

User's Manual

Mega POS MP-3000 Series
MP-3525
15" ULV Fanless POS system

Copyright Notice

This document is copyrighted, © 2008. All rights are reserved. Firich Enterprise Co., Ltd reserves the right to make improvements of the product described in this manual at any time without notice.

No part of this manual may be reproduced, copied, translated, or transmitted in any form or by any means without the prior written permission from Firich Enterprise Co., Ltd. Information provided in this manual is intended to be accurate and reliable. However, Firich Enterprise Co., Ltd assumes no responsibility for its use, nor for any infringements upon the rights of third parties, which may result from its use.

The material in this document is for product information only and is subject to change without notice. While reasonable efforts have been made in the preparation of this document to assure its accuracy, Firich Enterprise Co., Ltd, assumes no liabilities resulting from errors or omissions in this document, or from the use of the information contained herein.

Safety and Warranty

1. Read these safety instructions carefully.
2. Keep this user's manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
4. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
12. Never pour any liquid into an opening. This could cause fire or electrical shock.
13. Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.
14. If any of the following situations arises, get the equipment checked by service personnel:
 - a. The power cord or plug is damaged.
 - b. Liquid has penetrated into the equipment.
 - c. The equipment has been exposed to moisture.
 - d. The equipment does not work well, or you cannot get it to work according to the user's manual.
 - e. The equipment has been dropped and damaged.
 - f. The equipment has obvious signs of breakage.
15. **DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20°C (-4°F) OR ABOVE 60°C (140°F). IT MAY DAMAGE THE EQUIPMENT.**

Table of Content

Chapter 1	1
Introduction	1
MP-3525 Introduction.....	1
A Quick Tour for MP-3525	2
MP-3525 Dimension	3
Rear I/O Panel.....	4
Packing List	4
Chapter 2	5
Hardware Installation and Upgrading	5
2.5" Hard Disk Drive Installation.....	5
Pole-Type VFD Installation	6
Memory (DDRII RAM) / CPU / DOM Installation	7
Compact Flash Card (CF) Installation	7
MCR Configuration Modification.....	8
Cash Drawer Installation.....	9
Chapter 3	10
Software Installation and Setup	10
Please follow this installation sequence.	10
Chipset Driver Installation	10
Chipset Installation Utilities for Windows XP	10
VGA Driver Installation.....	14
VIA/S3G driver installation Windows 2000/XP	14
LAN Driver Installation	15
Realtek RTL8139/810x LAN Driver Installation Windows XP	15
Audio Driver Installation.....	17
Audio Driver Installation for all Windows Operating Systems	17
ELO Touch Tools Installation	20
ELO Touch Tools Installation for all Windows Operating Systems	20
ELO Control Panel.....	23
Fuji TouchKit Tools Installation	26
TouchKit Tools Installation for all Windows Operating Systems	26
Fuji TouchKit Control Panel	29
Wireless LAN Driver Installation.....	30
Wireless LAN Driver Installation for all Windows Operating Systems (Optional)	30
Chapter 4	31
Specifications	31
MP-3525 Specifications	31
Chapter 5	33
Troubleshooting	33
Touch Panel Does Not Work.....	33

<i>ELO Touch Panel Cannot Calibrate Correctly</i>	<i>33</i>
<i>Cannot Detect HDD</i>	<i>33</i>
<i>PS/2 Keyboard Is Not Functioning Normally</i>	<i>34</i>
<i>LAN Is Not Functioning Properly.....</i>	<i>34</i>
<i>COM1, COM2, COM5 Are Not Functioning Properly.....</i>	<i>34</i>
<i>Cash Drawer Port Is Not Functioning Properly.....</i>	<i>34</i>
<i>USB Device Is Not Functioning Properly.....</i>	<i>34</i>

Chapter 1

Introduction

MP-3525 Introduction

To reach the balance of budget-saving and strong requirement for product quality, MP-3525 is designed with quality-oriented and cost-effective concept. Fanless as it is, MP-3525 provide a decent choice for noise-free environment applications with optimized product reliability.

Main Features:

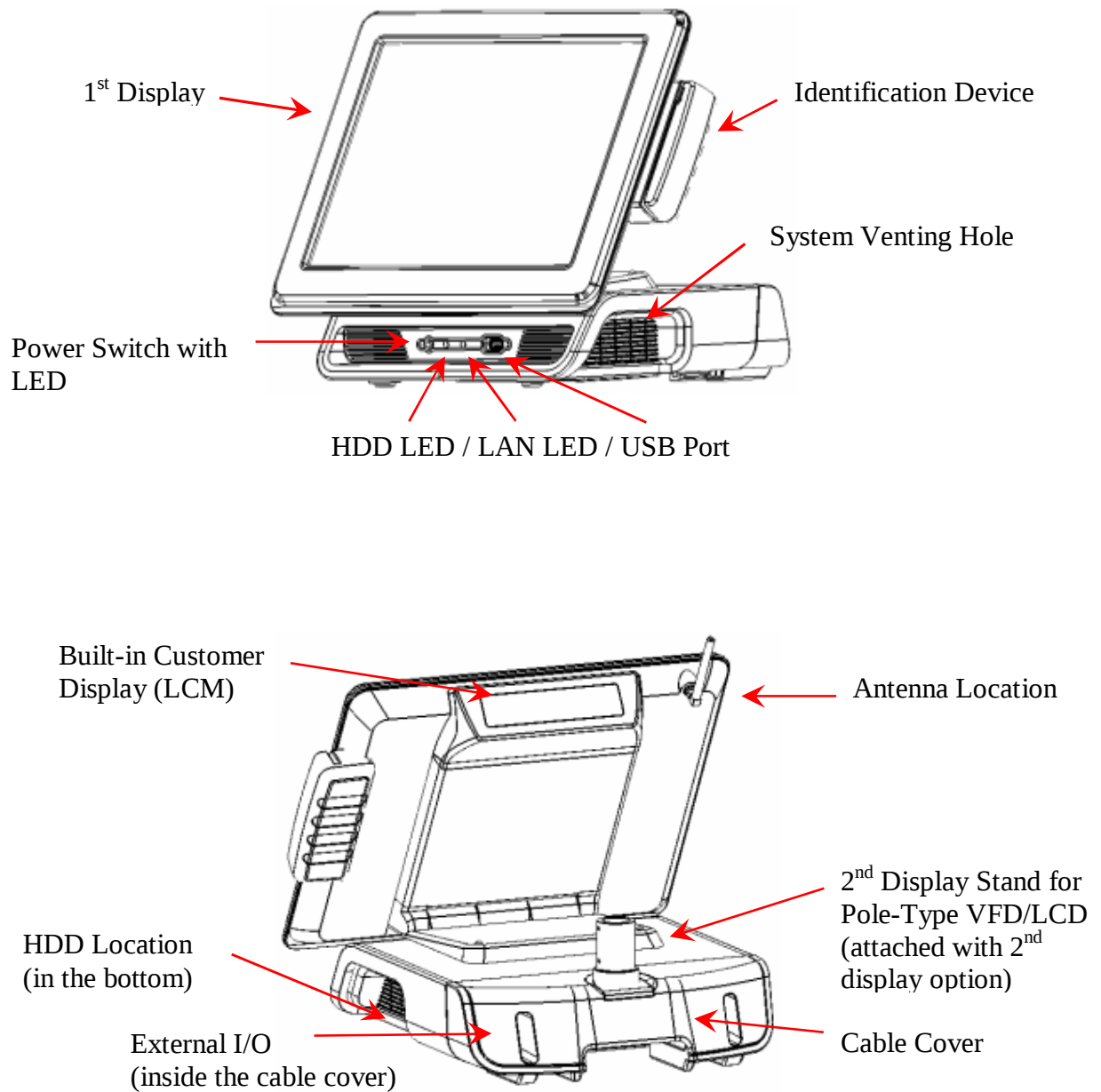
- The most cost-effective solution with built-in customer display and 12VDC out for 2nd display connection without extra adaptor needed.
- Fanless solution for green and noise-free environment.
- Easy maintenance for system parts, such as HDD, CF, and RAM...etc.
- Sufficient I/O access for various connection requirements.
- Integrated cable cover for supporting pole-type VFD / LCD display.
- Compliant with IP54 front panel standard



MP-3525 w/ cable cover & MCR

A Quick Tour for MP-3525

Before you start, take a moment to become familiar with **MP-3525**.



