

CP-2010 Series

Price Checker POS System



User Manual

Before installing and operating the unit, please read this user manual thoroughly and retain for reference.

How to Use This Manual

This manual contains information to set up and use the CP-2010. In addition, instructions are included for added hardware, software, upgrades, and optional items.

- Chapter 1** An introduction to what you find in the CP-2010 and an overview of product specifications, appearance, and interface.
- Chapter 2** Detailed installation information for the base unit and upgrades, including the CPU Module, HDD and SD card.
- Chapter 3** Mounting procedures for optional devices, such as wall mount kit.
- Chapter 4** CP-2010 carry board diagrams, locations of jumpers, and connectors.
- Chapter 5** Installation instructions for the MSTI video driver, audio, LAN and touch screen tools.

**WARNING!**

Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.

**CAUTION:**

Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

**NOTE:**

Text set off in this manner provides important supplemental information.

Federal Communications Commission (FCC) Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential 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. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



NOTE:

Shielded interconnect cables and shielded AC power cables must be employed with this equipment to insure compliance with pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

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First Edition June 2010

Patents

Certificate No.: 01328466 (ROC patent)
Patents pending (European Union, Mainland China and USA)

Precautions

1. Please read these safety instructions carefully.
2. Keep this User Manual for later reference.
3. Disconnect this equipment from the AC outlet before cleaning. Do not use liquid or spray detergent for cleaning. Use only a moistened sheet or cloth.
4. For pluggable equipment, the socket outlet should be installed near the equipment and should be easily accessible.
5. Avoid humidity and moisture.
6. Install equipment on a stable surface.
7. Do not leave this equipment running in an enclosed or non-air-circulated environment, nor store in temperatures above 60°C. Such conditions may damage the equipment.
8. Ventilation openings on the unit are for air circulation and protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
9. Check the voltage of the power source before connecting the equipment to the power outlet.
10. Place the power cord so that it will not be stepped on. Do not place anything over the power cord. The power cord must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product.
11. All cautions and warnings on the equipment should be noted.
12. If the equipment is not used for a long time, disconnect the equipment from the power outlet to avoid damage.
13. Never allow any liquid into ventilation openings. This could cause fire or electrical shock.
14. Never open the equipment. For safety reasons, qualified service personnel should only open the equipment.
15. If one of the following situations may arise, get the equipment checked by qualified service personnel:
 - a. The power cord or plug is damaged.
 - b. Liquid has penetrated the equipment.
 - c. The equipment has been exposed to moisture.
 - d. The equipment does not work well or you cannot get it work according to the user manual.
 - e. The equipment has been dropped and damaged.
 - f. The equipment has obvious signs of damage.



WARNING! Not intended for outdoor use.



CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with same type, and discard used batteries according to manufacturer's instructions.

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Chapter 1 Introduction

Features

- 8.9 inch TFT touch screen
- Fanless operation
- 75mm VESA compatible installation
- Ideal for price checking, verification or stock checking
- IP65 sealed front touch panel
- 2 x COM, 4 x USB, 1 x SD
- RoHS compliant

Specifications

CP-2010 System Configuration

CPU (SOC)	MSTI PMX-1000 (Vortex86MX)1GHz, 4KB SDRAM inside
Cash Memory	256K 2nd Level Cache Memory
System Memory	512MB DDR2 SDRAM on board
SD Memory	Supports 1 x SD memory card slot (optional)
HDD	1 x internal 2.5 inch 160GB SATA hard disk drive
Power	1 x external 40W 12VDC power adapter (100~240VAC, 50~60Hz, 3.3A)
OS Support	Windows® XP Pro Embedded / WEPOS® / Windows® POS Ready 2009 / Linux®

LCD Touch Panel

Resolution Size	8.9 inch TFT LCD / 1024 x 600
Brightness	200cd/m ²
Touch Screen Type	5-wire resistive touch with RS-232 interface (optional)

I/O Ports

USB Ports	Supports 4 USB 2.0 ports for future expansion (Rear x 4)
Serial Ports	2 x external: COM1, COM3 (D-SUB) pin 9 RI/5V/12V selected by jumper 1 x internal: COM2 for touch screen
Parallel Port	1 x bi-directional parallel port (D-SUB25)
LAN Port	1 x Giga LAN (10/100/1000Mbps Base-T), RJ45 connector
Speaker	2 x internal stereo 2W speakers

A-50M Omni-directional Scanner

Light Source	650nm visible laser diode (VLD)
Depth of Field	0-200mm (UPC/EAN 100%, PCS=90%)
Scan Lines	20

Scan Pattern	5 directions of scan field
Scan Rate	1,200 scans per second
Minimum Bar Width	5mil @ PCS=90%
Interface	USB

A-52M 2D Imagine Scanner

Aiming Element	650nm visible laser diode (VLD)
Optical System	640 x 480 pixels (VGA type CCD)
Field of View	32.2° (horizontal); 24.5° (vertical)
Resolution	6.67 mil (PDF 417), 5mil (Code 39)
Print Contrast	30% @ UPC/EAN 100%
Image Format	BMP, TIFF, JPEG
Interface	USB

Mechanics and Environment

Construction	Plastic housing and metal
Dimensions	CP-2010 with A-50M :270(L) x 269(W) x 93(D) mm CP-2010 with A-52M :270(L) x 269(W) x 82(D) mm
Housing Color	Red/Black, Silver/Black
Net Gross Weight	1.8 Kg
Operating Temperature	0 °C ~ 40 °C
IP65	IP65 sealed front touch panel
EMI/Safety	CE, FCC, RoHS

Package Contents

The following items come standard with the CP-2010:

<p>CP-2010 System</p>		<p>Power Adaptor</p>	
<p>Utility and Main Board Chipset Driver CD</p>		<p>AC Power Cord</p>	

<p>Wall Mount Swing Arm Kit (optional)</p>			
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Base System and Options

Before you begin, take a few moments to become familiar with the CP-2010.

