WP-75XX Series

Bezel Free All-in-One Modular Wall-Mount POS System

User Manual

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

Ver 2.1_2013/07/26

How to Use This Manual

This manual contains information to set up and use the WP-75XX. 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, and main memory.

Chapter 3 Mounting procedures for optional devices, such as MSR, Fingerprint, I-Button, IC Card, WiFi, Bluetooth, RFID, scanner, rear mount VFD, and swing arm kit.

Chapter 4 PEB-973J and PEB-973L 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, 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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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 Bezel Free Resistive or P-CAP touch(optional)
- Fanless operation with Intel® Luna Pier D525 1.8GHz, Intel® Cedar Trail Processor D2550 1.86 GHz or Intel® IVY Bridge Series Processor
- Support High Graphic Performance Direct 10.1, OpenGL 3.0 with Lower Power Consumption
- Aluminum Die-casting and Plastic Housing
- System Memory up to 4GB DDRIII SDRAM for WP-75XX-XX10/XX40 series, up to 8GB DDRIII SDRAM for WP-75XX-XX20/XX30/XX50/XX60 series
- Integrated stereo 2W+2W syste speaker
- 3 Mounting Options Available
- Support 12V and 24V powered USB Ports for WP-75XX-XX10/XX20/XX30 series
- 6 x COM, 10 x USB(11 x USB for WP-75XX-XX30/60 series), 1 x HDMI, 1 x Gigabit LAN, 1 x VGA and 1 x Half Size SSD Module
- Flexible options: MSR, I-Button, Fingerprint, RFID and IC Card Reader
- Support 12V/24V Selectable Cash Drawer Ports (via External Switch) except WP-75XX-XX40/50 series
- RoHS compliant

Specifications

System Configuration	WP-75XX-XX10/40	WP-75XX-XX20/50	WP-75XX-XX30/60
CPU	Intel® Cedar Trail Processor D2550 1.86GHz	Intel® Luna Pier D525 1.8GHz	Intel® IVY Bridge Processor Celeron / i3 / i5 / i7
System Chipset	Intel D2550 with NM10	Intel D525 with ICH8M	Intel® QM77 (IVY Bridge)
System Memory	Supports maximum 1 x 4GB DDRIII SDRAM	Supports maximum 2 x 4GB DDRIII SDRAM for	Supports maximum 2 x 4GB DDRIII SDRAM
Video Memory	Supports Intel DVMT technology		
SSD	Supports 1 x Half size SSD module		
HDD	1 x internal 2.5" SATA HDD bay		
Power Supply	150W 12Vdc power adapter for WP-75XX-XX10 max. 150W 60W 12Vdc power adapter for WP-75XX-XX40 max. 60W	150W 12Vdc power adapter for WP-75XX-XX20 max. 150W 60W 12Vdc power adapter for WP-75XX-XX50 max. 60W	120W 19Vdc power adapter for WP-75XX-XX30 max. 120W 90W 19Vdc power adapter for WP-75XX-XX60 max. 90W
OS Support	Windows® XP Pro Embedded / WEPOS® / Windows® POS Ready 2009 / Windows® 7 Pro Embedded / Linux®		

LCD Touch Panel				
Resolution Size	15" TFT LCD / 1280 x 1024			
Brightness	250cd/m^2			
Touch Screen Type	Bezel free ELO resistive touch(Default) Bezel free P-CAP touch(Option)			
I/O Ports	**WP-75XX-XX10/20**	**WP-75XX-XX40**	**WP-75XX-XX30**	**WP-75XX-XX60**
USB Ports	6 x External: 4 normal, 1 x 12V 1.5A power USB, 1 X 24V 2.5A power USB 4 x Internal USB (for Fingerprint, IC card reader)	6 x External: 6 normal 4 x Internal USB (for Fingerprint, IC card reader)	6 x External: 2 x USB2.0, 2 x USB3.0, 1 x 12V 1.5A power USB, 1 X 24V 2.5A power USB 5 x Internal USB (for Fingerprint, IC card reader) (3 x reserve)	6 x external: 4 x USB2.0, 2 x USB3.0 5 x Internal USB (for Fingerprint, IC card reader) (3 x reserve)
Serial Ports	3 x External: COM1, COM2 (RS232 with RJ-45 CON.), COM5 (RS232 / RS422 / RS485 with RJ-45 CON.) 3 x Internal : COM3 (T/S) ,COM4 (VFD), COM6 (reserve)			
HDMI Port	Support VGA port & Support HDMI port except WP-75XX-XX20			
Ethernel Port	1 x RJ-45 Gigabit Ethernet(10/100/1000)			
Audio	1 x Line out(Integrated stereo 2W+2W speaker)			
Cash drawer	RJ-11(12V(default)/24V, 1 connector control 2 cash drawer)			
Mechanics	**Stand base type**	**Wall mount type**		
Dimensions	211(D) x 365(W) x 326(H) mm	59(D) x 365(W) x 279(H) mm		
Net Gross Weight	6 Kg	4.5 Kg		
Construction	Aluminum Die-casting and plastic housing			
Housing Color	Black			
Environment				
Operating Temperature	0 °C ~ 40 °C			
IP Certification	IP65 sealed front panel with touch screen for WP-7550-XXXXW			
EMI/Safety	CE, FCC, RoHS			

Package Contents

POS System		**AC Power Cord**	
Utility and Main Board Chipset Driver CD		**Wall Mount Swing Arm Kit (optional)**	

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)
- 3-in-1 Module (Magnetic Stripe Reader + I-Button Reader + IC card reader)
- VFD Customer Display: 9 mm height, 2 lines 20 characters each (rear mount type)
- Wall Mount Swing Arm Kit
- Stand Base:Counter Top Base, adjustable View Angle
- Pole mount:Swing-arm mount, adjustable angle VESA

Base System

Before you begin, take a few moments to become familiar with the WP-75XX.

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.

- RFID module (USB interface)
- MSR (PS/2 interface)
- I-Button (PS/2 interface)
- Fingerprint (Fingerprint for USB interface)
- IC Card Reader (IC Card Reader for USB 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, RFID 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.

Convertible Pole-Type 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.

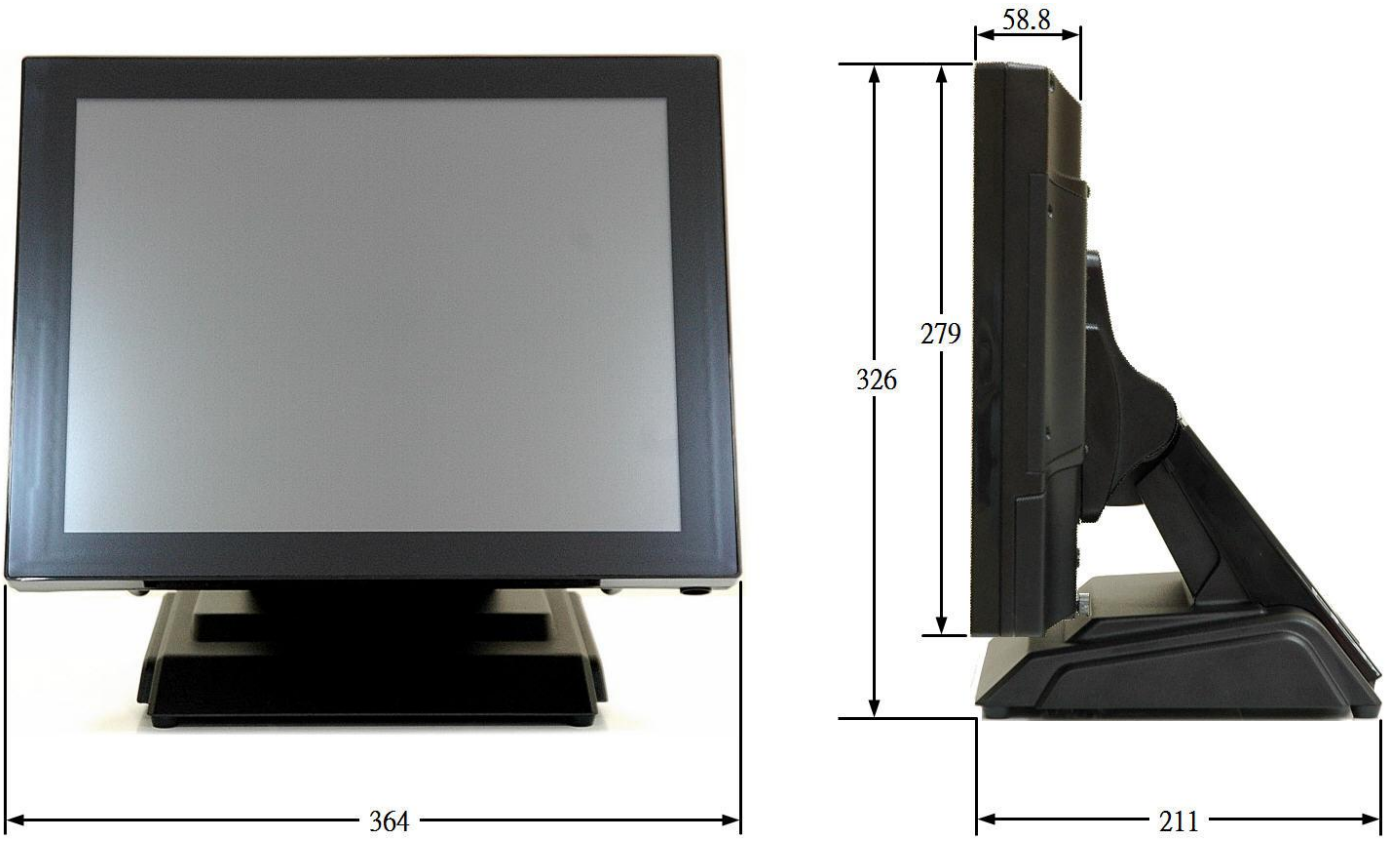
Five types of pole mount display choices are available: a 8.9” LCD monitor, a 10.1” LCD monitor, a 12” LCD monitor, a 15” LCD monitor, and a 9 mm high, 2 lines with 20 characters each VFD.

The pole mount is located at the rear of the base and connects with the 2nd display port for operation. Whether installing a VFD, 8.9” LCD, 10.1” LCD, 12” LCD or 15” LCD, there is no need to change any settings on the main board or I/O board.

Single Pole 2nd display choices:
- **8.9” LCD**
- **12” LCD**
- **15” LCD(shown)**
- **9 mm VFD**

Dimensions

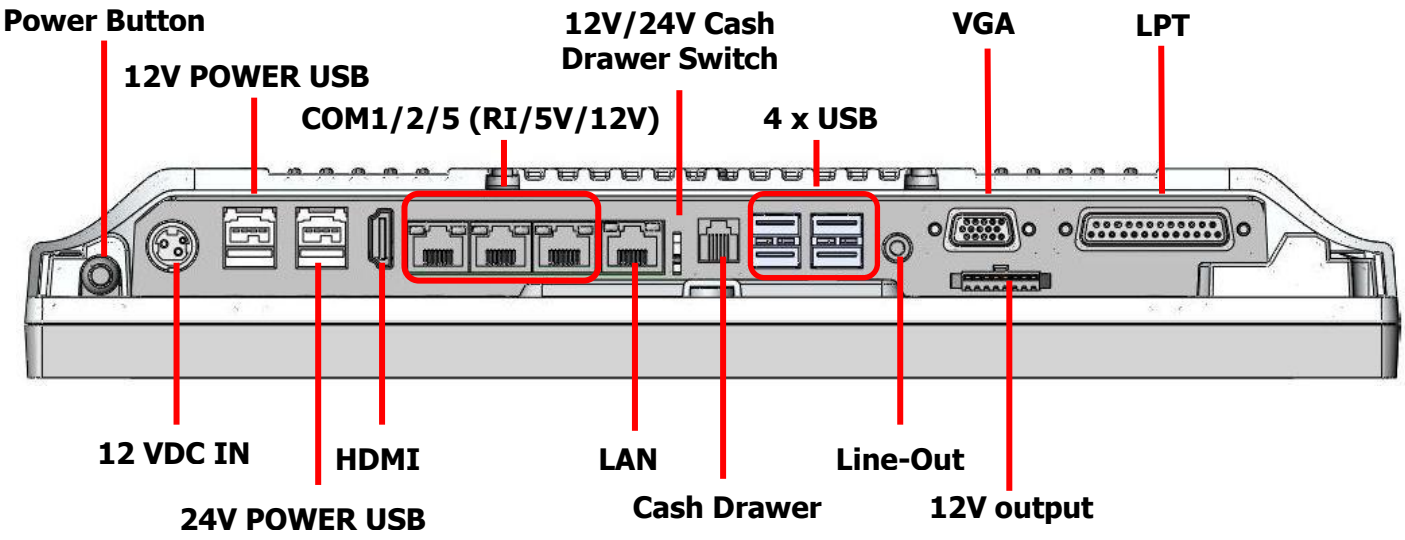
(Unit: mm)



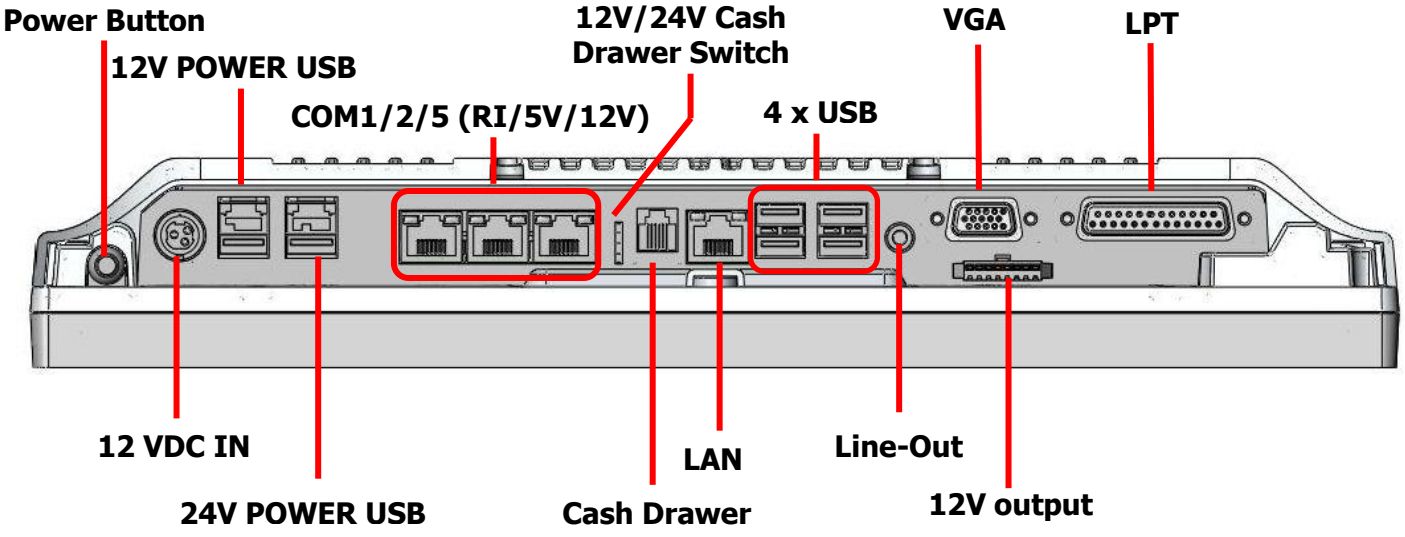
Connector Panel

The WP-75XX's primary connector panel is located at the rear.