MP-3525 Dimension



Rear I/O Panel



I/O Port	Connector Type	Description
	Earphone connector	Connect the speakers to this port
	USB type A connector	Standard USB connector for external device
	DC-in connector	Connect the power adaptor to this port
DC OUT	12V DC-out connector	This DC-out port can sustain the power of the monitor or any other devices which need 12V DC power input.
	VFD / RJ45 connector	This RJ45 port can be used to attach a VFD customer display or serve as an additional serial port (switching cable provided).
	RJ11 connector	Cash Drawer Connector, 12 V actuation support
	PS2 connector	Connect the keyboard or mouse to this port
	D-SUB 9 connector	The serial ports COM1/COM2 can be used to connect devices such as a printer or a fax/modem.
	Parallel 25-pin LPT Connector	The standard LPT (D-SUB 25 pin) connector for connecting POS printers or KeyPro solution
	RJ45 connector	Connect MP-3525 to the Ethernet
	D-Sub 15 Pin Connector	The VGA port is used for connecting LCD or CRT monitors

Packing List

- MP-3525 Main System x 1
- Power Adaptor x 1 / AC Power Cord x 1
- Driver & Manual CD x 1
- COM port switching cable (RJ45 to D-SUB 9 pin) x 1

Optional:

- Pole-type Customer Display
- MCR
- Built-in LCM Customer Display Module
- WiFi Wireless Module

Chapter 2

Hardware Installation and Upgrading

Warning!

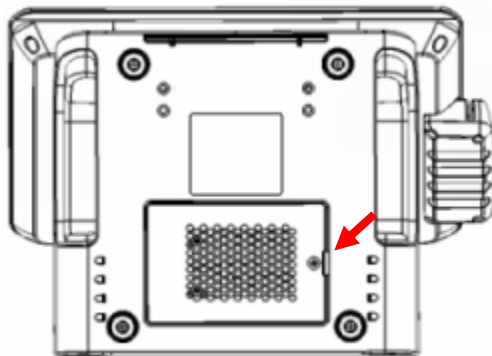


Do not remove the rear cover until you have verified that no power is supplied to the system. Power must be switched off and the power cord must be unplugged. Every time you service the system, you should be aware of this.

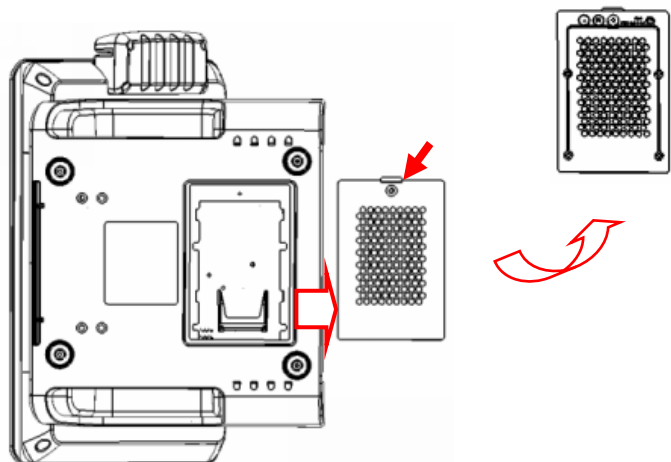
2.5" Hard Disk Drive Installation

1. Turn off power and remove power cord from the system

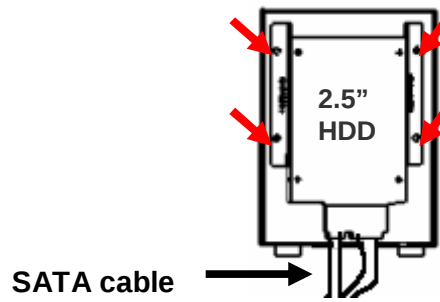
2. Unscrew the maintenance door at the bottom of the unit



3. Remove the door and flip it over



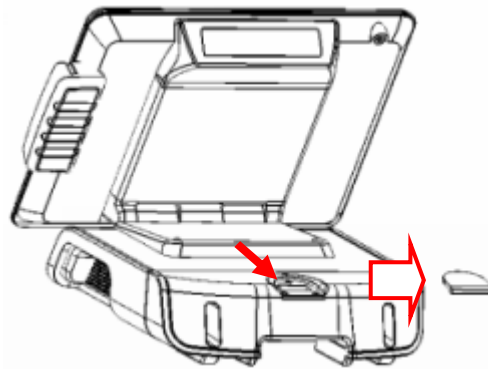
4. Place HDD kit on the door, fasten it with 4 screws and connect with the SATA cable.



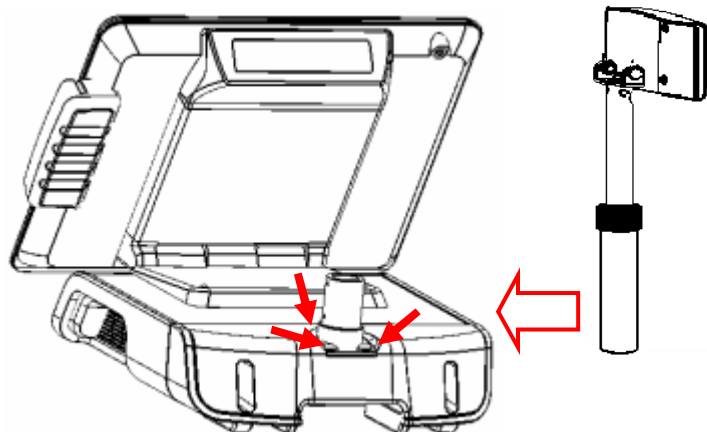
5. Restore the maintenance door to the system.
6. Fix the door with the screw.
7. Connect the power cord to the system.

Pole-Type VFD Installation

1. Remove the plastic cover on the cable cover



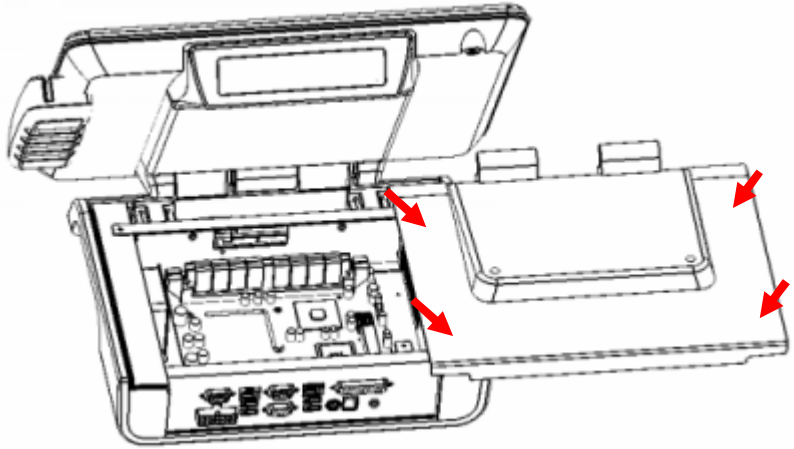
2. Fix the pole stand with screws and place the pole-type customer display to the stand



3. Connect the RJ45 or RS-232 (D-Sub 9) cable to the system.

Memory (DDRII RAM) / CPU / DOM Installation

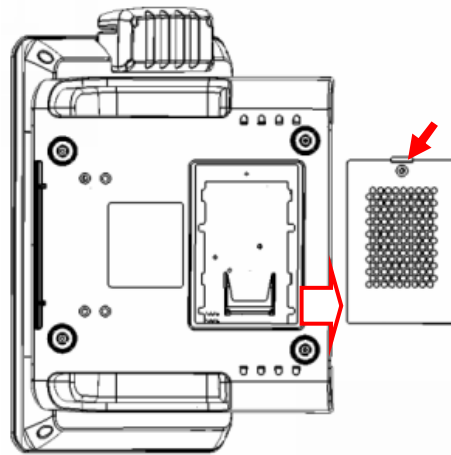
1. Unscrew and remove the top cover



2. Install the DDRII RAM or CPU you require
3. Restore the top cover

Compact Flash Card (CF) Installation

4. Unscrew and remove the maintenance door



5. Install the CF you require
6. Restore the maintenance door

MCR Configuration Modification

This option is for users who need to customize the MCR configurations for a particular task. To enter the Configuration Mode, please execute text editor program (such as Microsoft Word, Notepad...etc.) first, and then press [Ctrl] + [Alt] + [F10]. The following menu will appear accordingly.

