Zircon Series

All-in-One POS System

User Manual

POP-950-D5

Ver. 1.3

General Information

ABOUT THIS MANUAL

The purpose of this user's manual is to provide general information on BayLan Zircon Series (POP-950) POS System and to show the users how to configure the hardware-related configurations. The information in this manual is subject to change without notice due to rapid improvement on IT technology.

DISCLAIMER

This manual has been examined for accuracy. While precaution has been taken in the preparation of this manual, neither the manufacturer takes no liability for errors or omissions nor assume any responsibility for damage(s) incurred directly or indirectly from errors, omissions, or discrepancies of this manual.

IN NO EVENT WILL THE VENDOR BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THIS PRODUCT OR DOCUMENTATION, EVEN IF THE POSSIBILITY OF SUCH DAMAGES HAS BEEN ADVISED. IN PARTICULAR, THE VENDOR SHALL NOT HAVE LIABILITY FOR ANY HARDWARE, SOFTWARE, OR DATA STORED OR USED WITH THE PRODUCT, INCLUDING THE COSTS OF REPAIRING, REPLACING, OR RECOVERING SUCH HARDWARE, SOFTWARE OR DATA.

WARNING

The terminal 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 interface in a residential installation. This equipment can generate and radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interface will not occur under particular installation. If this equipment does cause harmful interference to radio or television reception, which is found by turning the equipment off and on, the user is encouraged to try to correct the interface by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the distance between the equipment or device
- Connect the equipment to an outlet other than the receiver's
- Consult a dealer or an experienced radio/TV technician for assistance

CAUTION

The system is provided with a battery-powered Real-Time Clock circuit. There is a danger of exposing and personal injury if the battery is incorrectly replaced or mistreated. Do not attempt to disassemble the battery, immerse it in the water or expose it to fire.

WARRANTY LIMITS

If the product and the parts are disassembled by any person other than the authorized technicians, the warranty will be terminated. The users should consult his/her dealer for any technical problems. Warranty does not cover any damage caused by improper use.

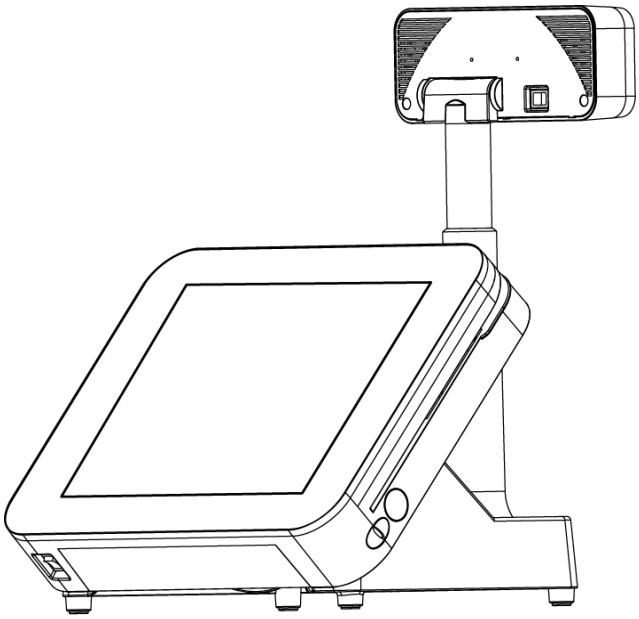
IMPORTANT SAFETY INFORMATION

- Read following instructions carefully.
- Use only parts, especially power adapter, recommended by the manufacturer; unapproved parts may be hazardous.
- Before plugging the power cord into the AC inlet of the power supply unit, make sure that the voltage applied to the power outlet is within the specified range (100V ~240V).
  Improper power source voltage range will cause damage to the power supply unit.
- Power off the system and remove the power adapter while cleaning the system.
- Before powering on the system, make sure all the peripherals are firmly installed.
- Do not use the system near water, such as a bathtub, a washbowl, a kitchen sink, a laundry tub, and a swimming pool. Do not expose the machine under direct sunlight, and keep it away from any heat source.
- Do not place the system on an unstable cart, stand or table. If the machine falls, it may injure a person or cause serious damage to the appliance.
- The system is equipped with a three-wire grounded plug with a third (grounding) pin. This is a safety feature. If your outlet does not accommodate the three-wire plug, have an electrician install a correct outlet, or use an adapter to ground the appliance safely. Do not leave out the safety purpose of the grounded plug.
- Do not allow anything to rest on the power cord. Do not locate the system where people may walk on the cord.
- Do not make the power outlet and extension cords overload. Overload can result in fire or electric shock.
- Do not push any object into the computer cabinet. Dangerous voltage points may be touched and the parts may be shorted out resulting in fire or electric shock.
- Do not attempt to service the system on your own. Opening or removing cover can expose you to dangerous voltage or other hazards.
- Power off the system before installing or removing non-PNP (plug and play) devices.
- If any of the following situations occurs, unplug the systems from the power outlet immediately and consult with a qualified service person:
  1. The power cord or plug is damaged or frayed.
  2. Liquid is spilled into the system.
  3. The system is dropped or the cabinet is damaged.
- When the system is not in use, cover the system and store it with care.

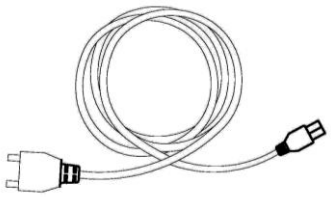
Contents

1. Product Overview

1.1. Items



POS System



AC Power Cord

Driver/Utility DVD

Main System

- HDD (2.5” SATA) / Compact Flash (Optional) / Disk on Module (Optional)
- SODIMM DDR3 (1 ~ 4GB)
- CPU: Intel Atom D525 Dual Core (1.8GHz , 1MB Cache)
- Power Adapter (Hidden under Base)
- AC Power Cord
- Driver/Utility DVD

Optional Accessories

- Magnetic Stripe Card Reader (MSR)
- Customer Display
- Wi-Fi module
- Thermal Receipt Unit
- I-Button
- Secondary Display

* For more information relating to the other optional peripherals, please contact the local representatives or technical support personnel of the providers.

1.2. Specifications

Model	**POP-950-D5**
Main Board	
CPU	Intel Atom D525 Dual Core (1.8GHz, 1MB Cache)
Chipset	Intel D525 + ICH8M
System Memory	2 x 204pin DDR3 SODIMM Socket , up to 4GB
Graphic Memory	Share System Memory 64~224MB
OS Support	Linux, POS Ready 2009, POS Ready 7, Windows XP Pro, Vista, Windows 7
Display	
Display Type	15" LCD Monitor
Brightness	250 nits
Resolution	1024 x 768 Pixel
Touch Screen	Flat 5 Wire Resistive Type
Tilting Angle	Fixed 50 Degree
Storage	
HDD	1x 2.5" SATA
Compact Flash	1 x Slot Type I II
Interface	
Serial	2 x COM with Power Selected 5/12V 1 x COM without Power Output
Parallel	1 x DB25 Parallel Port
USB	6 x USB 2.0 (External) 2 x USB 2.0 (Internal, 1 reserved for touch screen)
Mini-PCIe	1 x Internal
PS/2 Mouse	1 x 6-pin Mini DIN
PS/2 Key Board	1 x 6-pin Mini DIN
LAN	1 x RJ-45, Giga LAN Support
VGA	1 x DB-15, Female
DC Out	1 x 12VDC Jack for Customer Display or 2nd Display
Cash Drawer	1 x RJ-11, 12/24 VDC Selectable
Audio Jack	1 x Line Out, 1 x MIC In, 2 x Internal Speaker 2W
Others	
Power Input (Main Unit)	12VDC 90W,4-pin Connector with Lock (External Adaptor: 100~240 VAC, 50/60HZ)
Power Input (Printer Unit)	24VDC/2.5A (External Adapter 100~240VAC 50/60Hz)
Color	White, Black, Orange
Compliance	FCC / CE / WEEE / RoHS
Weight	8.5 Kg
Dimension (W x D x H:mm)	370 x 320 x 300
Operating Temperature	0°C~40°C
Operating Humidity	20% ~ 80% RH non-condensing
Storage Temperature	-20°C~ 60°C
Storage Humidity	20% ~ 85% RH non-condensing

Printer Unit (Optional)

General	
Print Method	Thermal line printing
Print Speed	250mm/sec
Print Life	100 Km
Print Font	ANK Font Font A: 12 x 24 dots Font B: 9 x 17 dots Chinese character: 24 x 24 dots
Print Resolution	576 dots/line or 512 dots/line
Print Font Character Support	International Font, Big 5 Chinese, GB Chinese, Japanese, Korean selectable
Character Per Line	48 (Font A) / 64(Font B)
Effective Print Width	72mm
Paper Width	79.5mm± 0.5mm
Paper Roll Diameter	83mm
Paper Thickness	0.06~0.08mm
Print Command	ESC/POS commands set compatible
Auto Cutter	Partial
Paper End Detection	Yes
Over-Heat Halt-on Protection	Yes
Interface (Printer)	
Serial	Multi I/O Interface (Serial +Ethernet +USB)
USB	
Ethernet	
Cash Drawer	DC 24V/1A, 6-Wire RJ-11 Socket
Others	
Power Input (Printer)	24VDC/2.5A (with External Adapter 100~240VAC 50/60Hz)
Operating Temperature	0°C~45°C
Operating Humidity	10% ~ 80% RH non-condensing
Storage Temperature	-10°C~ 60°C
Storage Humidity	10% ~ 90% RH non-condensing

Customer Display Unit (Optional)

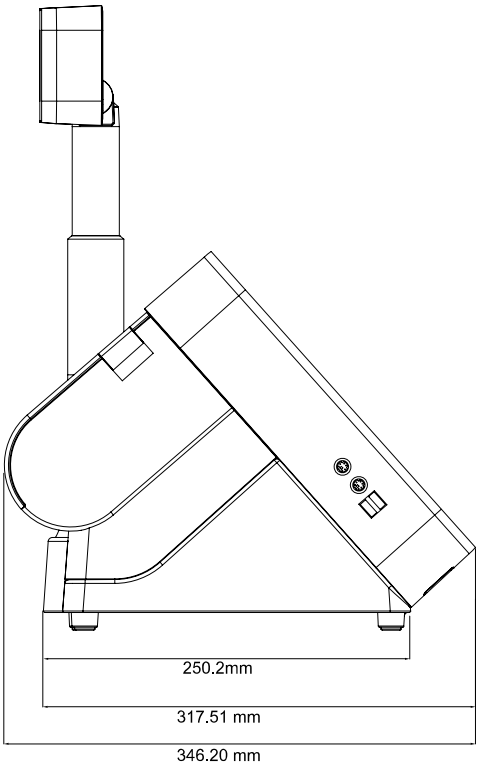
General	
Display Type	Vacuum Fluorescent Display
Brightness	700 cd/m2
Number of Columns	20 x 2
Character Size (mm)	6.4 x 9.2 (W x H), 5x7 dot matrix
Command Set	ESC/POS
Font Character Support	96 Alphanumeric & 13 international
Interface	RS-232.
Others	
Power Input	DC +9V~12V(RS-232)
Power Consumption	4.5 W (RS-232)
Material	ABS
Compliance	CE, FCC
Display Unit	218 x 87 x 45 mm
Support Pole	Telescopic Pole (280~459 mm adjustable)
Base	140 x 18 x 86 mm
Horizontal Rotation	±180 degree
Tilting Angle	53 degree, 4 step adjustable
Operating Temperature	0°C~40°C
Storage Temperature	-10°C~ 50°C
Relative Humidity	0% - 90% RH, non-condensing

Optional Peripherals

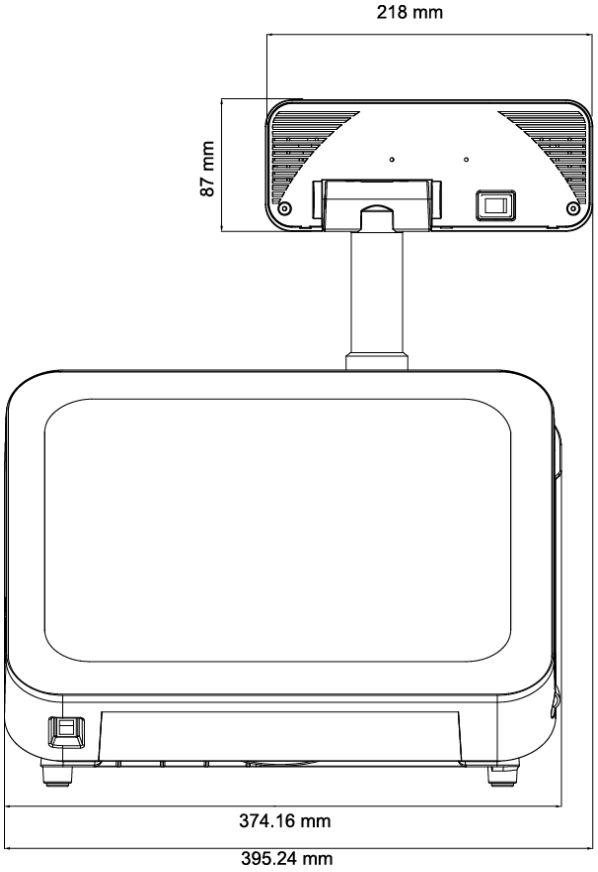
MSR	3 Track, PS/2 or USB or COM
i-Button	Dallas Key RS232 I/F
2nd Display	8.4”, 10.4”, 12.1”, 15” with or without Touch
Wi-Fi	Mini-PCIe interface Module

* For more information relating to the other optional peripherals, please contact the local representatives or technical support personnel of the providers.

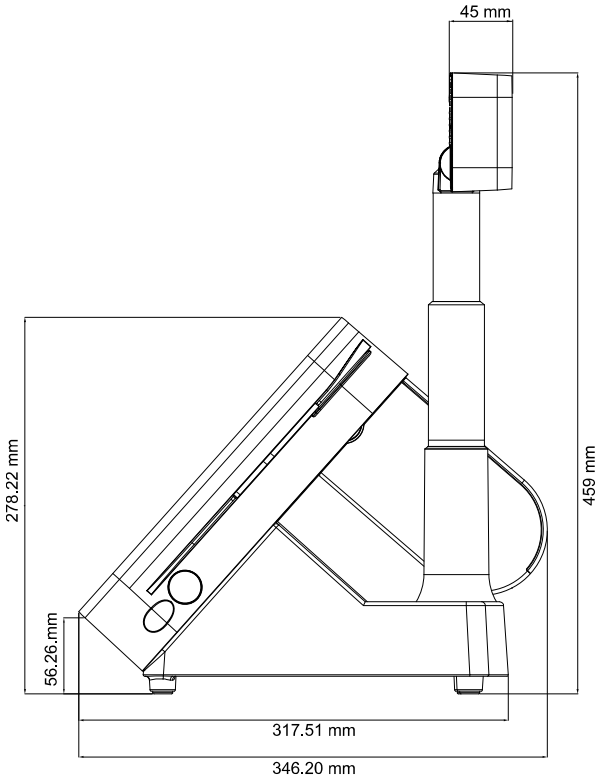
- **Dimensions**



Left View

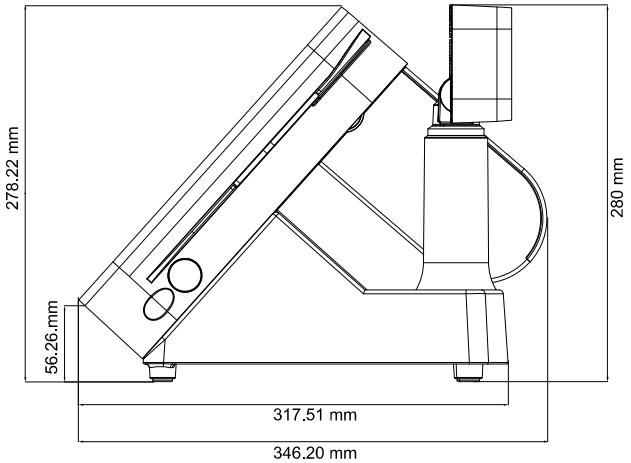


Front View



Right View

(VFD Pole max. height)

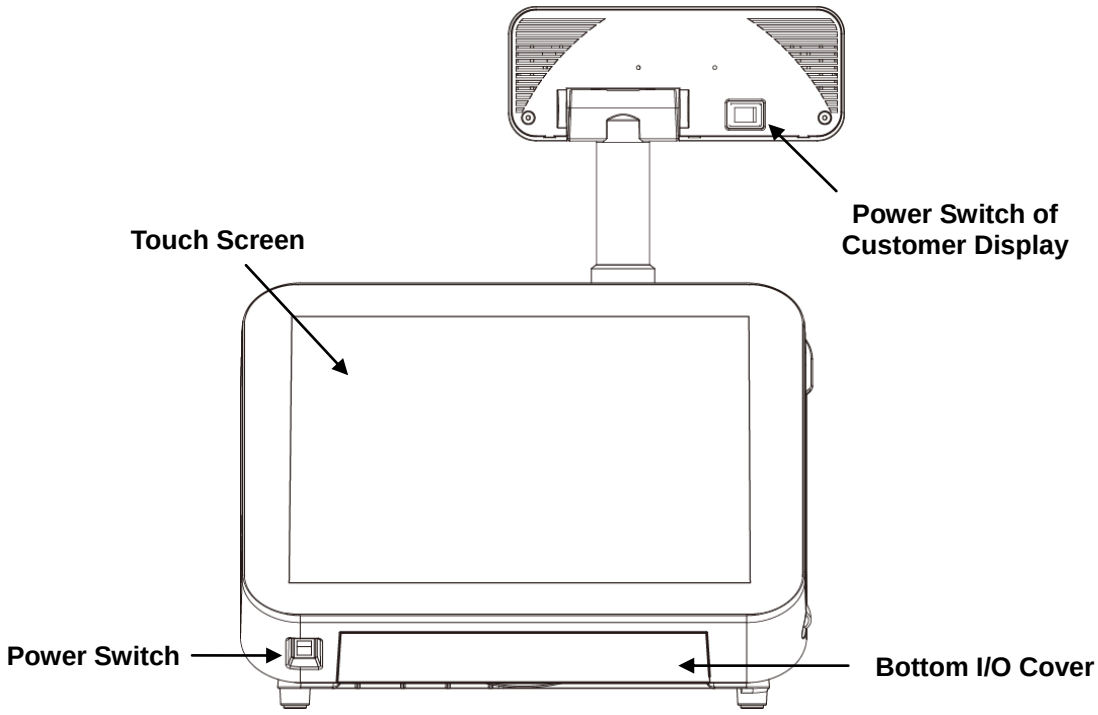


Right View

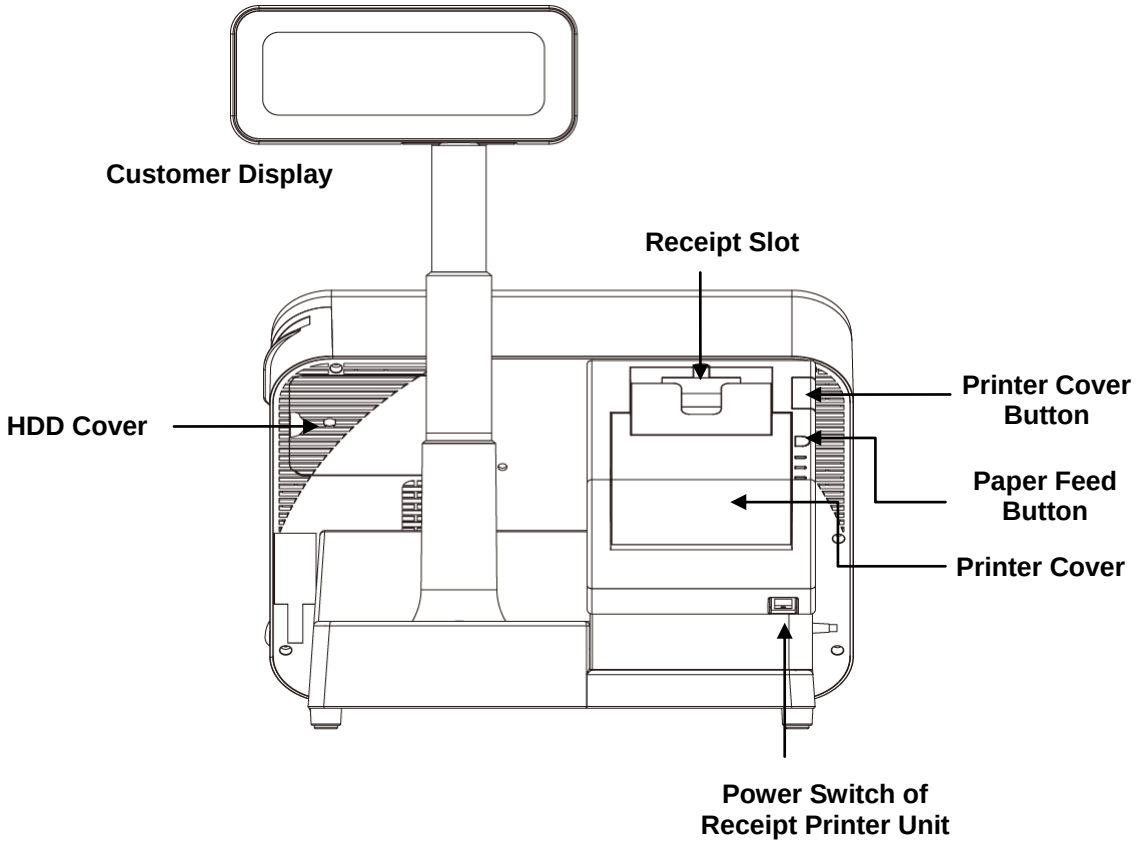
(VFD Pole min. height)

1.3. Parts Description

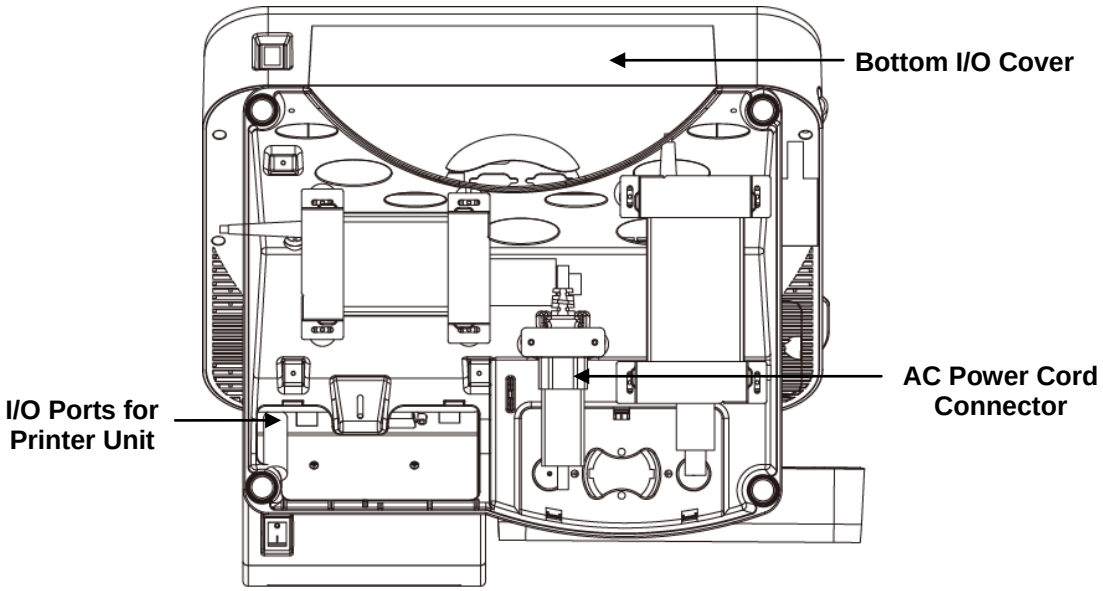
- **Front View**



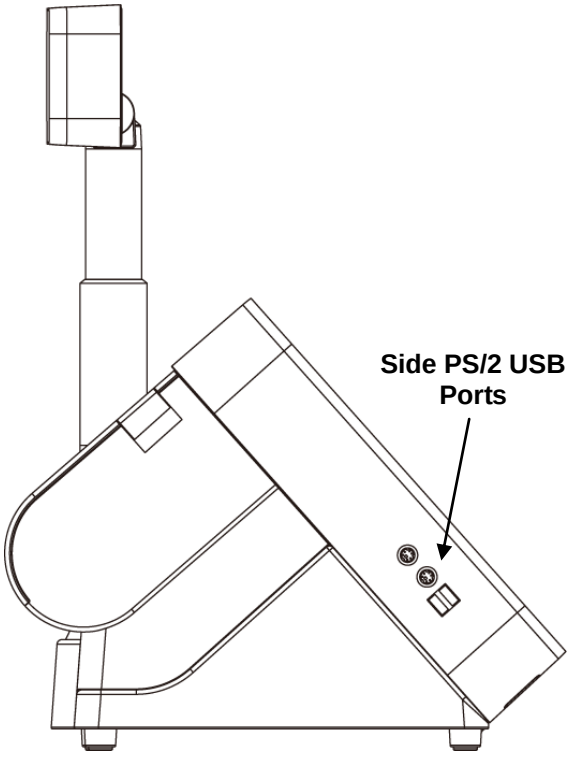
- **Rear View**



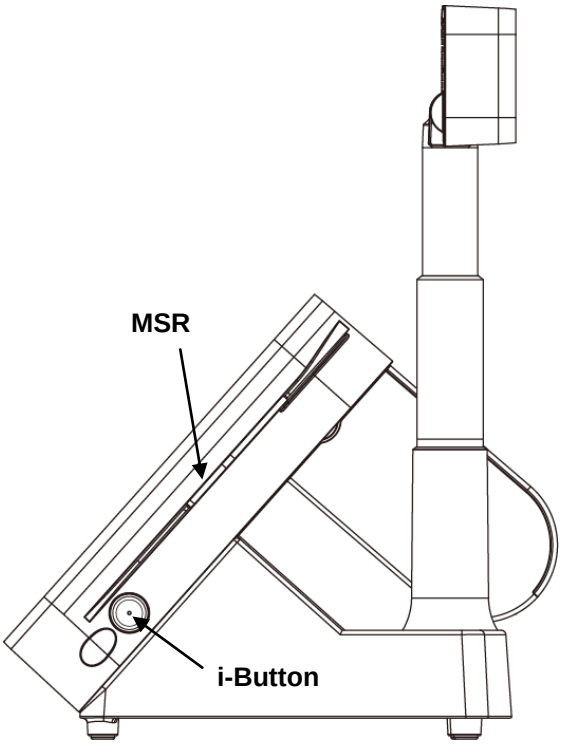
- **Bottom View**



- **Side View**

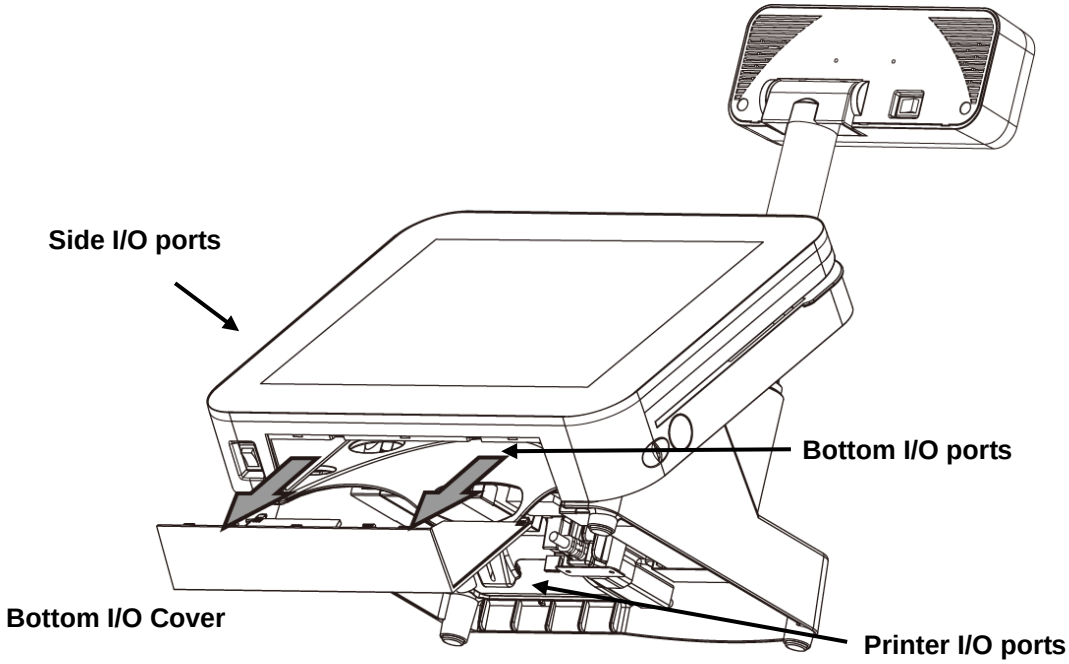


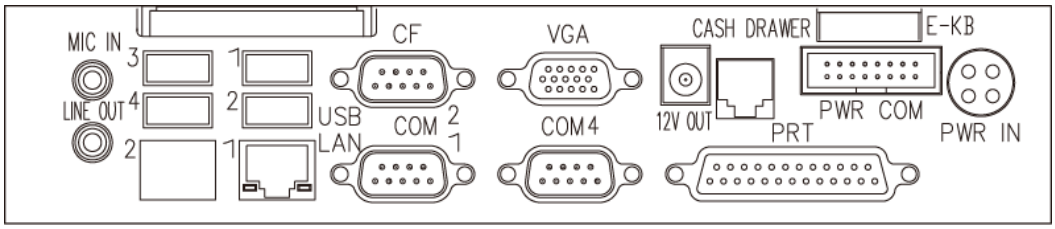
Left View



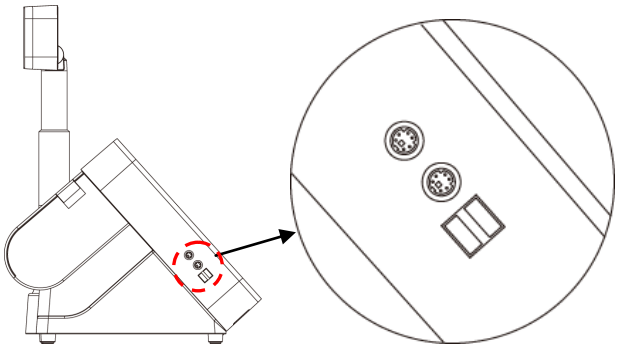
Right View

1.4. I/O Ports

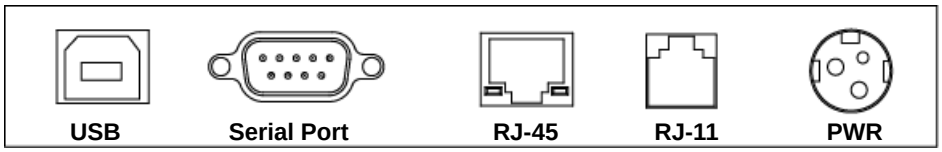




Bottom I/O Ports



Side I/O Ports

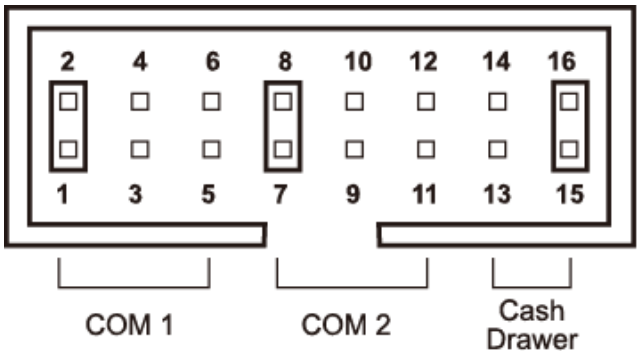


I/O Ports for Printer Unit

*** Printer Unit is an optional part and may not include in the product.**

I/O Port	Description
USB	Connect devices with USB connectors. There are 6 external USB ports available, (4 locate on the bottom and 2 left side ports).
Mouse	PS/2 mouse connector
KB	PS/2 keyboard connector
PWR IN	A 4 din rounded-power-jack for connecting an AC to DC +12V power adapter.
PWR COM	COM 1/2 support power RI/5/12V, refer to PWR COM Jumper Setting (as shown in the image below).
Extend KB	8-pin pitch 2.0 for keyboard.
AUDIO OUT	Earphone or speaker connector with 2 internal speakers.
MIC IN	Microphone connector
DC12V OUT	12VDC jack for customer display or 2nd VGA monitor.
Serial Ports	There are 6 x COM ports available. 3 x External COM : 2 x COM with 5/12VDC Power Selectable on pin-9 by jumper, 1 x COM does not supply power. 3 x Internal COM: 1 x COM for Touch Option, 1x COM for MSR, 1 x COM Reserved.
CASH DRAWER	1 x RJ11 connector with selected 12/24V, * Please refer to PWR COM Jumper Setting (as shown in the image below).
LAN	1 x RJ-45 connector with link/act integrates speed LED and supports wake-from-LAN function.
CF	1 x CF card.
VGA	1 x 15 pin D-type connector serves to transmit VGA data to the monitor.

PWR COM and Cash Drawer Voltage Jumper Settings



Setting	+12V	+5V	Modem Ring In (Default)
COM 1	**1-2**	**3-4**	**5-6**
COM 2	**7-8**	**9-10**	**11-12**

Setting	+12V	+24V
Cash Drawer	**13-14**	**15-16**

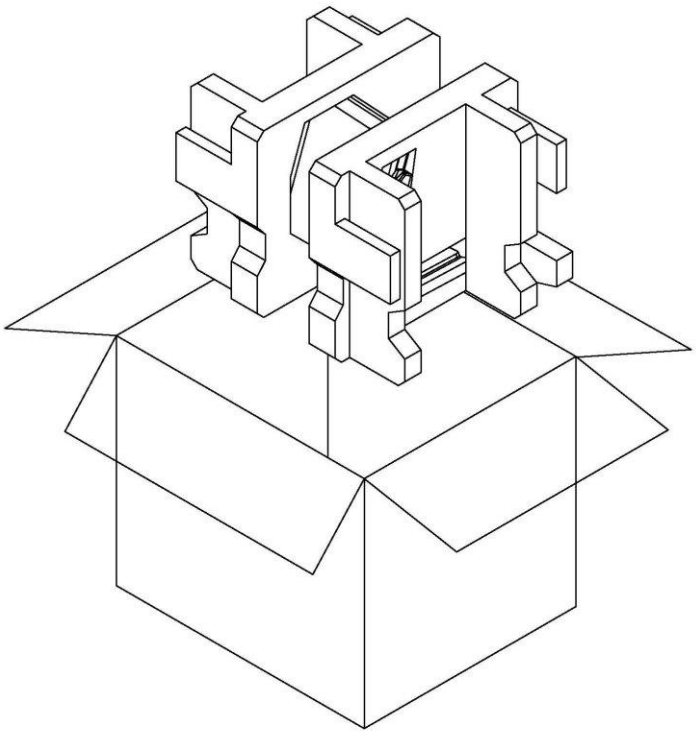
2. Components & Peripherals Installation

2.1. Unpack Your POS

The contents may vary with different options. If there's any physical damage or missing parts, please contact your supplier immediately. Please keep all packing materials in case you need to ship back the device for service.