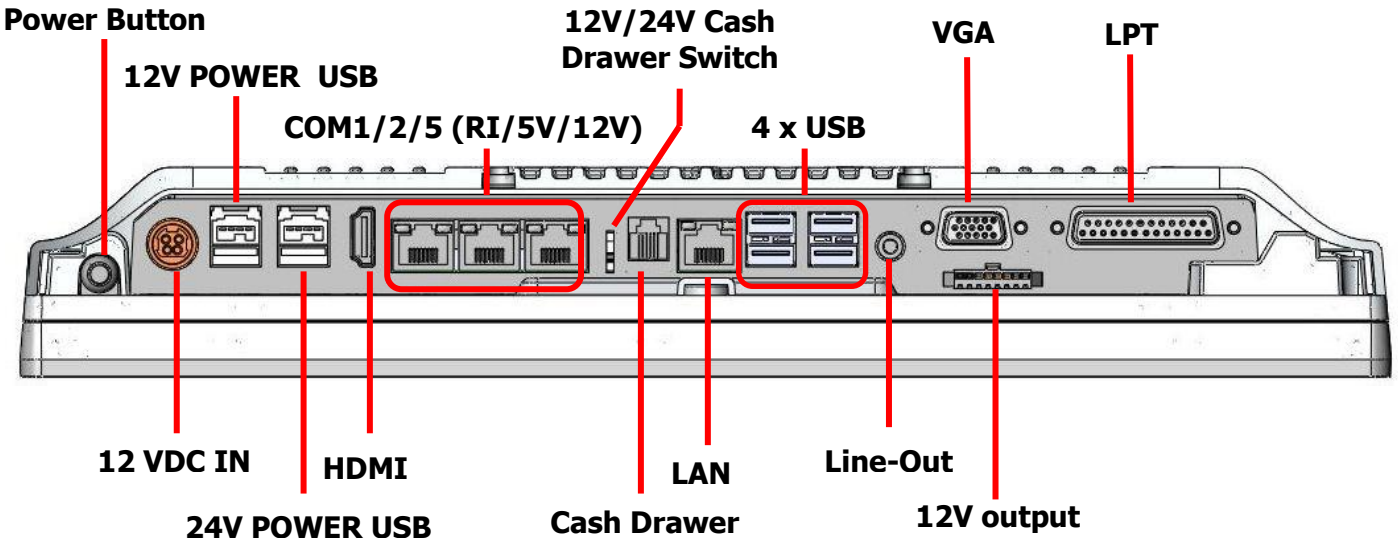
For WP-75XX-XX10



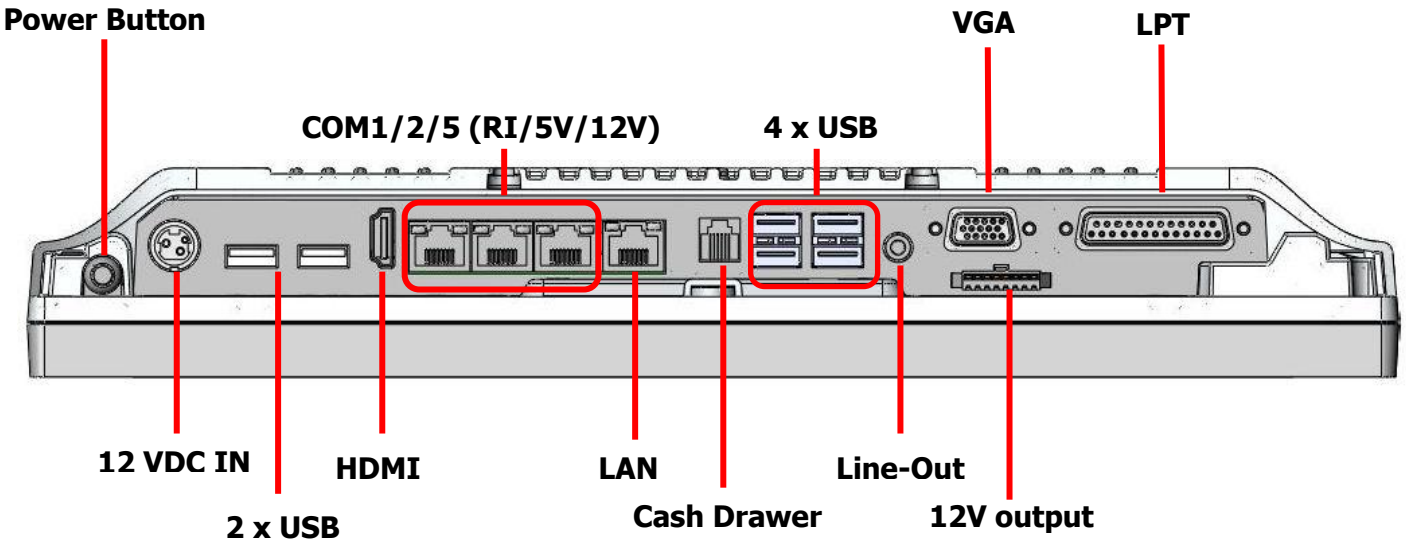
For WP-75XX-XX20



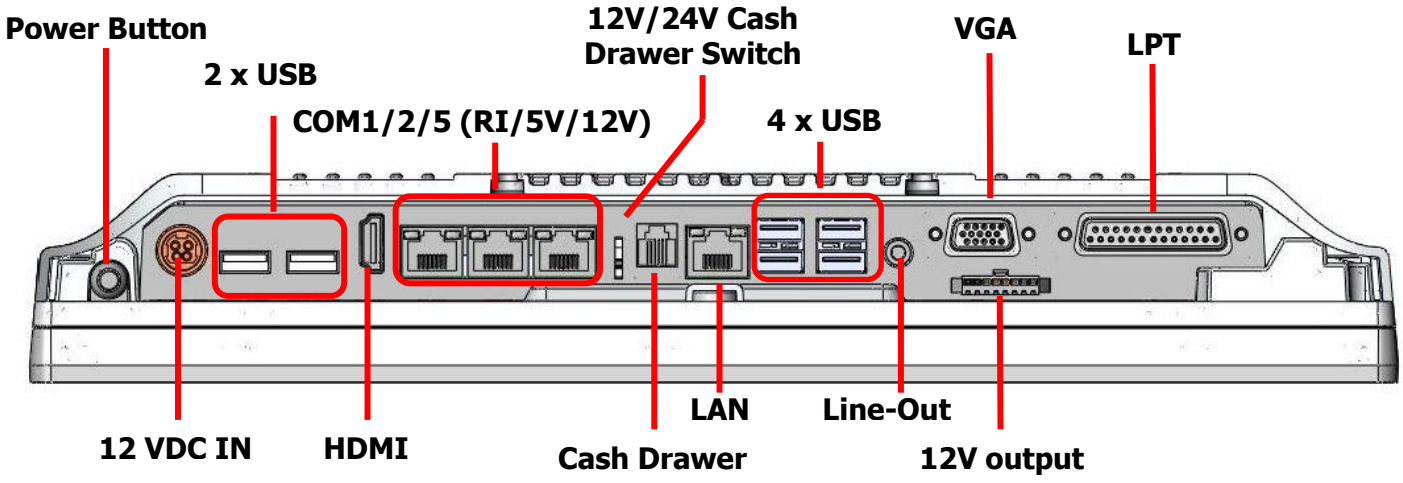
For WP-75XX-XX30



For WP-75XX-XX40



For WP-75XX-XX60



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.

Opening System Box

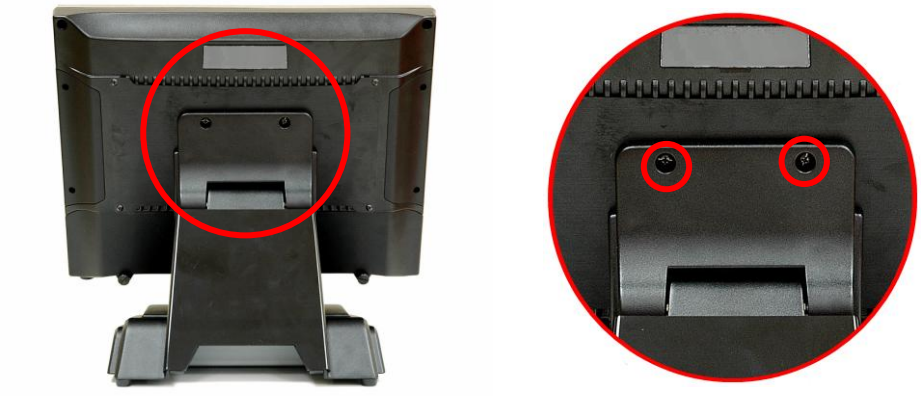
CAUTION: To prevent loss of work and damage to the system or drive:

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 two thumb screws indicated at the rear of the main LCD display, and then remove IO cover.

4. Unplug all cables from the IO ports of the POS system.
5. Unscrew two screws that attach the monitor to the hinge as shown below to remove it. Next, slide main LCD display upward slowly from hing and remove it.



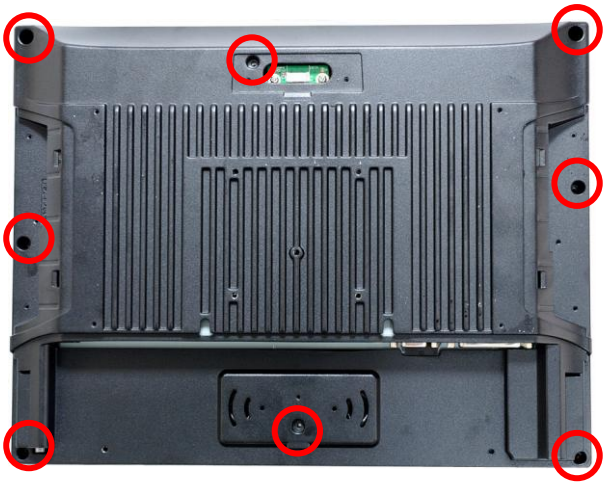
6. For easier access place the main LCD display upside down, then Remove four screws and detach the right side cover and left side cover.

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

7. Remove a screw and pull the mylar stuck on the HDD to remove HDD.

8. Remove logo indicated on the back of main LCD display.

9. Unscrew eight screws on the back cover of main LCD display as shown below to remove it.



Clearing CMOS

The WP-75XX'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 PEB-973J.

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.

Memory Installation

The memory sockets on the main board can be populated with up to an industry-standard DIMM. The WP-75XX comes standard with one preinstalled DIMM. To achieve maximum memory performance, up to 4GB 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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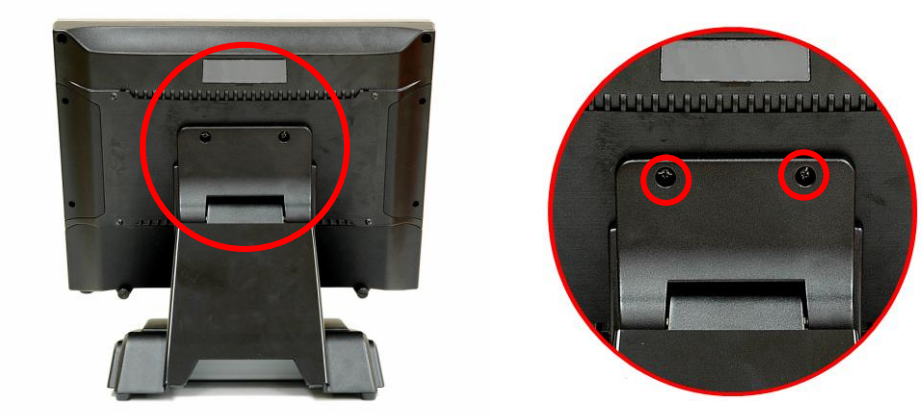
3. Remove two thumb screws indicated at the rear of the main LCD display, and then remove IO cover.

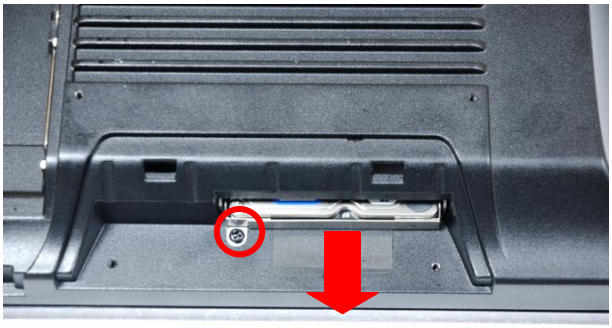
4. Unplug all cables from the IO ports of the POS system.

5. Unscrew two screws that attach the monitor to the hinge as shown below to remove it. Next, slide main LCD display upward slowly from hing and remove it.



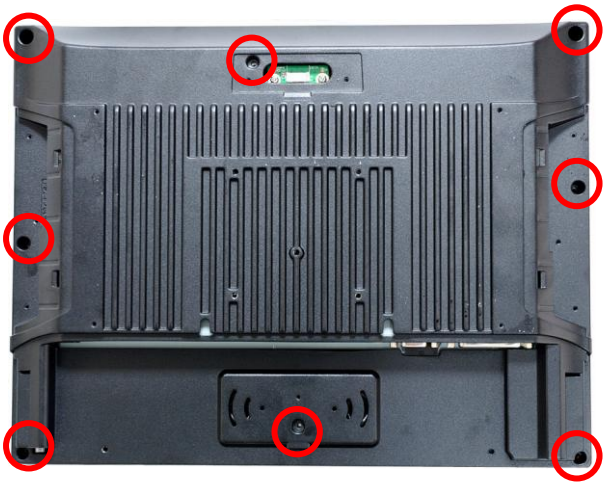
6. For easier access place the main LCD display upside down, then Remove four screws and detach the right side cover and left side cover.

7. Remove a screw and pull the mylar stuck on the HDD to remove HDD.



8. Remove logo indicated on the back of main LCD display.

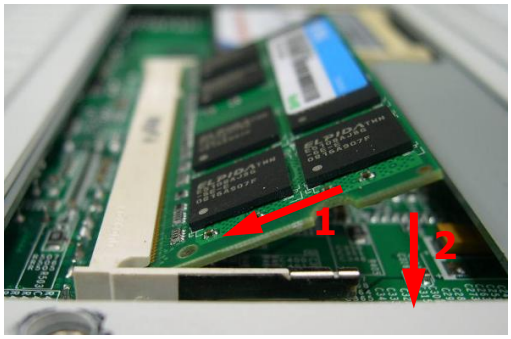
9. Unscrew eight screws on the back cover of main LCD display as shown below to remove it.

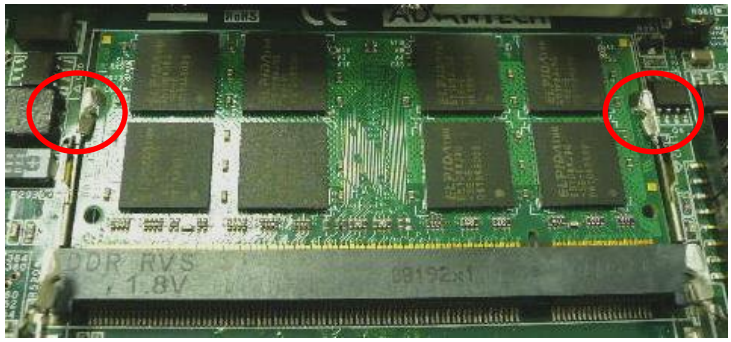


10. If an existing memory card or cards need to be replaced, pull the ends of both metal latches away from the card to release it.

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

11. 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.





12. Replace the RAM cover, then replace the system box.

13. 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.

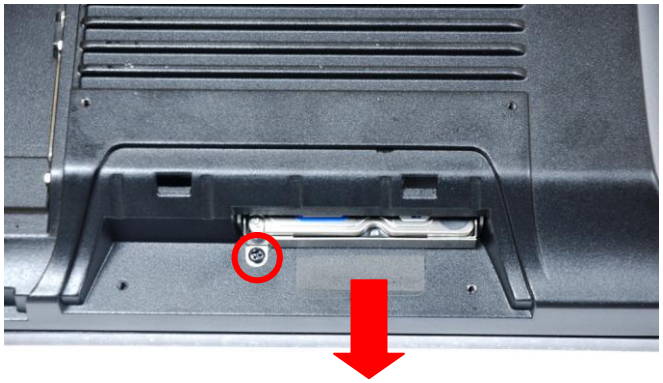
1. Turn off the system power properly through the operating system, then turn off any external devices.
2. Disconnect the power cord from the power outlet and disconnect any external devices.

