

EP-5500 Series

Efficiency All-in-One Point of Sales 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 EP-5500. In addition, instructions are included for added hardware, software, upgrades, and optional items.

- Chapter 1** An introduction to what you find in the box and an overview of product specifications, appearance, and interface.
- Chapter 2** Detailed installation information for the base unit and upgrades, including the HDD, main memory, and Compact Flash.
- Chapter 3** Mounting procedures for optional devices, such as MSR, Fingerprint, I-Button, IC Card, RFID, WiFi, Bluetooth, pole-type 2nd display, and cash drawer.
- Chapter 4** PEB-973A、PEB-973D and INS8313B main board diagrams, locations of jumpers, and connectors. Also shows the external COM6 port pin assignments.
- Chapter 5** Installation instructions for the Intel chip set driver, video driver, touch screen tools, audio, LAN, RFID, Fingerprint, IC Card, AdvanPOS system and OPOS drivers.



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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Patents and Trademarks

AdvanPOS trademark

Certificate No.: 01328466 (ROC patent)

Patents pending (European Union, Mainland China and USA)

EPOS Series documented list:

1. Detachable LCD Panel
Certificate No.: M 342009 (ROC patent)
Certificate No.: ZL 2008 2 0300411.2 (Mainland China patent)
Patents pending (European Union and USA)
2. Easy Detachable Monitor Bezel
Certificate No.: M 365523 (ROC patent)
Patent pending (Mainland China patent)

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

- 15" TFT touch screen
- EP-5500-AR10 with Fanless operation
- EP-5500-AR20/30 with Fan operation
- Robust plastic housing
- IP65 sealed front touch panel
- Convertible 2nd display options
- 6 x COM, 6 x USB, 1 x CF II
- Flexible options: MSR, I-Button, Fingerprint, IC card reader, RFID, WiFi, and Bluetooth
- RoHS compliant

Specifications

EP-5500 SERIES System Configuration

CPU	EP-5500-AR10: Intel® Atom™ Processor N270 1.6GHz w/512KB Cache fanless EP-5500-AR20/30: Intel® Atom™ Dual Core Processor D525 1.8GHz w/ 1MB L2 Cache
System Chipset	EP-5500-AR10 : Intel 945GSE+ICH7M EP-5500-AR20/30 : Intel D525 + ICH8M
System Memory	EP-5500-AR10: Supports a max. 1 x 2GB SO-DIMM DDR2 SDRAM 800MHz EP-5500-AR20: Supports a max. 1 x 4GB SO-DIMM DDR2 SDRAM 800MHz EP-5500-AR30: Supports a max. 1 x 4GB SO-DIMM DDR3 SDRAM 1333MHz
Video Memory	Supports Intel DVM T, shared system memory
Compact Flash	Supports 1 x Compact Flash Card Type II
HDD	1 x internal 2.5" 160GB SATA hard disk drive (up to 250GB)
Power	1 x external 60W 12VDC power adapter (100~240VAC, 50~60Hz, 5.0A)
OS Support	Windows® XP Pro Embedded / WEPOS® / Windows® POS Ready 2009 / Windows 7 Pro Embedded / Linux®

LCD Touch Panel

Resolution Size	15" TFT LCD / 1024 x 768
Brightness	250 cd/m ² (adjustable) or 350 cd/m ² (adjustable)
Touch Screen Type	3 rd party (Default) or Elo 5-wire resistive or Surface Capacitive touch

I/O Ports

USB Ports	Supports 6 USB 2.0 ports for future expansion (2 x internal, 4 x external) Front side x 2, rear side x 2
Serial Ports	4 x external: COM1, COM2, COM5 (D-SUB), COM6 (8-Pin wafer) 2 x internal: COM3 for touch screen, COM4 for Rear Mount VFD
Parallel Port	1 x bi-directional parallel port (D-SUB25)
VGA Port	1 x external VGA Port (D-SUB15)

Cash Drawer Port	1 x 12V RJ11 connector (maximum 2 drawers)
LAN Port	1 x Giga LAN (10/100/1000Mbps Base-T), RJ45 connector
Audio Port	1 x Line-out, 1 x Mic-in
Speaker	2 x internal stereo 2W speakers

Mechanics and Environment

Construction	Plastic housing
Dimensions	272(D) x 380(W) x 329(H) mm
Housing Color	Black
Net Gross Weight	8.5 Kg (with VFD and MSR)
Operating Temperature	0 °C ~ 40 °C
EMI/Safety	CE, CB, FCC, RoHS

Package Contents

The following items come standard with the EP-5500 series:

POS System		Power Adaptor	
Utility and Main Board Chipset Driver CD		AC Power Cord	

Options

- Magnetic Stripe Reader (MSR) Module: triple track
- 2-in-1 Module (Magnetic Stripe Reader + Fingerprint Reader)
- 2-in-1 Module (Magnetic Stripe Reader + I-Button Reader)
- 2-in-1 Module (Magnetic Stripe Reader + IC Card Reader)
- 2-in-1 Module (Magnetic Stripe Reader + RFID 13.56MHz ISO 14443A Mifare)
- 2-in-1 Module (Magnetic Stripe Reader + WiFi 802.11b/g/n or Bluetooth 2.0)
- 2-in-1 Module (Magnetic Stripe Reader + Bluetooth)
- 3-in-1 Module (Magnetic Stripe Reader + I-Button Reader + IC Card Reader)
- 3-in-1 Module (Magnetic Stripe Reader + I-Button Reader + RFID 13.56MHz ISO 14443A Mifare)
- VFD Customer Display: 9 mm height, 2 lines 20 characters each
- 2nd Customer Display: 8.9" or 15", tempered glass LCD 15 cm set on a 15 cm tube pole
- VESA Mount Bracket for Wall Mount
- Swing-arm Mounts, adjustable angle VESA for Pole Mount

Base System

Before you begin, take a few moments to become familiar with the EP-5500 series.



The rear of the system



Right Speaker



Left Speaker

Expandable Options

The two sides of the main display are specially designed for expandable functions and connect with one of the available internal USB ports or PS/2 for operation. Optimized for simple installation, these interfaces do not require any voltage setting adjustments.

- MSR (PS/2 interface)
- MSR+ I-Button (PS/2 interface)
- MSR+ Fingerprint (MSR for PS/2 interface, Fingerprint for USB interface)
- MSR+ IC Card Reader (MSR for PS/2 interface, IC Card Reader for USB interface)
- MSR+ RFID (MSR for PS/2 interface, 13.56 MHz 14443A Mifare RFID for USB interface)
- MSR+ WiFi (MSR for PS/2 interface, Wifi for USB interface)
- MSR+ Bluetooth (MSR for PS/2 interface, Bluetooth for USB interface)
- MSR+ I-Button+ IC Card Reader (MSR and I-Button for PS/2 interface, IC Card Reader for USB interface)
- MSR + I-Button + RFID (MSR and I-Button for PS/2 interface, 13.56 MHz 14443A Mifare RFID for USB interface)



* MSR Modules available in side or front swipe formats.

Convertible Pole-Type/Rear Mount 2nd Display (optional)

The pole-type 2nd display is for use with the POS system to display purchase prices and change amounts to customers. It is also capable of displaying advertising messages and announcements.

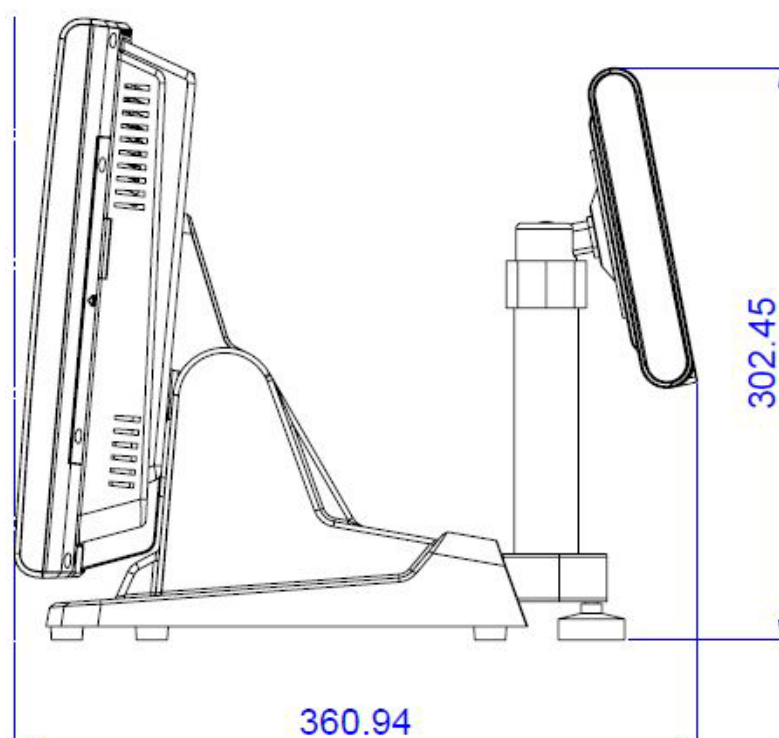
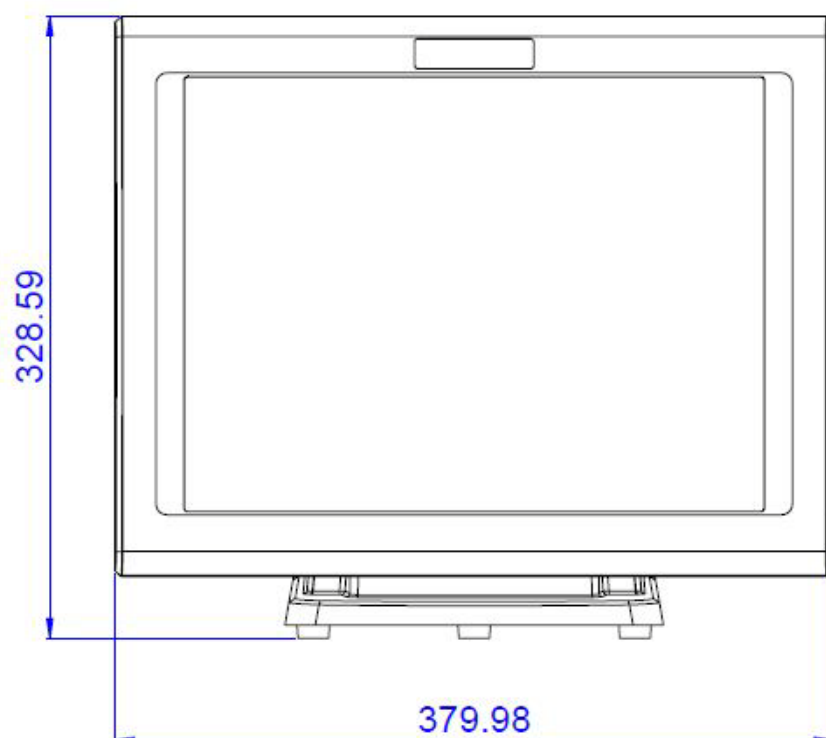
Three types of pole mount display choices are available: a 8.9" LCD monitor, 15" LCD monitor and a 9 cm high, 2 lines with 20 characters each VFD.

The pole mount is located at the rear of the system and connects with the COM6 port or VGA port for operation. Whether installing a VFD, 8.9" or 15" LCD, there is no need to change any settings on the main board.



EP-5500 Series with 8.9" 2nd Display Dimensions

(Unit: mm)



Connector Panel

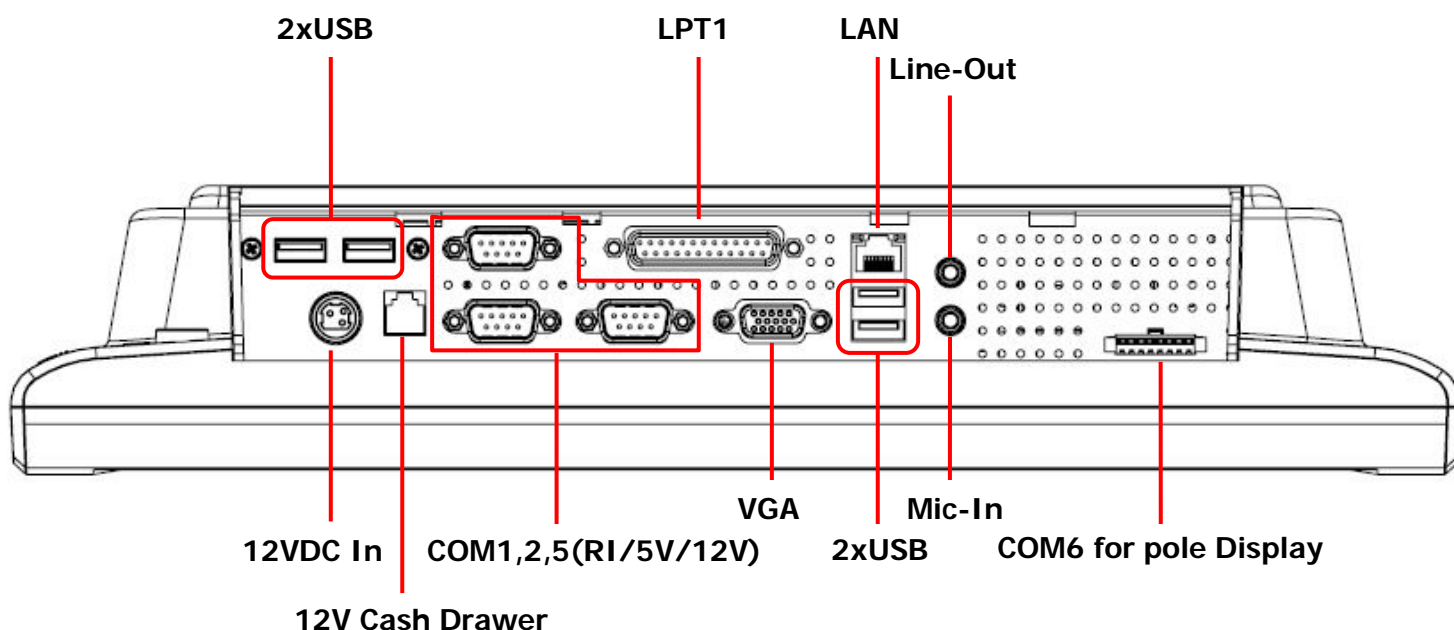
The EP-5500 series's primary connector panel is located at the rear.



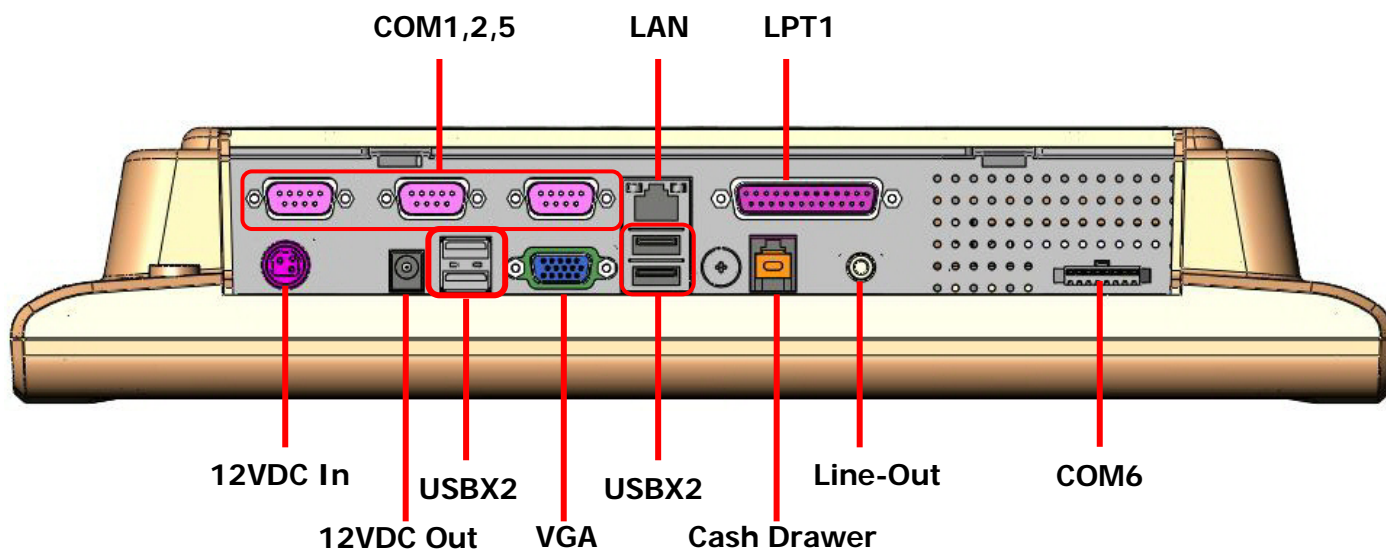
NOTE:

EP-5500 Series's COM6 port is a specialized port, not a standard COM port, and can not transmit the full range of RS-232C signals. Refer to Chapter 4 for COM6 pin assignments.

For PEB-973A/D main board



For INS8313B main board



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.

Detaching the LCD Panel

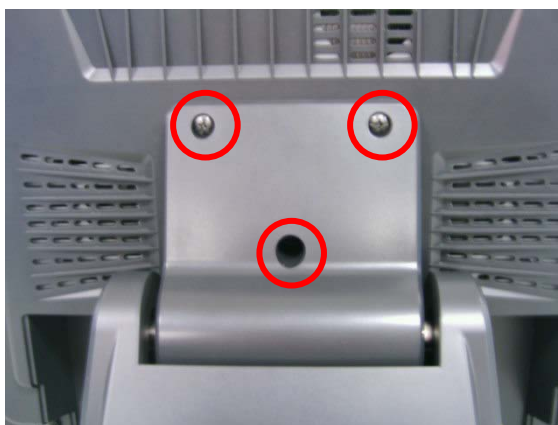
1. Turn off the system power properly through the operating system, then turn off any external devices.
2. Disconnect the power cord from the power outlet and disconnect any external devices.



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 three screws from the back of the panel.



