



C-Series Touchcomputer for Healthcare Applications User Guide

C-Series LCD Multi-function Touchcomputer

[19" model shown]



TE Touch Solutions

C-Series Touchcomputer for Healthcare

Applications User Guide

Multi-function Touchcomputer

Revision A

SW601689

1-800-ELOTOUCH (1-800-356-8682)
www.elotouch.com

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Warnings and Cautions



Warning

- Danger - Explosion hazard. Do not use in the presence of flammable anesthetics, and other flammable materials.
- To prevent fire or shock hazards, do not immerse the unit in water or expose it to rain or moisture.
- Do not use the unit with an extension cord receptacle or other outlets unless the prongs of the power cord can be fully inserted.
- RISK OF ELECTRICAL SHOCK - DO NOT OPEN. To reduce the risk of electrical shock, DO NOT remove the back of the equipment or open the enclosure. No user-serviceable parts are inside. Refer servicing to qualified field service engineers only.
- Uninsulated voltage within the unit may have sufficient magnitude to cause electrical shock.
Avoid contact with any part inside the unit.
- This device complies with the electromagnetic emission and immunity standards and is limited to the standards that are listed on pages 41 and 45. Other devices which are not designed to withstand emission levels as specified in the medical device standards may be susceptible to interference from this device. Subjecting the device to conditions beyond the rated performance capabilities may result in emissions in excess of the standard. If it is determined that this device produces electromagnetic or other interference it must be disconnected from power until the cause of the problem has been determined and resolved. If it is determined that this device is functioning improperly due to electromagnetic and other interference it must be disconnected from power until the cause of the problem has been determined and resolved.
- TE Touch Solutions recommends that after its useful life (or after sustaining unreparable damage), customers dispose of the touchcomputer and its power supply in an environmentally sound manner. Acceptable methods include the reuse of parts or whole products and the recycling of products, components, and materials. Please consult and obey national state, and local laws and ordinances governing the safe disposal of electronic equipment.

Note that the fluorescent lamps inside this product contain mercury and must be recycled or disposed of according to local, state, or national laws. For more information, contact the Electronic Industries Alliance at www.eiae.org.




This product consists of devices that may 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 touchcomputer display contain mercury.)



Caution

- Power cord is used as a disconnection device. To de-energize equipment, disconnect the power cord.
- This unit must follow the national requirement and local state laws to dispose unit.
- Before connecting the cables to your Elo touchcomputer, make sure all components are powered OFF.
- Only approved components complying with IEC60601-1 series can be connected to 19CX/22CX Touchcomputer for Healthcare Applications in Patient Environment. The use of ACCESSORY equipment not complying with the equivalent safety requirements of this equipment may lead to a reduced safety of the resulting system. Consideration relating to the choices of accessory equipment should include: Use of accessory in the patient environment.· Evidence that the safety certification of the accessory has been performed in accordance to the appropriate IEC 60601-1 and/or IEC 60601-1-1 harmonized national standard.
- For continued safety
 - This unit only complies to the above standards if used with a medical grade power cord.
 - A medical grade power supply, such as the one specified, is required for use in a medical application.
- Please do not touch the patient and the touchcomputer output connector at the same time.

Note:

-  • This symbol alerts the user to important information concerning the operation and maintenance of this unit, which should be read carefully to avoid problems.
-  • This symbol means DC Current.
-  • This symbol means ON/OFF stand-by switch.

Medical and Healthcare Application Disclaimer:

It is the sole responsibility of any person intending to commercialize, market or use any of TE Connectivity Ltd. or its family of companies ("TE") products for medical or healthcare applications to ensure that such product is adequate and appropriate for the person's intended use and complies with all applicable laws, regulations, codes and standards including but not limited to the European Union Medical Device Directive, United States Federal Food, Drug, and Cosmetic Act, regulations of the United States Food and Drug Administration (FDA), and for obtaining and maintaining any required regulatory approvals including but not limited to any required market clearances. TE has not sought nor received any rulings from the FDA or any other federal, state, or local government agency or notified body as to the safety, effectiveness or appropriateness of its product for such applications. Persons intending to evaluate or use TE's product for medical or healthcare purposes must rely on their own medical and legal judgment without any representation on the part of TE.



Classification



UL 60601-1
CAN/CSA C22.2 No.601.1

E342290
3ZT7

With respect to electrical shock, fire in accordance with UL60601-1 and CAN/CSA C22.2 No.

601.1

This touchcomputer is a Class I (GROUNDED) DEVICE.

These touchcomputers are classified NO APPLIED

PARTS EQUIPMENT. Protection against harmful

ingress of water:

INGRESS PROTECTION (IPX1)

This touchcomputer shall be classified as ORDINARY EQUIPMENT, not intended or evaluated for use in the presence of flammable anesthetic mixture with air, oxygen, or nitrous oxide.

Mode of Operation: CONTINUOUS OPERATION.

Environmental conditions for transport and storage

Temp.	Operating	0°C to 35°C
	Storage / Transportation	-30°C to 60°C
Humidity (non-condensing)	Operating	20% to 80%
	Storage / Transportation	5% to 95%
Altitude	Operating	0 to 3,000m
	Storage / Transportation	0 to 12,192m

19CX/22CX Touchcomputer for Healthcare Applications is intended for general use in hospital environment for data collection and display for reference. It shall not be used with life-supporting system

For full Product Specifications refer to Appendix C

European Standards and Classifications

Standards: EN 60601-1-2: 2007

The EMC limits and test methods are referred to the following standards: Emission:

	Immunity
CISPR 11:2003+A1:2004	IEC 61000-4-2:2008 ED.2.0
+A2: 2006 (Group I, Class A)	IEC 61000-4-3:2006+A1:2007 ED.3.0
CISPR 22: 2005+A1: 2005, Class A	IEC 61000-4-4: 2004+A1:2010 ED.2.0
AS/NZS CISPR 22: 2006, Class A	IEC 61000-4-5: 2005 ED.2.0
IEC 61000-3-2: 2005	IEC 61000-4-6: 2008 ED.3.0
+A1: 2008+A2: 2009, Class D	IEC 61000-4-8: 2009 ED.2.0
IEC 61000-3-3: 2008	IEC 61000-4-11: 2004 ED.2.0


Guidance and manufacturer's declaration-electromagnetic immunity for all EQUIPMENT AND SYSTEMS

Guidance and manufacturer's declaration-electromagnetic emissions		
<p>The 19CX/22CX Touchcomputer for Healthcare Applications is intended for use in the electromagnetic environment specified below. The customer or the user of the 19CX/22CX Touchcomputer for Healthcare Applications should assure that it is used in such an environment.</p>		
Emissions test	Compliance	Electromagnetic environment-guidelines
RF emissions CISPR 11	Group 1	The 19CX/22CX Touchcomputer for Healthcare Applications uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A	The 19CX/22CX Touchcomputer for Healthcare Applications is suitable for use in all establishments other than domestic and those directly connected to a low voltage power supply network which supplies buildings used for domestic purposes.
Harmonics emissions IEC 61000-3-2	Class D	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Guidance and manufacturer's declaration-electromagnetic immunity for all EQUIPMENT AND SYSTEMS

