

D-Series Touchcomputer User Guide

D-Series LCD Multi-function Touchcomputer

[Model D-Series Rev.C]





TE Touch Solutions

D-Series Touchcomputer User Guide

Multi-function Touchcomputer

Revision A

SW 601864

Elo TouchSystems

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

Copyright © 2011 Tyco Electronics Corporation, a TE Connectivity Ltd. Company. All Rights Reserved.

No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, including, but not limited to, electronic, magnetic, optical, chemical, manual, or otherwise without prior written permission of Tyco Electronics Corporation.

Disclaimer

The information in this document is subject to change without notice. Tyco Electronics Corporation and its Afffiliates in the TE Touch Solutions business unit in the TE Connectivity Ltd. family of companies (collectively "TE") makes no representations or warranties with respect to the contents herein, and specifically disclaims any implied warranties of merchantability or fitness for a particular purpose. TE reserves the right to revise this publication and to make changes from time to time in the content hereof without obligation of TE to notify any person of such revisions or changes.

Trademark Acknowledgments

AccuTouch, Elo TouchSystems, Elo TouchSystems (logo), Elo, IntelliTouch, iTouch, TE Connectivity, TE connectivity (logo) and TE (logo) are trademarks. Windows is a trademark of Microsoft Corporation. Other product names mentioned herein may be trademarks or registered trademarks of their respective companies. TE claims no interest in trademarks other than its own.

Table of Contents

Chapter 1: Setup	1
Unpacking Your Touchcomputer	1
Adjusting the Display	
Setting Up the Operating System	2
Calibrating the Touchscreen	9
Securing the Base	11
Advertising Brackets	11
Chapter 2: Operation	13
On-Screen Display (OSD)	14
LED Functionality	15
Using the Input/Output Panel	17
Chapter 3: Options and Upgrades	20
Adding Optional Peripherals	20
Magnetic Stripe Reader (MSR)	21
Customer Display	
Fingerprint Reader (FPR)	
Barcode Scanner	25
USB Wireless Adapter	
Rear-facing LCD Monitor Bracket Kit	
Second Hard Drive	
Solid State Drive	
Second HDD/SSD Mounting Kit (No drive)	
Third-Party Peripherals	
Chapter 4: Safety and Maintenance	
Safety	
Care and Handling	
Recovering the Operating System	
Reassigning COM Ports after System Recovery	
Chapter 5: Technical Support	
Technical Assistance	

Regulatory Information	50
Warranty	53

CHAPTER





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



Power cable Europe



Quick Install Guide



Advertising brackets



Optional security screw

The display screen can be adjusted from 0 to 60 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.

Selecting the Language (For Windows XP and 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.

You ca	and Language Options in customize Windows XP for different regions and languages.
3	Regional and Language Options allow you to change the way numbers, di currencies and the time are displayed. You can also add support for additic languages, and change your location setting.
	The Standards and formats setting is set to English (United States), and th location is set to United States.
	To change these settings, click Customize.
	Text Input Languages allow you to enter text in many different languages, a variety of input methods and devices.
	Your default text input language and method is: US keyboard layout
	To view or change your current configuration , click Details. Deta

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

Regional and Lan	guage Op	tions		[? 🔀
Regional Options	Languages	Advanced			
Text services and To view or chang text, click Details	ge the langu	-	hods you can u	ise to enter Details	
- Supplemental lan	guage supp	ort			
Most languages a select the approp	riate check	box below.			
✓ Install files fo Thai)	÷		-to-left language	es (including	
3					
	C	OK	Cancel		oly

- **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.