4. Place hands on both sides of the panel bottom and then to gently slide it up and off the hinge.



Opening Back Cover

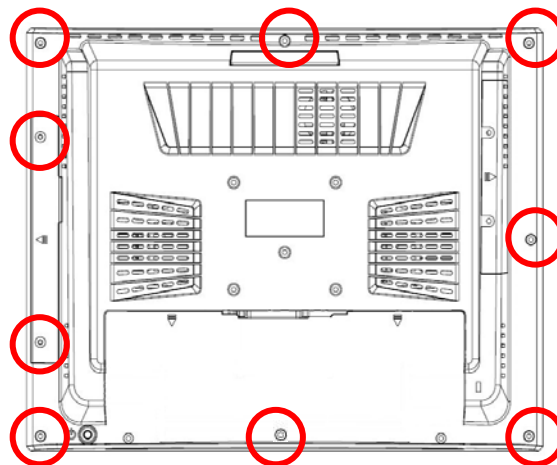


CAUTION: To prevent loss of work and damage to the system or drive:

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.

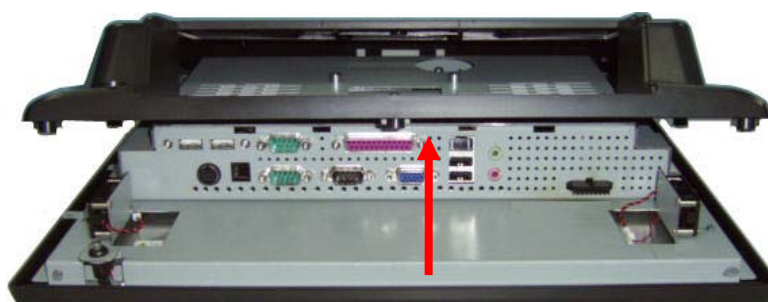
Before handling a drive, ensure that you are discharged of static electricity. While handling a drive, avoid touching the connector.

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. Place the main unit upside down. Next, Unscrew nine screws on the panel back cover as show below to remove it.

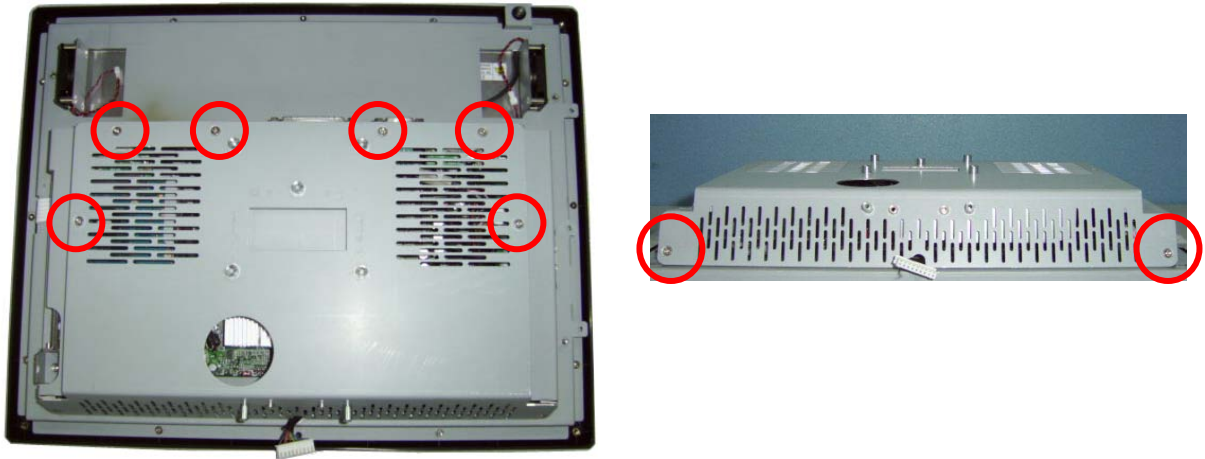


CAUTION: To avoid scratching the panel, before doing dismantling, put a piece of cloth or cushion under the main unit.

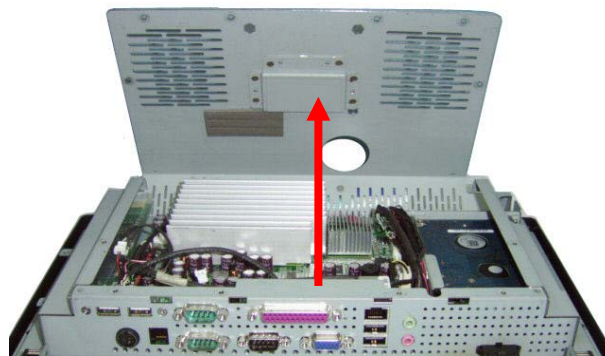
4. Open the panel back cover in the direction of the arrow.



5. Unscrew the eight screws as shown below to remove it.



6. Open the metal cover in the direction of the arrow.



Clearing CMOS

The EP-5500 series's configuration (CMOS) may occasionally be corrupted. If it is, it will be necessary to clear the CMOS memory using jumper JP1. Please refer to Chapter 4 for the exact JP1 pin positions.

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. Open the system box.
4. Locate the JP1 jumper box on the main board.
5. For PEB-973A/D, remove the jumper shunt from pins 1-2 and place over pins 2-3.
For INS8313B, remove the jumper shunt from pins 2-3 and place over pins 1-2.
6. Wait 60 seconds to allow the CMOS to clear, then remove the jumper shunt and place it back in its original position.
7. Replace the box cover.

Compact Flash Card Installation

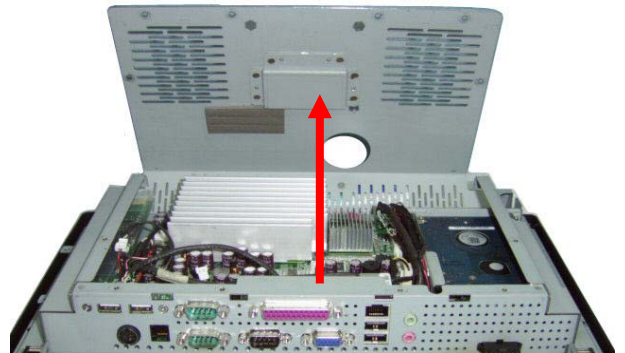
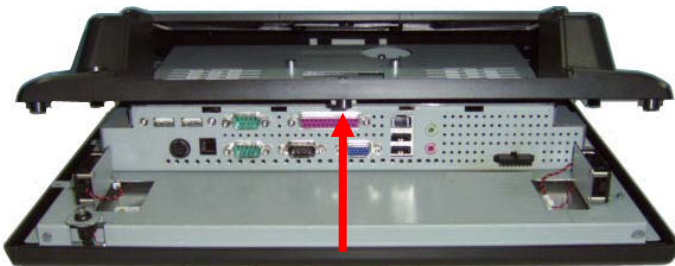
1. Turn off the system power properly through the operating system, then turn off any external devices.
2. Disconnect the power cord from the power outlet and disconnect any external devices.



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 panel back cover and metal cover.



CAUTION:

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

4. Take out the main board and then place the main board upside down.
5. Insert the CF card into the CF socket.



6. Set the main board back in place. Next, replace the panel back cover and metal cover.
7. Reconnect the power cord and any external devices, then turn on the system. The system should automatically recognize the CF card when the system power is turned on.

**NOTE:**

CF card and 2.5" HDD master/slave setting:

The system allows the use of both the CF card and hard disk at the same time, however the user will need to set the system BIOS for the preferred boot order. When either a CF card only or 2.5" hard disk only is installed, the BIOS will automatically designate it as the 'master' drive and system boot device.

Additional Memory Installation

The memory socket on the main board can be populated with an industry-standard DIMM. The EP-5500 series comes standard with one preinstalled DIMM. To achieve maximum memory performance, up to 2GB (EP-5500-AR10) / 4GB(EP-5500-AR20/30) of memory can be changed.



CAUTION:

You must disconnect the power cord and wait approximately 30 seconds for the power to drain before adding or removing memory cards. Regardless of the power-on state, voltage is always supplied to the memory modules as long as the system is plugged into an active AC outlet. Adding or removing memory modules while voltage is present may cause irreparable damage to the memory modules or main board. If you see an LED light on the main board, voltage is still present.

The memory module sockets have gold-plated metal contacts. When upgrading the memory, it is important to use memory modules with gold-plated metal contacts to prevent corrosion and/or oxidation resulting from having incompatible metals in contact with each other.

Static electricity can damage the electronic components of the system or optional cards. Before beginning these procedures, ensure that you are discharged of static electricity by briefly touching a grounded metal object.

When handling a memory module, be careful not to touch any of the contacts. Doing so may damage the 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.



WARNING!

To reduce risk of personal injury from hot surfaces, allow the internal system components to cool before touching.



NOTE:

There are two DIMM sockets on the main board: U11 is located on the top side, while U23 is located on the bottom (below the RAM cover).

To replace the memory card on the main board's top side, the system box cover must be removed.

If the system has a UPS installed, the battery connector and battery pack must first be removed to gain access to the memory sockets. Please refer to the Uninterrupted Power Supply Installation section.

3. Remove the panel back cover and metal cover.



CAUTION:

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

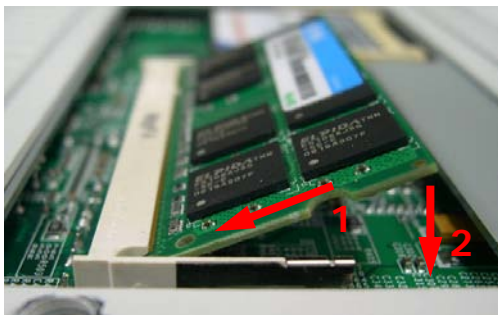
4. Take out the main board and then place the board upside down.
5. If an existing memory card or cards need to be replaced, pull the ends of both metal latches away from the card to release it.



NOTE:

A memory card can be installed in only one way. Match the notch on the card with the tab in the memory socket.

6. Insert the memory 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. Set the main board back in place. Next, replace the panel back cover and metal cover.

**NOTE:**

When the EP-5500 series RAM cover is installed, please note that the bottom of the thermal pad must be placed over the memory.

Ensure the thermal pad and the top surface of the memory is in total contact to prevent the memory from overheating. Overheating may result in unstable system performance.

8. Reconnect the power cord and any external devices, then turn on the system. The system should automatically recognize the additional memory when powered up.

Removing and Replacing the SATA Hard Disk

**NOTE:**

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

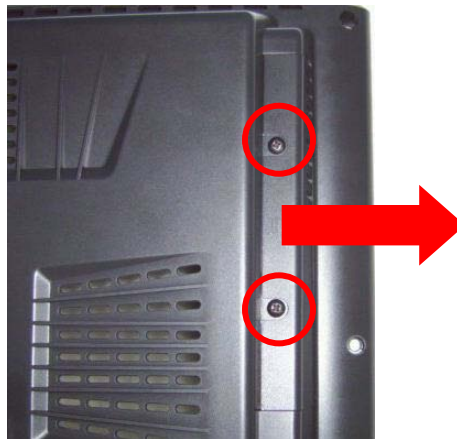
Before removing the original hard drive, be sure to back up its data so that you can transfer the data to the replacement hard drive. Also, if you are replacing the primary hard drive, make sure you have a recovery disc set to restore the operating system, software drivers, and any software applications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

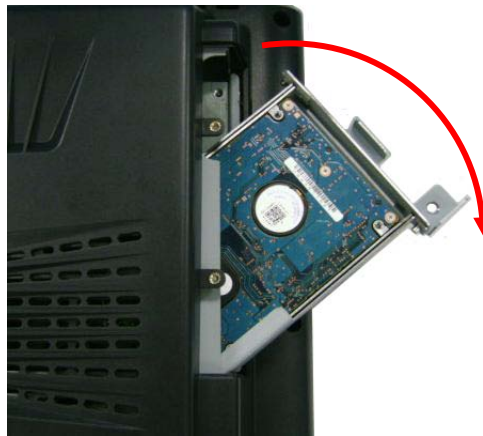
3. Remove the two screws from the right HDD side cover on the back of display.



4. Remove a screw that secures the HDD box on the HDD holder.



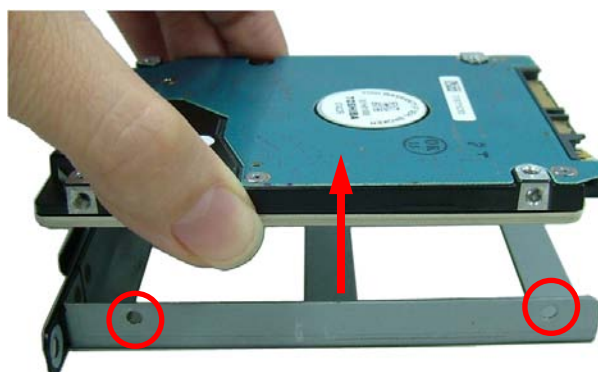
5. Rotate the HDD box in the direction of the arrow.



6. Remove a screw and slide the HDD box in the direction of the arrow.



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



8. Insert the replacement hard disk into the HDD box, and re-secure the screws.
9. Slide the HDD box back into the case and screw it.
10. Fix HDD side cover in place with its two screws.
11. Reconnect the power cord and any external devices, then turn on the system.

**NOTE:**

The capacity of a sector is 4096 bytes for 320GB HDD of WD. They are only suitable for Win7 or OS developed later than Win7. To use Microsoft earlier OS such as XP, POS Ready2009, You should install support tools offered by original supplier to align the performance of HDD. Otherwise HDD life will be reduced about 48%. You can get the alignment tool from following website or driver CD included in the package.

WD Alignment tool: <http://support.wdc.com/product/downloadsw.asp?sid=128>

Chapter 3 Optional Components and Peripherals

Module Installation

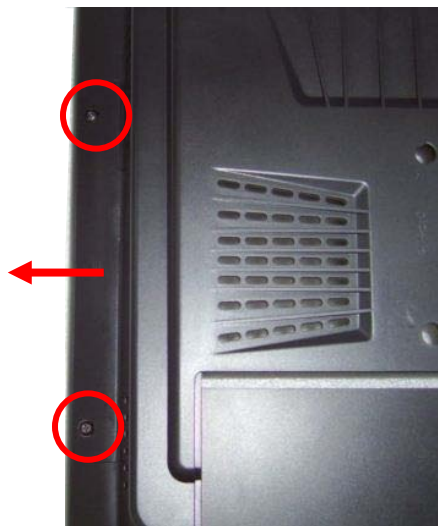
1. Turn off the system power properly through the operating system, then turn off any external devices.
2. Disconnect the power cord from the power outlet and disconnect any external devices.



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 two screws from the left MSR side cover on the back of the display.



4. Connect the MSR module's signal cable connector into the socket. Next, fix MSR module with two screws.



5. Reconnect the power cord and any external devices, then turn on the system.



NOTE:

The MSR module configuration tool is in the included CD. If you need configure MSR module, please execute the utility according to the procedure specified in Chapter 5.

Cash Drawer Installation

**NOTE:**

Before connecting cash drawer to the system, make sure the driver voltage and cable pin assignment of the cash drawer matches the definition of the system's cash drawer port. Please refer to the Cash Drawer Power Select Connector section.

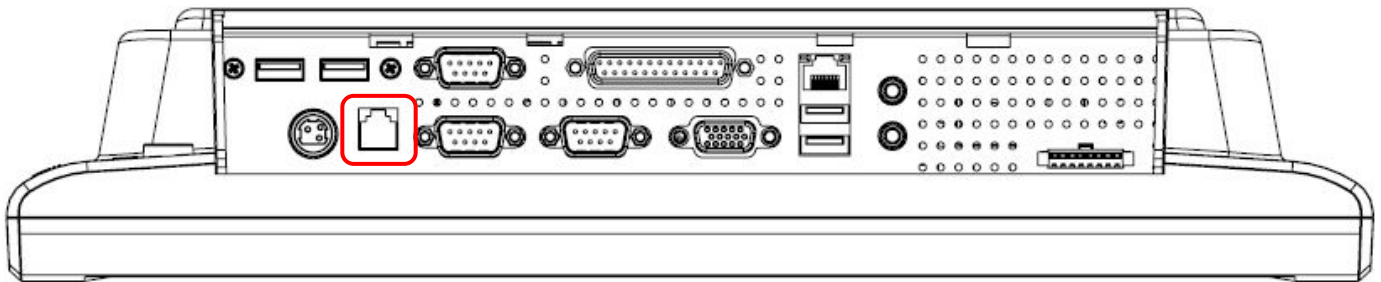
Before installing the cash drawer to the system, please make sure the system driver has been installed.

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.

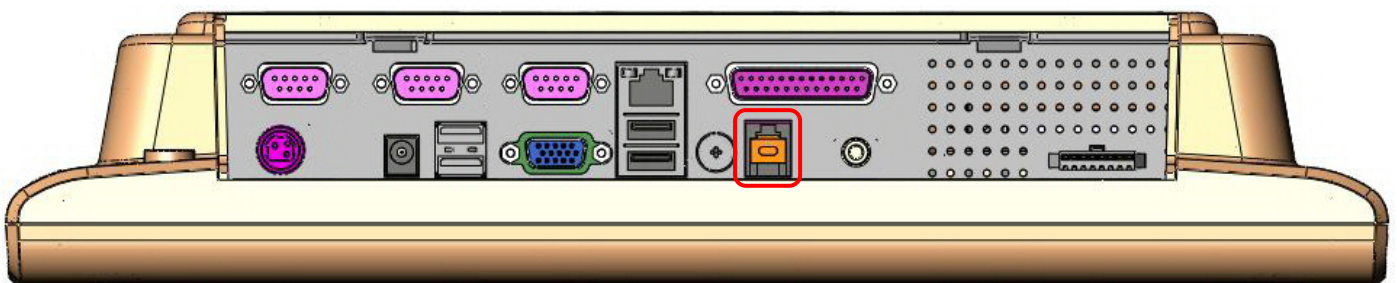
**CAUTION:**

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. Plug the cash drawer cable into the cash drawer port.