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Immunity Test Level	IEC 60601	Compliance Level	Electromagnetic Environment-Guidelines
Electrostatic Discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical Fast Transient/Burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output	± 2 kV for power supply lines ± 1 kV for input/output	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	Mains power quality should be that of a typical commercial or hospital
Voltage Dips, Short Interruption and Voltage Variations on Power Supply Input Lines IEC 61000-4-11	<5% <i>UT</i> (>95% dip in <i>UT</i>) for 0.5 cycle 40% <i>UT</i> (60% dip in <i>UT</i>) for 5 cycles 70% <i>UT</i> (30% dip in <i>UT</i>) for 25 cycles <5% <i>UT</i> (>95% dip in <i>UT</i>)	<5% <i>UT</i> (>95% dip in <i>UT</i>) for 0.5 cycle 40% <i>UT</i> (60 % dip in <i>UT</i>) for 5 cycles 70% <i>UT</i> (30% dip in <i>UT</i>) for 25 cycles <5% <i>UT</i> (>95% dip in <i>UT</i>)	Mains power quality should be that of a typical commercial or hospital environment. If the user of the 19CX/22CX Touchcomputer for Healthcare Applications requires continued operation during power mains interruptions, It is recommended that the 19CX/22CX Touchcomputer for Healthcare Applications be powered from an uninterruptible power supply or a battery.
Power Frequency (50/60 Hz) Magnetic Field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE <i>UT</i> is the A.C. mains voltage prior to application of the test level.			

Guidance and manufacturer's declaration-electromagnetic immunity for all EQUIPMENT AND SYSTEMS that are not LIFE-SUPPORTING

Guidance and manufacturer's declaration-electromagnetic immunity			
The 19CX/22CX Touchcomputer for Healthcare Applications is intended for use in the electromagnetic environment specified below. The user of the 19CX/22CX Touchcomputer for Healthcare Applications should assure that it is used in such an			
Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment-Guidelines
Conducted RF Radiated RF IEC 61000-4-3	3 Vrms 3 V/m 80 MHz to 2.5 GHz	3 Vrms 3 Vrms	<p>Portable and mobile RF communications equipment should be used no closer to any part of the 19CX/22CX Touchcomputer for Healthcare Applications and should assure that it is used in such an environment, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance</p> $d=1.2\sqrt{P}$ <p>$d=1.2\sqrt{P}$ 80MHz to 800 MHz</p> $d=2.3\sqrt{P}$ 800 MHz to 2.5GHz <p>where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres(m)</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey¹, should be less than the compliance level in each frequency range². Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
<p>NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.</p> <p>NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p>			

3. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the 19CX/22CX Touchcomputer for Healthcare Applications is used exceeds the applicable RF compliance level above, the 19CX/22CX Touchcomputer for Healthcare Applications should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the 19CX/22CX Touchcomputer for Healthcare Applications.

Recommended separation distances between portable and mobile RF communications equipment and the 19CX/22CX Touchcomputer for Healthcare Applications for all EQUIPMENT AND SYSTEMS that are not LIFE-SUPPORTING

The 19CX/22CX Touchcomputer for Healthcare Applications is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the 19CX/22CX Touchcomputer for Healthcare Applications can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications (equipment) and the 19CX/22CX Touchcomputer for Healthcare Applications as recommended below according to the maximum output power of the communications equipment.

Rated Maximum Output Power of Transmitter (W)	Separation Distance According to Frequency of Transmitter		
	150 kHz to 80 MHz $d=1.2\sqrt{P}$	80MHz to 800 MHz $d=1.2\sqrt{P}$	800 MHz to 2.5 GHz $d=2.3\sqrt{P}$
0.0	0.1	0.1	0.23
1	2	2	
0.	0.3	0.3	0.74
1	7	7	
1	1.	1.	2.3
	2	2	
1	3.	3.	7.4
10	1	1	23
0	2	2	

For transmitters rated at a maximum output power not listed above, the recommended separation distanced in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

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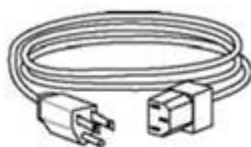
This chapter discusses how to set up and test your touchcomputer. For information on peripheral options, refer to Chapter 3, “Options and Upgrades.”

Unpacking Your Touchcomputer

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

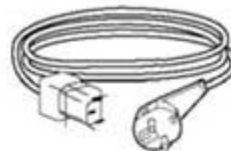


Touchcomputer



Power cable US/Canada

← AND →



Power cable Europe



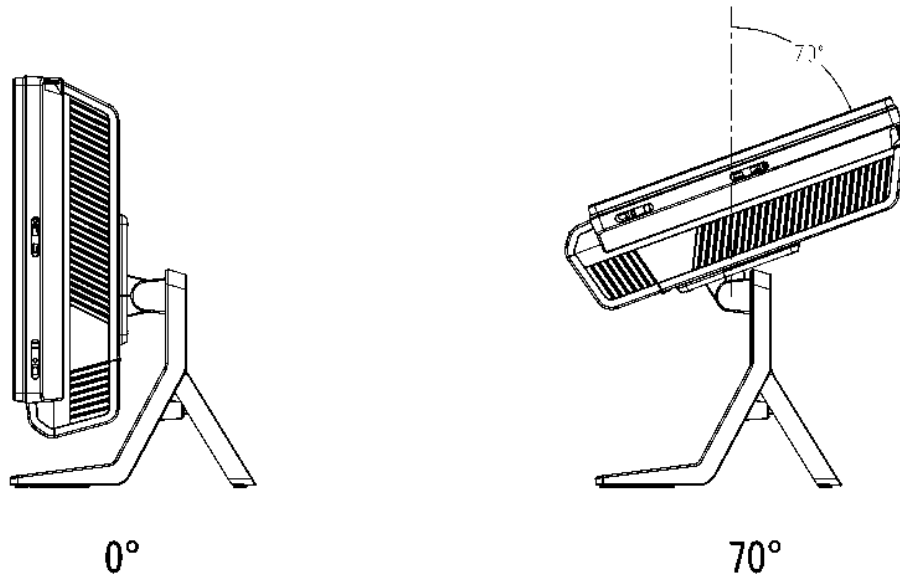
12VDC Medical Grade Power
Supply Brick



Quick Install Guide

Adjusting the Display

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

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.

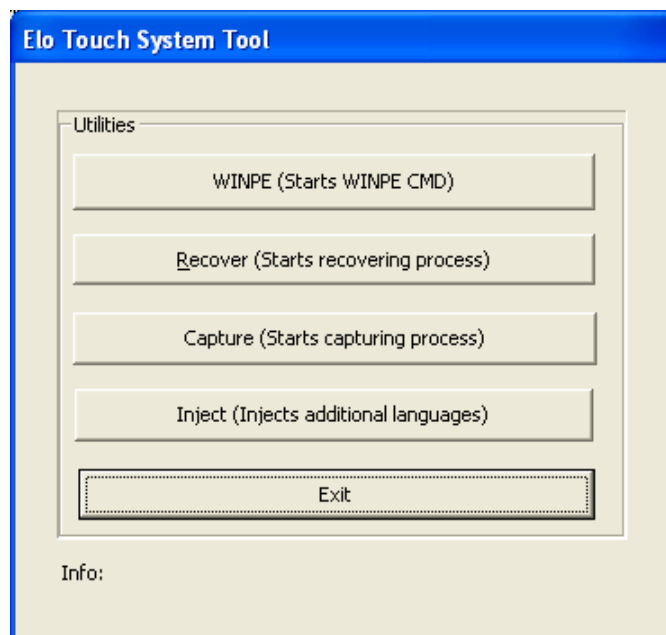
To set up the Microsoft Windows Operating System for the touchcomputer, turn on the touchcomputer by pressing the power button, and then follow the instructions on the screen.