- **Unpacking**

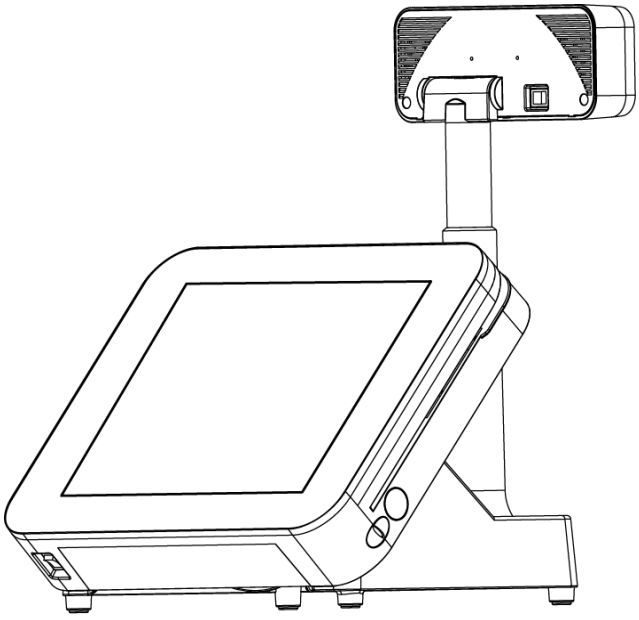
The product and accessories are packed in a paperboard carton. And it is wrapped by foam padding for protection during shipping.



2.2. Install Your POS System

The product is a fully integrated POS System and easy for installation.
To install the POS System:

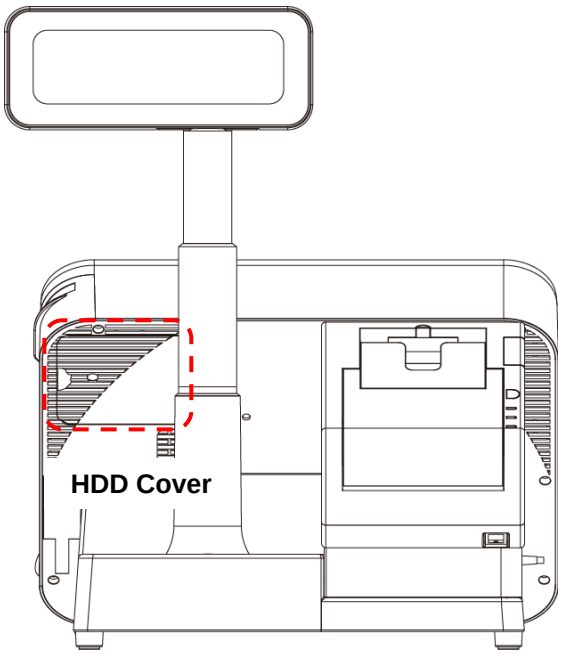
1. Place the product on the location.
2. Plug the AC power cord to the POS system
3. Connect the optional peripherals to the POS (for example: Mouse, Keyboard, and Barcode Scanner.)
4. Plug the AC power cord to the power source (for example: electrical outlet).
5. Turn on the switch of the Printer Unit and Customer Display (if pre-installed) and the other optional peripherals.
6. Turn on the POS System.



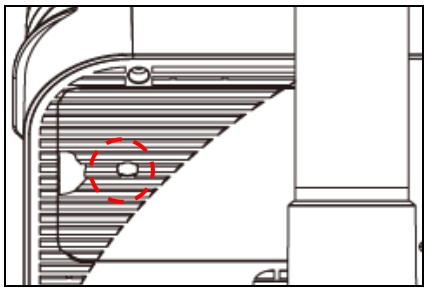
Note:

- Always install the POS system and the optional peripherals on a flat, clean and stable location surface with additional cushioned material (for example: blanket).
- To prevent obstruction on the operator, reserve appropriate space for the POS system and remove unnecessarily objects or items.

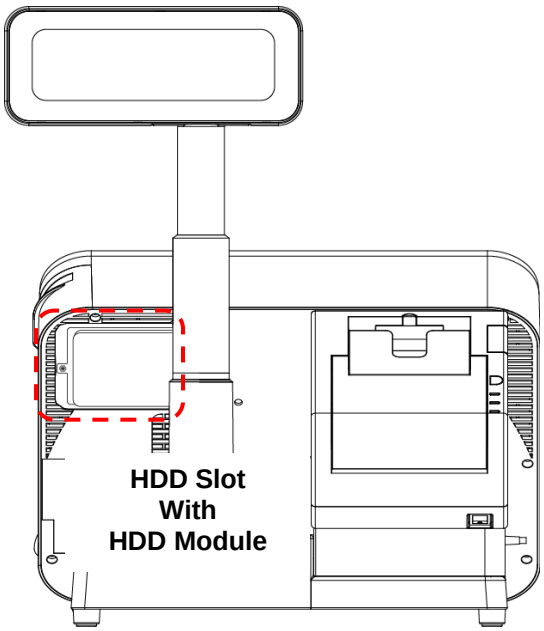
2.3. Replace the Hard Disk



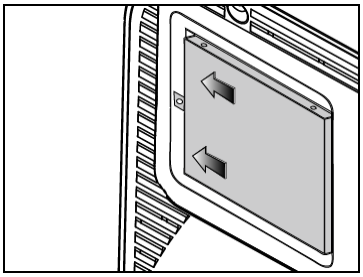
a. Loosen the securing screw to remove the HDD cover



Note:
To prevent injuries to the LCD Panel, Carefully lay the front of the unit face down on a flat, clean and stable surface with additional cushioned material
(for example: blanket).

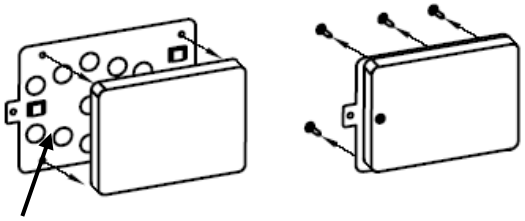


b. Pull the HDD Module to the left to detach it from the POS unit.
Disconnect the HDD Cable to remove the HDD Module.



Remove the HDD Module

HDD Bracket

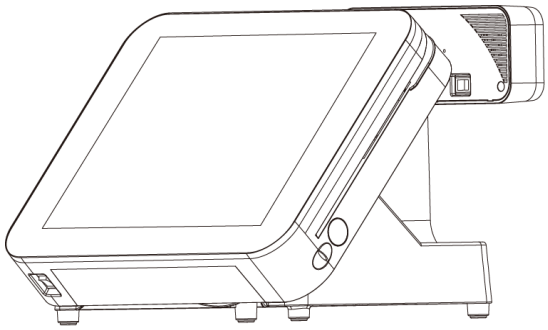


Protective Film

c. Loosen the securing screws to remove the hard disk from the bracket.
Then replace a new hard disk (with protective film attached to the HDD)

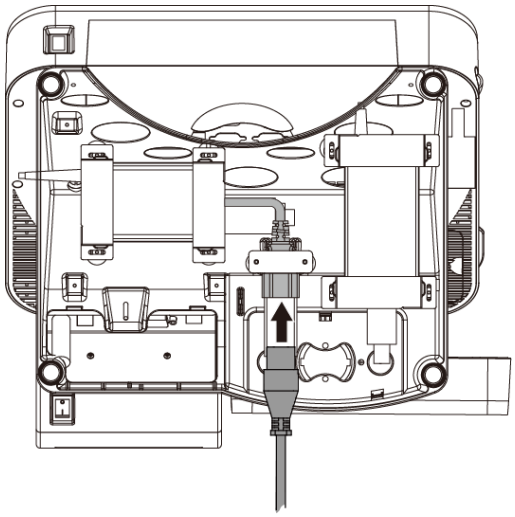
d. Re-install the HDD module and replace the HDD cover to the POS.

2.4. Plug AC Power Cord to the POS System

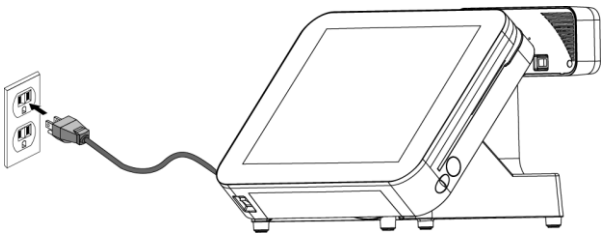


a. The power adapter should be found on the bottom of the base.
Carefully lift up the POS and there is a power connector in the bottom (as image below illustrated).

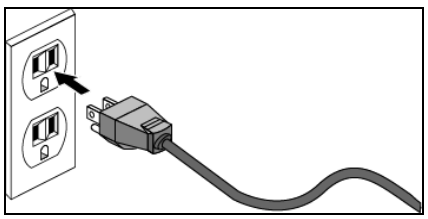
Note:
To prevent injuries to the LCD Panel, Carefully lay the front of the unit face down on a flat, clean and stable surface with additional cushioned material (for example: blanket).



b. Plug the AC power cord into the power connector.

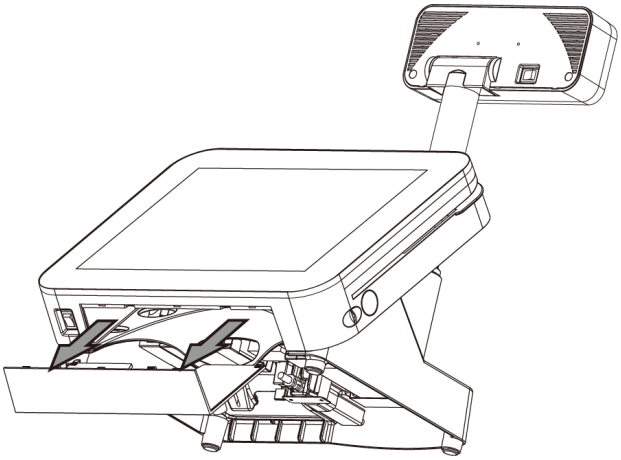


c. Plug the AC power cord in to the AC outlet.

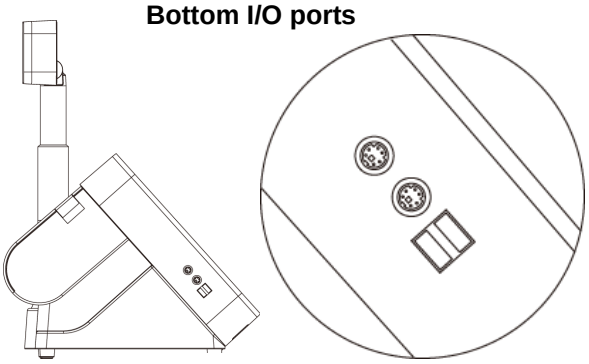


2.5. I/O Interface

You can install the peripherals (for example: mouse, keyboard, barcode scanner, or cash drawer)
via the I/O interface of the POS system according to your request.
To install the peripherals to the POS system:



Bottom I/O ports



Side I/O ports

a. Pull the Bottom I/O cover and connect the optional peripherals to the POS system.

b. Connect the PS/2 keyboard and mouse to the Side I/O Ports

c. Arrange the cables as the peripherals are installed. Push the Bottom I/O Cover and set the POS system into place.

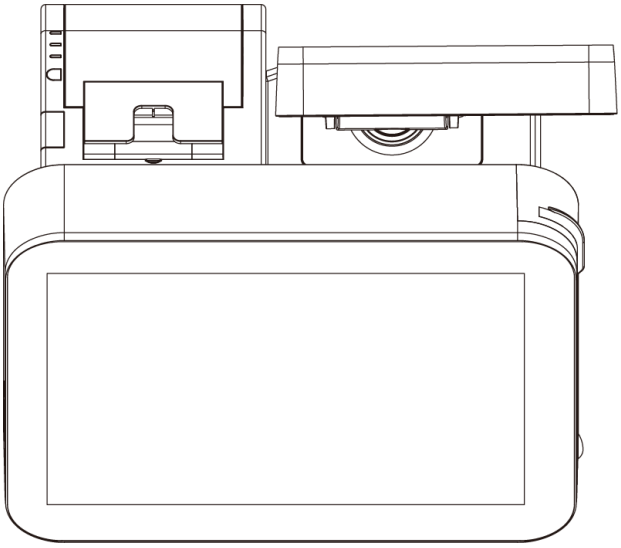
Note:

The Optional Accessory may not include in the package. Please contact your local representative for further information.

2.6. Install Your Receipt Printer (Optional)

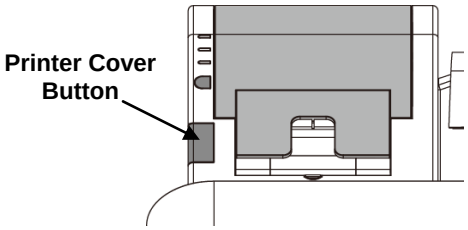
The POP-950 has optional thermal receipt printer module that is pre-installed into the POS system. To install the paper roll into the printer:

2.6.1. Install/Replace the Paper Roll

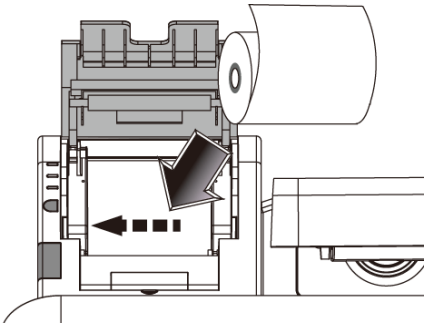


The Receipt Printer (upper left)

a. Press the button to open the printer cover.



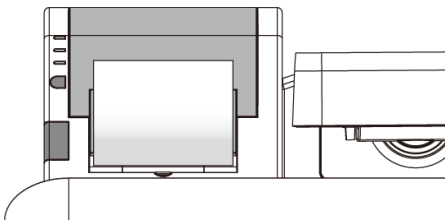
b. Place the receipt paper roll into the slot. Align the paper roll to the left of the slot.



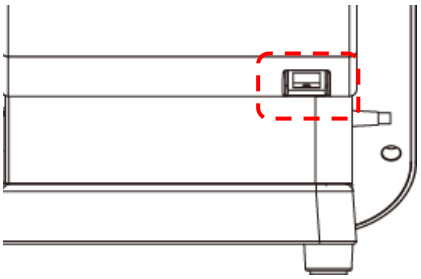
Note:
Place the paper and reserve proper length to pass through the printer slot.

Warning:
Do not pull out the paper with force through the slot.
If the paper does not feed easily check whether you are using the paper slot and there are no obstructions in the paper path.

c. Close the cover by pressing the cover. Make sure the cover is closed properly.

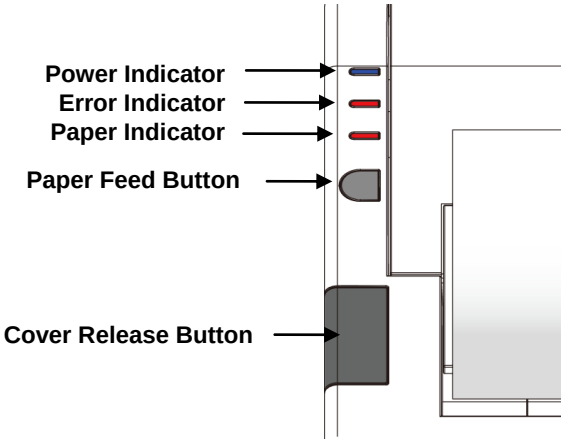


d. Turn on the power switch of the printer (in the rear of the POS system)



2.6.2. Buttons & Indicators of Receipt Printer Unit

Buttons



Control buttons & Indicators

Paper Feed:

This function is to advance the paper.

Press the key and the paper advances by a single line.

Press and hold the key for over 3 seconds and the paper advances by multiple lines.

Cover Release Button:

Press to open the printer cover.

Indicator Status

Indicator	Status	Description
Power		Power Off
		Power On
Error		Printer Error (Out of paper, Printer head over heat, or paper cutter error)
Paper		Out of paper * The Error Indicator is lit as well

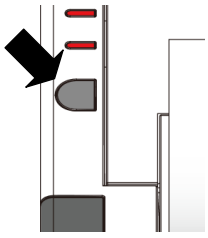
Self Test

This function allows user to perform self-test and print out the settings of the printer unit:

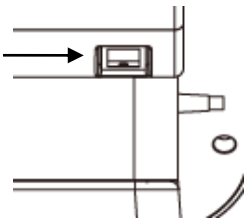
1. Turn off the printer.
2. Press and hold the Paper Feed Button.
3. Turn on the Power Switch of the printer.
4. Release the Paper Feed Button.

The Indicators would blink and then the printer starts printing out the se-f test data.

Press and hold the Paper Feed Button

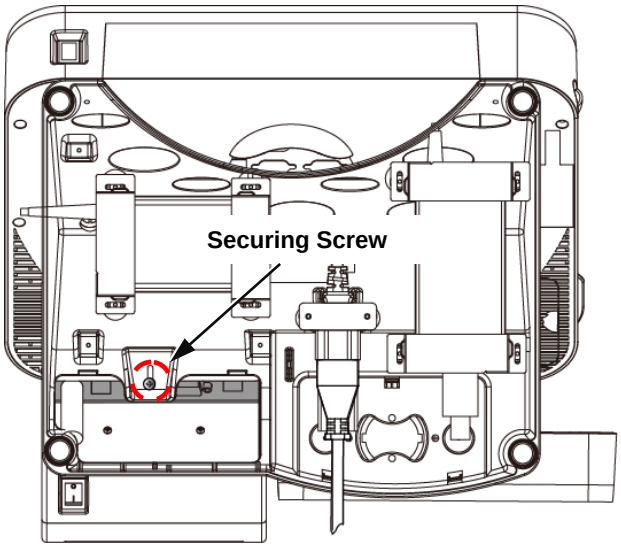


Turn On the Power Switch



2.6.3. Dip Switch Configuration of the Receipt Printer

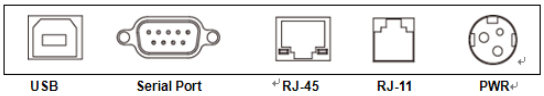
In general, the receipt printer unit is pre-installed on the POS system and need not change the settings. To change the setting of the printer, Please follow the steps as follows:



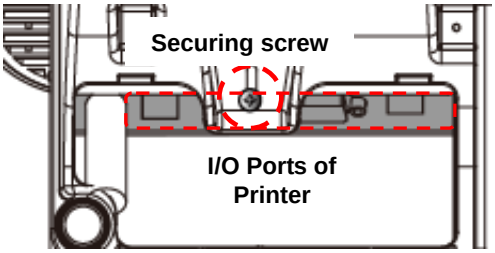
The Securing Screw of Receipt Printer

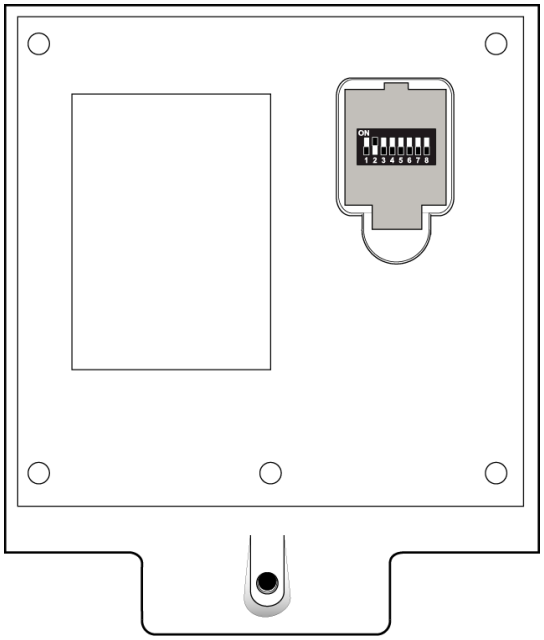
a. Switch off the power and carefully lift up the POS system.

b. Disconnect the cables from the I/O ports of the printer unit.



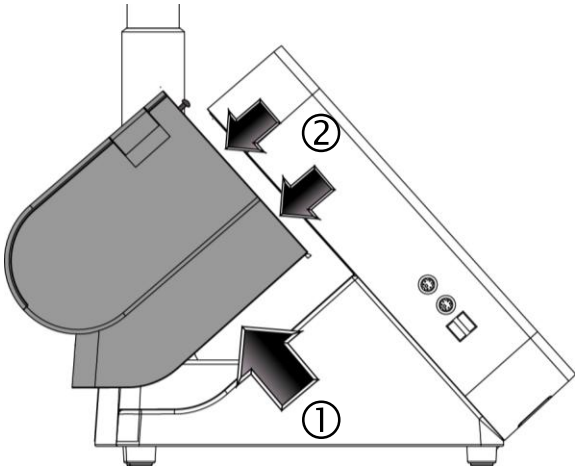
c. Loose the securing screw on the bottom-left of the POS system (as image below illustrated).





The Dipswitches of Receipt Printer (bottom)

d. Pull up to unhook the printer unit and then pull to detach the printer.



e. Turn over the printer unit and open the cover of DIP Switch Cover (in the bottom of receipt printer unit)

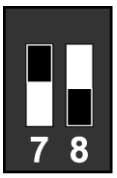
DIP Switch Setting (DIP 1~ DIP 6)

DIP Switch	Function	ON	OFF
1	Paper Cutter	No	Yes (*)
2	Audio Alarm	Yes (*)	No
3	Print Density	Dark	Light (*)
4	Two-byte Character Code	No	Yes (*)
5	Character Per Line	42	48 (*)
6	Cutter with Cash Drawer	Yes	No (*)
7 & 8	Baud Rate Setting	---	OFF (*)

The “*” mark indicates the default value of each setting.

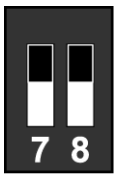
Baud Rate Setting (DIP 7, DIP 8)

19200
(*Default)



9600

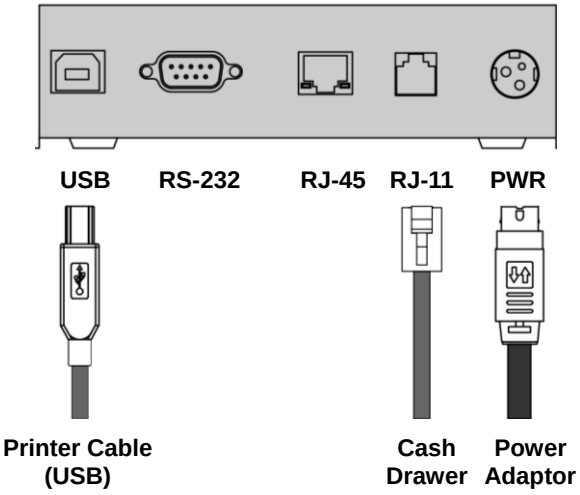
115200



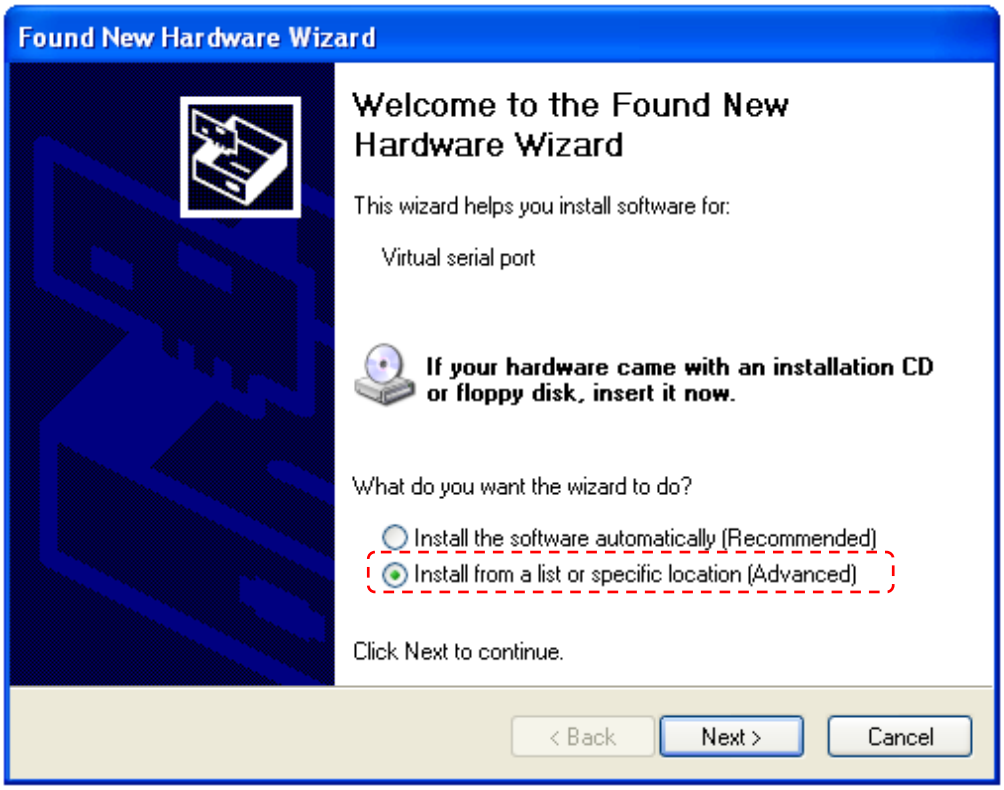
38400

2.6.4. Virtual Serial Port Installation (for USB Connection Only)

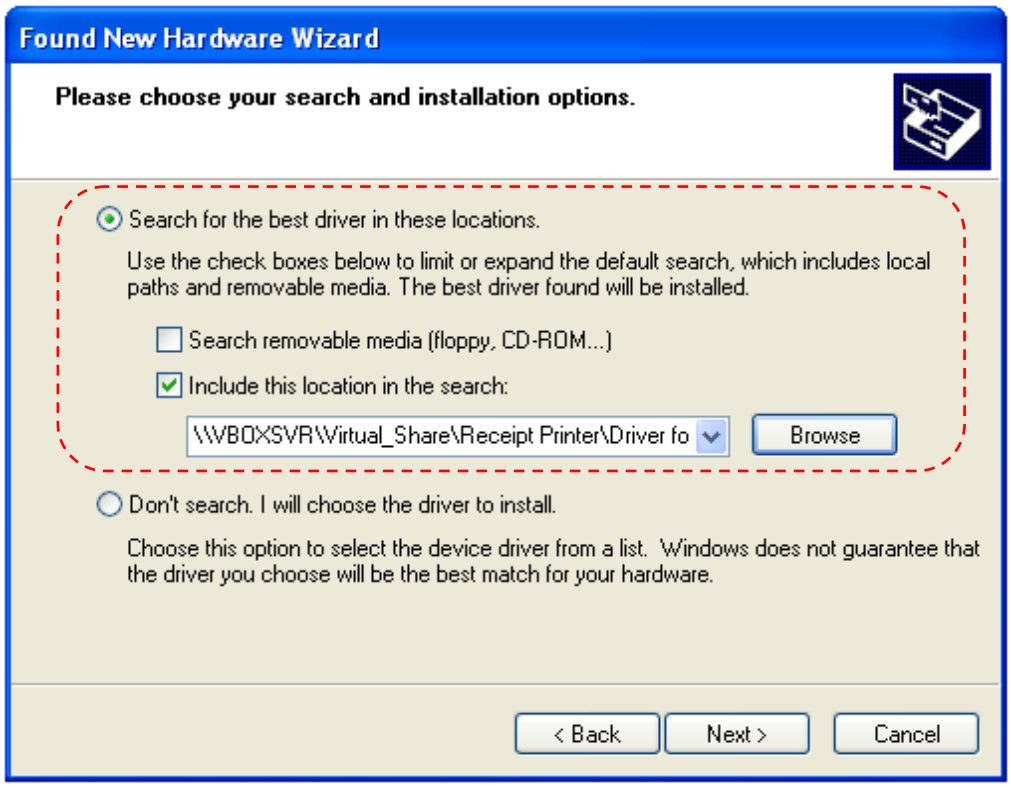
When connect the receipt printer to the computer with USB cable,
turn on the computer and the system will found a new hardware automatically and then initiate the Found New Hardware Wizard automatically (as image below illustrated):



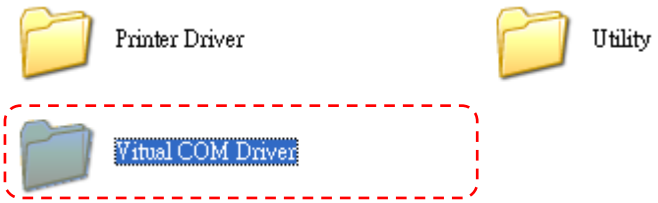
a. Found New Hardware Wizard is initiated; click “Install from a specific location (Advanced) and then click “Next” to continue.



b. To specify the location of driver, click “include this location in the search and “Browse” the specified folder manually.

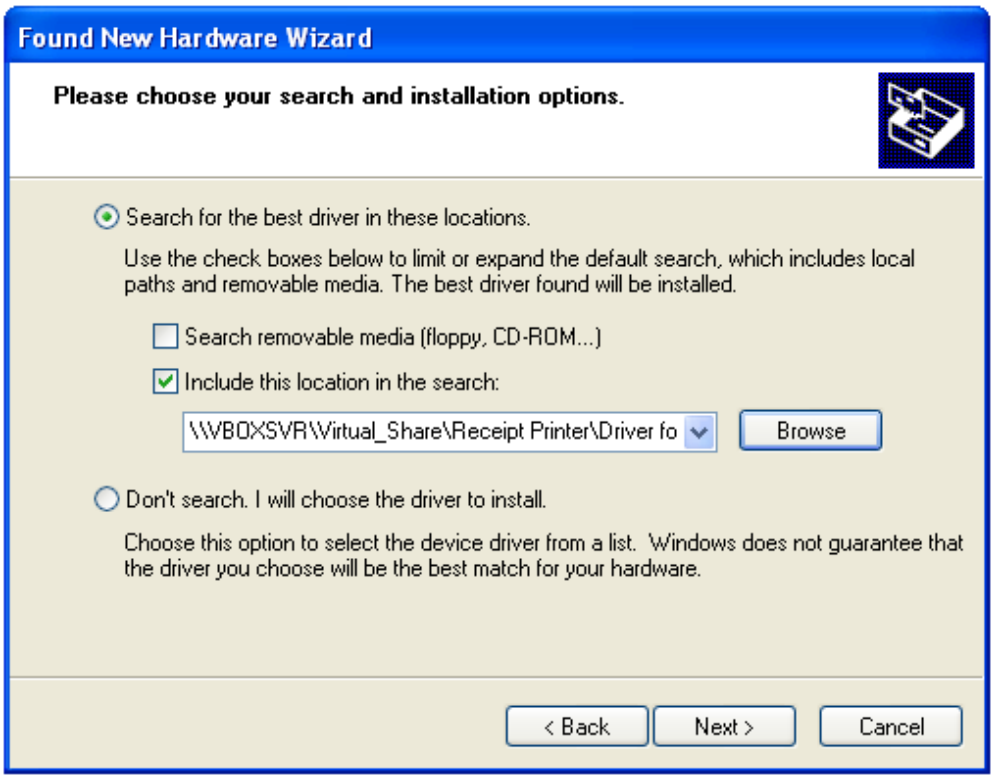


c. Access the path: Driver & Utility\Peripherals\Printer\PRP 950” and browse the subfolder “Virtual COM Driver”.
Click “OK” to continue.

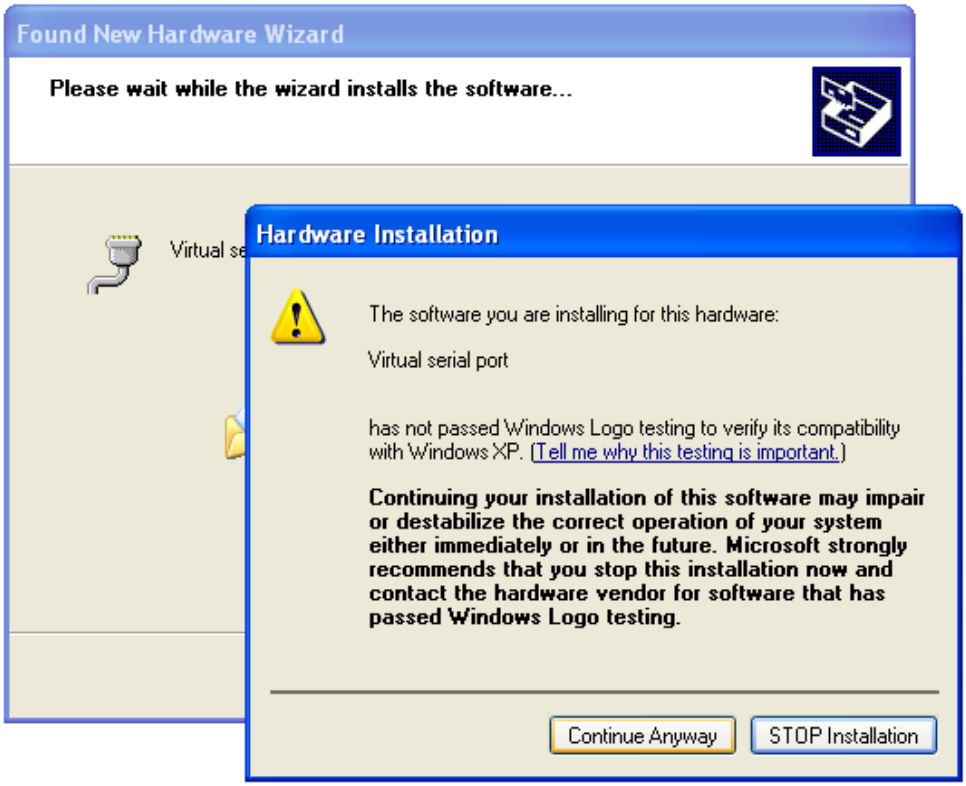


d. Access the subfolder depending on the operating system required.