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 LCD display upside down, then Remove two screws and detach the left side cover.

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

5. Remove a screw and pull the mylar stuck on the HDD to remove HDD.



4. Press the HDD to release the HDD from the HDD tray as shown below. Next, insert the replacement hard disk into the HDD tray.

5. Slide the HDD box back into the panel, ensuring that it is pressed all the way in and properly seated.
6. Reattach a screw that secure the HDD box.
7. Reattach the cover and two screws.
8. 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

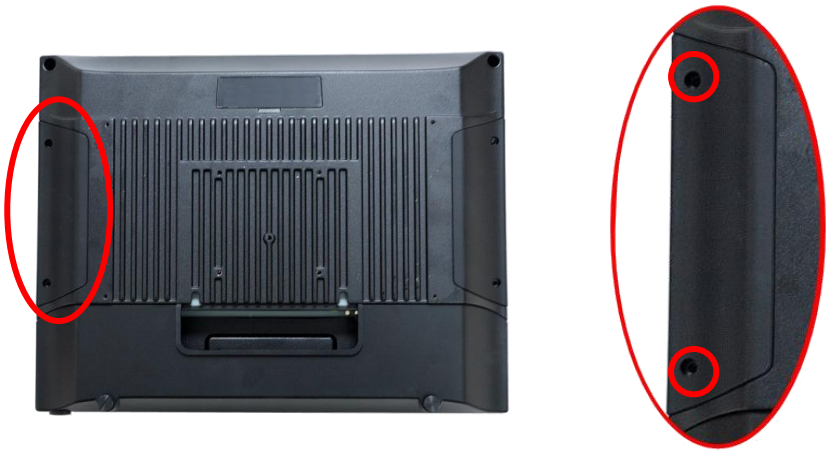
MSR/Fingerprint/I-Button/IC Card Module Installation

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. For easier access place the main LCD display upside down, then Remove two screws and detach the right side cover.



3. Connect MSR cable into the socket.
4. Slide the MSR into the main LCD display. Reattach the two screws that secure the MSR to the main LCD display.

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.

Rear Mount VFD 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. Remove logo indicated on the back of main LCD display.

4. Connect VFD cable to the KBTR connector of VFD KBTR board.

5. Secure the VFD module with two screws.

6. 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. If you need configure VFD module, please execute the utility according to the procedure specified in Chapter 5.

Pole Mount 2nd Display 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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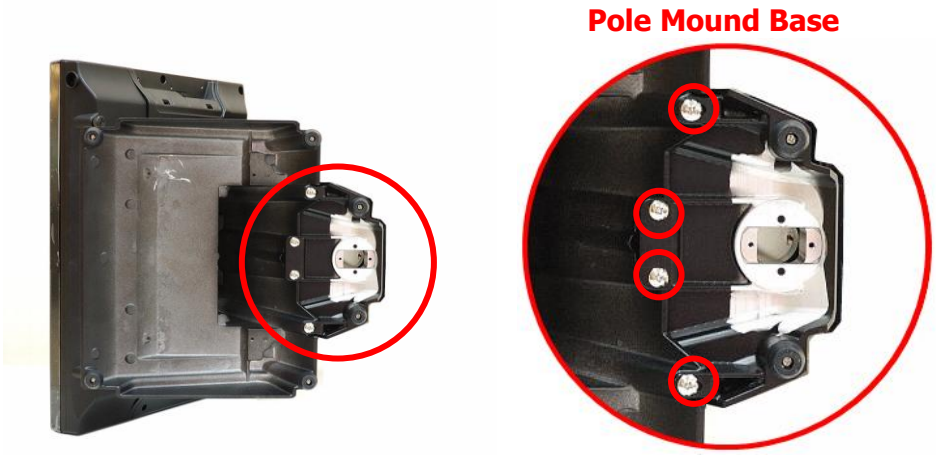
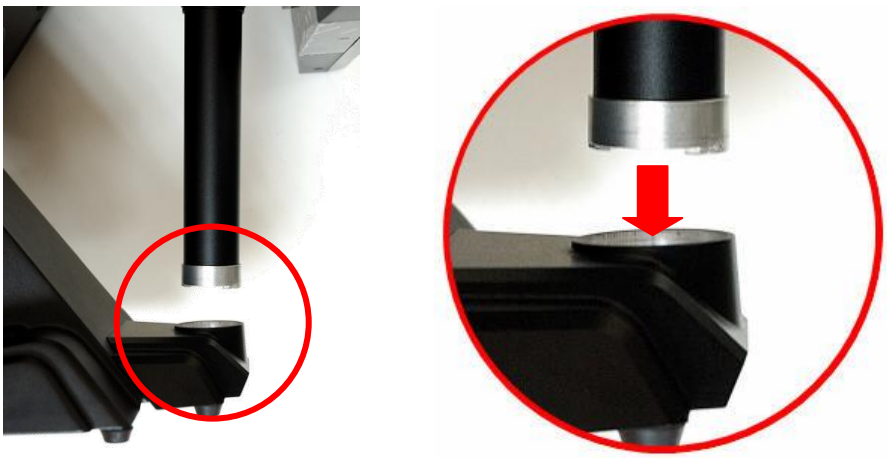
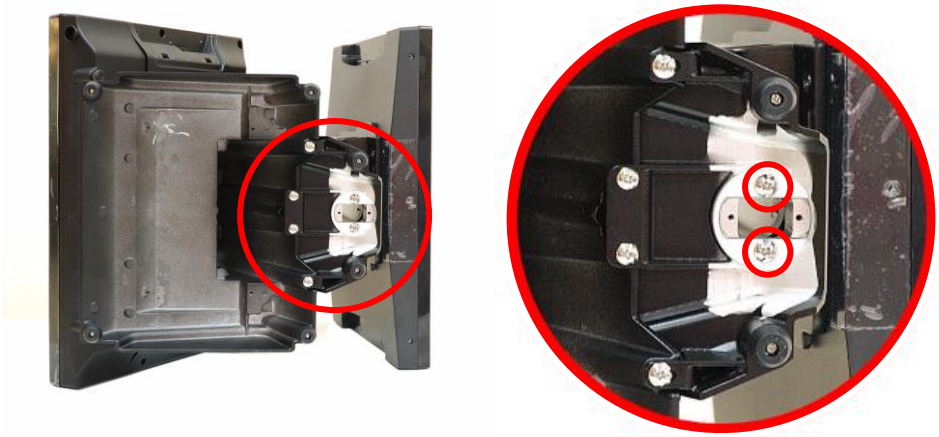
3. Secure the pole mount base with four screws.



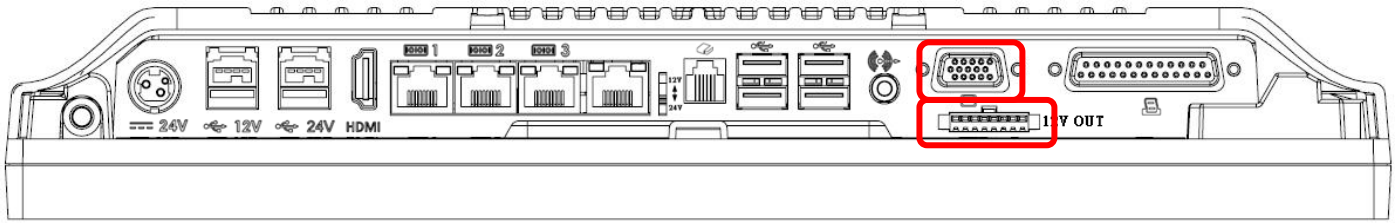
4. Carefully slide the pole display module into base's hole, ensuring it is plugged securely in the base's hole.



5. Secure the pole display module with two screws.



6. Connect VGA cable and 12V cable as shown below.



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

Cash Drawer Installation

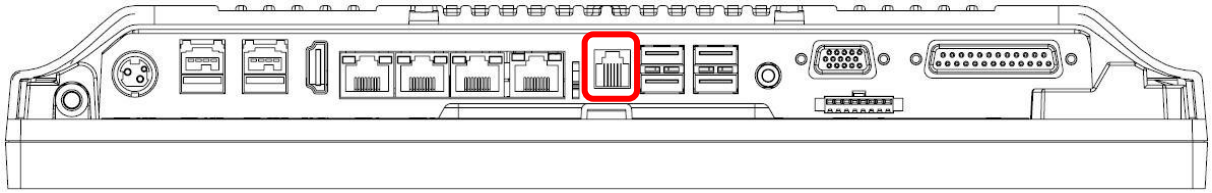
NOTE: Before connecting cash drawer to the system, please make sure the driver voltage and cable pin assignment of the cash drawer matches the definition of the system's cash drawer port.

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.

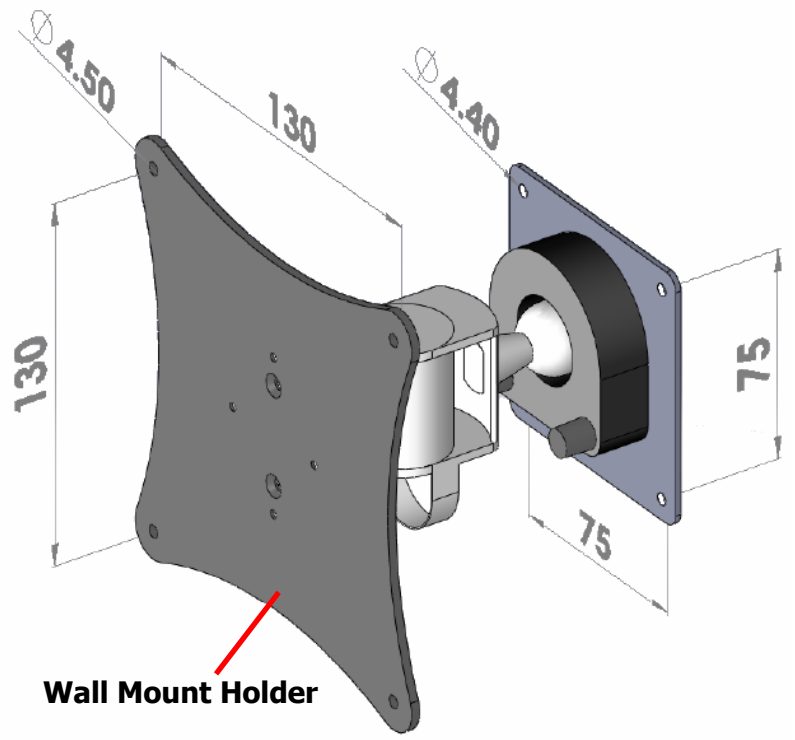


4. Reconnect the power cord and any external devices, then turn on the system.

Swing Arm Kit Installation

Select a flat surface of adequate strength, ensuring there will be proper ventilation and maneuvering space. Please use the right tools and accessories according to the surface material (drywall, concrete, solid wood, etc.) to securely support the system box. A fully equipped system may weigh up to 5.5 kg.

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



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

2. Next, prepare the arm to be attached to the WP-65X1. Release the two thumb screws and remove the VESA holder plate by sliding it in the direction of the arrow.

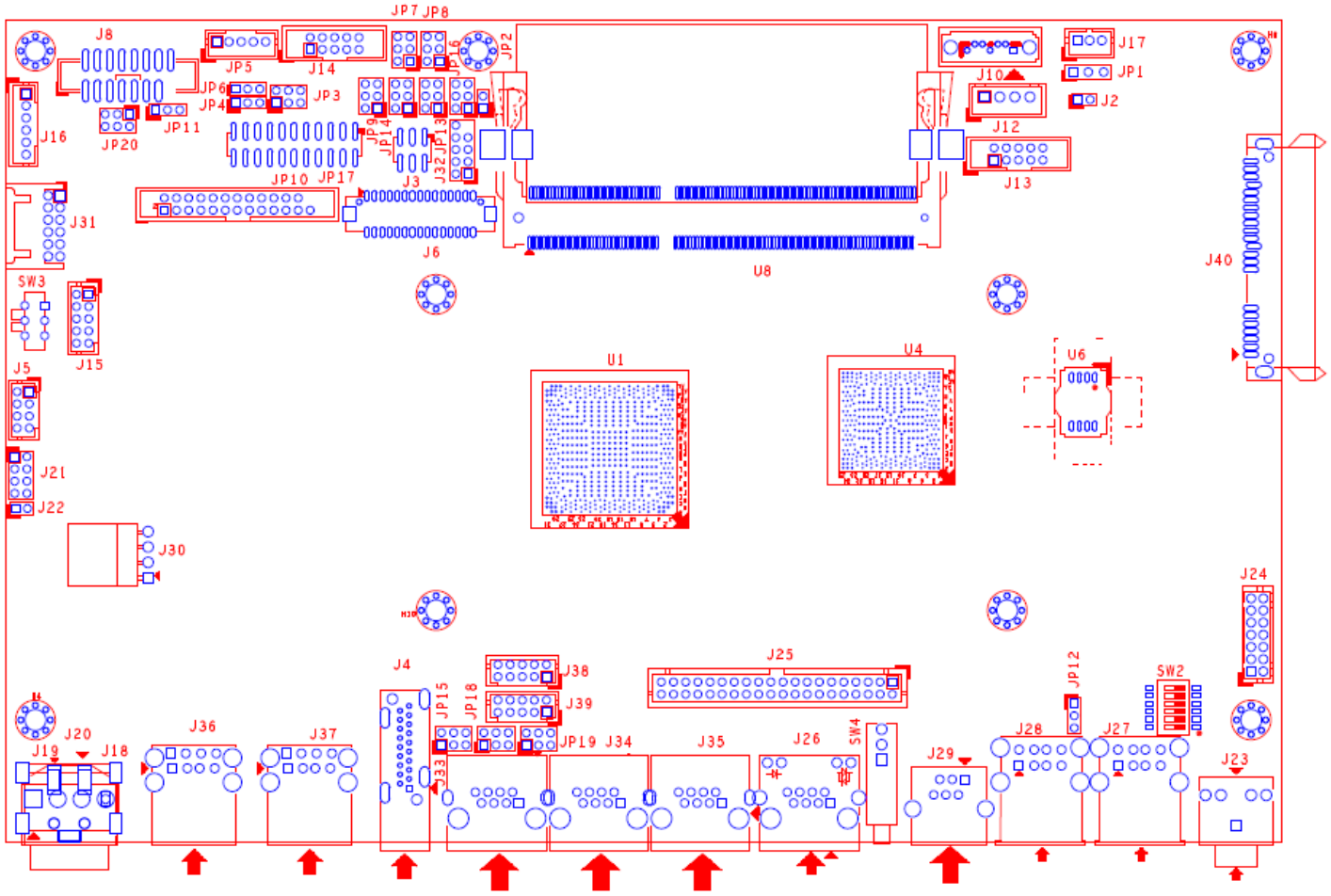
3. Secure the VESA holder to the main LCD display with four screws.