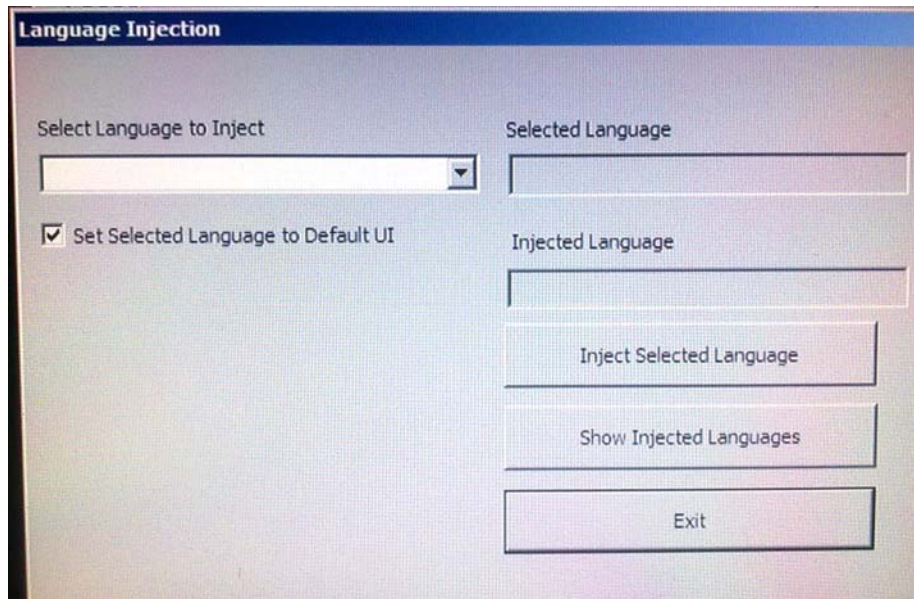
Injecting the Languages (For Windows 7 OS OS Only)

Windows 7 OS OS 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.

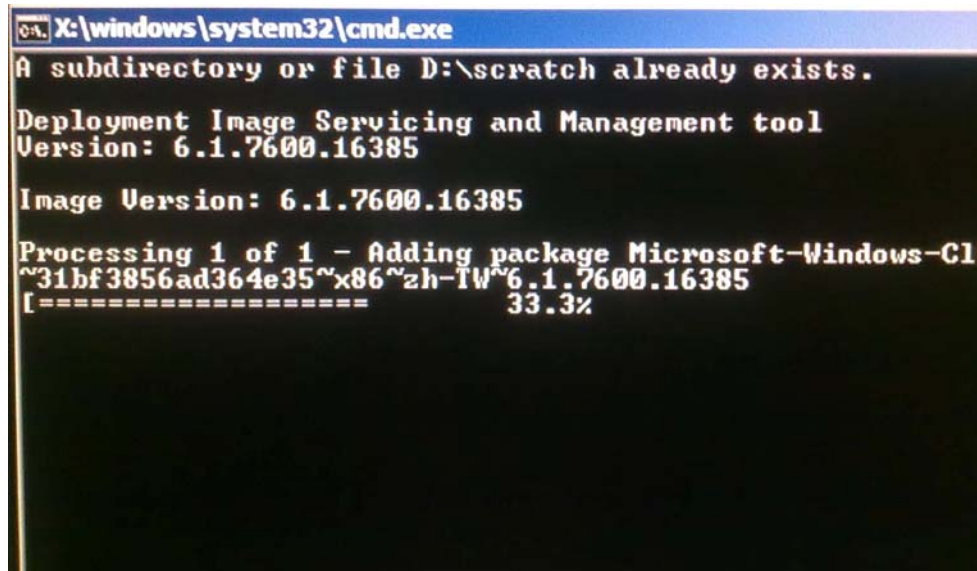
1. After the TE logo shows up, press **F8** (frequently) to enter Advanced Boot Options.
2. Select **Repair your computer**.
3. Click **Next** → **OK** (Shall not have password) → Click **Elo Touch System Tool**.
4. The following UI shall be presented.



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.



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 OS OS 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 OS OS 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 OS OS Only)

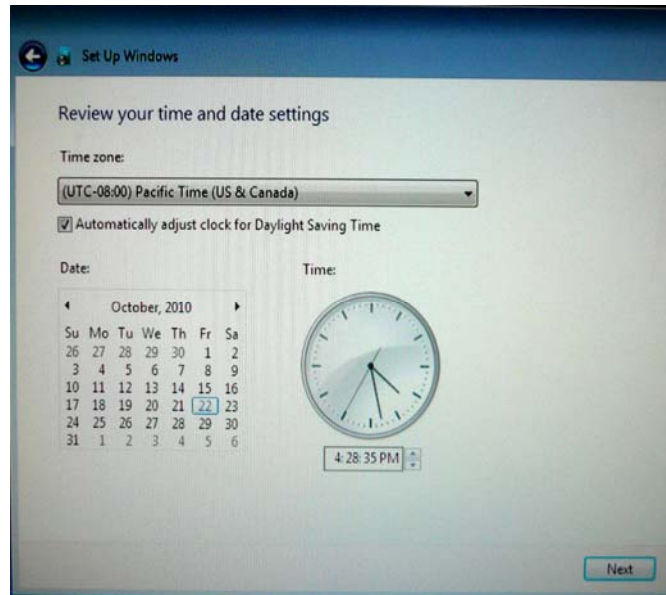
When the following window appears, you can select one of the update options of the touchcomputer. In general, you can choose **Use recommended settings** as your default option.



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

Reviewing the Time and Date Settings (For Windows 7 OS 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

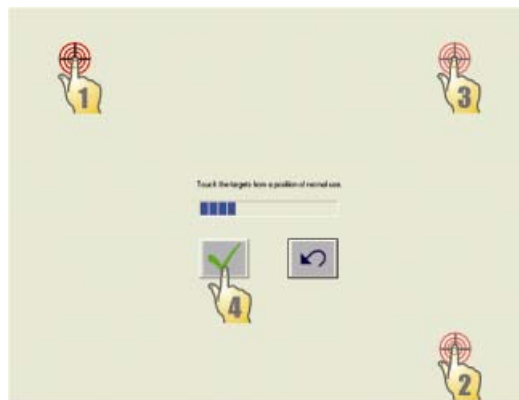
The touchscreen is pre-calibrated for accurate touch response.

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.

