ADVANPOS www.advanpos.com

DP-6500 Series

All-in-One Desktop POS System

User Manual

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

Ver 1.2_2012/07/04

How to Use This Manual

This manual contains information to set up and use the DP-6500 series. 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, WiFi, Bluetooth, RFID, rear mount VFD, and swing arm kit.

Chapter 4 PEB-973A main board diagrams, locations of jumpers, and connectors.

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.

Copyright

First Edition April 2010

Patents and Trademarks

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

D-POS (DP-65000) Series documented list:

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)

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.

Contents

Chapter 1 Introduction

Features

- 15” TFT LCD with resistive touch
- Fanless operation with Intel® Atom Processor N270 1.6GHz
- Magnesium-aluminum alloy shell for greater reliability
- Cable-less docking reduces clutter
- IP65 sealed front touch panel
- 5 x COM, 7 x USB, 1 x CF II, 1 x Gigabit LAN
- Flexible options: MSR, I-Button, Fingerprint, RFID, WiFi, Bluetooth, and IC Card Reader
- RoHS compliant

Specifications

DP-6500-AR10 System Configuration	
CPU	Intel® Atom™ Processor N270 1.6G Hz
System Chipset	Intel 945GSE+ICH7M
System Memory	Supports a maximum 1 x 2GB SO-DIMM DDR2 SDRAM
Video Memory	Supports Intel DVMT, shared system memory up to 224MB
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 or 350 cd/m^2 (adjustable)
Touch Screen Type	ELO or 3rd party 5-wire resistive
I/O Ports	
USB Ports	Supports 7 USB 2.0 ports for future expansion (3 x internal, 4 x external)
Serial Ports	4 x external: COM1, COM2, COM5, COM6 (D-SUB) pin 9 with +5V/+12V 1 x internal: COM3 for touch screen
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	Magnesium-aluminum and metal housing
Dimensions	290(D) x 380(W) x 165(H) mm
Housing Color	Silver/Black, Red/Black, Black
Net Gross Weight	7 Kg
Operating Temperature	0 °C ~ 40 °C
EMI/Safety	CE, FCC, RoHS

Package Contents

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

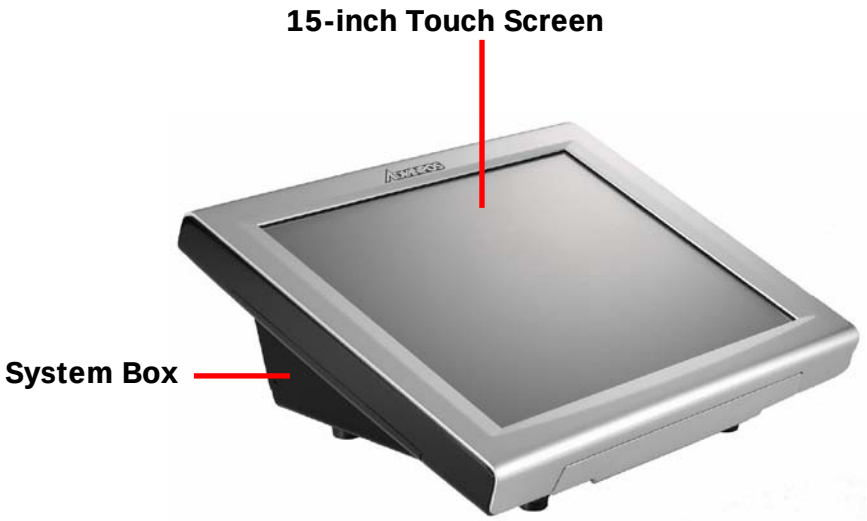
Options

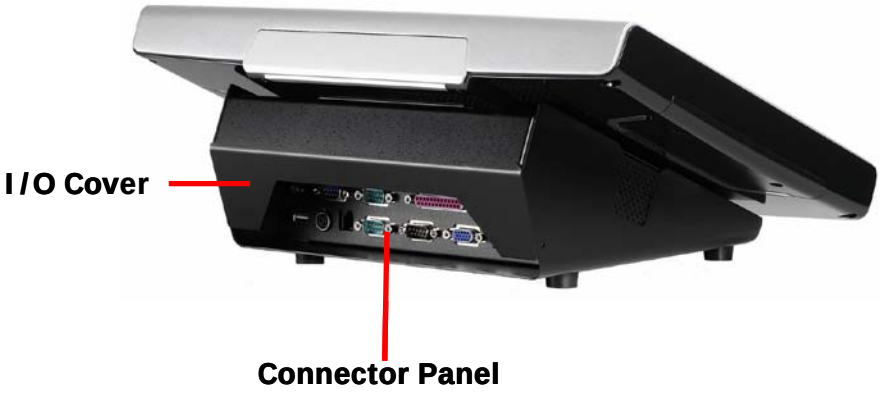
- Magnetic Stripe Reader (MSR) Module: triple track*
- 2-in-1 Module (Magnetic Stripe Reader + Fingerprint Reader) *
- 2-in-1 Module (Magnetic Stripe Reader + I-Button Reader) *
- 3-in-1 Module (Magnetic Stripe Reader + I-Button Reader + IC Card Reader) *
- Wireless Module: WiFi 802.11b/g or Bluetooth 2.0
- Radio Frequency Identification (RFID) Module: internal 13.56MHz
- VFD Customer Display: 5 cm height, 2 lines 20 characters each (rear mount type)

* Available in front or side swipe formats.

Base System

Before you begin, take a few moments to become familiar with the DP-6500 series.



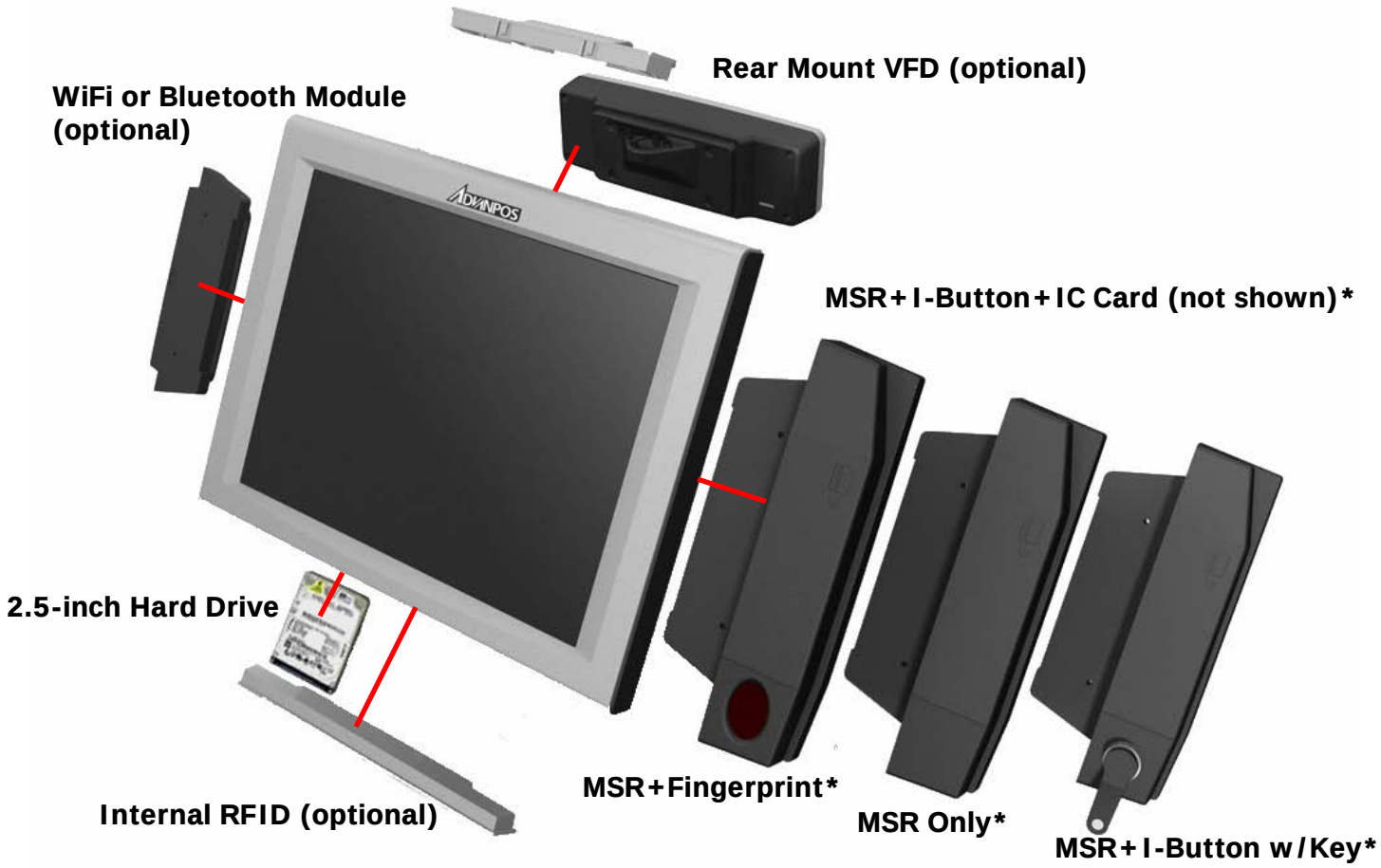


Expandable Main Display

The four 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.

- Rear Mount VFD (USB interface, requires USB driver)
- WiFi or Bluetooth module (USB interface)
- RFID module (USB interface)
- MSR (PS/2 interface)
- MSR+I-Button (PS/2 interface)
- MSR+Fingerprint (MSR for PS/2 interface, Fingerprint for USB interface)
- MSR+I-Button+IC Card Reader (MSR and I-Button for PS/2 interface, IC Card Reader for USB interface)

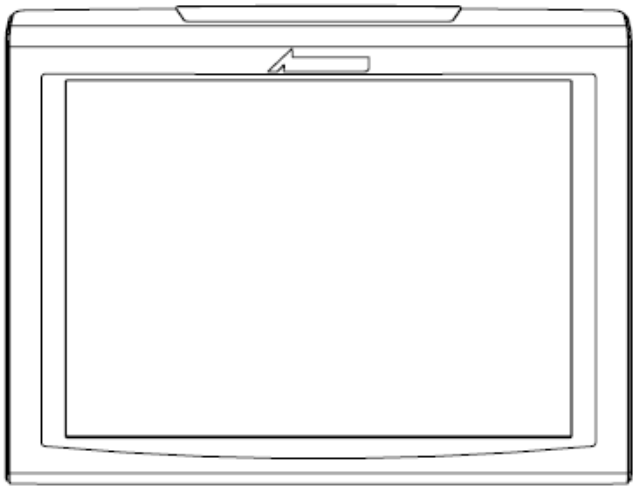
NOTE: The Magnetic Stripe Reader module can only be installed to the right side of the front panel. The wireless module can only be installed to the left side of the front panel. The locations are not interchangeable.

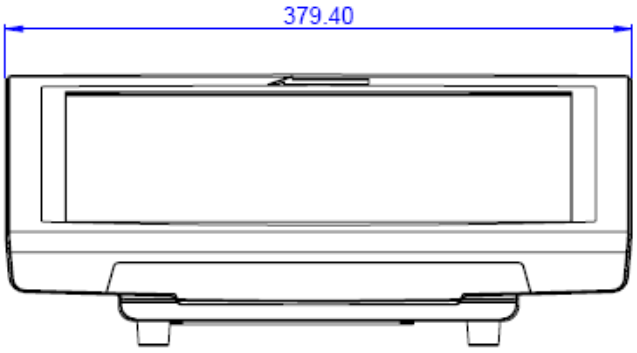


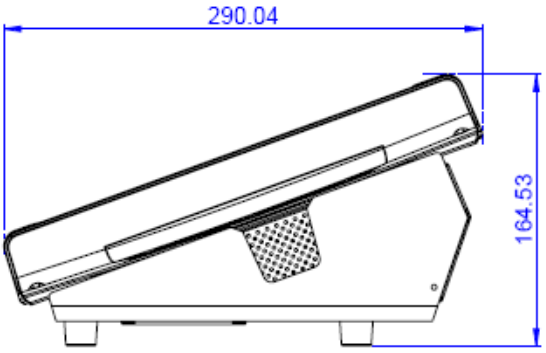
* MSR Modules available in side or front swipe formats.