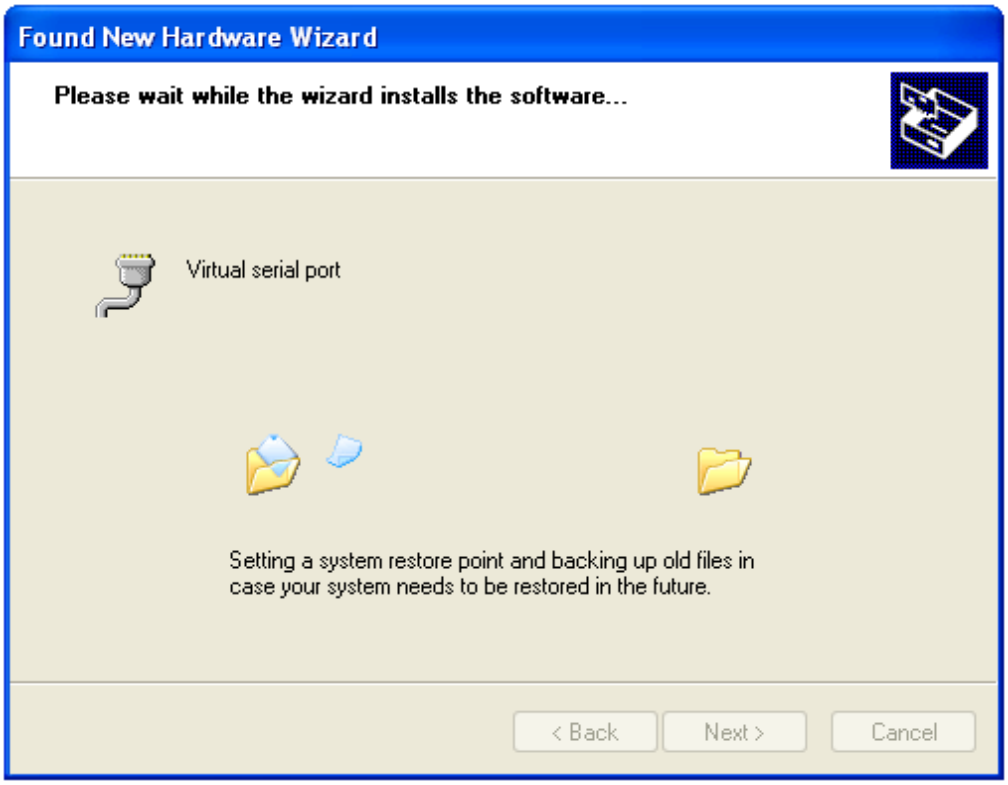
e. As the location of the driver is specified.
Click “Next” to continue.



f. Start Notification. Click “Continue Anyway” to continue.



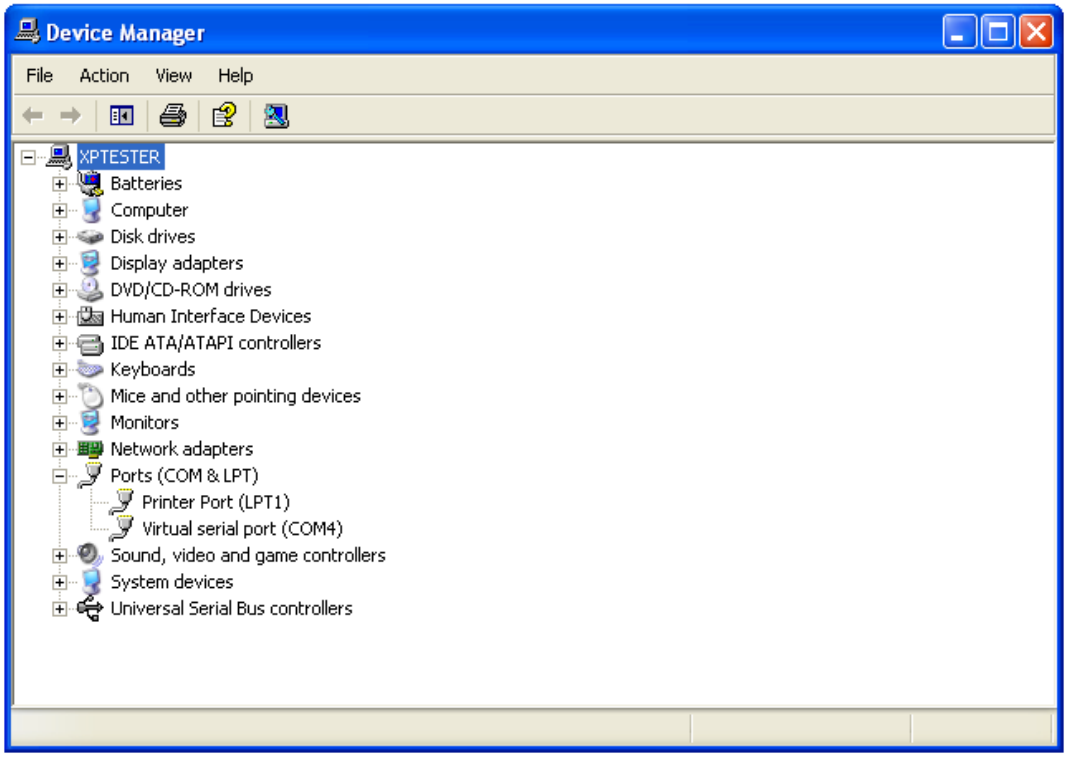
g. The wizard is installing the driver.



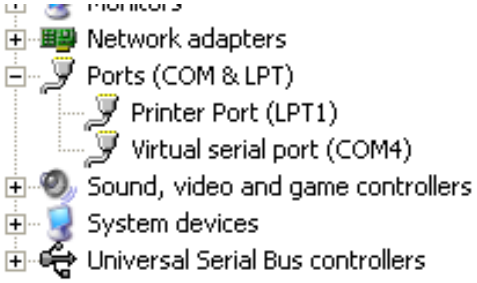
h. The driver of Virtual Serial Port is successfully installed. Click “Finish” to exit.

Note: Reboot the HOST PC
It’s recommended to reboot the HOST PC and proceed to the next step.

i. The Virtual COM port activates automatically when the printer is switched on.
You can Access
“My Computer>>Proprieties>>Hardware>>Device Manager>> Ports (COM & LPT)”
and see the Virtual COM Port Number.



When turn on the printer, the Virtual COM activates automatically (Virtual Serial Port).



2.6.5. Install the Driver and Setup of Receipt Printer Unit

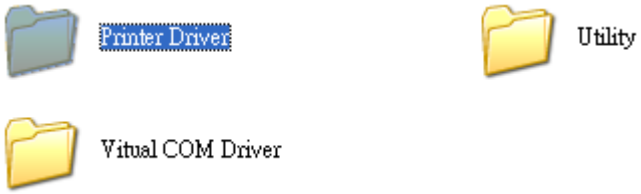
Please place the supplied disc into the CD/DVD-ROM driver.
Browse the disc and double click the folder “Driver & Utility” to access the folder.

There are categorized folders for POS Terminal, Peripherals and Touch Screen drivers.
Select “Peripherals” to access the subfolders.

To install the drivers of the Printer unit

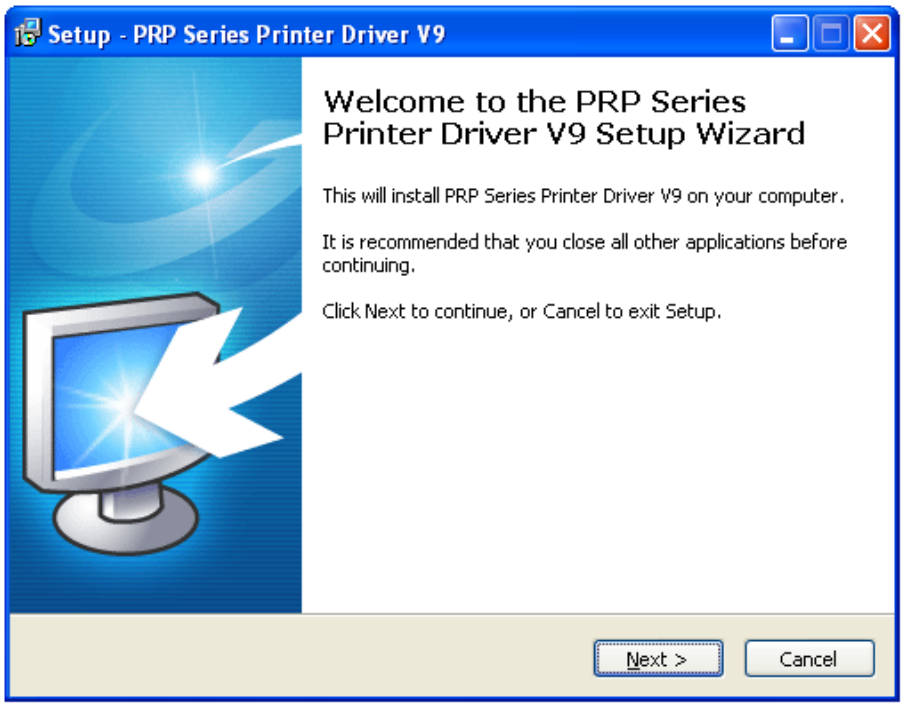
a. Double click the folder “Printer” and access the subfolders

b. Select “Printer Driver”



c. Double-click the “PRPDRVEN.EXE” and follow the on-screen instructions to install the driver.

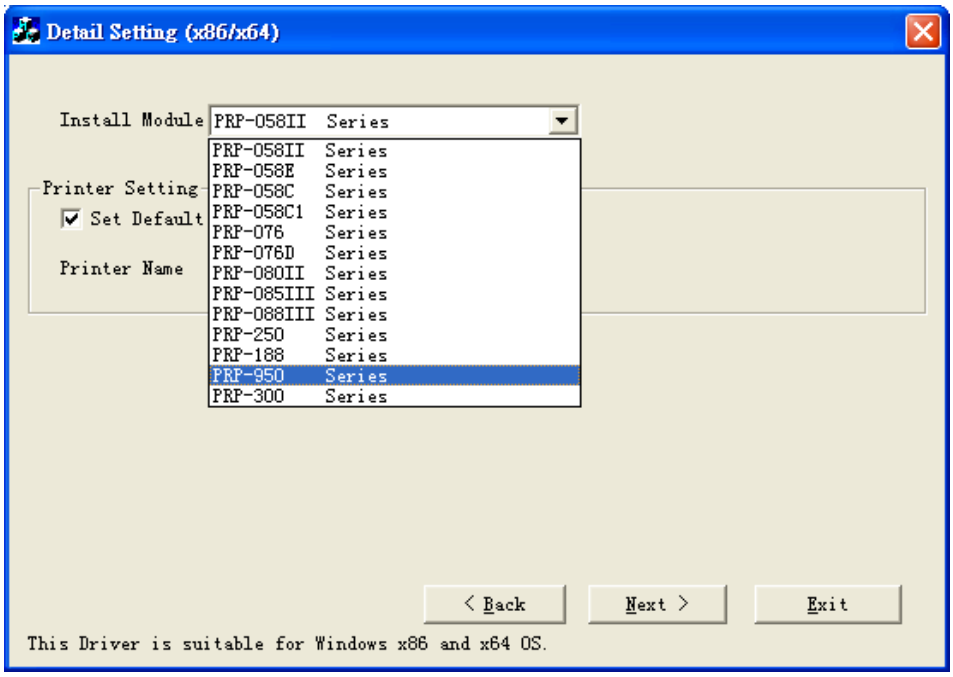
d. The setup wizard of receipt printer driver. Click “Next” to continue.



e. Select the appropriate operating system for your POS.
Click “Next” to continue.

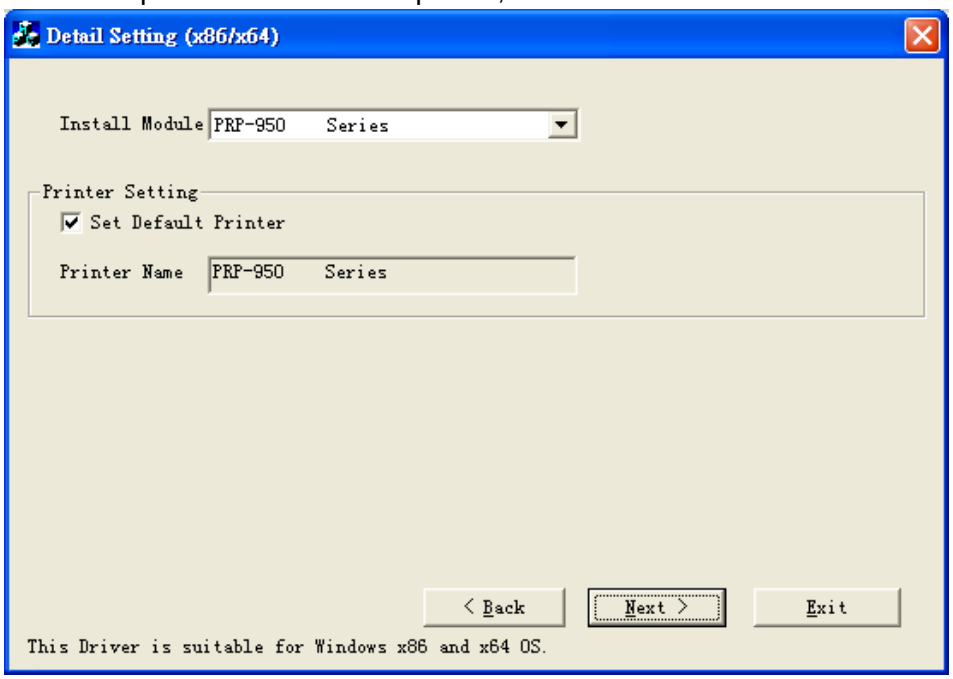
f. Module Type Setting:

Select the printer model number using the menu below.



g. Default Printer Setting:

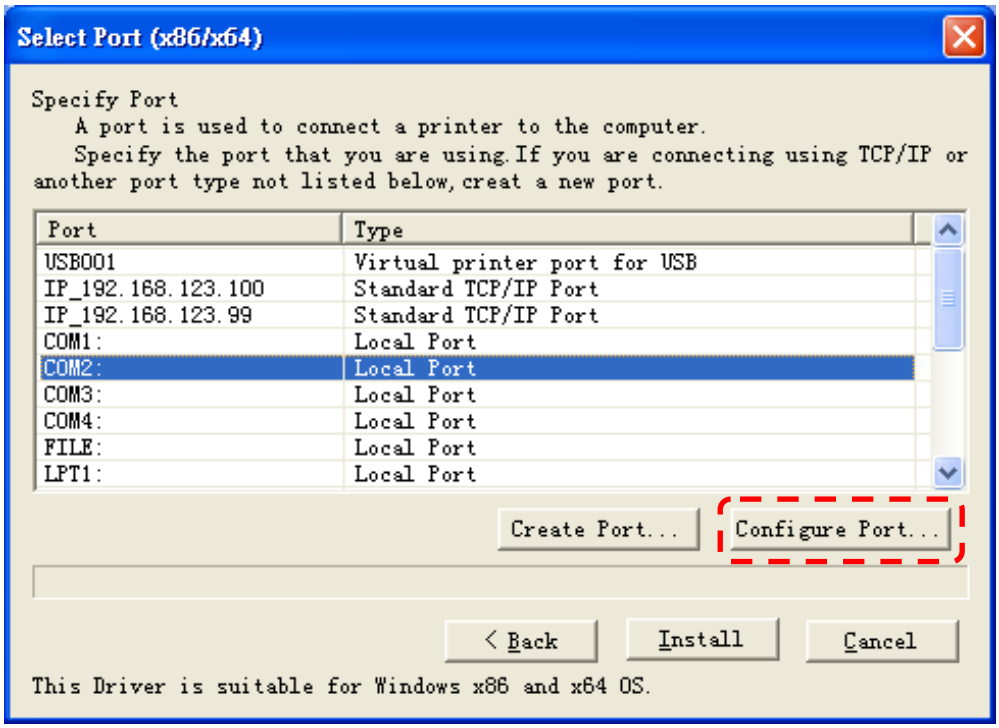
To set the printer as the default printer, click the checkbox to confirm.



h. Printer Port Setting:

Select appropriate serial port (COM 2 recommended) or Virtual COM port according to your system setting.

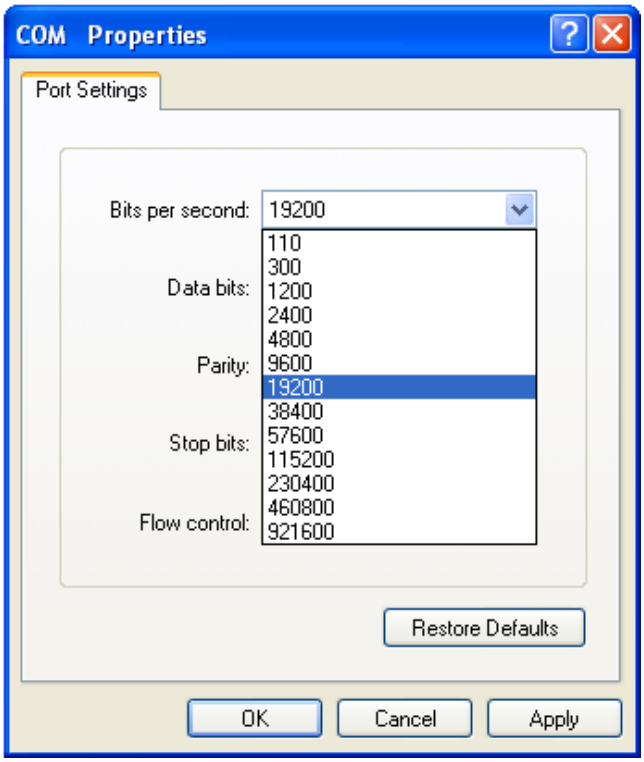
Click “Configure Port” ” to continue.



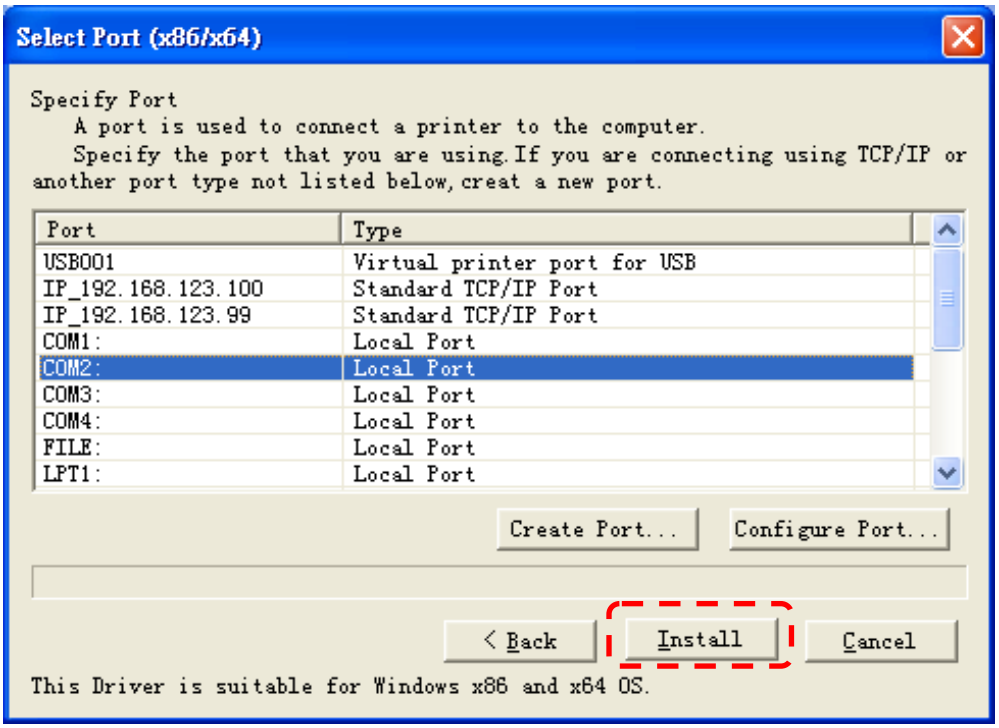
i. Configure Port:

Select the Bit per second (Baud Rate) to 19200.

Click “OK” to continue.



j. Click “Install” to Start Installation.



k. Configuration Completed.

Click “Finish” to exit the menu.

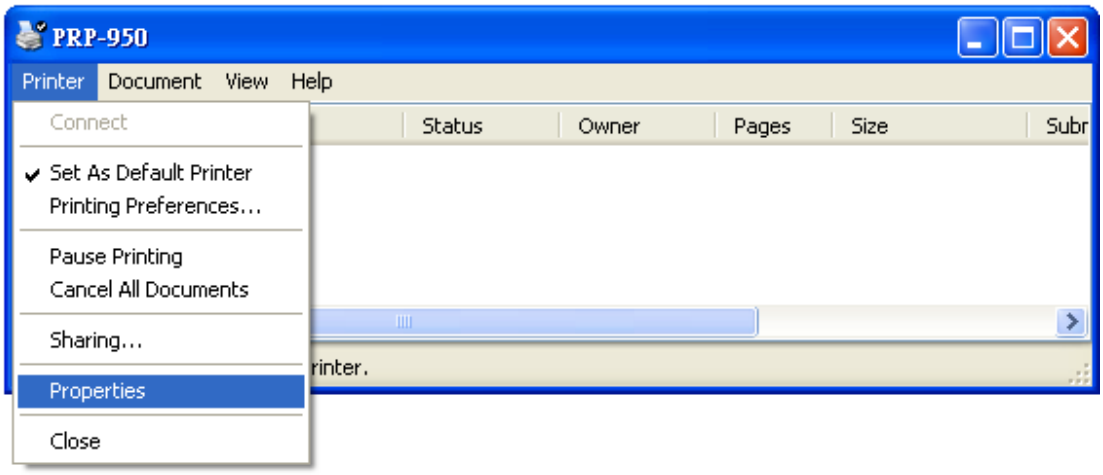
Note: Reboot the HOST PC

It’s recommended to reboot the HOST PC and proceed to the next step.

I. Examine the Port Setting:

Remember to access the properties of your printer (Start>>Printers and Faxes>> and double-click the icon to enter).

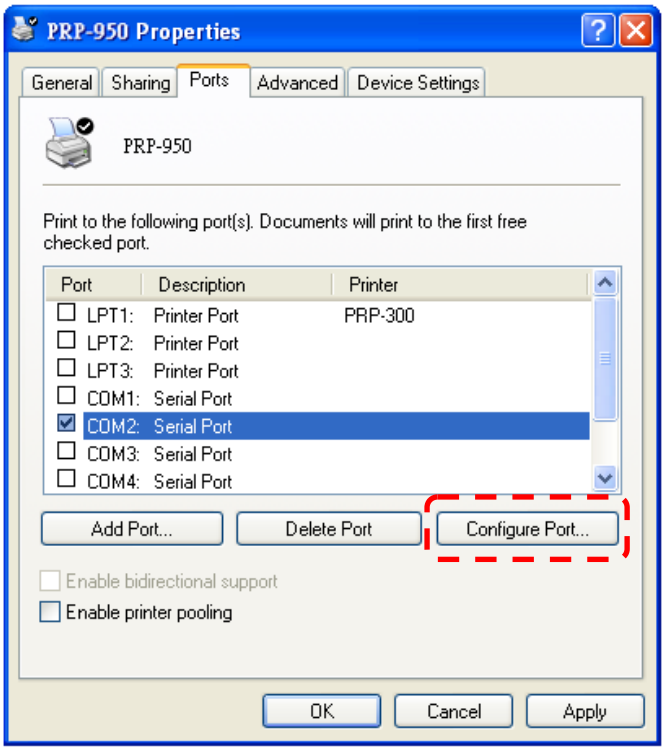
Make sure the port of printer is correctly configured.

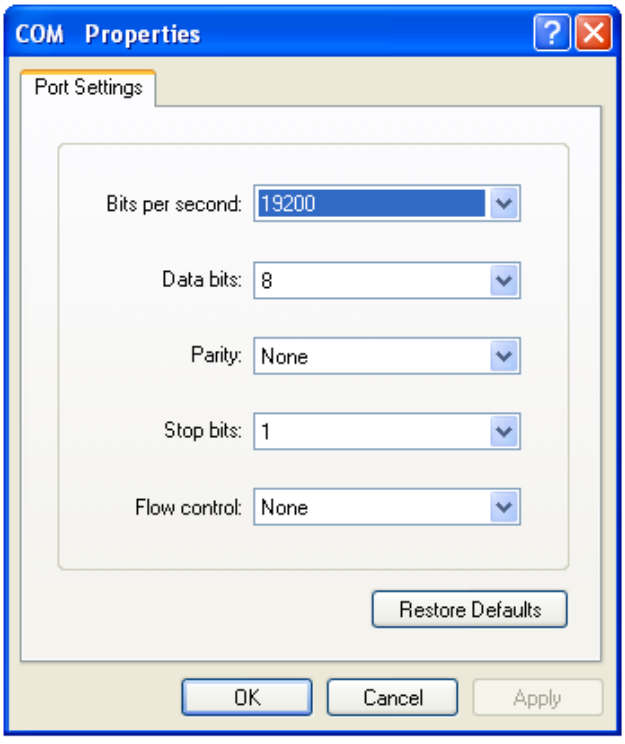


Access sub menu “Ports”, and click to select the correct port for your printer.

Click “Configure Port to examine the COM port setting.

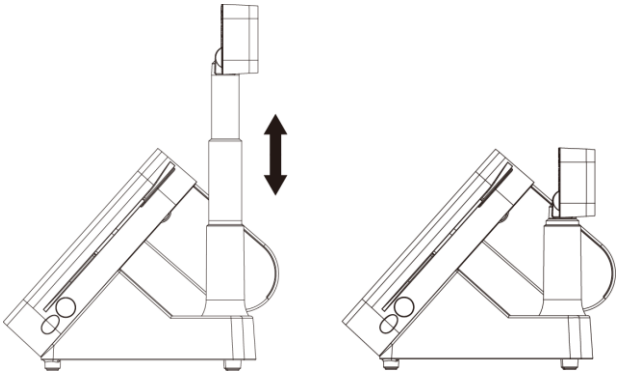
Click “OK” to exit.





2.7. Adjust the Customer Display (Optional)

The POP-950 has optional Customer Display that is pre-installed into the POS system.
To adjust the Angle of View:

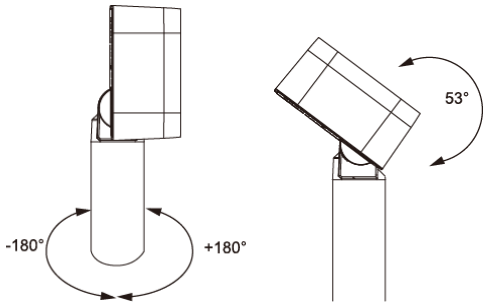


Adjust the height of Customer Display

a. Pull the tube of the Customer Display to the desired height.

b. Adjust the Display to the proper View Angle.
The maximum tilt angle is 53 degree (4 steps adjustable) and the rotate angle is ±180 degree.

Note: Do Not rotate the display over 180 degree.
Please rotate the display clockwise/ or counter-clockwise.



Rotate **Tilt**

Adjust the Display to the proper View Angle

2.8. Configuration of Customer Display

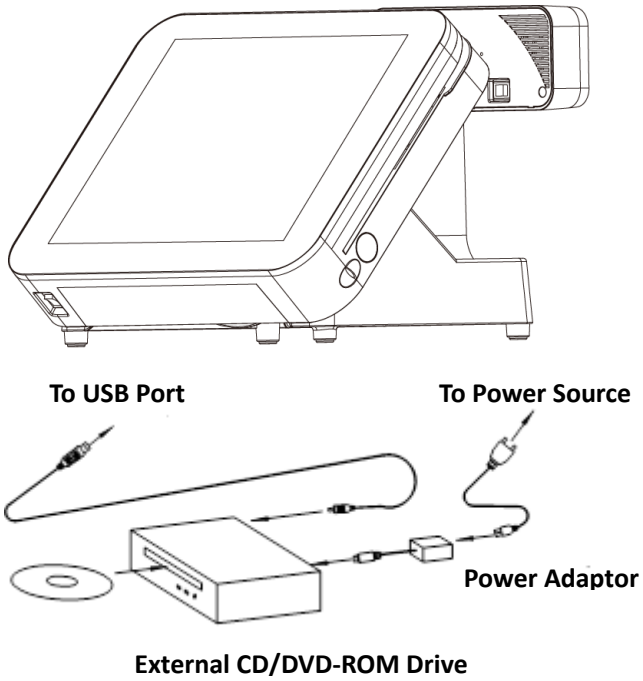
There is a configuration utility to setup your pre-installed customer display (refer to the configuration instruction manual for further information).

Note: COM Port Setting
The recommended (default) COM port setting is COM 1.

3. BIOS Setup

The product is compatible with POS Ready, Windows 95/98/2000/XP/7 and Ubuntu Linux. If the drivers are required, find the necessary files in the supplied disc. The storage media can be HDD, Compact Flash (CF), or Disk on Module (DOM) depending on different options.

a. Plug the AC power cord of the power adapter (CD/DVD-ROM DRIVE) to the power source. Connect an external CD/DVD-ROM DRIVE to the POS system (as the figure below illustrated).
Insert the installation disc for the Operating System.



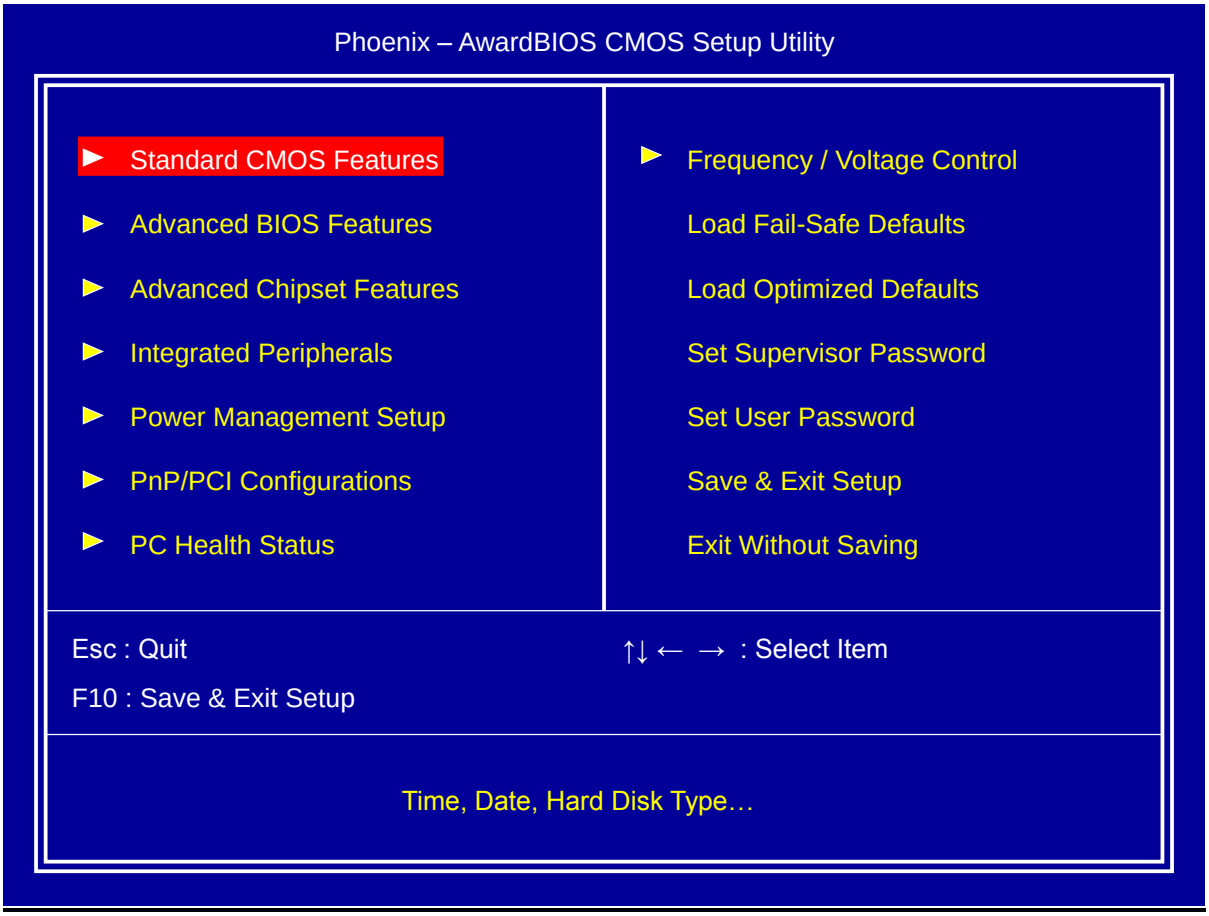
b. Power on or reboot the system board, when screen appears message as "Press DEL to enter SETUP". Press <DEL> key to run BIOS SETUP Utility.

Note.
To set CD/DVD-ROM as the first boot device, please access the BIOS Setup (press <DEL> when switch on the terminal). Access the "Advanced BIOS Features" and select the "USB-CD-ROM" as the "First Boot Device."
Return to the main menu and press <F10> and then press "Y" to save and complete the setting.