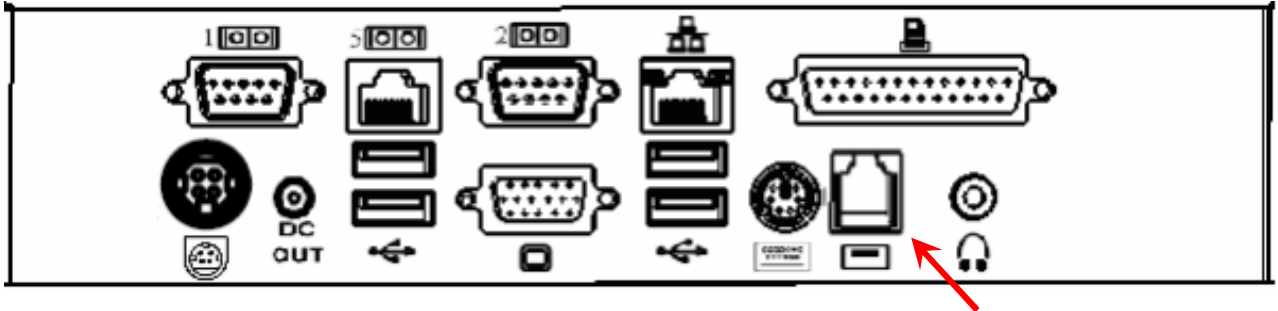
```
**** CONFIGURATION MODE ****  
  
1:SET INTERFACE  
2:SET MAGNETIC STRING  
3:SET STRING EDITING  
4:SET BUZZER  
5:RESET TO DEFAULT  
6:SHOW STATUS  
7:SET KEYBOARD CONFIGURATION  
0:EXIT SETUP MODE
```

For detailed instruction, please refer to the MSR212 Programmer's Manual under the path below in the driver CD: Utility\Pos Utility\MCR util\Uniform

Cash Drawer Installation

Before connecting the cash drawer to the **MP-3525**, please make sure the drive voltage and cable pin assignment of the cash drawer matches the definition of the cash drawer port of **MP-3525**. Please refer to the mother board (FEB-7100) manual GPIO part for more information. For programmers, please refer to the folder “Utility” → “Pos Utility” → “Cash Drawer” in the driver CD, where you may find the test programs and DLL Library files for your application.

Plug cash drawer cable into the cash drawer port.



Note: If the cash drawer cannot be detected by the system, please refer to [troubleshooting](#).

Up to two cash drawers may be driven from this port. Driving voltage of the solenoid is DC+12V. I/O port 2F is used for drawer operation. A test program is supplied, for Linux and Windows, source code of which is available on request by software developers.

To test for drawer open, read port **2F**, if bit 0=1 then drawer is open, if bit 0=0 drawer is closed. Before testing the cash drawer function, ensure to initiate the GPIO port first referring to the command sets below:

```
initGPIO=2e,87,2e,87,2e,07,2f,07,2e,f1
```

(2e stands for the address while '87', '07', 'f1' stands for the value to the address. All the values here are hexadecimal.)

Chapter 3

Software Installation and Setup

MP-3525 comes with a variety of drivers for different operating systems. You may find the system CD with all the necessary drivers and utilities.

Please follow this installation sequence.

Driver installation sequence:

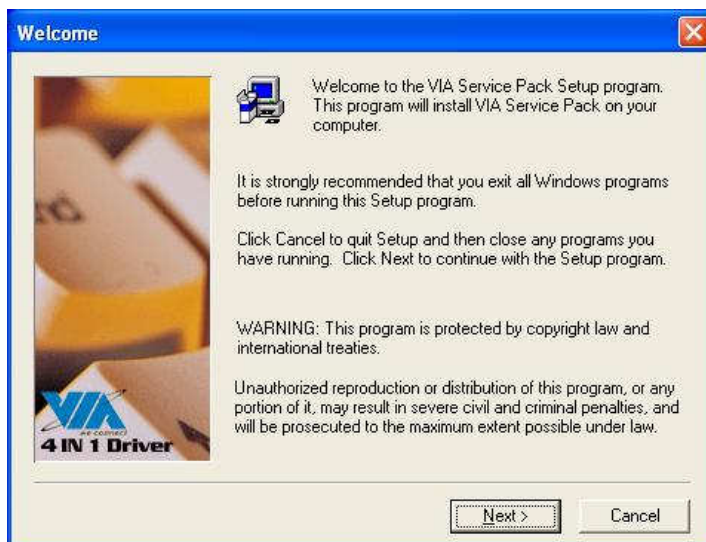
Chipset Driver -> VGA Driver -> LAN Driver -> Audio Driver -> Touch Tools

The reason to follow our sequence is that IRQ settings will be changed by Windows XP to non supported values, and you may encounter unnecessary problems later.

Chipset Driver Installation

Chipset Installation Utilities for Windows XP

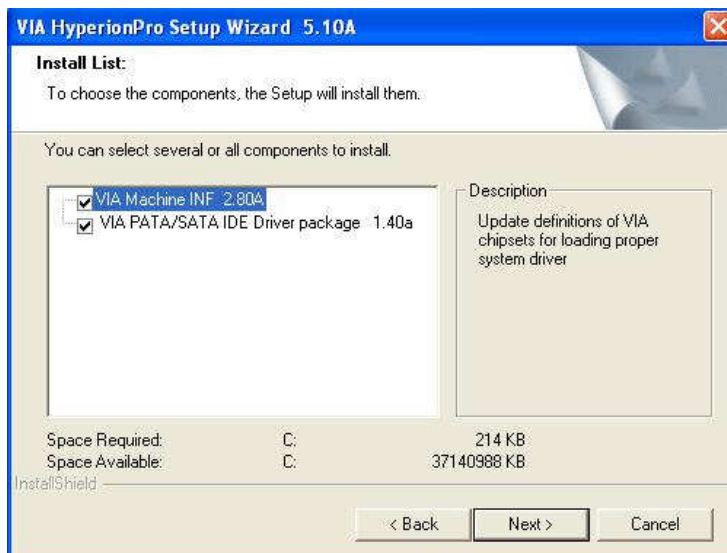
1. Locate :\\Chipset folder
2. Run **Setup.exe**



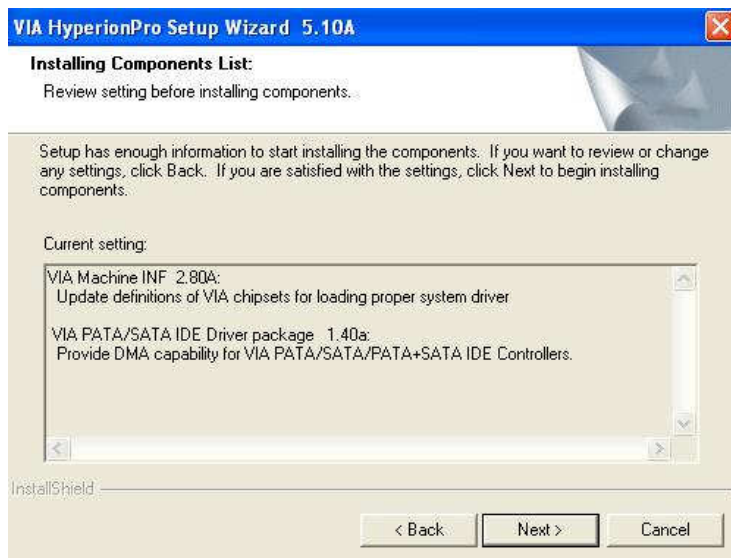
3. Click **Next**



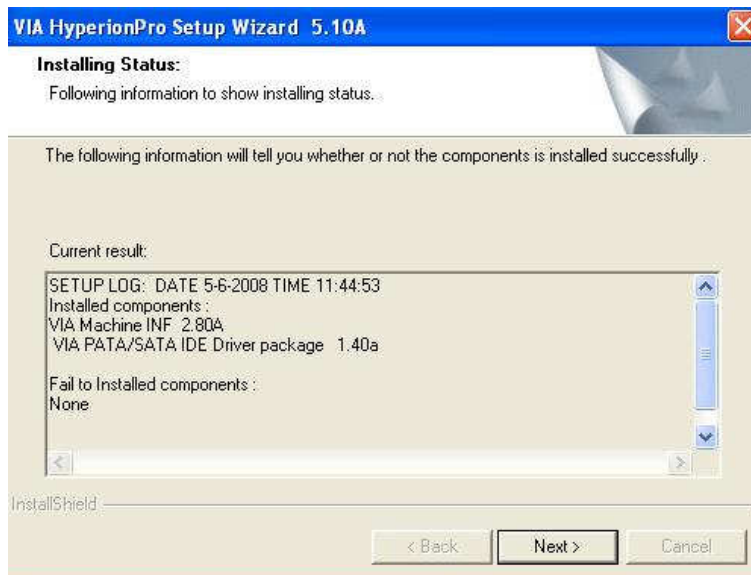
4. Click "I Agree"