4. Affix the main LCD display to the swing arm by sliding the holder plate back into its swing arm holder.

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

Chapter 4 Main Board Configuration

Jumper and Connector Locations of PEB-973J



Connector Allocations

Jump	Function
JP1	CMOS RAM charge/discharge setup
JP3	LVDS Panel VDD input voltage selection
JP4	LVDS Panel Backlight enable voltage selection
JP7;JP8;JP9; JP13;JP14;JP16	COM Port RI Voltage selection
JP11	Backlight control voltage level Mode
JP12	Cash Drawer Voltage selection
JP15; JP18; JP19	COM1 & COM2 & COM5 Console Selection Header
JP17	COM5 PORT RS232/422/485 Selection Header
JP20	LVDS Backlight control PWM or DC Mode
SW2	Audio Jack for AMP Function
SW3	KBTR COM Port & keyboard Function Selection
SW4	Cash Drawer Voltage selection
J4	HDMI Connector
J5	USB pin Header
J6	LVDS Connector
J8	VGA Pin Header.
J10	SATA Connector
J12	SATA Power pin header
J13;J14 ;J15	COM 3/4/6 Port pin header
J16	KB pin header
J17	System FAN Control pin header
J18.	INPUT Power Jack
J20	Power Pin Header (12V INPUT)
J21	Front panel pin header
J22	HDD_LED pin header
J23	Audio LINE_OUT phone Jack
J24	Audi Line _OUT & MIC & LINE_IN Function Pin Header
J25	LAN & USB & COM Port Co-layout pin header
J26	LAN Connector
J27;J28	USB Connector.
J29	Cash Drawer Connector.
J30	+12V OUT pin header
J31	KBTR pin header
J32	LPC Debug Port pin header
J33;J34;J35	COM PORT 1/2/5 Connector
J36	Power USB 12V Connector
J37	Power USB 24V Connector
J38;J39	COM PORT 2/5 Connector
J40	SMD Connector.SATA 7+15P Connector
JP2	Case Open Pin Header
JP5	BACK LIGHT PWR Pin Header
JP10	LPT Pin Header

Jumper Settings of PEB-973J

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

JP1

CMOS RAM charge/discharge setup

JP1	Function
1-2 short	NORMAL ★
2-3 short	Clear CMOS

JP3

LVDS Panel VDD input voltage selection

JP3	Function
2-4	VCC=3.3V ★
4-6	VCC=5V
3-4	VCC=12V

JP4

LVDS Panel Backlight enable voltage selection

JP4	Function
1-2	VCC=3.3V ★
2-3	VCC=5V

JP8

COM4 Port Voltage selection

JP8	Function
1-2 short	VDD=5V ★
3-4 short	RI#
5-6 short	VDD=12V

JP7 ; JP9 ; JP13 ; JP14 ; JP16

COM Port RI Voltage selection

JP7;JP9;JP13; JP14;JP16	Function
1-2 short	VDD=5V
3-4 short	RI# ★
5-6 short	VDD=12V

JP7 is COM3 Port RI Voltage selection .
JP9 is COM6 Port RI Voltage selection .
JP13 is COM1 Port RI Voltage selection .
JP14 is COM2 Port RI Voltage selection .
JP16 is COM5 Port RI Voltage selection .

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

JP11

Backlight control voltage level Mode

JP11	Function
1-2	3.3V
2-3	5V

JP12

Cash Drawer Voltage selection

JP12	Function
1;2	12V ★
2;3	24V

JP15 ; JP18 ; JP19

COM1 & COM 2 & COM5 Console Selection Header

PIN No.	Function
RS232	1-3 ; 2-4

JP17

COM5 PORT RS232/422/485 Selection Header

COM5 Function	Jumper Setting (Pin closed)
RS-232	5-6;9-11;10-12;15-17;16-18
RS-422	3-4;7-9;8-10;13-15;14-16;21-22
RS-485	1-2;7-9;8-10;19-20

JP20

LVDS Backlight control PWM or DC Mode

JP20	Function
1-3;2-4	PWM Mode ★
3-5;4-6	DC Mode

SW2 Audio Jack for AMP Function

SW2	Function
1 ; 3 ; 5 ON 2 ; 4 ; 6 OFF	For AMP Function ★
2 ; 4 ; 5 ;6 ON 1 ; 3 OFF	No AMP Function

SW3 KBTR COM Port & keyboard Function Selection

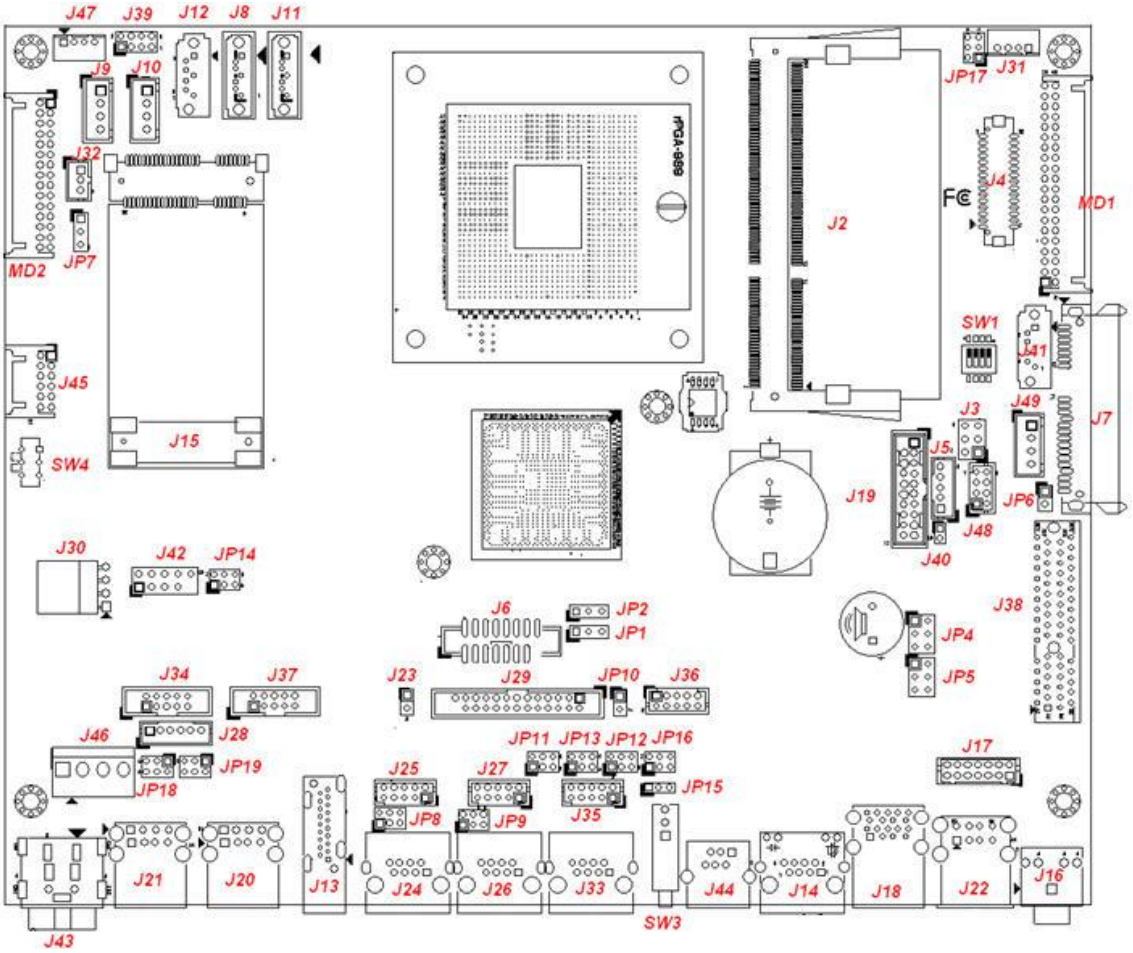
SW3	Function
A-B	Keyboard Function ★
B-C	COM6 Port TX & RX Function

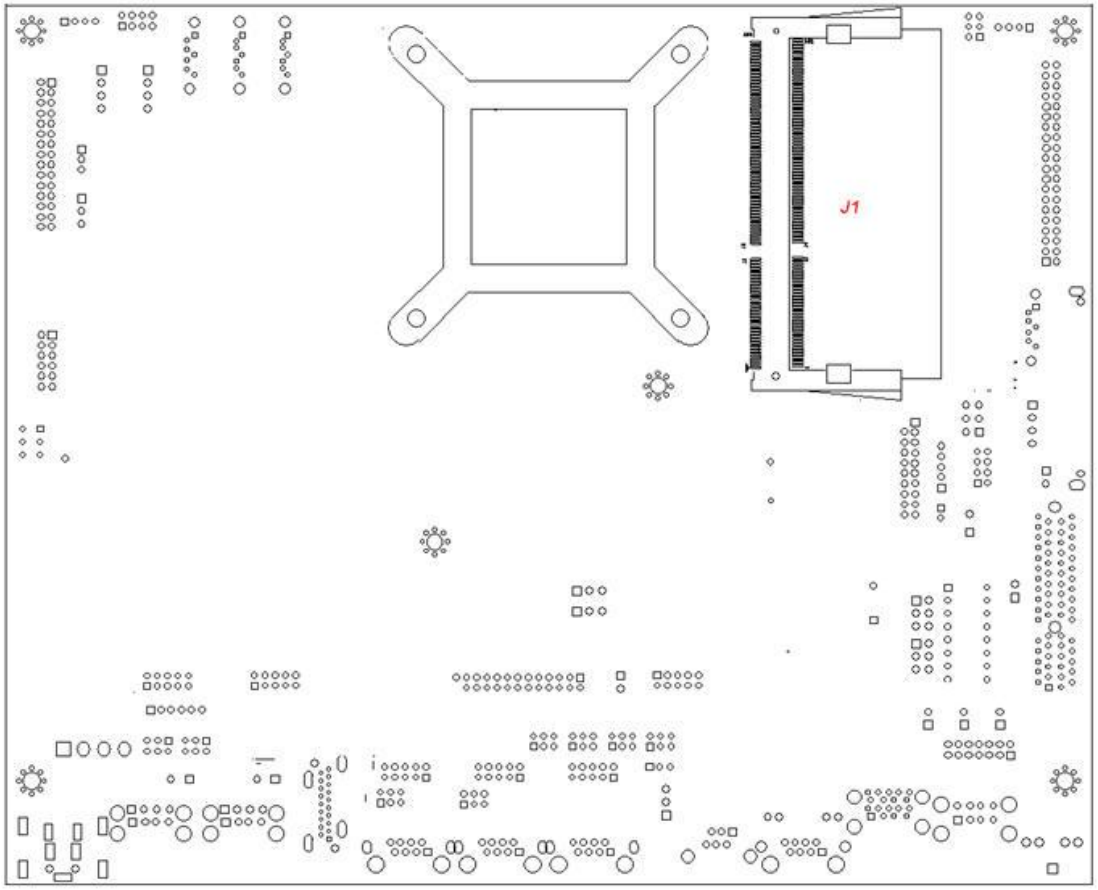
SW4 Cash Drawer Voltage selection

SW4	Function
Upward	24V
Downward	12V ★

Note : Wrong voltage selection may damage the Cash Drawer device .

Jumper and Connector Locations of PEB-973L





Connector Allocations

Jump	Function
J1	DDR3Connector / Reverse Type
J2	DDR3Connector / Standard Type
J3	LVDS Backlight Adjustment Connector
J4	LVDS Panel Connector
J5	LVDS Backlight Inverter Module Connector
J6	VGA Pin Header
J7	SATA Connector& SATA Power Pin Header(SATA 3.0)
J8、J11	SATA Connector (Black)
J12、J41	SATA Connector (Blue, SATA 3.0)
J9、J10, J49	SATA Power Connector
J13	HDMI Connector
J14	Ethernet Connector
J15	Mini PCI-Express/ mSATA Connector
J16	Audio LINE OUT Phone Jack
J17	Audi Line _OUT & MIC & LINE_IN Function Pin Header
J18	USB 3.0 A Type Connector
J19	USB 3.0 BOX Header
J20	Power USB +12V
J21	Power USB +24V
J22	USB Connector Type A
J23	Case Open Function Connector
J24、J26、J33	COM Port with RJ45 Connector
J25、J27、J35、J36	COM 1, 2, 5, 6 On Board Wafer Header
J28	PS/2 Keboard/ Mouse Connector
J29	LPT Parallel Port Connector
J30	+12V OUT Connector
J31	CPU Fan Connect
J32	System Fan Connect
J38	PCI-Express X4 Slot
J39	Front Panel Connector
J40	Hard Disk Active LED
J42	LPC Debug Port
JP1	CMOS RAM Charge/Discharge Setup
JP2	Secondary RTC Function
JP4	LVDS Panel VDD Input Voltage Selection
JP5	LVDS Panel Backlight Enable Voltage Selection
JP6	LVDS Panel Backlight Control Mode
JP7	mSATA / PCIe Function Selector
JP8	COM1 Console Selection Header
JP11	COM2 Console Selection Header
JP13	COM5 Console Selection Header
JP9	COM1 Port RI Voltage Selection

JP12	COM2 Port RI Voltage Selection
JP14	COM6 Port RI Voltage Selection
JP16	COM3 Port RI Voltage Selection
JP18	COM4 Port RI Voltage Selection
JP19	COM5 Port RI Voltage Selection
JP10	Keyboard 5V Enabled
JP15	Cash Drawer Voltage Selection
JP17	KBTR COM Port & Keyboard Function Selection
SW1	LVDS Panel Type Selector
SW3	Cash Drawer Voltage Selection
SW4	KBTR COM Port & Keyboard Function Selection

Jumper Settings of PEB-973L

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

JP1 CMOS RAM Charge/Discharge setup

JP1	Function
1-2	NORMAL ★
2-3	Clear CMOS

JP2 Secondary RTC Function

JP2	Function
1-2	NORMAL ★
2-3	Clear CMOS

JP4 LVDS Panel VDD Input Voltage Selection

JP4	Function
1-2	VDD=3V ★
5-6	VDD=5V

JP5 LVDS Panel Backlight Enable Voltage Selection

JP5	Function
1-3、2-4	5V, Active High ★
1-3、4-6	3V, Active High
3-5、2-4	5V, Active Low
3-5、4-6	3V, Active Low

JP6 LVDS Panel Backlight Control Mode

JP6	Function
Open	Backlight control use PWM mode
Short	Backlight control use voltage mode ★

JP7 mSATA / PCIe Function Selector

JP7	Function
1-2	Enabled mSATA function ★
2-3	Enabled PCIE and MiniPCIE function

JP8(COM1)，JP11(COM2)，JP13(COM5) COM Console Selection Header

	Function
RS232	1-3 ; 2-4

JP9(COM1)，JP12(COM2)，JP14(COM6) JP16(COM3)，JP18(COM4)，JP19(COM5) COM Port RI / Voltage Selection

	Function
1-2	VDD=5V
3-4	RI# ★
5-6	VDD=12V

JP10 Keyboard 5V Enabled

JP10	Function
Open	Disable PS2 Keyboard
Short	Enabled PS2 Keyboard ★

JP15 Cash Drawer Voltage Selection

JP15	Function
1;2	+ 12V ★
2;3	+ 24V

JP17 KBTR COM Port & Keyboard Function Selection

JP4	Function
1-3，2-4	Keyboard Function ★
3-5，4-6	COM6 Port TX & RX Function

SW3 Cash Drawer Voltage Selection

SW3	Function
1-2	+ 12V ★
2-3	+ 24V

SW4 KBTR COM Port & Keyboard Function Selection

SW4	Function
A-B	Keyboard Function
B-C	COM6 Port TX & RX Function

SW1 **LVDS panel type selector. 0 = Switch ON, 1= Switch OFF**

SW1[3..0]	Panel model name	Resolution
0000		800x600x18bit, single channel
0001	AUO G150XG01 V3	1024x768x18bit, single channel
0010		1024x768x24bit, single channel
0011		1280x768x18bit, single channel
0100		1280x800x18bit, single channel
0101		1280x960x18bit, single channel
0110		1280x1024x24bit, dual channel
0111		1366x768x18bit, single channel
1000		1366x768x24bit, single channel
1001		1440x900x24bit, dual channel
1010		1440x1050x24bit, dual channel
1011		1600x900x24bit, dual channel
1100		1680x1050x24bit, dual channel
1101		1600x1200x24bit, dual channel
1110		1920x1080x24bit, dual channel
1111		1920x1200x24bit, dual channel

Chapter 5 Software Setup

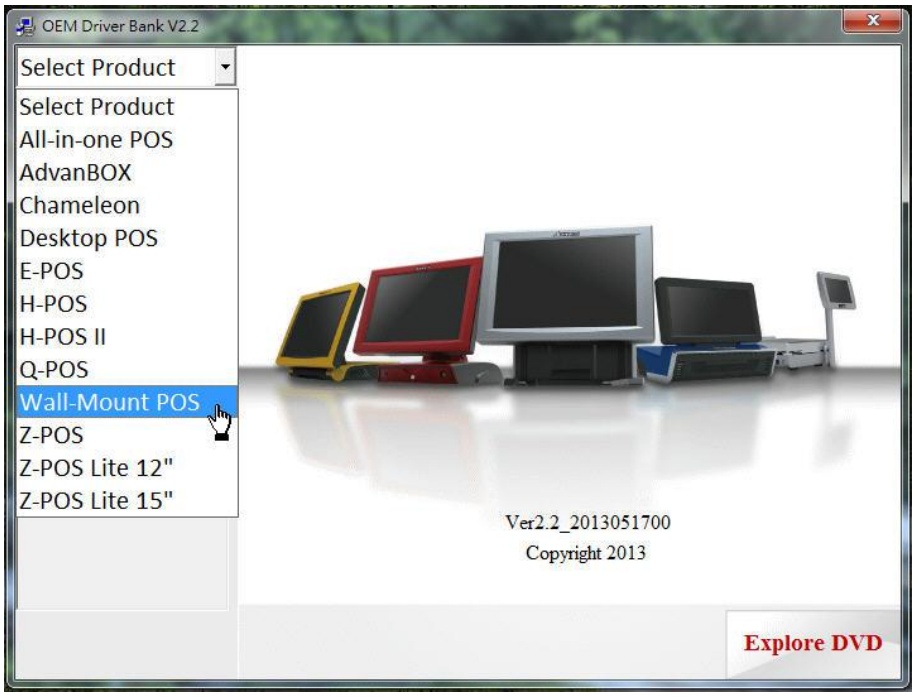
Pre-Installation Requirements

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.