Dimensions

(Unit: mm)

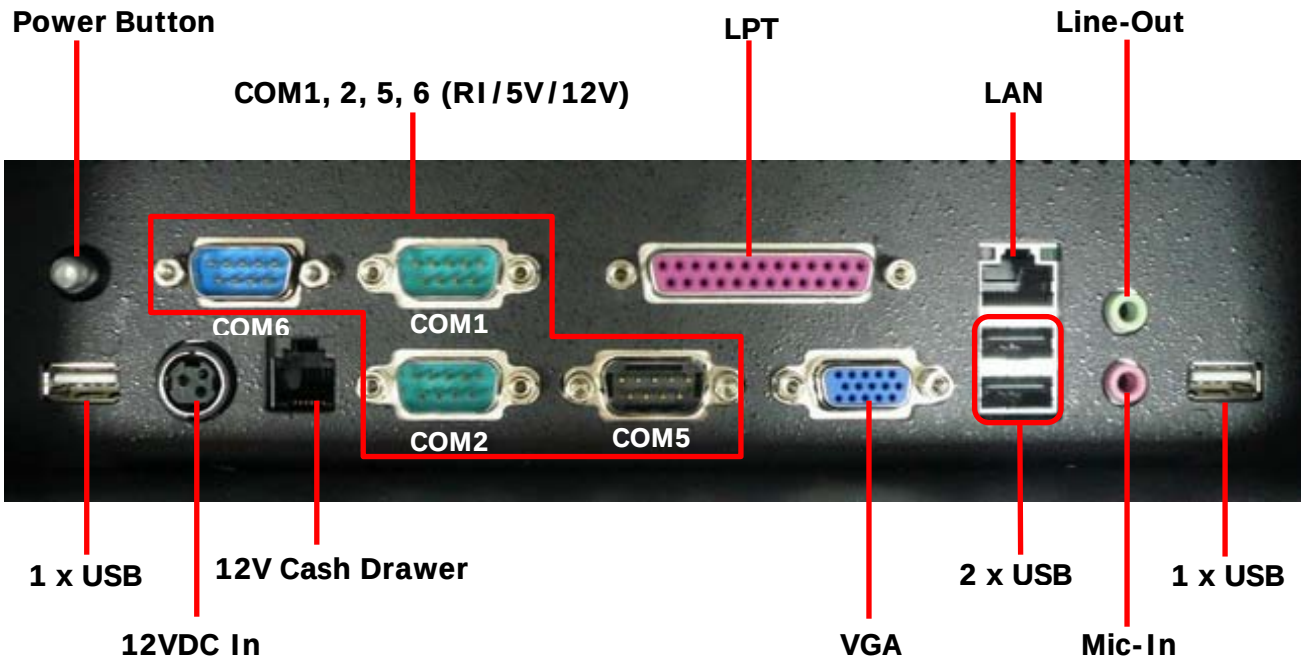






Connector Panel

The DP-6500 series primary connector panel is located at the rear. To clearly see the connector panel you must open the I/O cover up.



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.

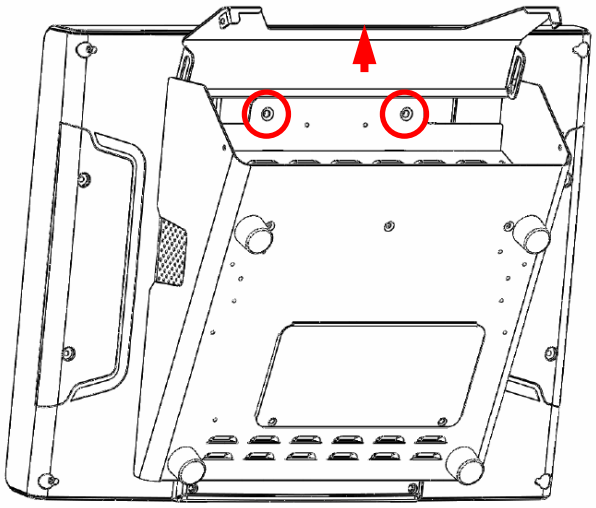
Removing System Box

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

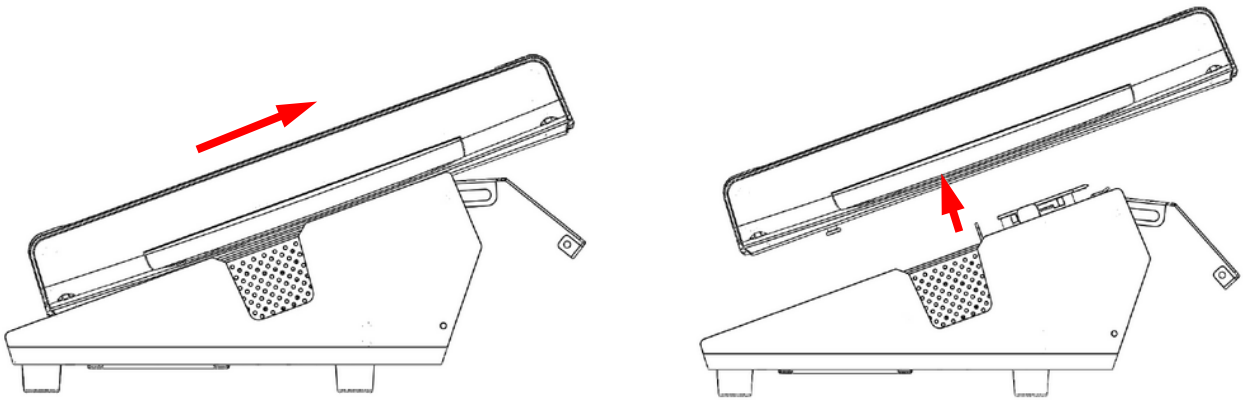
If you are inserting or removing a drive, shut down the operating system properly, turn off the system, and unplug the power cord. Do not remove a drive while the system is on or in standby mode.

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. For easier access open the I/O cover then remove the indicated two screws.



4. Slide the panel in the direction of the arrow then lift it off.



Opening System Box

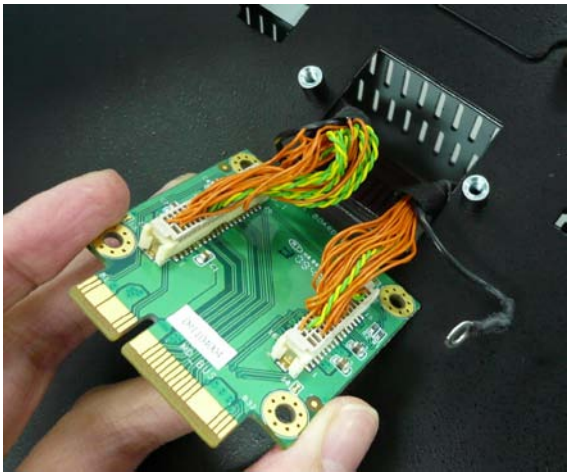
CAUTION: To prevent loss of work and damage to the system or drive:

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 system box.
4. Remove the four screws that secure the MD hinge board on the system box.

5. Disconnect the MD_1 and MD_2 cable from the MD hinge board, then remove the MD hinge board.



6. Remove the eight screws indicated on the system box cover.

7. Remove the system box cover.

Clearing CMOS

The DP-6500-AR10'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.

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3. Remove the system box and box cover.

4. Locate the JP1 jumper box on the main board.

5. Remove the jumper shunt from pins 1-2 and place over pins 2-3.

6. Wait 60 seconds to allow the CMOS to clear, then remove the jumper shunt and place it back in its original position over pins 1-2.

7. Replace the box cover and system box into the system.

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.

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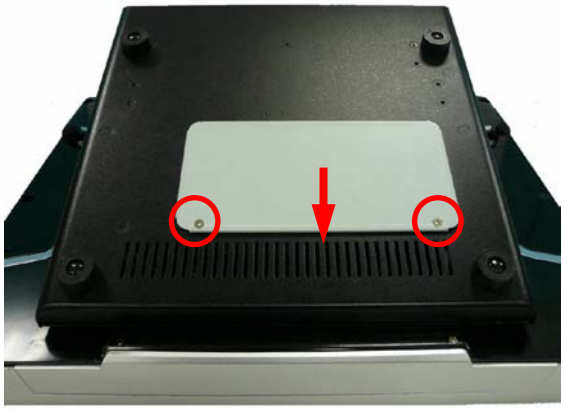
3. For easier access place the main unit upside down. Remove the indicated screws then slide off the CF cover.



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

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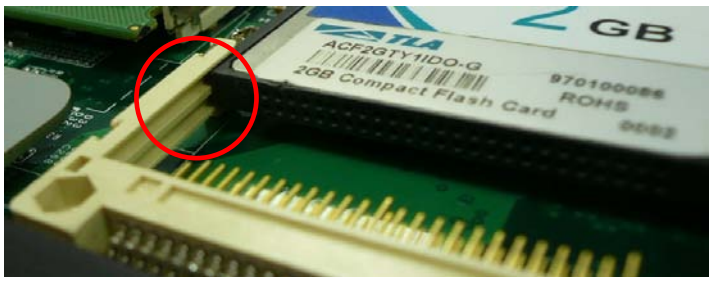
4. Insert the CF card into the CF socket.



5. Replace the CF cover and set the main unit back to an upright position.

6. 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.

Memory Installation

The memory sockets on the main board can be populated with up to an industry-standard DIMM. The DP-6500 series comes standard with one preinstalled DIMM. To achieve maximum memory performance, up to 2GB of memory can be added.

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.

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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.

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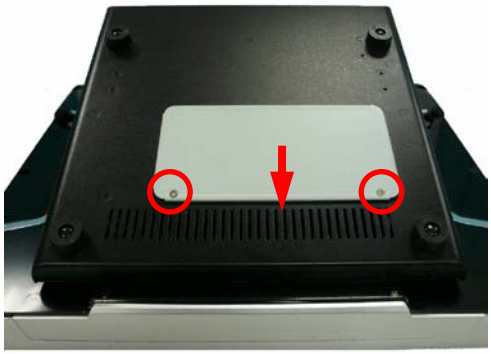
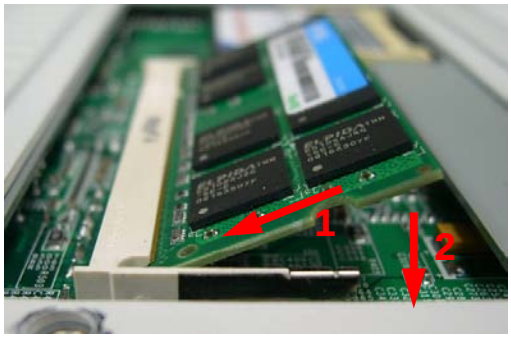
3. For easier access place the main unit upside down. Remove the indicated screws then slide off the CF cover.

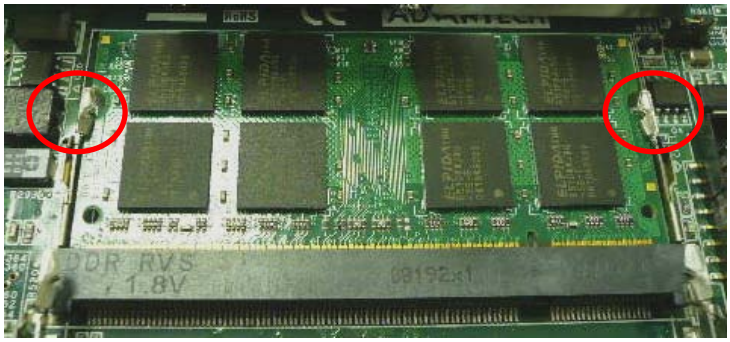


WARNING! To avoid scratching the panel while dismantling the system, first place a piece of cloth or cushion on your work surface.

4. 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.

5. Insert the new or replacement 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.





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. Replace the RAM cover then replace the system box.

7. 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.