5. Click Next



6. Click Next



7. Click Next



8. Click **Finish** to complete the installation.

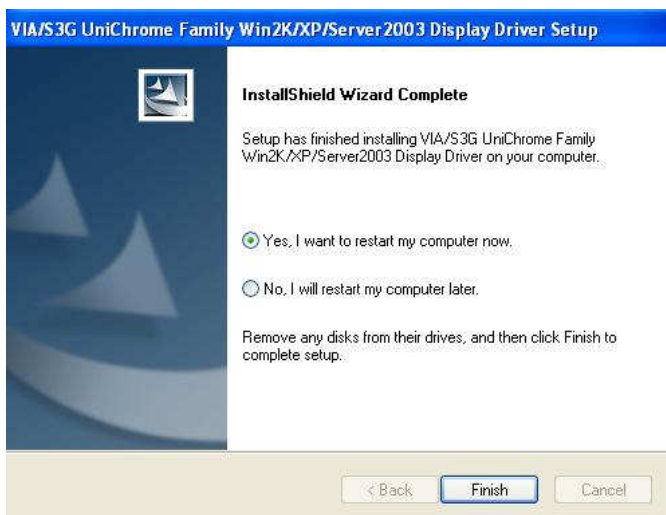
VGA Driver Installation

VIA/S3G driver installation Windows 2000/XP

1. Open **D:\VGA\VIA\ Twister\WIN2K&XP** folder.
2. Run **Setup.exe**.



3. Select **Next** to continue.



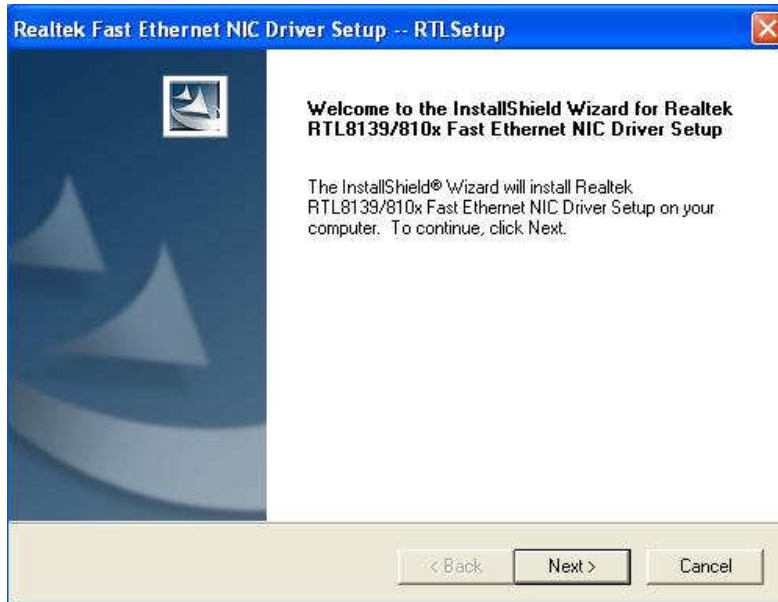
4. Click **Finish** to complete the installation procedure and restart the system.

LAN Driver Installation

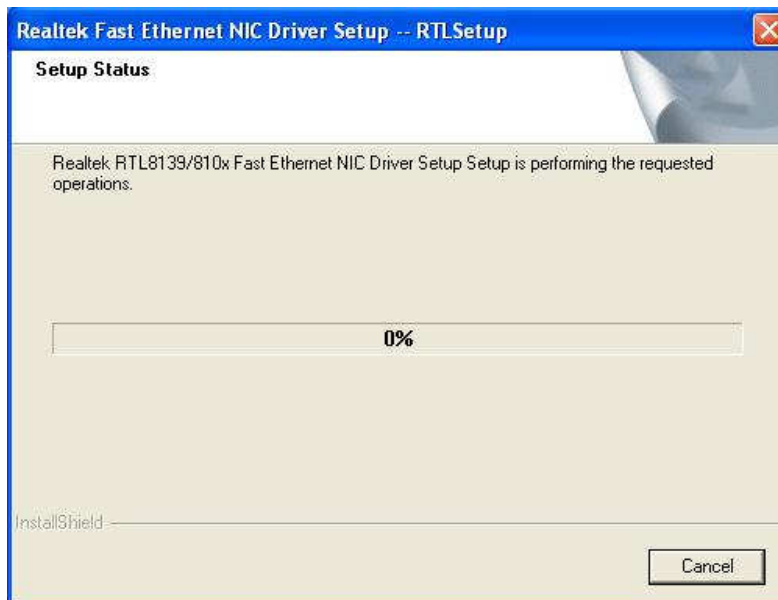
Realtek RTL8139/810x LAN Driver Installation Windows XP