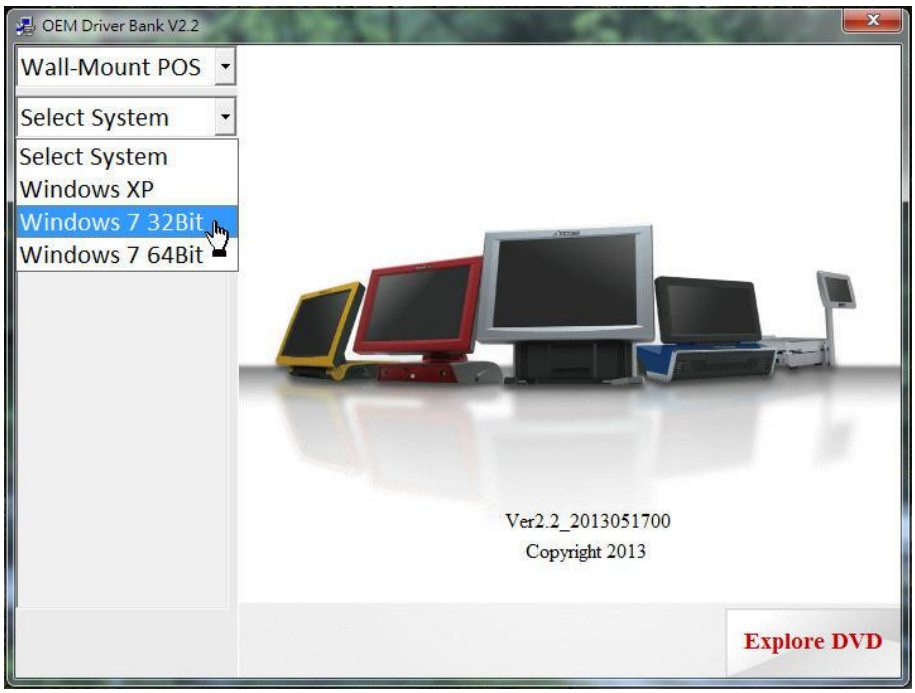
1. Insert sofeware CD into a system.

2. Run the setup.exe file on the CD.

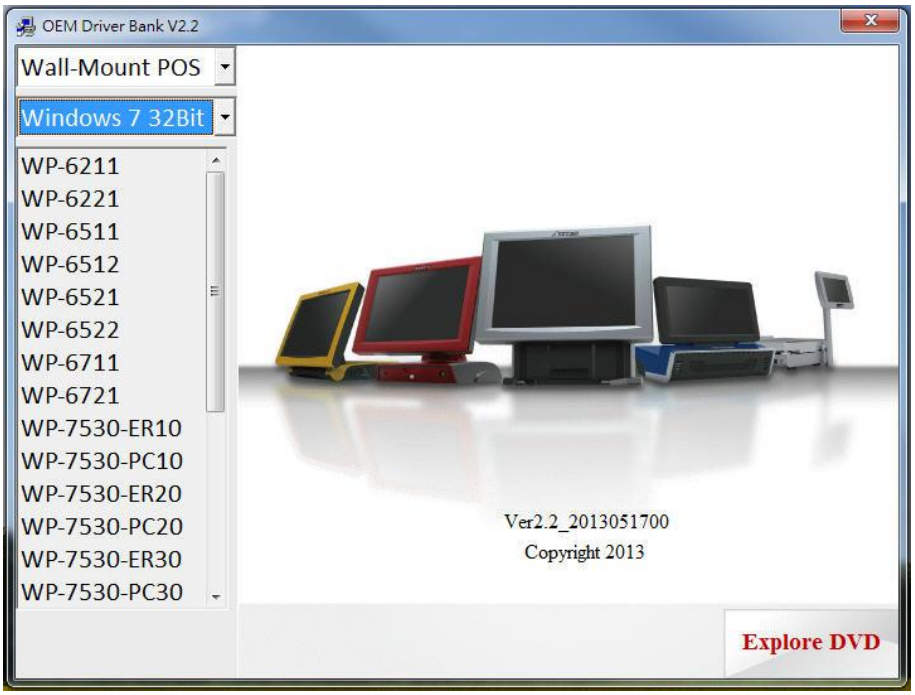
3. Click **【Select Product】** to select your POS model.



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



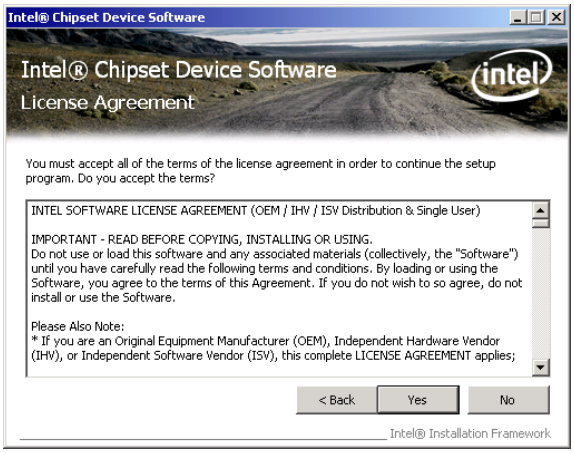
5. Select your POS model Number.



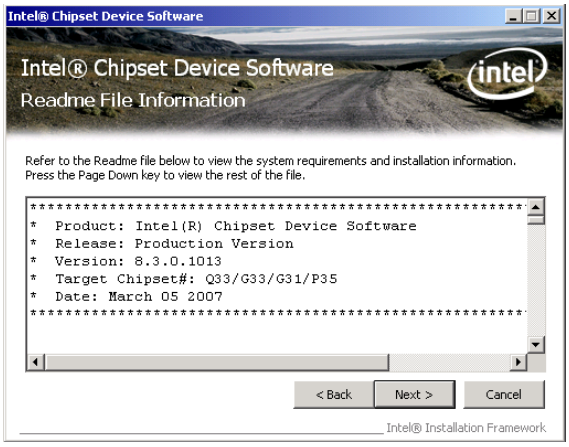
6. Select the peripheral driver that you want to install and then follow on-screen instructions to install your driver or refer to following procedures specifying how every driver is to be installed.

Intel Chipset Driver Installation

1. Click the Next button on the Welcome screen.



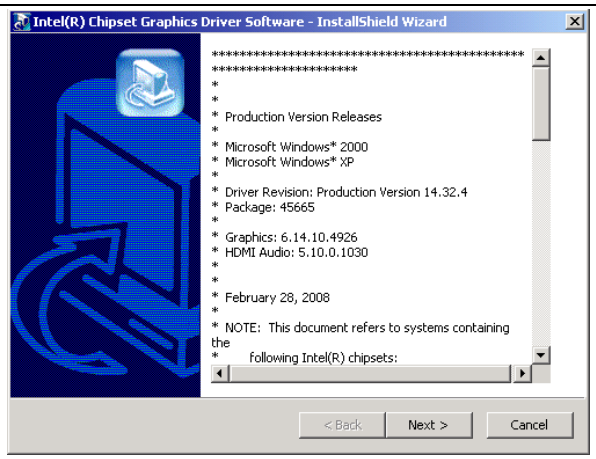
2. Click Yes on the License Agreement screen.



3. Click Next on the Information screen.

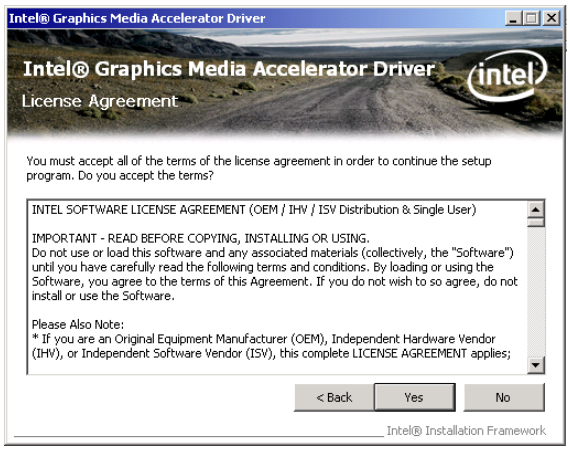
4. When installation is complete, click Finish.

Intel Graphics Driver Installation

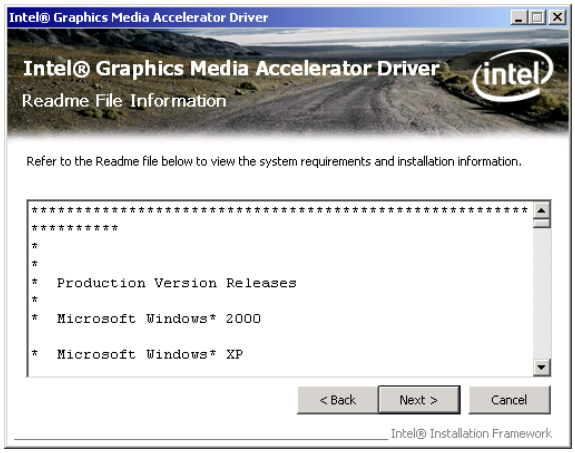


1. Click Next on the Starup screen.

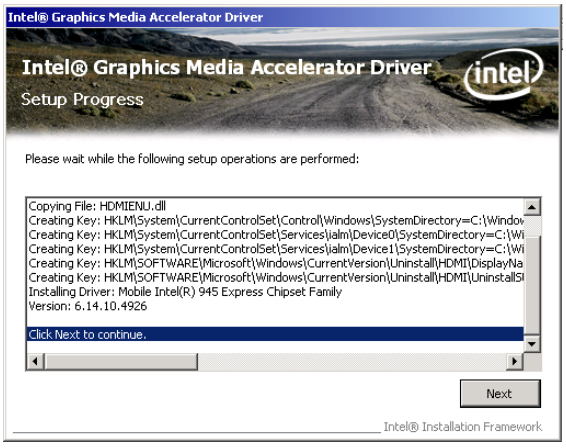
2. Click Next on the Welcome screen.



3. Click Yes on the License Agreement screen.



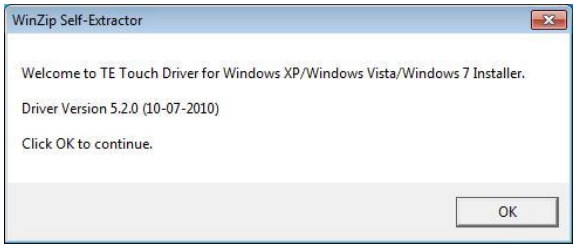
4. Click Next on the Information screen.



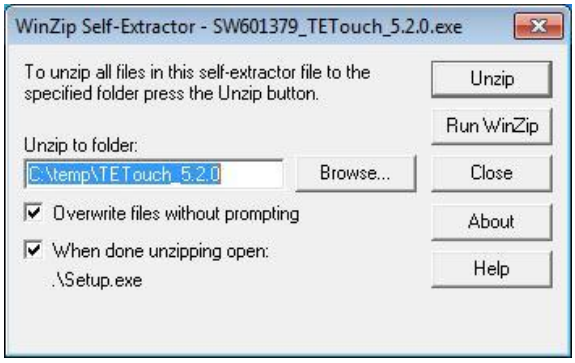
5. Click Next on the Setup Progress screen.

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

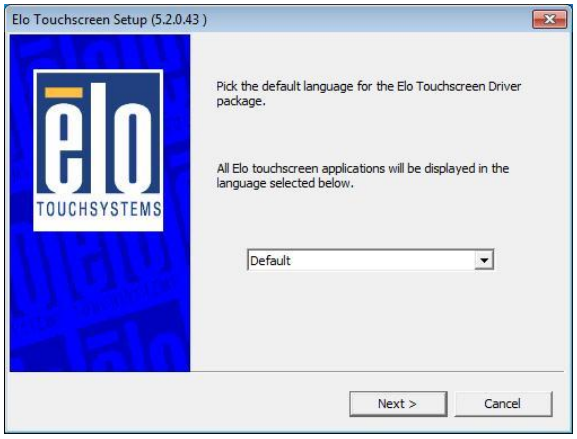
ELO Touch Screen Driver Installation



1. Click OK on the Welcome screen.

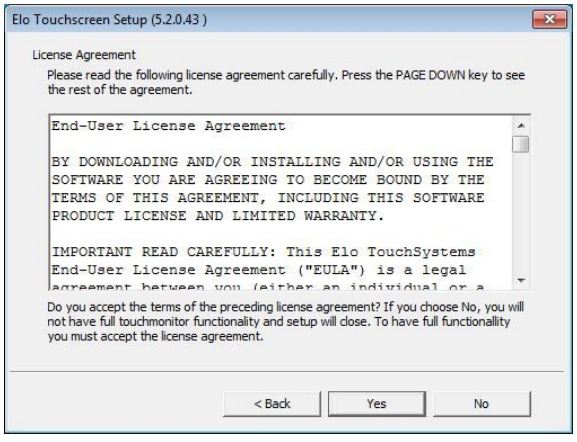


2. Click Unzip on the WinZip Self-Extractor screen.



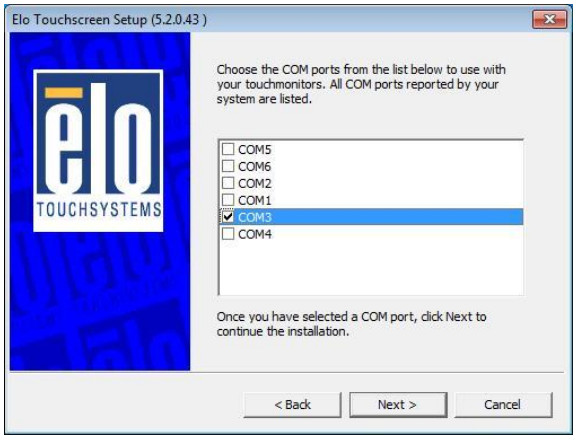
3. Select Default installation language, click Next.