8.9 inch TFT LCD choices:

- LCD with tempered glass
- LCD with 5 wire resistive touch



Internal Speaker

I/O Panel

Scanner module choices:

- Omni-directional Scanner Module (shown)
- 2D Image Scanner Module

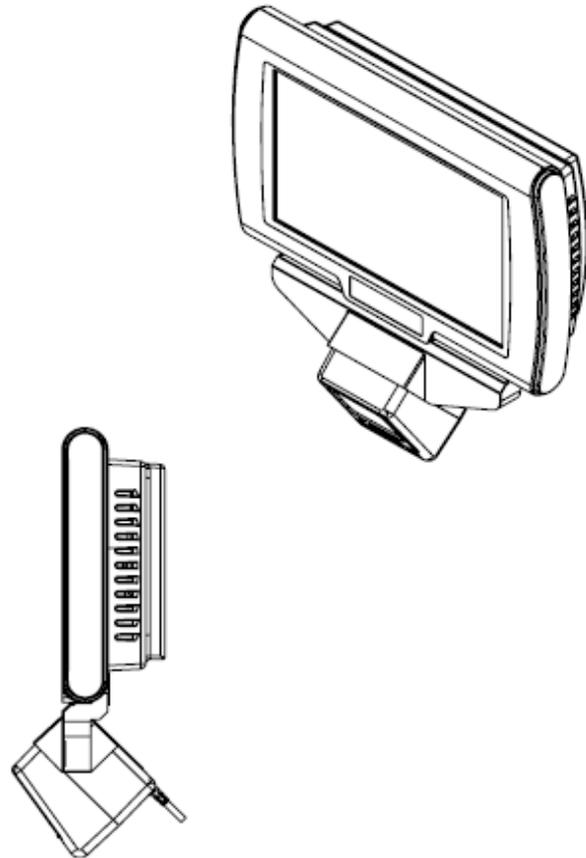
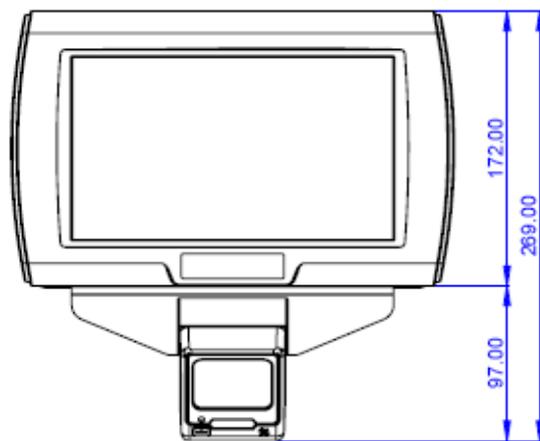
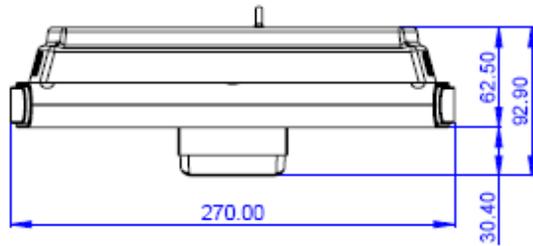
System Box



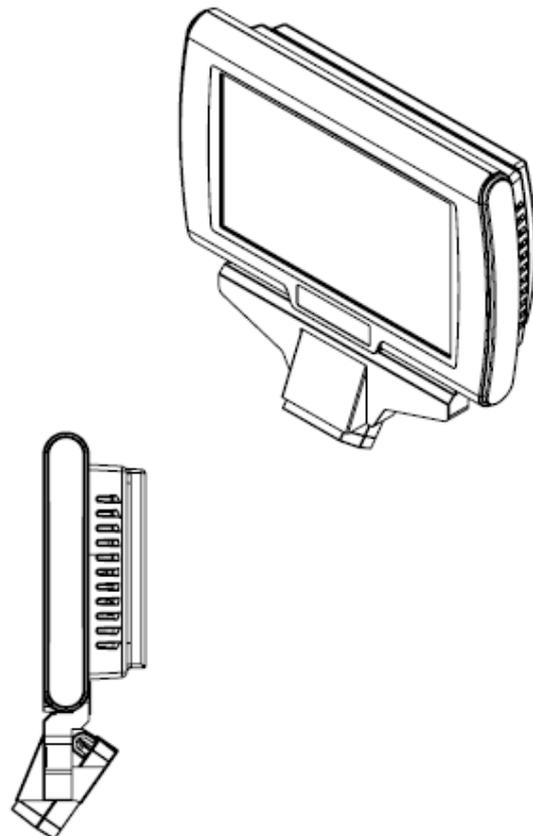
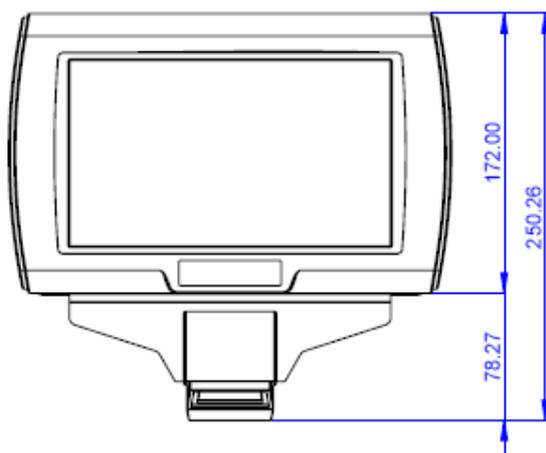
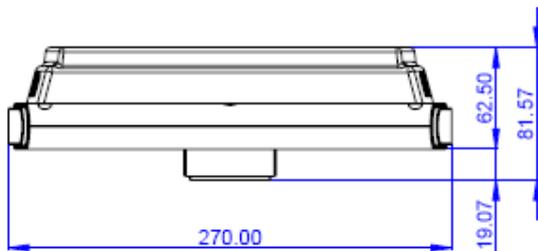
Dimensions

(Unit: mm)