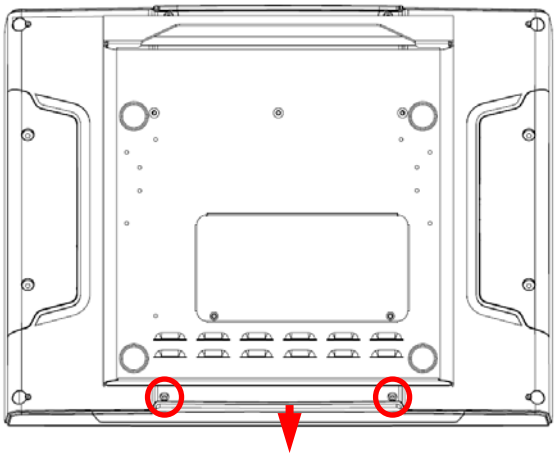
1. Turn off the system power properly through the operating system, then turn off any external devices.
2. Disconnect the power cord from the power outlet and disconnect any external devices.

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. For easier access place the main unit upside down.

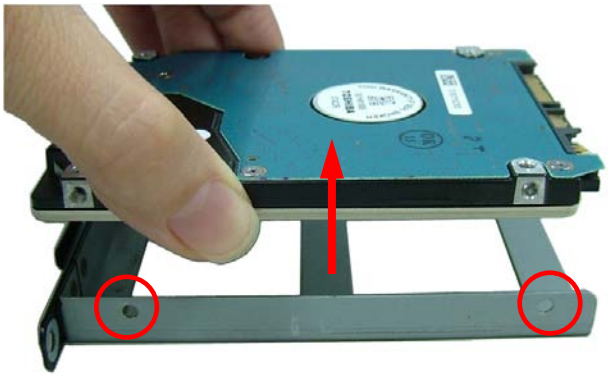
WARNING! To avoid scratching the panel during the dismantling process, first place a piece of cloth or cushion underneath.

4. From the bottom of the flat panel's rear side, remove two screws and detach the cover.



5. Remove the two screws that secure the HDD box, and carefully slide it out.

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



7. Insert the replacement hard disk into the HDD box, and re-secure the screws.
8. Slide the HDD box back into the panel, ensuring that it is pressed all the way in and properly seated.
9. Reattach the two screws that secure the HDD box.
10. Reattach the cover and 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 performence 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

MSR/Fingerprint/I-Button/IC Card Module Installation

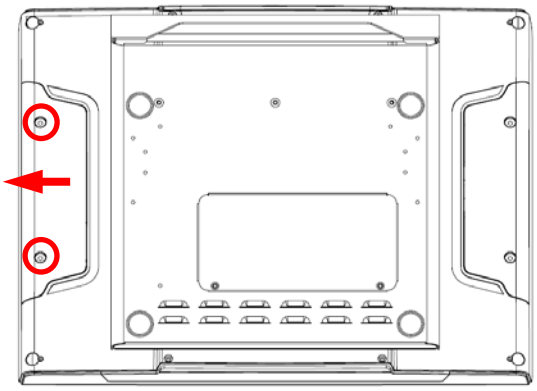
NOTE: The MSR module can only be installed to its designated position and socket; the same with the wireless module. Their locations are not interchangeable.

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.

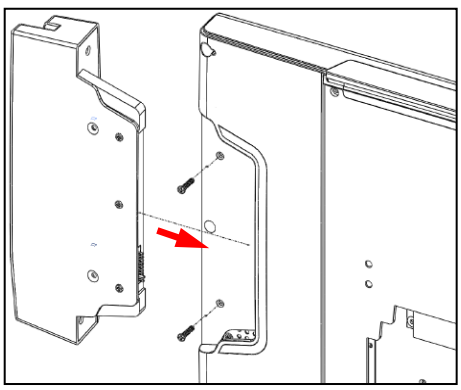
CAUTION: Regardless of the power-on state, voltage is always present on the main board as long as the system is plugged into an active AC outlet. You must disconnect the power cord to avoid damage to the internal components of the system.

3. Remove the two screws and slide the expansion cover in the direction of the arrow. Note the location of the attachment socket.



4. Slide the MSR into the panel, ensuring it is plugged securely into the socket.

5. Reattach the two screws that secure the MSR to the main unit.



6. 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.

Wireless Module Installation

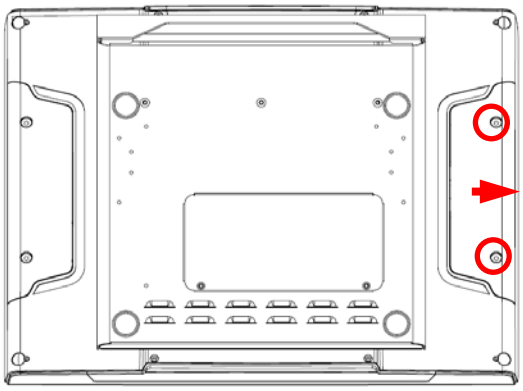
NOTE: The Wireless module can only be installed to its designated position and socket; the same with the MSR module. Their locations are not interchangeable.

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.

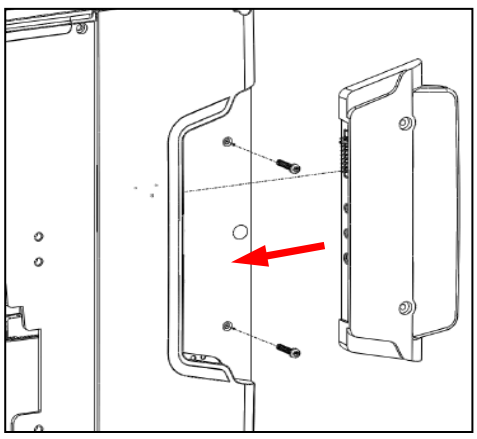
CAUTION: Regardless of the power-on state, voltage is always present on the main board as long as the system is plugged into an active AC outlet. You must disconnect the power cord to avoid damage to the internal components of the system.

3. Remove the two screws and slide the expansion cover in the direction of the arrow. Note the location of the attachment socket.



4. Slide the wireless module into the panel, ensuring it is plugged securely into the socket.

5. Reattach the two screws that secure the wireless module to the main unit.



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

Rear Mount VFD Installation (Need USB driver 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.

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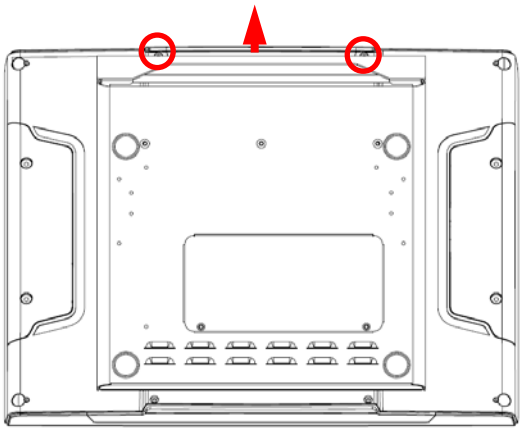
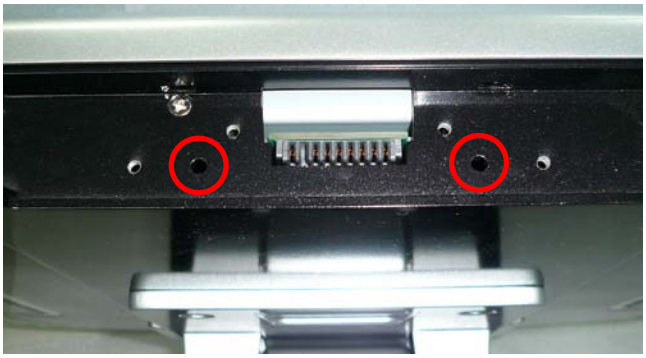
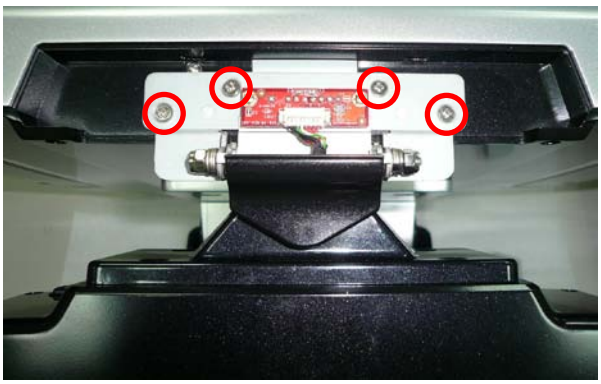
3. From the top of the flat panel's rear side, remove two screws and detach the cover.



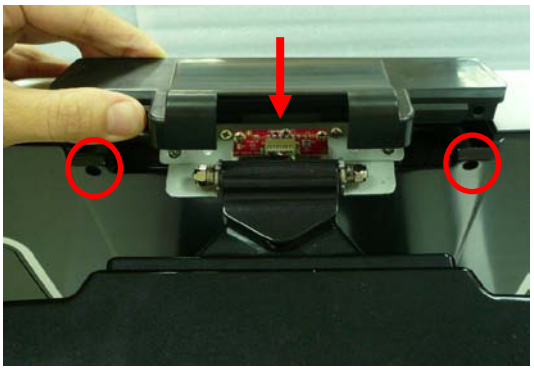
4. Align the VFD hinge guide posts to the two indicated holes and insert the VFD module.



5. Secure the VFD module with four screws.



6. Attach the hinge cover with two screws.



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

NOTE: The rear mount VFD module configuration utility is in the included CD. Should you need it, please execute the utility according to the procedure specified in Chapter 5.

RFID Module Installation

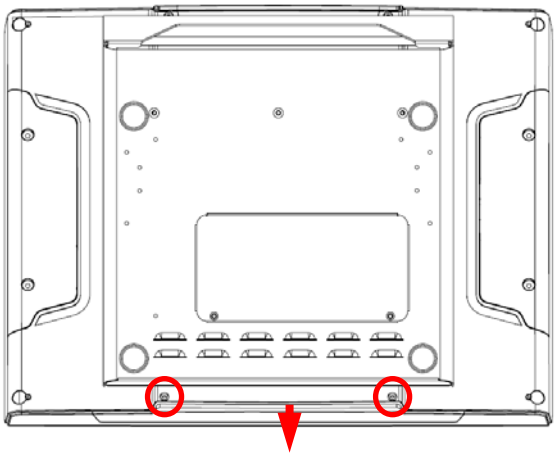
1. Turn off the system power properly through the operating system, then turn off any external devices.

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.

---

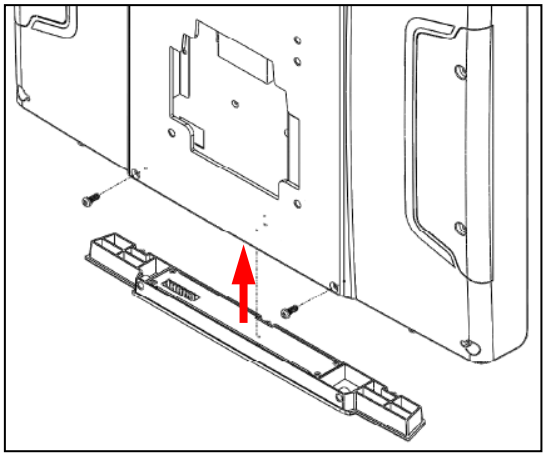
3. From the bottom of the flat panel's rear side, remove two screws and detach the cover.



4. If the RFID components are already assembled in the custom cover module, then skip to step 6.

5. If the module is disassembled, set the RFID circuit board into the custom cover. Top it with the flat metal piece and secure with four screws.

6. Attach the cover module into the panel, ensuring it is plugged securely into the socket. Secure with two screws.



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

NOTE: The RFID test utility is in the included CD. Should you need it, please execute the utility according to the procedure specified in Chapter 5.

Cash Drawer Installation

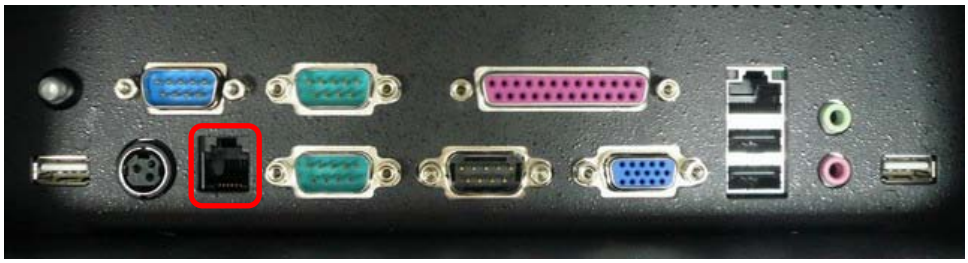
NOTE: Before connecting cash drawer to the system, please make sure the driver voltage and cable pin assignment of the cash drawer matches the definition of the system's cash drawer port.