4. Select Install Serial Touchscreen Drivers, click Next.

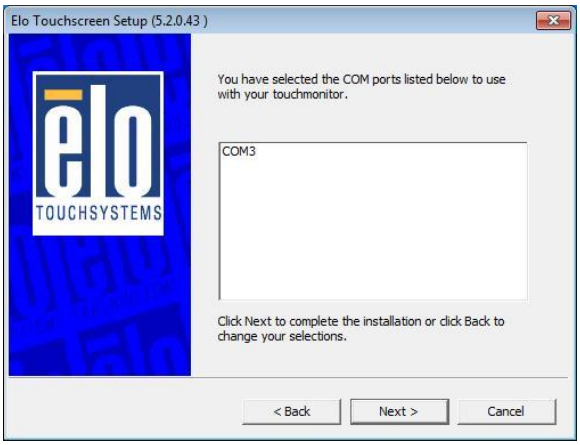


5. Click Yes on the License Agreement screen.

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



7. Select COM3, click Next.

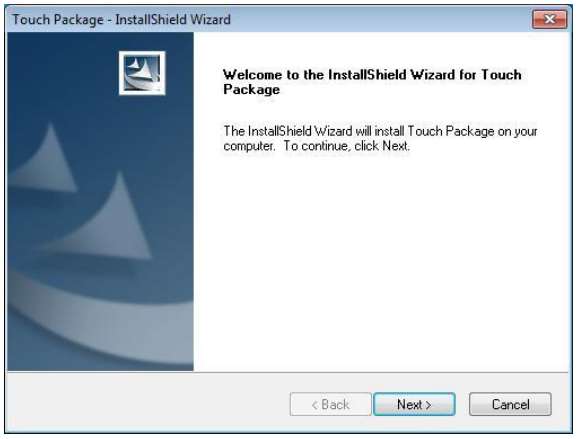


8. Click Next to confirm COM port selection.

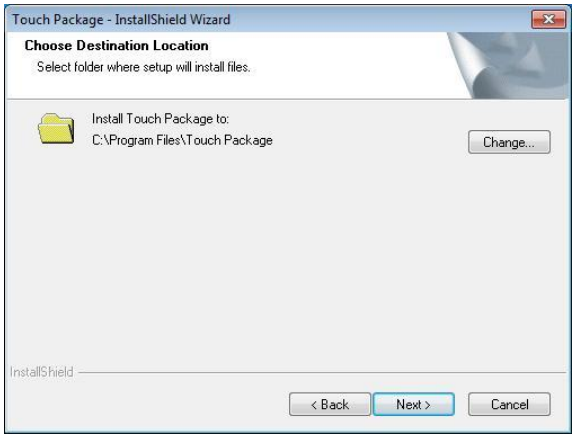
9. Click Finish.

10. Click Restart Now to apply these change.

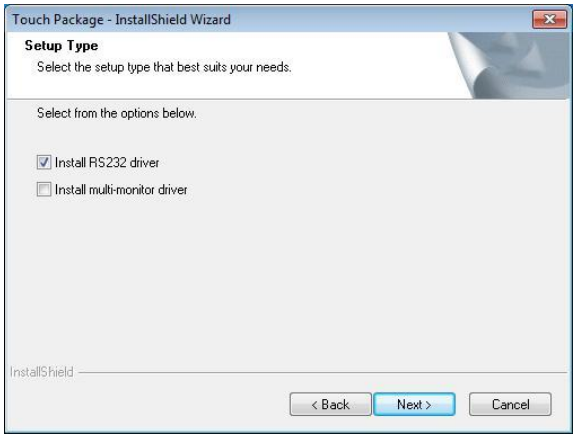
Abon Touch Screen Driver Installation



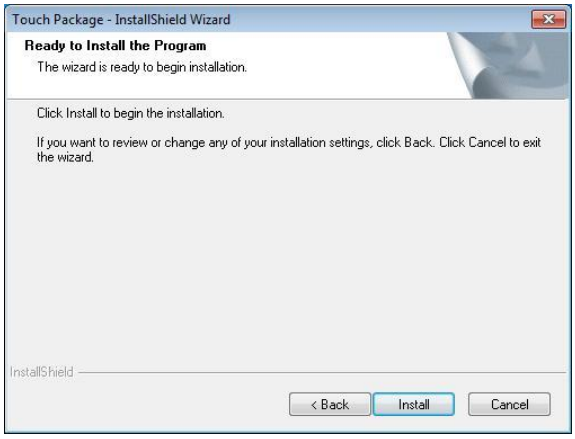
1. Click Next on the Welcome screen.



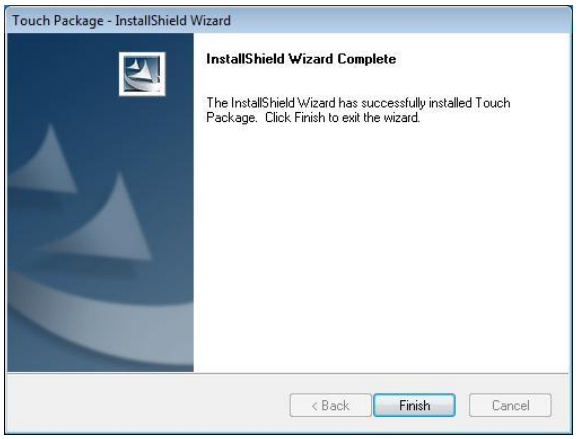
2. Click Next to confirm destination location.



3. Select Install RS232 driver and click Next.



4. Click Install to begin installation.

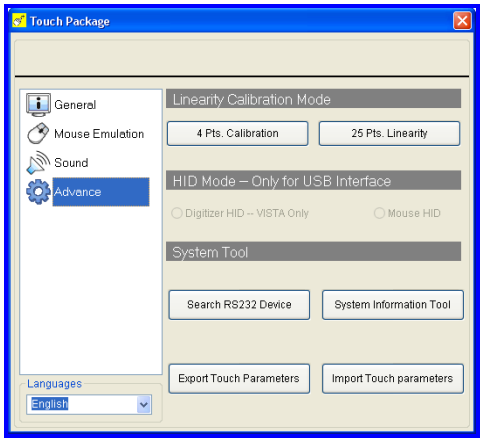


5. Click Finish to complete.

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

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

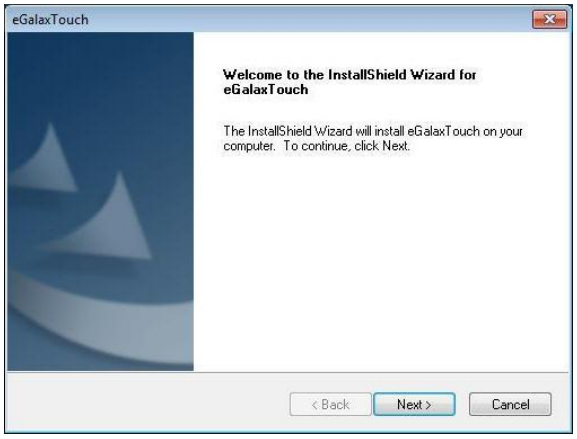
8. Click OK to reboot the system.



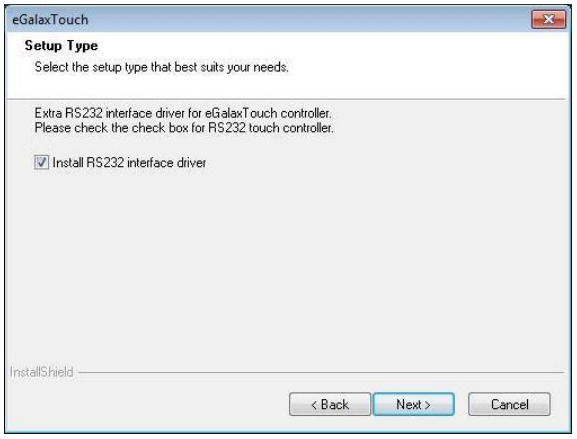
9. Run the Touch Tool on the desktop.

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

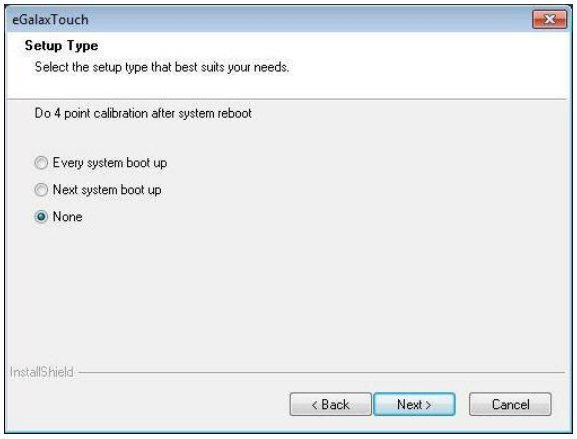
eGalax Touch Screen Driver Installation



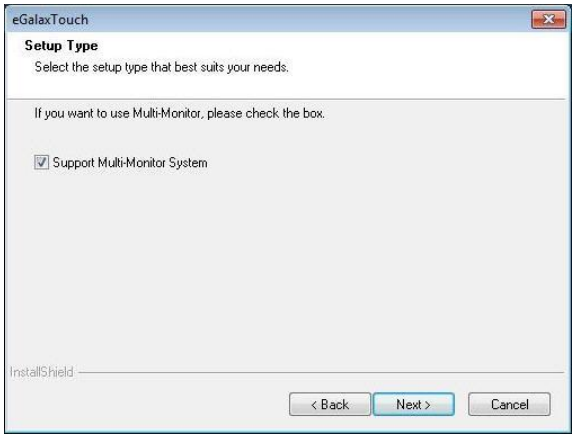
1. Click Next on the Welcome screen.



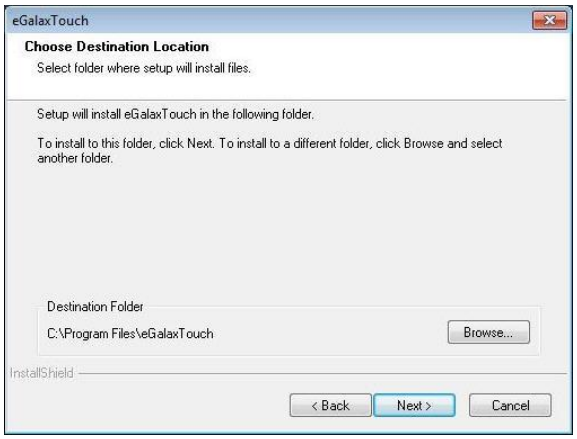
2. Select Install RS232 interface driver and click Next.



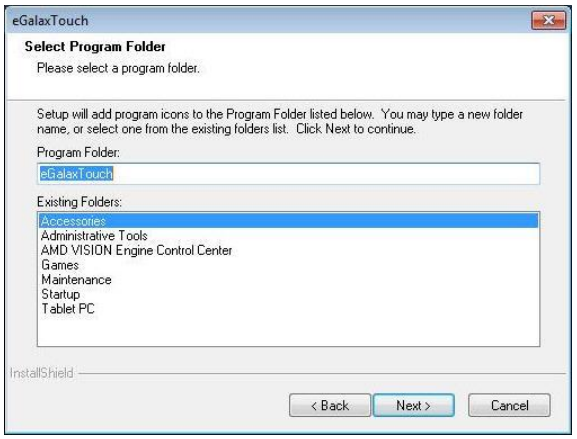
3. Select None and click Next.



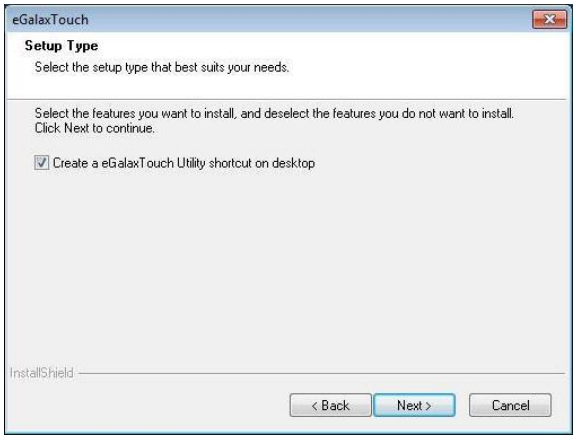
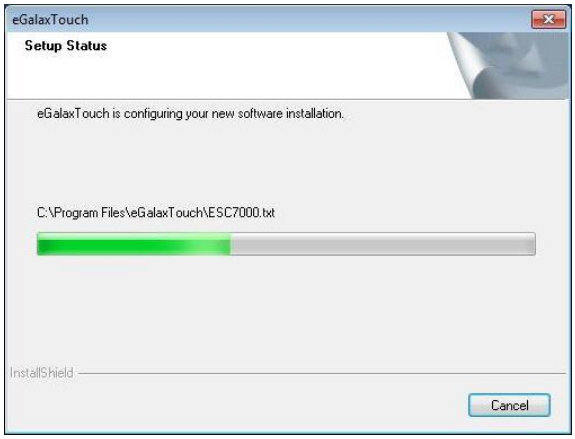
4. Select Support Multi-Monitor System and click Next.



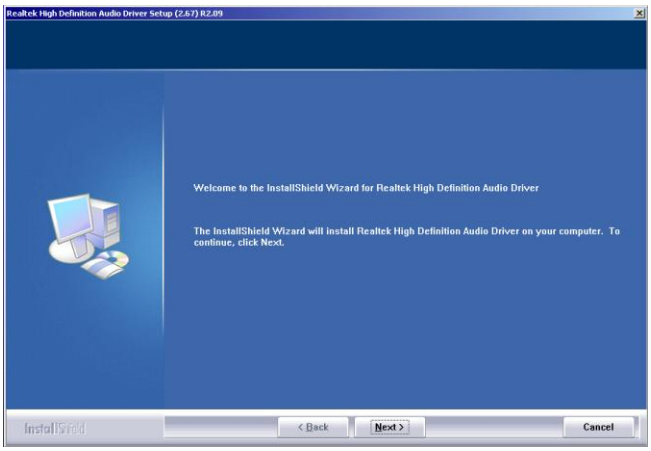
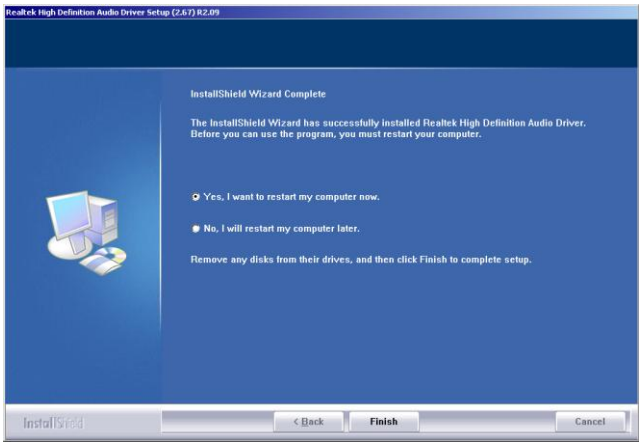
5. Choose Destination Location and click Next.



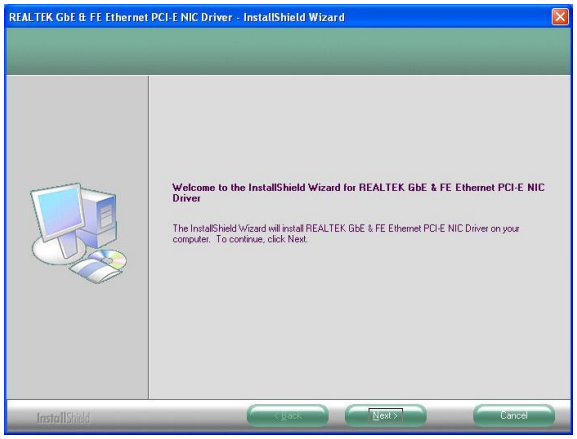
6. Select Program Folder and click Next.