Regional and Language Options	? 🛛
Regional Options Languages Advanced	
C Standards and formats	
This option affects how some programs format num dates, and time.	nbers, currencies,
Select an item to match its preferences, or click Cu your own formats:	ustomize to choose
English (United States)	Customize
Spanish (Bolivia) Spanish (Chile) Spanish (Colombia) Spanish (Costa Rica) Spanish (Dominican Republic) Spanish (Eusador) Spanish (El Salvador) Spanish (El Salvador) Spanish (Honduras) Spanish (Honduras) Spanish (Mexico) Spanish (Mexico) Spanish (Paraguay) Spanish (Paraguay) Spanish (Paraguay)	
Spanish (Evento Rico) Spanish (Spain) Spanish (Uruguay) Spanish (Venezuela) Swedish Swedish (Finland) Tatar Tswana	uch as news and
Turkish Ukrainian Uzbek (Cyrillic) Uzbek (Latin) Welsh Xhosa Zulu	

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

	Peru	
Regi	Philippines	
_	Pitcaim Islands	
Reg	Poland	
	Portugal	
1 6	Puerto Rico	
	Qatar	-
	Reunion	
	Bomania	
	Bota Island	
	Bussia	
	Bwanda	
	Saipan	
	Samoa	
	San Marino	
	São Tomé and Príncipe	
	Saudi Arabia	
	Senegal	
	Serbia and Montenegro	
	Sevchelles	
	Sierra Leone	
	Singapore	
	Slovakia	
	Slovenia	
	Solomon Islands	_
	Somalia	
1	South Africa	
	South Georgia and the South Sandwich Islands	
	Spain	
	Sri Lanka	~
	United States	
	United States	
	OK Cancel	Apply
		Abbia

9. Click OK.

Selecting the Time Zone (For Windows XP and POSReady 2009 Only)

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

Date & Time Image: Thursday , February 16, 2006 r 6:41:48 PM Image: Time Zone Image: Image: Image: Time Zone Image: Image: Image: Image: Image: Time Zone Image: Image	Thursday , February 16, 2006 6:41:48 PM Time Zone (GMT-05:00) Eastern Time (US & Canada)	ite and Ti	fessional Setup me Settings orrect date and time for your Windows computer.
Time Zone (GMT-05:00) Eastern Time (US & Canada)	Time Zone (GMT-05:00) Eastern Time (US & Canada)	⊤Date & 1	Time
(GMT-05:00) Eastern Time (US & Canada)	(GMT-05:00) Eastern Time (US & Canada)	8	Thursday , February 16, 2006 💌 6:41:48 PM 💌
		Time Zo	· · · · · · · · · · · · · · · · · · ·
			-

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** several times to enter Advanced Boot Options.
- 2. Select Repair your computer.
- 3. Click Next \rightarrow OK (Shall not have password) \rightarrow Click Elo Touch System Tool.
- 4. The following User Interface will be presented:



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

anguage Injection	
Select Language to Inject	Selected Language
Set Selected Language to Default UI	Injected Language
	Inject Selected Language
	Show Injected Languages
	Exit

6. Click the drop-down list and select the preference language.

7. Click Inject Selected Language

8. The following window will 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 Only)

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

Set Up Windows		
Nina 🖉	dows ⁻⁷ Profes	sional
Country or region:	United States	•
Time and currency:	English (United States)	•
Keyboard layout:	US	•
0	Copyright © 2009 Microsoft (Corporation. All rights reserved.
		Next

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.

Review your time and date Time zone:			
(UTC-08:00) Pacific Time (US & Ca	nada)	•	
Automatically adjust clock for D	aylight Saving Time		
Date:	Time:		
• October, 2010 +	<u></u>		
Su Mo Tu We Th Fr Sa 26 27 28 29 30 1 2			
3 4 5 6 7 8 9	- 1 -		
17 18 19 20 21 22 23	6/12		
24 25 26 27 28 29 30 31 1 2 3 4 5 6	- Alexandre		
	4: 28: 35 PM		

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 to APR models.



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



There are two mounting options for the D-Series touchcomputer. In both cases, the base must be mounted on a horizontal surface.

Option 1: Secure from below. Use the four pretapped holes to secure the touchcomputer from below the mounting surface. The holes are designed to work with ISO metric m6 screws. These screws are not contained in the package, but should be readily available at any hardware store.

Option 2: Secure from top. Use the two through holes to secure the base to the surface.

NOTE: Mounting screws are not provided with the shipment.

Refer to the figure below for the location of the holes. All dimensions are in millimeters.