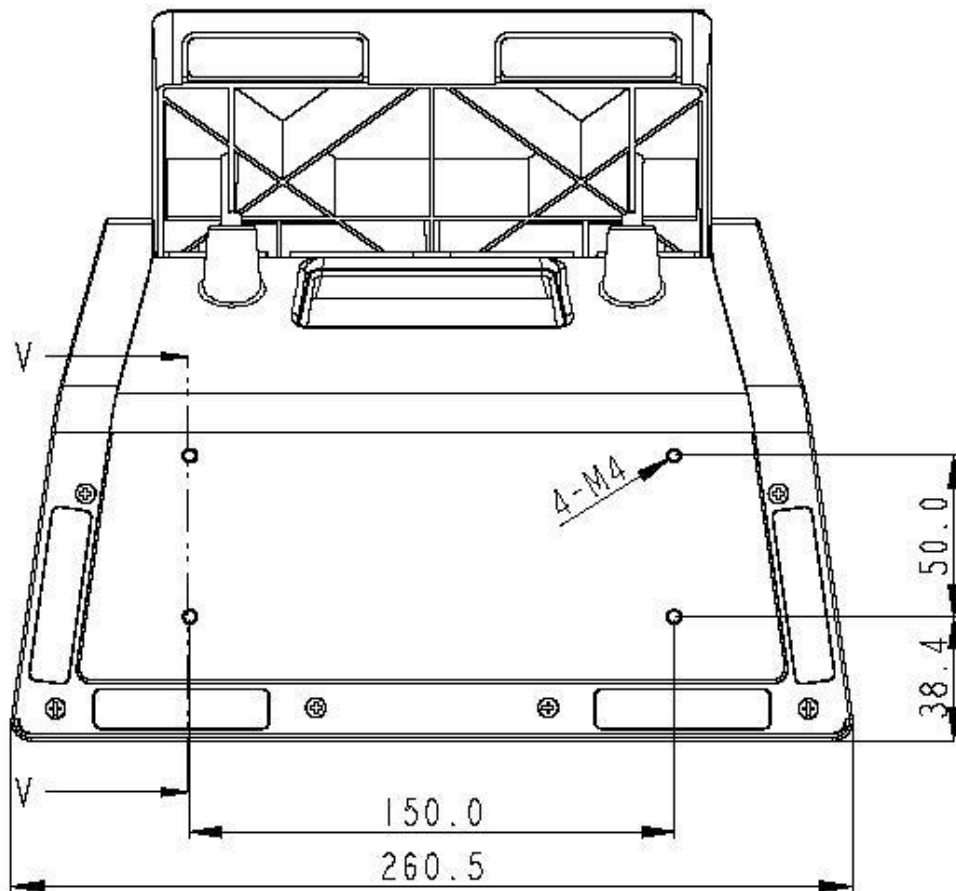


Securing the Base

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

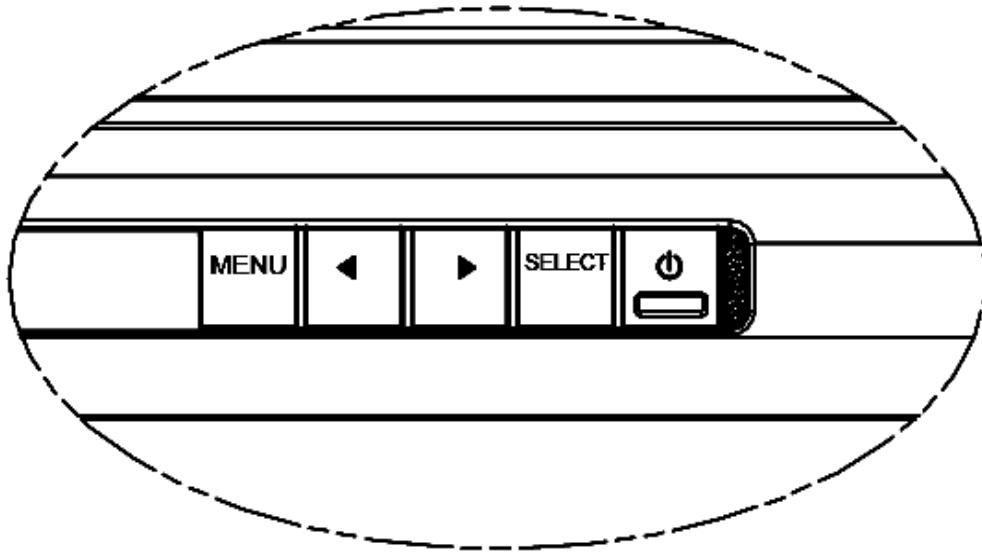
OPERATION

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)



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.

Feature	Description
Brightness	Adjust brightness and contrast. <ul style="list-style-type: none"> Brightness: Adjusts the backlight of the monitor. Contrast: Adjusts the maximum luminance level of the monitor.
Image setting	Adjusts H position, V position, clock, and phase. <ul style="list-style-type: none"> H position: Moves the screen horizontally right and left (1 pixel pitch increment). V position: Moves the screen vertically up and down (1 line increment). Clock: Adjusts the ratio of dividing frequency of the dot clock. Phase: Adjusts the phase of the dot clock.
Color	Sets color temperature (9300K, 7500K, 6500K, 5500K, or User Preset).
OSD	Adjusts H position, V position, and OSD timeout. <ul style="list-style-type: none"> H position: Adjusts the OSD menu screen position left or right. V position: Adjusts the OSD menu screen position up or down. Timeout: Adjusts the amount of time that the OSD menu is displayed.
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.

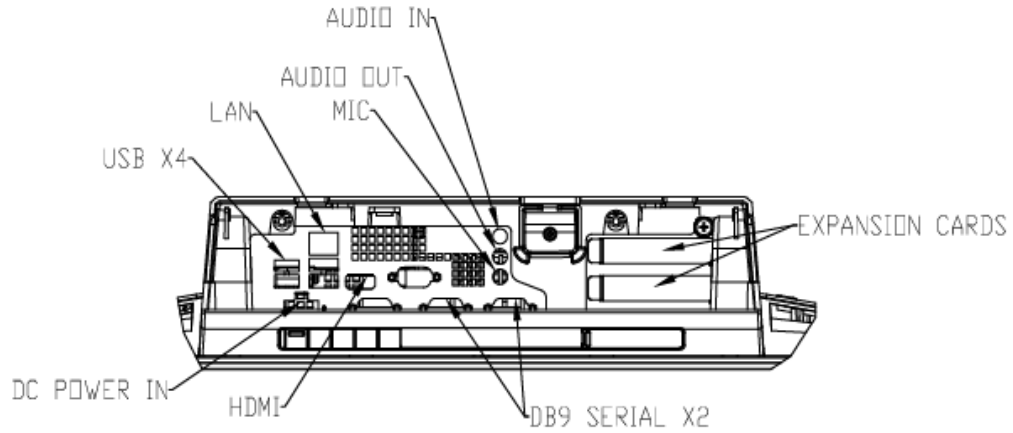
L.E.D. Functionality

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

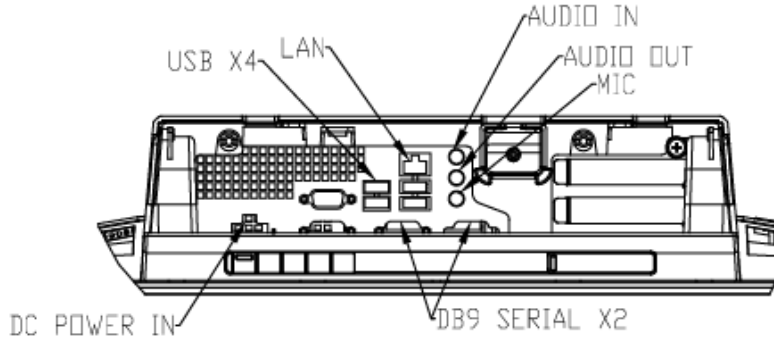
LED Color to Observer	State
Off	No input power — Off mode
Amber	Input power present – Off mode or hibernation
Amber/Green	Input power present — Standby
Green	Input power present — Power On

Using the Input/Output Panel

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:



C3 models



C2 models

Note: The DB9 Serial (COM) ports are defaulted (from left to right) COM3 and COM4

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

Note: Peripheral Kits may not meet Electrostatic Discharge (ESD) IEC 61000-4-2 for medical purposes (please consult specifications for each peripheral kit). All peripheral kits DO meet standard ITE ESD requirements.