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.

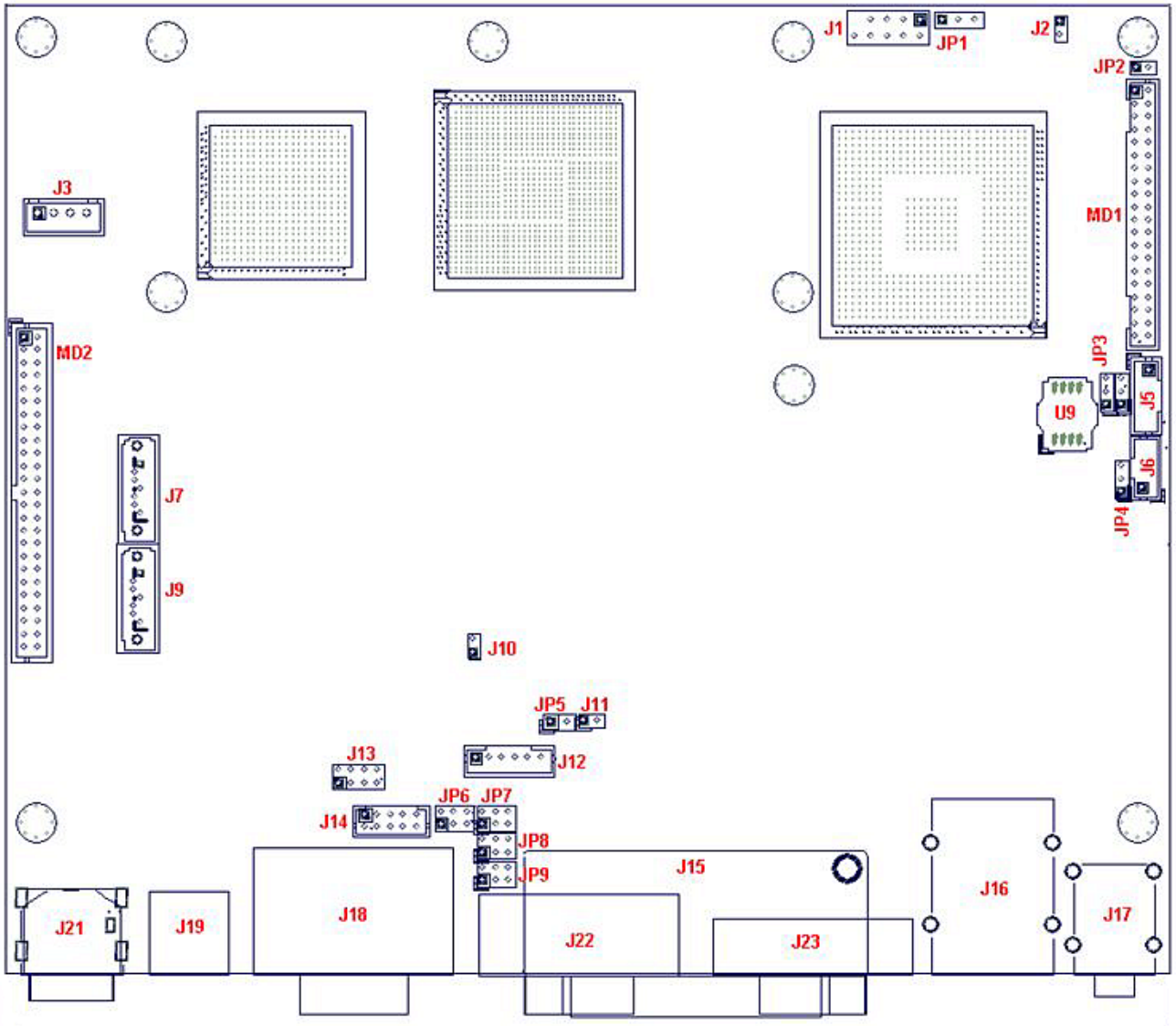
3. Plug the cash drawer cable into the cash drawer port.



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

Chapter 4 PEB-973A Main Board Configuration

Jumper and Connector Locations



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

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

J14/J18/J22

RS-232 Port COM1, COM2, COM5, COM6 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

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

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

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.

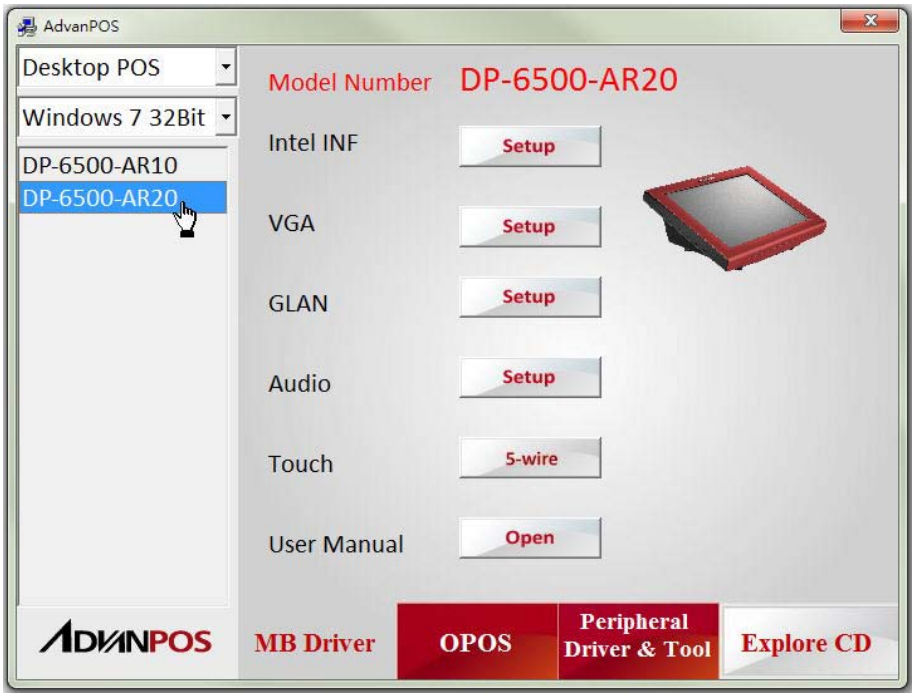
1. Insert sofeware CD into a system.

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.

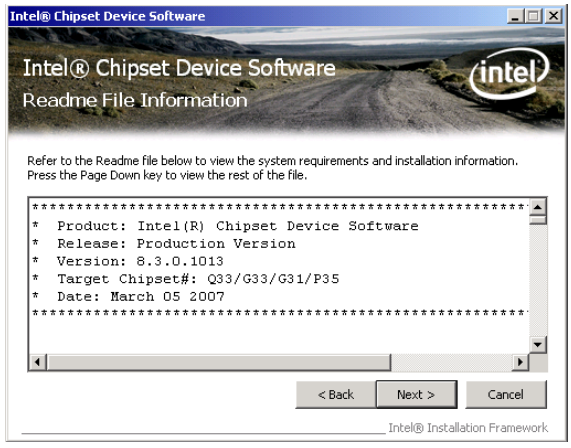


6. Select the peripheral driver that you want to install and then follow on-screen instructions to install your driver or refer to following procedures specifying how every driver is to be installed.

Intel Chipset Driver Installation

1. Click the Next button on the Welcome screen.

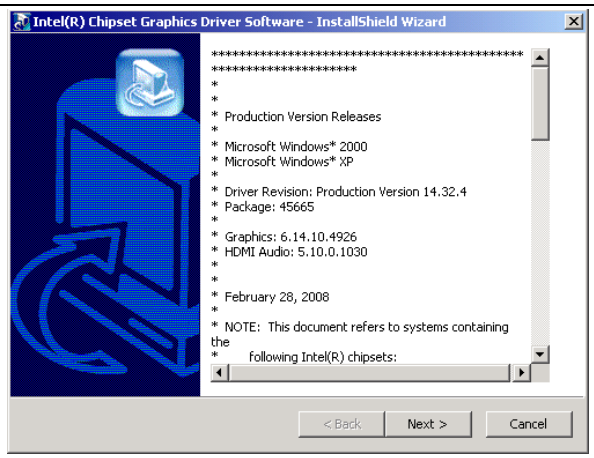
2. Click Yes on the License Agreement screen.



3. Click Next on the Information screen.

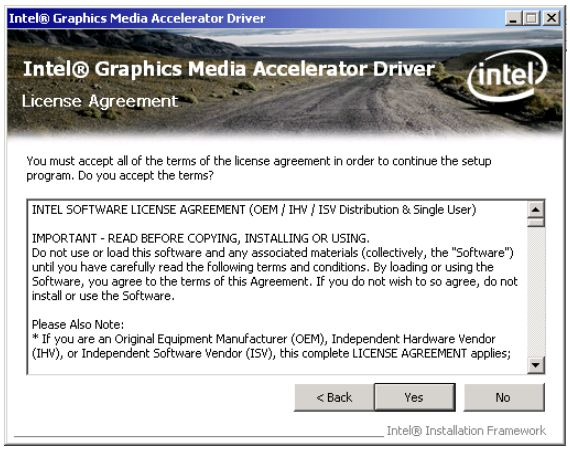
4. When installation is complete, click Finish.

Intel Graphics Driver Installation

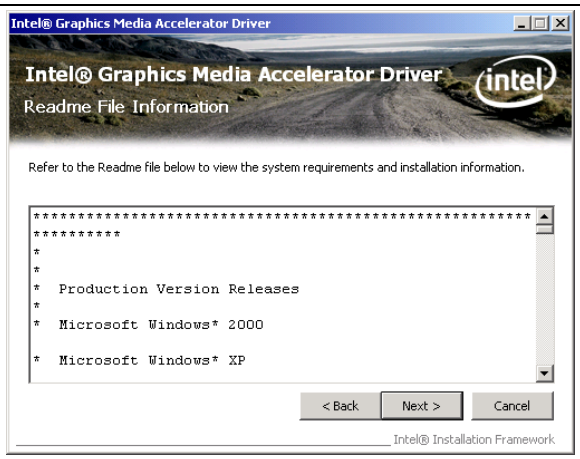


1. Click Next on the Starup screen.

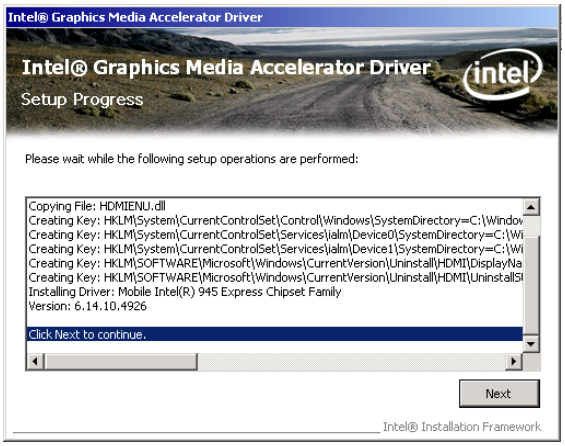
2. Click Next on the Welcome screen.



3. Click Yes on the License Agreement screen.



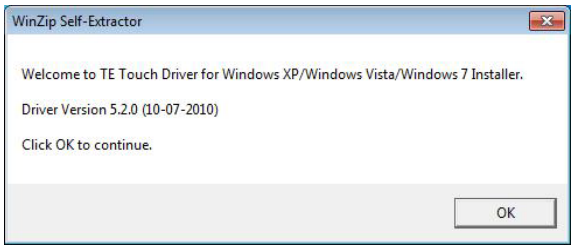
4. Click Next on the Information screen.