	
7. Select to creat a shortcut and click Next.	8. New software installation.

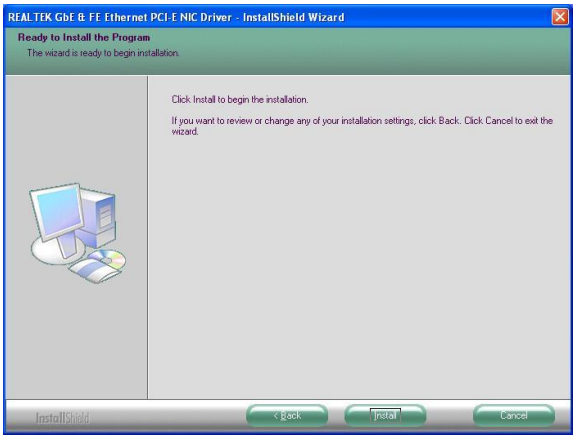
Audio Driver Installation

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

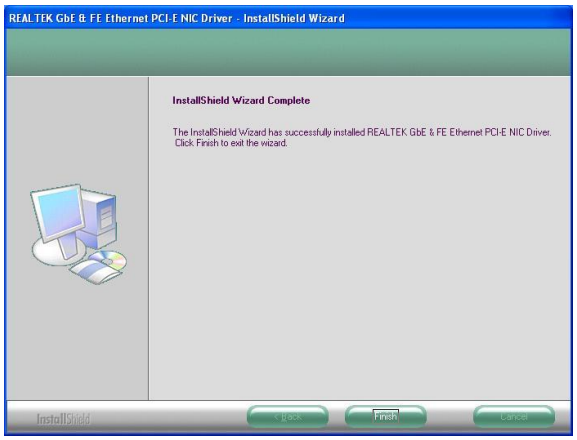
Ethernet Driver Installation for Windows XP



1. Click Next.

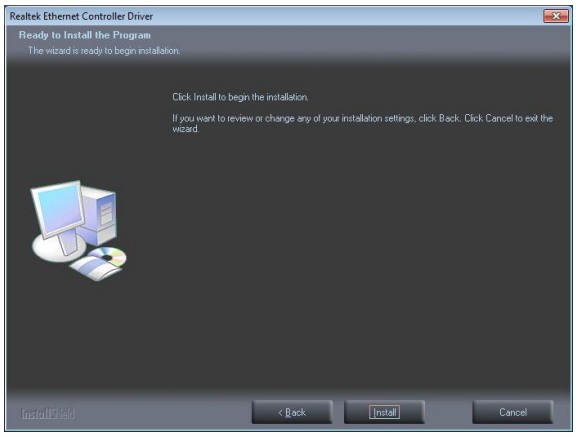


2. Click Install.

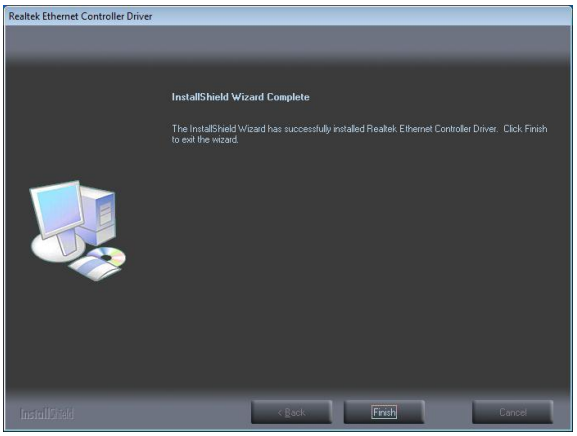


3. Click Finish.

Ethernet Driver Installation for Windows 7



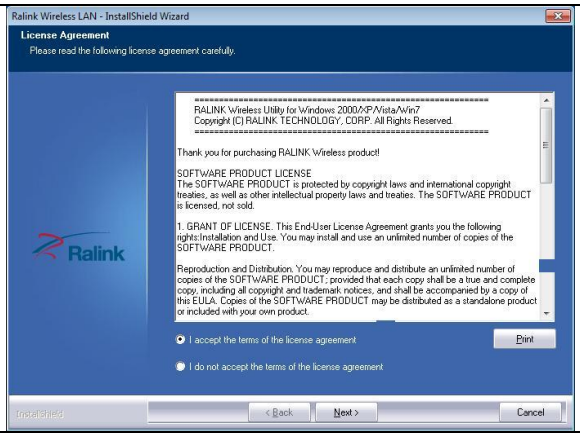
1. Click Install.



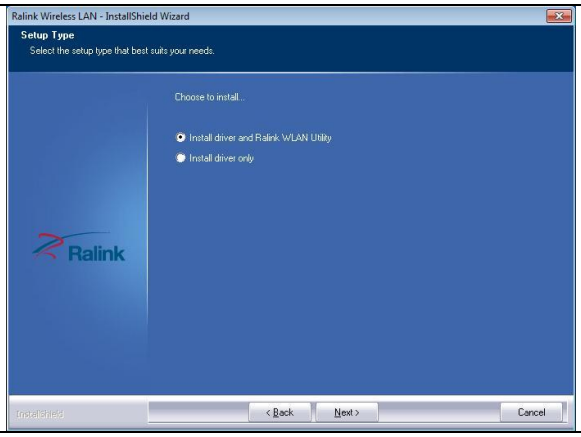
2. Click Finish.

Wireless LAN Driver Installation (optional)

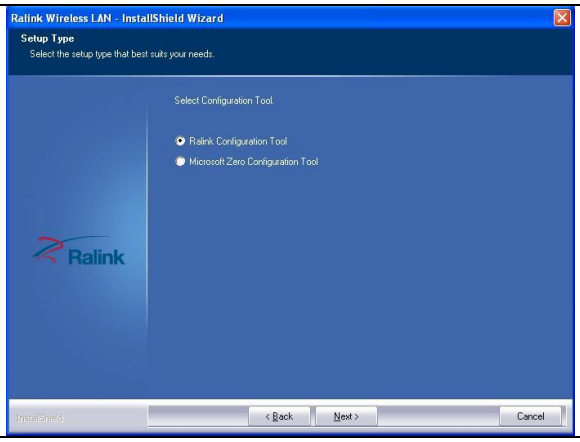
1. Enter the **LR802UKN3_802.11bgn** folder and then run the IS_AP_STA_RT2870_D.exe.



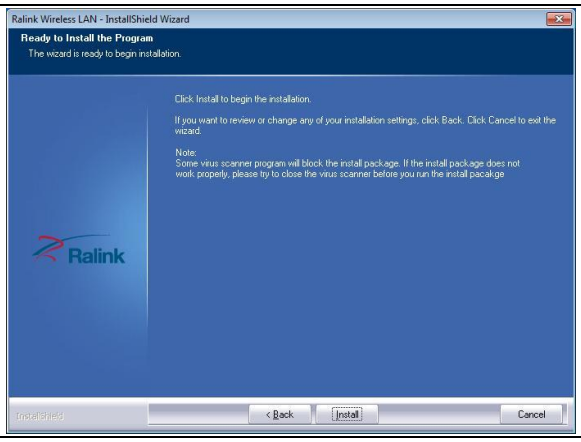
2. Click Accept on the License Agreement screen.



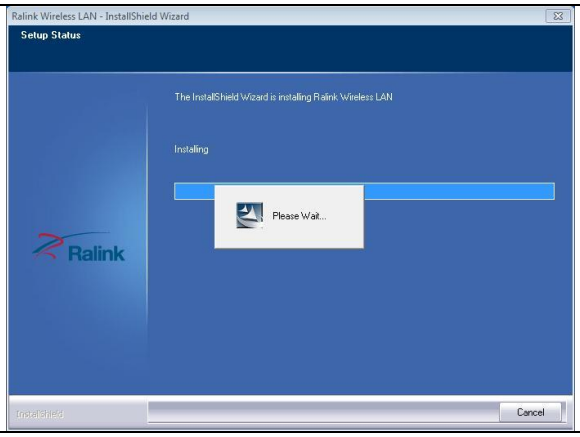
3. Alternative, and then click Next.



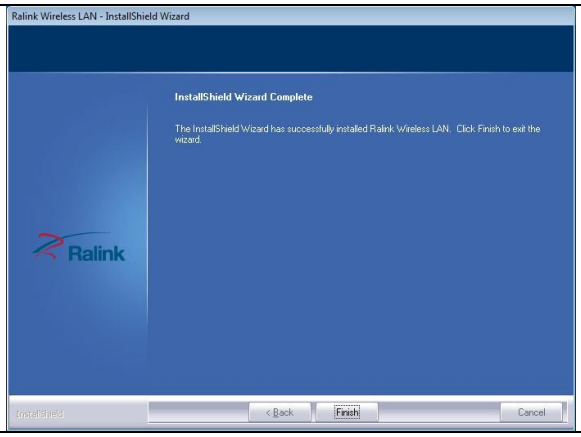
4. For Windows XP operating system, select Configuration Tool.



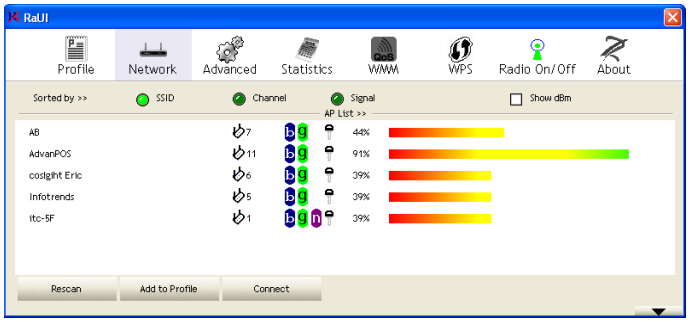
5. Click Install.



6. Wait as the WLAN driver is installed.



7. Click Finish.

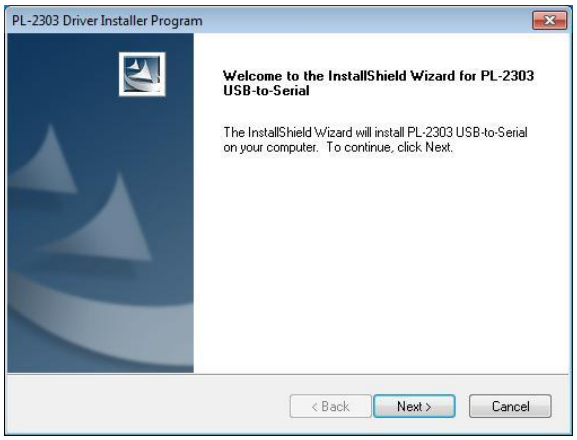


8. When installation is complete, the WLAN utility will automatically appear on the desktop.

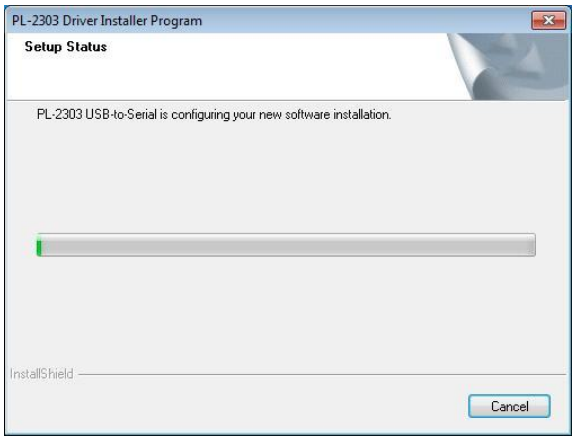
Rear Mount VFD USB-to-Serial Driver Installation (optional)

The WP-75X0 VFD port is a USB interface. The 9mm VFD uses a Serial interface, so in order to enable it, you must install the included USB-to-Serial interface driver.

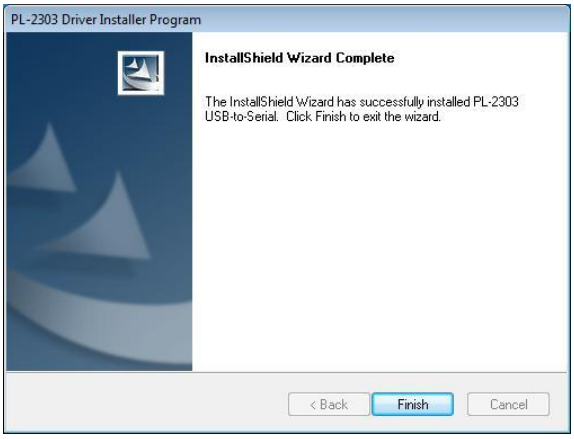
1. First, plug in the VFD Module.
2. Enter the **USB To COM Driver** folder and then run utility program PL2303_Prolific_driverInstaller_v130.



3. Click Next on the Welcome screen.



4. Wait as the driver is installed.



5. Click Finish.

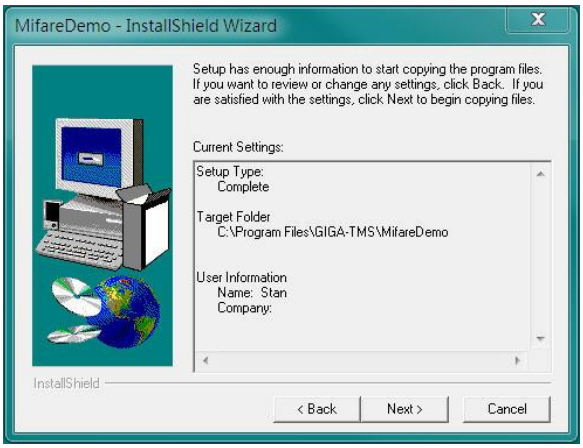
RFID Driver Installation (optional)

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

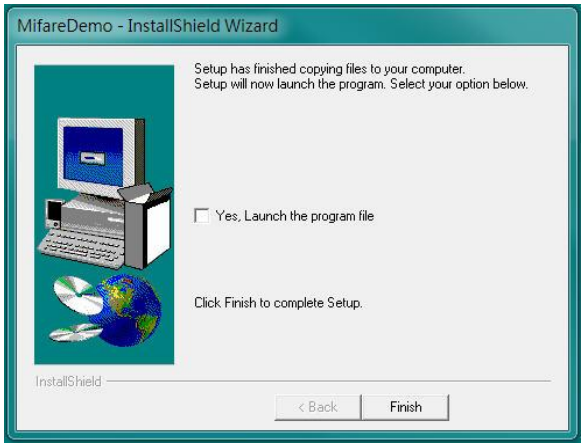
3. Click Next.

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.

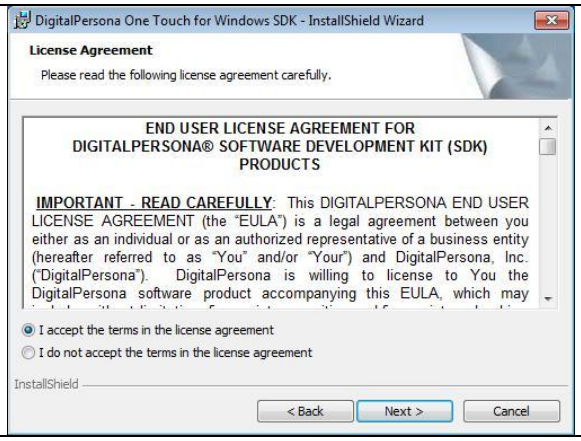
3. For PS2 interface: Run the MSRfgSetup_V1_4R7_PSW00025.exe.
   For USB interface: Enter the **Software** folder and then run the HISD_MSR_PSW00003.exe.

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

Fingerprint Reader Driver Installation (optional)

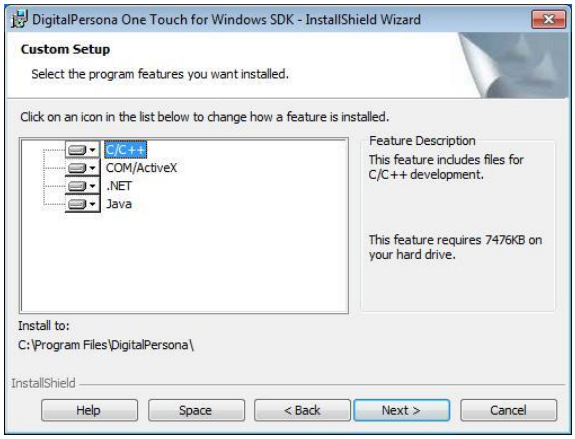
1. Plug in the 2-in-1 Fingerprint Reader and MSR module.
2. Enter the **SDK** folder and then run the setup.exe.