OR



4. Reconnect the power cord and any external devices, then turn on the system.

Pole-Type 2nd Display Module Installation

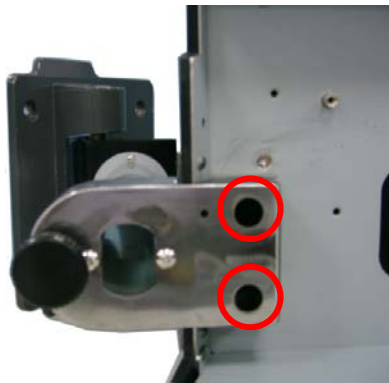
1. Turn off the system power properly through the operating system, then turn off any external devices.
2. Disconnect the power cord from the power outlet and disconnect any external devices.



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. Secure the pole-type 2nd display module with four screws.



4. Pass the pole-type 2nd display module's cables through the guide hole as shown below.



5. Connect the pole-type 2nd display module's cable connectors to the EP-5500 series's COM6 port and VGA port respectively.



6. Reconnect the power cord and any external devices, then turn on VFD/LCD power. Finally, turn on the system power.



NOTE:

The pole mount VFD module's configuration utility is in the included CD. If you need configure VFD module, please execute the utility according to the procedure specified in Chapter 5.

Rear Mount VFD Module Installation

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. Connect the VFD module's cable connector to the socket on the top of panel back cover.



4. Secure the VDF module with two screws.



5. Reconnect the power cord and any external devices, then turn on VFD/LCD power. Finally, turn on the system power.

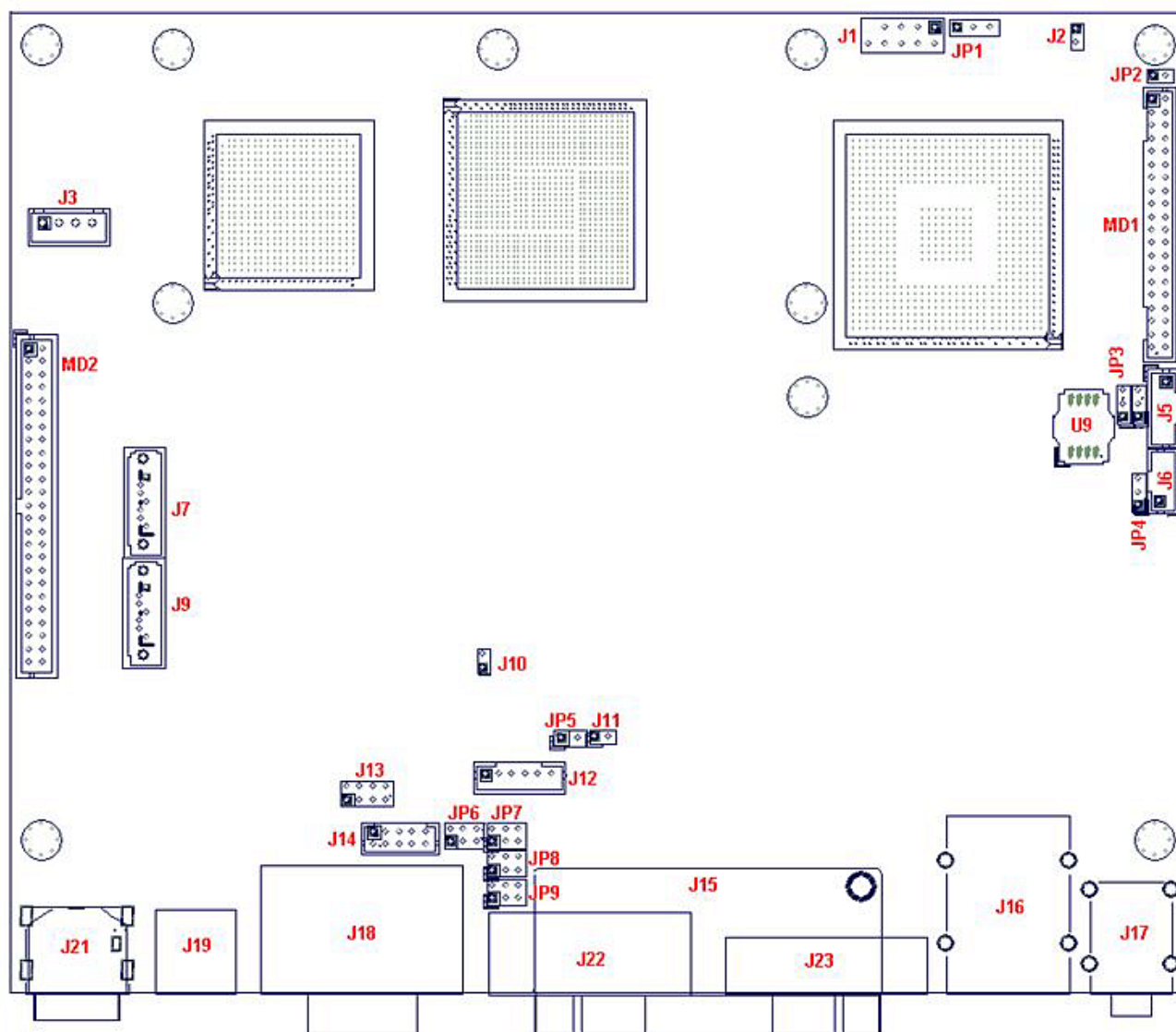


NOTE:

The rear mount VFD module's configuration utility is in the included CD. If you need configure VFD module, please execute the utility according to the procedure specified in Chapter 5.

Chapter 4 Main Board Configuration

Jumper and Connector Locations of PEB-973A (For EP-5500-AR10)



Connector Allocations

Connector	Function
J1	LPC port 80 daughter card connector
J2	SATA and IDE active LED
J3	SATA drive power connector
J4	Reserved
J5	LVDS back light inverter connector
J6	USB port 2
J7	SATA port 0
J8	Battery socket
J9	SATA port 2
J10	Suspend LED connector
J11	Case open connector
J12	PS/2 KB and MS connector

J13	Front panel connector
J14	COM6 connector
J15	Printer port
J16	USB port 1, USB port 4 and GIGA LAN RJ-45 connector
J17	Speaker out and MIC connector
J18	COM1, COM2 connector. Upper is COM1; Lower is COM2
J19	RJ-11 connector
J21	+12V DC power input
J22	COM5 connector
J23	VGA connector
J24	CF card socket (on the solder side)

Connector Pin Assignments of PEB-973A (For EP-5500-AR10)

J21

+12V DC Input DIN Connector

PIN No.	Description
1	GND
2	VIN
3	VIN
CG1	GND

J19

Cash Drawer Port RJ-11 Connector

PIN No.	Description	PIN No.	Description
1	GND	2	12V for drawer A
3	GPI	4	+12V
5	12V for drawer B	6	GND

J18/J22

RS-232 Port COM1, COM2, COM5 D-Sub9 Connector

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

J15**Parallel Port LPT1 SCSI Connector**

PIN No.	Description	PIN No.	Description
1	STBX	2	D0
3	D1	4	D2
5	D3	6	D4
7	D5	8	D6
9	D7	10	ACKX
11	BUSY	12	PE
13	SLCT	14	AFDX
15	ERX	16	INITX
17	SLINX	18	GND
19	GND	20	GND
21	GND	22	GND
23	GND	24	GND
25	GND		

J23**VGA Port D-Sub15 Connector**

PIN No.	Description	PIN No.	Description
1	RED	2	GREEN
3	BLUE	4	NC
5	GND	6	Reserved
7	GND	8	GND
9	NC	10	GND
11	NC	12	DDC DATA
13	HSYNC	14	VSYNC
15	DDC CLK		

J16**LAN Port RJ-45 and USB Port1/Port4 Connector**

PIN No.	Description	PIN No.	Description
T1	LAN0+	B1	+5V
T2	LAN0-	B2	USBD1-
T3	LAN1+	B3	USBD1+
T4	LAN2+	B4	GND
T5	LAN2-	B5	+5V
T6	LAN1-	B6	USBD4-
T7	LAN3+	B7	USBD4+
T8	LAN3-	B8	GND

J17

Speaker out and MIC Connector

PIN No.	Description
Top	Stereo line out
Bottom	Microphone input

Jumper Settings of PEB-973A (For EP-5500-AR10)

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 symbol (★).

JP1

Clear CMOS Selection

PIN No.	Function
1-2 Short	Charge ★
2-3 Short	Clear CMOS

JP2

CF Card Master Slave Selection

PIN No.	Function
1-2 Short	Master
1-2 Open	Slave ★

JP3

LVDS Panel VDD Selection

PIN No.	Function
1-2 Short	3.3V ★
2-3 Short	5V

JP4

LVDS Back Light Enable Level Selection

PIN No.	Function
1-2 Short	3.3V ★
2-3 Short	5V

JP5

PS/2 KB and Mouse Interface Enable Selection

PIN No.	Function
1-2 Short	Enable ★
1-2 Open	Disable

JP6

COM6 RI Function Selection (reserved for Pole Display)

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

JP7

COM1 RI Function Selection

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

JP8

COM2 RI Function Selection

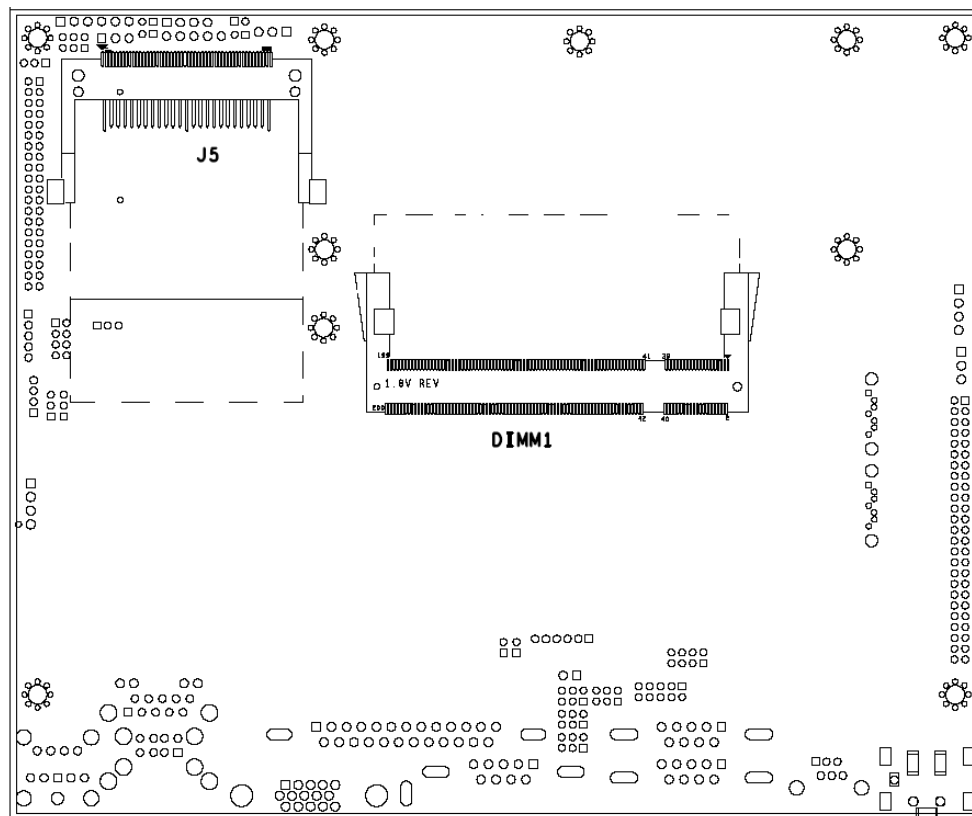
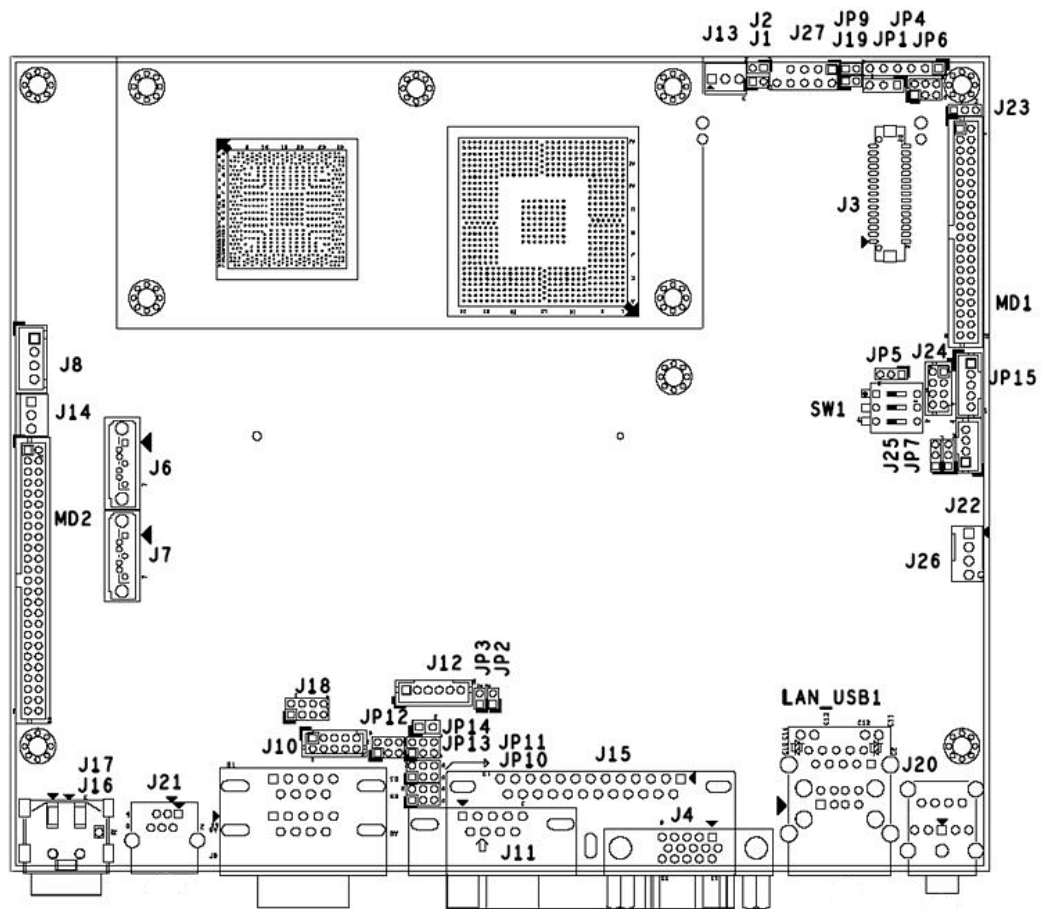
PIN No.			Function
1-2	3-4	5-6	
Short			+5V output
	Short		RI function ★
		Short	+12V output

JP9

COM5 RI Function Selection

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

Jumper and Connector Locations of PEB-973D (For EP-5500-AR20)



Connector Allocations

Connector	Function
J3	LVDS Connector
J4	VGA Connector
J5	Compact Flash Connector
J6,J7	SATA Connector
J8	SATA Power Connector
J9	COM1 & COM2 Connector
J10	COM6 Port Pin Header
J11	COM5 Port Connector
J12	PS/2 Keyboard/Mouse Connector
J13	CPU FAN
J14	SYS FAN
J15	Print Port Connector
J16	POWER DC +12V Connector
J17	POWER DC +12V Connector
J18	Front panel pin header
J19	HDD LED Pin header
J20	AUDIO JACK Connector
J21	CASH DRAWER Interface Connector
J22	External USB Pin Header
J24	External USB Pin Header
J26	12V Output Connector
J27	Port 80 Connector (2x5-1(Pin 9) Pin Header/2.54mm)
JP2	CASE OPNE Pin Header
JP3	SUS LED Pin Header
JP4	XC3S200A JTAG
JP15	BACK LIGHT PWR Connector

Connectors Pin Assignments of PEB-973D (For EP-5500-AR20)

J9/J11

RS-232 Port COM1, COM2, COM5 D-Sub9 Connector

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

J14

VGA Port D-Sub15 Connector

PIN No.	Description	PIN No.	Description
1	RED	2	GREEN
3	BLUE	4	NC
5	GND	6	Reserved
7	GND	8	GND
9	NC	10	GND
11	NC	12	DDC DATA
13	HSYNC	14	VSYSN
15	DDC CLK		

J15

Parallel Port LPT1 SCSI Connector

PIN No.	Description	PIN No.	Description
1	STBX	2	D0
3	D1	4	D2
5	D3	6	D4
7	D5	8	D6
9	D7	10	ACKX
11	BUSY	12	PE
13	SLCT	14	AFDX
15	ERX	16	INITX
17	SLINX	18	GND
19	GND	20	GND
21	GND	22	GND
23	GND	24	GND
25	GND		

J16**+12V DC Input DIN Connector**

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

J21**Cash Drawer Port RJ-11 Connector**

PIN No.	Description	PIN No.	Description
1	GND	2	12V for drawer A
3	GPI	4	+12V
5	12V for drawer B	6	GND

LAN_USB1**LAN Port RJ-45 and USB Port1/Port4 Connector**

PIN No.	Description	PIN No.	Description
T1	LAN0+	B1	+5V
T2	LAN0-	B2	USBD1-
T3	LAN1+	B3	USBD1+
T4	LAN2+	B4	GND
T5	LAN2-	B5	+5V
T6	LAN1-	B6	USBD4-
T7	LAN3+	B7	USBD4+
T8	LAN3-	B8	GND

J20**Speaker out and MIC Connector**

PIN No.	Description
Top	Stereo line out
Bottom	Microphone input

Jumper Settings of PEB-973D (For EP-5500-AR20)

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 symbol (★).

