.

### Using the Web

For online self-help, go to [www.elotouch.com/go/websupport](http://www.elotouch.com/go/websupport).

For technical support, go to [www.elotouch.com/go/contactsupport](http://www.elotouch.com/go/contactsupport).

For current Elo news, product updates, and announcements, or to register to receive our Touchcomputer newsletter, go to [www.elotouch.com/go/news](http://www.elotouch.com/go/news).

### Using the Phone

Call toll-free 1-800-ELO-TOUCH (1-800-356-8682).



## REGULATORY INFORMATION

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### I. Electrical Safety Information

A) Compliance is required with respect to the voltage, frequency, and current requirements indicated on the manufacturer's label. Connection to a different power source than those specified herein may result in improper operation, damage to the equipment, invalidation of warranty, or a fire hazard if the requirements are not followed.

B) There are no operator-serviceable parts inside this equipment. There are hazardous voltages generated by this equipment which constitute a safety hazard. Service should be provided only by a qualified service technician.

C) This equipment is provided with a detachable power cord which has an integral safety ground wire intended for connection to a grounded safety outlet.

1) Do not substitute the cord with other than the provided approved type. Under no circumstances use an adapter plug to connect to a 2-wire outlet as this defeats the continuity of the grounding wire.

2) The equipment requires the use of the ground wire as a part of the safety certification. Modification or misuse can provide a shock hazard that can result in serious injury or death.

3) Contact a qualified electrician or the manufacturer if there are questions about the installation prior to connecting the equipment to main power.

### II. Emissions and Immunity Information

A) Notice to Users in the United States: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential or commercial installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

B) Notice to Users in Canada: This equipment complies with the Class A limits for radio noise emissions from digital apparatus as established by the Radio Interference Regulations of Industry Canada.

C) Notice to Users in the European Union: Use only the provided power cords and interconnecting cabling provided with the equipment. Substitution of provided cords and cabling may compromise electrical safety or CE Mark Certification for emissions or immunity as required by the following standards: This Information Technology Equipment (ITE) is required to have a CE Mark on the manufacturer's label which means that the equipment has been tested to the following Directives and Standards:

This equipment has been tested to the requirements for the CE Mark as required by EMC Directive 2004/108/EC indicated in European Standard EN 55022 Class A and the Low Voltage Directive 2006/95/EC as indicated in European Standard EN 60950-1.

D) General Information to all Users: This equipment generates, uses, and can radiate radio frequency energy. If not installed and used according to this manual, the equipment may cause interference with radio and television communications. There is, however, no guarantee that interference will not occur in any particular installation due to site-specific factors.

1) In order to meet emission and immunity requirements, the user must observe the following:

- a) Use only the provided I/O cables to connect this digital device with any computer.
- b) To ensure compliance, use only the provided manufacturer's approved power cord.
- c) The user is cautioned that changes or modifications to the equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

2) If this equipment appears to cause interference with radio or television reception, or any other device:

- a) Verify as an emission source by turning the equipment off and on.
- b) If you determine that this equipment is causing the interference, try to correct the interference by using one or more of the following measures:
  - i) Move the digital device away from the affected receiver.
  - ii) Reposition (turn) the digital device with respect to the affected receiver.
  - iii) Reorient the affected receiver's antenna.

iv) Plug the digital device into a different AC outlet so the digital device and the receiver are on different branch circuits.

v) Disconnect and remove any I/O cables that the digital device does not use. (Unterminated I/O cables are a potential source of high RF emission levels.)

vi) Plug the digital device into only a grounded outlet receptacle. Do not use AC adapter plugs. (Removing or cutting the line cord ground may increase RF emission levels and may also present a lethal shock hazard to the user.)

vii) If you need additional help, consult your dealer, manufacturer, or an experienced radio or television technician.

### III. Agency Certifications

The following certifications have been issued for the monitor:

- Argentina S-Mark
- Australia C-Tick
- CE
- China CCC
- China RoHS
- FCC
- IMERC
- Japan VCCI
- Mexico NOM
- TUV
- Russia PCT
- WEEE
- UL
- cUL

## WARRANTY

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Except as otherwise stated herein or in an order acknowledgment delivered to Buyer, Seller warrants to Buyer that the Product shall be free of defects in materials and workmanship. With the exception of the negotiated warranty periods; the warranty for the touchcomputer and components of the product is 3 years.