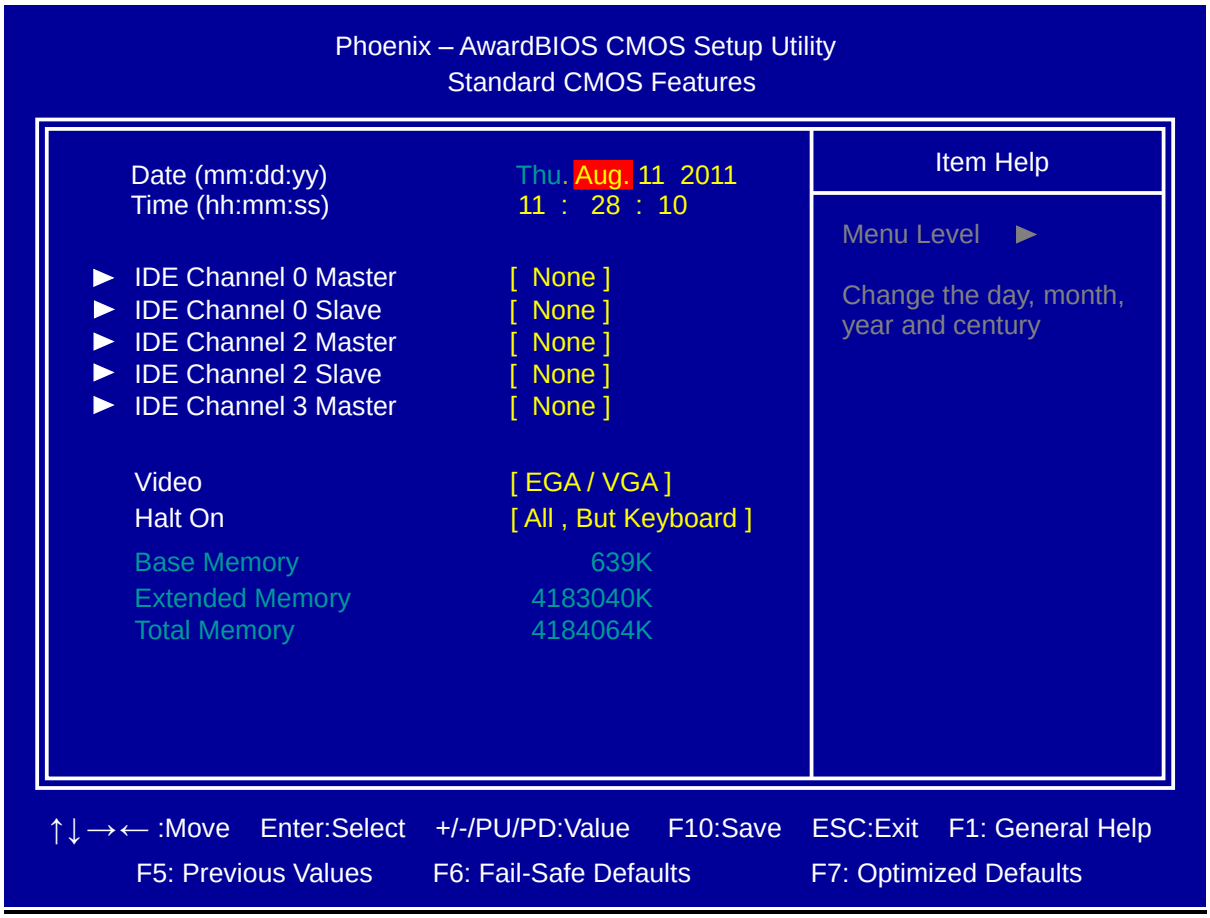
※ The BIOS configuration is for reference only, it may subject to change without prior notice.

3.1. Main Menu

Please use arrow keys to select item, then press <Enter> key to accept or enter the sub-menu.



3.2. Standard CMOS Features



☐ **Date**
Set system date.

☐ **Time**
Set system time.

☐ **IDE Channel 0 Master/Slave**
Press <Enter> for IDE device automatic detection.

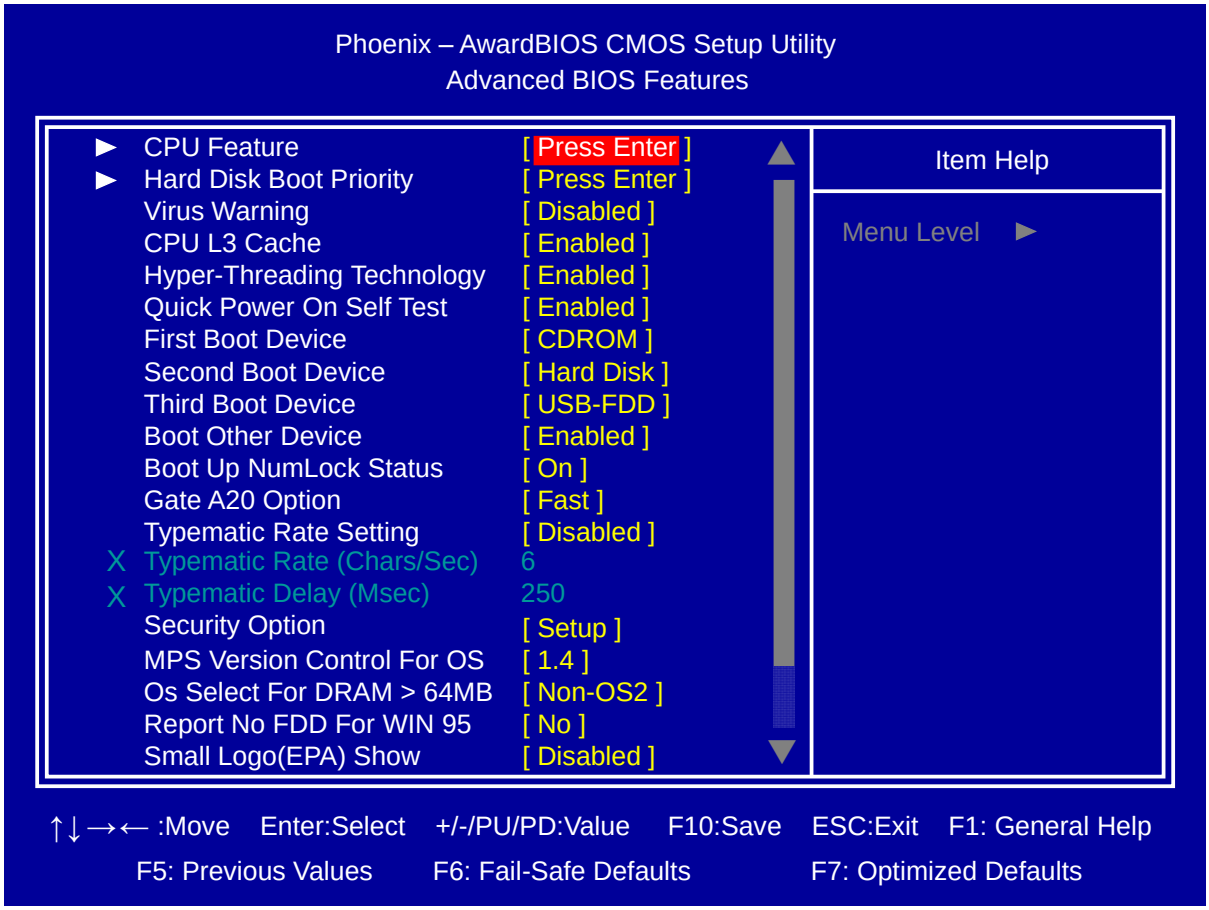
☐ **IDE Channel 2 Master/Slave**
Press <Enter> for IDE device automatic detection.

☐ **IDE Channel 3 Master**
Press <Enter> for IDE device automatic detection.

☐ **Video**
Select Video device type.

☐ **Halt on**
Select stop procedure or ignore when error detected during POST (Power-On Self Test).

3.3. Advanced BIOS Features



☐ **CPU Feature**

Press <Enter> to select CPU parameter.

☐ **Hard Disk Boot Priority**

Press <Enter> to select Hard Disk boot device priority.

☐ **Virus Warning**

Select “Virus Warning” Enabled/Disabled.

☐ **CPU L3 Cache**

Select “CPU L3 Cache” Enabled/Disabled.

☐ **Hyper-Threading Technology**

Select “Hyper-Threading Technology” Enabled/Disabled

☐ **Quick Power On Self Test**

Select “Quick Power On Self Test” Enabled/Disabled.

☐ **First/Second/Third Boot Device**

Select boot device priority.

☐ **Boot Other Device**
Select “Boot Other Device” Enabled/Disabled.

☐ **Boot Up NumLock Status**
Select <NumLock> key ON/Off when system boot up.

☐ **Gate A20 Option**
Select Gate A20 controlled by Keyboard controller (Normal) or Port 92 (Fast).

☐ **Typematic Rate Setting**
Select “Typematic Rate Setting” Enabled to set,
Typematic Rate (Chars/Sec): Number of characters repeated in one second.
Typematic Delay (Msec): When holding one key, set the time between the first and second character displayed.

☐ **Security Option**
Setup: Require password to permit BIOS setup utility.
System: Require password to permit boot-up and BIOS setup utility.

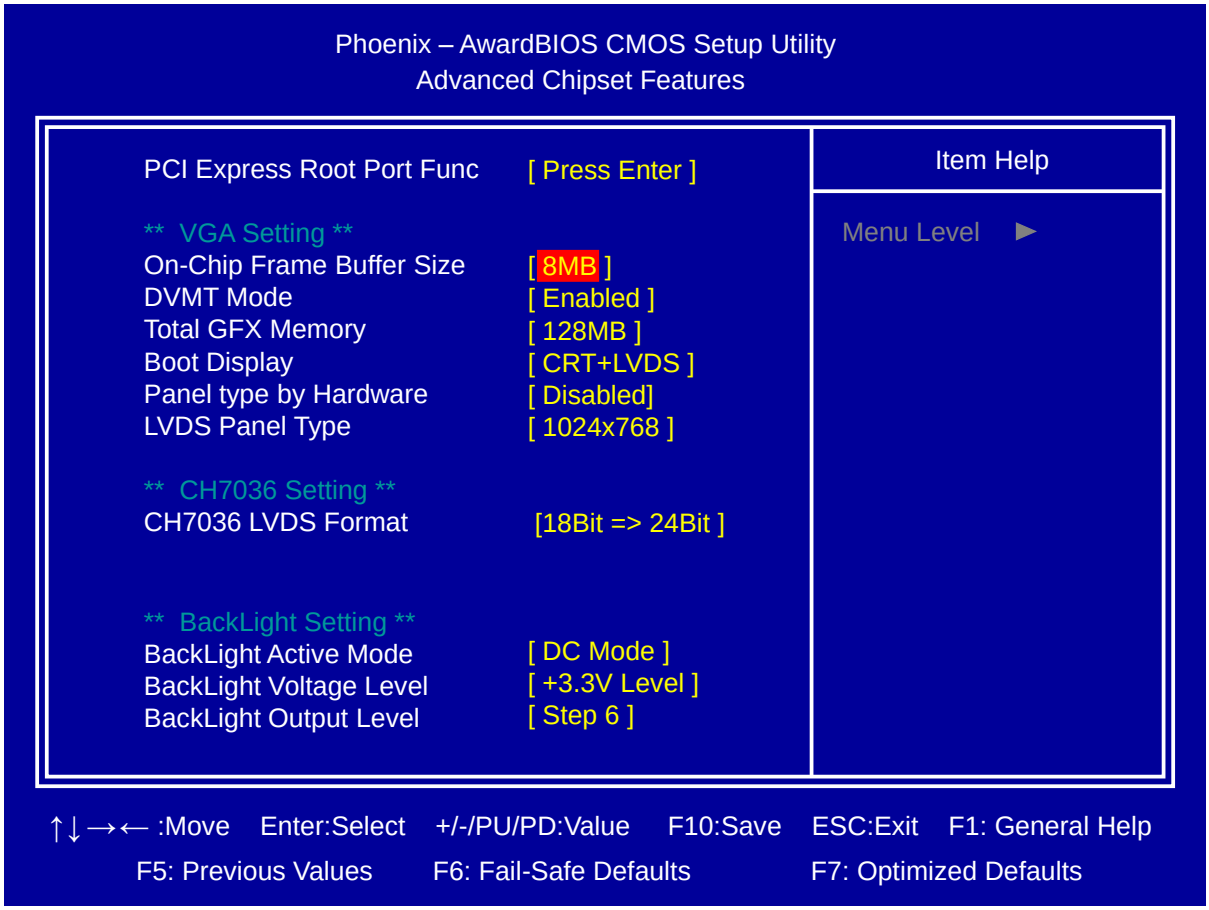
☐ **MPS Version Control For OS**
Select MPS (Multiprocessor Specification) Version 1.4 to added extended configuration tables to improve support for multiple PCI bus configurations and improve future expandability. It is also required for a secondary PCI bus to work without the need for a bridge. Select Version 1.1 for older Operating Systems.

☐ **OS Select For DRAM > 64M**
Select “OS2” only if you are running older version of IBM OS/2 Operating System with greater than 64MB of RAM on the system. Otherwise select “Non-OS/2” setting.

☐ **Report No FDD For WIN 95**
If running Windows 95/98 without floppy disk drive, select “Enabled” to release IRQ6. This is required to pass Windows 95/98's SCT test, if select “Disabled”, BIOS will not report missing floppy drive to Win95/98.

☐ **Small Logo(EPA) Show**
Select EPA (Environmental Protection Agency) Energy Star logo appears during the system boot-up process.

3.4. Advanced Chipset Features



☐ **On-Chip Frame Buffer Size**
Select share system memory 1MB or 8MB.

☐ **DVMT Mode**
DVMT (Dynamic Video Memory Technology) allowing the system to dynamically allocate memory resources according to the demands of the system at any point in time, that improve efficiency of the memory allocated to either system or graphics processor.

☐ **Total GFX Memory**
Select Total GFX Memory: 128MB, 256MB, or MAX. (For Win XP, the MAX Value is based on system memory size, 512MB for 1GB DRAM, 768MB for 1.5GB ~ 2GB, 1GB for above 2GB.)

☐ **Boot Display**
Select boot display device type: CRT, LVDS, or CRT+LVDS.

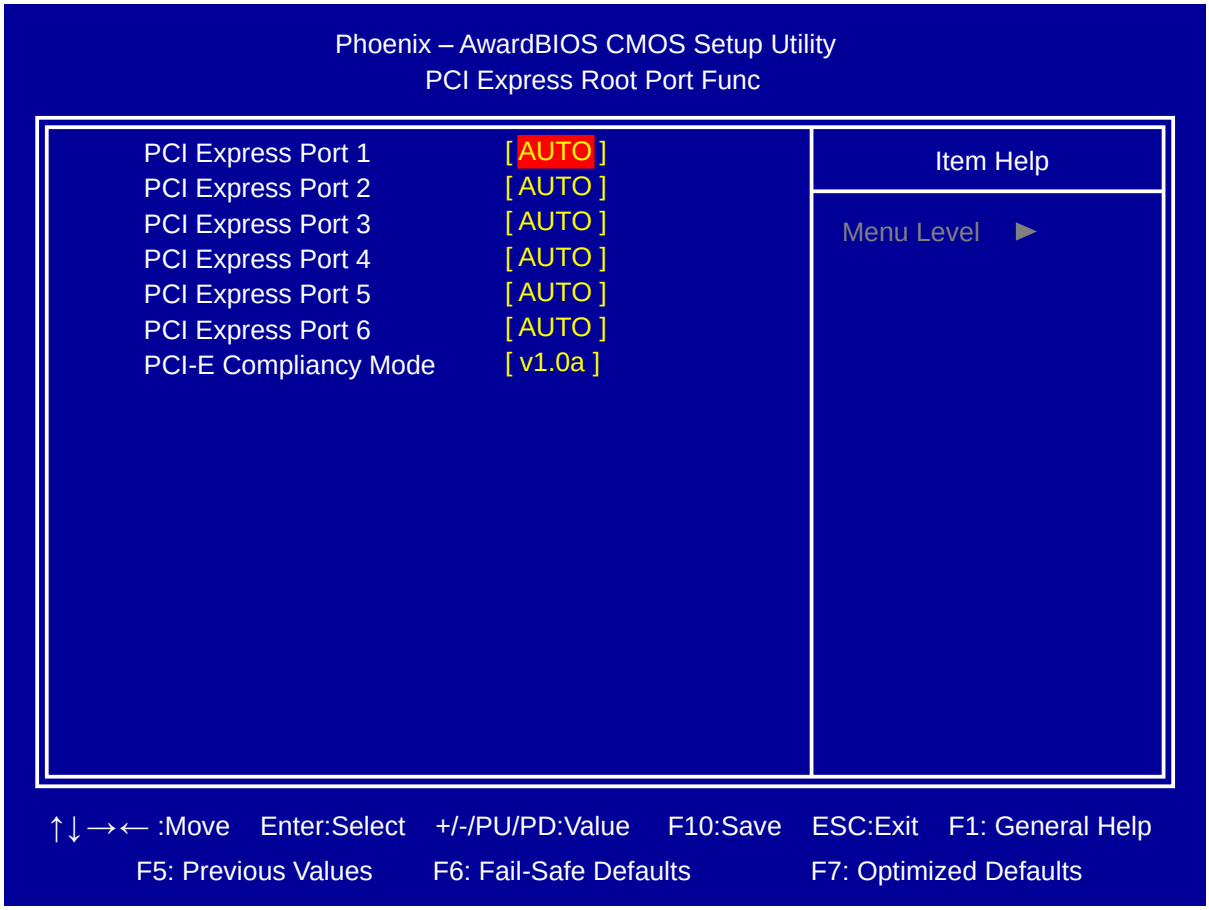
☐ **LVDS-18 Panel Type**
Select LCD 18 bit resolution

☐ **BackLight Active Mode**
Select Backlight Active Mode: PWN Mode or DC Mode.

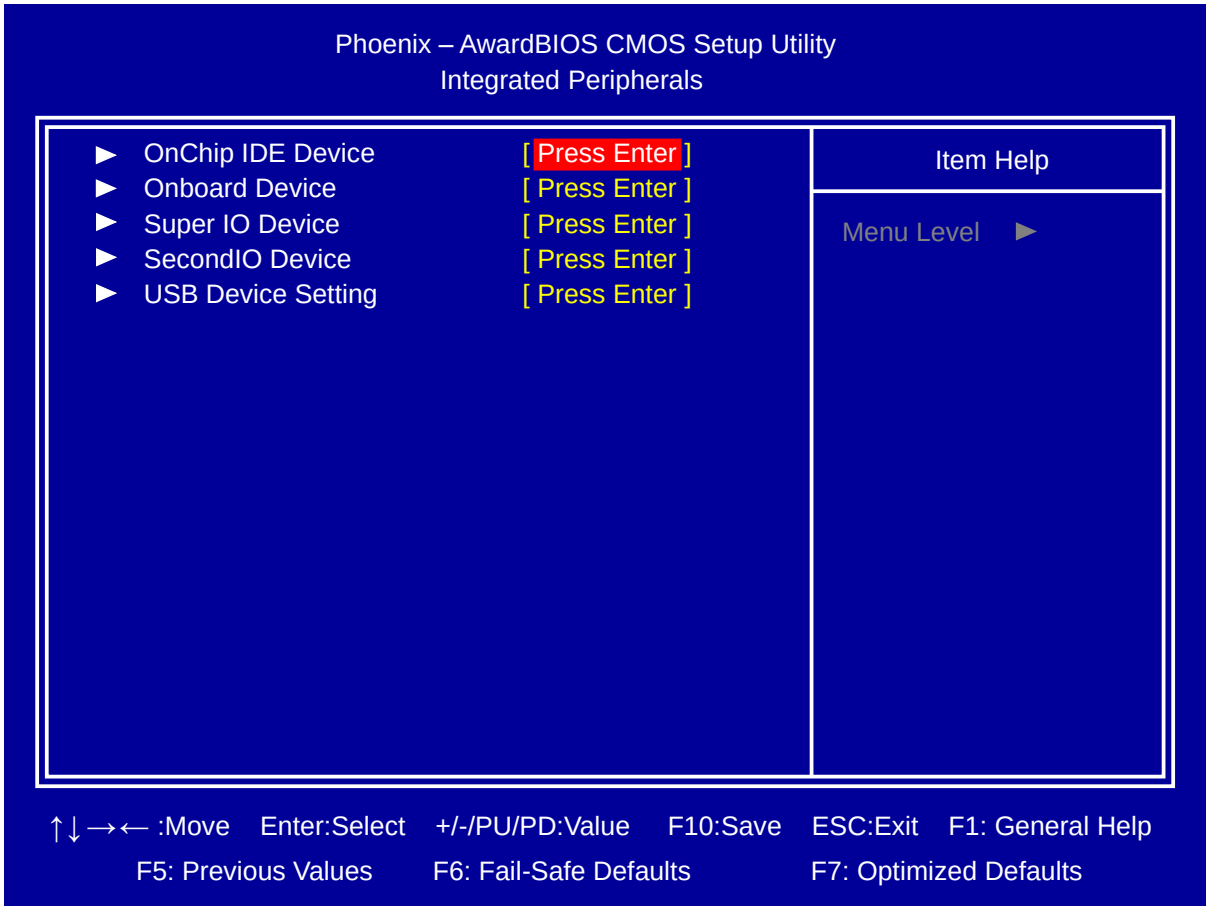
☐ **BackLight Voltage Mode**
Select Backlight Voltage Mode: +5.0V Level or +3.3V Level.

☐ **BackLight Output Mode**
Select Backlight Output Mode: Step1 to Step 10.

☐ **PCI Express Root Port Func**

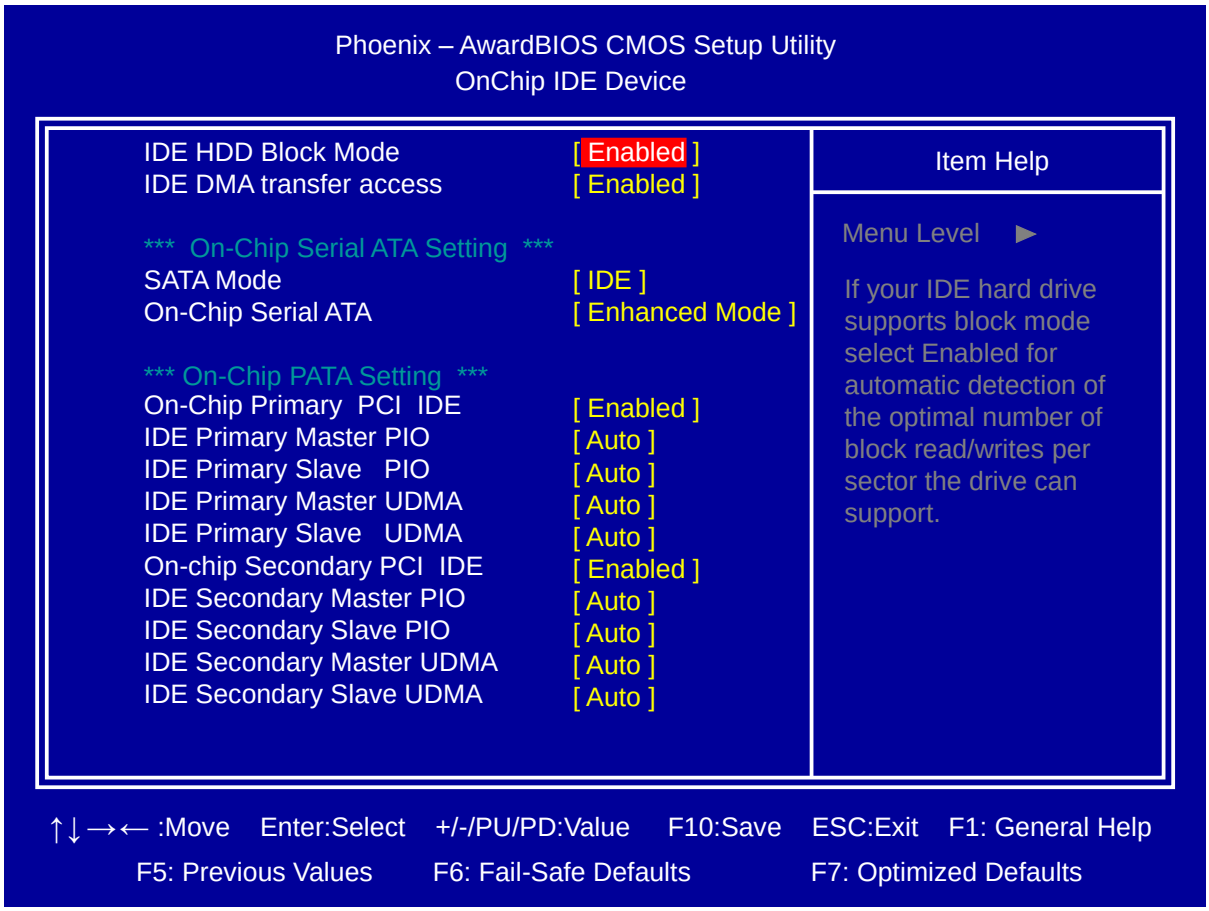


3.5. Integrated Peripherals



3.5.1. OnChip IDE Device

Press <Enter> to set IDE and SATA device configuration.



☐ **IDE HDD Block Mode**

Block mode is also called block transfer, multiple commands, or multiple sectors read/write.

☐ **IDE DMA transfer access**

UDMA (Ultra DMA) is a DMA data transfer protocol that utilizes ATA commands and the ATA bus to allow DMA commands to transfer data at a maximum burst rate of 33 MB/s.

☐ **On-Chip Serial ATA Setting**

The selections in “SATA mode” are as follows:

IDE: Default

RAID: Enable SATA RAID function

AHCI: Set this item to enable SATA AHCI function for Win XP-SPI+IAA driver support AHCI mode.

If you select IDE, there will show “On chip Serial ATA” for you to set. There have five selections in “On chip Serial ATA”:

Disabled: Disable on-board serial ATA function.

Auto: Auto detect Serial ATA device.

Combined Mode: SATA and PATA drives are auto-detected and placed in Legacy mode.

Enhanced Mode: the drivers (Default, SATA and PATA drives) are auto-detected and placed in Native mode.

SATA Only: Serial ATA function only.

☐ **On-Chip Primary PCI IDE**

☐ **On-Chip Secondary PCI IDE**

The chipset contains a PCI IDE interface with support for two IDE channels. Select Enabled to activate the IDE interface. Select Disabled to deactivate this interface, if you install a primary and/or secondary add-in IDE interface.

☐ **IDE Primary Master PIO**

☐ **IDE Primary Slave PIO**

☐ **Secondary Master PIO**

☐ **Secondary Slave PIO**

The four IDE PIO (Programmed Input / Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.

☐ **IDE Primary Master UDMA**

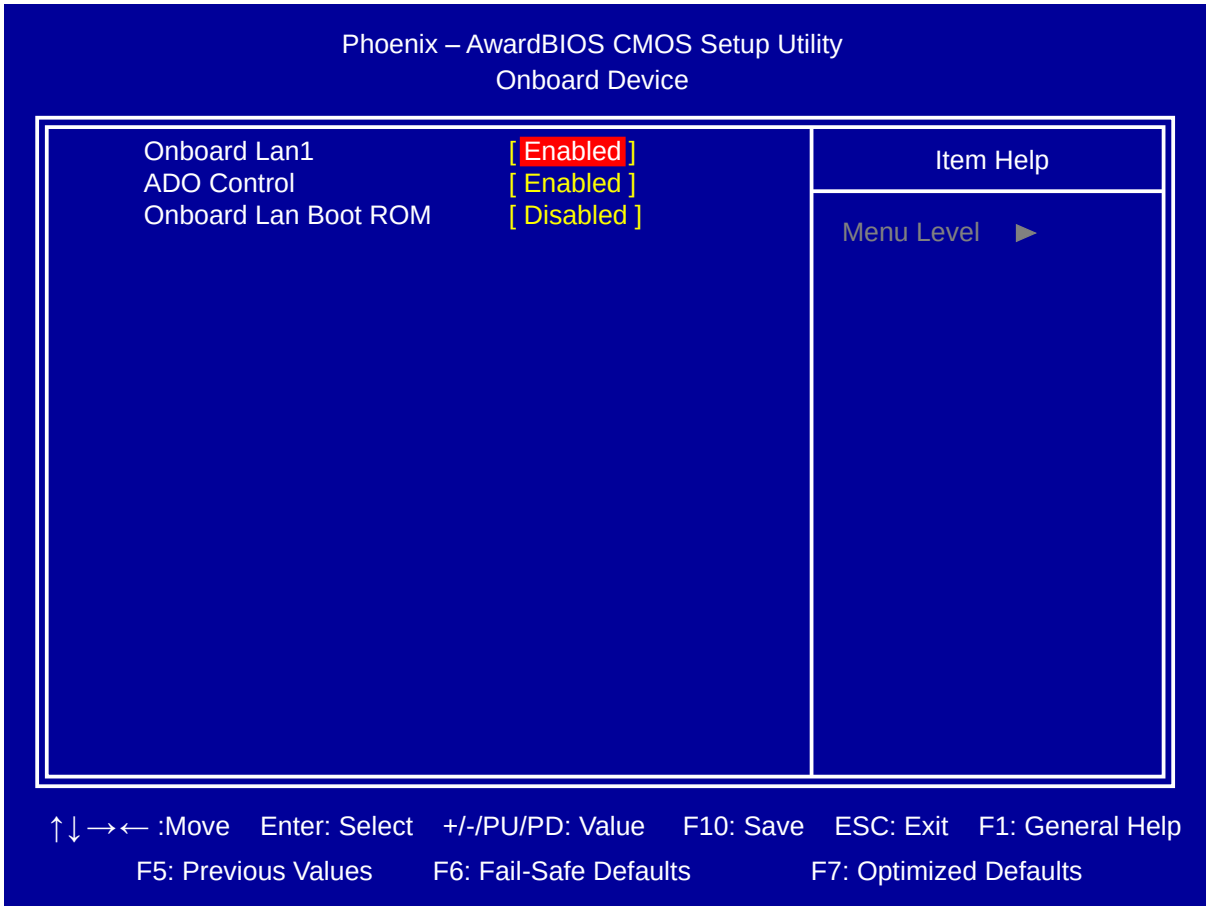
☐ **IDE Primary Slave UDMA**

☐ **IDE Secondary Master UDMA**

☐ **IDE Secondary Slave UDMA**

UDMA (Ultra DMA) is a DMA data transfer protocol that utilizes ATA commands and the ATA bus to allow DMA commands to transfer data at a maximum burst rate of 33 MB/s. When you select Auto in the four IDE UDMA fields (for each of up to four IDE devices that the internal PCI IDE interface supports), the system automatically determines the optimal data transfer rate for each IDE device.

3.5.2. Onboard Device

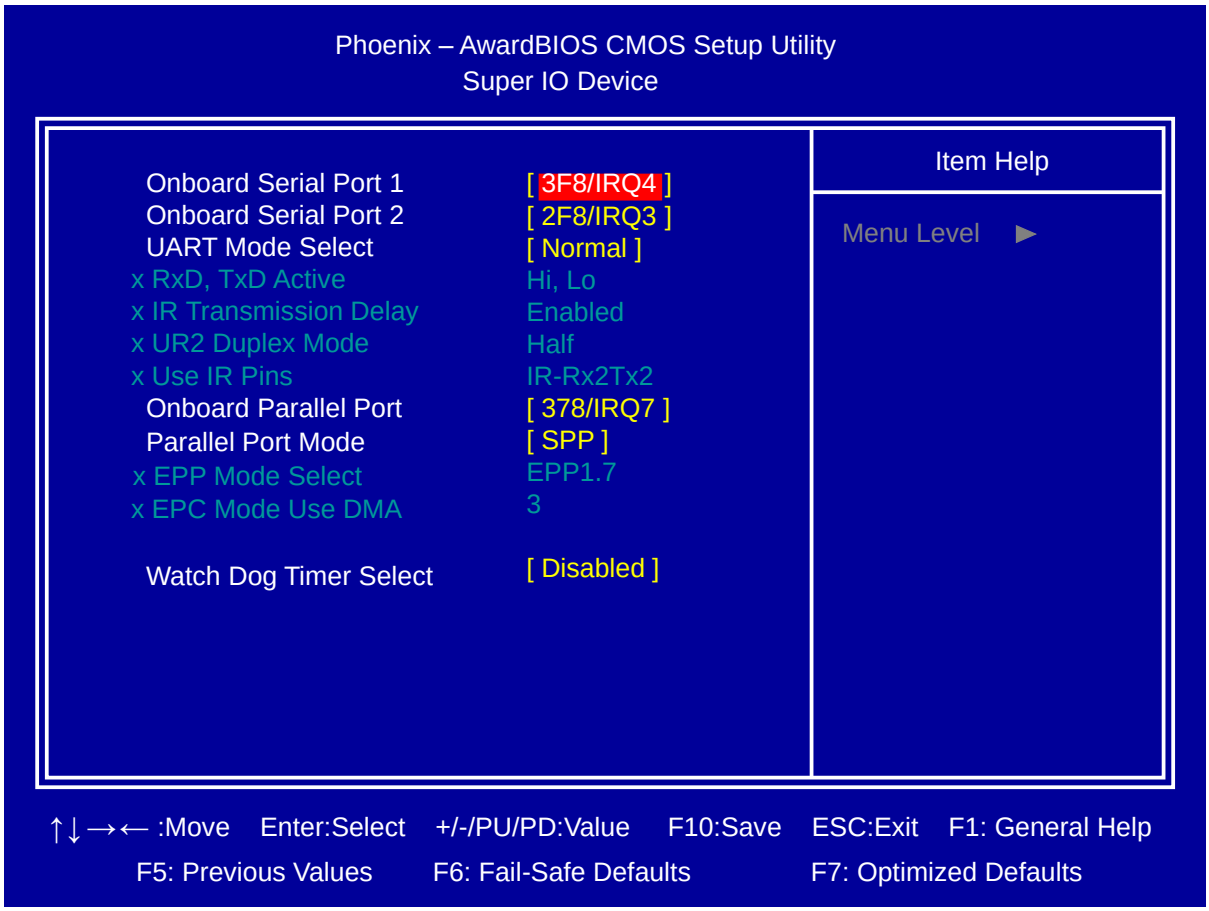


☐ **Onboard Lan1**
Enable/Disable onboard Lan1.

☐ **Onboard Lan Boot ROM**
Decide whether to invoke the boot ROM of the onboard LAN chip

3.5.3. Super IO Device

Press <Enter> to select Serial, Parallel and “I” configuration.



☐ **Onboard Serial Port 1**
Select serial port 1 address: Disabled, 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, or Auto.

☐ **Onboard Serial Port 2**
Select serial port 2 address: Disabled, 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, or Auto.