JP1

Clear CMOS Selection

PIN No.	Function
1-2 Short	Charge ★
2-3 Short	Clear CMOS

JP9

CF Card Master Slave Selection

PIN No.	Function
1-2 Short	Master
1-2 Open	Slave ★

JP6

LVDS Panel VDD Selection

PIN No.	Function
1-2 Short	3.3V ★
2-3 Short	5V

JP7

LVDS Back Light Enable Level Selection

PIN No.	Function
1-2 Short	3.3V ★
2-3 Short	5V

JP14

PS/2 KB and Mouse Interface Enable Selection

PIN No.	Function
1-2 Short	VCC ★
1-2 Open	No VCC

JP13

COM6 RI Function Selection (reserved for Pole Display)

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

JP10**COM1 RI Function Selection**

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

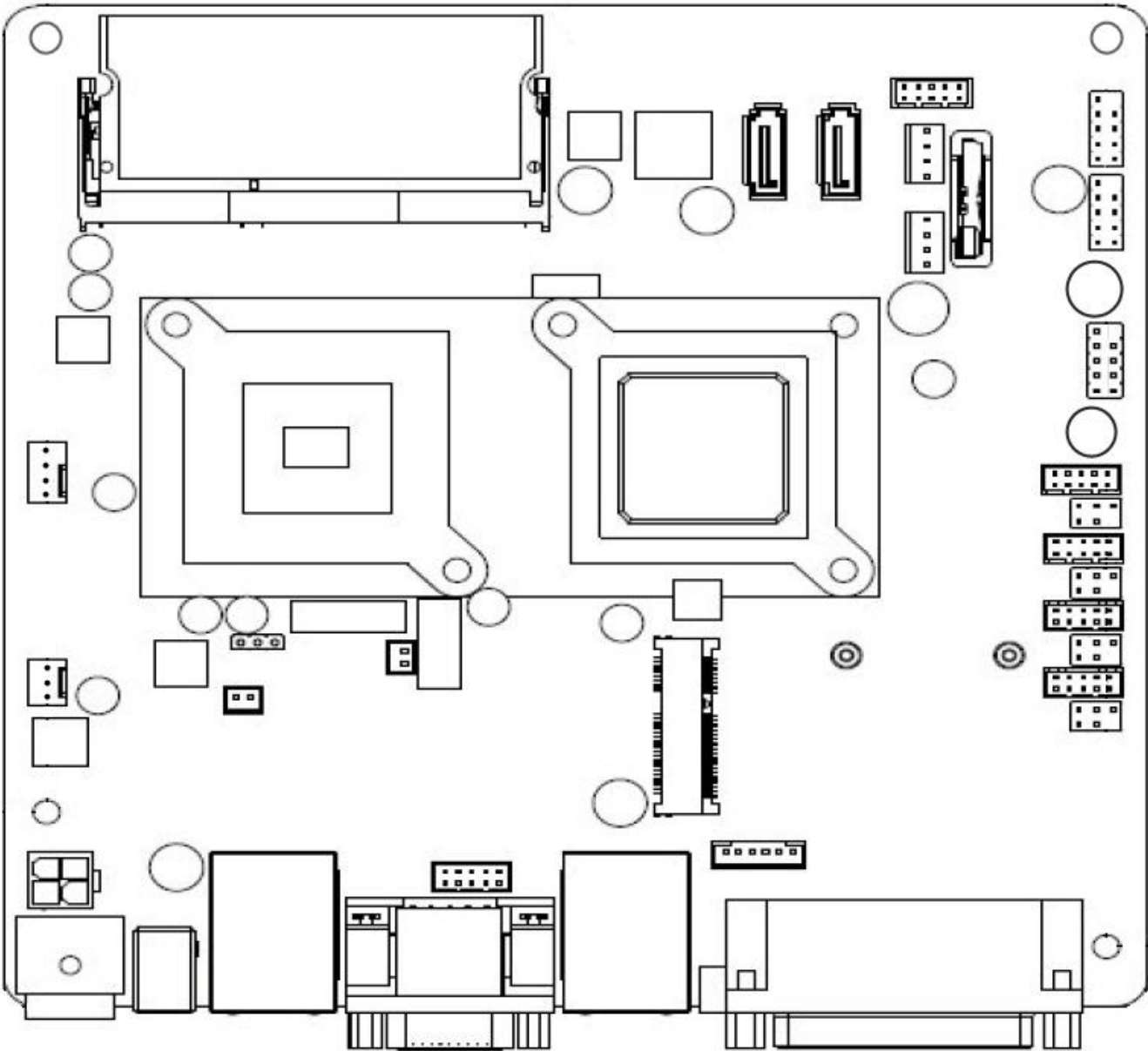
JP11**COM2 RI Function Selection**

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

JP12**COM5 RI Function Selection**

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

Jumper and Connector Locations of INS8313B (For EP-5500-AR30)



Connector Allocations

Connector	Function
MINI_CARD	Mini PCIe connector
DC_IN	DC+12V IN connector
DC_OUT	DC+12V Out connector
COM1	2x5 Pin connector
COM3	2x5 Pin connector
COM4	2x5 Pin connector
COM5	2x5 Pin connector
COM6	2x5 Pin connector
F_AUDIO	Front_Audio connector
F_USB 1	USB connector
F_USB 2	USB connector
F_USB 3	USB connector
SATA 1	7 pin SATA connector
SATA 2	7 pin SATA connector
SATA 3	7+15 pin SATA connector
SATAPW_1	SATA Power connector
SATAPW_2	SATA Power connector
SODIMM	DDR3 Memory SO-DIMM Socket
CPU_FAN	CPU FAN connector
BKLTEN_CON	1x5 pin Backlight connector
LCDPWR_CON	2 pin connector
LVDS	2x15pin Hirose connector
VGA2	2x4 pin connector

Connector Pin Assignments of INS8313B (For EP-5500-AR30)

DC_OUT

12V for external/internal use, this connector is reserved for future use

PIN No.	Description
1	GND
2	GND
3	12V
4	12V

CPU_FAN connector

PIN No.	Description
1	GND
2	+12V/RPM control
3	RPM detect
4	RPM control

System FAN connector

PIN No.	Description
1	GND
2	+12V/RPM control
3	RPM detect

KB_MS2

PS/2 Keyboard and PS/2 Mouse

PIN No.	Description
1	GND
2	KDAT
3	F_KDAT
4	KCLK
5	F_KCLK
6	5V

INV_BRIG1

Inverter with Box-header

PIN No.	Description
1	12V DC out
2	12V DC out
3	GND
4	Backlight Controller
5	Backlight Controller

LVDS 18 bit Connector

PIN No.	Description
1	GND
2	NC
3	EDID Data
4	GND
5	EDID Clock
6	NC
7	GND
8	NC
9	Data0+
10	NC
11	Data0-
12	Backlight Enable
13	GND
14	Backlight Controller
15	Data1+
16	GND
17	Data1-
18	GND
19	GND
20	Backlight 5V
21	LVDS Clock-
22	Backlight 5V
23	LVDS Clock+
24	Backlight 5V
25	GND
26	GND
27	Data2-
28	LVDS Power 3.3V
29	Data2+
30	LVDS Power 3.3V

COM1/3/5/6**Serial Port with Box-header**

PIN No.	Description
1	DCD
2	DSR
3	RXD
4	RTS
5	TXD
6	CTS
7	DTR
8	RI/+5V/+12V
9	GND
10	RI/+5V/+12V

COM4**Serial Port with 1.27mm pin-header**

PIN No.	Description
1	DSR
2	DCD
3	RTS
4	RXD
5	CTS
6	TXD
7	RI/+5V/+12V
8	DTR
9	RI/+5V/+12V
10	GND

JFRONT**Front Panel Connector with Box-header**

PIN No.	Description
1	Stand-by LED
2	Power LED
3	Power Switch#
4	GND
5	LAN Action LED
6	Stand-by 5V
7	HDD LED#
8	VCC 5V
9	RI/+5V/+12V
10	GND

F_USB1/2/3**USB Pin-header**

PIN No.	Description
1	USB Power 5V
2	USB Power 5V
3	USB Dx-
4	USB Dy-
5	USB Dx+
6	USB Dy+
7	GND
8	GND
9	NC
10	NC

F_AUDIO**Front Audio Box-header**

PIN No.	Description
1	Amplifier Out_R+
2	MIC_L
3	Amplifier Out_R-
4	MIC_R
5	GND
6	Line In_R
7	Amplifier Out_L+
8	Line In_L
9	Amplifier Out_L-
10	Line In_JD
11	GND
12	MIC_JD

VGA2**VGA Connector with Box-header**

PIN No.	Description
1	V-SYNC
2	H-SYNC
3	GND
4	GND
5	RED
6	GND
7	GREEN
8	DDC Clock
9	BULE
10	DDC Data

SATAPW_1/2**SATA HDD Power 5V & 12V**

PIN No.	Description
1	12V
2	GND
3	GND
4	5V

Mini PCIE Socket

PIN No.	Description
1	PCIE_WAKE#
2	*+3.3VSB
3	NC
4	GND
5	NC
6	+1.5V
7	NC
8	UIM_PWR
9	GND
10	UIM_DATA
11	CLK100_MPCIE1#/2#
12	UIM_CLK
13	CLK100_MPCIE1/2
14	UIM_RESET
15	GND
16	UIM_VPP
17	NC
18	GND
19	NC
20	MPCIE1/2_EN
21	GND
22	RST_PCIE#
23	PCIE_RX2-/3-
24	+3.3VSB
25	PCIE_RX2+/3+
26	GND
27	GND
28	+1.5V
29	GND
30	SB_SMB_CLK
31	PCIE_TX2-/3-
32	SB_SMB_DAT

33	PCIE_TX2+/3+
34	GND
35	GND
36	USBN
37	GND
38	USBP
39	+3.3VSB
40	GND
41	+3.3VSB
42	LED_WLAN#
43	GND
44	LED_WLAN#
45	NC
46	LED_WLAN#
47	NC
48	+1.5v
49	NC
50	GND
51	NC
52	*+3.3VSB

SATA1, SATA2 connector

Serial ATA 2.0

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

LAN1/2

10/100/1000 Ethernet RJ-45 Connector

PIN No.	Description
1	TX+
2	TX-
3	RX+
4	NC
5	NC
6	RX-
7	NC
8	NC

COM2**RS-232/422/485 Port A DB-9 Connector**

PIN No.	RS-232	RS-422	RS-485
1	DCD	TX-	DATA-
2	RXD	RX+	NA
3	TXD	TX+	DATA+
4	DTR	RX-	NA
5	GND	GND	GND
6	DSR	NA	NA
7	RTS	NA	NA
8	CTS	NA	NA
9	+5V/+12V/RI	+5V/+12V/NA	+5V/+12V/NA

SATA3**Serial ATA 2.0**

PIN No.	Description
1	3.3V
2	3.3V
3	3.3V
4	GND
5	GND
6	GND
7	5V
8	5V
9	5V
10	GND
11	Reserved
12	GND
13	12V
14	12V
15	12V

USB1**2-Stack USB2.0 Type A Connector**

PIN No.	Description
1	+5V
2	USB1-
3	USB1+
4	GND
5	+5V
6	USB0-
7	USB0+
8	GND

VGA1**D-SUB 15 pin Connector**

PIN No.	Description
1	Red
2	VGreen
3	Blue
4	NC
5	GND
6	GND
7	GND
8	GND
9	VCC
10	GND
11	NC
12	DDC data
13	HSYNC
14	VSYNC
15	DDC clock

Jumper Settings of INS8313B (For EP-5500-AR30)

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 symbol (★).

LVDS PWR1**LVDS 3V/5V selection**

PIN No.	Function
1-2 Short	3.3V ★
2-3 Short	5V

JRS1**Jumper for RS232, RS422 and RS485 connectors**

PIN No.	Function
1-2 Short	RS232 ★
3-4 Short	RS422
5-6 Short	RS485

JRS2**COM2 Pin 1**

PIN No.	Function
1-2 Short	RS485 D-
2-3 Short	RS232 DCD ★

JRS3**COM2 Pin 2**

PIN No.	Function
1-2 Short	RS485 D+
2-3 Short	RS232 RXD ★

JRS4**COM2 Pin 4**

PIN No.	Function
1-2 Short	RS422 D-
2-3 Short	RS232 DTR ★

JRS5**COM2 Pin 3**

PIN No.	Function
1-2 Short	RS422 D+
2-3 Short	RS232 TXD ★

JCOM1/2/3/4/5/6

For Pin 9 output 5V, 12V or RI

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

USB_PWR1/2/3

Jumper for Stand-by 5V or VCC 5V selections

PIN No.	Function
1-2 Short	VCC 5V ★
2-3 Short	Stand-by 5V

CLR_COMS1

Clear CMOS Pin-header

PIN No.	Function
1-2 Short	Clear CMOS
2-3 Short	Charge ★

LCDPWR CON

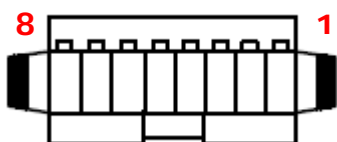
LCD Power ON/OFF

PIN No.	Function
1-2 Short	ON
1-2 Open	OFF ★

BKLTEN_CON

Back light Inverter Enabled/Disabled

PIN No.	Function
1-2 Short	Enable
1-2 Open	Disable ★

External COM6 Por: Connector Pin Definitions

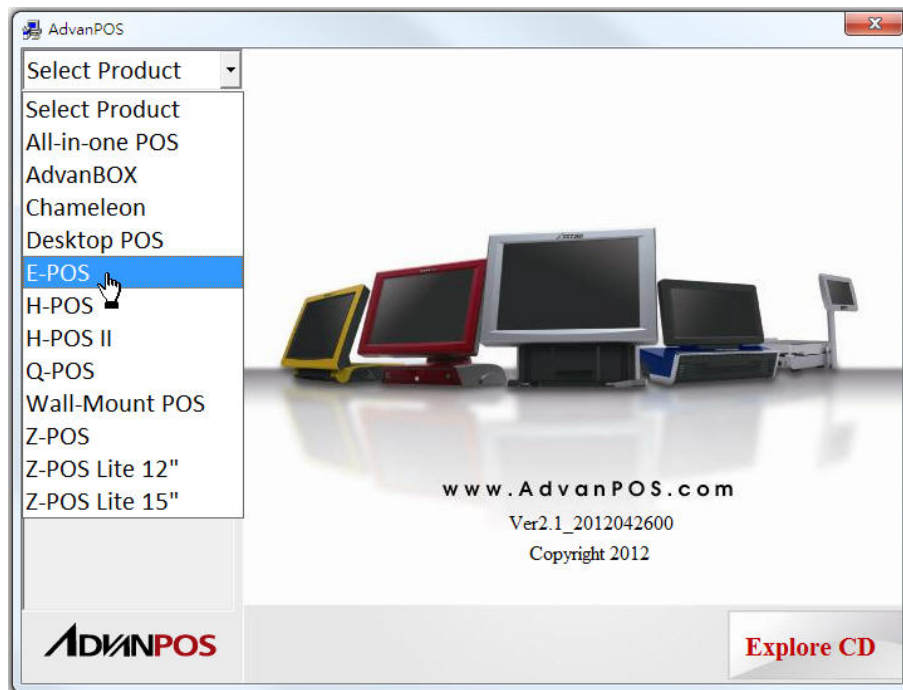
PIN No.	Description
1	VIN
2	GND
3	CTS
4	RTS
5	RXD
6	TXD
7	+12V
8	GND

Chapter 5 Software Setup

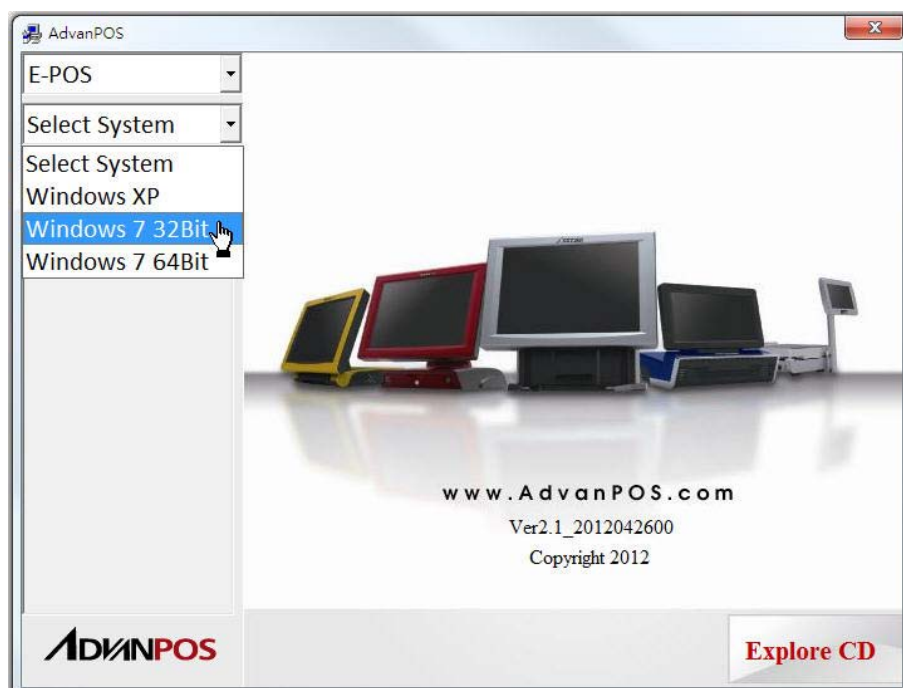
Pre-Installation Requirements

This system comes with a variety of drivers for different operating systems. A software CD is included in the package contents. The following section documents the procedures used to install the peripheral.

1. Insert software CD into a system.
2. Run the setup.exe file on the CD.
3. Click **【Select Product】** to select your POS model.