1. Open Device Manger in the System Properties.

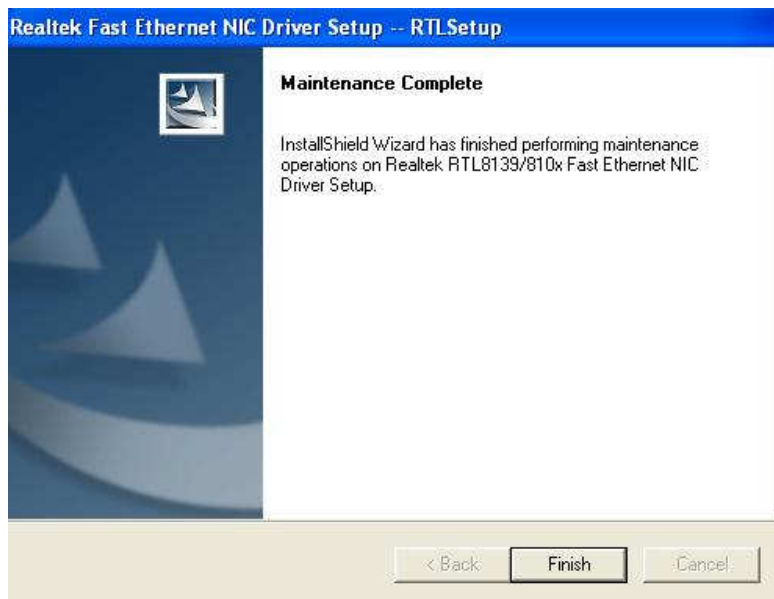
Select **PCI Ethernet Controller**



2. Click **Next**



3. Wait for the installation procedure.

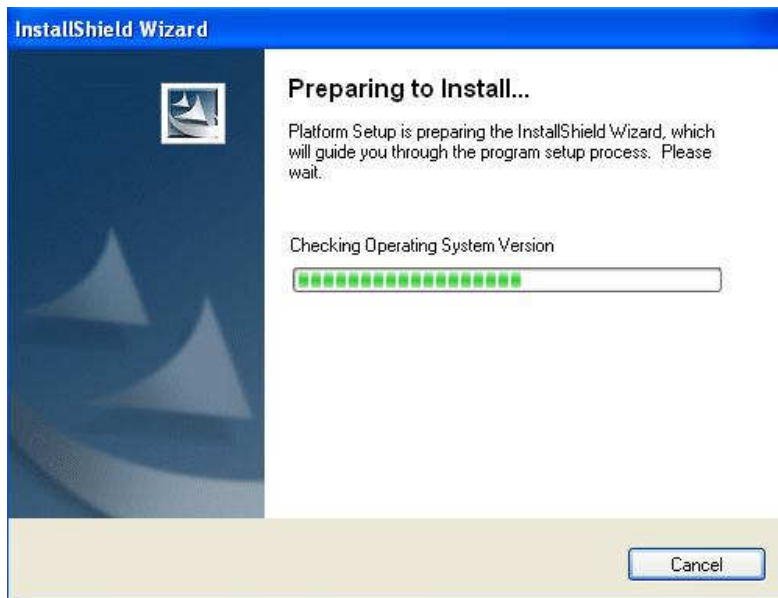


4. Click **Finish** to complete the installation procedure and restart the system.

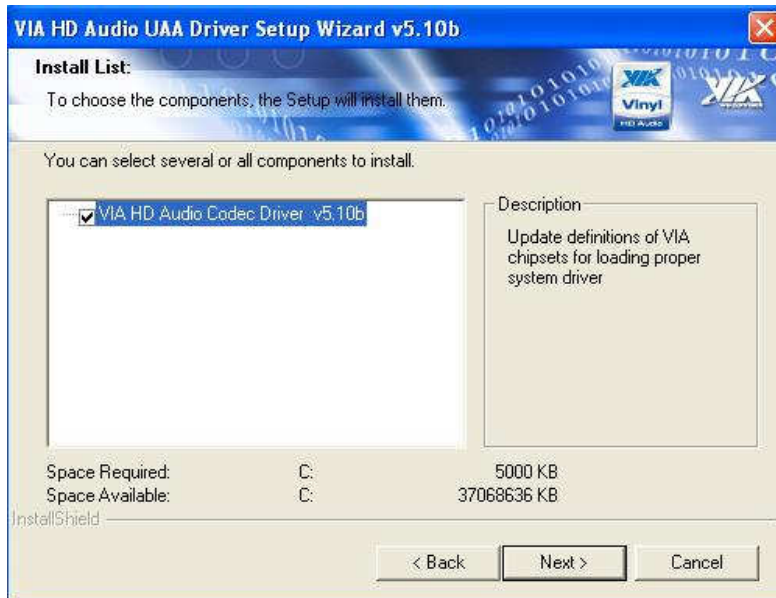
Audio Driver Installation

Audio Driver Installation for all Windows Operating Systems

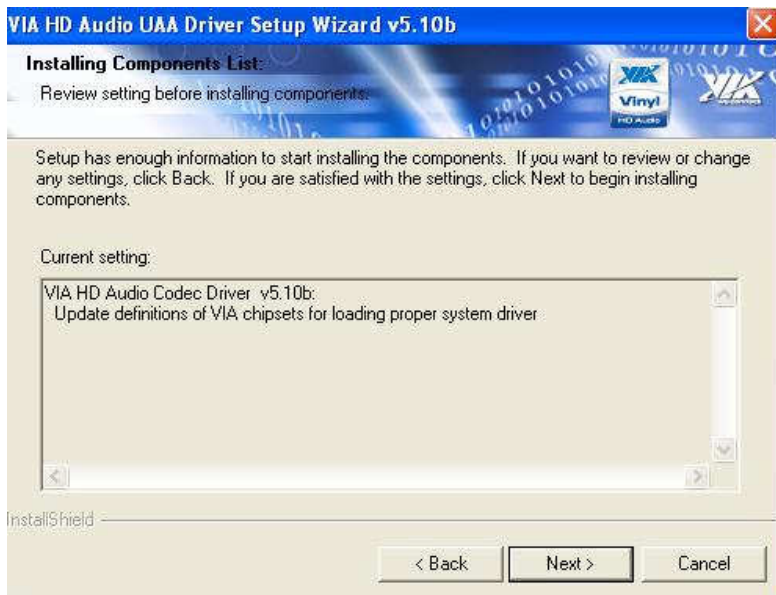
1. Open D:\AUDIO
2. Run **SETUP.EXE**



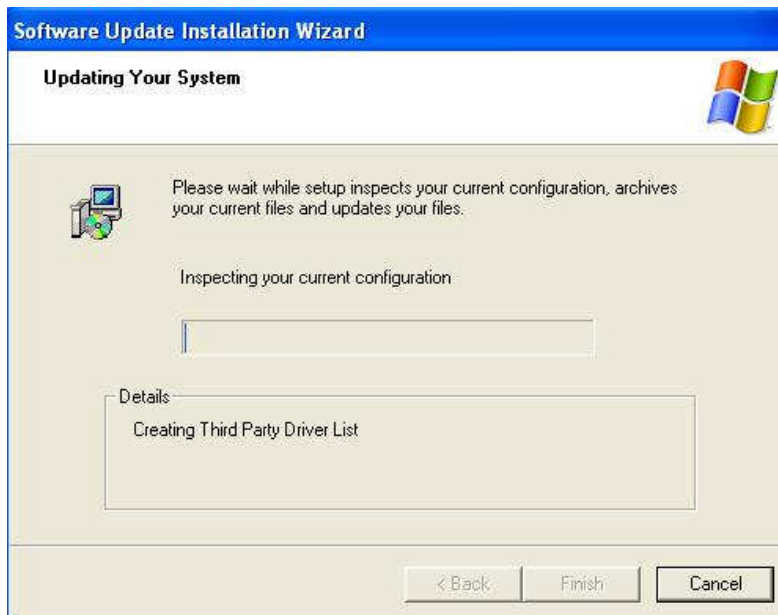
3. Click **Next**



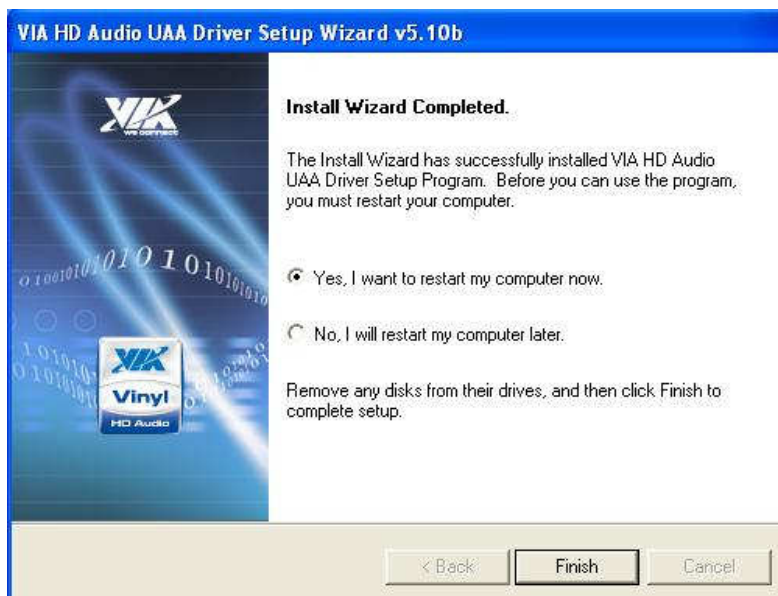
4. Click Next



5. Click Next



6. Wait for the installation procedure.



5. Click **Finish** to complete the installation procedure and restart the system.

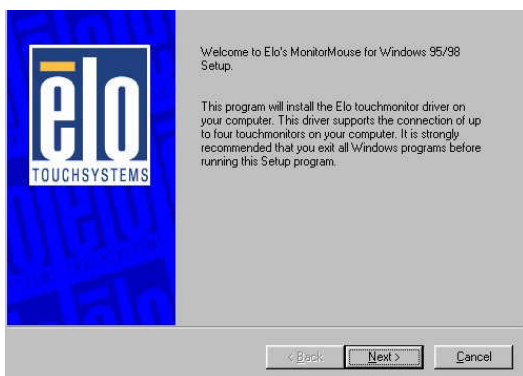
ELO Touch Tools Installation

ELO Touch Tools Installation for all Windows Operating Systems

1. Locate **D:\TOUCHSCREEN\ELO Touch**
2. Select the relevant ELO folder for the operating system that you are using.

Example. If you are installing for a Windows 98 system, then select **Elo Win9x_Me**. If you are installing under Windows 2000 or XP then select **Elo Touch 2K_XP**

3. Run **Setup.exe**



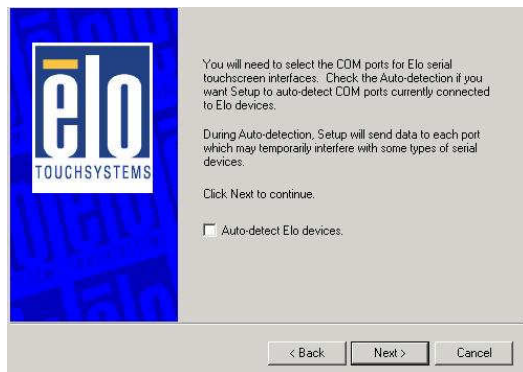
4. Click **Next**



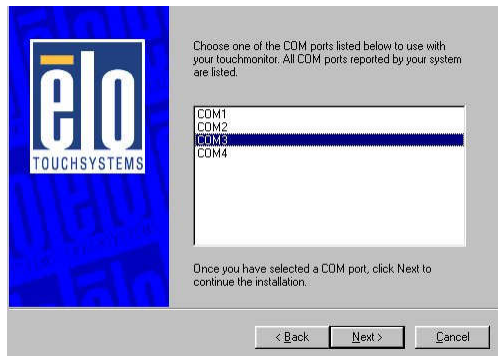
5. Check "Install serial Touch screen Drivers." And Click **Next**.



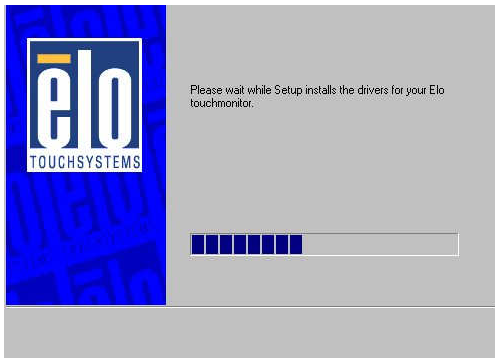
6. Read the **“License Agreement”** and click **Yes** if you accept it.



7. Select “Auto-detect Elo devices.” and click **Next**.



8. Select the COM port for the touch monitor. It is recommended that you select **COM3** for the touch screen, as this port is internally configured for touch operation.