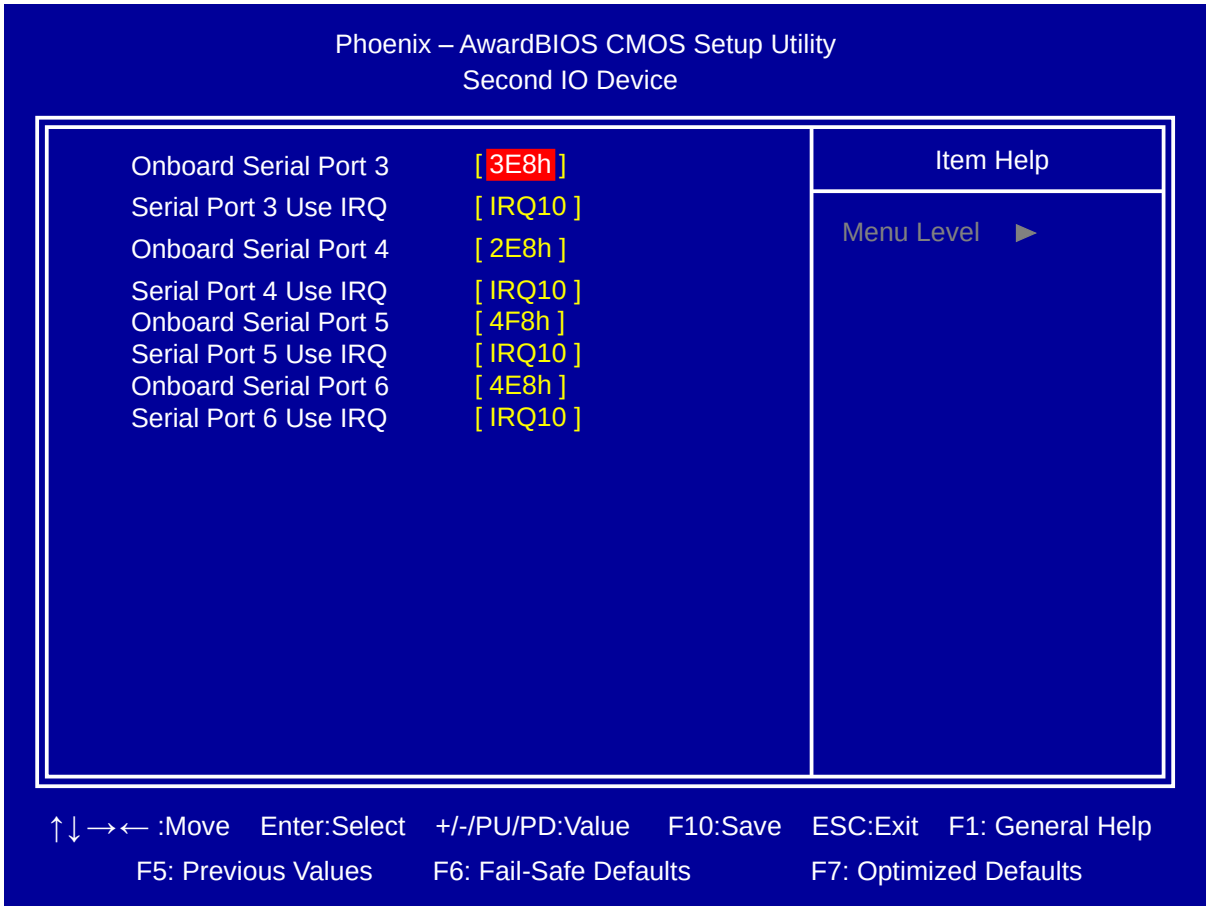
☐ **UART Mode Select**
Select UART Mode: IrDA, ASKIR, or Normal.

☐ **Onboard Parallel Port**
Select onboard parallel port: Disabled, 378/IRQ7, 278/IRQ5, or 3BC/IRQ7.

☐ **Parallel Port Mode**
Select Parallel Port Mode: SPP, EPP, ECP, ECP+EPP, or Normal.

☐ **Watchdog Timer Select**
Select Watch dog Disabled or set timer value: 10sec, 20sec, 30sec, 40sec, 1 min, 2min, or 4min.

3.5.4. Second IO Device

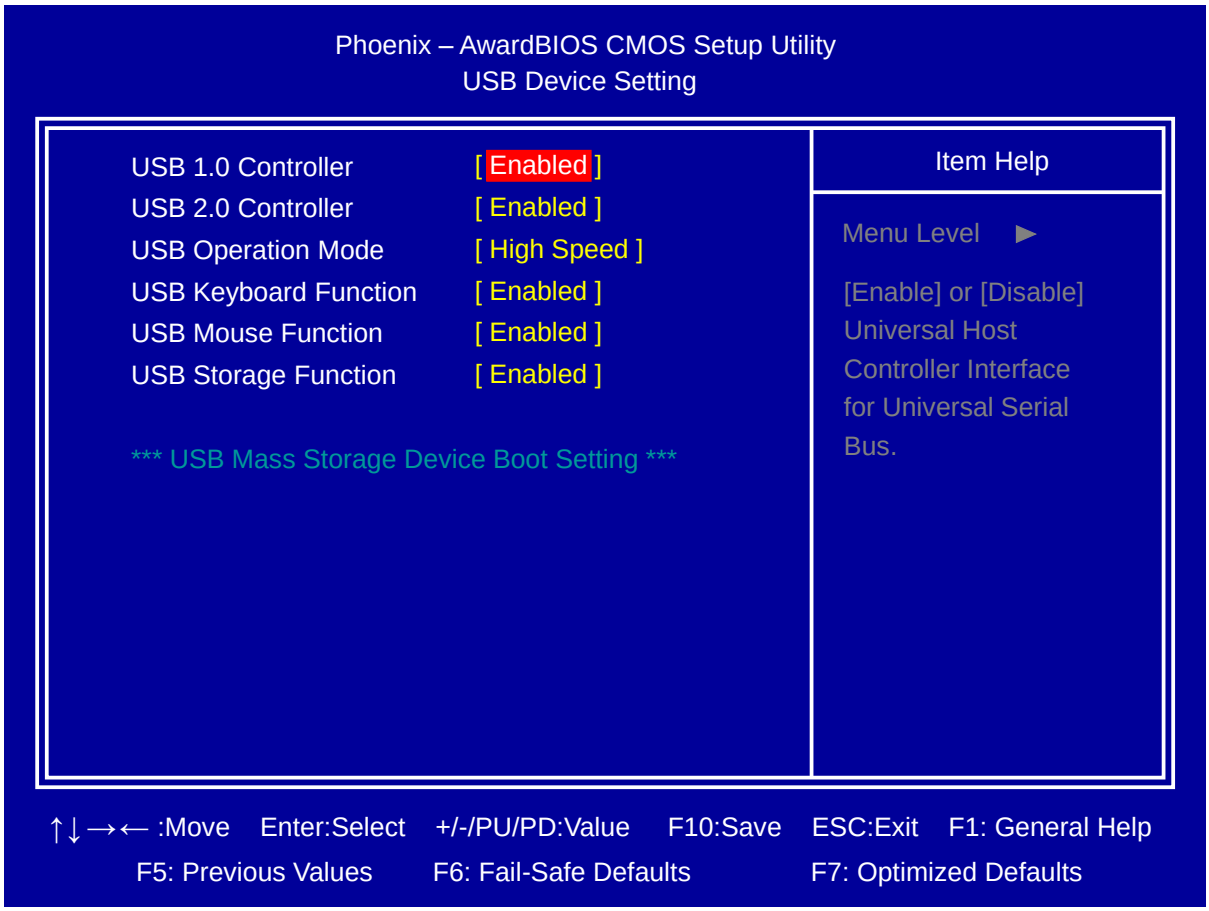


☐ **Onboard Serial Port 3/4/5/6**
Select serial port address.

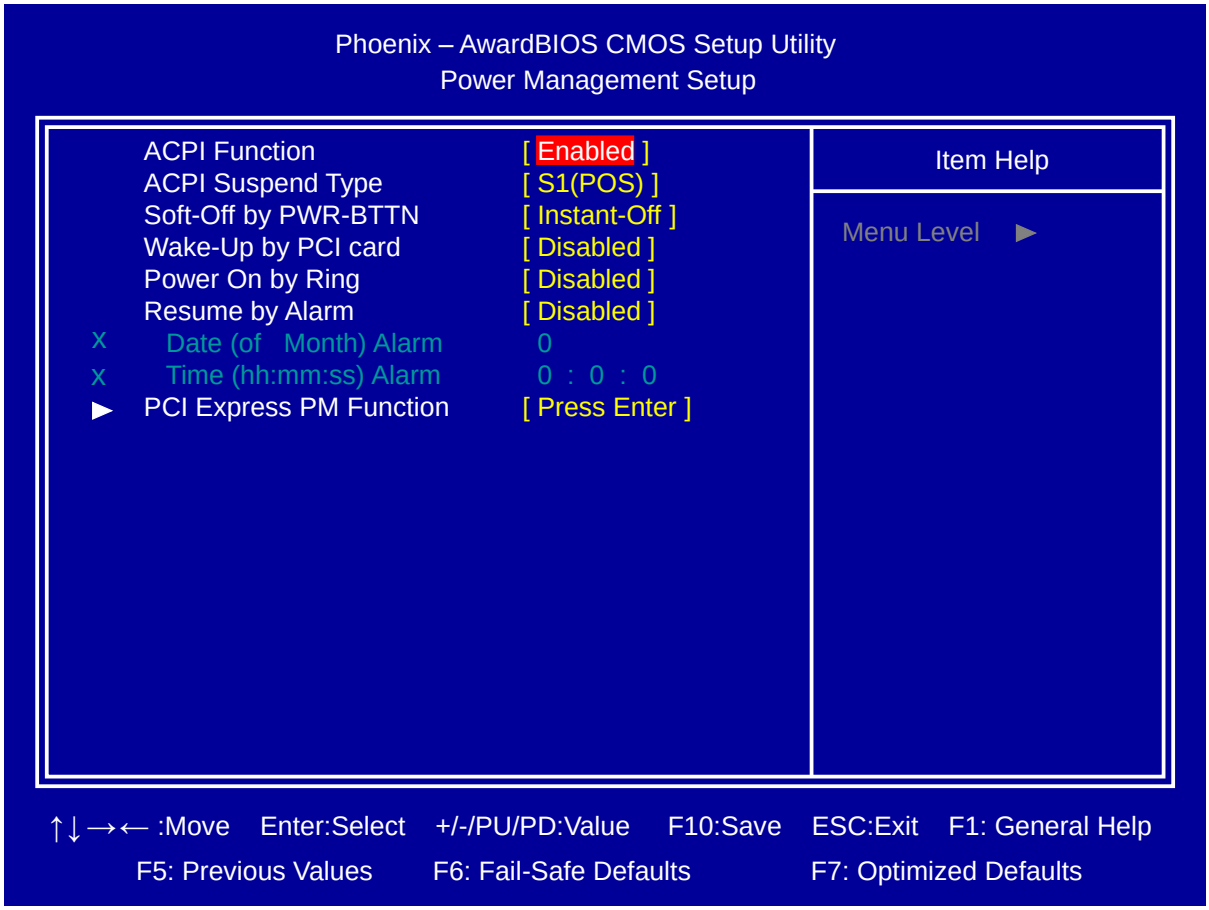
☐ **Serial Port 3/4/5/6 Use IRQ**
Select serial port IRQ. Support IRQ sharing mode.

3.5.5. USB Device Setting

Press <Enter> to select USB device configuration.



3.6. Power Management Setup



☐ **ACPI Function**
Select ACPI (Advanced Configuration and Power Management) Enabled/Disabled.

☐ **ACPI Suspend Type**
Select S1 (POS) type.

☐ **Soft-Off by PWR_BTTN**
Select power button function,
Instant-off: Press power button will power off instantly.

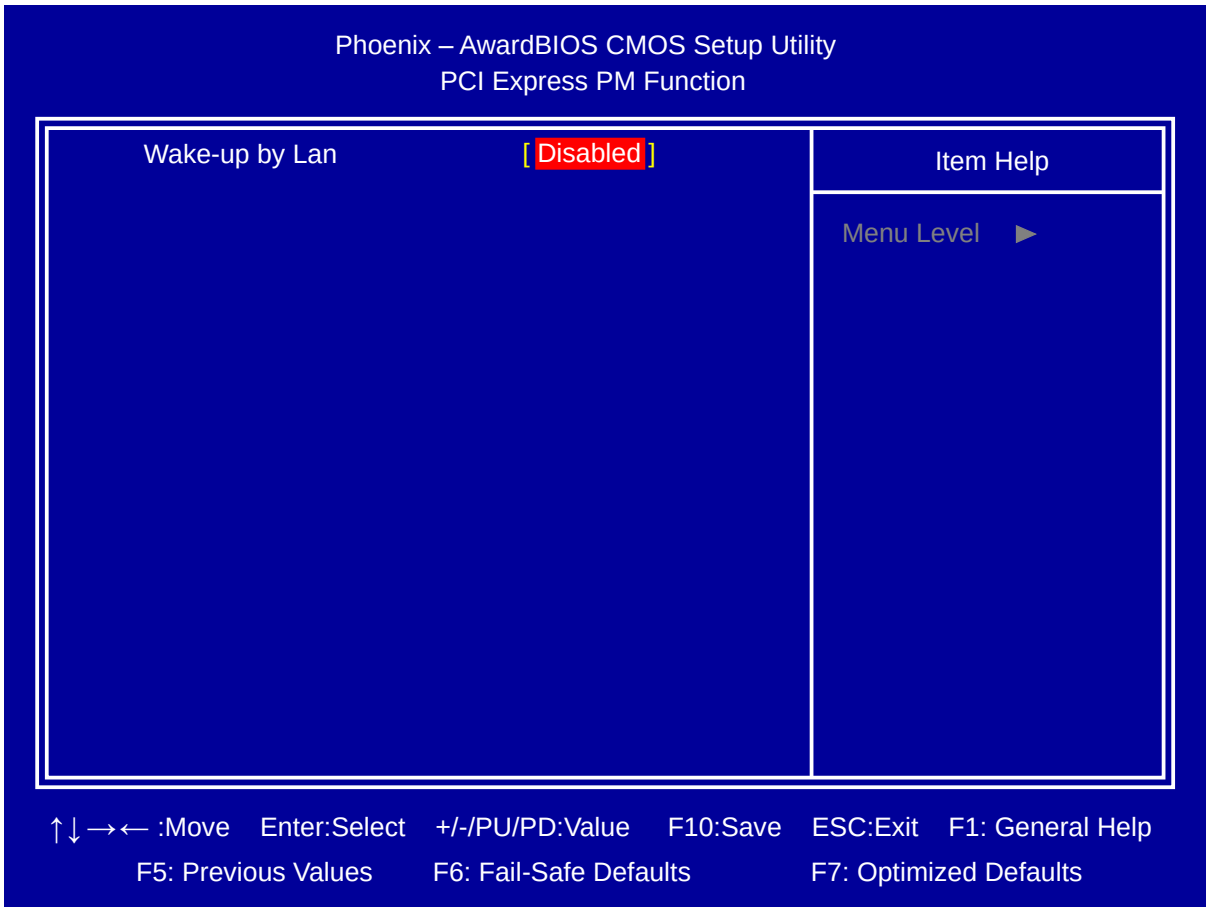
☐ **Wake-UP by PCI card**
Select wake-up by PCI device Enabled/Disabled.

☐ **Power On by Ring**
Select Power on by Ring Indicator signal from Modem.

☐ **Resume by Alarm**
Set date and time to power on system from soft-off state.

☐ **PCI Express PM Function**

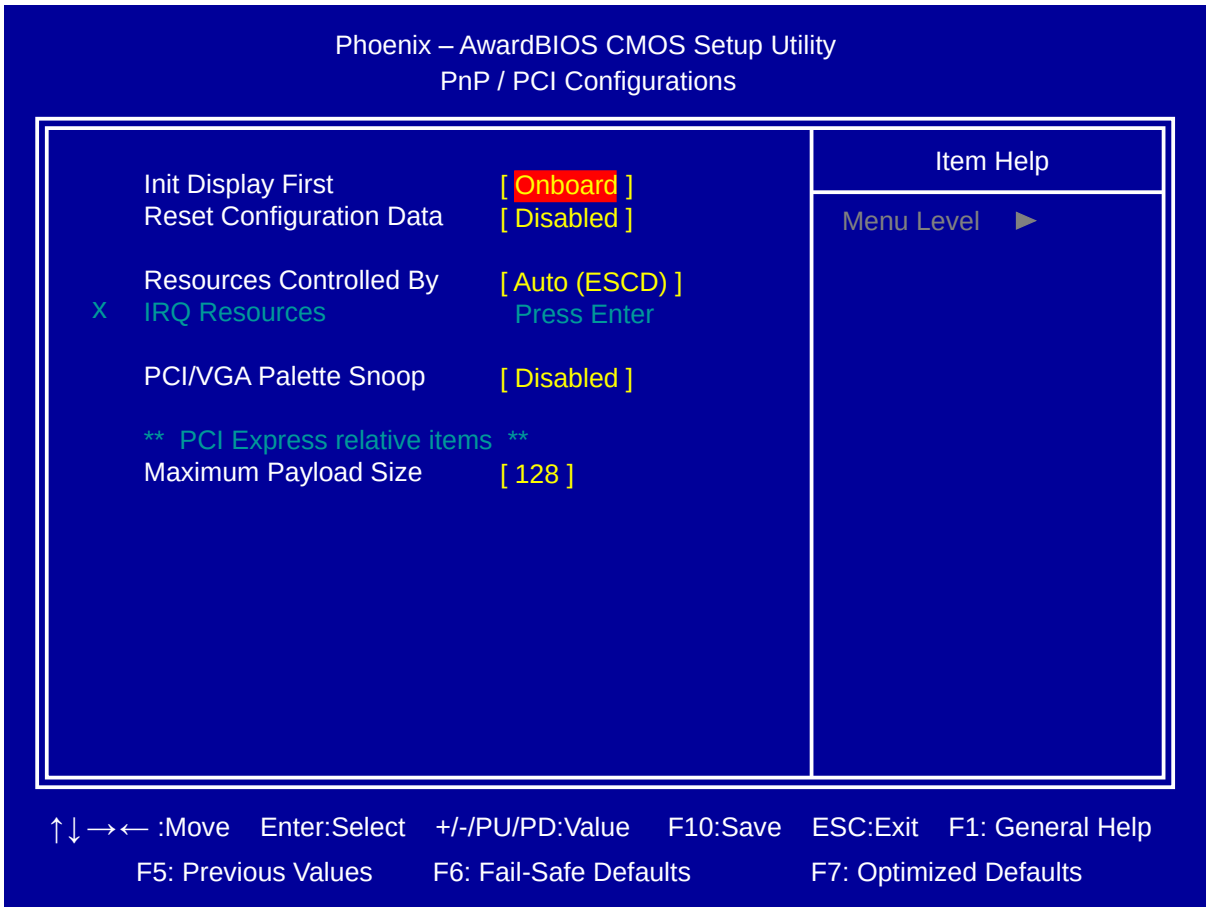
Press <Enter> to select “Wake-up by LAN” Enabled/Disabled.



☐ **Wake-up by Lan**

Select wake-up by LAN Enabled/Disabled.

3.7. PnP/PCI Configurations



☐ **Init Display First**
Select initial display by PCI or Onboard device.

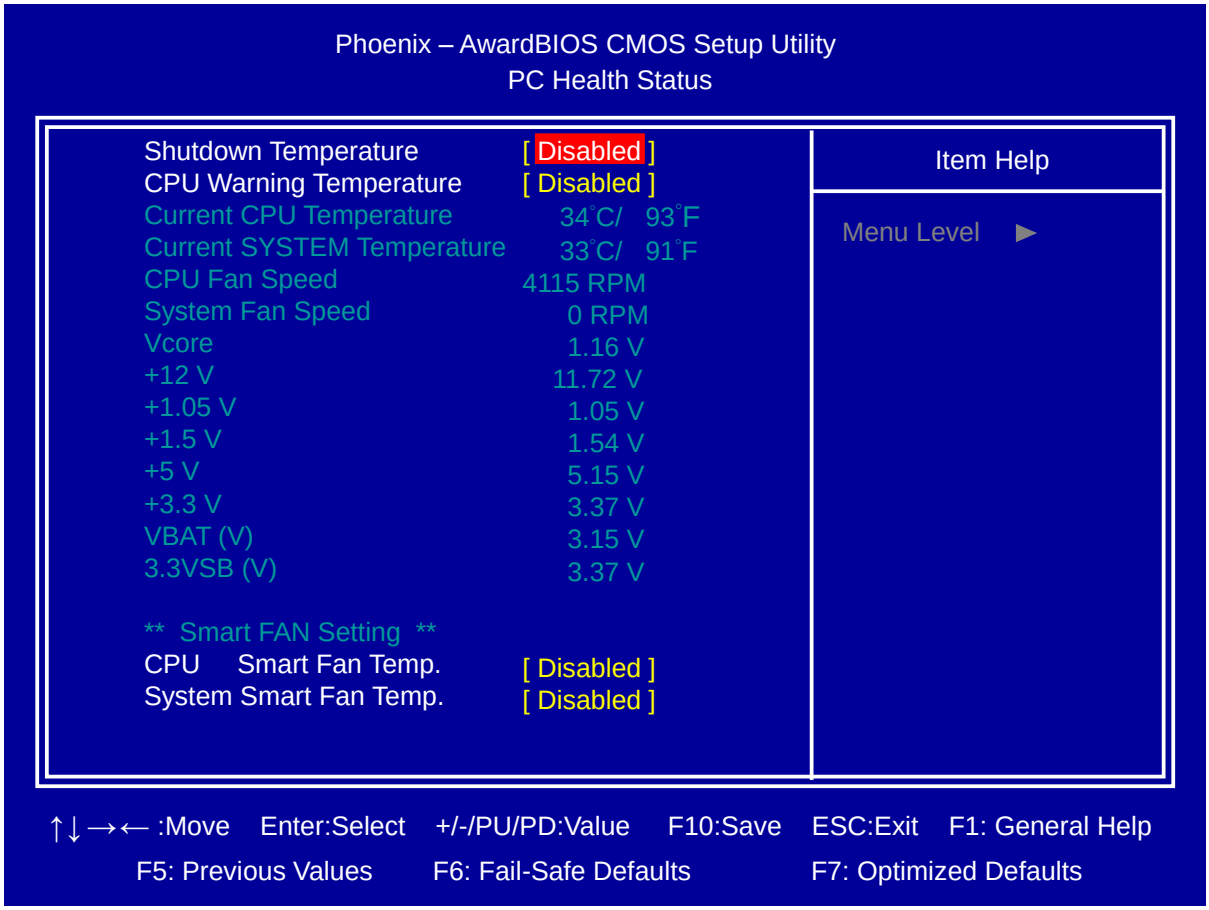
☐ **Reset Configuration Data**
Select Enabled to reset Extended System Configuration Data (ESCD) when you exit BIOS setup utility, if you have installed new add-on card and the system reconfiguration has caused such a serious conflict that the OS cannot boot.

☐ **Resources Controlled By**
BIOS can automatically configure the entire boot and Plug and Play compatible devices. If you choose Auto, you cannot select IRQ DMA and memory base address fields, since BIOS automatically assigns them.

☐ **PCI/VGA Palette Snoop**
Select PCI/VGA Palette Snoop Enabled/Disabled.

☐ **Maximum Payload Size**
Set maximum TLP payload size (byte) for the PCI Express devices.

3.8. PC Health Status



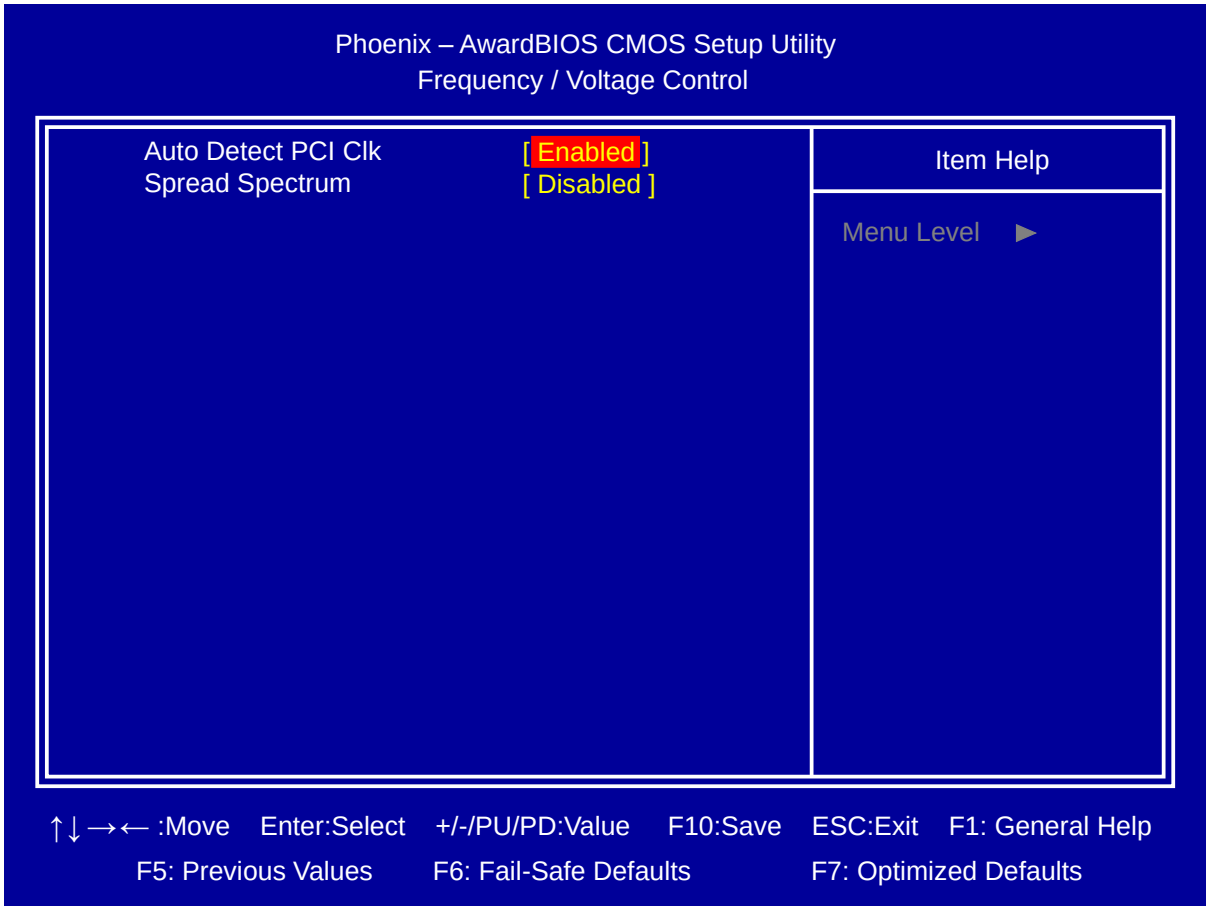
☐ **Shutdown Temperature**
If CPU temperature reaches the setting value will automatic shutdown system.

☐ **CPU Warning Temperature**
If CPU temperature reaches the setting value will beep in DOS mode.

☐ **CPU Smart Fan Temperature**
Setup the CPU Smart FAN temperature.

☐ **System Smart Fan Temp.**
Setup the System Smart FAN temperature.

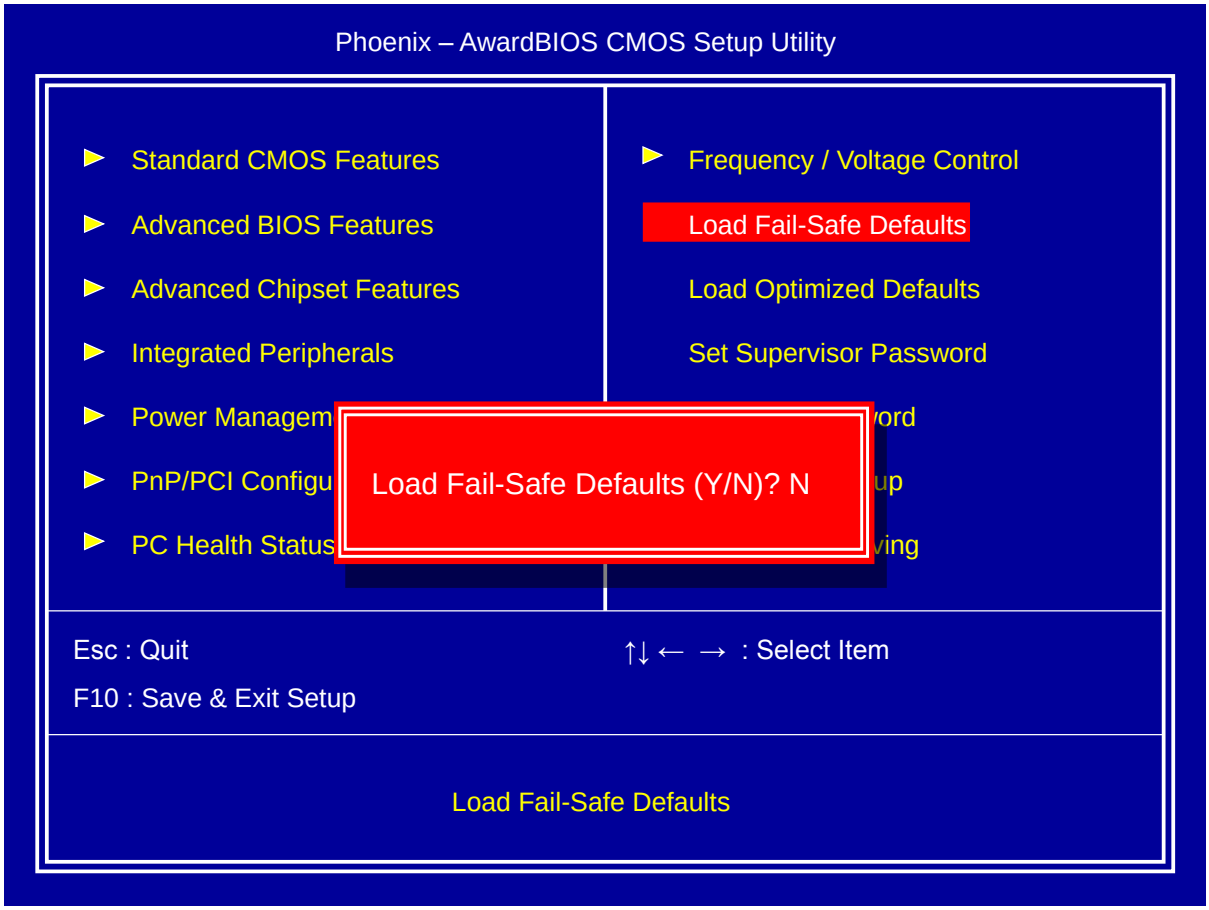
3.9. Frequency/Voltage Control



☐ **Auto Detect PCI Clk**
Select “Auto Detect PCI Clk” Enabled/Disabled

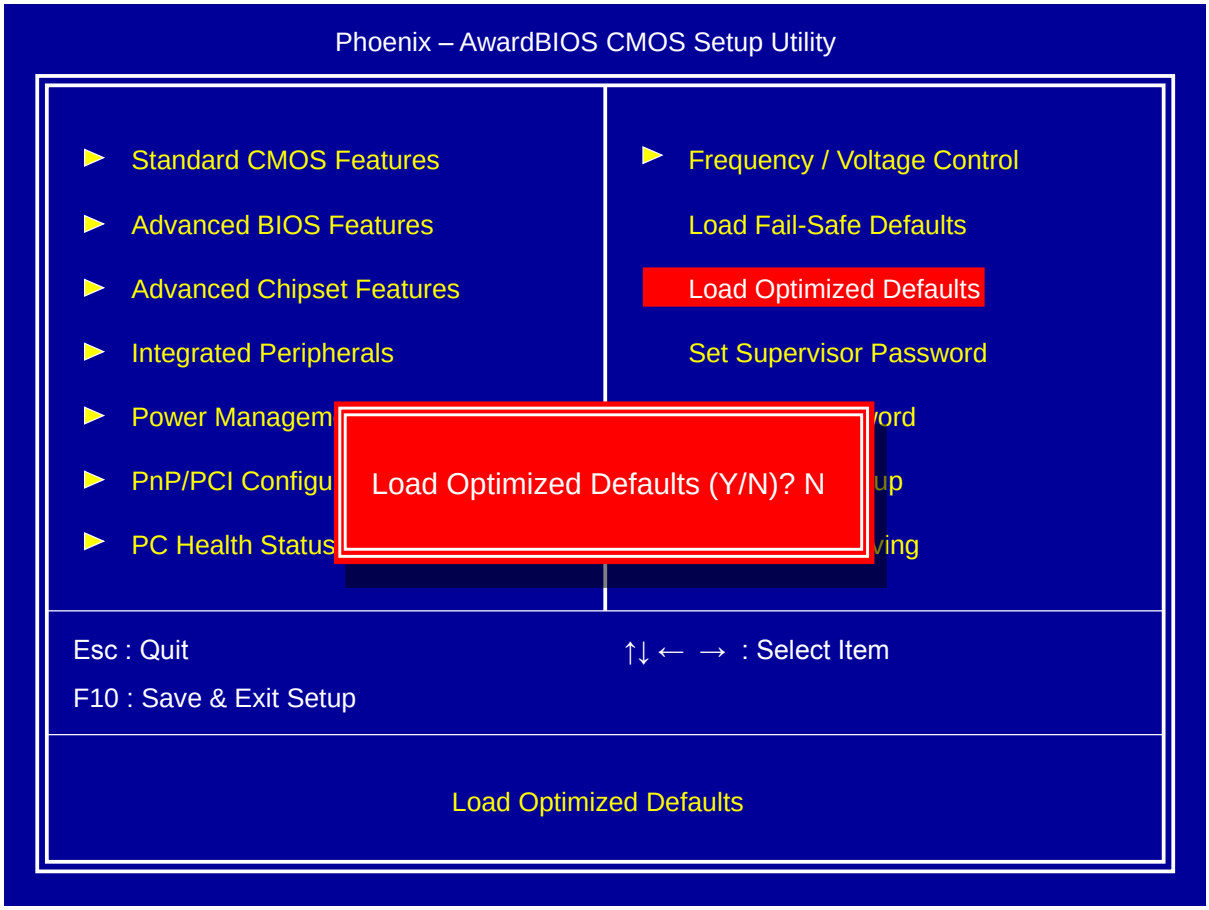
☐ **Spread Spectrum**
Select “Spread Spectrum” Enabled/Disabled.