CP-2010 and A-50M Dimensions

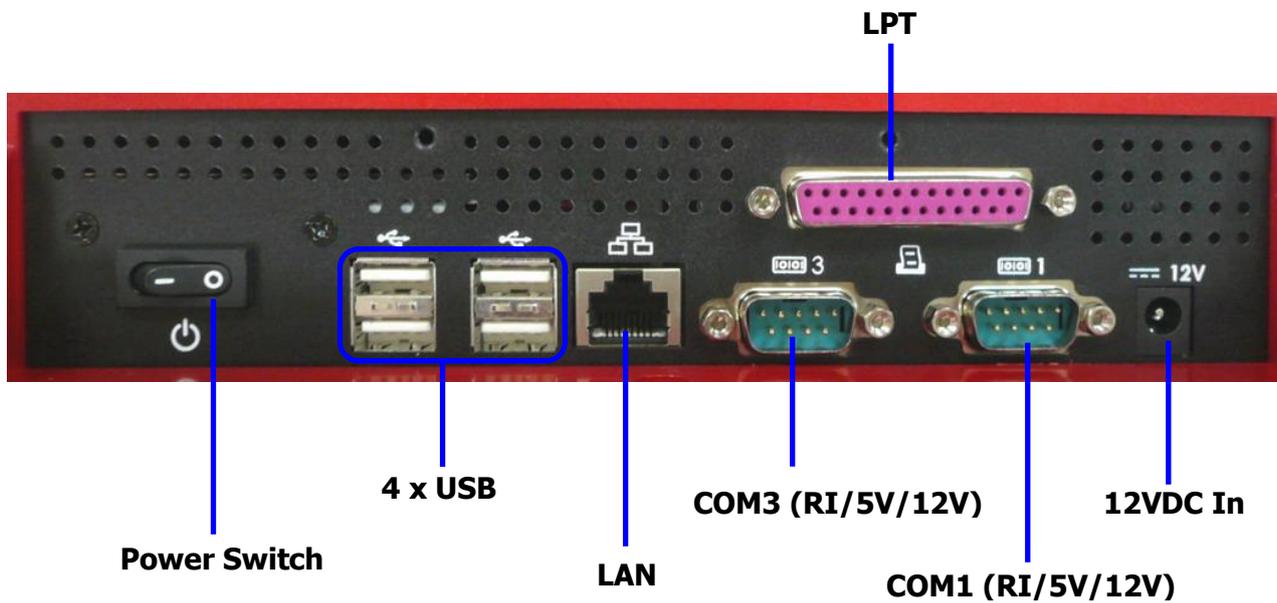


CP-2010 and A-52M Dimensions



Connector Panel

The CP-2010's primary connector panel is located at the rear.



Chapter 2 Standard Hardware and Upgrades

Precautions

Before performing hardware changes, be sure to carefully read all of the applicable instructions, cautions, and warnings in this guide.



WARNING!

To reduce the risk of personal injury from electrical shock, hot surfaces, or fire:

Disconnect the power cord from the wall outlet and allow the internal system components to cool before touching.

Do not plug telecommunications or telephone connectors into the network interface controller receptacles.

Do not disable the power cord grounding plug. The grounding plug is an important safety feature.

Plug the power cord in a grounded (earthed) outlet that is easily accessible at all times.



CAUTION:

Static electricity can damage the electrical components of the computer and/or optional equipment. Before beginning these procedures, ensure that you are discharged of static electricity by briefly touching a grounded metal object.

When the computer is plugged into an AC power source, voltage is always applied to the main board. You must disconnect the power cord from the power source before opening the unit to prevent damage to internal components.

Removing Scanner Module

1. Turn off the system power properly through the operating system, then turn off any external devices.
2. Disconnect the power cord from the power outlet and disconnect any external devices.



CAUTION:

Regardless of the power-on state, voltage is always present on the main board as long as the system is plugged into an active AC outlet. You must disconnect the power cord to avoid damage to the internal components of the system.

3. For easier access, place the main unit face down, and disconnect the scanner's USB cable from the CP-2010 USB port.



WARNING!

To avoid scratching the panel while dismantling the system, first place a piece of cloth or cushion on your work surface.

4. Loosen the three scanner retaining screws as shown, and lift off the scanner module.



Opening Bottom Covers



CAUTION: To prevent loss of work and damage to the system or drive:

If you are inserting or removing a drive, shut down the operating system properly, turn off the system, and unplug the power cord. Do not remove a drive while the system is on or in standby mode.

Before handling a drive, ensure that you are discharged of static electricity. While handling a drive, avoid touching the connector.

1. Turn off the system power properly through the operating system, then turn off any external devices.
2. Disconnect the power cord from the power outlet and disconnect any external devices.
3. Remove the scanner module.
4. Place the main unit face down. Then remove the three screws indicated at the rear of the unit.



CAUTION: To avoid scratching the panel while dismantling the system, first place a piece of cloth or cushion on your work surface.

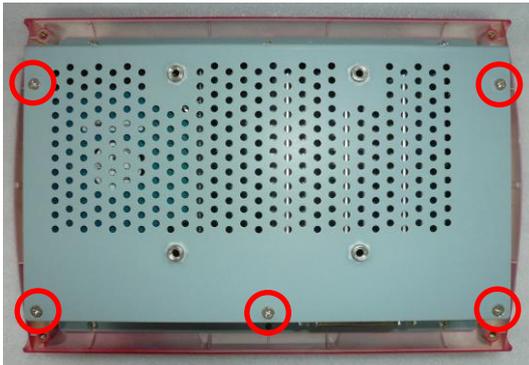
5. Lift off the plastic rear cover in the direction of the arrow.



6. Remove the two plastic side panels.



7. Remove the eight screws that secure the metal bottom cover to the main unit.



8. Lift off the metal bottom cover in the direction of the arrow.



CPU Module Replacement



WARNING! If the CPU Module has been unloaded, the real Date/Time, and BIOS settings have to reset every time to ensure the system boot normally.

1. Turn off the system power properly through the operating system, then turn off any external devices.
 2. Disconnect the power cord from the power outlet and disconnect any external devices.
-

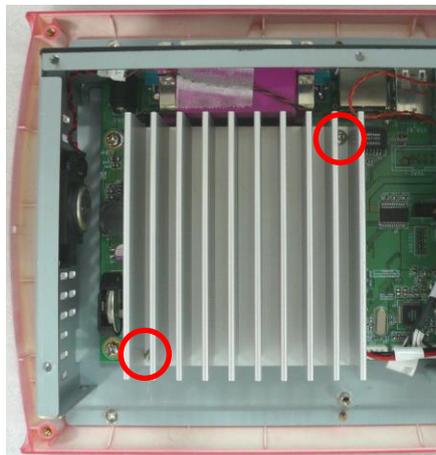


CAUTION: Regardless of the power-on state, voltage is always present on the main board as long as the system is plugged into an active AC outlet. The power cord must be disconnected from the power source before clearing the CMOS.



NOTE: All LEDs on the board should be OFF. Failure to ensure there is no power in the system may damage the main board. You must disconnect the power cord to avoid damage to the internal components of the system.

3. Remove the scanner module and detach the bottom covers.
4. Remove the two screws that secure the heatsink to the carry board, and lift out the heatsink.

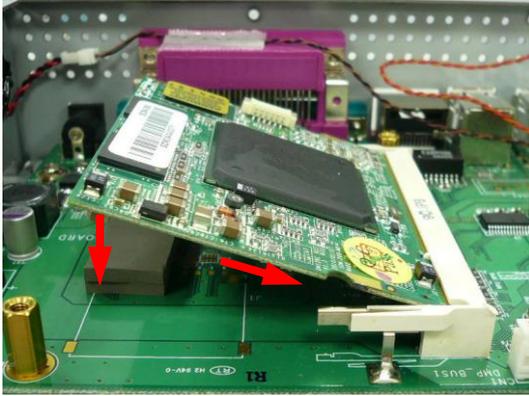


5. Pull the ends of both metal latches away from the CPU module card to release it.
-



NOTE: A CPU module card can be installed in only one way. Match the notch on the card with the tab in the socket.

6. Insert the replacement CPU module card into the socket, almost covering the gold contacts completely, then push the card down. If the card is fully inserted and properly seated, the metal latches will be in the closed position indicated.