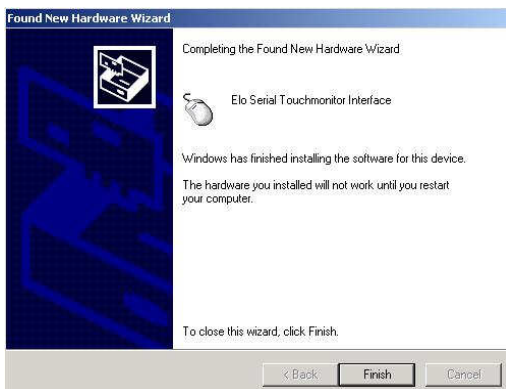


9. Wait until the ELO Touch Tools have been installed.



10. Select “View ELO touch screen control panel” and click **Finish**.

IT MAY BE NECESSARY TO RESTART YOUR COMPUTER TO UTILIZE YOUR TOUCHSCREEN FEATURES.



11. Click **NEXT** while this window appears after the system finishes rebooting.



12. Click **YES** to restart your computer again.

After the system finishes rebooting, follow the directions to calibrate ELO Touch Tools.

ELO Control Panel

This section explains the different options in the ELO control Panel.

General tab

The general tab allows you to:

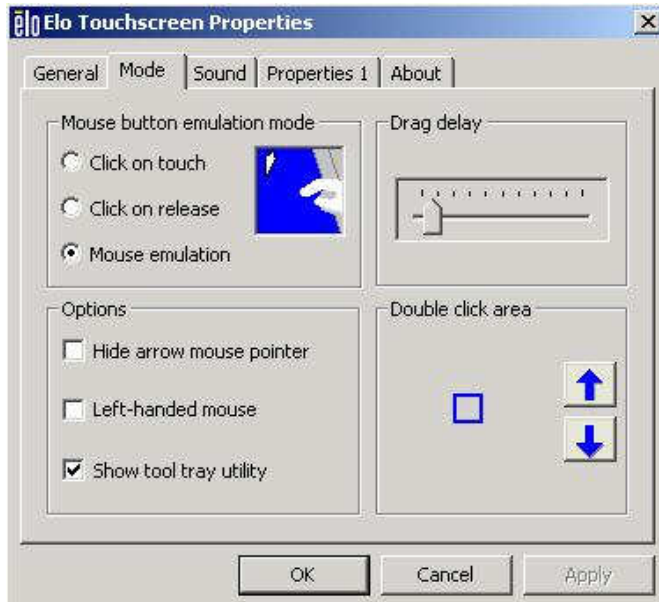
- Change the COM port your touch screen is set to.
- Calibrate the touch screen with the **Align** button.



Mode tab

The Buttons tab allows you to:

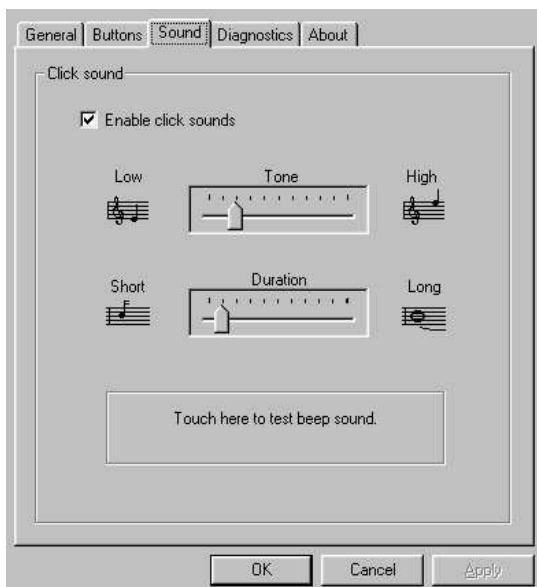
- Adjust all mouse emulation controls.
- Change cursor properties
- Enable or disable right mouse button utility.



Sound tab

The Sound tab allows you to:

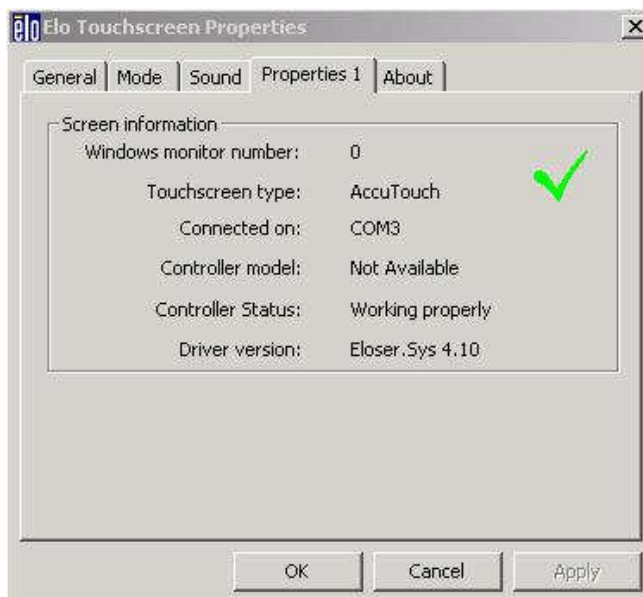
- To change sound properties for ELO touch tools.



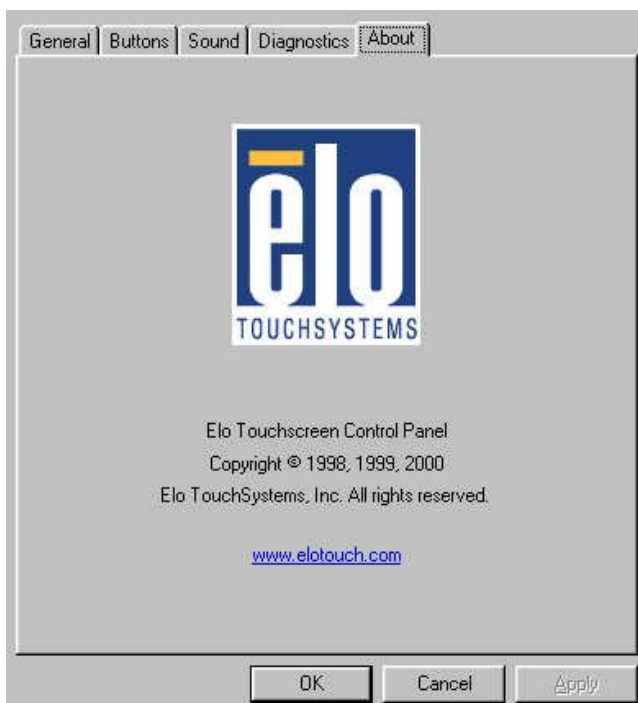
Properties tab

The Diagnostics tab allows you to:

- View Controller Information.

**About tab**

The About tab displays Information about ELO Touchsystems



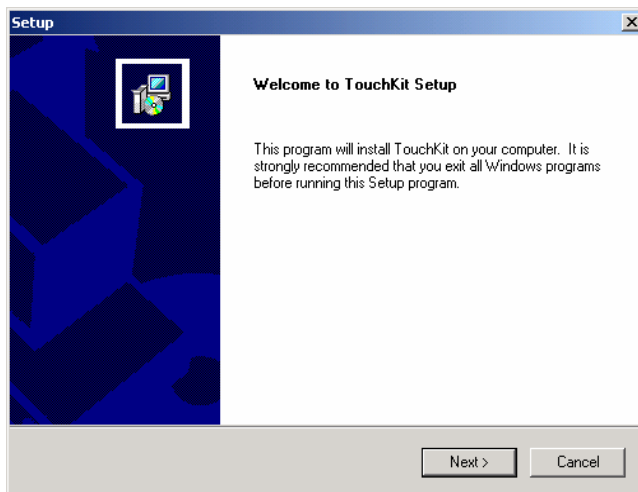
Fuji TouchKit Tools Installation

TouchKit Tools Installation for all Windows Operating Systems

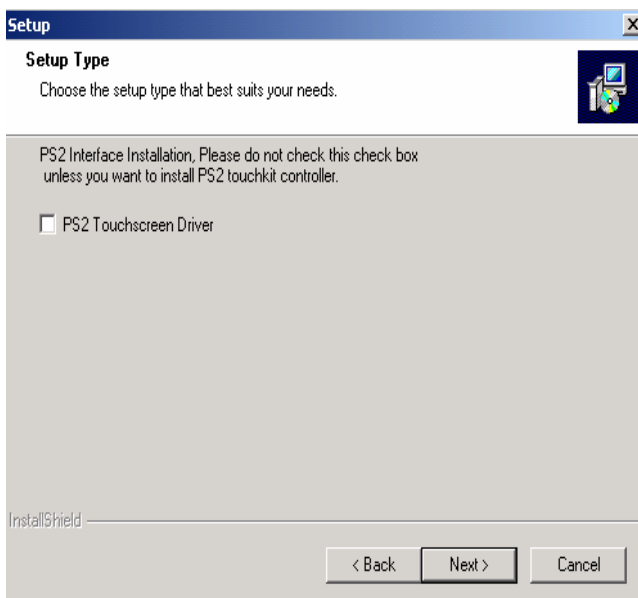
1. Locate **D:\TOUCHSCREEN\leGalax Touch\Driver**
2. Select the relevant eGalax folder for the operating system that you are using.