Advertising Brackets

Advertising brackets are provided to allow the user to display paper ads on the back of the D-Series touchcomputer. These brackets are included separately in the accessory box. The maximum size of the advertising material is 220mm X 320mm (8.6" X 12.6").

To install these brackets, simply push them onto the sides of the back door of the D-Series touchcomputer, as shown in the figure below.



Then insert the advertising material as shown below.



CHAPTER

2



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.



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. Brightness: Adjusts the backlight of the monitor. Contrast: Adjusts the maximum luminance level of the maximum luminance level
Image setting	 monitor. Adjusts H position, V position, clock, and phase. 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. 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.

Feature	Description
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 DDCCI function.Sharpness: Adjusts sharpness of video.
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:

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

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

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

LED Functionality

Base Power Status LED

The D-Series base has two LEDs that indicate the power status and hard drive status. See the figure on page 13, item 2 for the location of this LED. The light can be green, flashing green, red, or off. The table below shows LED state and corresponding color.

LED Color to Observer	State	
Off	No input power — Off mode	
Red	Input power present, power switch off — Off mode	
Flashes green	Input power present — Sleep mode	
Green	Input power present — On mode	

Head Power Status LED

The head power status is indicated by a different LED, which is located at the lower edge of the head (#3 in figure on page 13).

LED Color to Observer	State	
Off	No input power to head — Off mode	
Red	Input power present, power switch off — Off mode	
Amber	Input power present — Sleep mode	
Green	Input power present — On mode	

Touch Power Status LED

The touch power status is indicated by a separate LED located at the lower edge of the head and to the right of the Head Power Status LED (#4 in figure on page 13). This feature is available for AT and APR 7010.

LED Color to Observer	State	
Off	No input power — Off mode	
Red	Input power present, power switch off — Off mode	
Amber	Input power present — Sleep mode	
Green	Input power present — On mode	

HDD Activity LED

Hard disk drive activity is indicated by a flashing LED on the base, just under the computer power LED (#1 in the figure on page 13). Reading from and writing to the disk causes the LED to flash.

LED Color to Observer	State
Off	No activity
Flashes green	Activity

Using the Input/Output Panel

To access the input/output (I/O) ports, open the cable cover door on the left side of the unit, as shown below.



The touchcomputer provides a number of input and output interfaces for connecting a wide variety of compliant devices as shown in the following figure.



Number	Port	Description		
1	Audio	Audio in (left), out (center), mic (right)		
		Audio In		
		 Audio Out: One 3.5mm stereo audio output jack for connecting headphones or external powered speakers 		
		Microphone Input: One 3.5mm microphone input jack for connecting an external microphone		
2	Ethernet	One RJ45 Ethernet port providing LAN capabilities		
3, 9, 10	USB	Seven USB 2.0 type A ports		
4	VGA	One D-SUB VGA output port for connecting the display head – SYSTEM USE ONLY		
5	Parallel	Standard 25-pin connector port		
6	Serial	Two USB-to-Serial ports		
7	DVI-D	One DVI-D output port for connecting the second display – CUSTOMER USE		
8	PS/2 universal	Mouse (left) and keyboard (right)		
9	24V powered USB	24V powered USB port; the max loading on this port is 24VDC @ 2A		
11	Native serial	One "native" serial port		
12	Speaker power	Power switch for disabling the internal speakers		
13	Cash drawer	RJ11, 6 position (12V/24V default)		
14	Powered serial	Two powered USB-to-Serial ports, 5V default/12V		
15	Main power	AC power		

NOTE: The customer display, fingerprint reader, and barcode scanner are designed to connect to the USB 2.0 ports on the I/O panel. If all three peripherals were connected, there would be four USB 2.0 ports remaining.

CHAPTER



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 in field-installable kits:

Magnetic stripe reader (MSR)

Customer display

Fingerprint reader (FPR)

Barcode scanner (1-D or omni-directional/2-D)

USB Wireless adapter (802.11 B/G/N)

Rear-facing LCD monitor bracket kit

Second hard disk drive

Solid State Drive (SSD)

Second HDD/SSD mounting kit (no drive)

NOTE: The peripherals described are all options that are purchased separately.