3.10. Load Fail-Safe Defaults



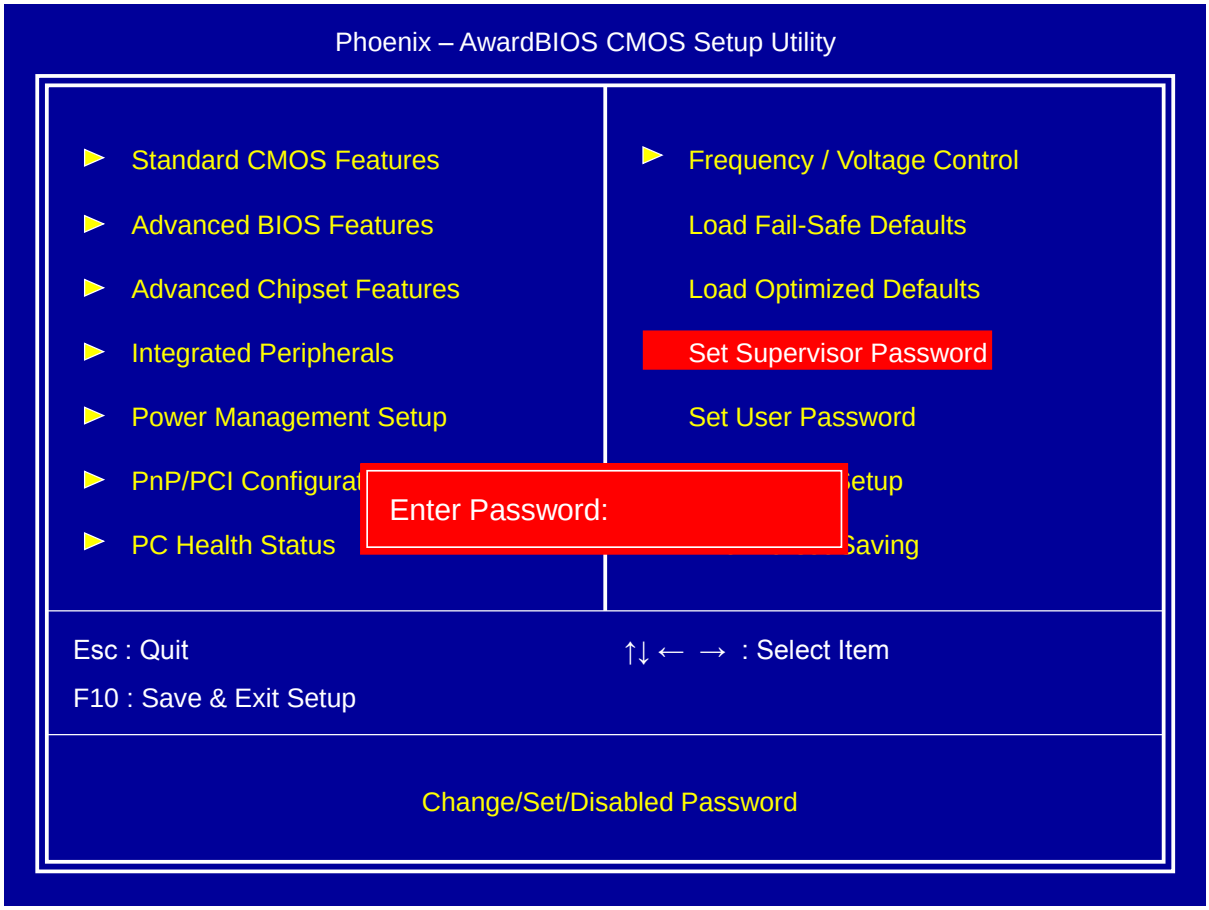
This item will set configuration for non-optimized system operation.

3.11. Load Optimized Defaults



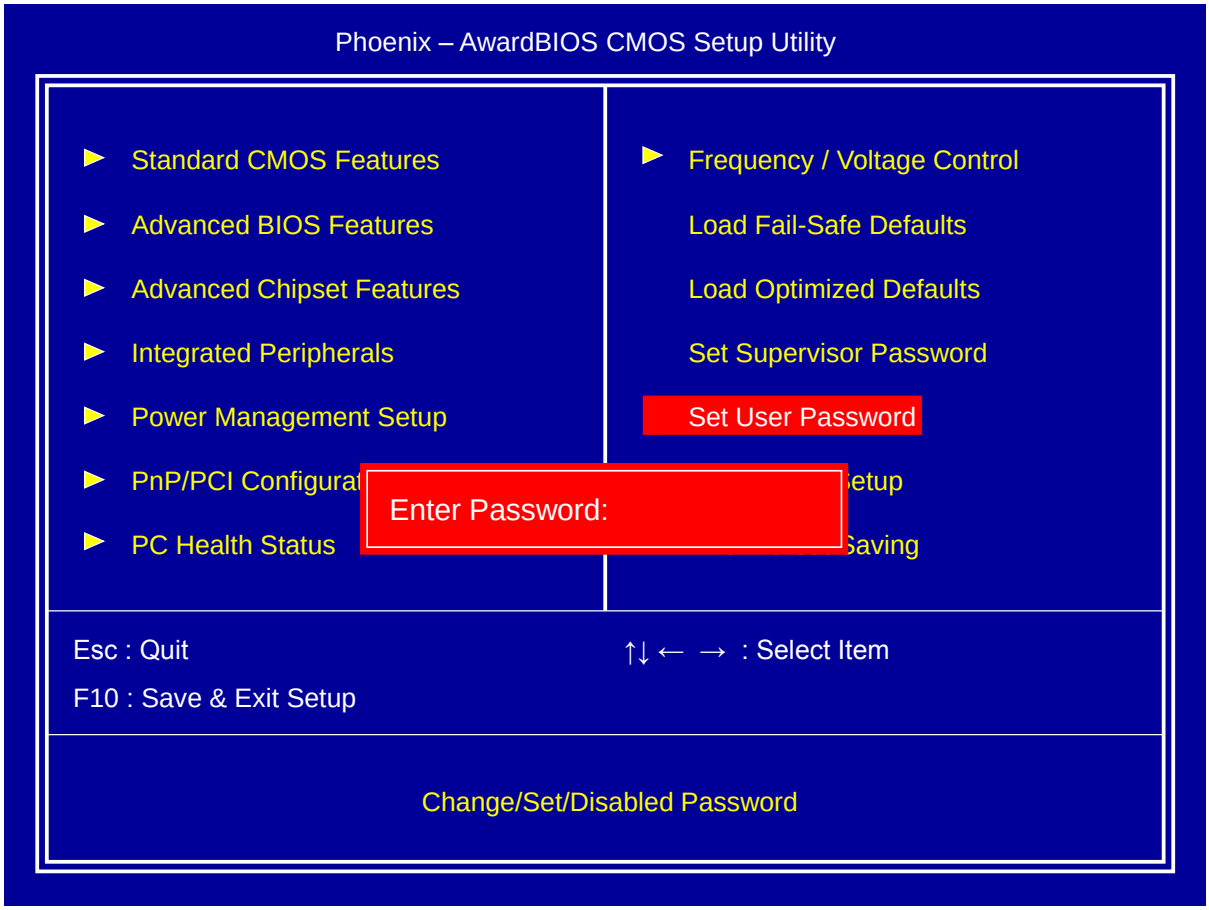
This item will restore factory default setting for optimized system operation.

3.12. Set Supervisor Password



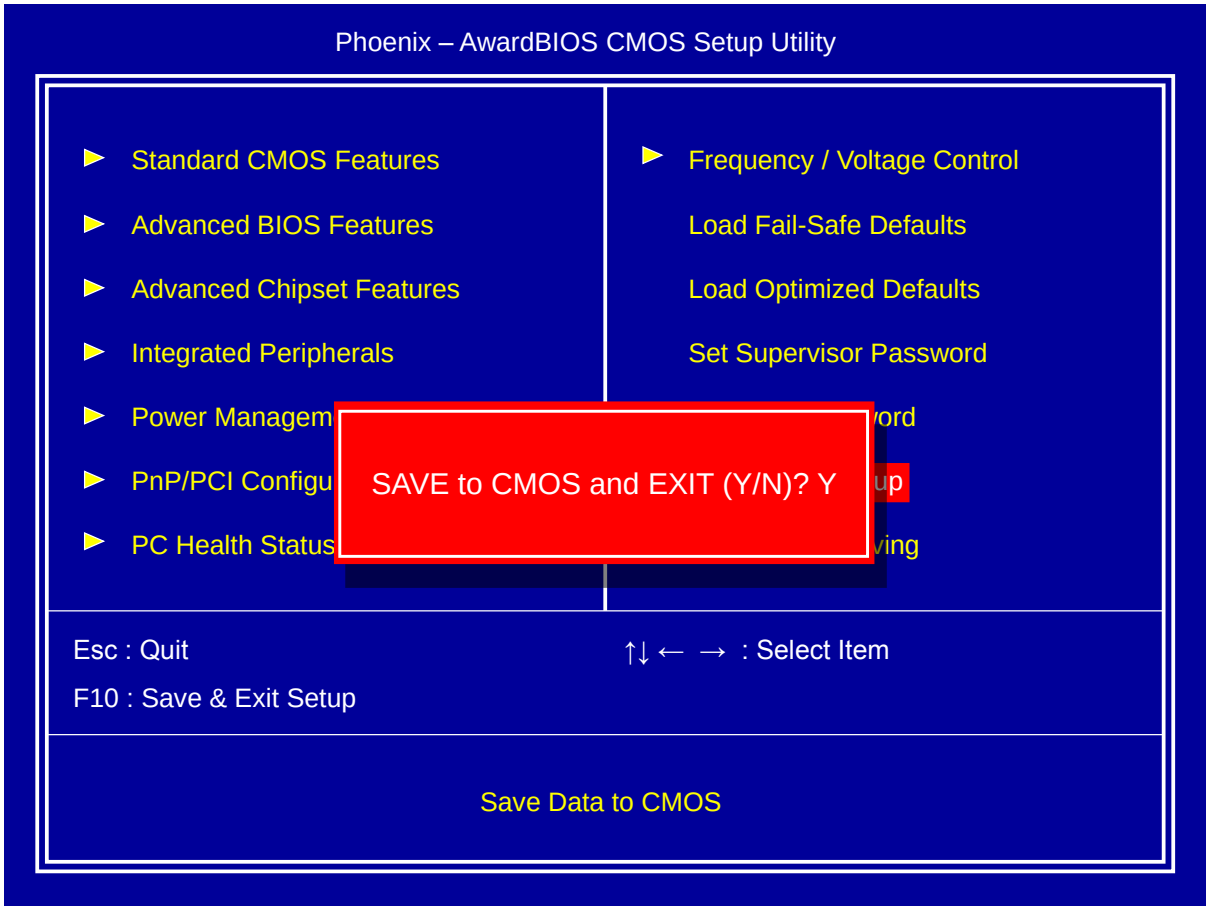
If set supervisor password, it will request typing password to enter BIOS setup utility.

3.13. Set User Password



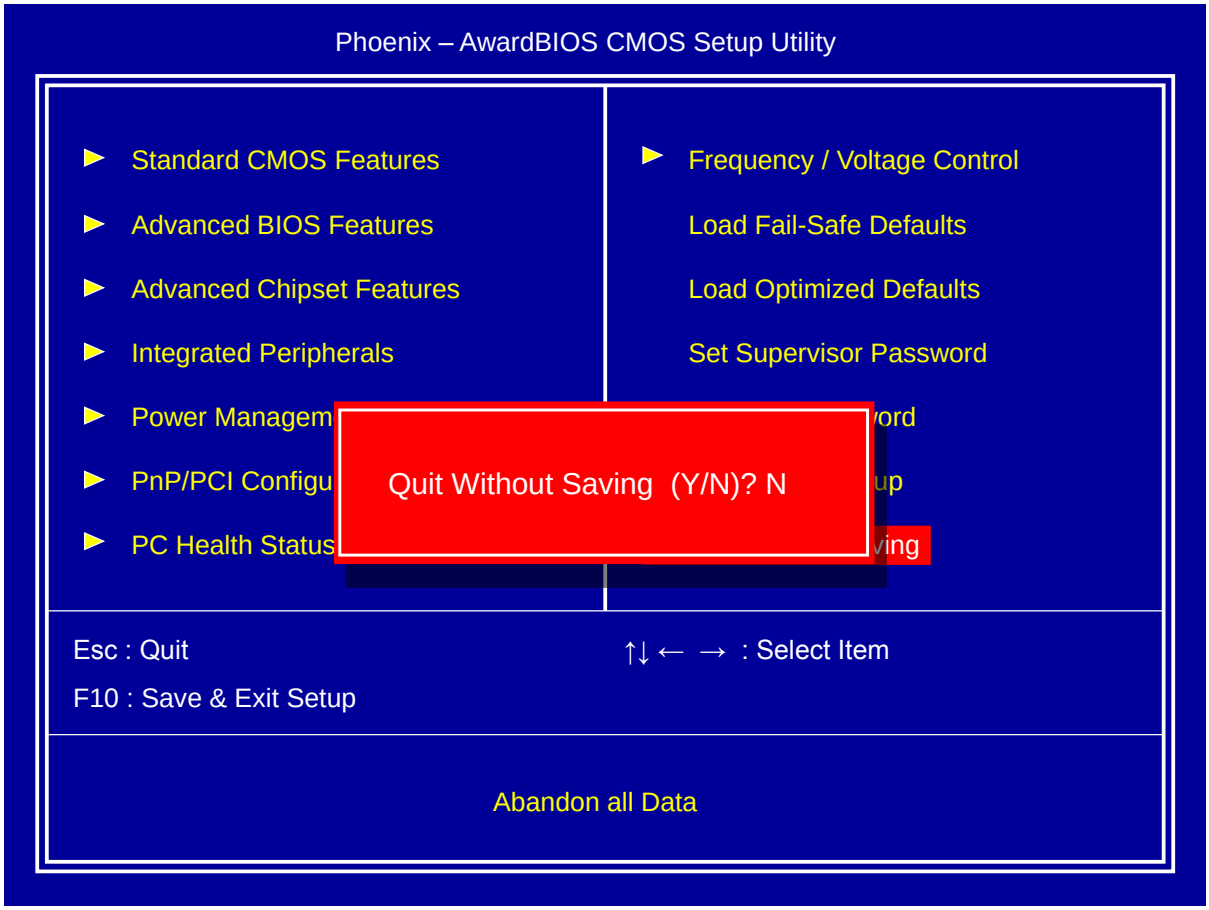
If set user password will request typing password to enter BIOS setup utility, and does not allow modifying configuration.

3.14. Save & Exit Setup



This item confirm save configuration or not before exit BIOS setup utility,
Press <Y> and <Enter> to save configuration, then reboot system.
Press <N> and <Enter> will back to BIOS setup utility.

3.15. Exit Without Saving



This item confirm save configuration or not before quit BIOS setup utility,
Press <Y> and <Enter> will not save configuration, then reboot system.
Press <N> and <Enter> will back to BIOS setup utility.

4. Install the Drivers of POS Terminal

Please place the supplied disc into the CD/DVD-ROM drive.
Browse the disc and open the folders required to install the driver(s).
Double click the folder “Driver & Utility” to access the folder.

There are categorized folders for POS Terminal, Peripherals and Touch Screen drivers.

To install the drivers of POS terminal:

a. Double click the folder “POS Terminal Driver”

b. There are subfolders as image below illustrated.
Please access the folder “Atom D525” for the drivers required.

c. Select the folder as the operating system required
(i.e. double click the folder “Win XP” for the Windows XP system, or
the folder “Win 7” for Windows 7)

d. There are categorized folders of components.
Select the folder to install the driver of POS terminal.

4.1. Install the Chipset Driver

a. Open (double click) the folder “Chipset”.

b. Double click the icon to start installation.

c. Click “Next” to proceed.

d. Read the License Agreement and click “Yes” to continue

e. Click “Next” to continue the setting process

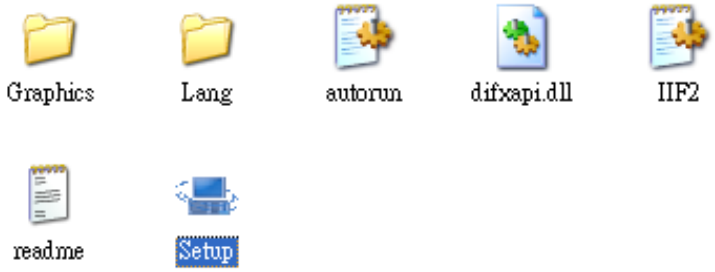
f. Select “Next” to continue the setting process

g. Select “Yes” and click “Finish”, and then restart the system

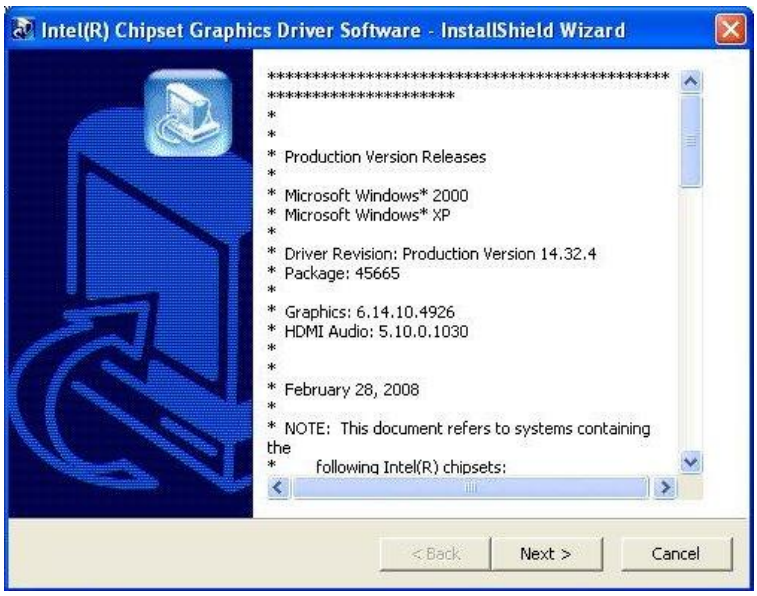
4.2. Install the Graphics Driver

a. Open (double click) the folder “Graphics”.

b. Access the sub folder and double click “Setup.EXE” to start the setting process

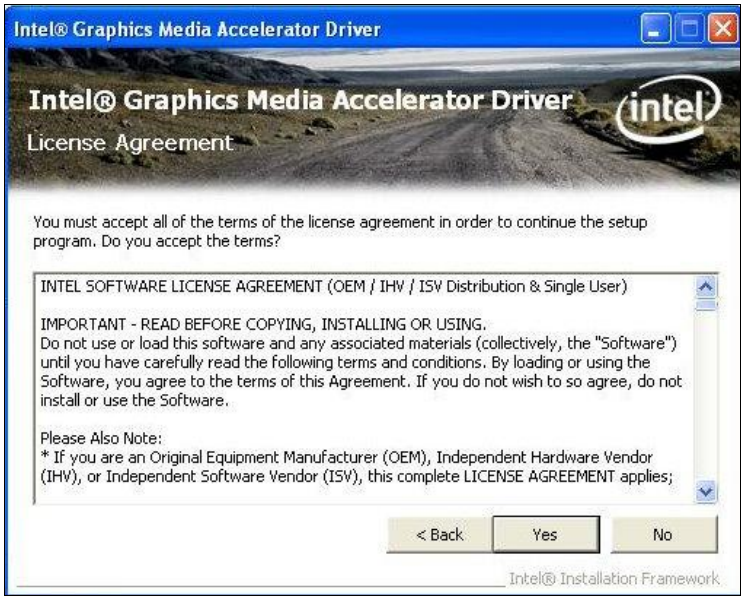


c. Click “Next” to continue. Click “Cancel” to abort the installation.

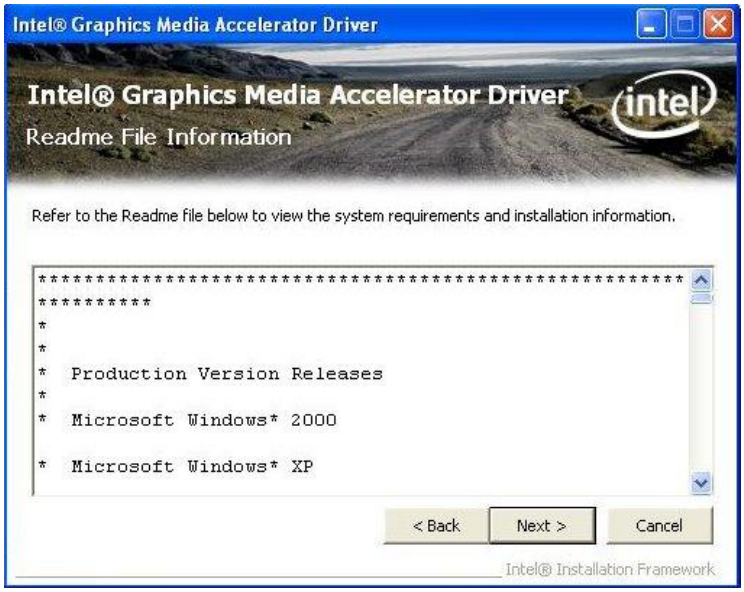


d. Click “Next” to proceed.

e. Declaration of License Agreement, click “Yes” to agree and continue.



f. Click “Next” to continue



g. Click “Next” to continue

h. The graphic card driver is successfully installed.

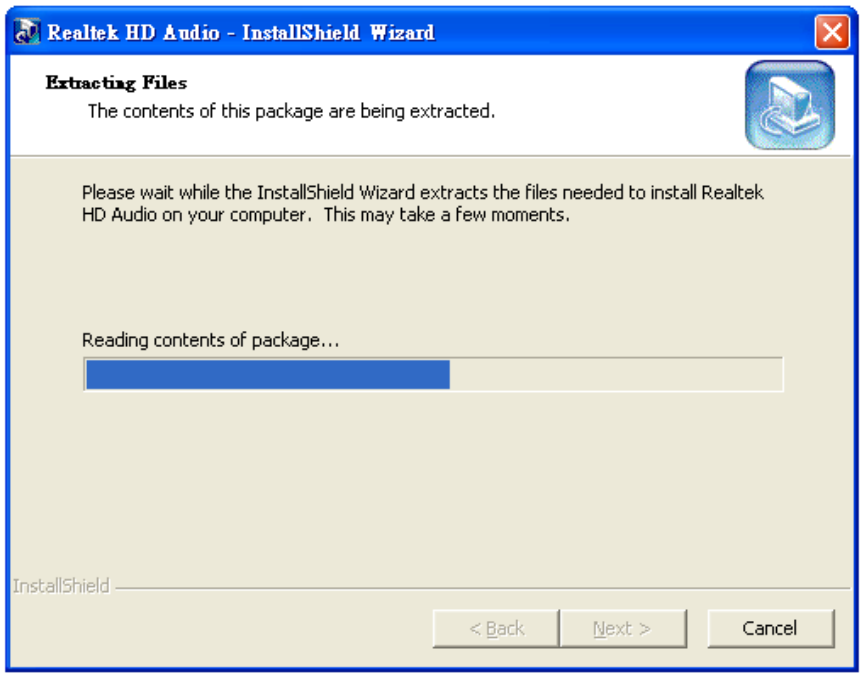
It's recommended to restart the system after the driver is installed.

Click "Finish" to restart the computer.

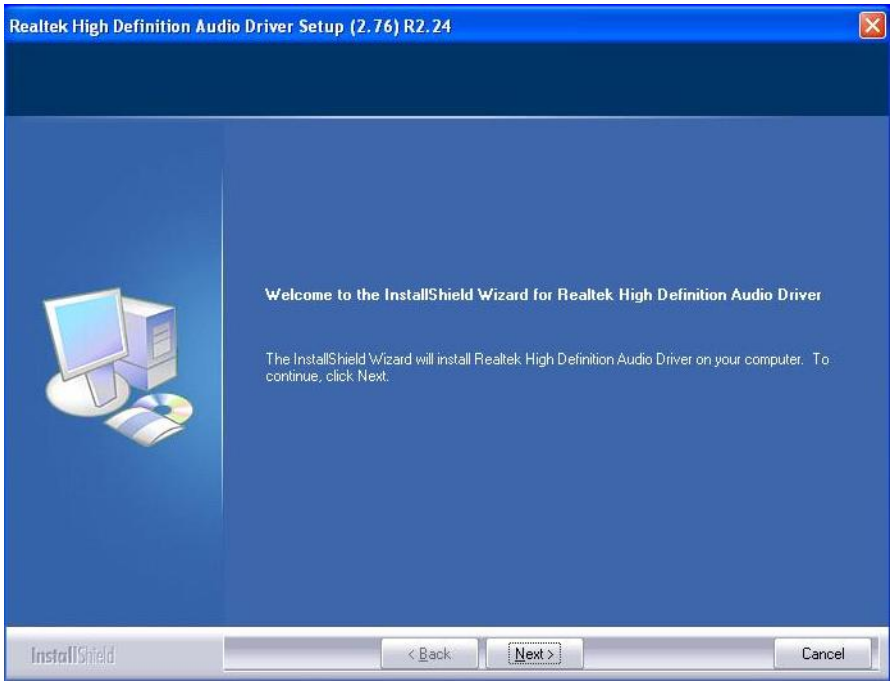
4.3. Install the Audio Driver

a. Open (double click) the folder “Audio”

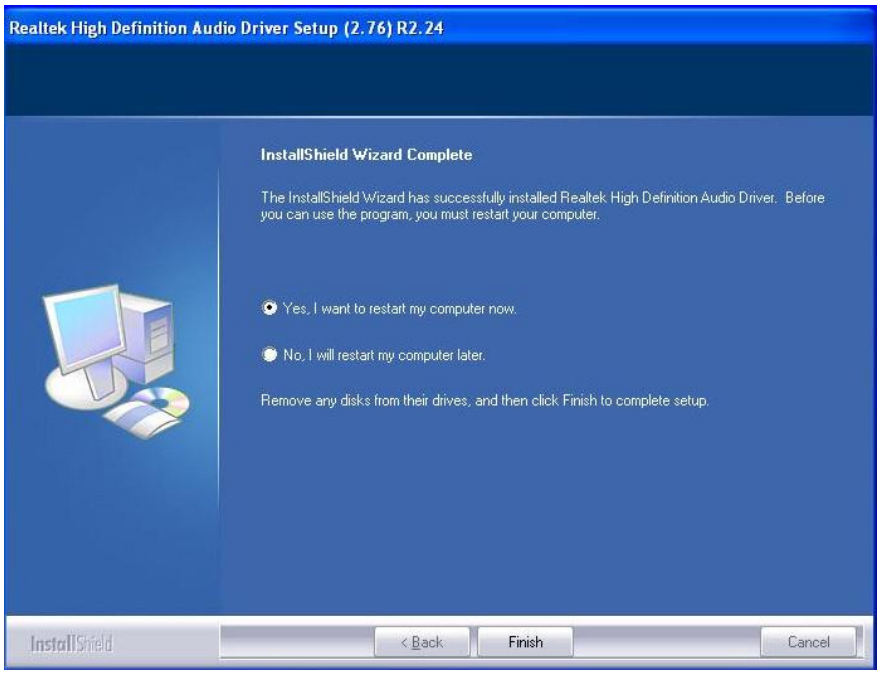
b. Double click the icon to initiate the Install Shield Wizard. The Install Shield Wizard will extract the contents and then start the installation



c. Click “Next” to start installing the driver to the computer.



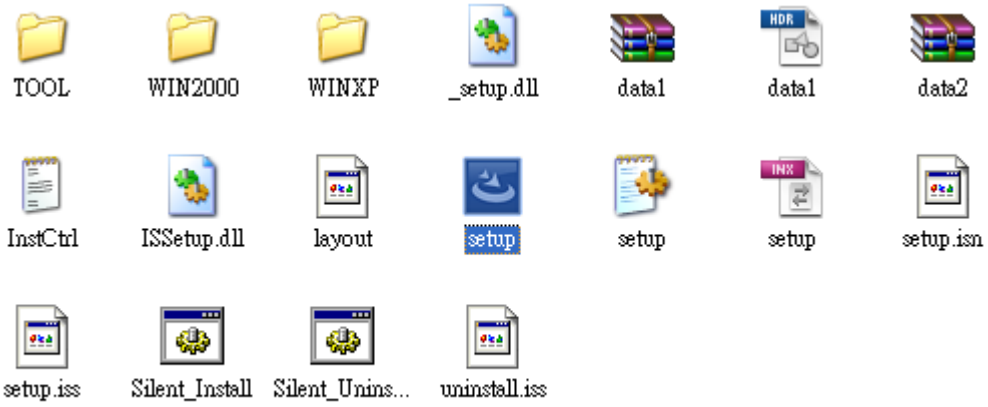
d. The audio driver is successfully installed.
It’s recommended to restart the system after the driver is installed.
Click “Finish” to restart the computer.



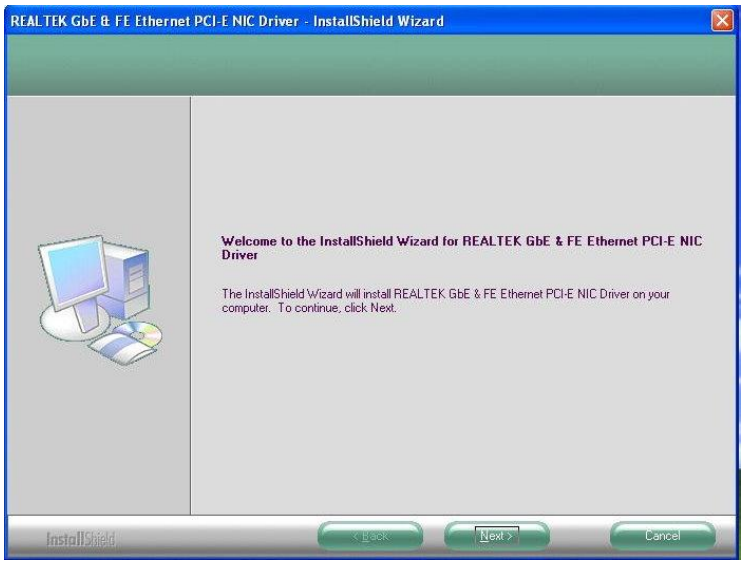
4.4. Install the LAN Driver

a. Open (double click) the folder “LAN”

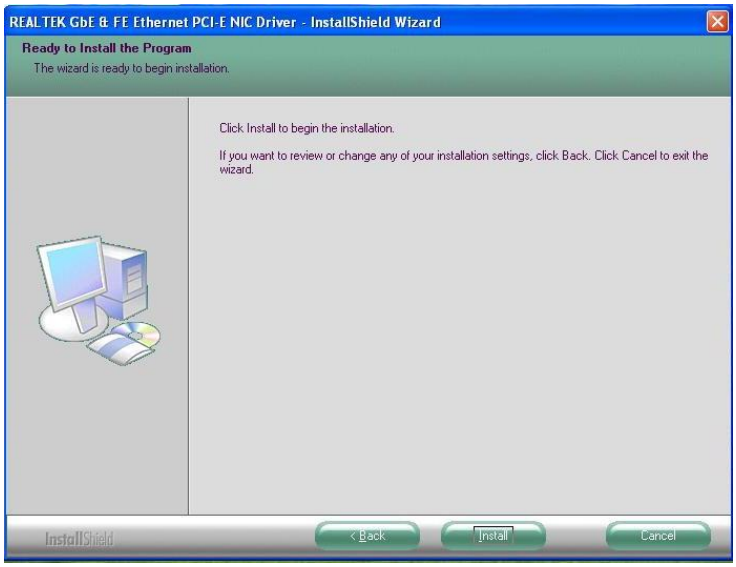
b. Access to the subfolder.
Double click the file “Setup.EXE” to start the installation.



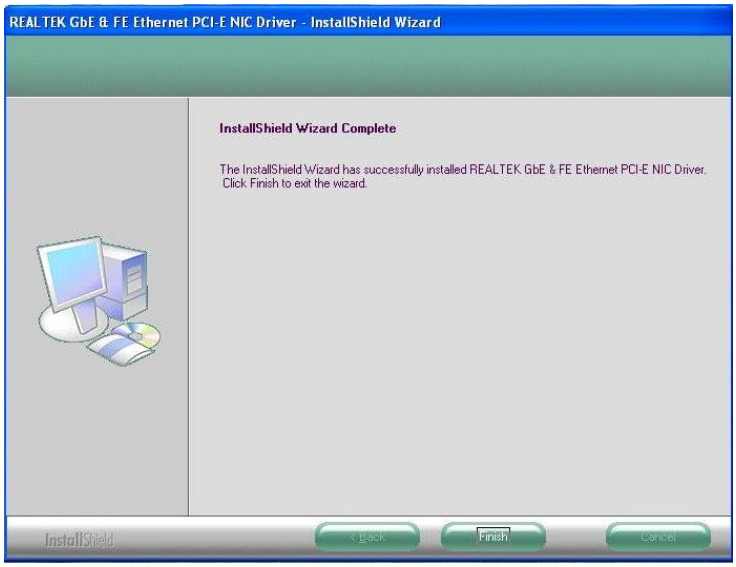
c. Click “Next” to start installing the driver to the computer.



d. Click “Install” to continue the setting process



e. Click “Finish” to finish the installation



5. Install the Touch Screen Driver

Please place the supplied disc into the CD/DVD-ROM drive.

Browse the disc and double click the folder “Driver & Utility” to access the folder.

There are categorized folders for POS Terminal, Peripherals and Touch Screen drivers.

To install the drivers of Resistive Touch Panel:

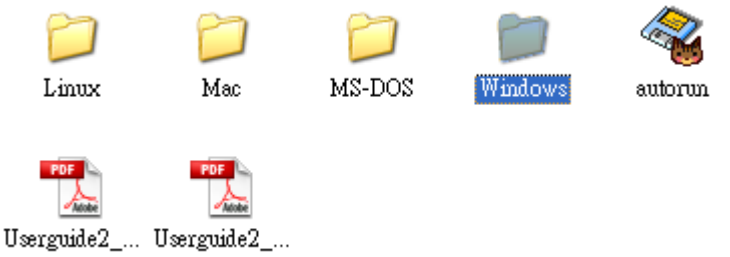
a. Double click the folder “Touch Driver” to access the subfolder.

b. There are drivers of Resistive type and SAW type touch screen.
To install the driver for Resistive type,
select (double click) the folder “Resistive Touch” to start installation.

c. Select the folder “Resistive Touch(Abon)” and access the subfolders.