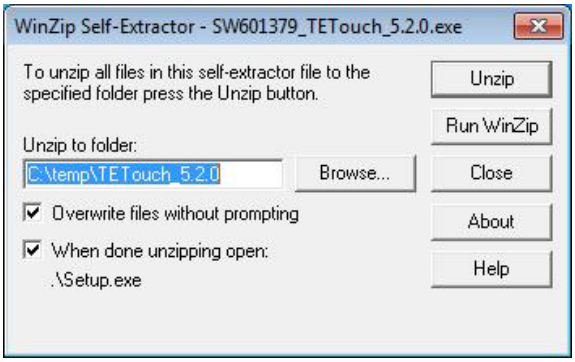
5. Click Next on the Setup Progress screen.

6. When installation is complete, click Finish and restart the system.

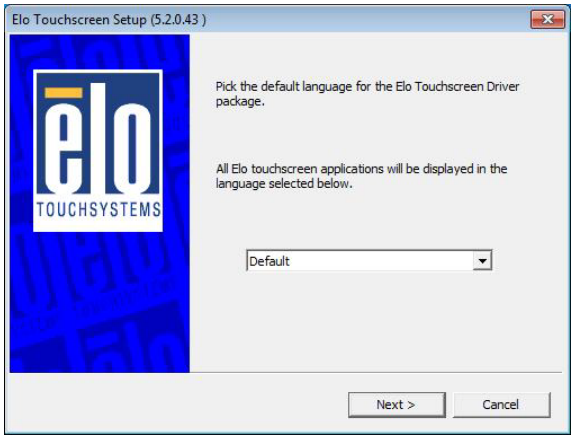
ELO Touch Screen Driver Installation



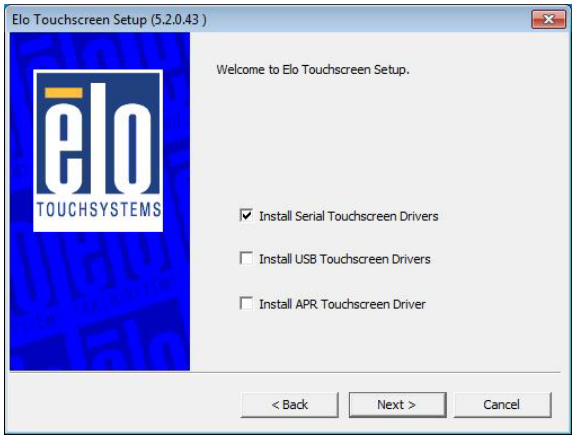
1. Click OK on the Welcome screen.



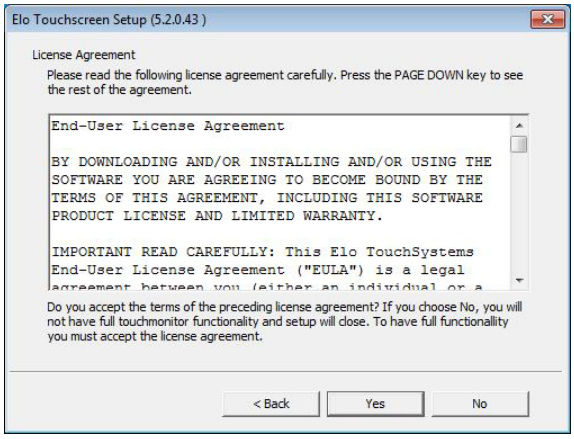
2. Click Unzip on the WinZip Self-Extractor screen.



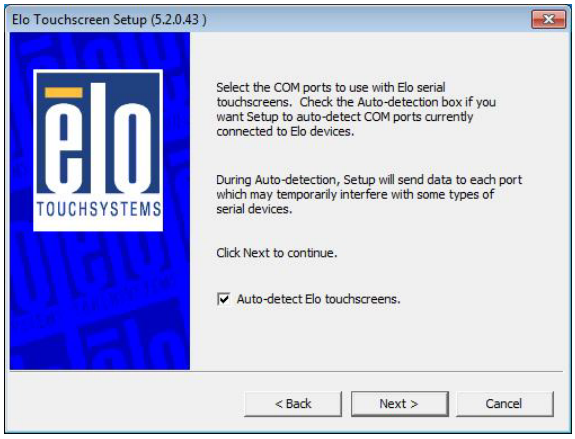
3. Select Default installation language, click Next.



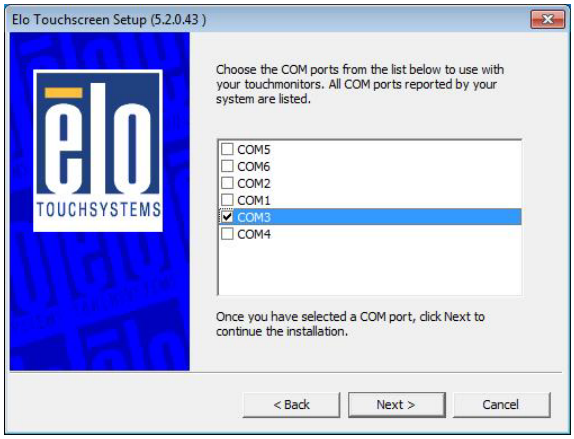
4. Select Install Serial Touchscreen Drivers, click Next.



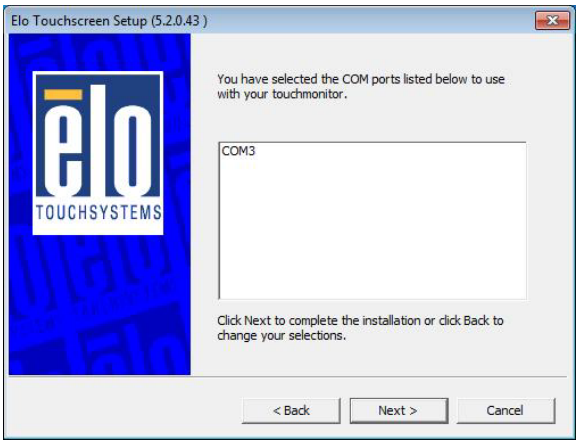
5. Click Yes on the License Agreement screen.



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

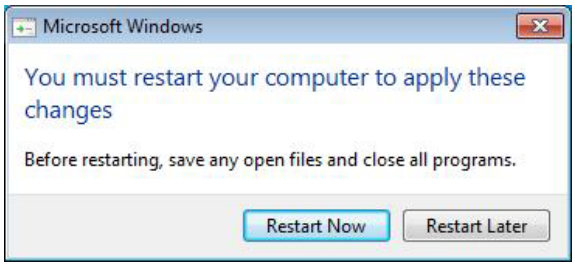


7. Select COM3, click Next.



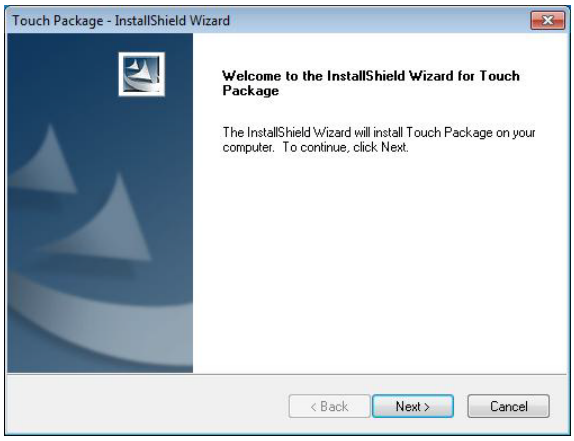
8. Click Next to confirm COM port selection.

9. Click Finish.

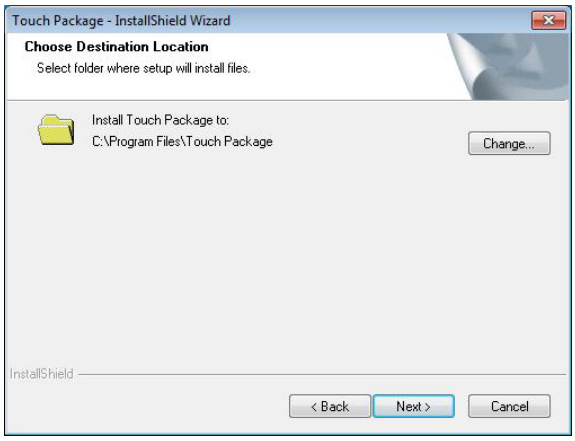


10. Click Restart Now to apply these change.

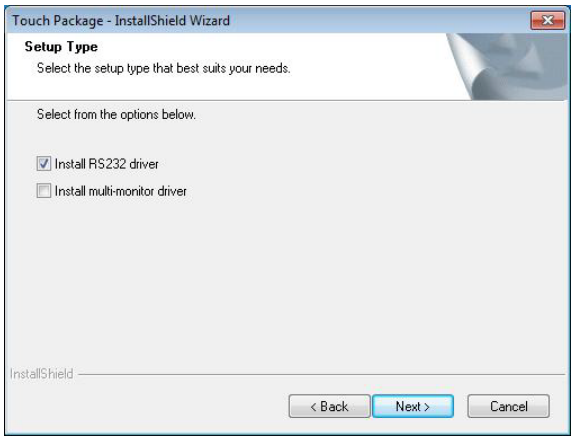
Abon Touch Screen Driver Installation



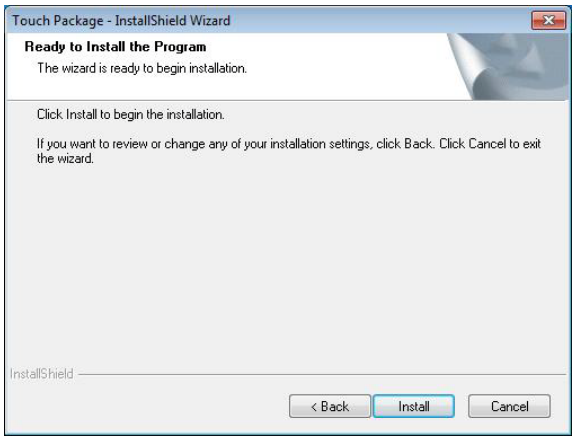
1. Click Next on the Welcome screen.



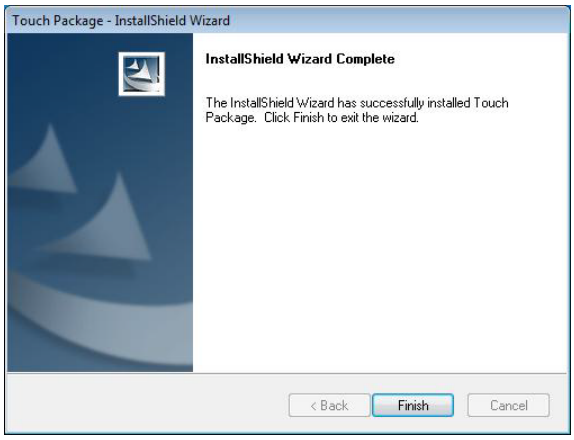
2. Click Next to confirm destination location.



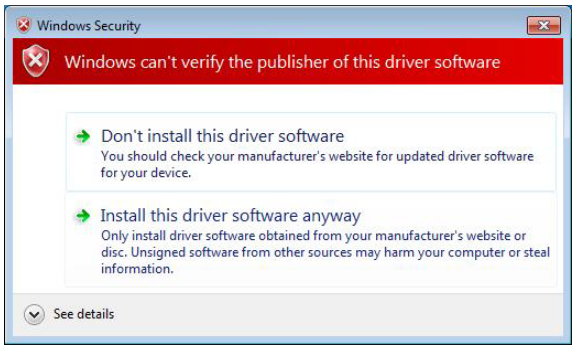
3. Select Install RS232 driver and click Next.



4. Click Install to begin installation.



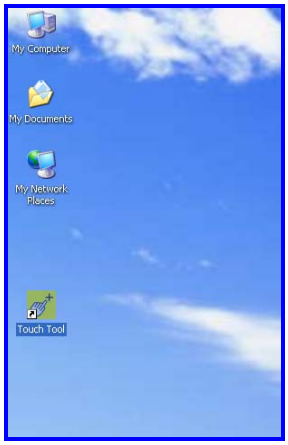
5. Click Finish to complete.