Magnetic Stripe Reader (MSR)

You can add a magnetic stripe reader (MSR) to the D-Series touchcomputer using a USB port located on the display head.

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
- Bidirectional 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: E145919

Testing the MSR

Testing in USB MSR Keyboard (KB) Emulation Mode

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

Untitled - N	lotepad		X
Ele Edit Forma			
XB123412341	2341234 ADOE/JOHN	^09021012644900742000000?;1234123412341234=090210126449742?	
			3
<			> .:

Testing in USB MSR Human Interface Device (HID) Mode

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

ID TECH MagSwipe HID Reader Demo Application Version 1.04	
eneral Settings Track Settings Help	
Connect ID TECH MagSwipe HID Reader	
Command: Command format is \53\18 or \53\13\01\33	Send Command
Complete Command String	
Reader Output:	<u> </u>
	2

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



3. 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 D-Series touchcomputer. Each display has two lines of 20 characters (2x20 VFD). Software application and drivers can be found at the following location <u>www.elotouch.com</u>

The customer display can be adjusted to a 30-degree range up and down and swivels 30 degrees side to side.



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	E632206	

Fingerprint Reader (FPR)

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 4000B		
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	E373639		

Testing the FPR

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



Barcode Scanner

There are two types of optional USB barcode scanners: 1-D or omni-directional. The barcode scanner is only an option if the speaker bar is present.

When a scanner is chosen, a USB-SSI (Simple Serial Interface) converter board is included. Both barcode scanners are powered with the USB interface.

One-dimensional scanner specifications:

- Ability to generate 1-D scanning pattern
- Low-cost solution
- USB powered
- Easy communication between host and scanner

- Visible laser diode operating at 650nm
- 100+ scans/sec.
- RoHS-compliant
- Part number: E946856

Omni-directional scanner specifications:

- Ability to generate omni-directional scanning pattern
- Maximum performance
- 2-D scanning ability (PDF417, MicroPDF)
- USB powered
- Easy communication between host and scanner
- Visible laser diode operating at 650nm
- 600+ scans/sec.
- RoHS compliant
- Part number: E449881

USB-SSI converter board specifications:

- Ability to convert from serial interface to USB interface and vice versa.
- Compact size
- Input voltage: 5V
- BuzzerWireless card
- Part number: E580321

Enabling 2-D Scanning

The scanner default settings do not enable 2-D barcode reading ability. To enable this option, follow these steps:

1. Scan the barcodes below to activate PDF417 and MicroPDF417. These are both types of 2-D barcodes.



Enable PDF417

(01h)



Enable MicroPDF417

(01h)

2. Now scan the barcode below to change the scanning pattern. Using this scanning pattern allows you to read 2-D barcodes (you can still read 1-D barcodes).



Testing the Barcode Scanner

- 1. Determine which port the barcode scanner is using:
 - a. Click Start > Control Panel
 - b. In the Windows Control Panel screen, double-click the Administrative Tools -> double-click the Computer Management application (Only for Windows XP and POSReady 2009.)
 - c. For **Windows Vista and Windows 7** users, **Device Manager** is in the Windows Control Panel.
 - d. In Computer Management, select **Device Manager**. In the right pane, look under the **Ports** section, and note the **COM** value (COM1, COM2, COM3, and so on) of the USB-Serial Port object.



2. From the EloTouchSystems link on the desktop, go to "Peripherals\Barcode Scanner Drivers and Apps" and double-click the Barcode Scanner Test icon to start the SSIContainer application.

	🙃 SSIContainer	
	Elle Edit View Help	
Connect button	Messages: Connect Disconnect Reset Baud and Port Request Version Data Baud 9600 Port 1 Request All Paramm Data Get Capabilities Request Single Param Set Single Param	Port field
	Aim On Aim Off New Value: Led On Led Off LED Code: Trigger On Trigger Off Image Filename: Enable Disable Request Image Transfer Abort Macro Sequence Send Macro Data After Abort Ready NUM	

- **3.** Change the **Port** field value to match the value you retrieved from the Device Manager.
- 4. Click **Connect**. You should see the text "Connected" in the Messages field.