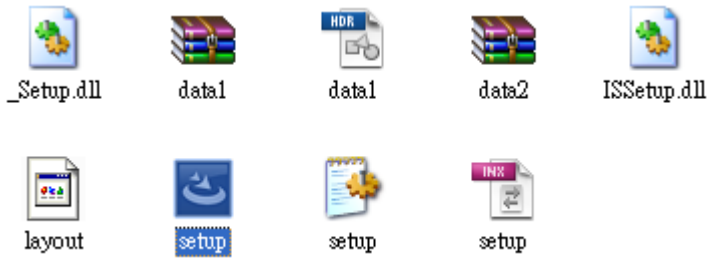
5.1. Install the Driver of Resistive Type Touch Panel

a. Select the subfolder according to the operating system and prepare for installation (for example:: select “Windows” for Windows XP operating system)



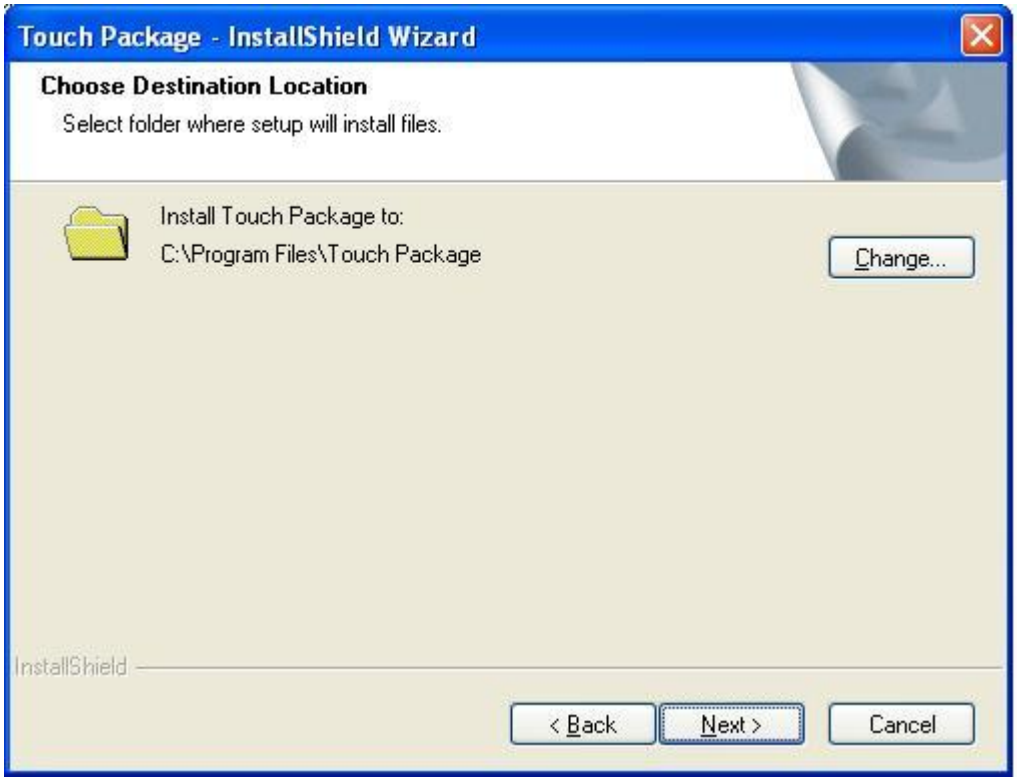
b. Select the subfolder according to the operating system installed. (for example: select “Win 7 & Vista & XP & 2K & ME98-32bits” for the Windows XP 32-bit version)

c. Double click the file “Setup.EXE” to start the installation.

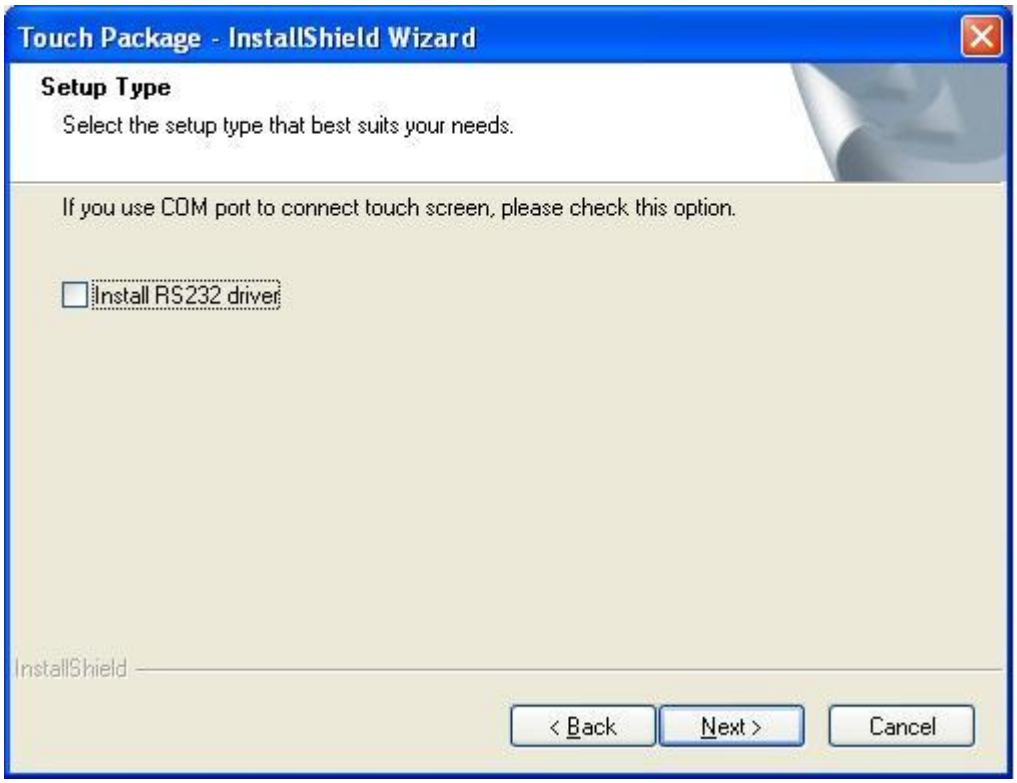


d. Click “Next” to start the installation.

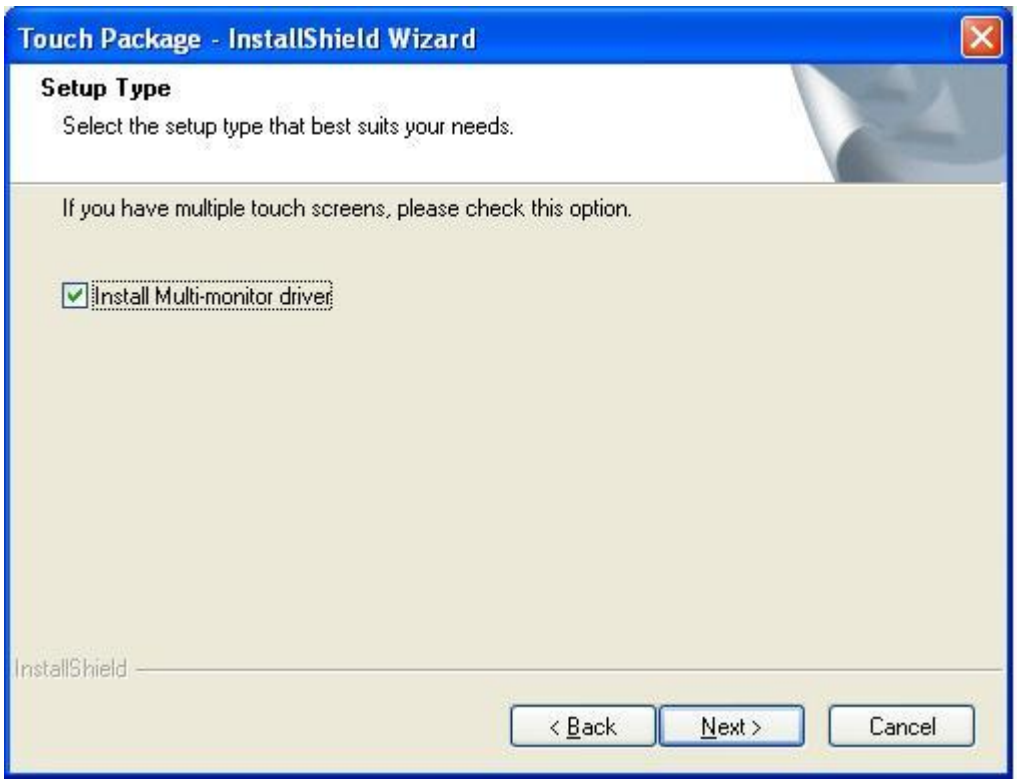
e. Select the destination folder and click “Next” to continue.



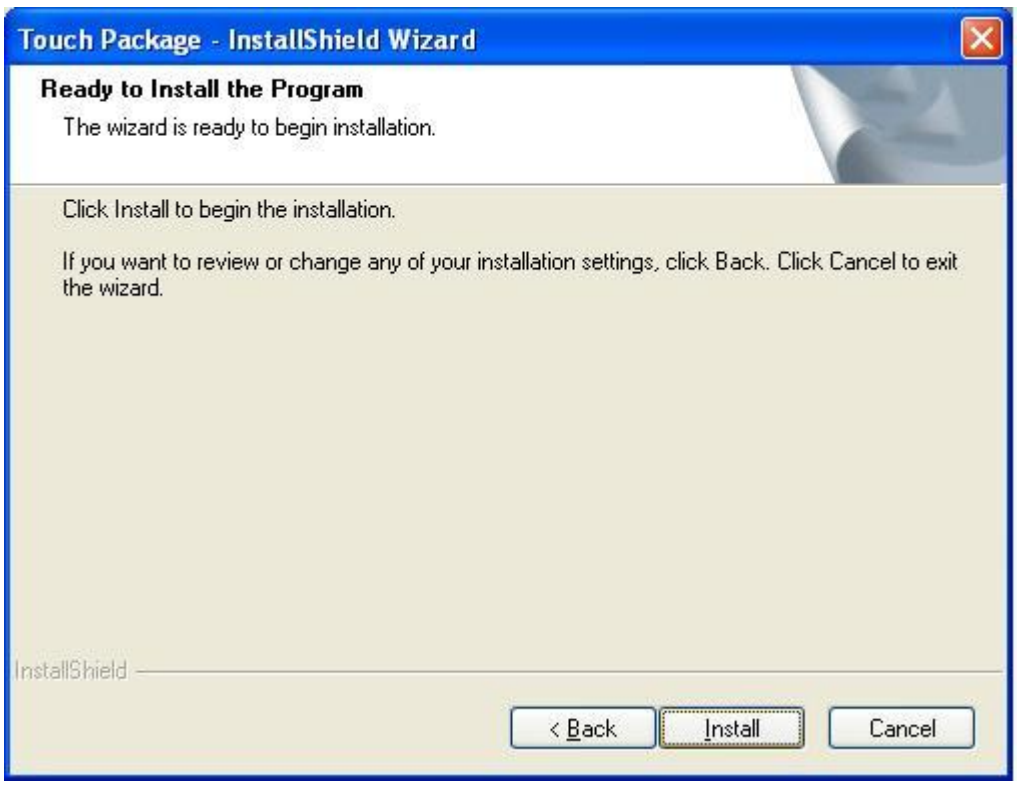
f. COM port (RS-232) driver installation.
If the touch screen is for RS-232 interface, please click the checkbox “Install RS232 driver” additionally to install the driver.
Click “Next” to continue.



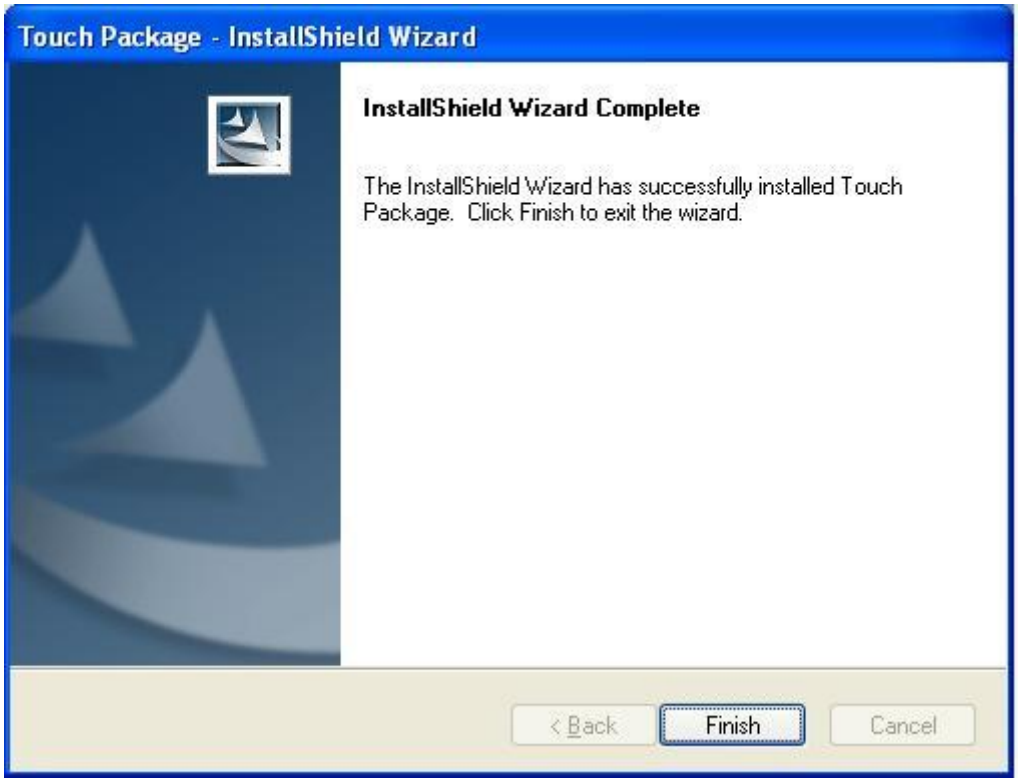
g. Multi-monitor driver installation:
Click the checkbox “Install Multi-monitor driver” to install the driver.



h. Click “Install” to start the installation.



i. Installation completed. Click “Finish” to exit.



j. Initializing the touch tool program.

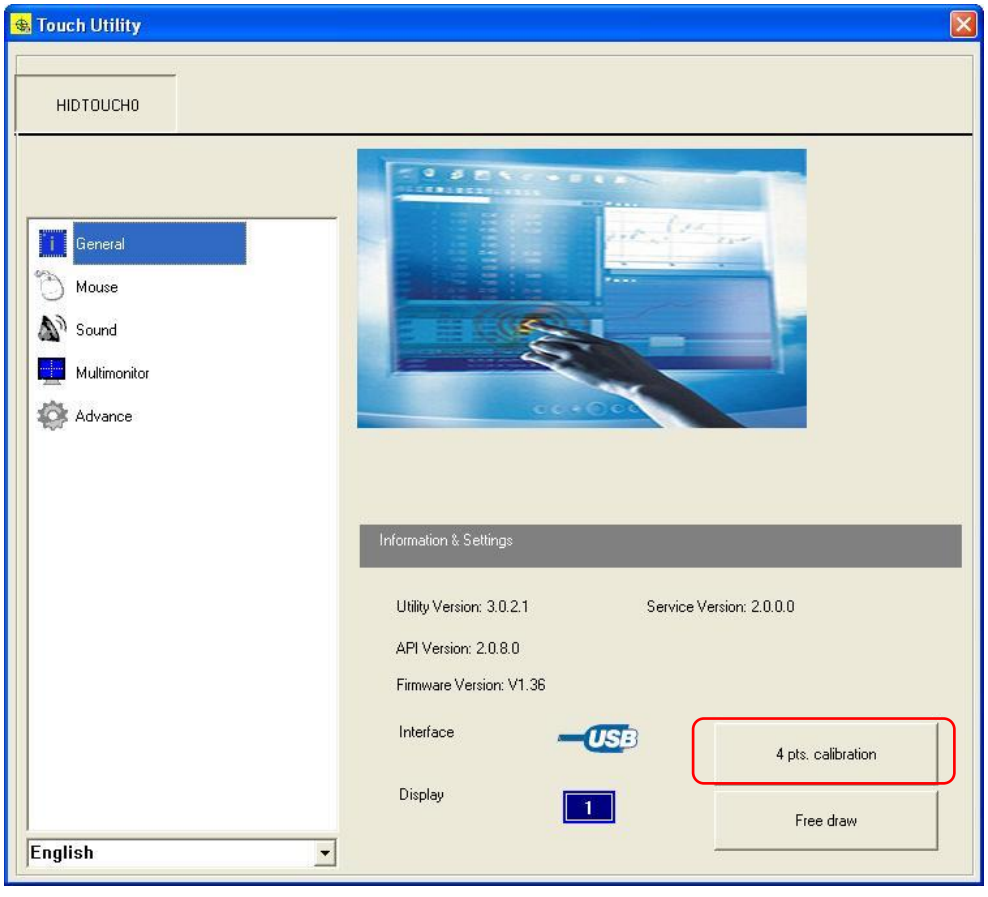
k. Installation completed. There is an icon on the screen for quick launch.

5.2. Touch Screen Calibration (Resistive Type)

There is a Utility “Touch Tool” for Touch Screen Calibration. 

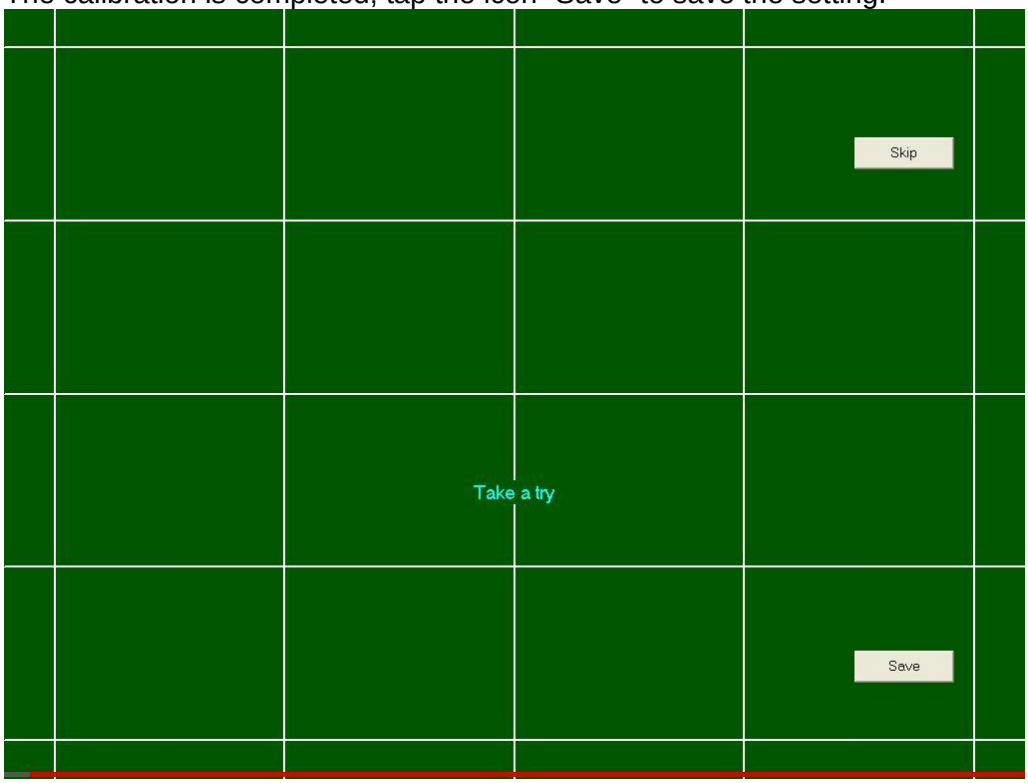
a. Double click the icon to access the utility.

b. User can perform 4-point-calibration by selecting the function “4 pts calibration".



c. There are 4 calibration points on the screen.
Tap the blinking mark to complete the first calibration point.
Proceed to the next mark and complete all calibration points

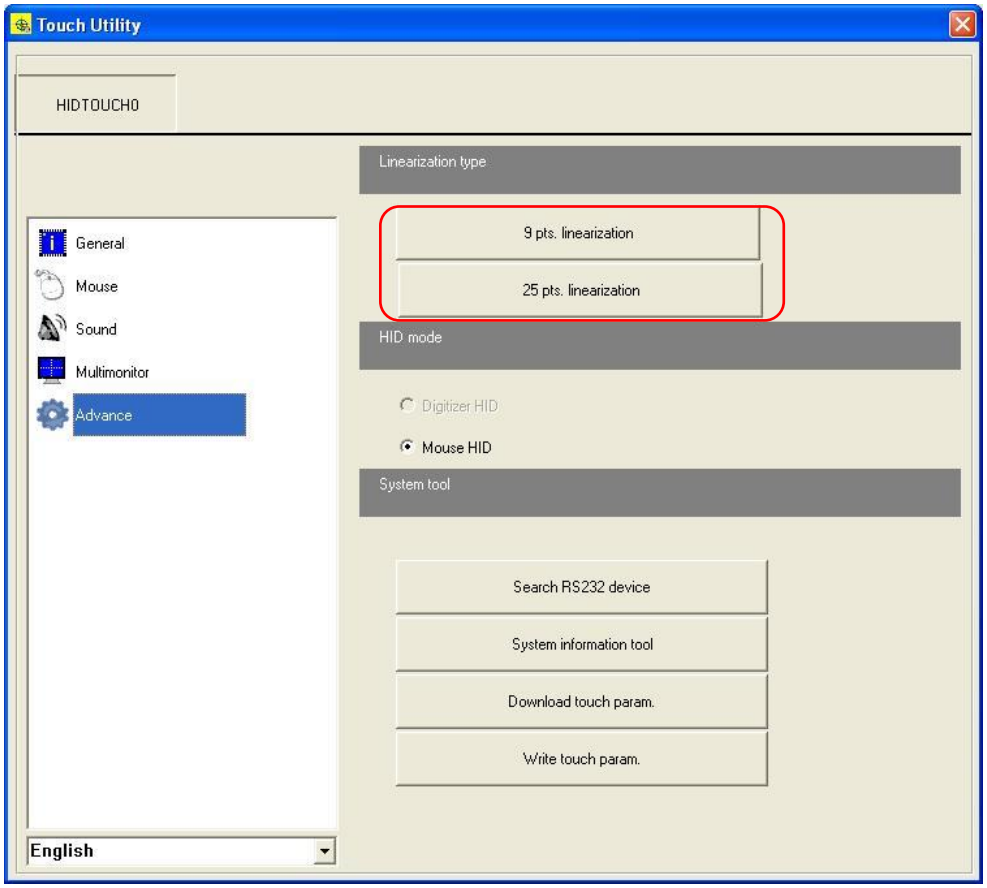
d. The calibration is completed; tap the icon “Save” to save the setting.



Tips: Advanced 9-point/25-point Calibration

There are advanced 9-point calibration and 25-point calibration for more accurate calibration demands.

Access “Advance” menu, and select either “9 pts linearization” or “25 pts linearization” to calibrate your touch screen.



6. Peripherals Testing

The POS terminal is equipped with mainstream interfaces for the connection of peripherals and devices. If the POS is equipped with optional peripherals (for example: Wi-Fi module, magnetic stripe card reader, customer display, or a cash drawer). Please install the driver or perform the tests prior or to the POS system is operational.

Note:
For more information relating to the other optional peripherals, please contact the local representatives or technical support personnel of the nearest providers.

Please place the supplied disc into the CD/DVD-ROM drive.
Browse the disc and double click the folder “Driver & Utility” to access the folder.

There are categorized folders for POS Terminal, Peripherals and Touch Screen drivers.
Select “Peripherals” to access the subfolders.

The subfolders of peripherals are as follows:

Select (double click) the folder for the peripheral required.

6.1. Install the Wi-Fi Driver (Optional)

There are categorized subfolders for POS Peripherals.

Select “WiFi” to access the subfolders.

There are two drivers for USB type and Mini-PCIe type.

For USB Type Wi-Fi module:

Open the folder “LR802UKN3(USB)”to find the appropriate driver:

For Mini PCIe Type Wi-Fi module:

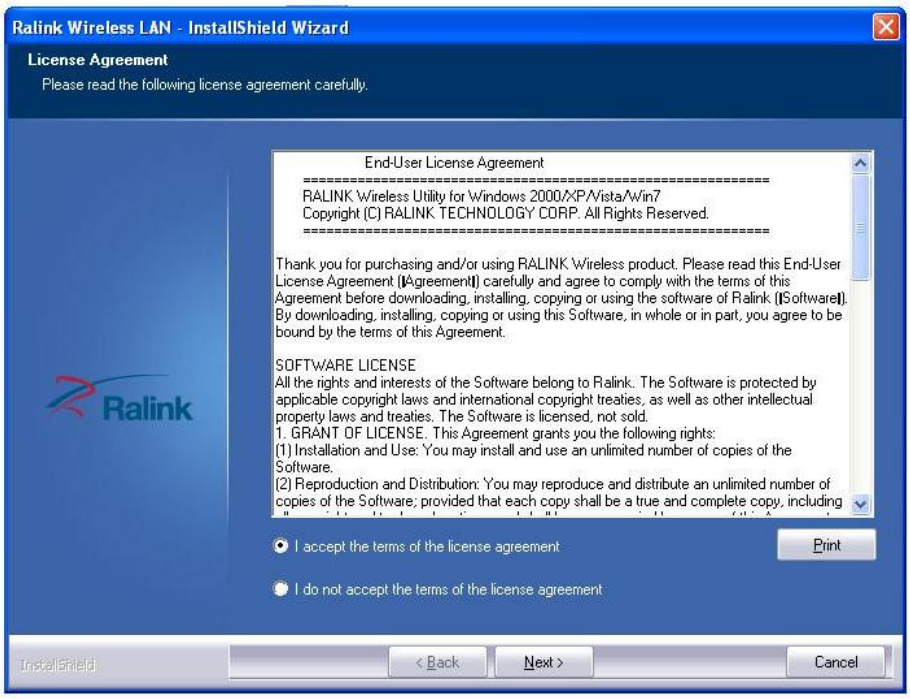
Open the folder “RT2860 (Mini-PCIe)” to find the appropriate driver:

Please refer to the local representative for the hardware information before install the driver.

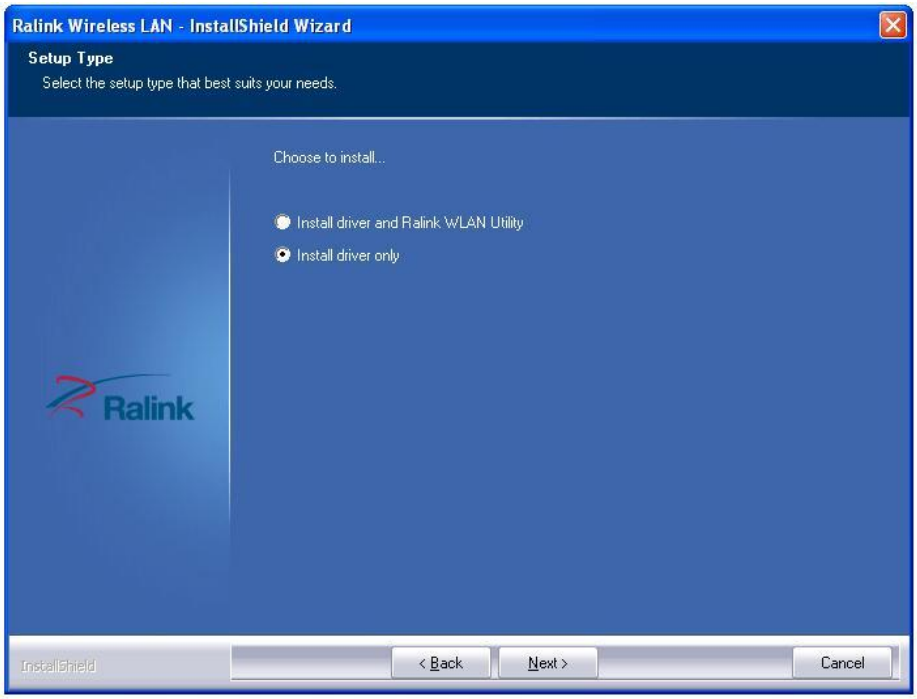
a. Open the folder to find the appropriate driver.

b. Access the subfolders and double click the icon to install the driver.

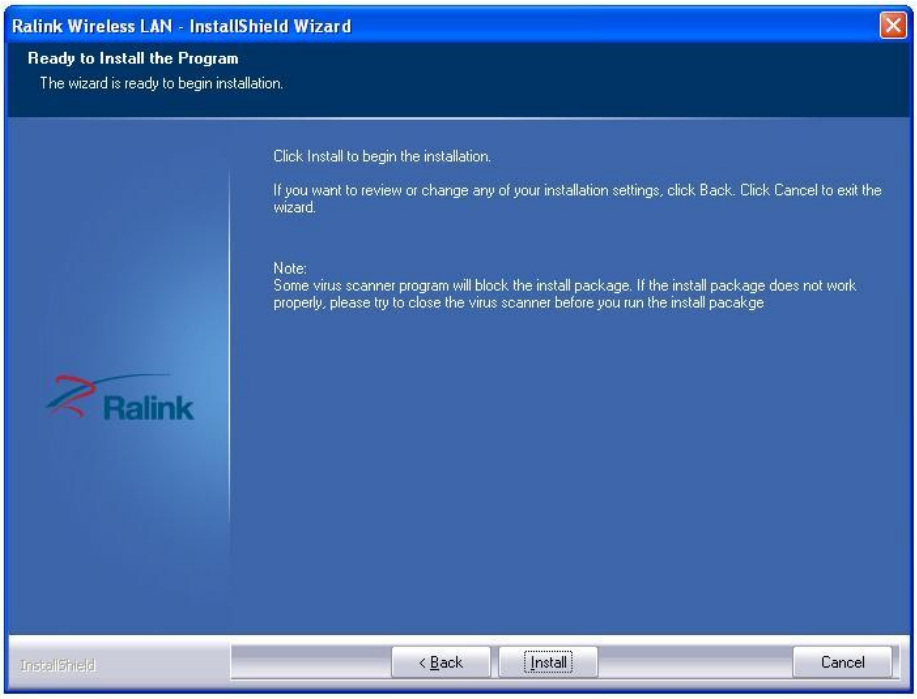
c. Click “Yes” to accept the terms of License Agreement and continue.



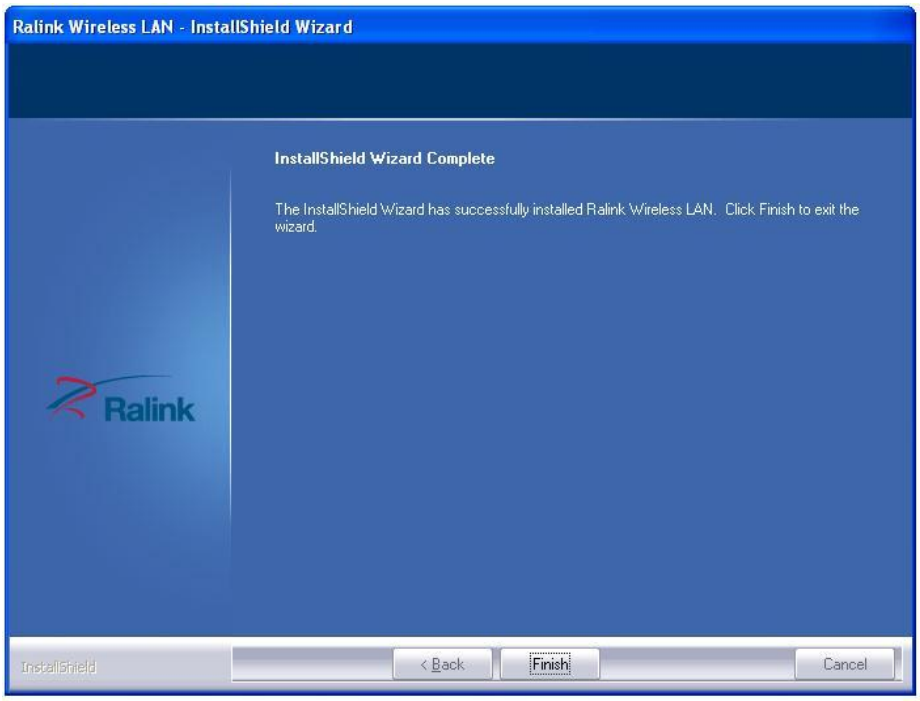
d. Select “Install driver only” and click “Next” to continue.



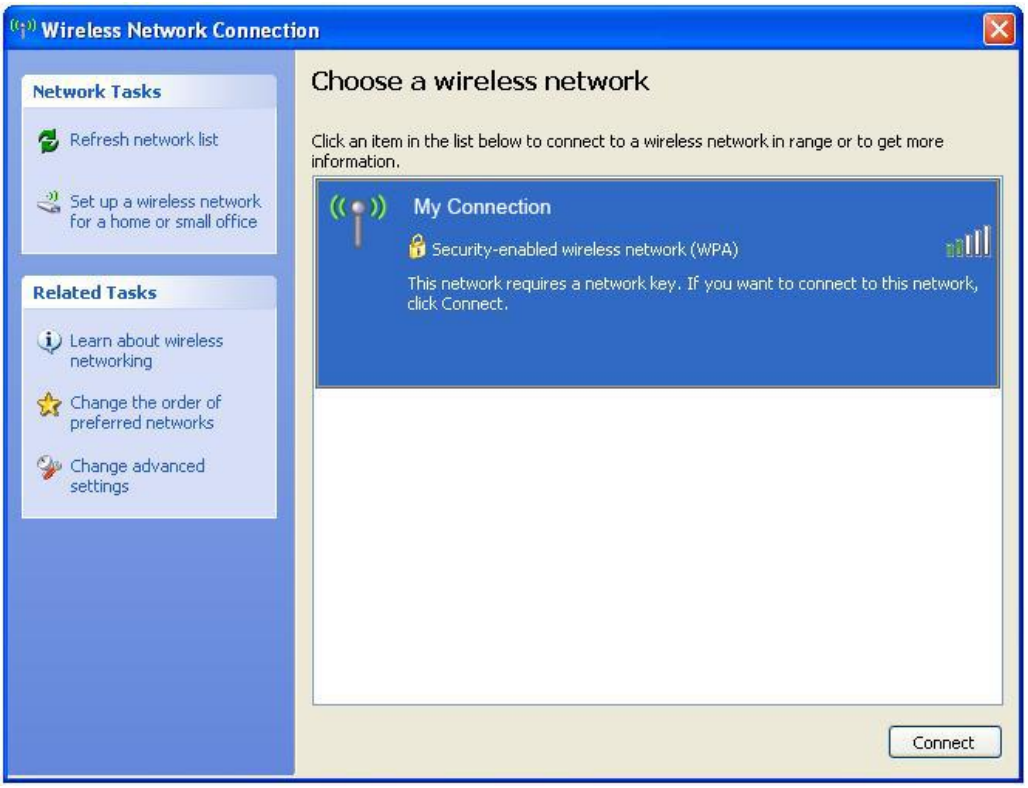
e. Click “Install” to begin Installation.



f. The Wi-Fi driver is successfully installed.
Click “Finish” to complete and exit the Wizard



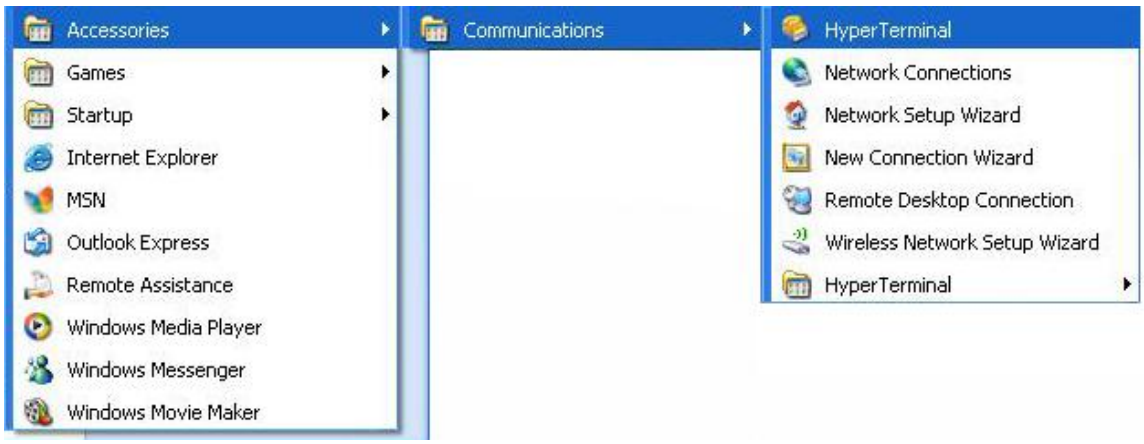
Note:
To access the wireless network and initiate the connection, please refer to the service provider for further information.