7. Reattach the heatsink and make sure the heatsink bottom's thermal pad and the top of the CPU are in total contact to prevent the CPU from overheating. Overheating may result in unstable system performance.



8. Reattach the bottom covers and scanner module.
9. Reconnect the power cord and any external devices, then turn on the system. To load the default BIOS settings, press the **Del** key when the PC is starting.
10. Once you are in the BIOS, select '**Exit**' options page and navigate to the '**Load Optimal Defaults**', select '**OK**' to exit the item.
11. Next, navigate to the '**Load Failsafe Defaults**', select '**OK**' to exit the item.
12. Last, select the '**Main**' options page and navigate to the '**System Time**' and '**System Date**' lines, set the correct date and time. After this exit the BIOS, saving the changes.
13. After you load the defaults and reboot, re-enter the BIOS again, then manually configure the settings for best performance.

SATA Hard Disk Replacement



NOTE:

This system does not support Parallel ATA (PATA) hard drives.

Before removing the original hard drive, be sure to back up its data so that you can transfer the data to the replacement hard drive. Also, if you are replacing the primary hard drive, make sure you have a recovery disc set to restore the operating system, software drivers, and any software applications that were preinstalled on the system.

1. Turn off the system power properly through the operating system, then turn off any external devices.
2. Disconnect the power cord from the power outlet and disconnect any external devices.



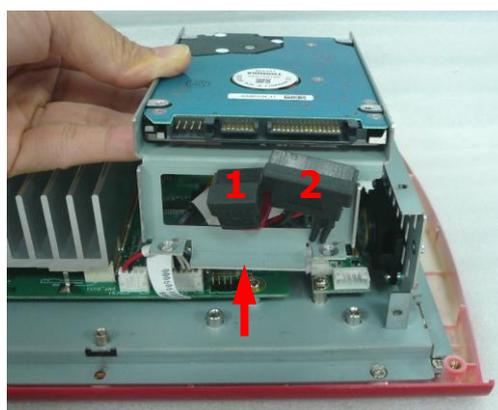
CAUTION:

Regardless of the power-on state, voltage is always present on the main board as long as the system is plugged into an active AC outlet. You must disconnect the power cord to avoid damage to the internal components of the system.

3. Remove the scanner module and detach the bottom covers.
4. Remove the four screws that secure the HDD holder.



5. Disconnect the data cable (1) and power cable (2) from the HDD, and remove the HDD holder.



6. From the sides of the HDD holder, remove all four screws and lift out the hard disk.



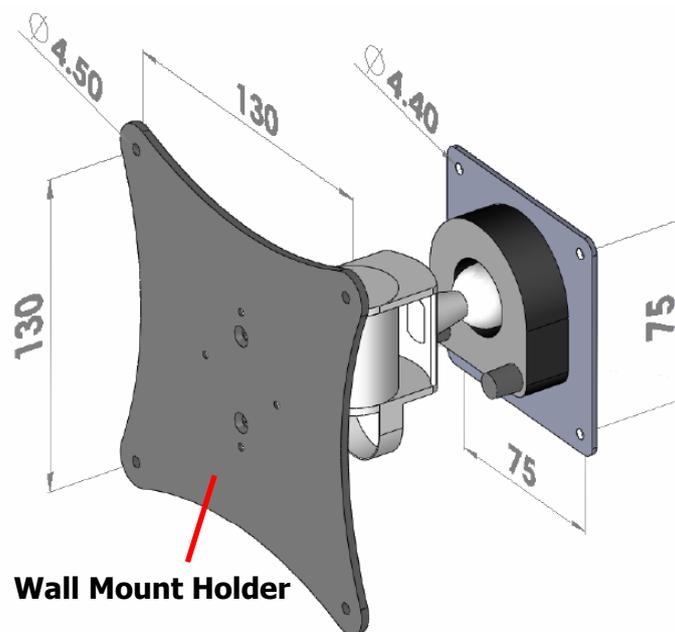
7. Insert the replacement hard disk into the HDD holder, and reattach the screws.
8. Replace the HDD holder back onto the main board.
9. Reattach the four screws that secure the HDD holder.
10. Reconnect the data cable and power cable.
11. Reverse the remainder of the steps to reattach the bottom covers.
12. Reconnect the power cord and any external devices, then turn on the system.

Chapter 3 Optional Components

Wall Mount Swing Arm Kit Installation

Select a flat surface of adequate strength, ensuring there will be proper ventilation and maneuvering space. Please use the right tools and accessories according to the surface material (drywall, concrete, solid wood, etc.) to securely support the system box. A fully equipped system may weigh up to 1.8 kg.

1. Drill four holes in the surface following the rectangular mounting plate layout as shown below. The rectangular drill pattern should be 130mm wide (horizontal) and 130mm high (vertical). Secure the swing arm to the surface with four screws.



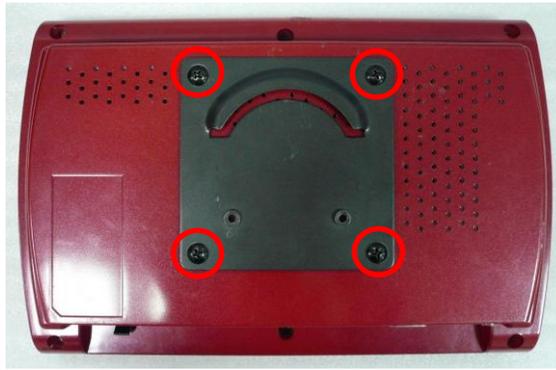
NOTE:

Wall mounting screws are not supplied, as different types of walls require different types of screws. Please be sure the mounting screws used can support the weight of the unit.

2. Next, prepare the arm to be attached to the CP-2010. Release the two thumb screws and remove the holder plate by sliding it in the direction of the arrow.



- Secure the holder plate to the main unit with four screws, as shown.



- Affix the main unit to the swing arm by sliding the holder plate back into its swing arm holder.