Example: If you are installing for a Windows 98 system, then select **Win9x_Me**. If you are installing under Windows 2000 or XP then select **Win2000_XP**

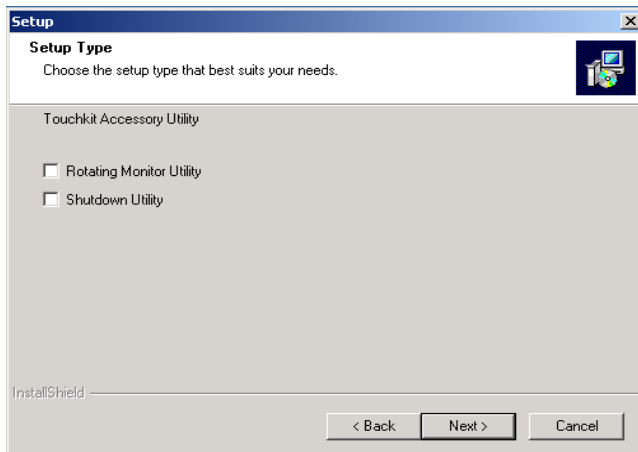
3. Run **Setup.exe**



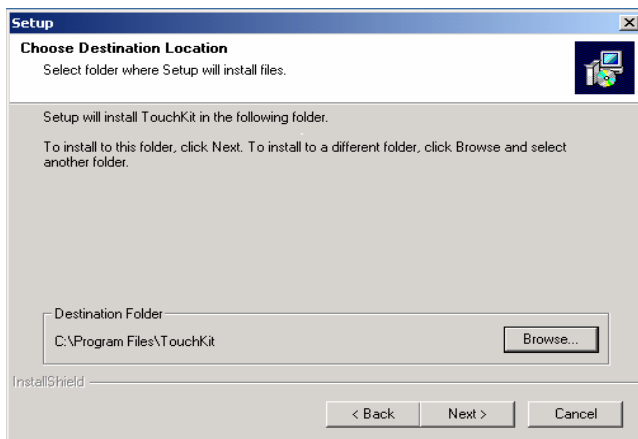
4. Click **Next**



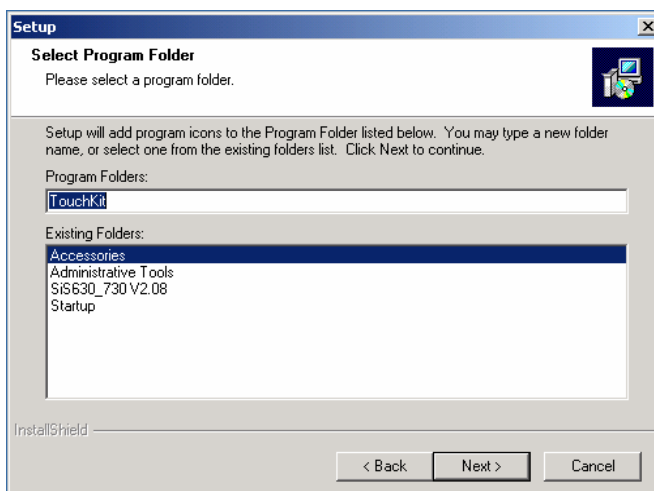
5. Click **Next**



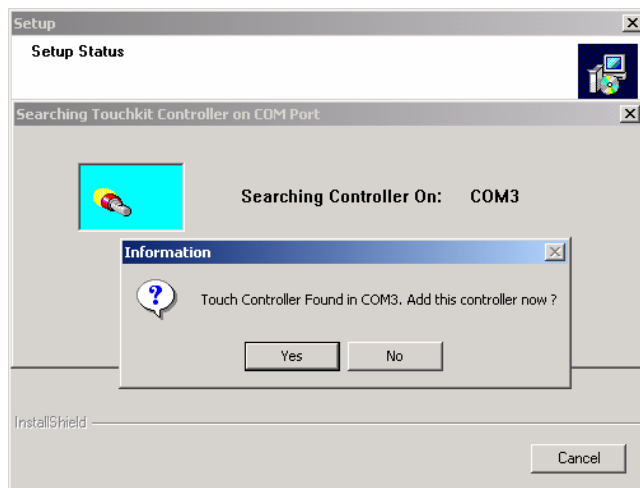
6. Click **Next**



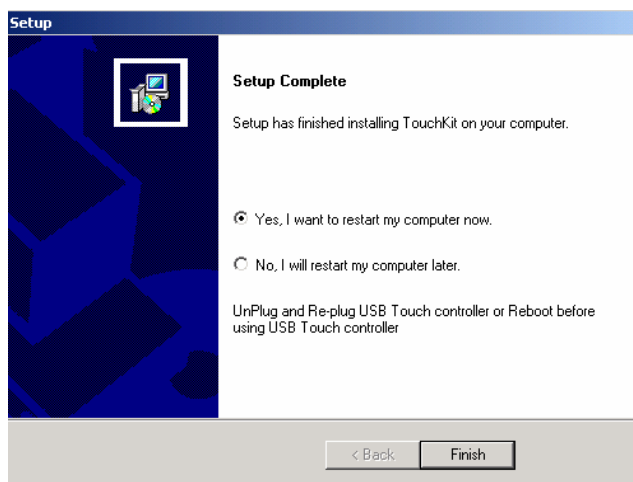
7. Click **Next**



8. Click **Next**



9. Click **Yes**



10. Click **Finish** to restart your computer again.

After the system finishes rebooting follow the directions to calibrate the Touch screen.

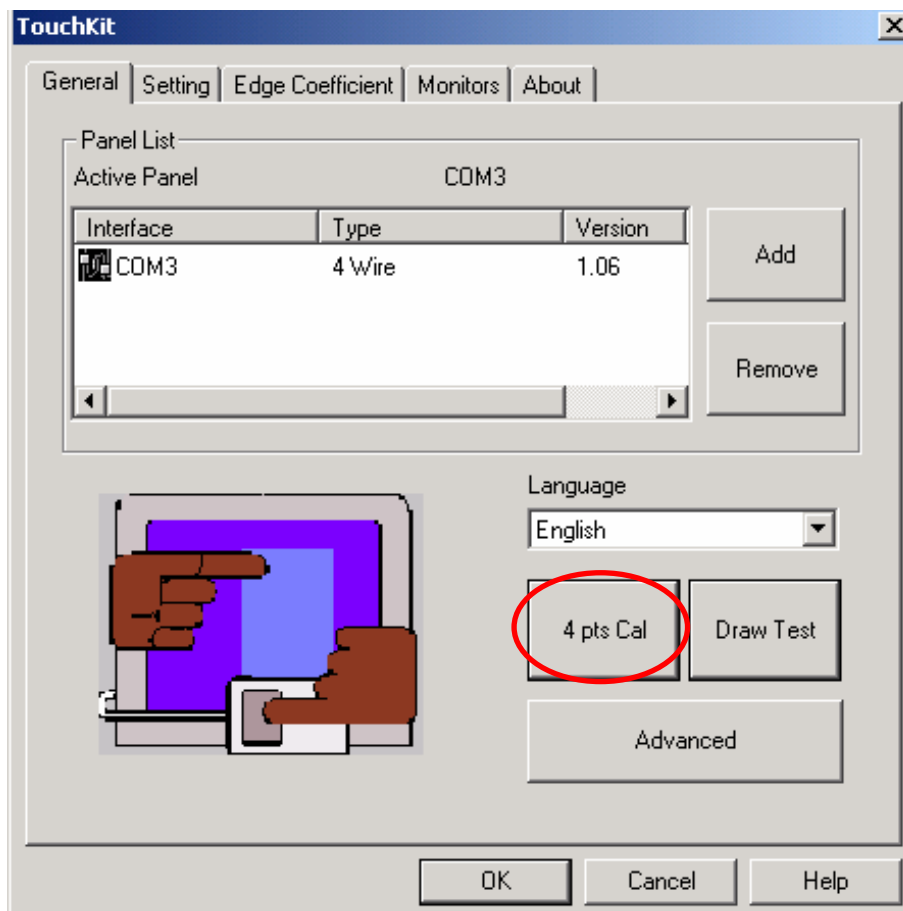
Fuji TouchKit Control Panel

This section explains the different options in the TouchKit control Panel.