Note: Peripherals may be available only in dark grey. Peripherals may be excluded from healthcare system certifications.

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

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:

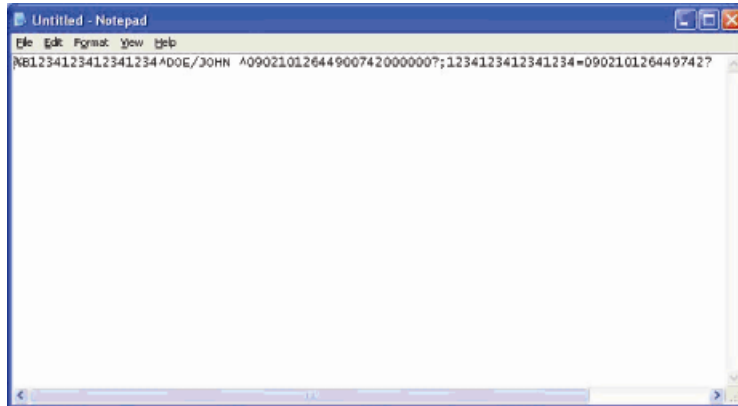
- Reads up to 3 tracks of information
- Bi-directional swipe reading
- Superior reading of high jitter, scratched, and worn MagStripe cards
- Reliable for over 1,000,000 card swipes
- Reads ISO7811, AAMVA, and most other card data formats
- PC software makes configuration changes easy
- Swipe speeds 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.



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



- 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

Feature	Description
Display type	Vacuum fluorescent display
Display color	Green
Display pattern	5 x 7 dot matrix
Brightness	350-600 cd/m ²
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

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 :

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

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 is more mechanically reliable 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 :

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 :

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:

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 OS, 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	2 Million Pixel Webcam Module
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
Supported Operating Systems	Windows XP, Windows 7 OS, Windows Vista, POSReady 2009
Part Number	E454277

Elo POS Demo Software

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



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 26 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 TE Touch Solutions Customer Service for instructions.
- Guidance and manufacturer’s declaration-electromagnetic immunity for all EQUIPMENT AND SYSTEMS reports are available upon request.



Care and Handling

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

Power down the unit and disconnect from the electrical mains prior to engaging in any cleaning activities.

Take care to ensure no leakage of solution into the system. **IF ANY FLUID INGRESS INTO THE UNIT DURING CLEANING IS SUSPECTED, DO NOT POWER ON THE UNIT.** Call the manufacturer at the contact numbers listed below to have your unit inspected by a qualified technician prior to powering on.

Careful application of dilute aqueous cleaning solutions (non-ammonia based) according to directions is recommended. Do not spray cleaning solution directly onto touchscreen; always use a cloth or towel that has been lightly pre-moistened with cleaning solution.

Do not use organic solvents (e.g., turpentine, varsol, benzene), abrasive cleansers or compressed air to clean touchscreen displays or touchcomputer.

For disinfection, careful application of alcohol-based disinfectants or branded commercially available quaternary ammonium compounds (e.g., PRO-SANTM brand, TB QuatTM brand, etc.) is recommended. Use as little as practicable to reduce the risk of fluid ingress into the unit.



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 touchcomputer display contain mercury.)

WEEE Directive

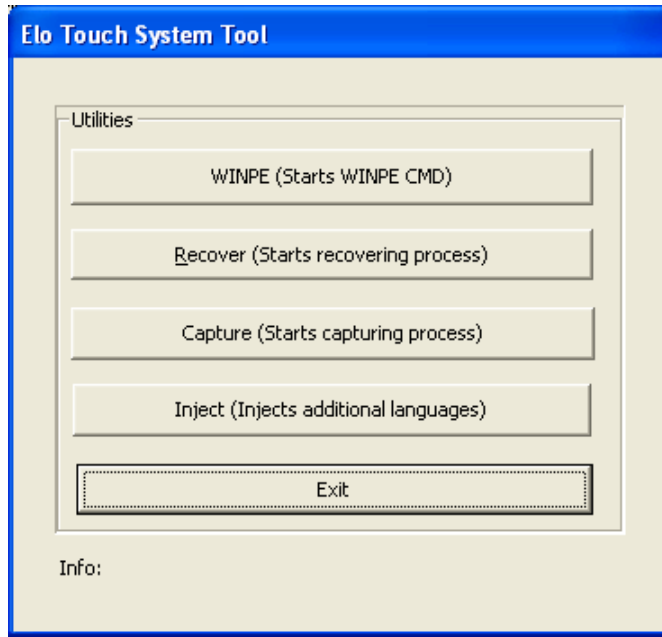


In the European Union, the Waste Electrical and Electronic Equipment (WEEE) directive label shown to the left indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility for recovery and recycling.

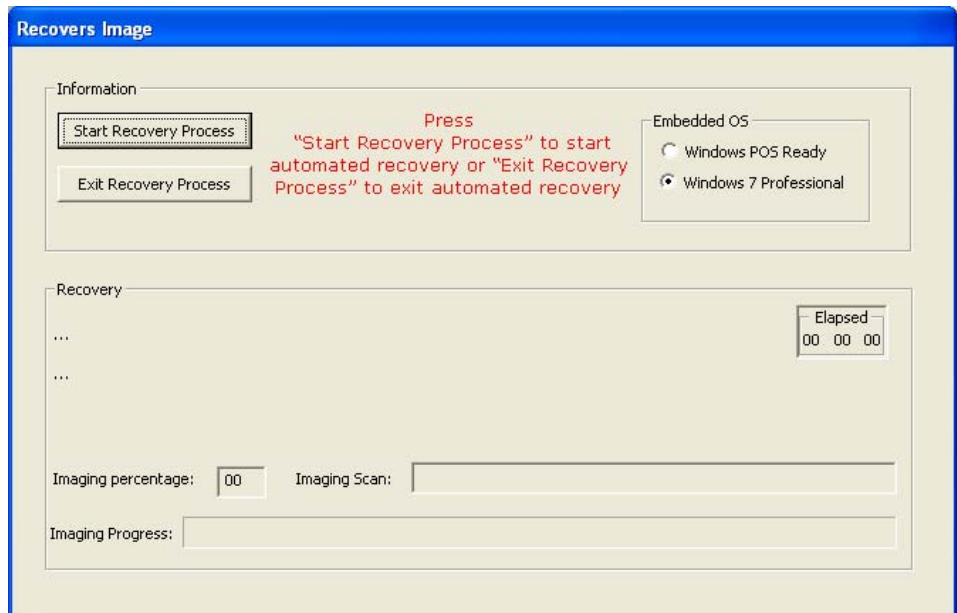
Recovering the Operating System

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 Windows 7 OS: 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**