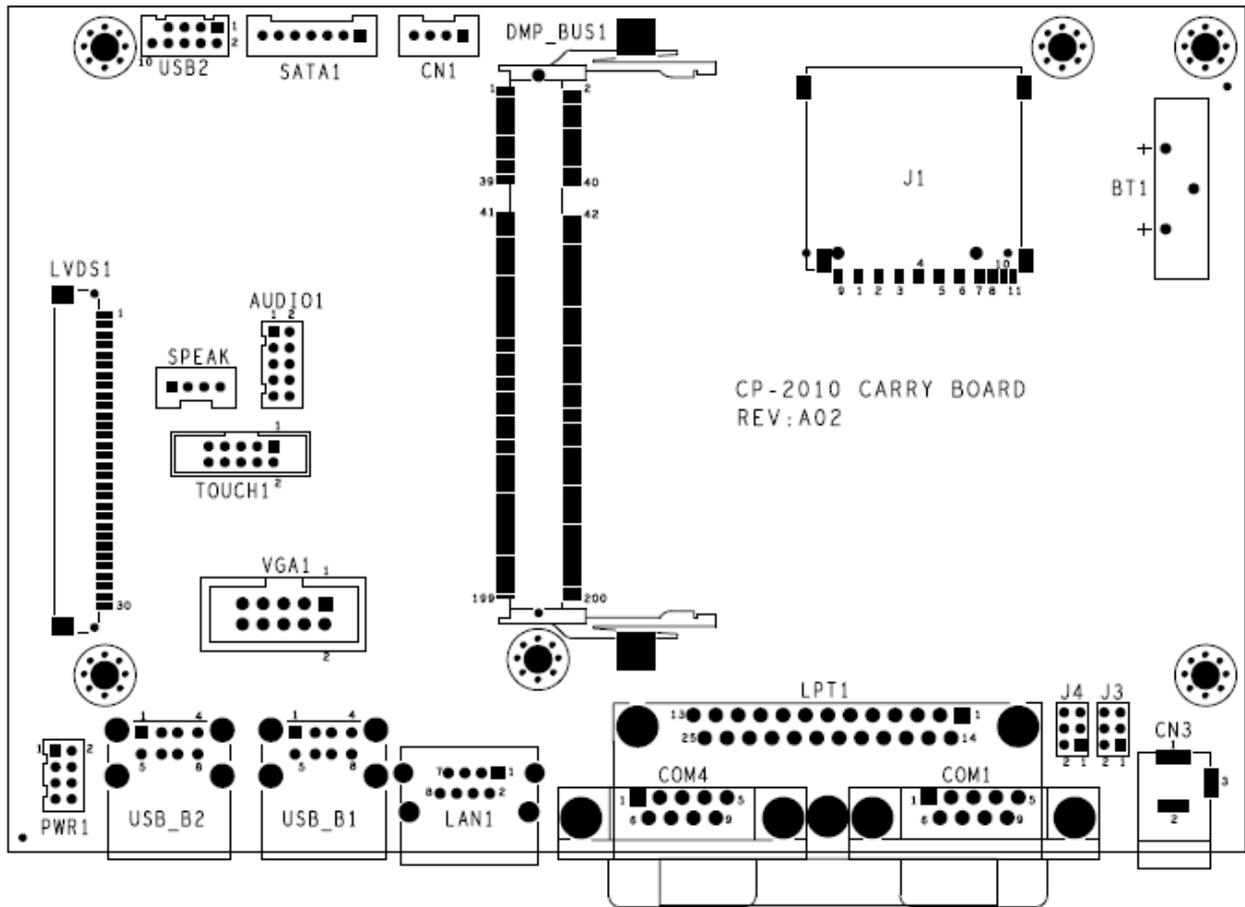


- After the main unit is attached, replace the two thumb screws to secure the panel.



Chapter 4 CP-2010 Carry Board Configuration

Jumper and Connector Locations



Connector Allocation

Connector	Function
BT1	Battery Connector
J1	SD Memory Card Socket
DMP_BUS1	SO-DIMM CPU Module Connector
CN1	SATA HDD Power Connector
SATA1	SATA Connector
USB2	USB Pin Header
Audio	Audio LINE_OUT & LINE_IN Connector
SPEAK	Speaker Connector
Touch1	COM2 Connector
LVDS1	LVDS Connector
VGA1	VGA Connector
PWR1	POWER SW Connector
USB_B1 / USB_B2	USB Dual Connector
LAN1	RJ45 LAN1 Connector
COM1	COM1 Connector
COM4	COM3 Connector
LPT1	Print Port Connector

CN3	POWER DC JACK
J3	COM1 RI Function Setup Connector
J4	COM3 RI Function Setup Connector

Connector Pin Assignments

CN3

Power DC Jack

PIN No.	Description	PIN No.	Description
1	+12VDC	2	GND
3	GND		

COM1/COM4

COM1/COM3 Port Connector

PIN No.	Description	PIN No.	Description
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

LPT1

Print Port Connector

PIN No.	Description	PIN No.	Description
1	CS0	2	D0
3	D1	4	D2
5	D3	6	D4
7	D5	8	D6
9	D7	10	D11
11	D10	12	D9
13	D8	14	D15
15	D14	16	D13
17	D12	18	GND
19	GND	20	GND
21	GND	22	GND
23	GND	24	GND
25	GND		

LAN1

RJ45 LAN Connector

PIN No.	Description	PIN No.	Description
1	TX+	2	TX-
3	RX+	4	GND

5	GND	6	RX-
7	GND	8	GND

USB_B1/USB_B2

USB Dual Connector

PIN No.	Description	PIN No.	Description
1	VCC	2	DT0-
3	DT0+	4	GND
5	VCC	6	DT1-
7	DT1+	8	GND

J1

SD Memory Card Slot

PIN No.	Description	PIN No.	Description
1	SDA_D3	2	SDA_CMD
3	GND	4	VCCSDA
5	SDA_CLK	6	GND
7	SDA_D0	8	SDA_D1
9	SDA_D2	10	SDA_CD
11	SDA_WP		

Jumper Settings

To set jumper positions, place the jumper shunt over the pins designated in the table (SHORT) or remove (NC) it from the jumper pins and store for future use. Default settings are indicated with a star sign (★).

J3

COM1 RI Function Setup

PIN No.			Function
1-2	3-4	5-6	
Short			+5V Output
	Short		RI Function ★
		Short	+12V Output

J4

COM3 RI Function Setup

PIN No.			Function
1-2	3-4	5-6	
Short			+5V Output
	Short		RI Function ★
		Short	+12V Output



NOTE:

Wrong voltage selection may damage the COM Port device. Please survey COM port device's RI before setup this jumper setting.

Chapter 5 Software Setup

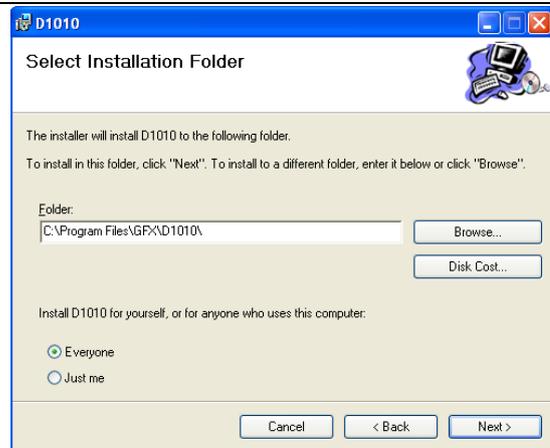
This system comes with a variety of drivers for different operating systems. A software CD is included in the package contents.