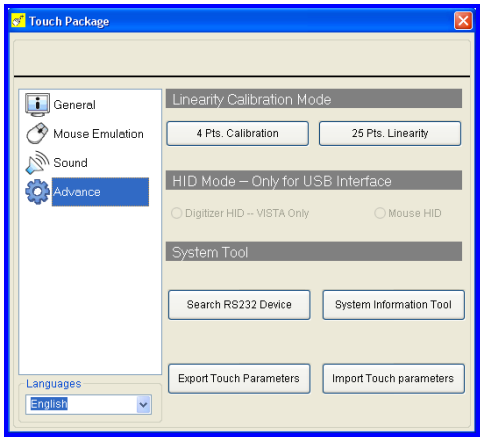


6. For Windows 7 operating system, click Install this driver software anyway.

7. For Windows XP operating system, click Continue anyway.

8. Click OK to reboot the system.

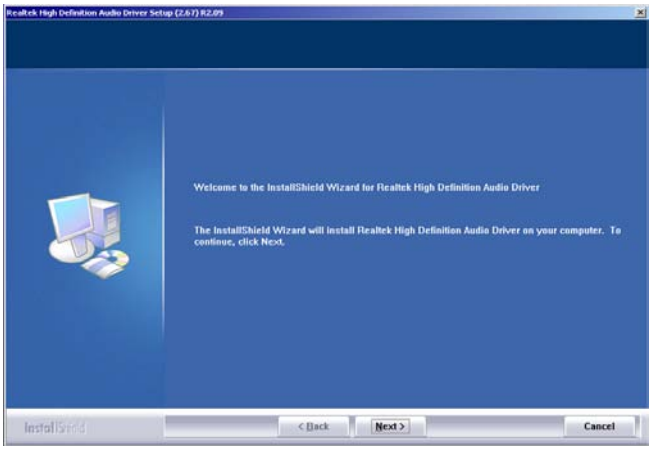
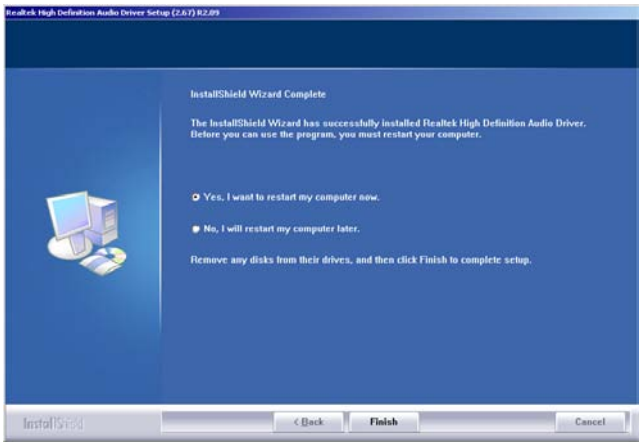




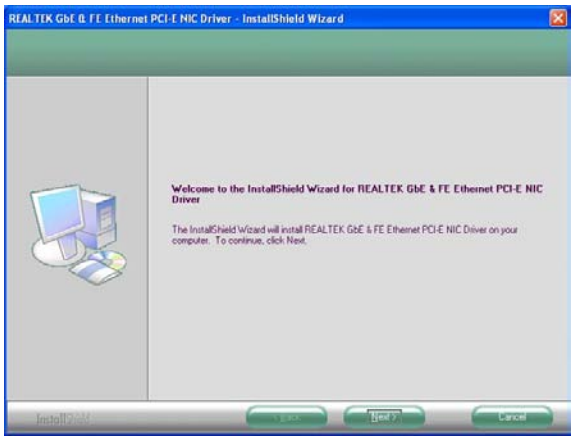
9. Run the Touch Tool on the desktop.

10. Select Advance and click on the 4 Pts. Calibration button.

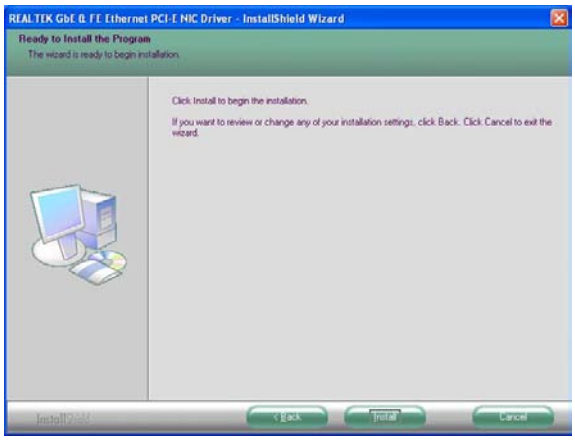
Audio Driver Installation

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

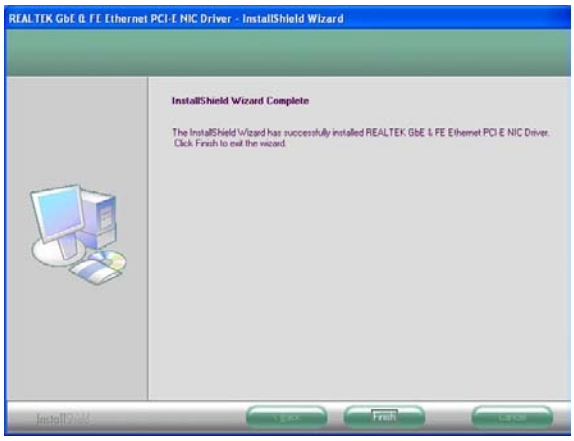
Ethernet Driver Installation for Windows XP



1. Click Next.

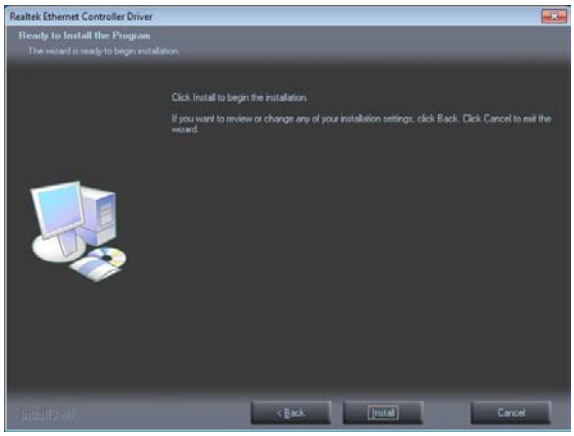


2. Click Install.

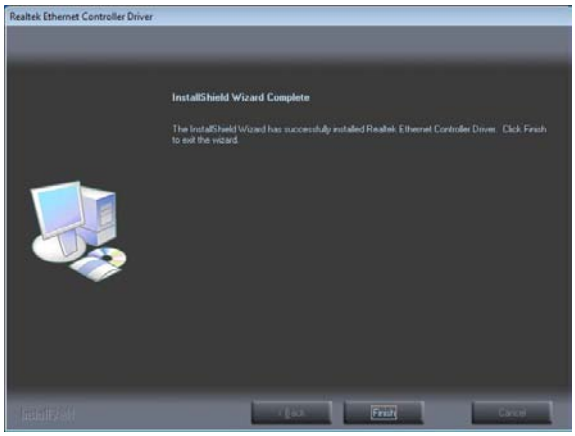


3. Click Finish.

Ethernet Driver Installation for Windows 7



1. Click Install.

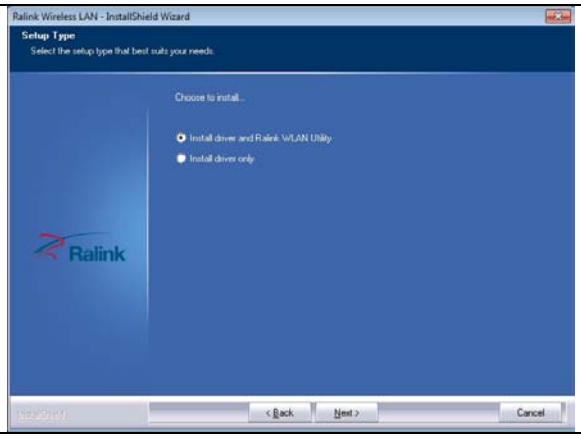


2. Click Finish.

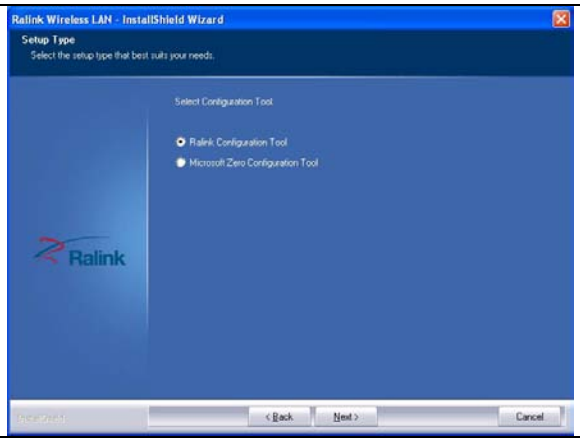
Wireless LAN Driver Installation (optional)

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

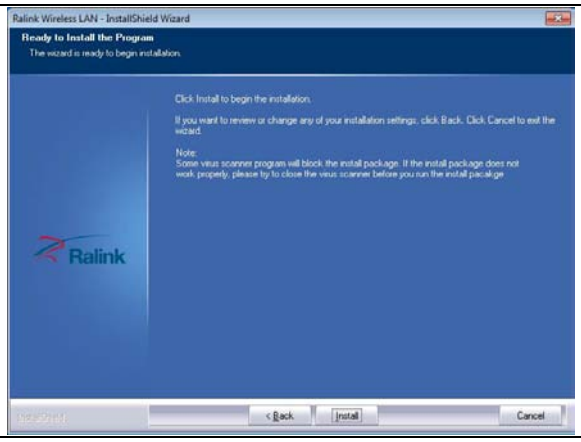
2. Click Accept on the License Agreement screen.



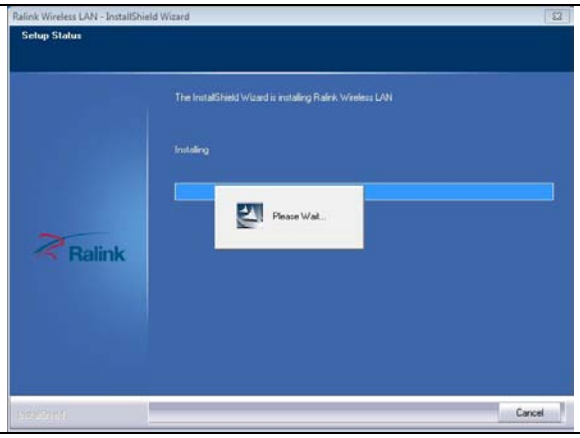
3. Alternative, and then click Next.