Seller makes no warranty regarding the model life of components. Seller's suppliers may at any time and from time to time make changes in the components delivered as Products or components. Buyer shall notify Seller in writing promptly (and in no case later than thirty (30) days after discovery) of the failure of any Product to conform to the warranty set forth above; shall describe in commercially reasonable detail in such notice the symptoms associated with such failure; and shall provide to Seller the opportunity to inspect such Products as installed, if possible. The notice must be received by Seller during the Warranty Period for such product, unless otherwise directed in writing by the Seller. Within thirty (30) days after submitting such notice, Buyer shall package the allegedly defective Product in its original shipping carton(s) or a functional equivalent and shall ship to Seller at Buyer's expense and risk.

Within a reasonable time after receipt of the allegedly defective Product and verification by Seller that the Product fails to meet the warranty set forth above, Seller shall correct such failure by, at Seller's options, either (i) modifying or repairing the Product or (ii) replacing the Product. Such modification, repair, or replacement and the return shipment of the Product with minimum insurance to Buyer shall be at Seller's expense. Buyer shall bear the risk of loss or damage in transit, and may insure the Product. Buyer shall reimburse Seller for transportation cost incurred for Product returned but not found by Seller to be defective. Modification or repair, of Products may, at Seller's option, take place either at Seller's facilities or at Buyer's premises. If Seller is unable to modify, repair, or replace a Product to conform to the warranty set forth above, then Seller shall, at Seller's option, either refund to Buyer or credit to Buyer's account the purchase price of the Product less depreciation calculated on a straight-line basis over Seller's stated Warranty Period.

THESE REMEDIES SHALL BE THE BUYER'S EXCLUSIVE REMEDIES FOR BREACH OF WARRANTY. EXCEPT FOR THE EXPRESS WARRANTY SET FORTH ABOVE, SELLER GRANTS NO OTHER WARRANTIES, EXPRESS OR IMPLIED BY STATUTE OR OTHERWISE, REGARDING THE PRODUCTS, THEIR FITNESS FOR ANY PURPOSE, THEIR QUALITY, THEIR MERCHANTABILITY, THEIR NONINFRINGEMENT, OR OTHERWISE. NO EMPLOYEE OF SELLER OR ANY OTHER PARTY IS AUTHORIZED TO MAKE ANY WARRANTY FOR THE GOODS OTHER THAN THE WARRANTY SET FORTH HEREIN. SELLER'S LIABILITY UNDER THE WARRANTY SHALL BE LIMITED TO A REFUND OF THE PURCHASE PRICE OF THE PRODUCT. IN NO EVENT SHALL SELLER BE LIABLE FOR THE COST OF PROCUREMENT OR INSTALLATION OF SUBSTITUTE GOODS BY BUYER OR FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, OR INCIDENTAL DAMAGES.

Buyer assumes the risk and agrees to indemnify Seller against and hold Seller harmless from all liability relating to (i) assessing the suitability for Buyer's intended use of the Products and of any system design or drawing and (ii) determining the compliance of Buyer's use of the Products with applicable laws, regulations, codes, and standards. Buyer retains and accepts full responsibility for all warranty and other claims relating to or arising from Buyer's products, which include or incorporate Products or components manufactured or supplied by Seller. Buyer is solely responsible for any and all representations and warranties regarding the Products made or authorized by Buyer. Buyer will indemnify Seller and hold Seller harmless from any liability, claims, loss, cost, or expenses (including reasonable attorney's fees) attributable to Buyer's products or representations or warranties concerning same.

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***www.elotouch.com***

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- ***Product information***
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- ***News on upcoming events***
- ***Press release***
- ***Software drivers***
- ***Touch Monitor Newsletter***

## Getting in Touch with Elo

To find out more about Elo's extensive range of touch solutions, visit our Website at [www.elotouch.com](http://www.elotouch.com) or simply call the office nearest you:

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