Driver Software List

Driver	Driver Setup Location
MSTI Graphics	<CD>:\Drive\MB\PMX-1000\VGA\D1010_R8
RealTek Audio	<CD>:\Driver\MB\PMX-1000\Audio\ALC262_Codec_WDM_R223
PCI-E Ethernet	<CD>:\Driver\MB\PMX-1000\Ethernet\A9120_MAC_2008_09_10
Abon Touch Screen	<CD>:\Driver\Peripheral\Touch\Abon

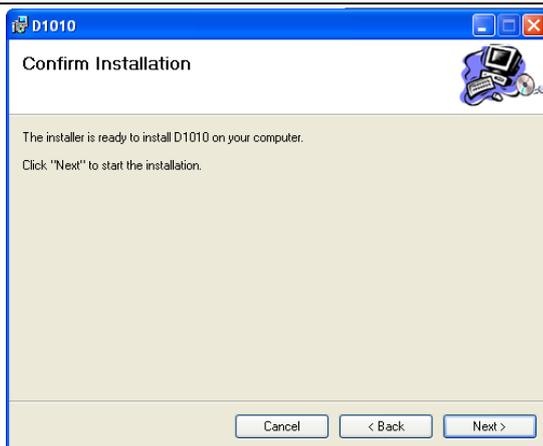
MSTI Graphics Driver Installation

1. Locate and Run the D1010_R8.msi file on the CD in folder <CD>:\Driver\MB\PMX-1000\VGA\D1010_R8



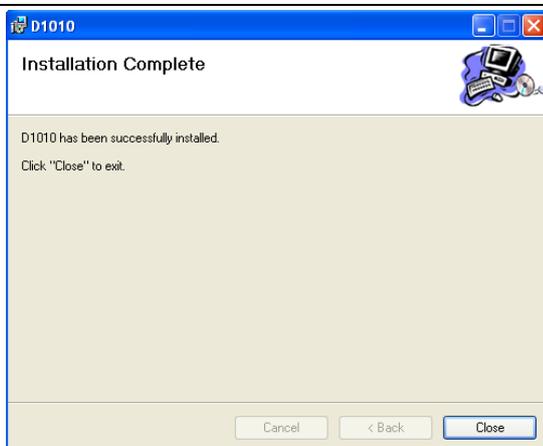
2. Click Next on the Welcome screen.

3. Click Next after making sure the check boxes shown are marked.



4. Click Next to start the installation.

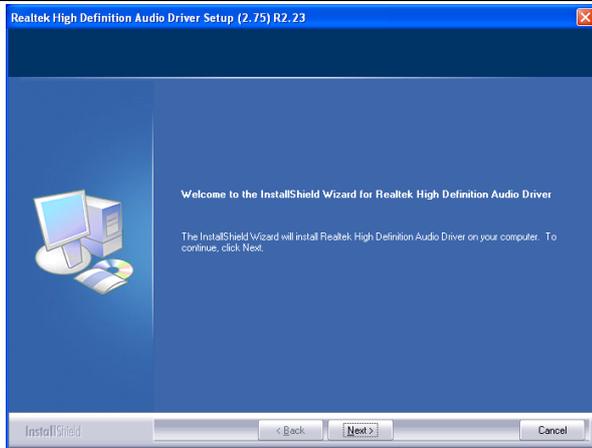
5. Click Continue Anyway on the software Installation screen.



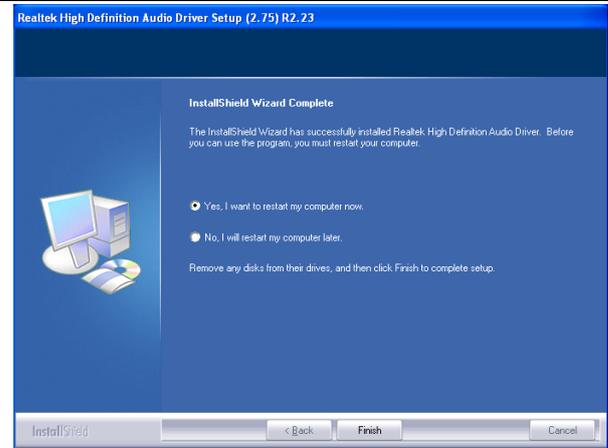
6. When installation is complete, click Close.

Audio Driver Installation

1. Locate and Run the Setup.exe file on the CD in folder <CD>:\Driver\MB\PMX-100\Audio\ALC262_Codec_WDM_R223



2. Click Next on the Welcome screen.

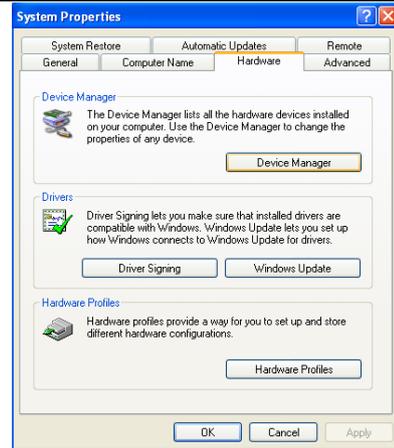


3. When installation is complete, select Yes and click Finish to restart the system.

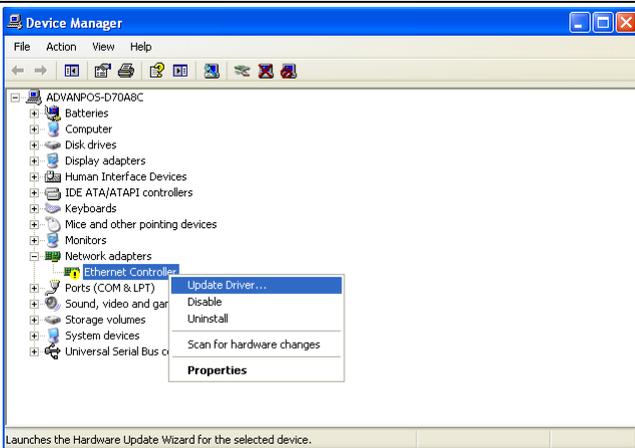
Ethernet Driver Installation



1. Select My Computer on the desktop and then right-click to set properties.



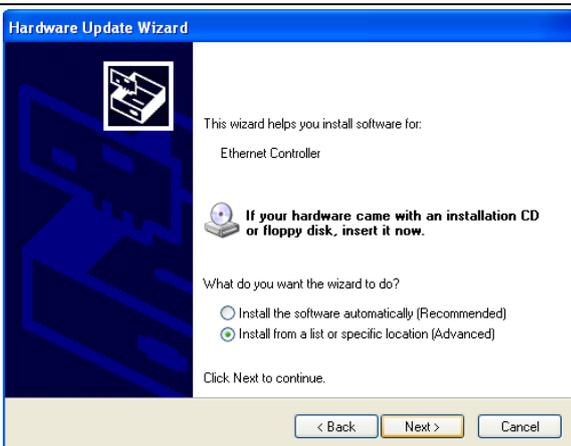
2. Select Hardware and then Click Device Manager.