General tab

The general tab allows you to:

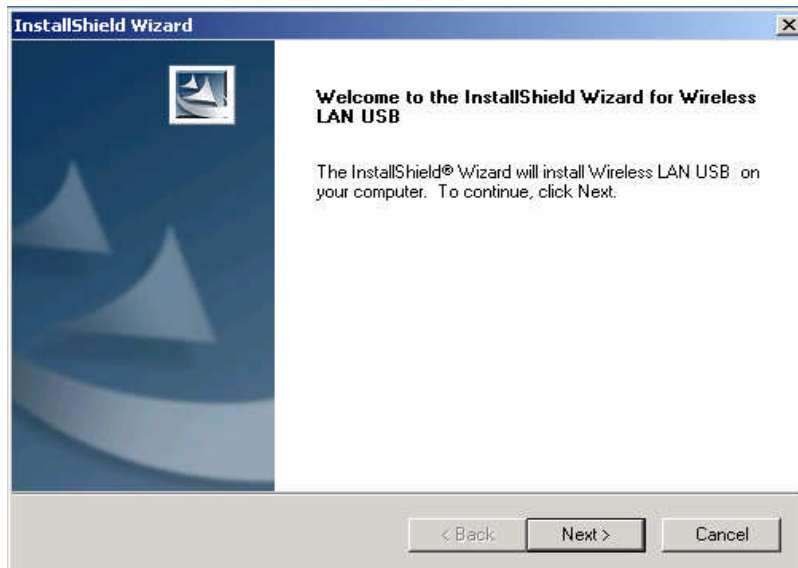
- Change the COM port your touch screen is set to.
- Calibrate the touch screen with the **4 pts Cal** button.



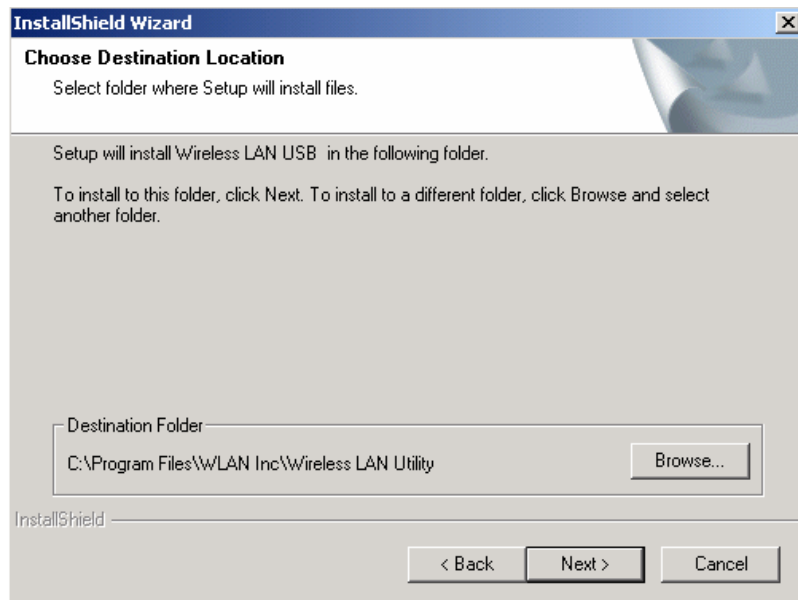
Wireless LAN Driver Installation

Wireless LAN Driver Installation for all Windows Operating Systems (Optional)

1. Open D:\Wireless LAN folder
2. Run **Setup.EXE**



3. Click **Next**



4. Click **Next**

Chapter 4

Specifications

MP-3525 Specifications

System Configuration	
CPU (On Board)	VIA Eden ULV 1.6GHz
Chipset	- VIA® CX700M - Winbond W83627EHG
Memory	- One 240-pin Long-DIMM DDRII socket (2 nd DIMM as optional) - Supports DDRII 400/533 SDRAM up to 1GB per channel
VGA controller	- CX700M Integrated 3D / 2D / Video Processors - Pixel Resolution up to 1920x1400 - Support D-Sub 15Pin Connector
Primary LCD Panel	15" TFT LCD Panel (1024x768).
Primary Touch Panel	15" with 4-wire / 5-wire Resistive Touch Panel
Storage	Internal 2.5" Serial ATA 80GB hard disk drive as default Support type II Compact Flash™ Disk. IDE interface Support IDE-44 pin DOM
Speaker	Integrated 2W x 2 stereo system speakers
Power	150 watts external power adaptor
I/O Port	
Serial Port	3 User available COM ports (COM1, COM2, COM5). 2 System assigned COM ports (COM3 & COM4). ➤ COM3 for primary touch screen. ➤ COM4 for built-in LCM customer display 1 Reserved (COM6).
Enhanced Parallel Port	Support EPP/SPP/ECP
USB port	6 USB 2.0 ports (1*Internal, 5*External)

MP-3525

Cash drawer port	RJ11 Cash drawer port,12V actuation.
Keyboard Port	One PS/2 keyboard port.
LAN Port	10/100M Base-T Ethernet Controller, Realtek RTL8100C
VGA Port	Standard D-SUB 15 Pin VGA Port
Audio Port	VIA VT1708B HD Audio CODEC
Optional Features	
Customer display	➤ Built-in LCM module ➤ Pole-type VFD customer display ➤ Pole-type LCD customer display
MSR	External Magnetic Stripe Card Reader track 1/2/3
Wireless	➤ Internal WiFi Module(USB)
Power Consumption	
Power consumption	20 – 30W (Standard system while running programs and accessing HDD).
Operating temperature	
Operating temperature	0 °C ~ 40 °C

Chapter 5

Troubleshooting

Please note that the following troubleshooting guide is designed for people with strong computer hardware knowledge such as System Administrators and Engineers.

Touch Panel Does Not Work

- A) Check CMOS settings, COM3 needs to be “Enabled”.
- B) Check if there are no conflicts between COM3 and any other devices.
- C) Check if the ELO driver or the TouchKit driver has been properly installed. Or try to re-install again (Please refer to the ELO driver installation or the TouchKit driver).
- D) Check if the ELO controller or the TouchKit driver on COM3 has been detected during the ELO driver or the TouchKit driver installation. If yes, then check if the flat cable from the ELO touch screen or the TOUCHKIT touch screen has been properly connected to the ELO controller or the TouchKit controller (**Attention:** Pin1 mark should be on the same side as the ELO controller).
- E) Check if the ELO controller Green LED is blinking?
If no, there is no DC+5V support for the ELO controller from the motherboard.
- F) Touch screen controller could be defective or the touch panel could be defective.

ELO Touch Panel Cannot Calibrate Correctly

- A) Please replace the ELO controller, and re-calibrate. If this works, change back to the original ELO controller, and re-calibrate.
- B) If the ELO touch panel still cannot calibrate correctly after changing to a new ELO controller, the touch panel may be not installed properly or it could be defective.

Cannot Detect HDD

- A) SATA cable is not connected properly to main board or it could be defective.
- B) HDD power cable is not connected properly to the main board or it could be defective.
- C) Check CMOS setup, set SATA HDD to Auto Detect.
- D) On-board SATA port could be defective.

PS/2 Keyboard Is Not Functioning Normally

- A) Make sure the keyboard is properly connected to the PS/2 keyboard port before the system is powered up. If the keyboard is connected after Windows2000 has been booted, the keyboard will not work.
- B) Check that the LED on the keyboard goes on then off after power on. If yes, the keyboard is getting power correctly.
- C) The main board could be defective.

LAN Is Not Functioning Properly

- A) Check if the LAN driver is installed properly.
- B) Check if there are any IRQ conflicts.
- C) Check if the RJ45 cable is properly connected.
- D) The on-board LAN chip could be defective.

COM1, COM2, COM5 Are Not Functioning Properly

- A) Check if the I/O ports are enabled in the CMOS setup.
- B) Check if there are any IRQ conflicts.
- C) The main board or I/O cable could be defective.

Cash Drawer Port Is Not Functioning Properly

- A) Make sure the pin assignment matches between the cash drawer and the RJ11 cash drawer port.
- B) Verify if the digit I/O port address and bit are correct.
- C) The main board could be defective.

USB Device Is Not Functioning Properly

- A) Ensure that the USB controller is “enabled” in the CMOS setup.
- B) Ensure that the USB Legacy is “enabled” in the CMOS setup. (Windows 2000 、 Window XP Professional)
- C) Ensure that the USB Legacy is “Disabled” in the CMOS setup. (Embedded OS: Windows XP Embedded 、 Window CE. NET 、 Linux RedHat 9)