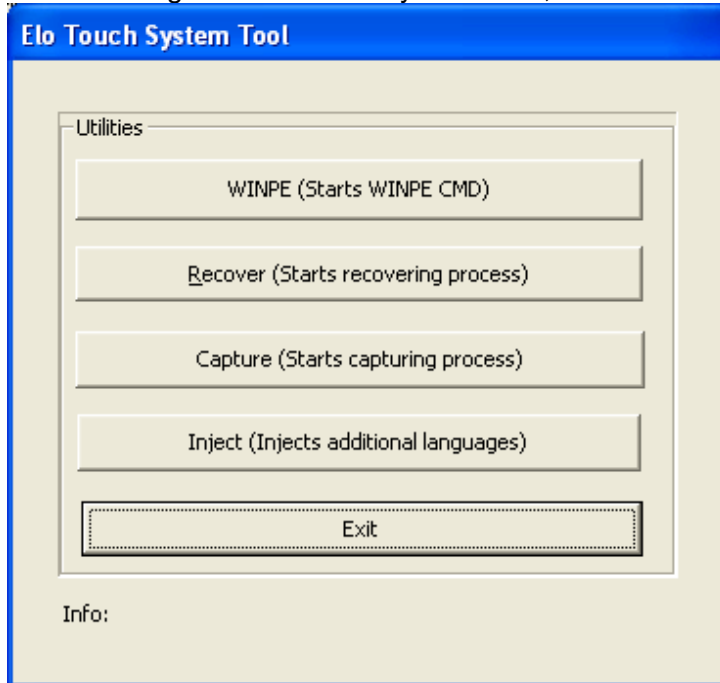


6. After finished, click **Exit** → **Exit** → **Restart**

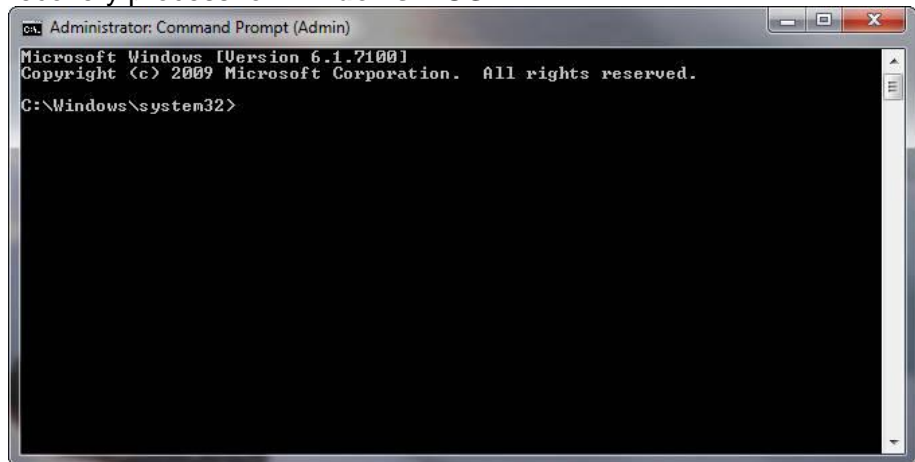
- ii. Use the recovery DVD to recover the touchcomputer. Recovery DVD's can be ordered if necessary from TE Touch Solutions customer service.
 1. Connect the USB DVD drive to the touchcomputer.
 2. Place the recovery DVD in the DVD drive.



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 OS**.



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

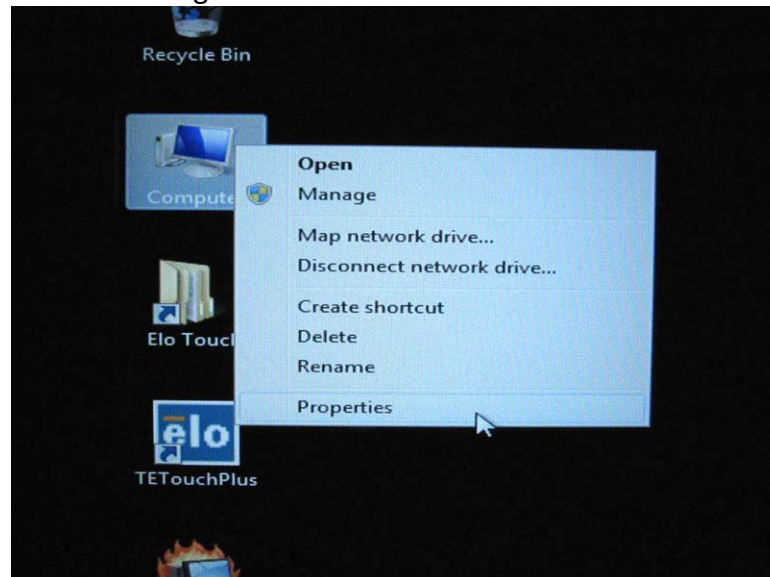
NOTE: *All data is deleted during the recovery process. The user must back up files when necessary. TE Touch Solutions does not accept liability for lost data or software.*

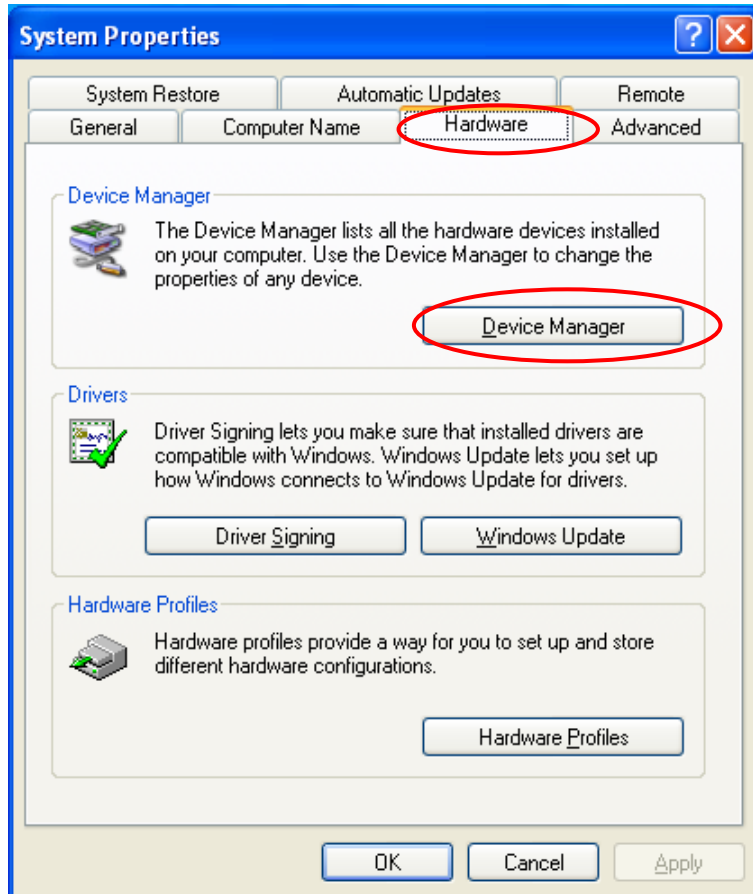
NOTE: *If using Windows 7 OS and your hard disk is corrupts, you can request a Recovery DVD from TE Touch Solutions customer service.*

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 Windows 7 OS, right click the “Computer” → Click “Properties” → “Device Manager”.