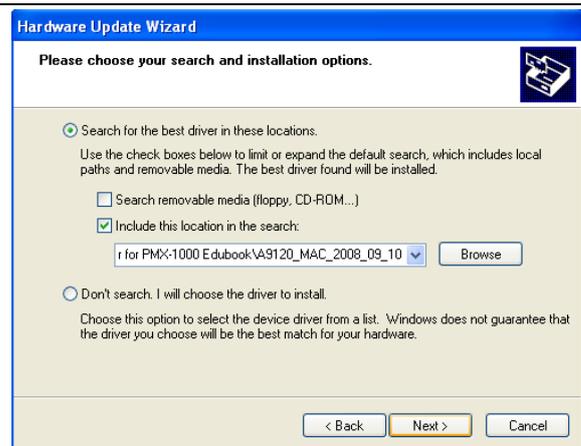
3. Select Ethernet Controller and then right click to Update Driver.



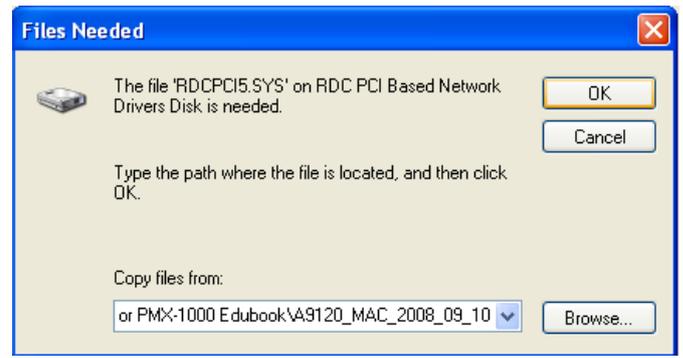
4. Select Yes, this time only and then click Next.



5. Select Install from a list or specific location and then Click Next.

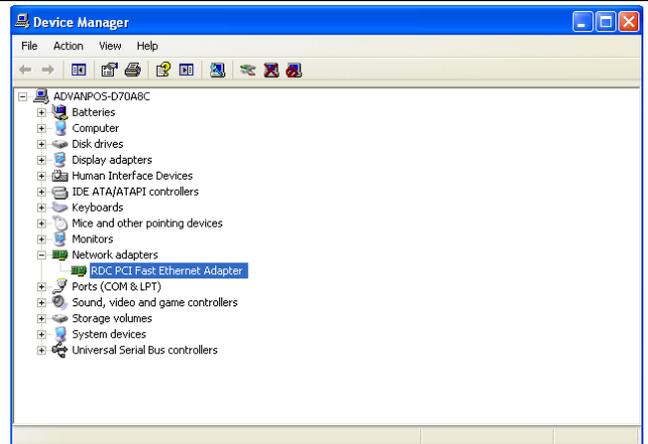


6. Click Next after making sure the check boxes shown are marked.



7. Click Continue Anyway on the Hardware Installation screen.

8. Click OK after making sure the check boxes shown.

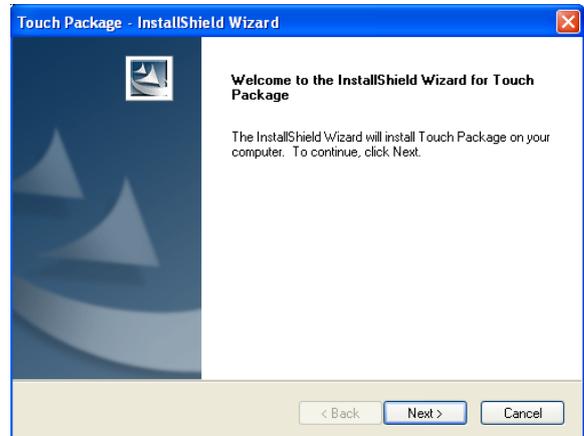
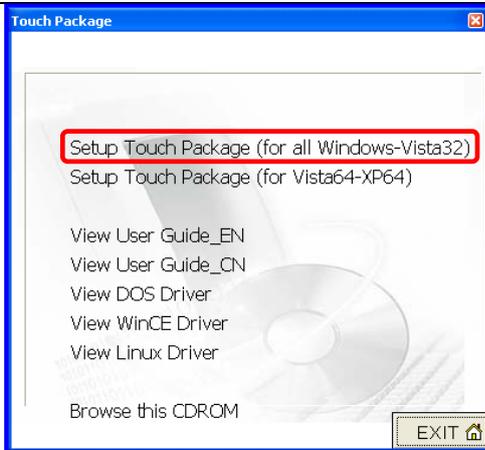


9. When installation is complete, click Finish.

10. The system Device Manager will aware the Ethernet device.

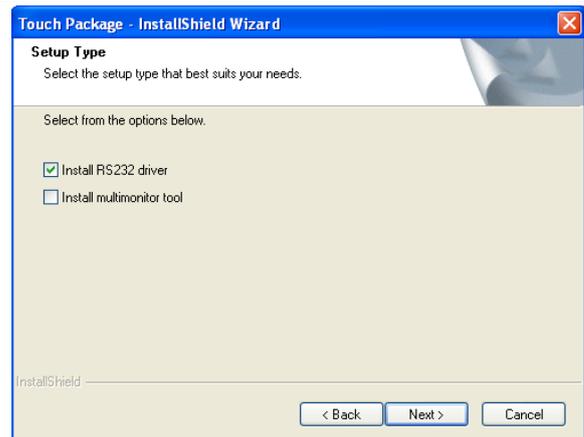
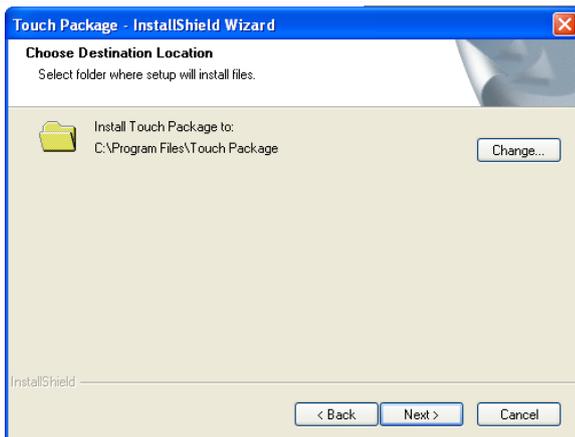
Abon Touch Screen Driver Installation