4. Click **【Select System】** to select your operating system.



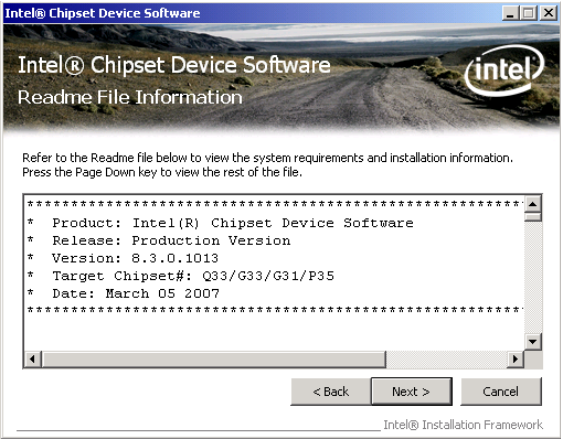



5. Select your POS model Number.

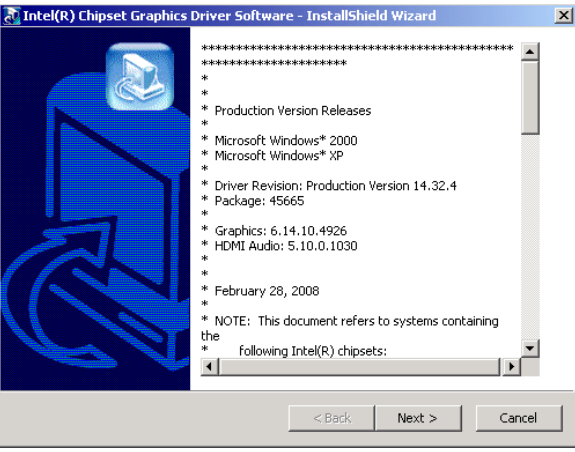

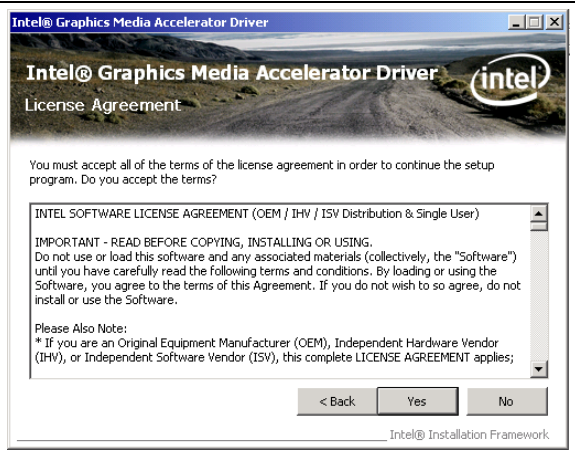
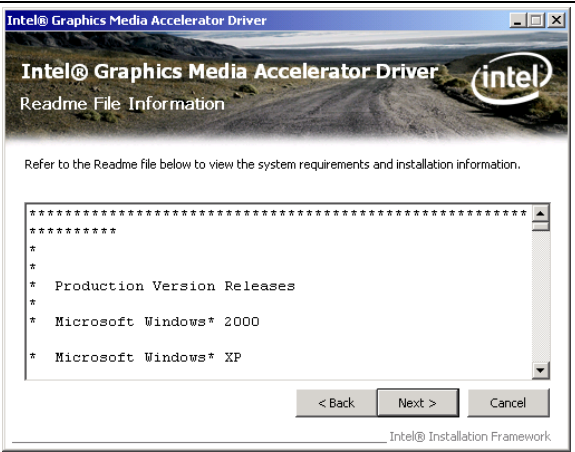
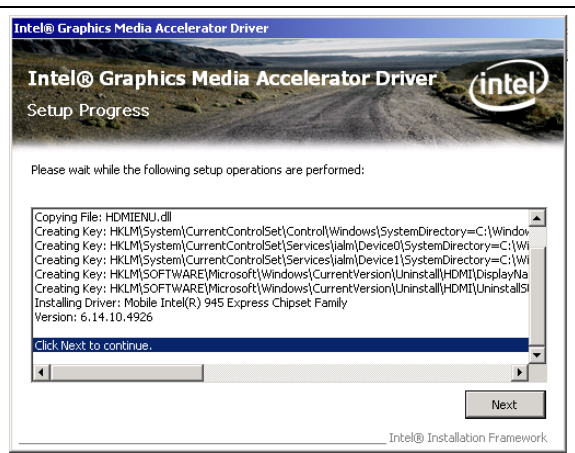



6. Select the driver that you want to install and then follow on-screen instructions to install your driver or refer to following procedures specifying how every driver is to be installed.

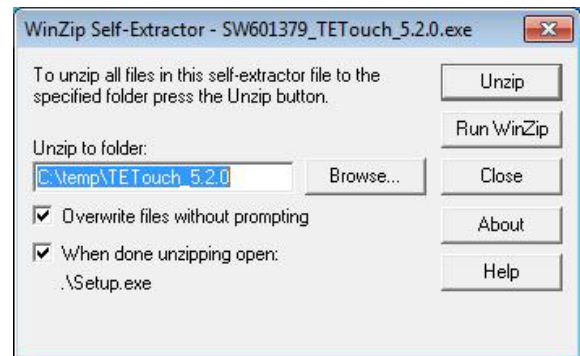
Intel Chipset Driver Installation

	
1. Click the Next button on the Welcome screen.	2. Click Yes on the License Agreement screen.
	
3. Click Next on the Information screen.	4. When installation is complete, click Finish.

Intel Graphics Driver Installation

	
<p>1. Click Next on the Startup screen.</p>	<p>2. Click Next on the Welcome screen.</p>
	
<p>3. Click Yes on the License Agreement screen.</p>	<p>4. Click Next on the Information screen.</p>
	
<p>5. Click Next on the Setup Progress screen.</p>	<p>6. When installation is complete, click Finish and restart the system.</p>

ELO Touch Screen Driver Installation



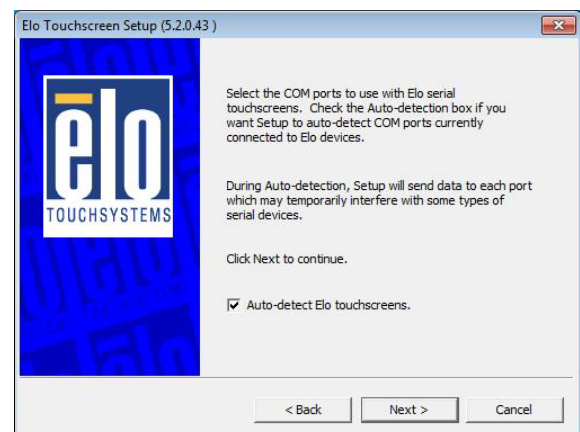
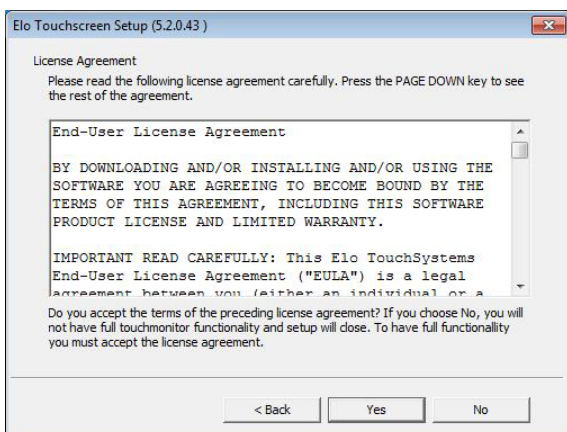
1. Click OK on the Welcome screen.

2. Click Unzip on the WinZip Self-Extractor screen.



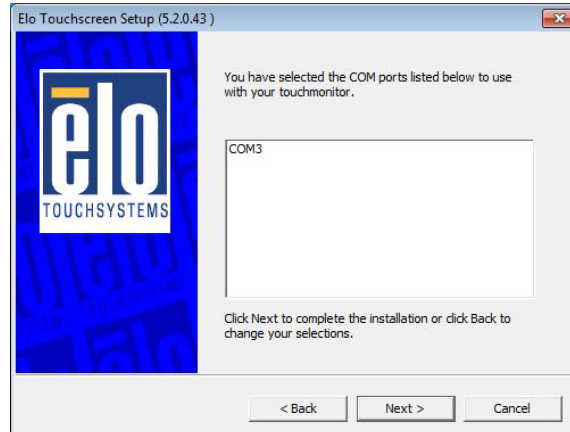
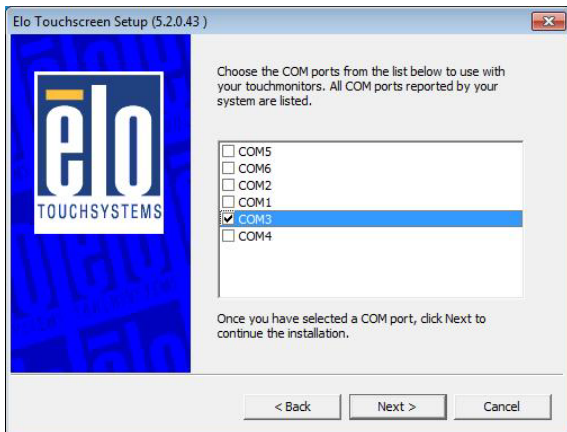
3. Select Default installation language, click Next.

4. Select Install Serial Touchscreen Drivers, click Next.



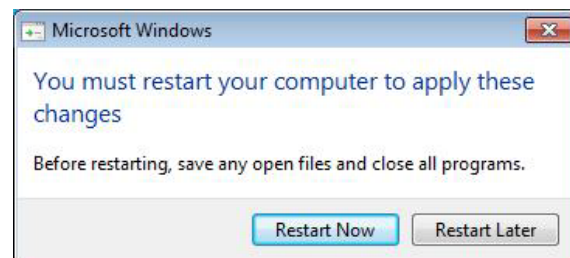
5. Click Yes on the License Agreement screen.

6. Select Auto-detect Elo devices, click Next.



7. Select COM3, click Next.

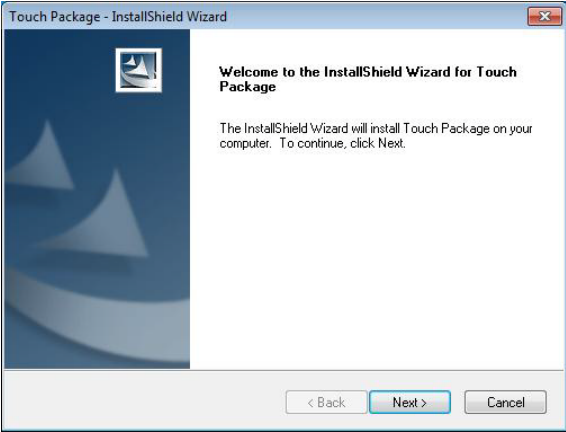
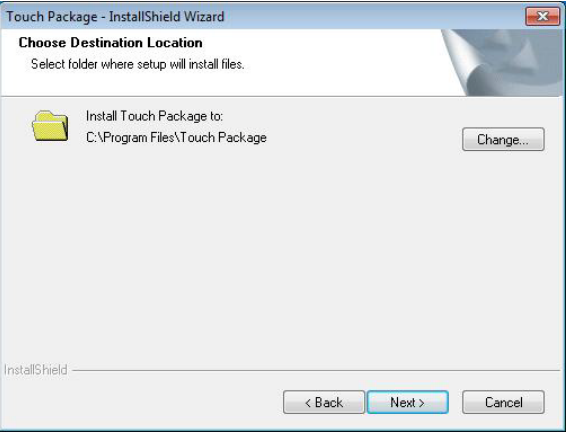
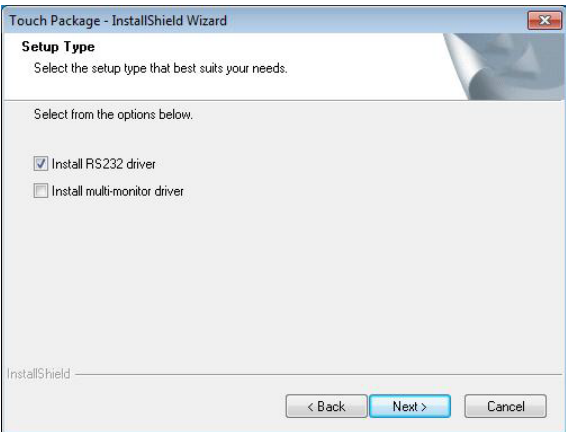
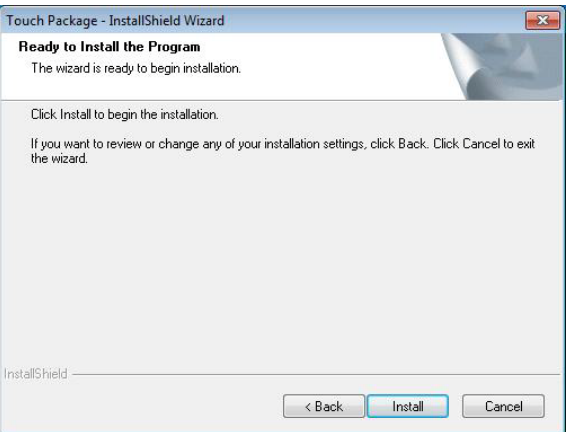
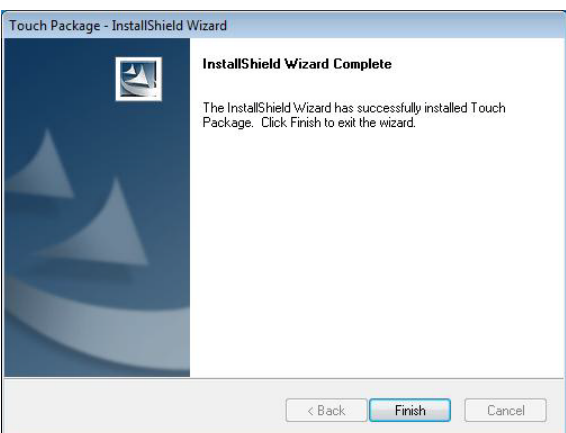
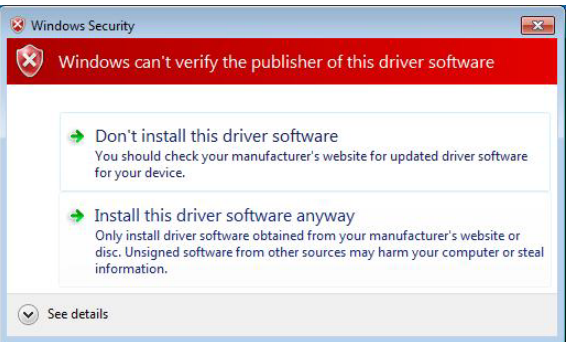
8. Click Next to confirm COM port selection.



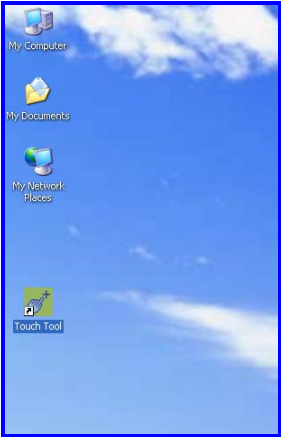
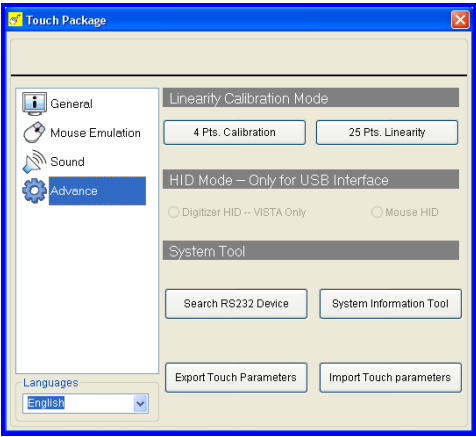


9. Click Finish.


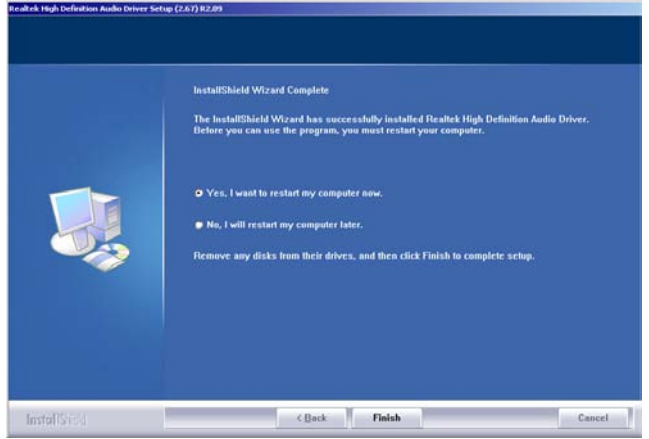
10. Click Restart Now to apply these change.