SSIContainer			
Eile Edit View Help			
Messages: SSI Codetype ID: 8 Data: 025133251428	Connect Disconnect Request Version Data Request All Paramm Data Request Single Param Param Number 238	Reset Baud and Port Baud 9600 Port 5 Get Capabilities Set-Single Parm	Param Number
Aim On Aim Off	New Value:		Param Change
Led On Led Off LED Code: 0	ename:		New Value
Trigger On Trigger Off Trigger Off Trigger Off	uest Image Transfer Abort I	mage Xfer Viewfinder	
Start Video Transfer Beep Beep Code: 0	Abort Macro Sequence	Send Macro Data Alter Abort	
Ready		NUM //	

- 5. In the box labeled Param Number, enter the value 238.
- 6. In the box labeled New Value, enter the value 1.
- 7. Check the box labeled Permanent Param Change.
- **8.** Scan a barcode (sample given below). The scanned data should appear in the "Messages" section of SSIContainer screen.



The barcode scanner also has the ability to run in USB-KB emulation mode. To enable this option, please install the required drivers. To find the drivers:

- 1. Click the 1xDx Setup Files folder on the desktop.
- 2. Then click the Barcode Scanner folder.
- **3.** Finally, click the **Keyboard Emulation Setup Files** folder, where you can find setup instructions to complete the installation process.

USB Wireless Adapter

A wireless USB adapter can be installed as an option in the D-Series touchcomputer to provide wireless LAN capabilities.

Typical specifications for the wireless card are:

- USB 2.0 interface
- 802.11 B/G/N compliant
- Support for Windows XP, Windows Vista 32, Windows POSReady 2009 and Windows 7
- RoHS compliant
- Part number: E249774

Testing the Wireless Adapter

To test the wireless adapter:

- 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.

	and the second in second and	
	and the Palacenese lates " "street.	
	Tank Cont	
	1,200	
2		
Press in - 1 inter	Choose a within a rate of	
R. in case of	the state of the later is stated as the state of the stat	
(2 hallowed)	Reads.	
" Street and the	Tanna	
Antoni fado	Transferences in Assesses	
A DECEMBER	4 10.0	
P 2repterior	age many	
A party and	Bart Freih	
1	T Charles and the same	- eff

Rear-facing LCD Monitor Bracket Kit

A rear-facing LCD monitor mounting bracket kit can be installed as an option on the D-Series touchcomputer to provide the second display through DVI-D display interface. The compatibility requirements for the rear-facing monitor bracket are as below:

Maximum weight: 3.3lbs (1.5Kg)

Mounting Holes: 75mm x 75mm per VESA MIS-D 75

Part number: E835074

Second Hard Drive

A second hard drive can be added to (or used to replace) the original hard disk drive. This addition provides additional capacity for D-Series touchcomputer data storage.

Part number: E828965

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: E536242

Second HDD/SSD Mounting Kit (No drive)

A second HDD/SSD mounting kit can be purchased from Elo in order to install any second 2.5" HDD/SDD in the D-Series touchcomputer.

Part number: E349653

Third-Party Peripherals

The D-Series touchcomputer includes one pre-configured port for a cash drawer. The peripheral is not available from Elo TouchSystems.
Cash Drawer Port

We provide a standard RJ11 port to attach a cash drawer.

Testing the Cash Drawer Port

- **1.** Connect the cash drawer to the touchcomputer using a cable with the correct wiring definition.
- In the EloTouchSystems link on the desktop, go to "Peripherals\Cash Drawer" and double-click the cashdrawer icon to start the test program. The screen displays "Display is open."

estRun	
BusST	CBUS0 & 1
0xFF	
Display is Open ,Can k	Send 200ms

3. Turn off the test equipment.

The screen displays "Display is closed."