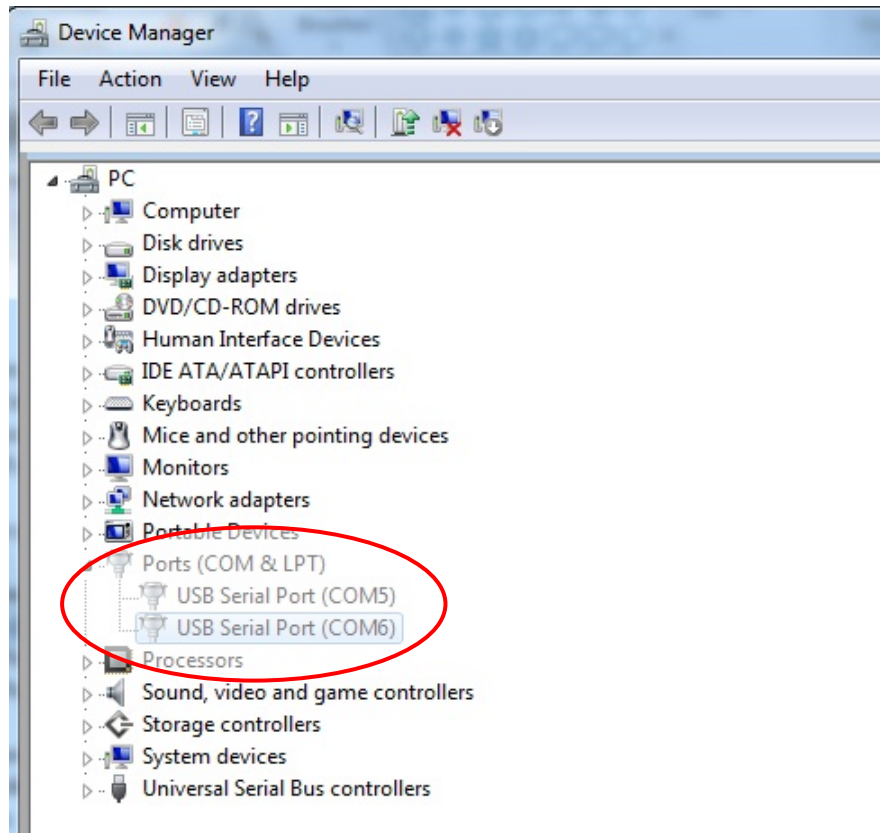




2. Double click the “Ports (COM & LPT)” and check all of these “USB Serial Port” settings must be **IDENTICAL** as the following table.

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.

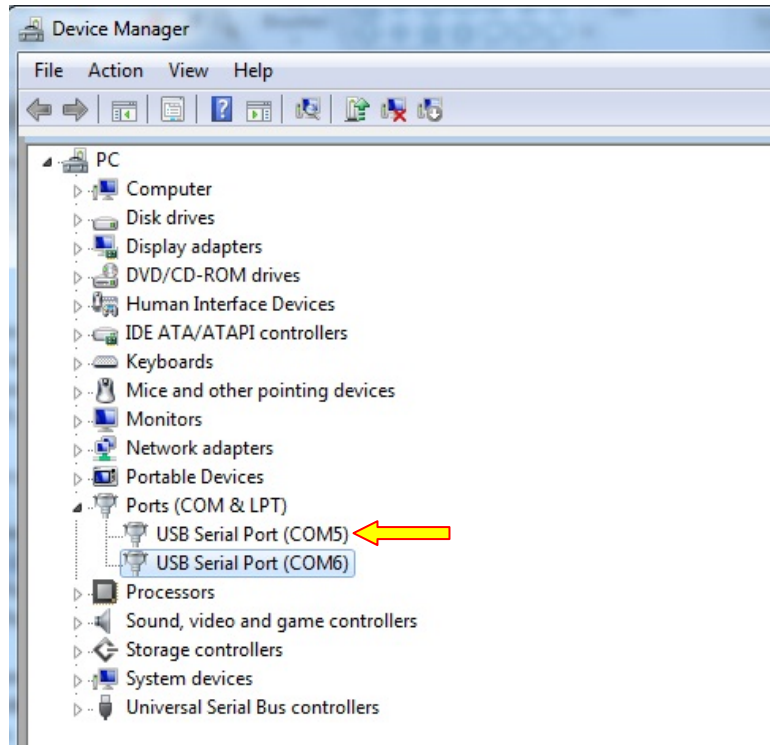


In usual, even if the operating system reassigns these serial ports, they are still in order. In this case, you should change it as the following table.

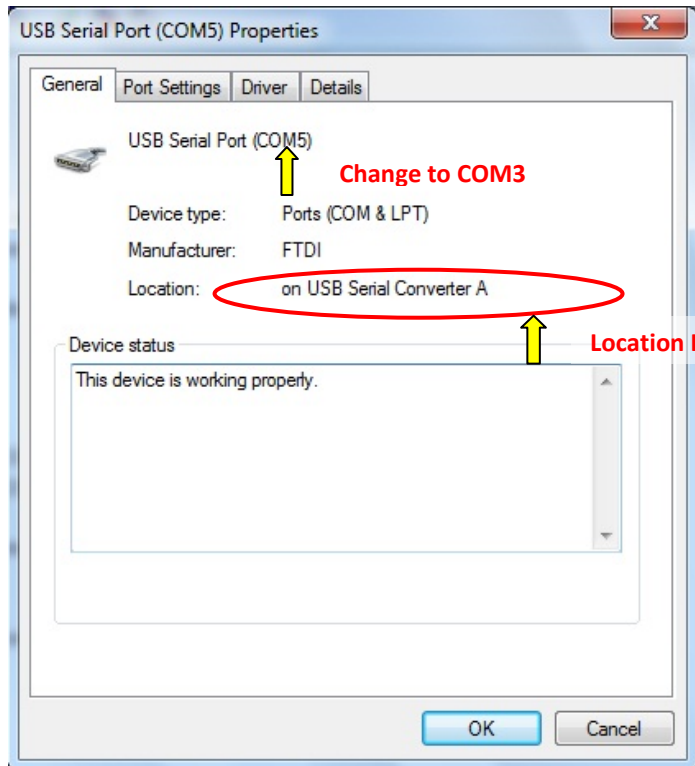
Original one	Change to
USB Serial Port (COM5)	USB Serial Port (COM3)
USB Serial Port (COM6)	USB Serial Port (COM4)

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

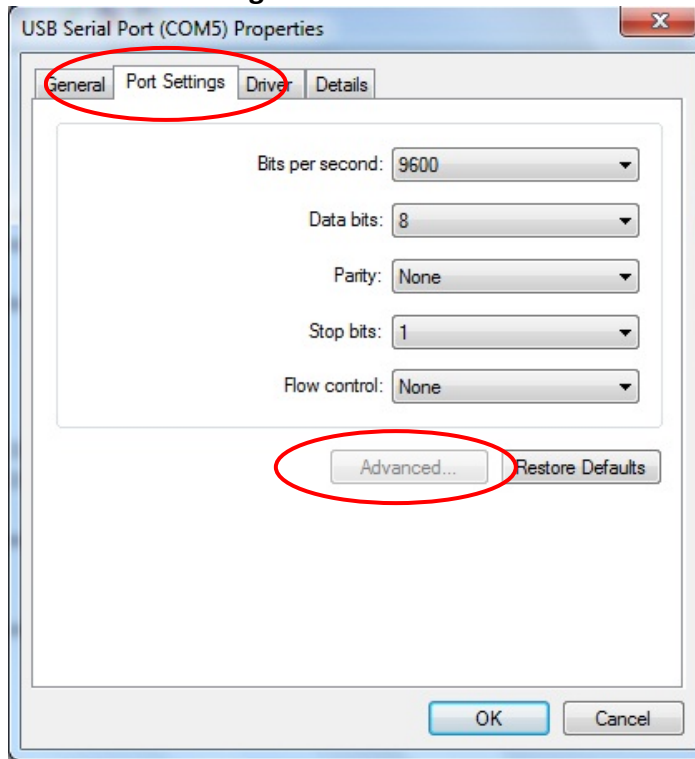
- To correct it, please follow the instructions below:
Double click the port you need to change. In this case, it is **COM5**.