Abon Touch Screen Driver Installation

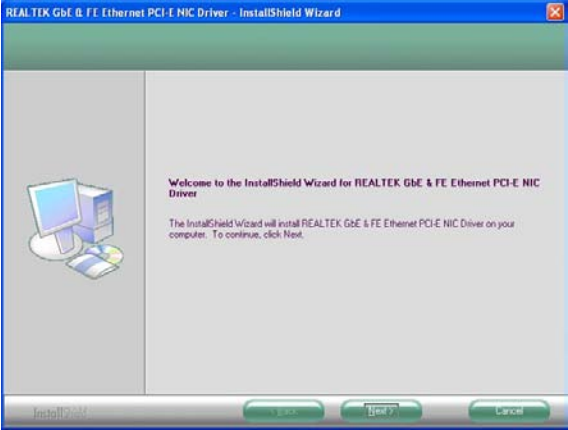
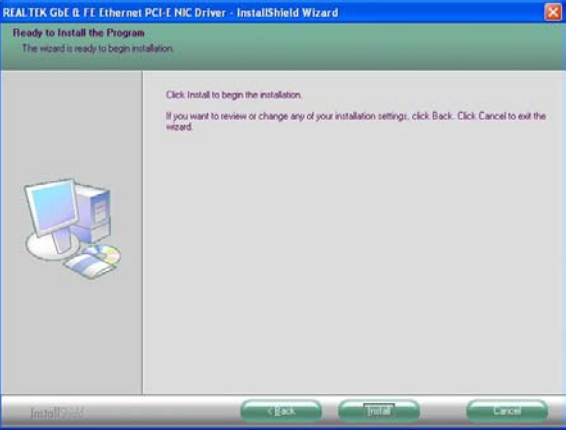
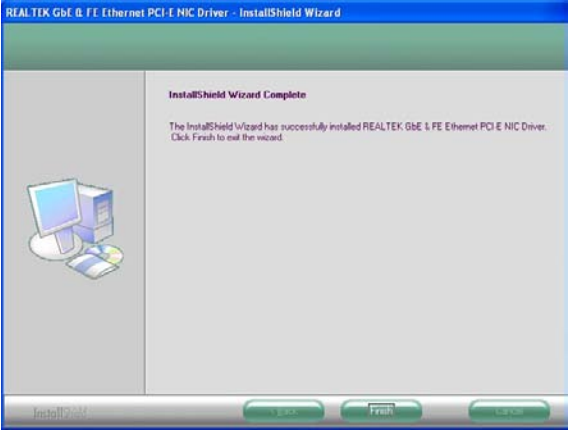
	
<p>1. Click Next on the Welcome screen.</p>	<p>2. Click Next to confirm destination location.</p>
	
<p>3. Select Install RS232 driver and click Next.</p>	<p>4. Click Install to begin installation.</p>
	
<p>5. Click Finish to complete.</p>	<p>6. For Windows 7 operating system, click Install this driver software anyway.</p>

 <p>Hardware Installation</p> <p>The software you are installing for this hardware: Touch Pack Serial Controller</p> <p>has not passed Windows Logo testing to verify its compatibility with Windows XP. [Tell me why this testing is important.]</p> <p>Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.</p> <p>Continue Anyway STOP Installation</p>	 <p>Touch Package Reboot</p> <p>Please reboot your computer to work your touch properly.</p> <p><input checked="" type="radio"/> Yes, I want to restart my computer now.</p> <p><input type="radio"/> No, I will restart my computer later.</p> <p>OK</p>
<p>7. For Windows XP operating system, click Continue anyway.</p>	<p>8. Click OK to reboot the system.</p>
	
<p>9. Run the Touch Tool on the desktop.</p>	<p>10. Select Advance and click on the 4 Pts. Calibration button.</p>

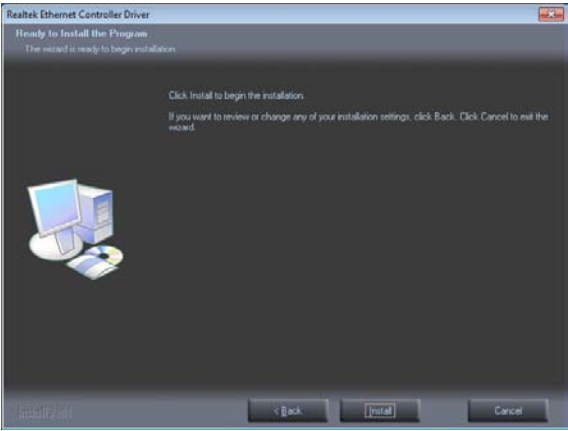
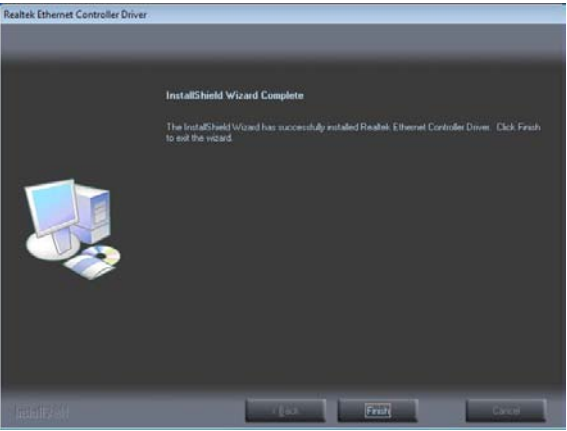
Audio Driver Installation

	
<p>1. Click Next on the Welcome screen.</p>	<p>2. When installation is complete, click Finish to restart the system.</p>

Ethernet Driver Installation for Windows XP

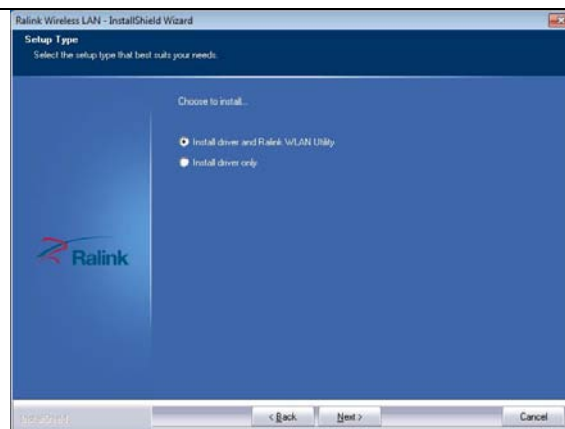
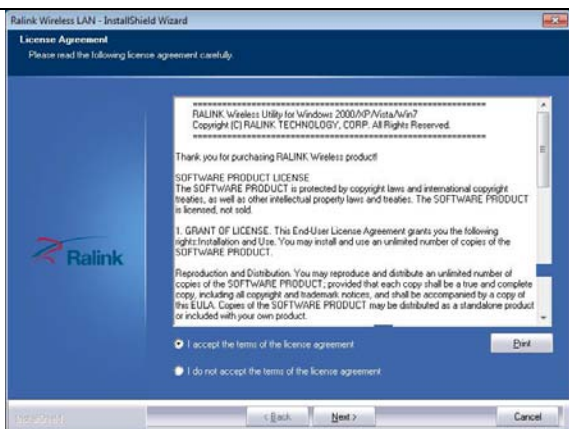
	
<p>1. Click Next.</p>	<p>2. Click Install.</p>
	
<p>3. Click Finish.</p>	

Ethernet Driver Installation for Windows 7

	
<p>1. Click Install.</p>	<p>2. Click Finish.</p>

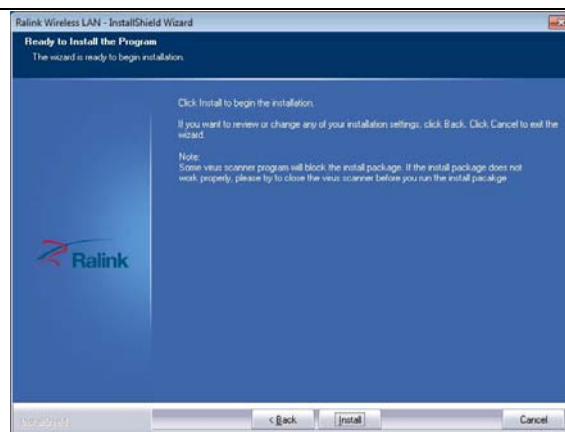
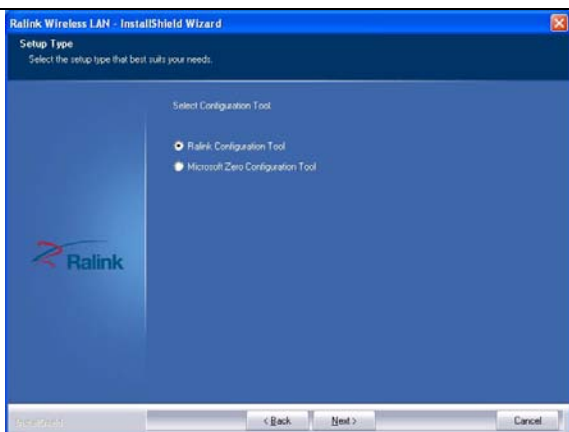
Wireless LAN Driver Installation (optional)

1. Enter the **LR802UKN3_802.11bgn** folder and then run the **IS_AP_STA_RT2870_D.exe**.



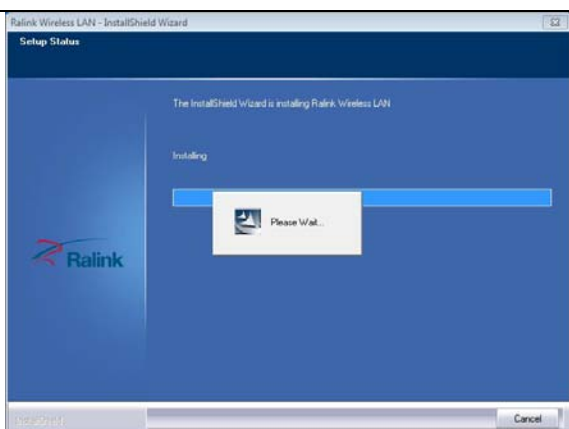
2. Click Accept on the License Agreement screen.

3. Alternative, and then click Next.



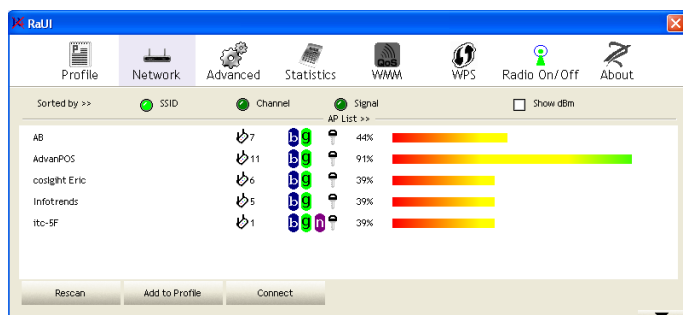
4. For Windows XP operating system, select Configuration Tool.

5. Click Install.



6. Wait as the WLAN driver is installed.

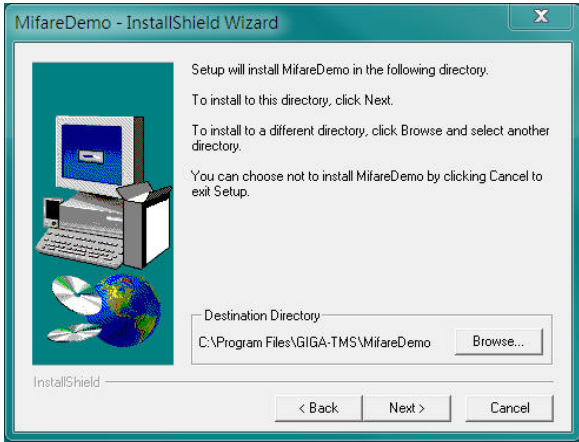
7. Click Finish.



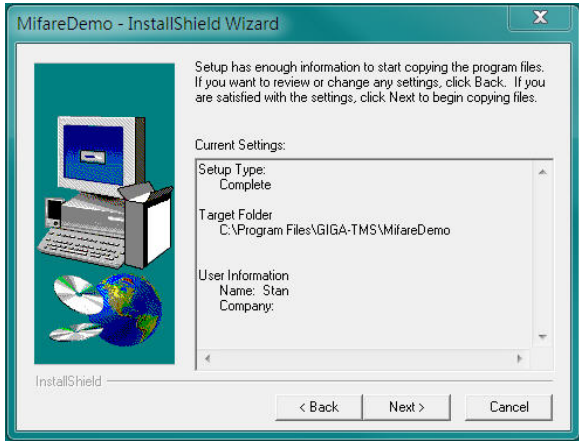
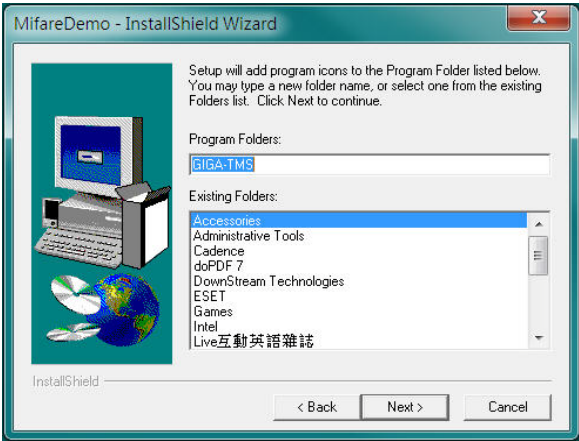
8. When installation is complete, the WLAN utility will automatically appear on the desktop.

RFID Driver Installation (optional)

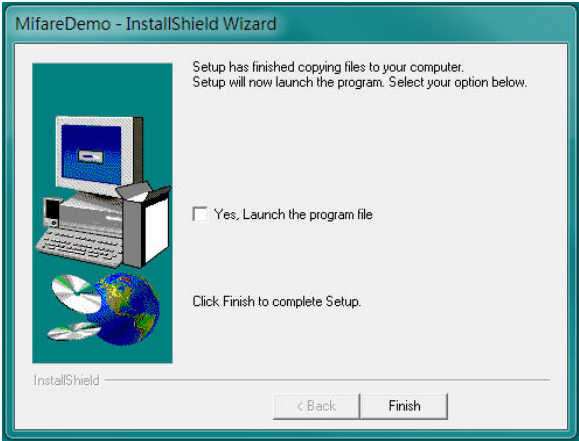
- 1. First, plug in the RFID Module.
- 2. Enter the **MF320U** folder and then run the MifareDemoSetup_PSW00020.exe.



- 3. Click Next.
- 4. Click Next to accept the Destination Directory.



- 5. Click Next after making sure the folder.
- 6. Click Next to begin copy files.



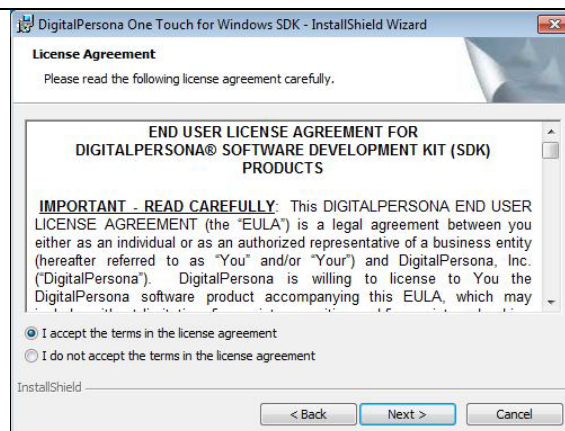
- 7. Click Finish.

MSR Driver Installation (optional)

1. Plug in MSR module.
2. Select your MSR interface PS2 or USB.
3. For PS2 interface: Run the MSRfgSetup_V1_4R7_PSW00025.exe.
For USB interface: Enter the **Software** folder and then run the HISD_MSR_PSW00003.exe.
4. Follow on-screen instructions to install your MSR driver.

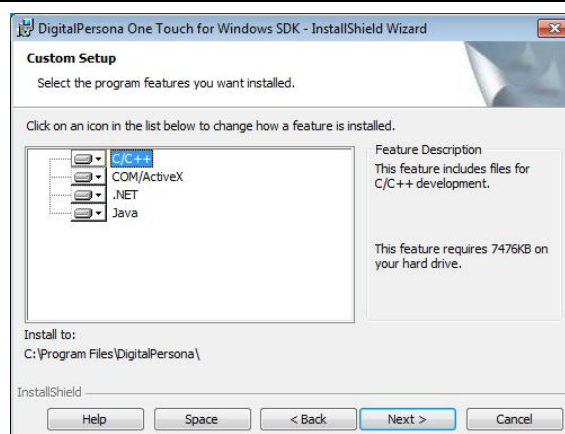
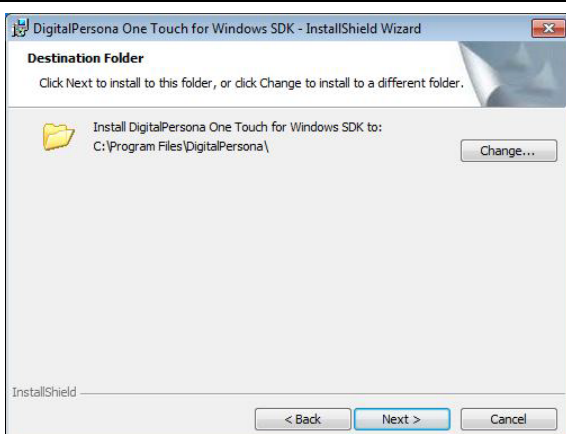
Fingerprint Reader Driver Installation (optional)

1. Plug in the 2-in-1 Fingerprint Reader and MSR module.
2. Enter the **SDK** folder and then run the setup.exe.



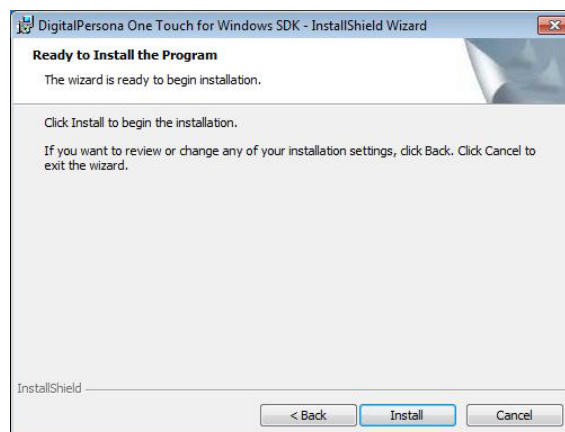
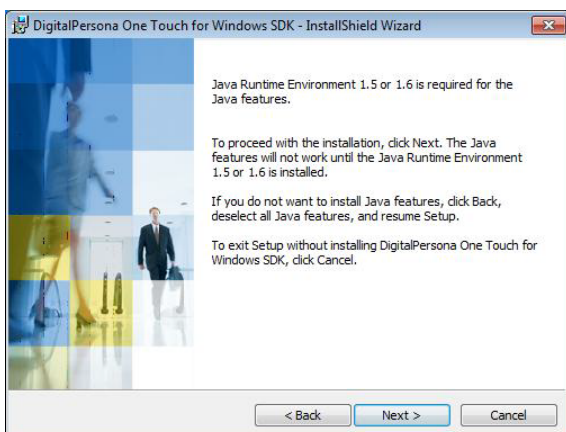
3. Click Next on the Welcome screen.