DLP-USB232M Serializer and Tester	
TestRun	
CBusST	CBUS0 & 1
0xF0	
Display is close !!	Send 200ms

4. Click Send 200ms.

The software automatically turns on the cash drawer.



CHAPTER

4

SAFETY AND MAINTENANCE

Safety

Here is some important information on 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.

Care and Handling

The following tips help keep your touch computer 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.

UL Directive

The touchcomputer has included a lithium battery on the motherboard. There is a risk of explosion if battery is replaced by an incorrect type. Please dispose of used batteries according the region instructions.

China RoHS

中国 RoHS

根据中国(电子讯息产品污染控制管理办法), 以下部份列出本公司产品中可能包含的有毒和/或有害物质的名称和含量

部件名称	有毒有害物质或元素					
PETI PETA	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr⁶⁺)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
塑料部件	0	0	0	0	0	0
金属部件	X	0	0	0	0	0
电线电缆组件	x	0	0	0	0	0
LCD 屏	x	х	o	0	0	0
触控屏	x	0	0	ο	0	0
电路模组	X	0	0	0	0	0
软件(CD等)	0	0	0	0	0	0
0 表示该有责7	○ 亲示该有责有宝物质在该部供所有物质材料中的今暑物在					

 O 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 标准规定的限量要求下。
 X 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出在

SJ/T 11363-2006 标准规定的限量要求,对于所 有显示 X 的情况,本公司按照 EU RoHS 采用了容许的豁免指标。

产品标示说明

(1).根据 SJ/T11364-2006 要求,本公司电子信息产品均注明以下污染控制标志. 本产品环保使用期限为 10 年,在下列温度和湿度使用的条件下,不会发生外泄或突变, 使用该电子讯息产品不会对环境造成严重污染或对其人身财产造成严重损害.

*操作条件 温度:0℃~35℃(32°F~95°F)/湿度:20%~80%(不凝结). *储存条件 温度:-30℃~60℃(-22°F~140°F)/湿度:5%~95%(不凝结).



(2). 本公司鼓励并建议客户将本产品依据所在地的相关法令,进行回收及再利用, 切勿随意与一般垃圾丢弃.



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

I) Use the Elo recovery utility (included in POSReady 2009, Windows 7, and some Windows XP systems)

*Windows XP users: If your system does not have a recovery partition, please follow the steps in section II to recover your system using the included recovery DVD.

- i. Use the included image to recover the touchcomputer (For *Windows XP and POSReady 2009 Only.)
 - After the TE/Elo logo shows up, press DOWN repeatedly to enter Windows Boot Manager.
 - 2. Select OS Recovery
 - 3. The following User Interface will be presented:



4. Click Recover → Start Recovery Process

Start Recovery Process Press Start Recovery Process "Start Recovery Process" to start automated recovery or "Exit Recovery Process" to exit automated recovery Exit Recovery Process Process" to exit automated recovery	Embedded OS Windows POS Ready Windows 7 Professional
Recovery	- Elapsed
	J

- 5. Once completed, click Exit Recovery Process → Exit. The system will restart automatically.
- ii. Use the included image to recover the touchcomputer (For **Windows 7** Only.)
 - 1. After the TE/Elo logo shows up, press **F8** repeatedly to enter Advanced Boot Options.
 - 2. Select Repair your computer
 - Click Next → OK (Default is no password but once you create the new account or password, please use new account or password to log in recovery environment) → Elo Touch System Tool
 - 4. The following User Interface will be presented:



5. Click Recover → Start Recovery Process

Start Recovery Process	Press "Start Recovery Process" to start automated recovery or "Exit Recovery Process" to exit automated recovery	Embedded OS Windows POS Ready Windows 7 Professional
Recovery		Elapsed -
		00 00 00

6. Once completed, click Exit Recovery Process → Exit. The system will restart automatically.

II) Use the Elo recovery DVD

(Some Windows XP versions include a recovery DVD; for these systems there is no recovery partition on the HDD, so you must follow the following procedure to recovery the system. Some Windows XP versions, and ALL POSReady 2009 and Windows 7 touchcomputers come with the built-in recovery partition on the installed HDD; they do not include recovery media. In the event the HDD recovery partition is accidentally deleted or becomes or inaccessible, POSReady 2009 and Windows 7 systems do not include a recovery DVD. You will need to must request a recovery DVD from Elo TouchSystems customer service. Contact information can be found on the last page of this guide.)