6.2. Test Your Magnetic Stripe Card Reader(MSR) and i-Button Module

For RS-232 Interface:

a. Execute Start >> All Programs >> Accessories >> Communications >> Hyper Terminal.

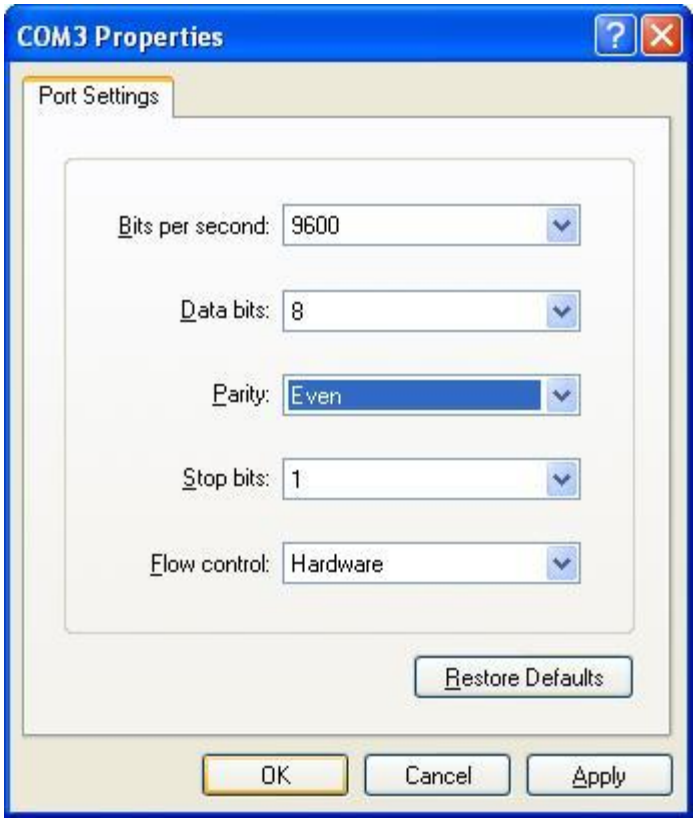


b. Enter a name and press “OK.”

c. Select “COM3” and press “OK.”

d. Port Setting (MSR+i-Button Module):

If the POS unit is equipped with MSR+i-Button module,
set Bits per second to 9600, Data bits to 8, Parity to Even, Stop bits to 1,
and Flow control to Hardware.
Press “OK." to continue

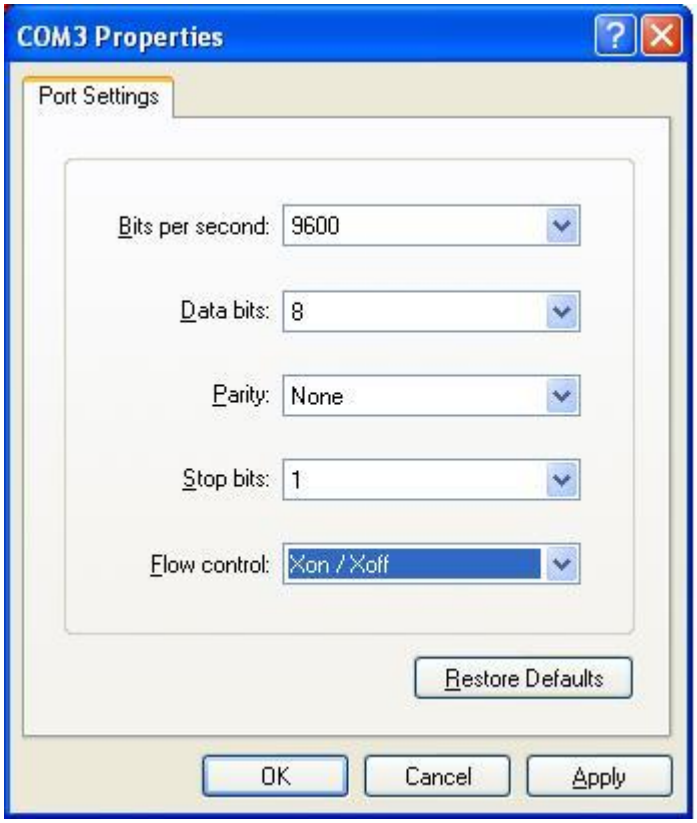


e. Port Setting (MSR Module without i-Button):

If the POS unit is equipped with MSR module only.

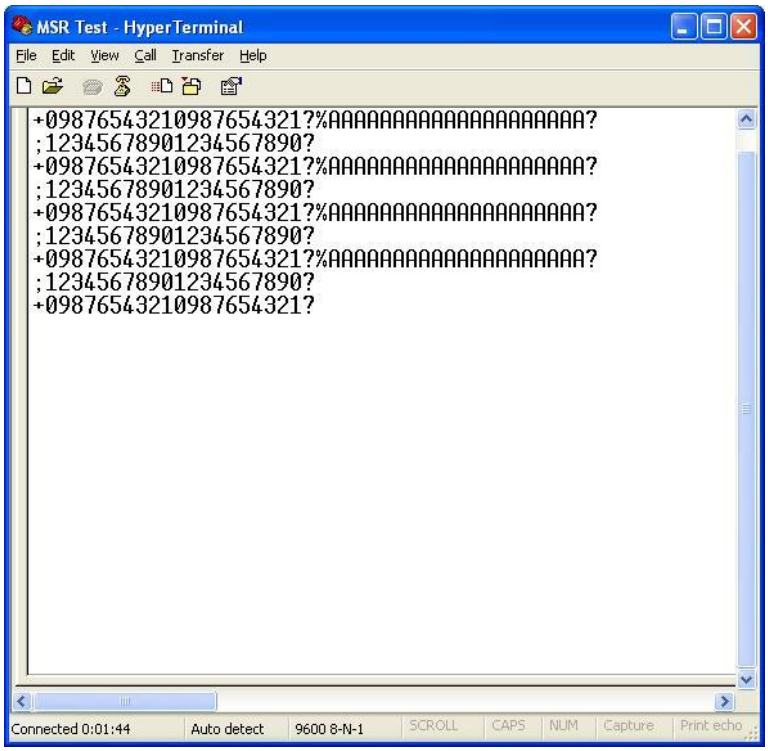
Set the Baud Rate (Bits per second) to 9600, Data bits to 8, Parity to None, Stop bits to 1, and Flow control to Xon/Xoff.

Press “OK." to continue



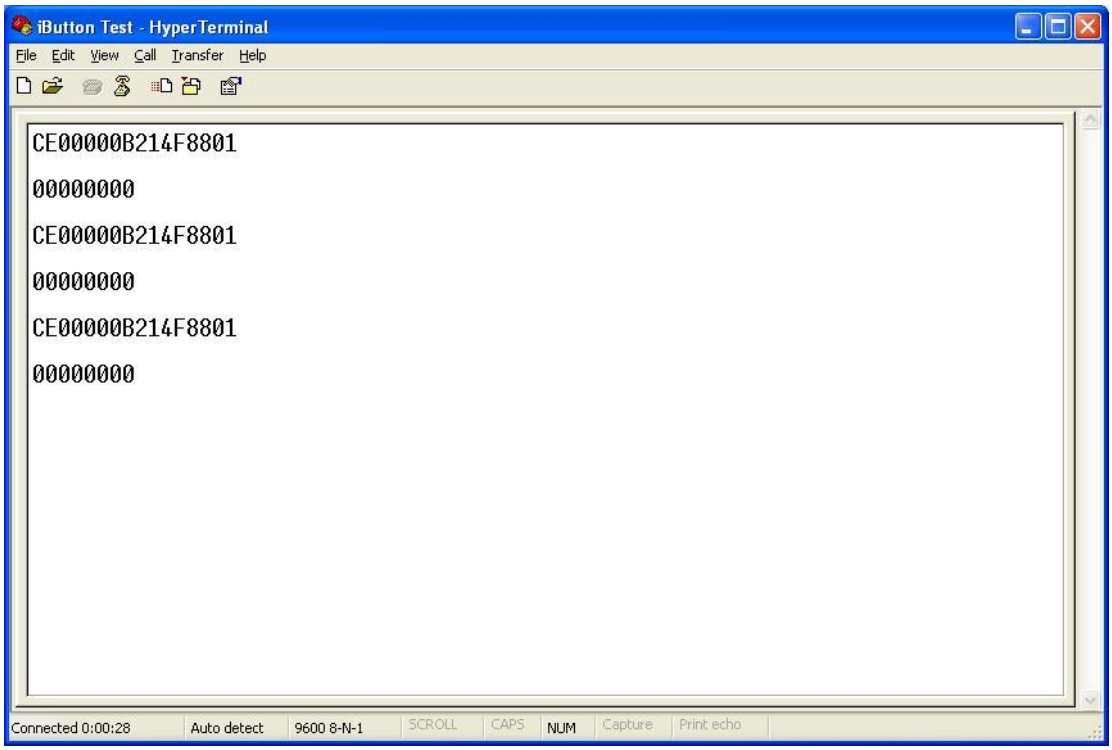
f. MSR Test:

Swipe a card through the card reader and the information will be displayed on the terminal.



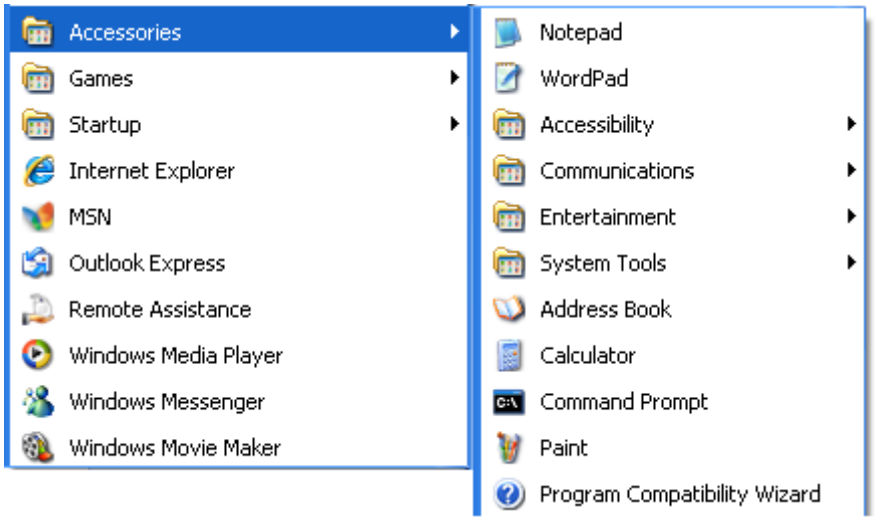
g. i-Button Test:

Attach the i-button to the reader and the information will be displayed on the terminal



For Keyboard Wedge Interface:

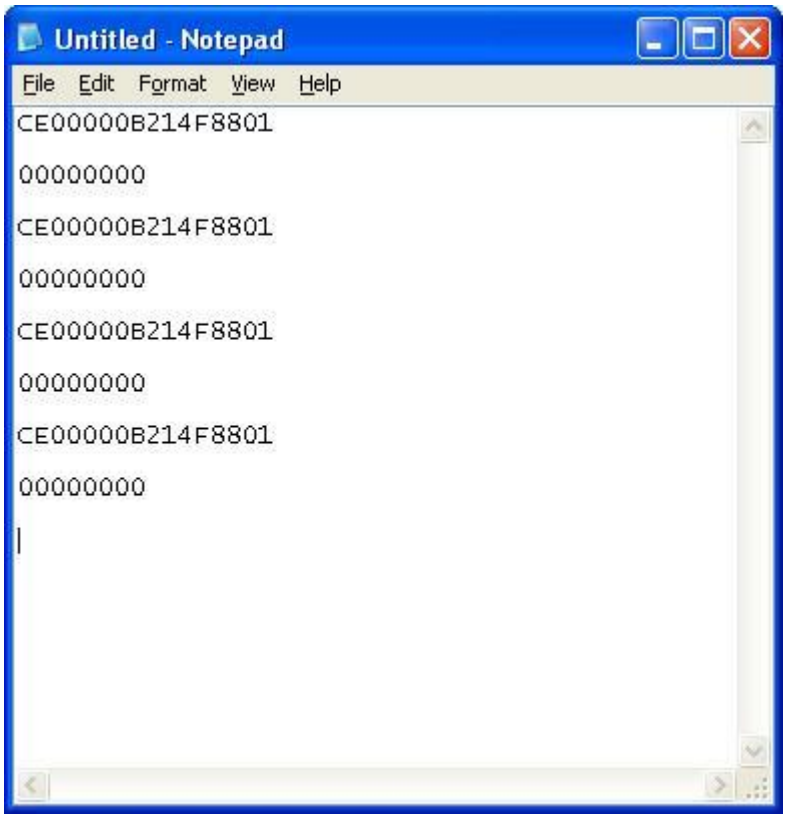
a. Execute Start >> All **Programs** >> Accessories >>Notepad.



b. **MSR** Test**:**
Swipe a card through the reader and the information will be displayed on the window

c. i-Button Test:

Attach the i-button to the reader and the information will be displayed on the window



6.3. Test Your Customer Display

There are categorized subfolders for POS Peripherals.

a. Select (double click) the subfolder “Customer Display”.

b. There are two folders for LCD type Customer Display (DSP) and Vacuum Fluorescent type Display (VFD).
Select the folder by the Customer Display installed.

c. Select the subfolder “Test Utility”.

d. Double click the file “BREAKOUT” to initiate the program.

e. The Communications Window pops up and ready for test.
Enter any keys on the window and the texts will display on the customer display

The texts are displayed on the customer display.

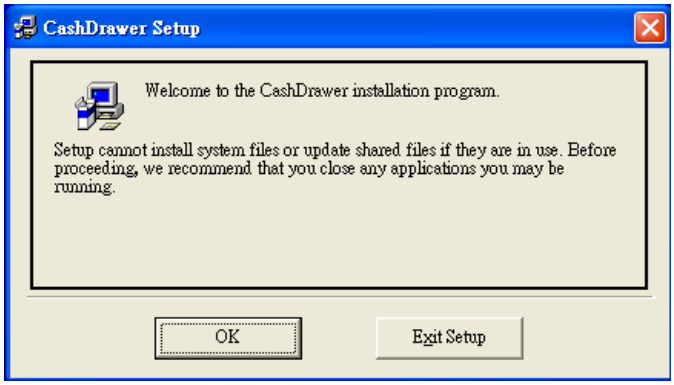
f. To terminate the program, click (X) to close the Communications Window.
There is a pop up window for notice. Click “Exit Now” to terminate the program.

6.4. Cash Drawer

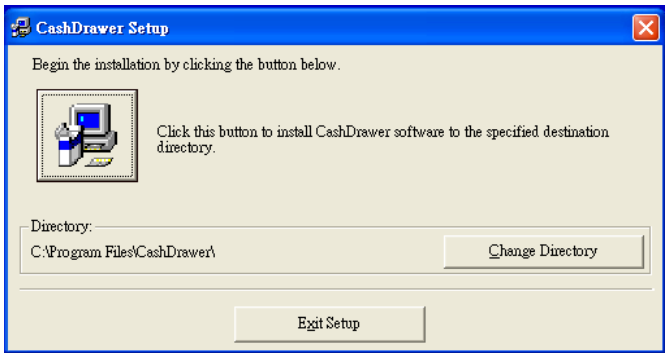
There are categorized subfolders for POS Peripherals.
Select “Cash Drawer” to access the subfolders

a. Open the folder “Peripherals” “Cash Drawer” and double click the file “setup.EXE”

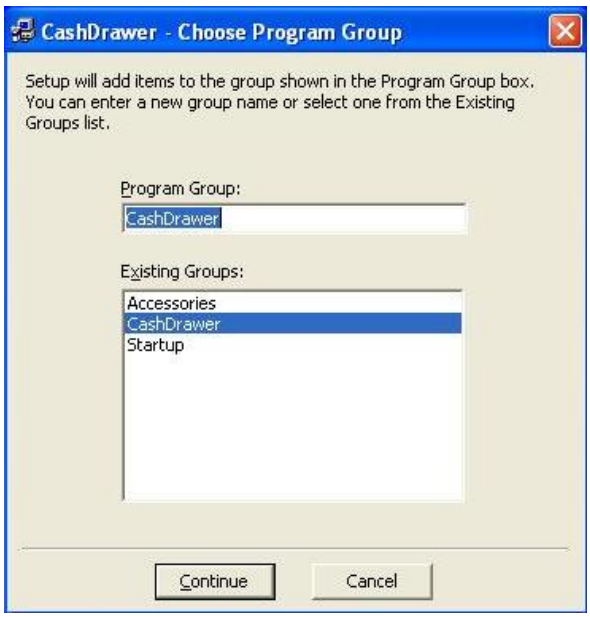
b. Click “OK” on the welcome window.



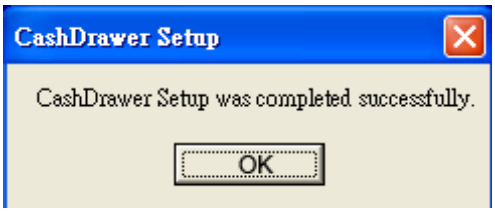
c. Select the destination folder and click the icon to start the installation.



d. Select an existed group name or enter a new name.
Click “Continue.” to proceed.

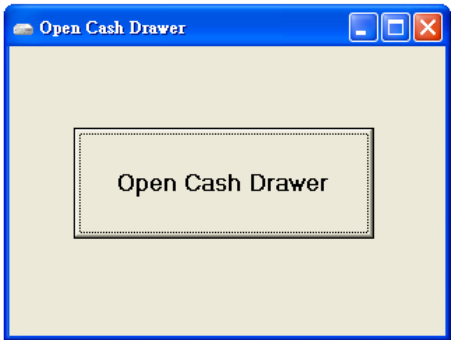


e. Click “OK” to finish the installation.



f. Execute **Start** >> **All Programs** >> **Cash Drawer** >> **Cash Drawer** to open the program.

g. Click “Open Cash Drawer” on the window, and the connected cash drawer will open.



Note:

The program is for testing only.

If editing AP Open drawer is required, please refer to the following command set.

Cash Drawer Controller Register

Register Location: I/O port 280h

Attribute: Read/Write

Size: 8 bit

Bit 0~3, 5~7: Reserved

Bit 4: Cash Drawer “DIO OUTPUT”, pin output control.

= 1: Open the Cash Drawer

= 0: Close the Cash Drawer

Control Command Example

Run “Debug.EXE” under DOS or Windows98

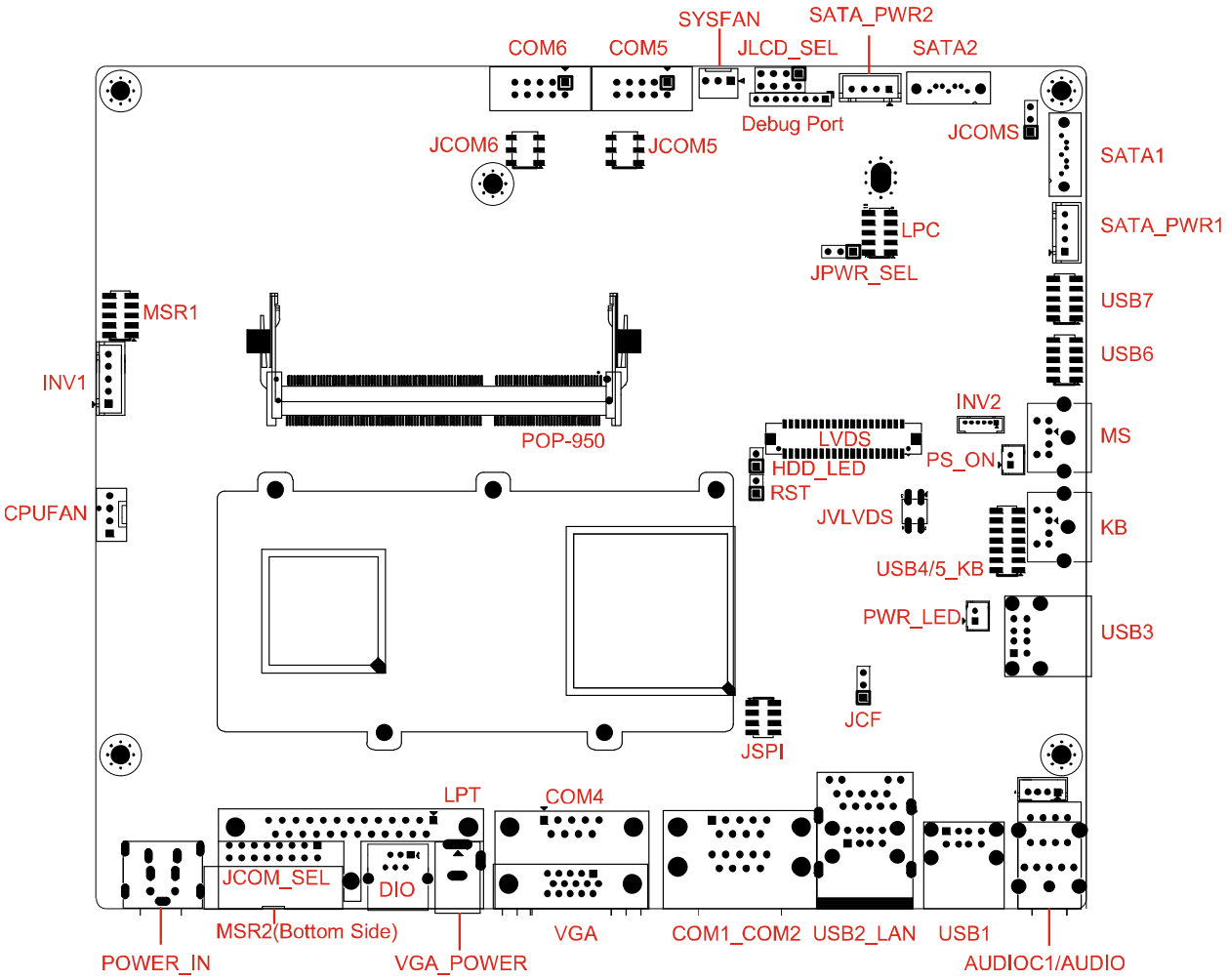
Command	Description
O 280 10	Opening cash drawer
O 280 00	Allow to close cash drawer

Set the I/O address 280 bit 4 = 1 to open the cash drawer by “DIO OUTPUT” pin control.

Set the I/O address 280 bit 4 = 0 to close the cash drawer.

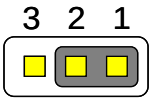
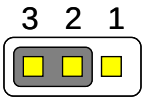
7. Jumper Settings & Connectors

7.1. The Main Board Jumper Location

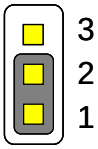
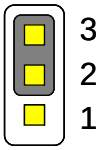


7.2. Jumper Settings

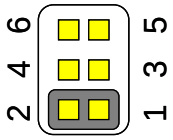
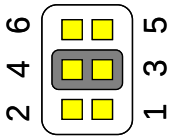
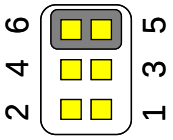
JCMOS：CMOS Clear

Pin No.	1-2	2-3
Function	Normal Operation (Default)	Clear CMOS Contents
Jumper Setting		

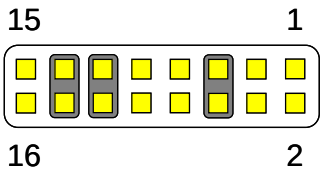
JCF_SEL：Compact Flash (Master / Slave) Select

Pin No.	1-2	2-3
Function	Master Mode	Slave Mode (Default)
Jumper Setting		

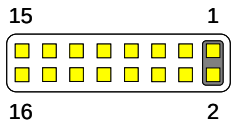
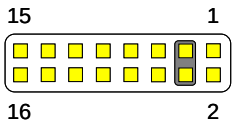
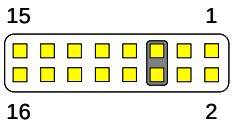
JCOM5 / JCOM6：COM5 / COM6 (5V/12V/RI) Select

Pin No.	1-2	3-4	5-6
Function	+5V	Modem Ring In (Default)	+12V
Jumper Setting			

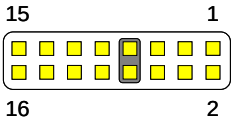
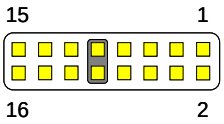
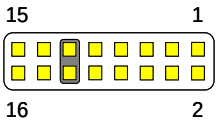
JCOM_SEL：COM1 / COM2 (5V/12V/RI) Select (1/4)

Pin No.	5-6, 11-12, 13-14
Function	COM1 (Ring In) ,COM2 (Ring In), DIO(+12V) (Default)
Jumper Setting	

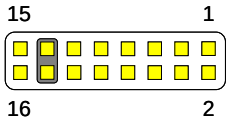
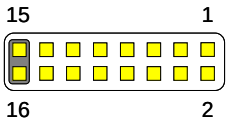
JCOM_SEL：COM1 (5V/12V/RI) Select (2/4)

Pin No.	1-2	3-4	5-6
Function	COM1 (+12V)	COM1 (+5V)	Modem Ring In (Default)
Jumper Setting			

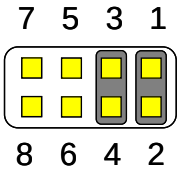
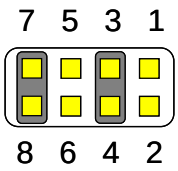
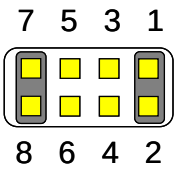
JCOM_SEL：COM2 (5V/12V/RI) Select (3/4)

Pin No.	7-8	9-10	11-12
Function	COM2 (+12V)	COM2 (+5V)	Modem Ring In (Default)
Jumper Setting			

JCOM_SEL：DIO (12V/24V) Select (4/4)

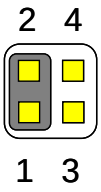
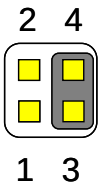
Pin No.	13-14	15-16
Function	DIO (+12V) (Default)	DIO (+24V)
Jumper Setting		

JLCD_SEL：LCD Panel Select (1/2)

Pin No.	1-2, 3-4	3-4, 7-8	1-2, 7-8
Function	800x600x18bit	1024x768x18bit	1024x768x24bit (Default)
Jumper Setting			

Note: Other hardware JP setting as 1024x768-18bit resolution.

JVLVDS：LCD Power (+3.3V / +5V) Select

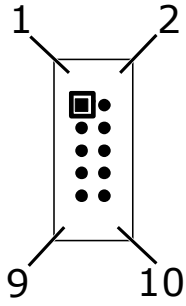
Pin No.	1-2	3-4
Function	LCD Power +3.3V (Default)	LCD Power +5V
Jumper Setting		

7.3. Connector Function List

Connector	Function	Note
AUDIO	Line-in, Line-out, MIC-InConnector	
SPKR_OUT	6W amplifier Line-out Connector	
CPUFAN	CPUFAN 4-pin Connector	
CF	Cimpat Flash Connector	
COM1,COM4	Serial port Connector	
COM5,COM6	Serial port Connector with Box-header	
DC12V_OUT	+12V Output	
DDR1	DDR2 SO-DIMM	
DIO	Digital IO (RJ-11)	
INV1, INV2	LCD inverter Connector	
KB1	PS2 Keyboard MINI DIN Connector	
LPT	Printer Connector	
LVDS	LVDS Connector	
MSR1, MSR2	MSR Connector	
PS2	PS2 Mouse MINI DIN Connector	
PS_ON	Power Button	
PWR	DC Jack Power Connector	
PWR_LED	Power and HDD LED with Pin Header	
RST	System Reset Connector	
SATA1,SATA2	SATA connector	
SATA_PWR1, SATA_PWR2	SATA Power Connector	
SYSFAN	System FAN connector	
USB2_LAN,	USBx2 and RJ45 Connector	
USB2/3, USB4/5	USB Connector	
USB4/5_KB	USBx2 and PS2 KB/MS with Pin-header	
USB6, USB7	USB with Pin Header	
USB_KB	USBx2 and PS2 KB/MS Connector	
VGA	VGA Connector	
VGA_POWER1	+12V with DC-Jack	

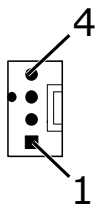
7.4. Internal Connector Pin Assignment

COM5, COM6：Serial Port with Pin-header (2.0 mm)



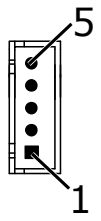
Pin No.	Sign l	Pin N	Si nal
	CD	2	DSR
3	RXD	4	R
5	TXD		CTS
7	DTR		RI/+5 /+12V
9	Ground	10	RI/+5V +12V

CPUFAN：4Pin FAN Connector



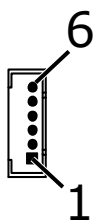
Pin No.	Signal
1	Ground
2	Fan Power (+12V)
	Speed Sense
	Control

INV1：Inverter Connector with Box header (2.50 mm)



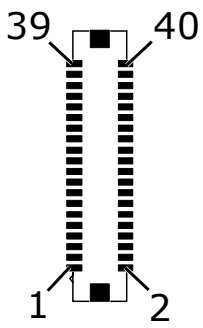
Pin No	Sign l
1	+12V
2	Ground
3	Inverter Enable
4	Inverter rightness Control
5	Ground

INV2：Inverter Connector with Box header (1.25 mm)



Pin No.	Signal
1	+12V
2	+12V
3	Ground
4	Inverter Enable
5	Inverter Brightness Control
6	SW_PWR#

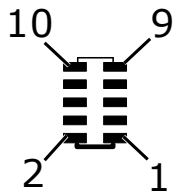
LVDS：LVDS Panel Signal with Wafer Connector (1.25 mm)



Pin No.	Signal	Pin No.	Signal
1	LVDS Power	2	LVDS Power
3	LVDS Power	4	LVDS Power
5	Ground	6	Ground
7	Ground		Ground
9	LB_ ATA0P	10	LA_DATA0P
11	LB_DATA0N	12	L DATA0N
13	Ground	1	Grou d
15	B_DATA P	16	LA_DATA1P
1	LB TA1N	1	LA_DATA1N
19	Ground	20	Ground
21	LB_DATA2P	22	LA_DATA2P
23	LB_DATA2N	24	LA_DATA2N
25	Ground	26	Ground
27	LB_CLKP	28	LA_CLKP
29	LB_CLKN	30	LA_CLKN
31	Ground	32	Ground
33	LB_DATA3P	34	NC
35	LB_DATA3N	36	NC
37	Ground	38	Ground
39	NC	40	NC

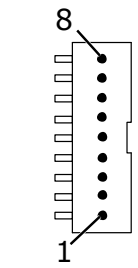
Note：LVDS Power = +5V or +3.3V (Default)

MSR1：External Keyboard Connector with Pin-header (2.0 mm)



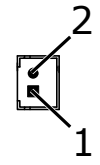
Pin No.	Signal	Pin No.	Signal
1	+5V	2	Ground
3	KDAT_CON	4	KCLK_CON
5	KDAT_KBC	6	KCLK_KBC
7	COM3_TX	8	COM3_RX
9	KB_EN	10	Ground

MSR2：External Keyboard Connector with Pin-header (2.0 mm) Bottom Side



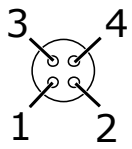
Pin No.	Signal	Pin No.	Signal
1	Ground	2	KDAT_KBC
3	KDAT_CON	4	KCLK_KBC
5	KCLK_CON	6	+5V
7	KB_EN	8	Ground

PS_ON：Power Button with Pin-header (2.0 mm)



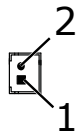
Pin No.	Signal
1	SW_PWR#
2	Ground

PWR_IN：DC Jack



Pin No.	Signal
1	Ground
2	Ground
3	+12V
4	+12V

PWR_LED：LED Indicator with Pin-header (2.0 mm)

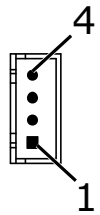


Pin No.	Signal
1	Power LED+ (+5V, 470 Ohm)
2	Power LED- (Ground)

RST：System Reset with Pin-header (2.54 mm)

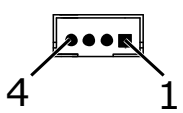
Pin No.	Signal
	Ground
2	Reset

SATA_PWR1 / SATA_PWR2：SATA Power Connector with Box-header 2.5 mm)



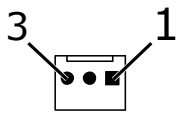
Pin No.	Signal
1	+12V
2	Ground
3	Ground
4	+5V

SPKR_OUT：Audio Amplifier Output with Pin-header (2.0 mm)



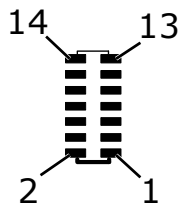
Pin No.	Signal
1	Amplifier -Out Left
2	Ground
3	Ground
4	Amplifier-Out Right

SYSFAN：System FAN 3 Pin Connector



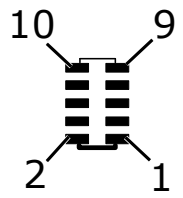
Pin No.	Signal
1	Ground
2	Fan Power (+12V)
3	Speed Sense

USB4/5_KB：USB4/5 Port and PS2 KB/MS Connector with Pin-header (2.0mm)



Pin No.	Signal	Pin No.	Signal
	USB Power (+5V)	2	Ground
3	USB DATA4-	4	USB DATA5+
5	USB DATA4+	6	USB DATA5-
7	Ground	8	USB Power (+5V)
9	PS2 Power (+5V)	10	MDAT_CON
11	KDAT_CON	2	MCLK_CON
13	KCLK_CON	14	Ground

USB6, 7：USB Port Connector with Pin-header (2.0mm)



Pin No.	Signal	Pin No.	Si n l
1	NC	2	NC
3	USB Ground	4	NC
5	USB DATA+	6	NC
7	USB DATA-	8	USB Ground
9	USB Power (+5V)	10	NC