4. Click Next on the License Agreement screen.



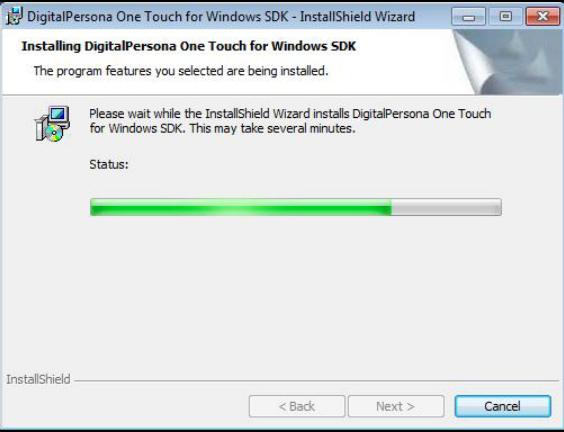
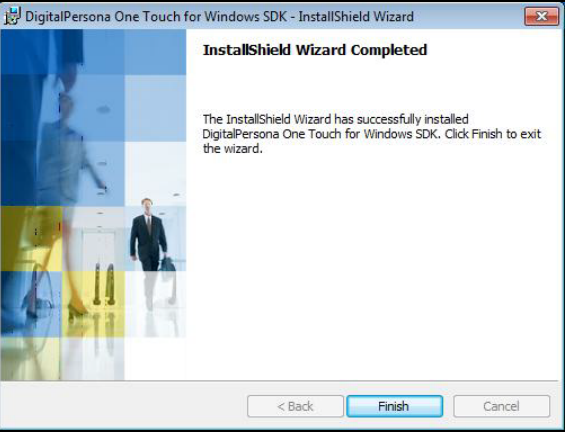
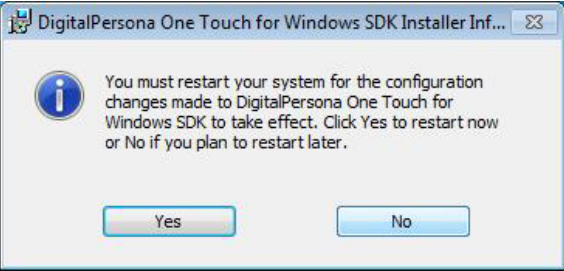
5. Click Next to accept the destination folder.

6. Click Next to begin installation.



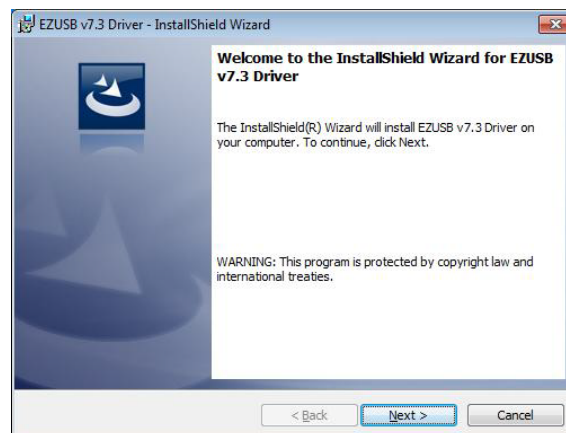
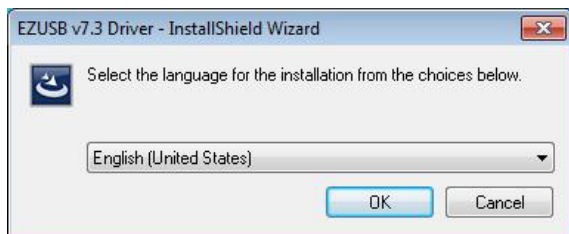
7. To proceed with the installation, click Next.

8. Click Install to begin the installation.

	
<p>9. Wait as the driver is installed.</p>	<p>10. Click Finish.</p>
	
<p>11. Click Yes to restart the system (required).</p>	

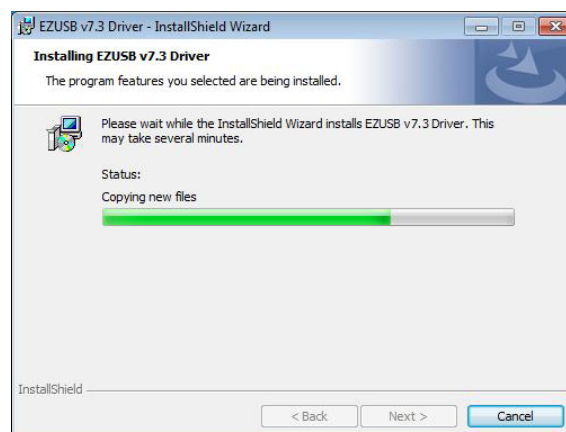
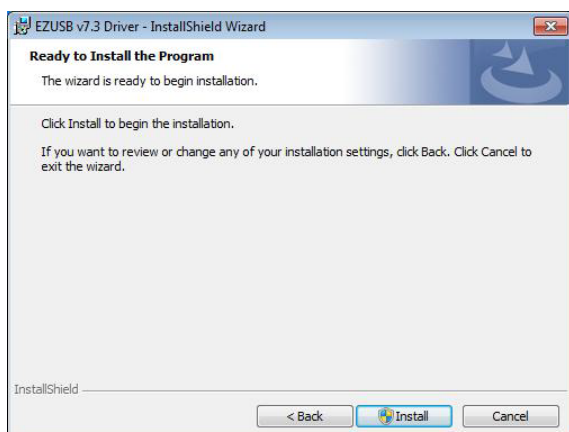
IC Card Reader Driver Installation (optional)

1. Plug in the 3-in-1 MSR/I-Button/IC Card Reader module.
2. Enter the **EZ100PU Driver** folder.
3. Select your POS operating system and then run the setup.exe.



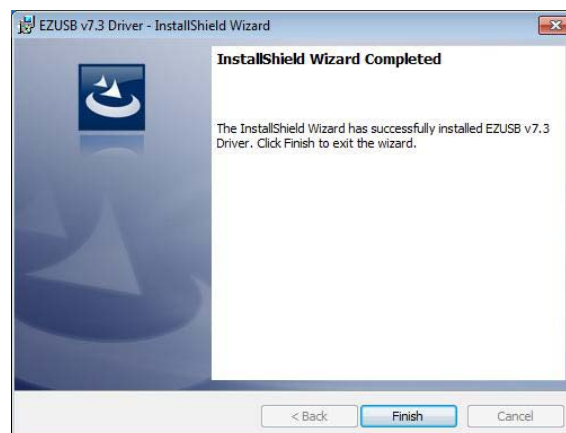
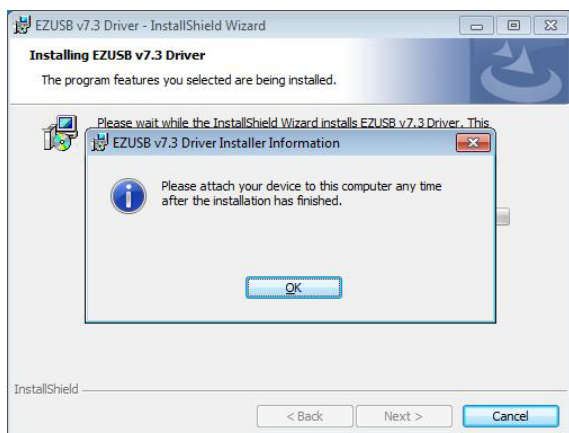
4. Select language, click OK.

5. Click Next on the Welcome screen.



6. Click Install to begin the installation.

7. Wait as the driver is installed.



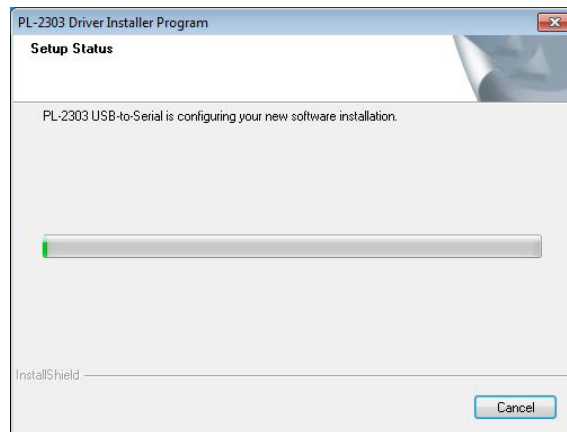
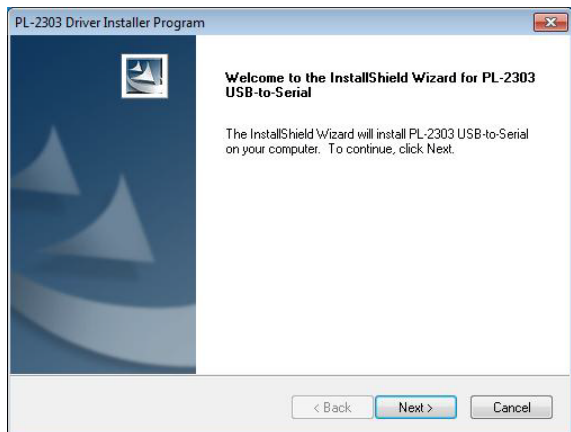
8. Click OK on the Note screen.

9. Click Finish.

Rear Mount VFD Driver Installation (optional)

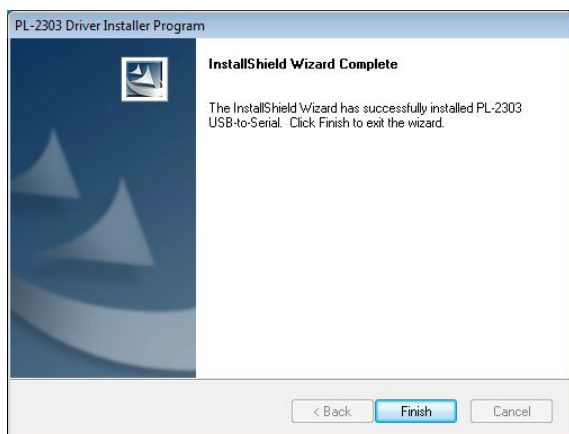
The EP-5500 rear mount VFD port is a USB interface. The rear mount VFD uses a Serial interface, so in order to enable it you must install the included USB-to-Serial interface driver.

1. First, plug in the VFD Module.
2. Enter the **USB To COM Driver** folder and then run utility program PL2303_Prolific_driverInstaller_v130.



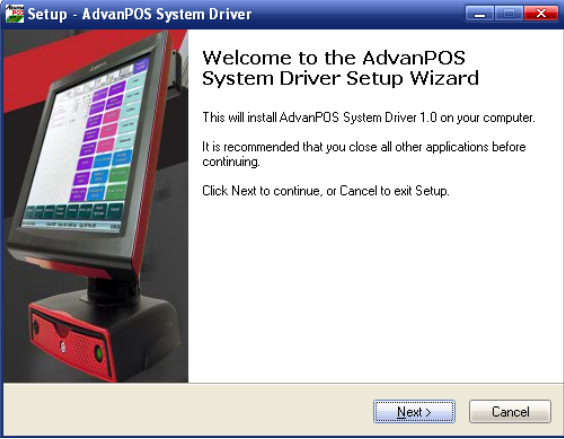
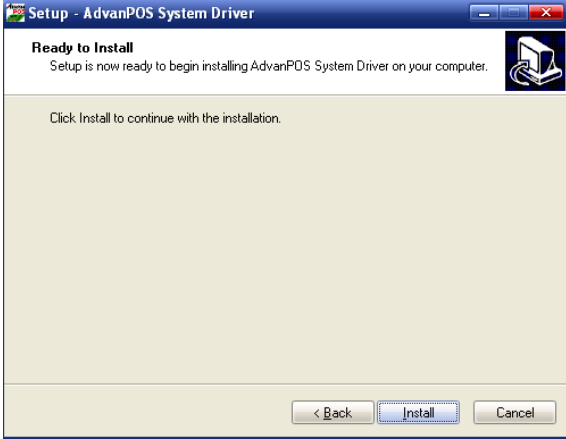
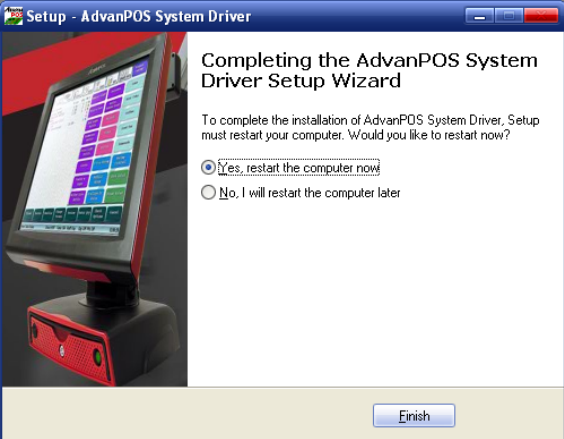
3. Click Next on the Welcome screen.

4. Wait as the driver is installed.



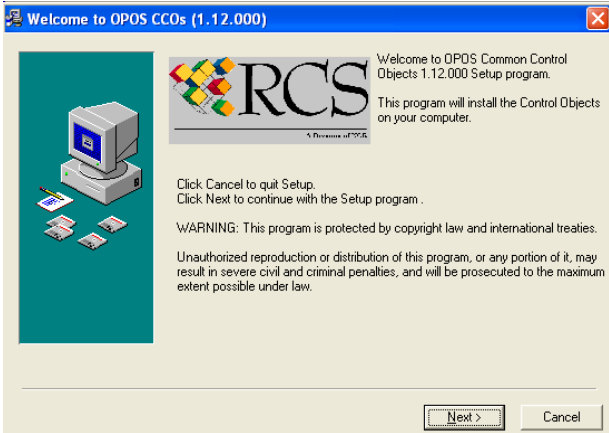
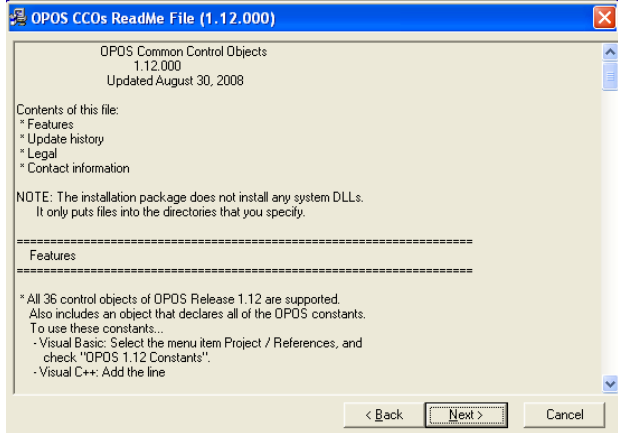
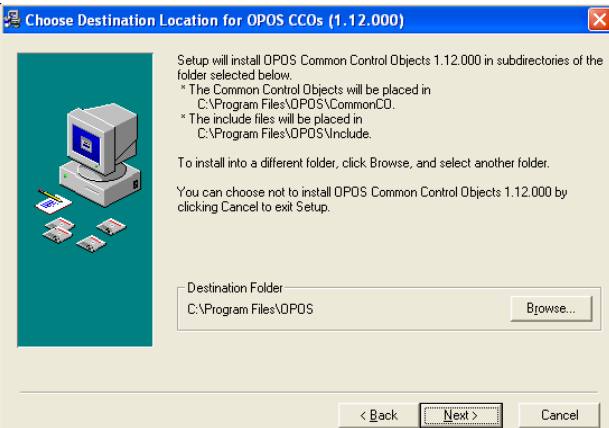
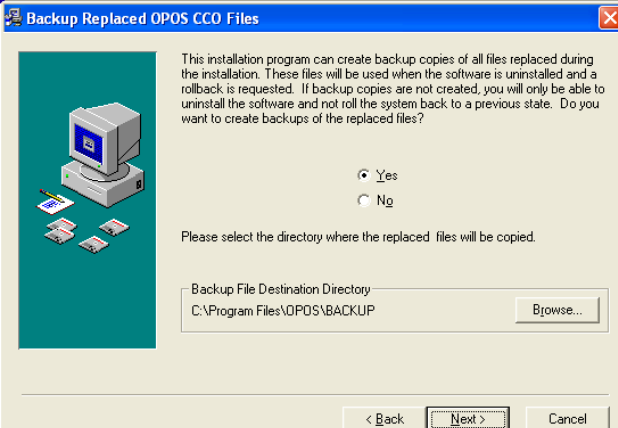
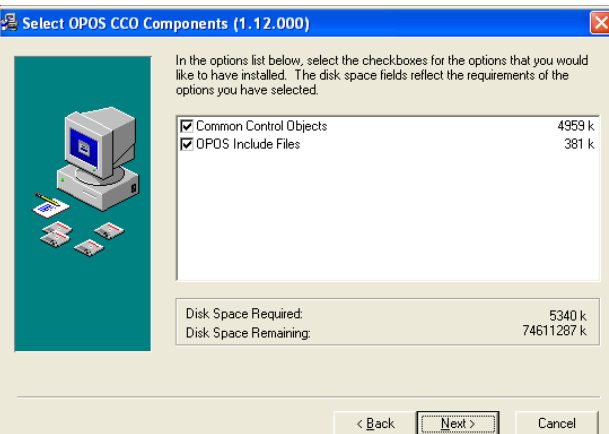
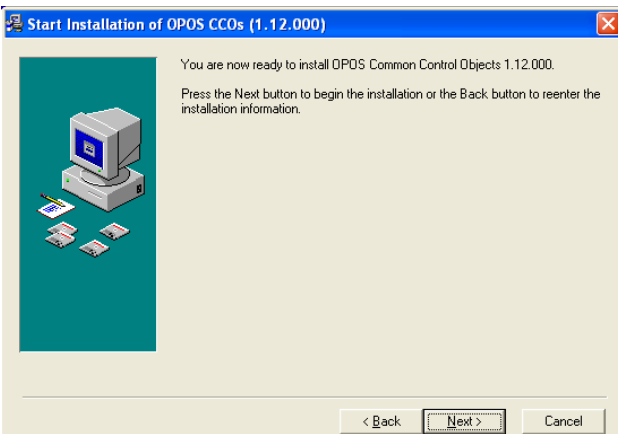
5. Click Finish.