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

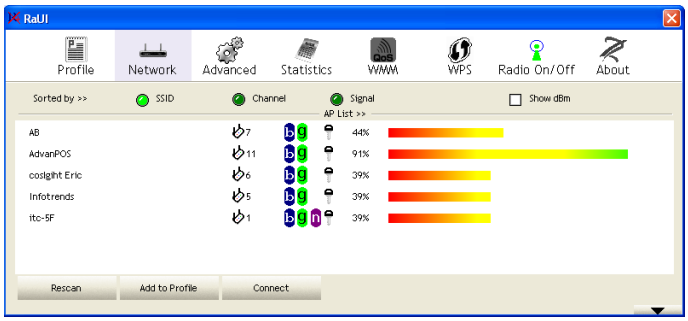


5. Click Install.



6. Wait as the WLAN driver is installed.

7. Click Finish.

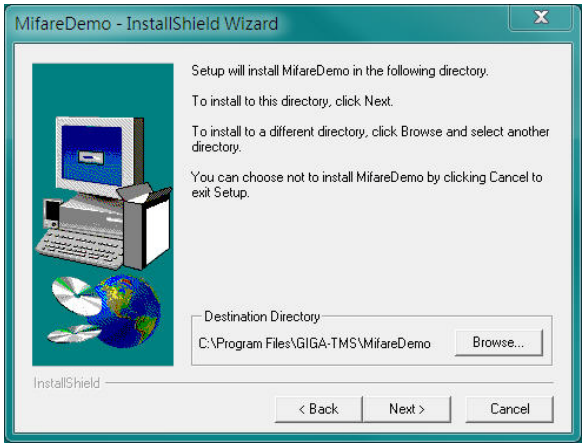


8. When installation is complete, the WLAN utility will automatically appear on the desktop.

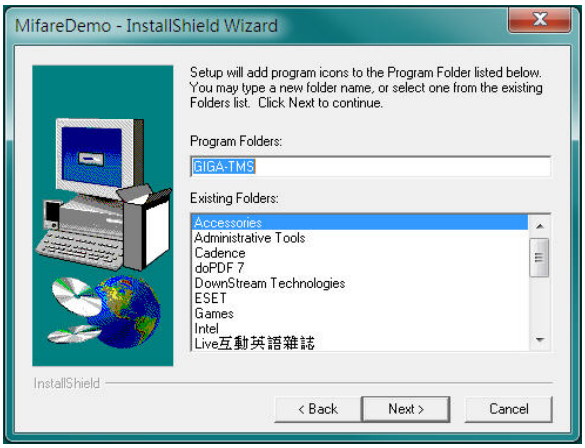
RFID Driver Installation (optional)

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

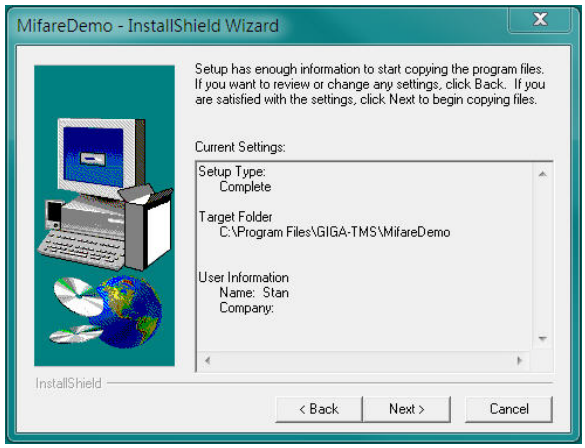
3. Click Next.



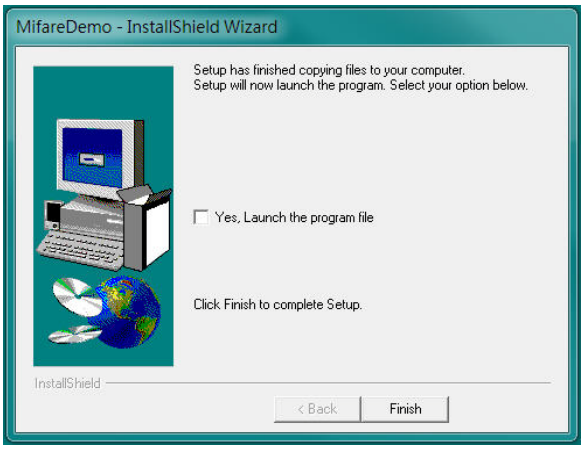
4. Click Next to accept the Destination Directory.



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.

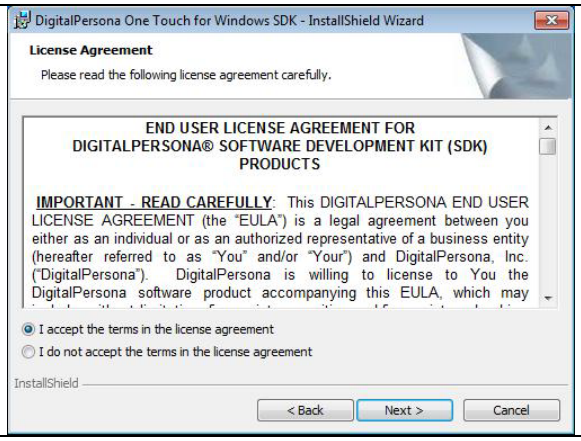
3. For PS2 interface: Run the MSRfgSetup_V1_4R7_PSW00025.exe.
   For USB interface: Enter the **Software** folder and then run the HISD_MSR_PSW00003.exe.

4. Follow on-screen instructions to install your MSR driver.

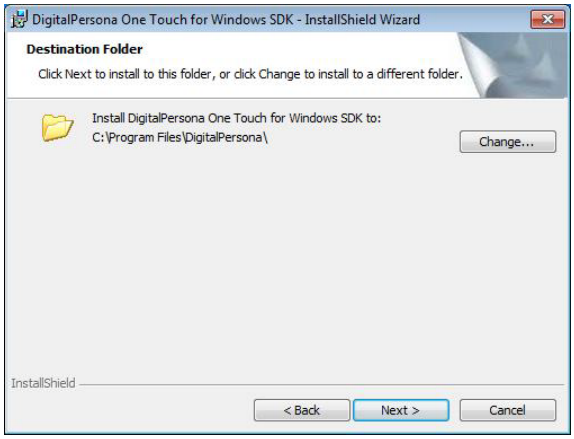
Fingerprint Reader Driver Installation (optional)

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

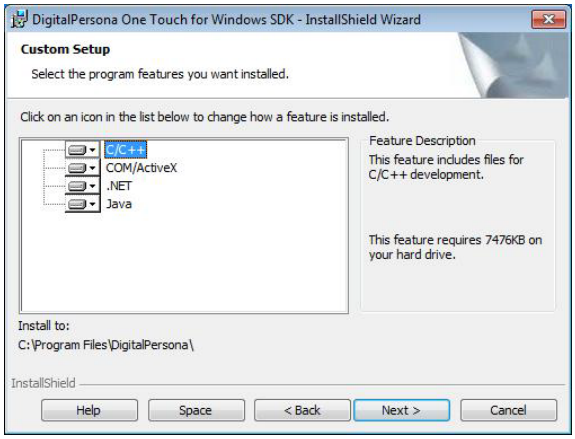
3. Click Next on the Welcome screen.



4. Click Next on the License Agreement screen.

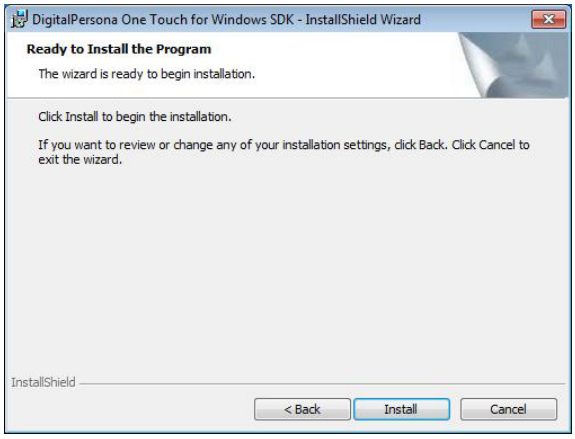


5. Click Next to accept the destination folder.

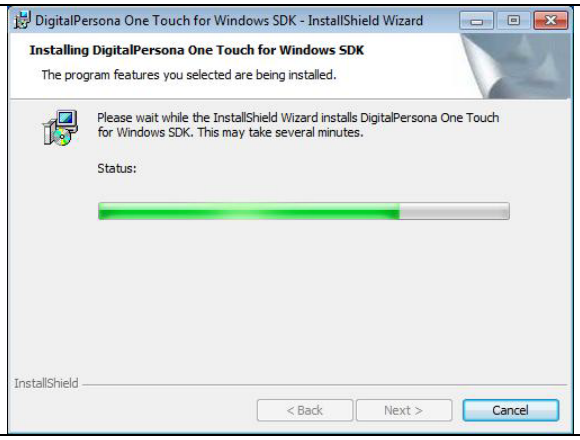
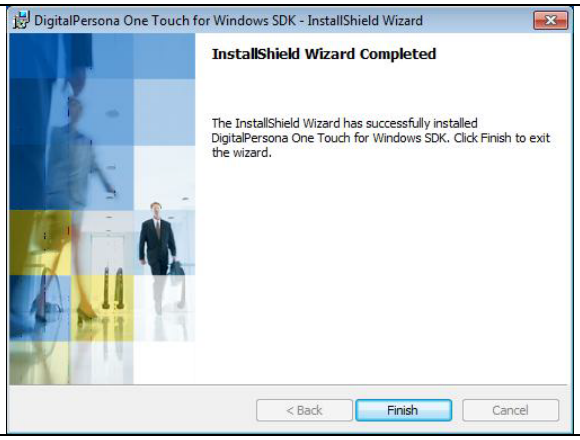
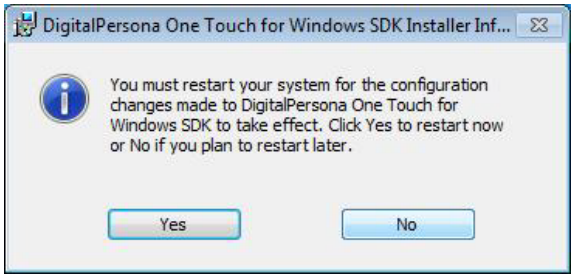


6. Click Next to begin installation.

7. To proceed with the installation, click Next.



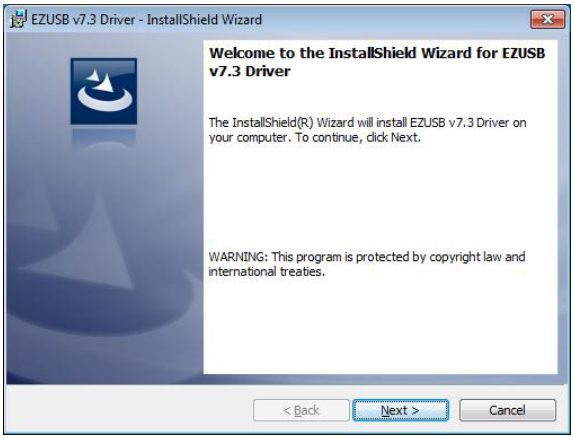
8. Click Install to begin the installation.

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

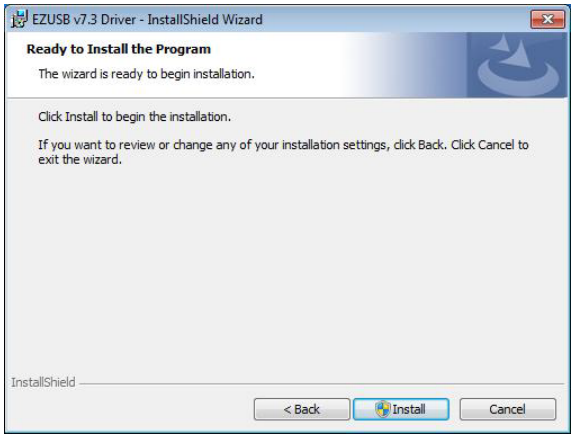
IC Card Reader Driver Installation (optional)

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.

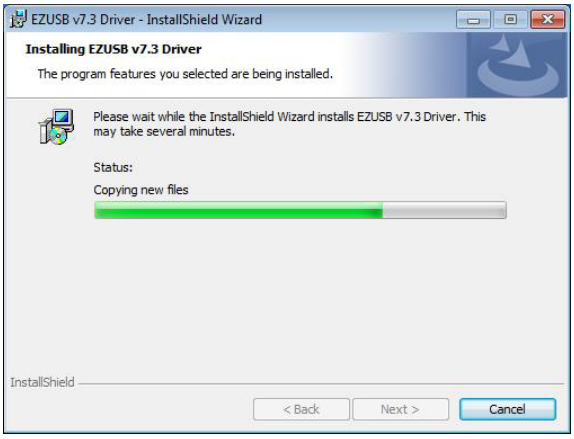
4. Select language, click OK.



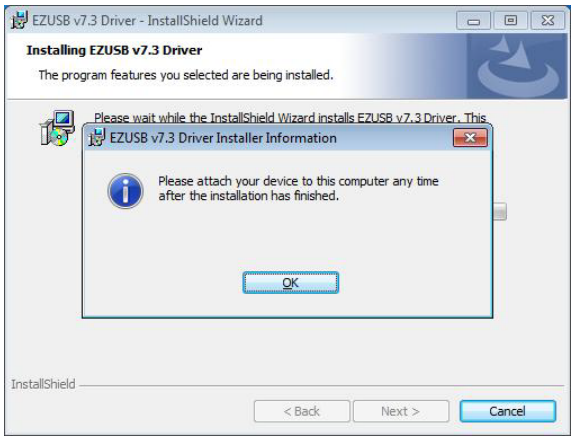
5. Click Next on the Welcome screen.