Hardware needed:

- 1. Elo Touchcomputer
- 2. External USB DVD Drive
- 3. Elo Windows XP, POSReady 2009 or Windows 7 Recovery DVD

Procedure

- 1. Connect the USB DVD drive to the touchcomputer.
- 2. Place the recovery DVD in the DVD drive.
- 3. Power on your touchcomputer and press **"F11**" to enter **Device Boot Menu** and boot from DVD.
- If "F11" doesn't open the Device Boot Menu (depending on your model), power off, then power on again and press "F8" to enter the Device Boot Menu.
- 5. After entering the System Recovery Tool, click the "WINPE" button.

OR



6. Once you see the "**Command Prompt**" window to start the recovery process type:

• "pos9" to start the recovery process for POSReady 2009/Windows XP. * Note: If your system came with Windows XP, it will automatically be re-installed; if your system came with POSReady 2009, it will automatically be re-installed; you cannot recovery a different operating system than what originally shipped with your system. OR

• "win7" to start the recovery process for Windows 7

7. Then press "Enter".



- 8. Follow the on-screen instructions to complete the recovery.
- 9. Once you are prompted to reboot:
 - Remove the recovery DVD from your DVD drive
 - Shut down your touchcomputer by pressing and holding the power button for 5 seconds
 - Disconnect the DVD drive from your touchcomputer
 - Restart your touch computer by pressing the power button
- 10. Follow the on-screen instructions to setup your system.
- **NOTE:** All data is deleted during the recovery process. The user must back up files when necessary. Elo TouchSystems does not accept liability for lost data or software.
- **NOTE:** If your hard disk is corrupted, you can request a Recovery DVD from Elo TouchSystems customer service.
- NOTE: The end user must adhere to Microsoft's Licensing Agreement.
- **NOTE:** After recovering your touchcomputer by using the included image, the operating system may reassign your USB Serial Ports during the first bootup. You can follow the instructions below to reassign them manually.

Reassigning COM Ports after System Recovery

(The section is required once you recovered your system either from recovery partition or DVD)

- Instructions to reassign the USB Serial Port(s)
 - For POSReady 2009, right click on the "Computer" icon on the desktop → Left click "Properties" → Then "Hardware" → Then "Device Manager". For Windows 7, right click on the "Computer" icon on the desktop → Left click "Properties" → Then "Device Manager".



Sy	ystem Proper	ties					?×
ſ	System Re	store	Auto	matic	Jpdates	Remo	ote
Ì	General	Computer Name Hardware Advanced			nced		
	Device Manager The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to change the						
	properties of any device.						
	Drivers						
	Driver Signing lets you make sure that installed drivers are compatible with Windows. Windows Update lets you set up how Windows connects to Windows Update for drivers.						
	Driver <u>Signing</u>						
	Hardware Profiles						\leq
	Hardware profiles provide a way for you to set up and store different hardware configurations.						
	Hardware Profiles						
				DK	Canc	el 🧧) Abbin

2. Double click the "Ports (COM & LPT)" and verify that all of the "USB Serial Port" settings are **IDENTICAL** to 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 they are not, and you see the assignments as shown below, then the operating system has reassigned these serial ports. You need to re-assign (correct) them manually.



Normally, even if the operating system reassigns these serial ports, they are still in order. In this case, you should re-assign them as shown in 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 <u>COM3</u> and end at <u>COM4</u> in order.

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



<u>COM5</u> 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 <u>COM3</u>. (<u>COM4</u> for the USB Serial Converter B).