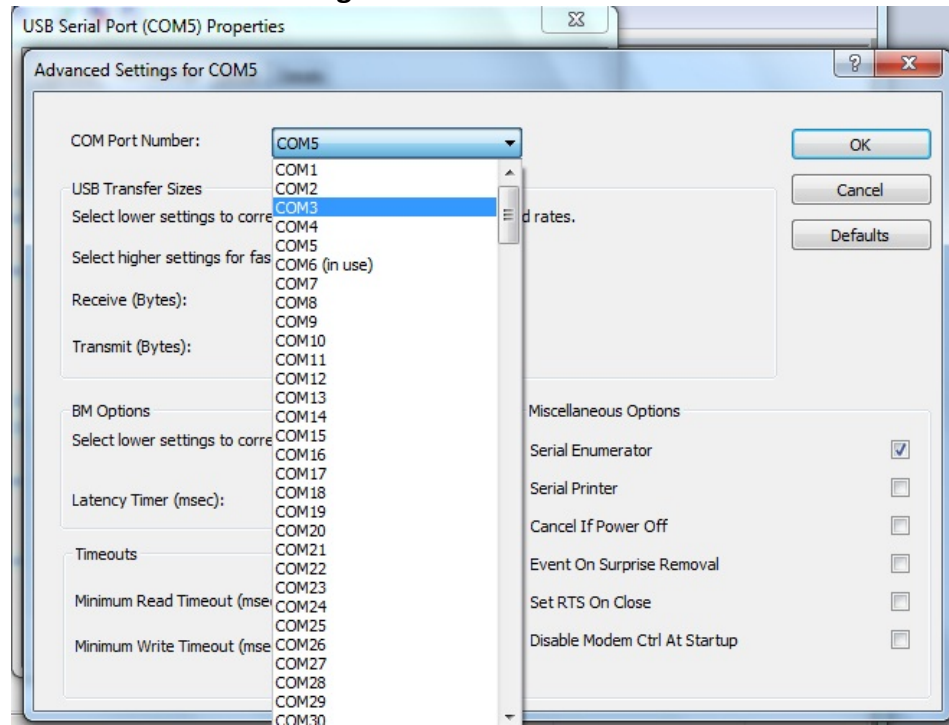
COM5 is the 1st port of these USB serial ports so the “**Location:**” should be “**on USB Serial Converter A**”. Please assign this serial port to **COM3**. (**COM4** for the **USB Serial Converter B**).



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

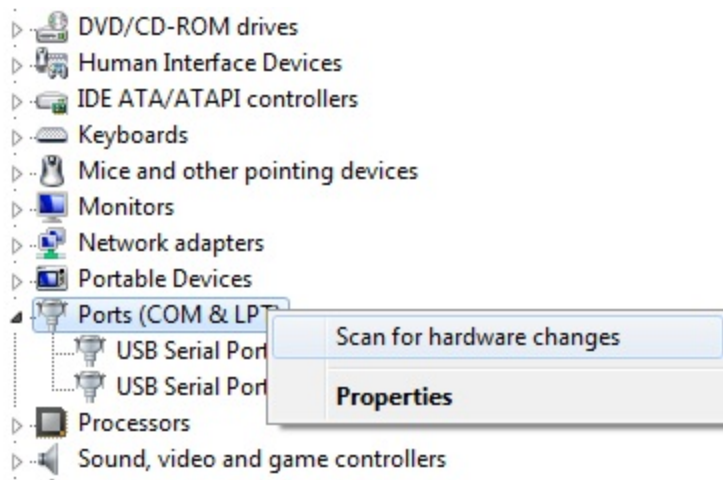


In this case, select **COM3** from the drop-down menu → click **OK** → **OK** back to the **Device Manager**.

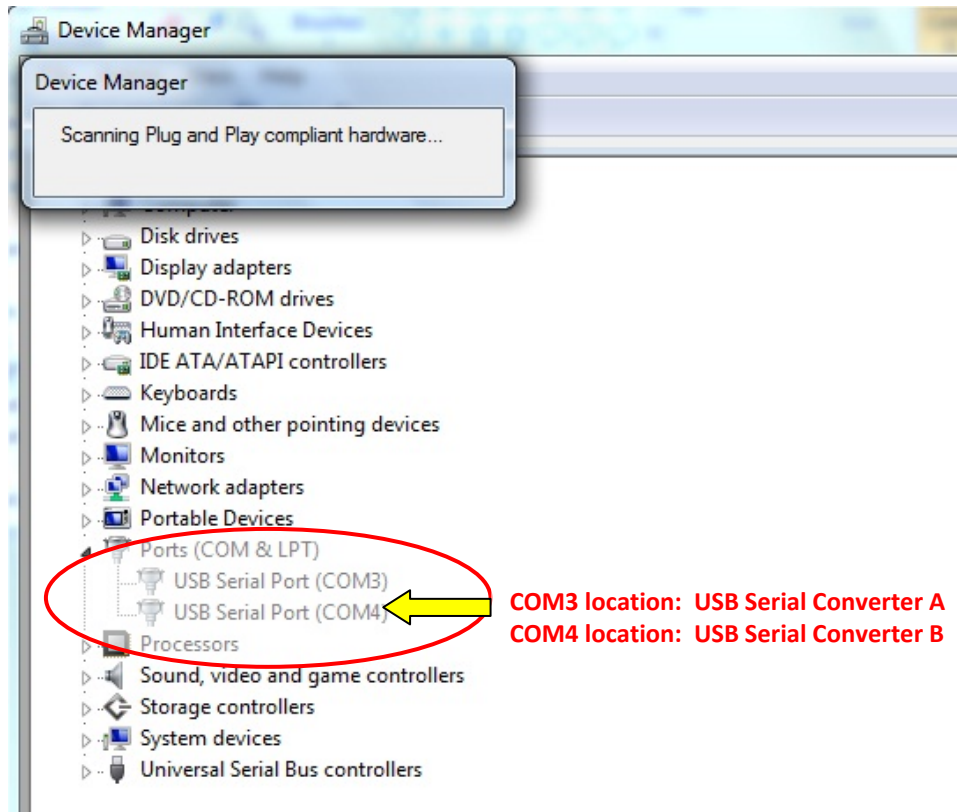


Follow the same steps to accomplish these settings for other ports.

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 SUPPORT

Technical Assistance

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

- The web
- The phone

Using the Web

For technical support, go to 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.

Using the Phone

For technical support, see the table at the end of the user guide for contact information.



REGULATORY INFORMATION

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 should an adapter plug be used to connect to a 2-wire outlet as this will defeat 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 standards listed below. 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 Directives and Standards listed below:

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 60601.

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 touchcomputer:

UL (UL 60601-1)	cUL (CAN/CSA-C22.2 No. 601.1-M90)	TUV (EN 60601-1)
IPX1	FCC (Class A)	CE (Class A)
VCCI (Class A)	C-Tick (Class A)	CB (IEC 60601-1)
Elo Declarations: RoHS., WEEE, CE		



WARRANTY

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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- *News on upcoming events*
- *Press release*
- *Software drivers*
- *Touchcomputer Newsletter*

Getting in Touch with Elo



To find out more about the extensive range of Elo touch solutions, visit www.elotouch.com or simply call the office nearest you:

North America

Tyco Electronics Corporation (TE
Touch Solutions Division)
301 Constitution Drive
Menlo Park, CA 94025
USA

(800) ELO-TOUCH
(800) 356-8682
Tel 650-361-4800
Fax 650-361-4747
customerservice@elotouch.com

Europe

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(TE Touch Solutions Division)
Diestsesteenweg 692
B-3010 Kessel-Lo
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