3. Click Next on the Welcome screen.



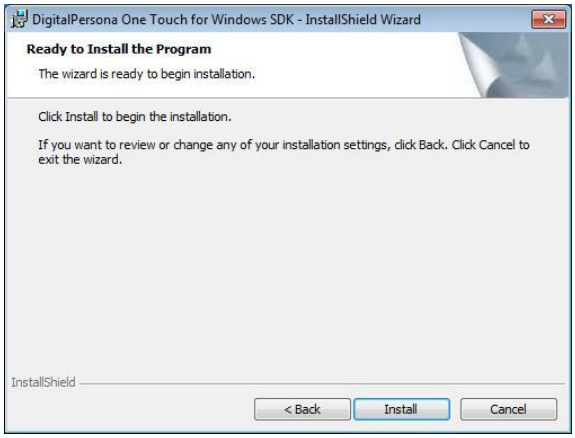
4. Click Next on the License Agreement screen.

5. Click Next to accept the destination folder.

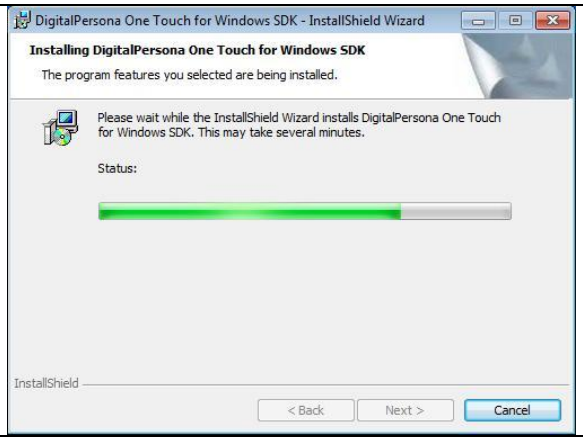
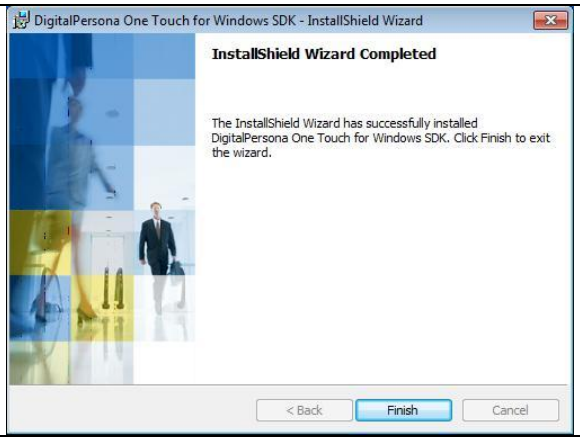


6. Click Next to begin installation.

7. To proceed with the installation, click Next.



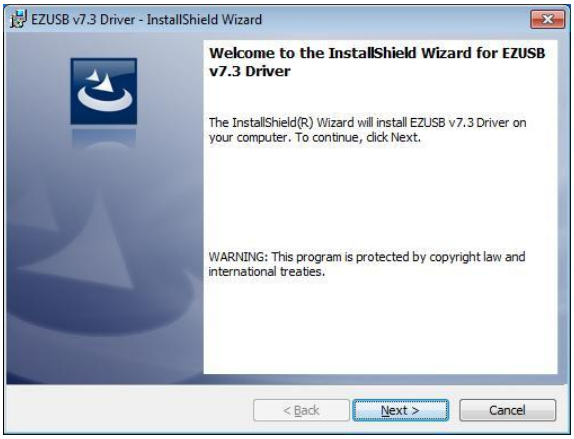
8. Click Install to begin the installation.

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

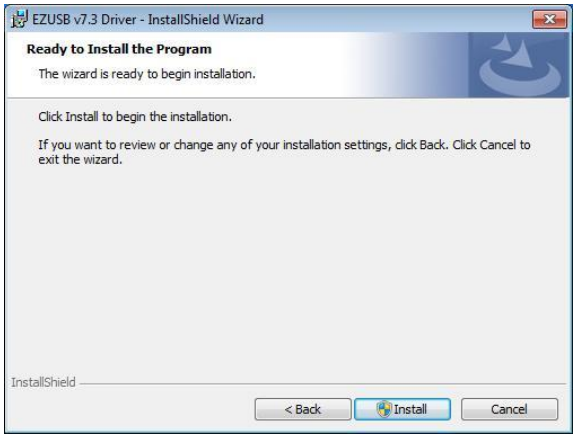
IC Card Reader Driver Installation (optional)

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.

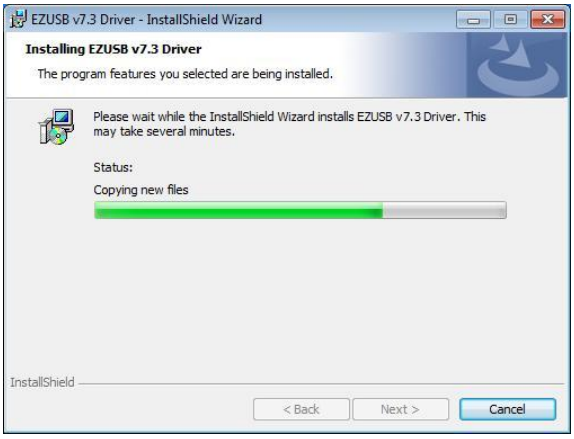
4. Select language, click OK.



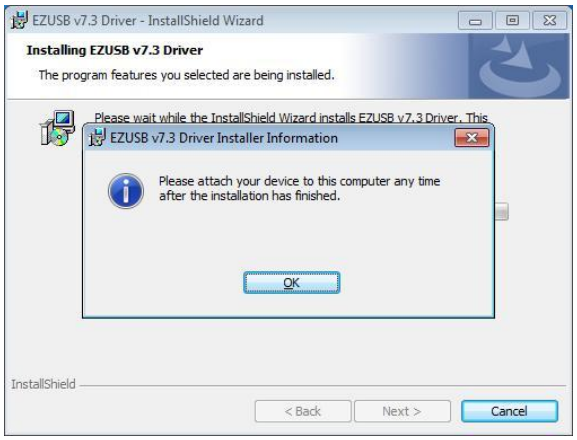
5. Click Next on the Welcome screen.



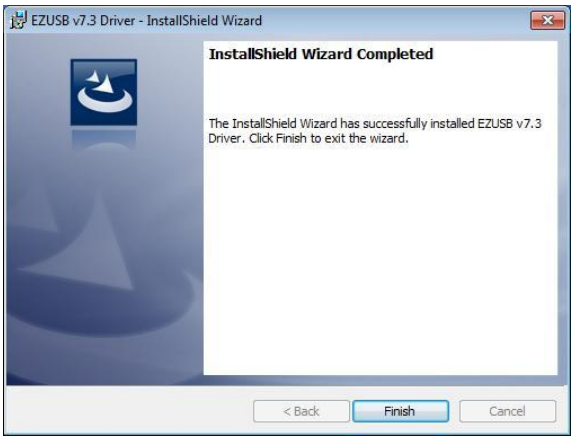
6. Click Install to begin the installation.



7. Wait as the driver is installed.



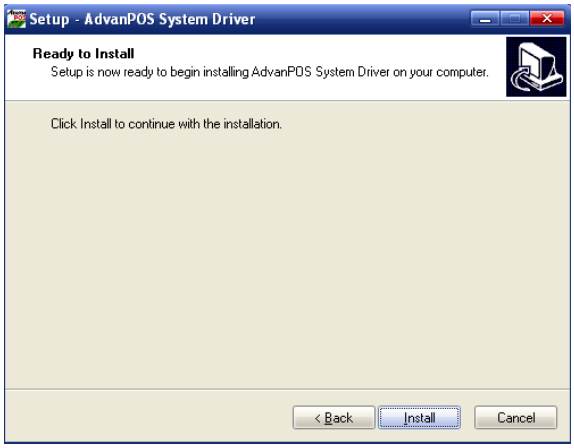
8. Click OK on the Note screen.



9. Click Finish.

System Driver Installation

1. Click Next on the Welcome screen.

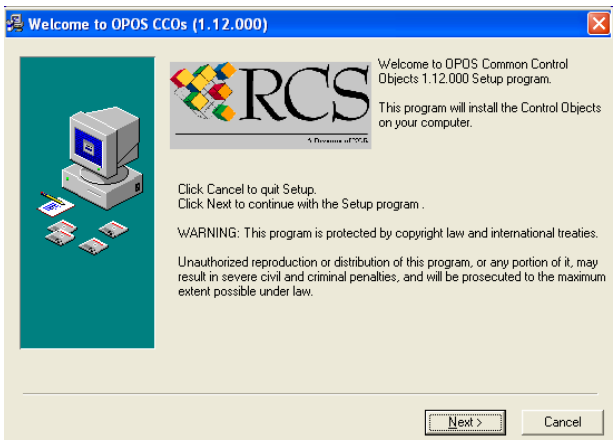


2. Click Install on the Ready to Install screen.

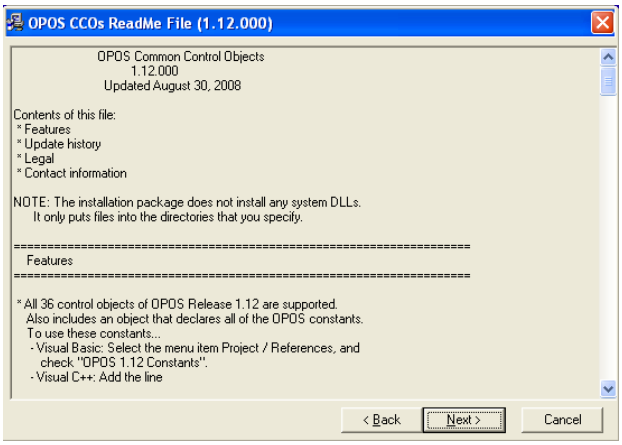
3. Click Finish on the Completing installation screen. A system restart is required to complete the installation.

OPOS CCO Driver Installation

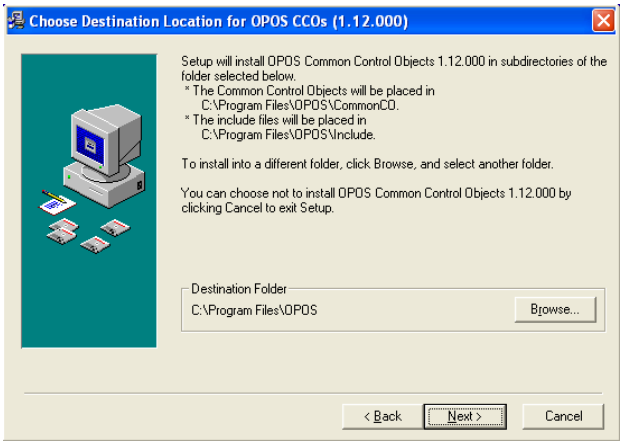
The OPOS driver for the WP-75XX supports the MSR, I-Button (KeyLock), RFID, VFD (Line-Display) and Scanner. Before installing the OPOS driver, please make sure the System Driver has been installed.



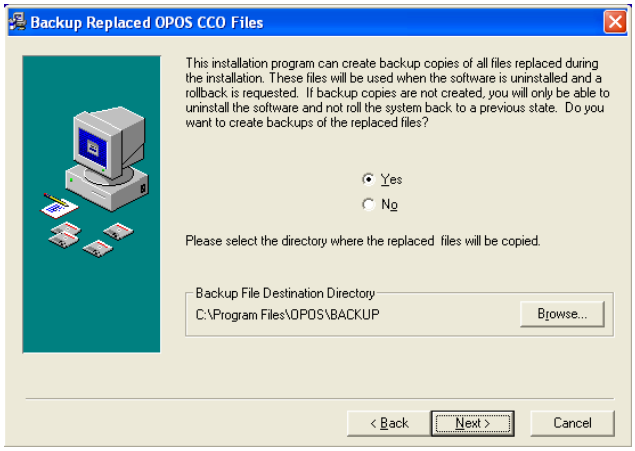
1. Click Next on the Welcome screen.



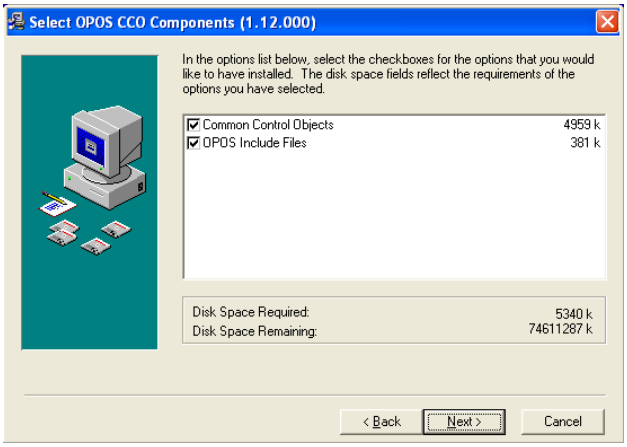
2. Click Next on the ReadMe screen.



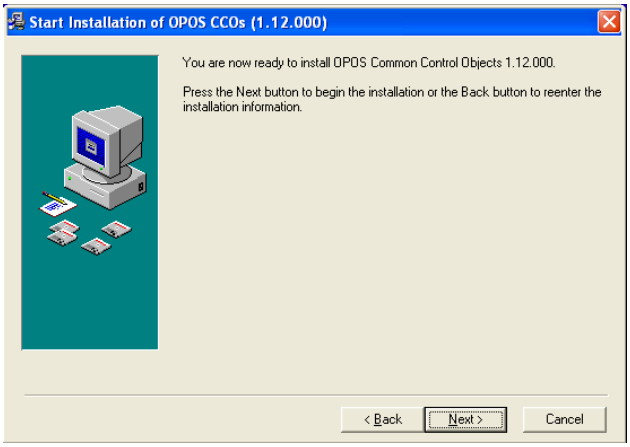
3. Select the Destination Location and click Next.



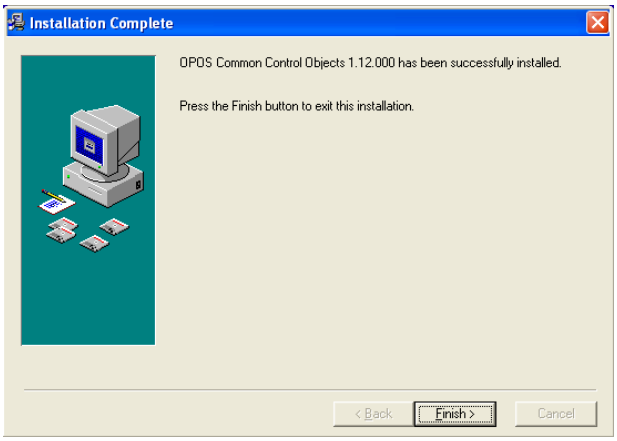
4. Click Yes to backup the CCO files and select backup file destination directory, then click Next.



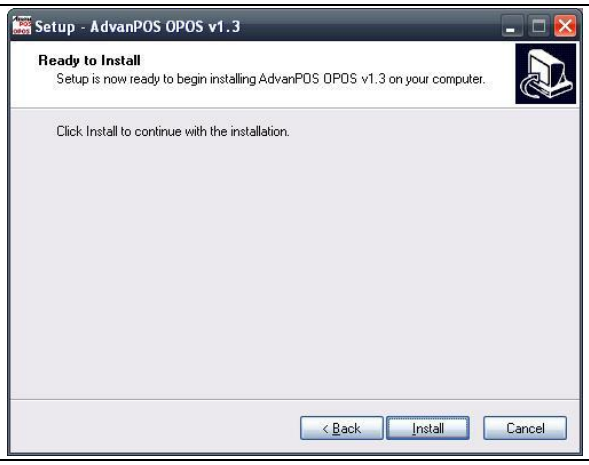
5. Select Common Control Objects and OPOS Include Files, then Click Next.



6. Click Next on the Start Installation screen.

	
7. Click Finish on the Installation Complete screen.	

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 40000
#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_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_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
```