General	Port Settings D	river Details		
1	USB Serial Port (COM5) Change to COM3		
	Device type:	Ports (COM & LPT)		
	Manufacturer:	FTDI		
	Location:	on USB Serial Converter A	$> \parallel$	
Devic	e status		Location	nformation
	device is working p			
			Ŧ	
			•	



USB Seria	I Port (COM5)	Properties			X
General	Port Settings	Driver Details			
		Bits per second	9600		•
		Data bits	8		•
		Parity	None		•
		Stop bits	1		•
		Flow control	None		•
		Ad	vanced	Restore De	efaults
-				ок	Cancel

In this case, select <u>COM3</u> from the drop-down menu \rightarrow click **OK** \rightarrow **OK** back to the **Device Manager.**

ISB Serial Port (COM5) Properti	es			
Advanced Settings for COM5	inter a			? ×
COM Port Number:	СОМ5	•		ОК
USB Transfer Sizes	COM1 COM2	<u> </u>		Cancel
Select lower settings to corre		≡ d ra	ites.	Defaults
Select higher settings for fas	COM5 COM6 (in use) COM7			
Receive (Bytes):	COM8 COM9			
Transmit (Bytes):	COM10 COM11 COM12			
BM Options	COM13 COM14	Mis	scellaneous Options	
Select lower settings to corre	COM15 COM16 COM17	Se	rial Enumerator	
Latency Timer (msec):	COM18 COM19		rial Printer	
Timeouts	COM20 COM21		ncel If Power Off	
	COM22 COM23		ent On Surprise Removal	
Minimum Read Timeout (mse	COM25		t RTS On Close	
Minimum Write Timeout (mse	COM27	Dis	sable Modem Ctrl At Startup	
	COM28 COM29			
	COM30			

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

After completing the above steps, right click on "Ports (COM & LPT)" and click Scan for hardware changes.



5. This should result in the following assignments:

🛃 Device Manager	2000 · · · · · · · · · · · · · · · · · ·
Device Manager	
Scanning Plug and Play compliant hardware	
 Disk drives Display adapters Display adapters DVD/CD-ROM drives Human Interface Devices IDE ATA/ATAPI controllers IDE ATA/ATAPI controllers Keyboards Mice and other pointing devices Monitors Monitors Network adapters Portable Devices Ports (COM & LPT) USB Serial Port (COM3) Processors Sound, video and game controllers Storage controllers System devices Universal Serial Bus controllers 	COM3 location: USB Serial Converter A COM4 location: USB Serial Converter B

• If not, please repeat steps 1-5.

CHAPTER

5

TECHNICAL SUPPORT

Technical Assistance

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

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 <u>www.elotouch.com/go/news</u>

Using the Phone

For technical support, see the table at the end of the user guide for contact 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 you 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 B 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 B 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 89/336/EEC indicated in European Standard EN 55022 Class B and the Low Voltage Directive 73/23/EEC as indicated in European Standard EN 60950.

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

UL/cUL	• FCC	• TUV
• CE	• CB	Argentina S-mark
Russia GOST-R	Australia C-Tick	Japan VCCI
China CCC	Taiwan BSMI	Korea KC
Mexico COC	•	•

The following certifications have been issued for the touchcomputer:

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.

www.elotouch.com

Get the latest ...

- Product information
- Specifications
- News on upcoming events
- Press release
- Software drivers
- Touchcomputer 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 or simply call the office nearest you:

North America Tyco Electronics Corporation (TE Touch Solutions Division) 301 Constitution Drive Menlo Park, CA 94025 USA	Europe Tyco Electronics Raychem B.V.B.A. (Elo TouchSystems Division) Diestsesteenweg 692 B-3010 Kessel-Lo Belgium	Asia-Pacific Sun Hamada Bldg. 2F 1-19-20 ShinYokohama Kanagawa 222-0033 Japan	© 2011 Tyco Electronics F
(800) ELO-TOUCH (800) 356-8682 Tel 650-361-4800 Fax 650-361-4747 customerservice@elotouch.com	Tel +32(0)(16)35 21 00 Fax +32(0)(16)35 21 01 elosales@elotouch.com	Tel +81(45)478-2161 Fax +81(45)478-2180 <u>www.tps.co.jp</u>	Printed in USA