1. Locate and Run the autorun.exe file on the CD in folder <CD>:\Driver\Peripheral\Touch\Abon



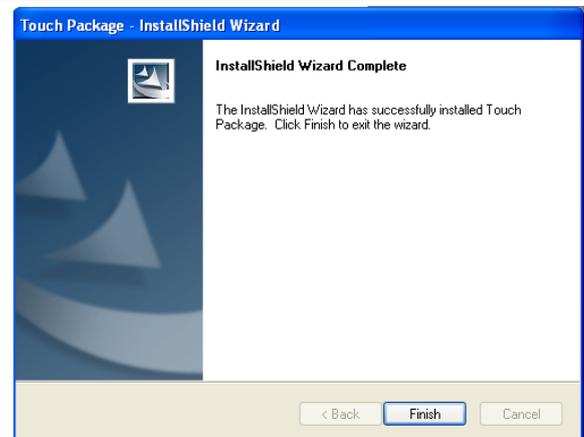
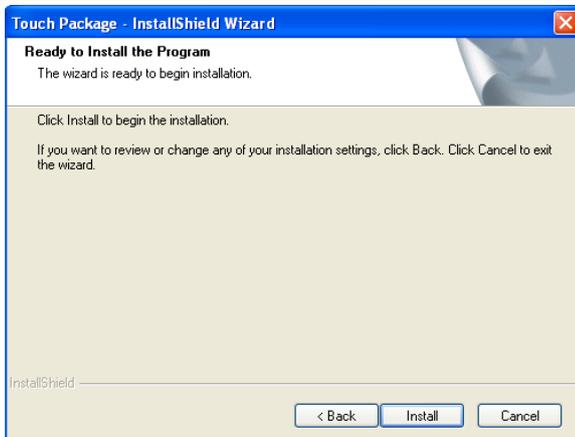
2. Select Setup Touch Package (for all Windows-Vista32).

3. Click Next on the Welcome screen.



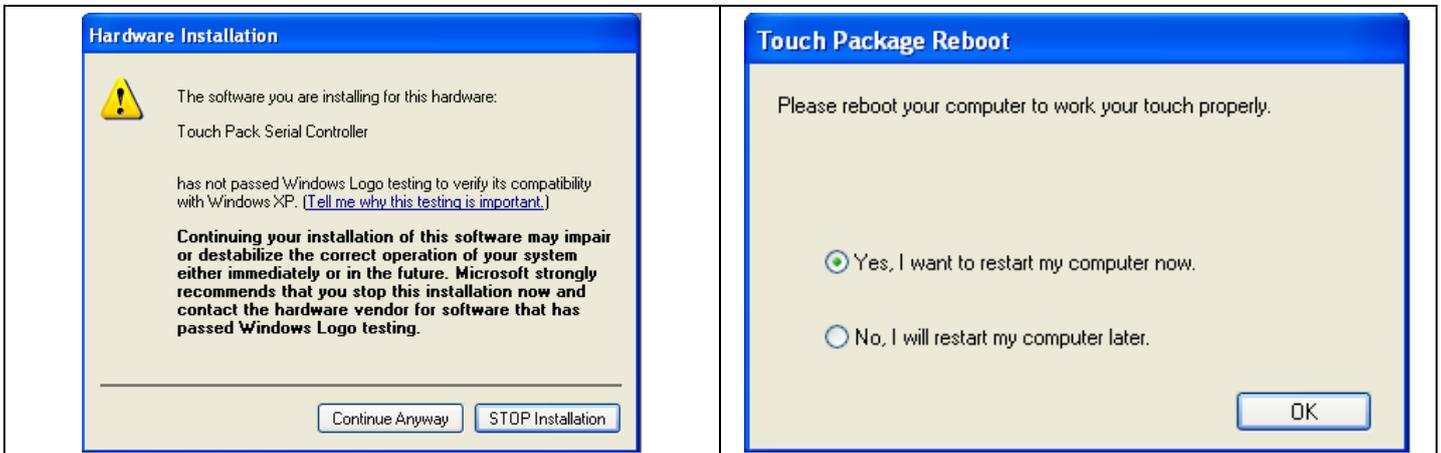
4. Click Next.

5. Select Install RS232 driver and click Next.



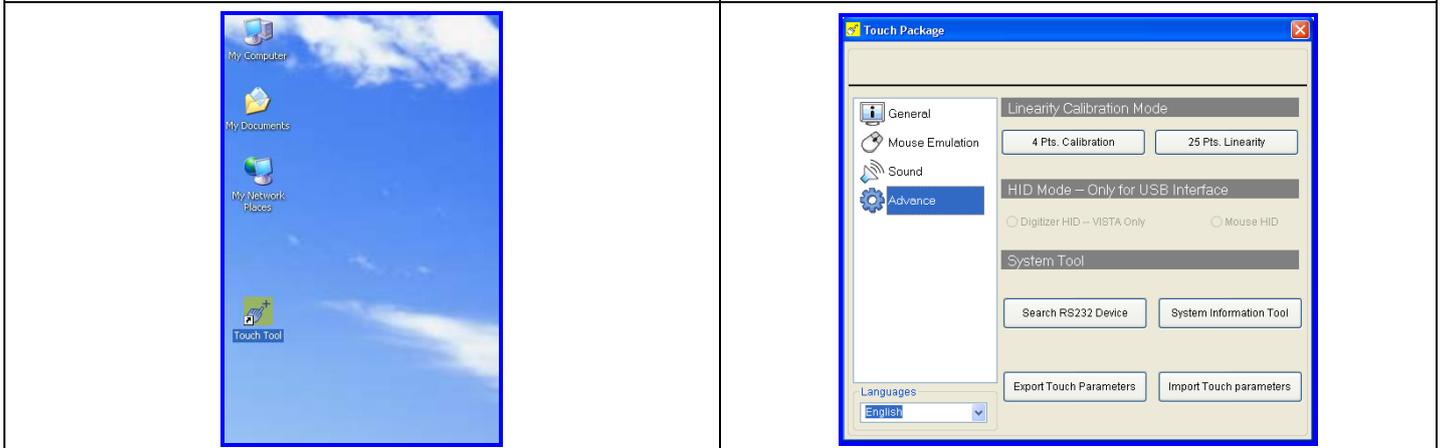
6. Click Install.

7. Click Finish.



8. Click Continue Anyway.

9. Click OK to reboot the system.



10. Run the Touch Tool on the desktop.

11. Select Advance, then click 4 Pts Calibration.

Scanner Driver Installation

For further detailed scanner's setting and programming, please refer to the scanner user's manual and programming guide. Go to <CD>\Optional Module Data & Tool\Scanner\A-50M or A-52M