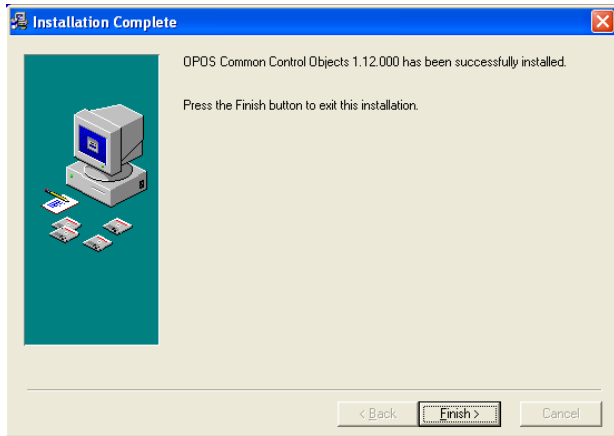
AdvanPOS System Driver Installation (required for Cash Drawer)

	
1. Click Next on the Welcome screen.	2. Click Install on the Ready to Install screen.
	
3. Click Finish on the Completing installation screen. A system restart is required to complete the installation.	

OPOS CCO Driver Installation

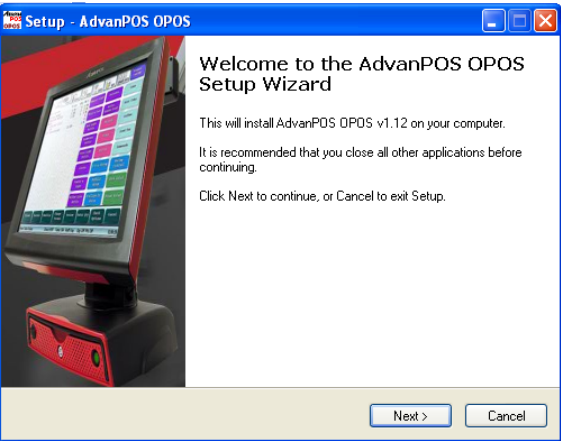
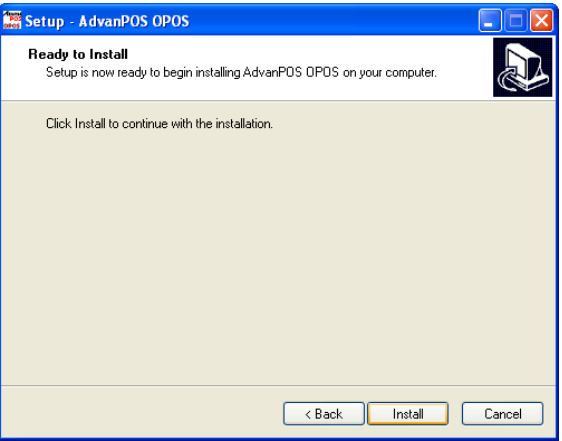

Before installing the OPOS driver, please make sure the AdvanPOS System Driver has been installed. The OPOS driver for the EP-5500 series supports the Cash Drawer, MSR, I-Button (KeyLock), RFID, VFD (Line-Display).

 <p>Welcome to OPOS Common Control Objects 1.12.000 Setup program.</p> <p>This program will install the Control Objects on your computer.</p> <p>Click Cancel to quit Setup. Click Next to continue with the Setup program.</p> <p>WARNING: This program is protected by copyright law and international treaties. Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.</p> <p>Next > Cancel</p>	 <p>OPOS Common Control Objects 1.12.000 Updated August 30, 2008</p> <p>Contents of this file: * Features * Update history * Legal * Contact information</p> <p>NOTE: The installation package does not install any system DLLs. It only puts files into the directories that you specify.</p> <p>Features</p> <p>* All 36 control objects of OPOS Release 1.12 are supported. Also includes an object that declares all of the OPOS constants. To use these constants: - Visual Basic: Select the menu item Project / References, and check "OPOS 1.12 Constants". - Visual C++: Add the line</p> <p>< Back Next > Cancel</p>
<p>1. Click Next on the Welcome screen.</p>	<p>2. Click Next on the ReadMe screen.</p>
 <p>Setup will install OPOS Common Control Objects 1.12.000 in subdirectories of the folder selected below.</p> <ul style="list-style-type: none"> * The Common Control Objects will be placed in C:\Program Files\OPOS\CommonCO. * The include files will be placed in C:\Program Files\OPOS\Include. <p>To install into a different folder, click Browse, and select another folder.</p> <p>You can choose not to install OPOS Common Control Objects 1.12.000 by clicking Cancel to exit Setup.</p> <p>Destination Folder: C:\Program Files\OPOS</p> <p>Browse...</p> <p>< Back Next > Cancel</p>	 <p>This installation program can create backup copies of all files replaced during the installation. These files will be used when the software is uninstalled and a rollback is requested. If backup copies are not created, you will only be able to uninstall the software and not roll the system back to a previous state. Do you want to create backups of the replaced files?</p> <p><input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p>Please select the directory where the replaced files will be copied.</p> <p>Backup File Destination Directory: C:\Program Files\OPOS\BACKUP</p> <p>Browse...</p> <p>< Back Next > Cancel</p>
<p>3. Click Next to confirm the Destination Location.</p>	<p>4. Click Yes to backup the CCO files and select backup file destination directory, then click Next.</p>
 <p>In the options list below, select the checkboxes for the options that you would like to have installed. The disk space fields reflect the requirements of the options you have selected.</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Common Control Objects 4959 k <input checked="" type="checkbox"/> OPOS Include Files 381 k <p>Disk Space Required: 5340 k Disk Space Remaining: 74611287 k</p> <p>< Back Next > Cancel</p>	 <p>You are now ready to install OPOS Common Control Objects 1.12.000.</p> <p>Press the Next button to begin the installation or the Back button to reenter the installation information.</p> <p>< Back Next > Cancel</p>
<p>5. Select Common Control Objects and OPOS Include Files, click Next.</p>	<p>6. Click Next on the Start Installation screen.</p>



7. Click Finish on the Installation Complete screen.

AdvanPOS OPOS Driver Installation

	
<p>1. Click Next on the Welcome screen.</p>	<p>2. Click Install on the Setup screen.</p>
	
<p>3. Click Finish on the Completing installation screen.</p>	

Appendix A. Sample C++ Cash Drawer Code for Windows



NOTE:

Requires installation of System Driver. Refer to the System Driver Installation section for instructions.

1. Open Cash Drawer

```
// IOCTL Codes
#define GPD_TYPE 56053
#define ADV_OPEN_CTL_CODE CTL_CODE(GPD_TYPE, 0x900, METHOD_BUFFERED, FILE_ANY_ACCESS)
#define ADV_STATUS_CTL_CODE CTL_CODE(GPD_TYPE, 0x901, METHOD_BUFFERED, FILE_ANY_ACCESS)

void OpenDrawer(UCHAR uWhichDrawer)
{
    // uWhichDrawer = 1 => CD#1, uWhichDrawer = 2 => CD#2
    HANDLE hFile;
    BOOL bRet;
    UCHAR uDrawer = uWhichDrawer;

    // Open the driver
    hFile = CreateFile("\\\\.\\ADVSYS",
                      GENERIC_WRITE | GENERIC_READ,
                      FILE_SHARE_READ | FILE_SHARE_WRITE, NULL,
                      OPEN_EXISTING, FILE_ATTRIBUTE_NORMAL, 0);

    if (m_hFile == INVALID_HANDLE_VALUE)
    {
        AfxMessageBox("Unable to open Cash Drawer Device Driver!");
        return;
    }

    // Turn on the Cash Drawer Output (Fire the required solenoid)
    bRet = DeviceIoControl(hFile, ADV_CD_OPEN_CTL_CODE,
                          &uDrawer, sizeof(uDrawer),
                          NULL, 0,
                          &ulBytesReturned, NULL);

    if (bRet == FALSE || ulBytesReturned != 1)
    {
        AfxMessageBox("Failed to write to cash drawer driver");
        CloseHandle(hFile);
        return;
    }

    CloseHandle(hFile);
}
```

2. Get Cash Drawer Status

```
void GetDrawerState()
{
    HANDLE hFile;
    BOOL bRet;

    // Open the driver
    hFile = CreateFile(TEXT("\\\\.\\ADVSYS"),
                      GENERIC_WRITE | GENERIC_READ,
                      FILE_SHARE_READ | FILE_SHARE_WRITE, NULL,
                      OPEN_EXISTING, FILE_ATTRIBUTE_NORMAL, 0);
```



```

if (m_hFile == INVALID_HANDLE_VALUE)
{
    AfxMessageBox("Unable to open Cash Drawer Device Driver!");
    return;
}

// Read the CD status
bRet = DeviceIoControl(hFile, ADV_CD_STATUS_CTL_CODE,
    NULL, 0
    &ReadByte, sizeof(ReadByte),
    &ulBytesReturned, NULL);

if (bRet == FALSE || ulBytesReturned != 1)
{
    AfxMessageBox("Failed to Read from cash drawer driver");
    CloseHandle(hFile);
    return;
}
else
{
    AfxMessageBox(ReadByte ? "Drawer Open" : "Drawer Closed");
}

CloseHandle(hFile);
}

```

Appendix B. Sample VB.NET Cash Drawer Code for Windows



NOTE:

Requires installation of System Driver. Refer to the System Driver Installation section for instructions.

```
Private Declare Function CreateFile Lib "kernel32" Alias "CreateFileA" (ByVal lpFileName As String, ByVal dwDesiredAccess As Integer, ByVal dwShareMode As Integer, ByVal lpSecurityAttributes As IntPtr, ByVal dwCreationDisposition As Integer, ByVal dwFlagsAndAttributes As Integer, ByVal hTemplateFile As IntPtr) As Integer
Private Declare Function DeviceIoControl Lib "kernel32" (ByVal hDevice As IntPtr, ByVal dwIoControlCode As Integer, ByVal lpInBuffer As Byte, ByVal nInBufferSize As Integer, ByVal lpOutBuffer As Byte, ByVal nOutBufferSize As Integer, ByVal lpBytesReturned As Long, ByVal lpOverlapped As Integer) As Integer
Private Declare Function CloseHandle Lib "kernel32" (ByVal hObject As Long) As Integer

Public Shared Function CTL_CODE(ByVal DeviceType As Integer, ByVal func As Integer, ByVal Method As Integer, ByVal Access As Integer) As Integer
    Return (DeviceType << 16) Or (Access << 14) Or (func << 2) Or Method
End Function

Dim DeviceHandle As Integer
Const GENERIC_READ As Long = &H80000000, GENERIC_WRITE As Long = &H40000000
Const FILE_SHARE_READ As Long = &H1, FILE_SHARE_WRITE As Long = &H2
Const OPEN_EXISTING As Long = &H3, FILE_ATTRIBUTE_NORMAL As Long = &H80
Const INVALID_HANDLE_VALUE As Long = &HFFFFFFF

Const ADVPORT_TYPE As Long = 40000, METHOD_BUFFERED As Long = 0, FILE_ANY_ACCESS As Long = 0
Dim ADV_OPEN_CTL_CODE As Long = CTL_CODE(ADVPORT_TYPE, &H900, METHOD_BUFFERED, FILE_ANY_ACCESS)
Dim ADV_STATUS_CTL_CODE As Long = CTL_CODE(ADVPORT_TYPE, &H901, METHOD_BUFFERED, FILE_ANY_ACCESS)

Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
    DeviceHandle = CreateFile("\\.\ADVSYS", GENERIC_READ Or GENERIC_WRITE, FILE_SHARE_READ Or FILE_SHARE_WRITE, 0, OPEN_EXISTING, FILE_ATTRIBUTE_NORMAL, 0)
    If DeviceHandle = INVALID_HANDLE_VALUE Then
        'Failed to Open Cash Drawer Driver
        Timer1.Enabled = False
        MsgBox("Error opening ADVSYS.sys. Error = " & Err.LastDllError)
    End If
End Sub

Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click
    Dim iBytesRtn As Integer
    Dim iRet As Integer, iDrawer As Integer

    ' Open Drawer #1
    iDrawer = &H1
    iRet = DeviceIoControl(DeviceHandle, ADV_OPEN_CTL_CODE, iDrawer, 4, 0, 0, iBytesRtn, 0)
    If (iRet = 0 Or iBytesRtn <> 1) Then
        MsgBox("Error opening ADVSYS.sys. Error = " & Err.LastDllError)
    End If
End Sub

Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button2.Click
    Dim iBytesRtn As Integer
    Dim iRet As Integer, iDrawer As Integer

    ' Open Drawer #2
    iDrawer = &H2
    iRet = DeviceIoControl(DeviceHandle, ADV_OPEN_CTL_CODE, iDrawer, 4, 0, 0, iBytesRtn, 0)
```

```

    If (iRet = 0 Or iBytesRtn <> 1) Then
        MsgBox("Error opening ADVSYS.sys. Error = " & Err.LastDllError)
    End If
End Sub
Private Sub Timer1_Tick(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Timer1.Tick
    Dim iBytesRtn As Integer
    Dim iRet As Integer, iStatus As Integer

    ' Get Drawer Status
    iRet = DeviceIoControl(DeviceHandle, ADV_STATUS_CTL_CODE, 0, 0, iStatus, 4, iBytesRtn, 0)
    If (iRet = 0 Or iBytesRtn <> 1) Then
        MsgBox("Error opening ADVSYS.sys. Error = " & Err.LastDllError)
    End If
    If (iStatus = 0) Then
        StatusText.Text = "Cash Drawer(s) Closed"
    Else
        StatusText.Text = "Cash Drawer(s) Open"
    End If
End Sub

```

Appendix C. Sample VB6.0 Cash Drawer Code for Windows



NOTE:

Requires installation of System Driver. Refer to the System Driver Installation section for instructions.

Option Explicit On

```
Private Declare Function CreateFile Lib "kernel32" Alias "CreateFileA" (ByVal lpFileName As String, ByVal dwDesiredAccess As Long, ByVal dwShareMode As Long, ByVal lpSecurityAttributes As SECURITY_ATTRIBUTES, ByVal dwCreationDisposition As Long, ByVal dwFlagsAndAttributes As Long, ByVal hTemplateFile As Long) As Long
Private Declare Function DeviceIoControl Lib "kernel32" (ByVal hDevice As Long, ByVal dwIoControlCode As Long, ByVal lpInBuffer As Any, ByVal nInBufferSize As Long, ByVal lpOutBuffer As Any, ByVal nOutBufferSize As Long, ByVal lpBytesReturned As Long, ByVal lpOverlapped As OVERLAPPED) As Long
Private Declare Function CloseHandle Lib "kernel32.dll" (ByVal hObject As Long) As Long
```

'CreateFile Custom Variables

```
Private Type SECURITY_ATTRIBUTES
    nLength As Long
    lpSecurityDescriptor As Long
    bInheritHandle As Long
End Type
```

'DeviceIoControl Custom Variables

```
Private Type OVERLAPPED
    Internal As Long
    InternalHigh As Long
    offset As Long
    OffsetHigh As Long
    hEvent As Long
End Type
```

```
Dim DeviceHandle As Integer
Dim SA As SECURITY_ATTRIBUTES
Dim SA1 As OVERLAPPED
Dim ADV_OPEN_CTL_CODE As Long
Dim ADV_STATUS_CTL_CODE As Long
```

```
Private Const GENERIC_READ As Long = &H80000000
Private Const GENERIC_WRITE As Long = &H40000000
Private Const FILE_SHARE_READ As Long = &H1
Private Const FILE_SHARE_WRITE As Long = &H2
Private Const OPEN_EXISTING As Long = &H3
Private Const FILE_ATTRIBUTE_NORMAL As Long = &H80
Private Const INVALID_HANDLE_VALUE As Long = &HFFFFFFFF
```

```
Private Const METHOD_BUFFERED As Long = 0, FILE_ANY_ACCESS As Long = 0
```

```
Private Function CTL_CODE(ByVal lngDevFileSys As Long, ByVal lngFunction As Long, ByVal lngMethod As Long, ByVal lngAccess As Long) As Long
    CTL_CODE = (lngDevFileSys Or (lngAccess * (2 ^ 14)) Or (lngFunction * (2 ^ 2)) Or lngMethod)
End Function
```

```

Private Sub Form_Load()
    '-1673527296 Come from c code (40000 <<16)
    ADV_OPEN_CTL_CODE = CTL_CODE(-1673527296, &H900, METHOD_BUFFERED, FILE_ANY_ACCESS)
    ADV_STATUS_CTL_CODE = CTL_CODE(-1673527296, &H901, METHOD_BUFFERED, FILE_ANY_ACCESS)

    DeviceHandle = CreateFile("\\.\ADVSYS", GENERIC_READ Or GENERIC_WRITE, FILE_SHARE_READ Or
    FILE_SHARE_WRITE, SA, OPEN_EXISTING, FILE_ATTRIBUTE_NORMAL, 0)
    If DeviceHandle = INVALID_HANDLE_VALUE Then
        'Failed to Open Cash Drawer Driver
        MsgBox("Error opening ADVSYS.sys. Error = " & Err.LastDllError)
    End If
End Sub

Private Sub Command1_Click()
    Dim iBytesRtn As Long
    Dim iRet As Integer, iDrawer As Integer

    ' Open Drawer #1
    iDrawer = &H1
    iRet = DeviceIoControl(DeviceHandle, ADV_OPEN_CTL_CODE, iDrawer, 4, 0, 0, iBytesRtn, SA1)
    If (iRet = 0 Or iBytesRtn <> 1) Then
        MsgBox("Error opening ADVSYS.sys. Error = " & Err.LastDllError)
    End If
End Sub

Private Sub Command2_Click()
    Dim iBytesRtn As Long
    Dim iRet As Integer, iDrawer As Integer

    ' Open Drawer #2
    iDrawer = &H2
    iRet = DeviceIoControl(DeviceHandle, ADV_OPEN_CTL_CODE, iDrawer, 4, 0, 0, iBytesRtn, SA1)
    If (iRet = 0 Or iBytesRtn <> 1) Then
        MsgBox("Error opening ADVSYS.sys. Error = " & Err.LastDllError)
    End If
End Sub

Private Sub Timer1_Timer()
    Dim iBytesRtn As Long
    Dim iRet As Integer, iStatus As Integer

    ' Get Drawer Status
    iRet = DeviceIoControl(DeviceHandle, ADV_STATUS_CTL_CODE, 0, 0, iStatus, 4, iBytesRtn, SA1)
    If (iRet = 0 Or iBytesRtn <> 1) Then
        Timer1.Enabled = False
        MsgBox("Error opening ADVSYS.sys. Error = " & Err.LastDllError)
    End If
    If (iStatus = 0) Then
        Label1.Caption = "Cash Drawer(s) Closed"
    Else
        Label1.Caption = "Cash Drawer(s) Open"
    End If
End Sub

```