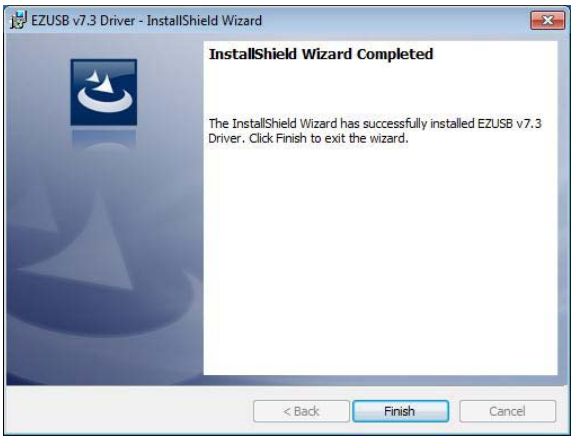
6. Click Install to begin the installation.



7. Wait as the driver is installed.

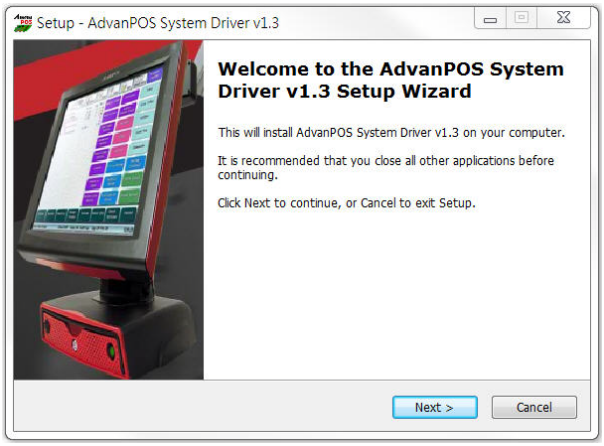
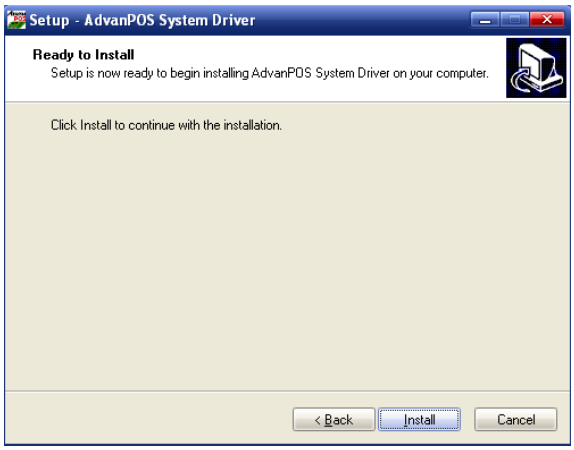


8. Click OK on the Note screen.



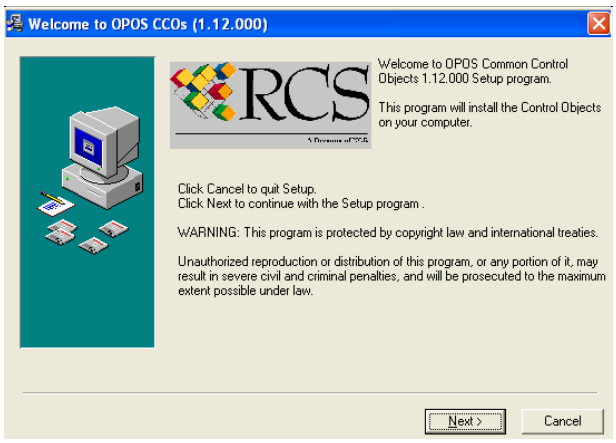
9. Click Finish.

AdvanPOS System Driver Installation (required for Cash Drawer)

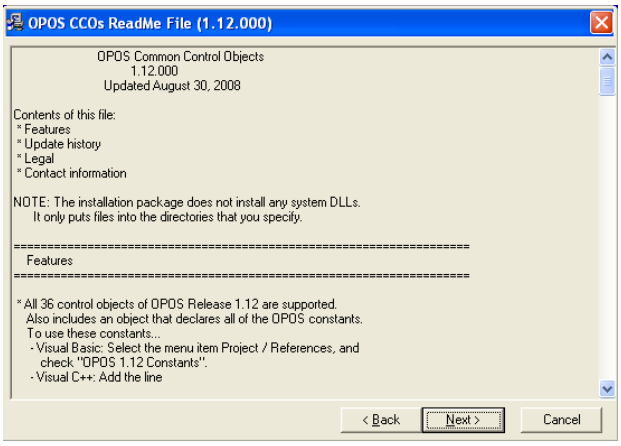
<table>
<tr>
<td> 
</td>
<td> 
</td>
</tr>
<tr>
<td>1. Click Next on the Welcome screen.</td>
<td>2. Click Install on the Ready to Install screen.</td>
</tr>
<tr>
<td> 
</td>
<td></td>
</tr>
<tr>
<td>3. Click Finish on the Completing installation screen. A system restart is required to complete the installation.</td>
<td></td>
</tr>
</table>

OPOS CCO Driver Installation

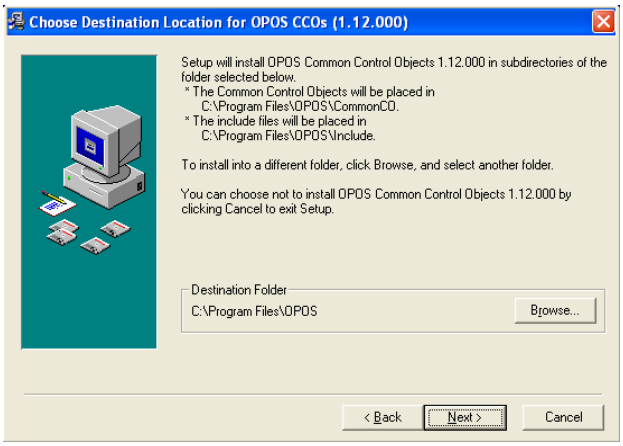
Before installing the OPOS driver, please make sure the AdvanPOS System Driver has been installed. The OPOS driver for the Cash Drawer, MSR, I-Button (KeyLock), RFID, VFD (Line- Display).



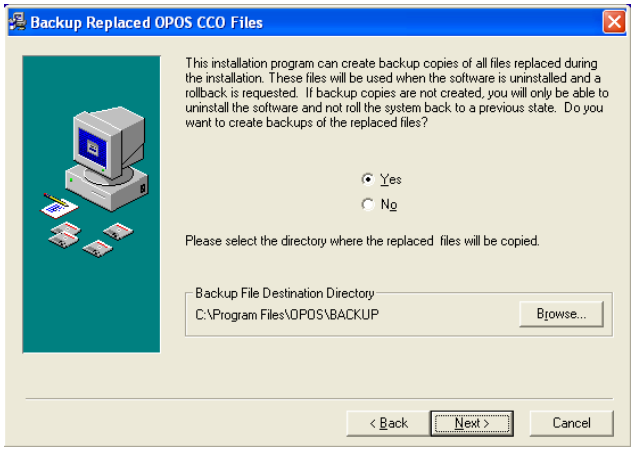
1. Click Next on the Welcome screen.



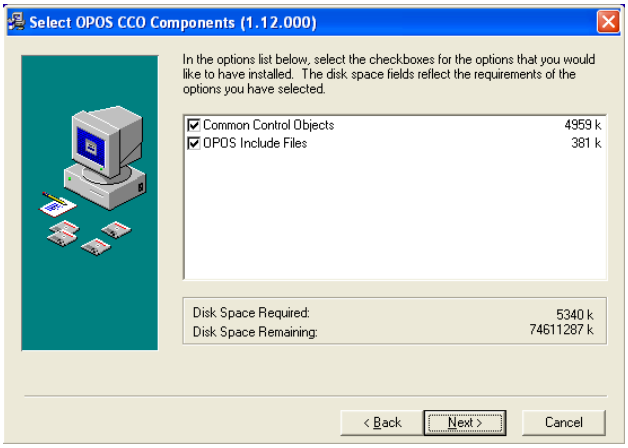
2. Click Next on the ReadMe screen.



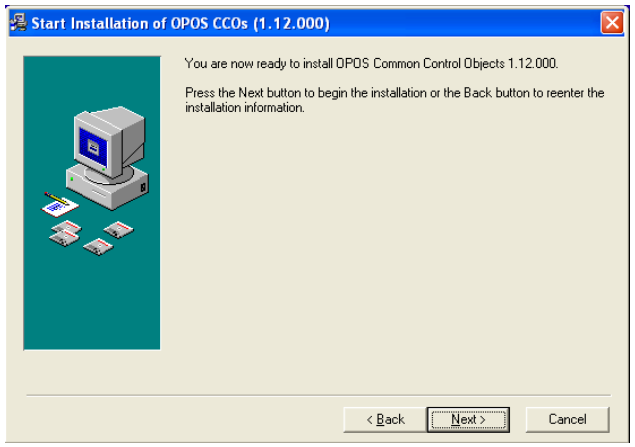
3. Click Next to confirm the Destination Location.



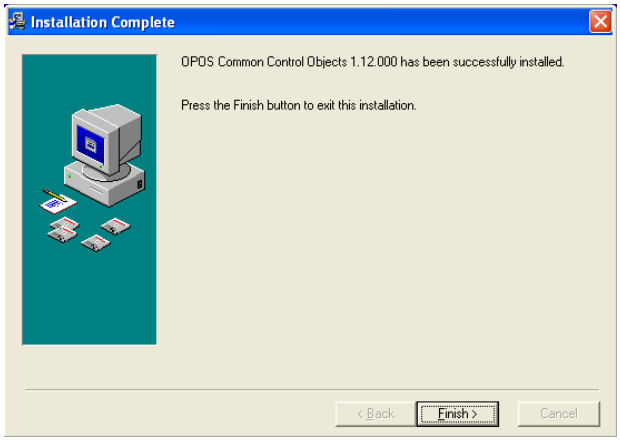
4. Click Yes to backup the CCO files and select backup file destination directory, then click Next.



5. Select Common Control Objects and OPOS Include Files, click Next.

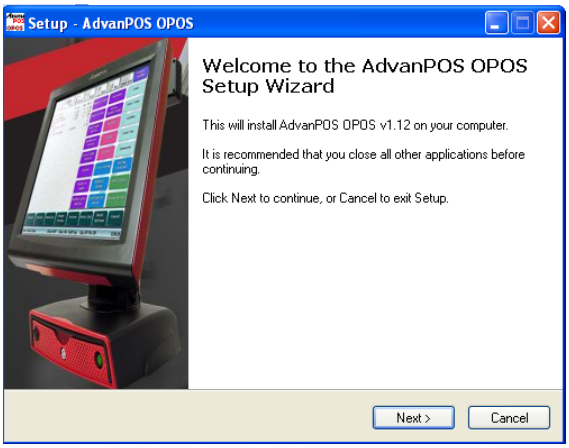
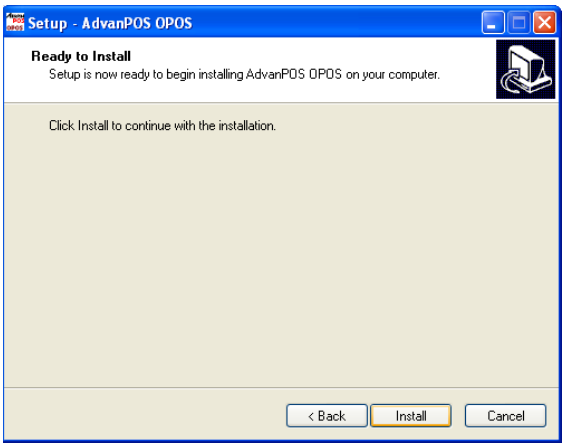


6. Click Next on the Start Installation screen.



7. Click Finish on the Installation Complete screen.

AdvanPOS OPOS Driver Installation

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

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, ByRef lpInBuffer As Byte, ByVal nInBufferSize As Integer, ByRef lpOutBuffer As Byte, ByVal nOutBufferSize
As Integer, ByRef 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 = &HFFFFFFFF

    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
```