# FlexPOS 120 /150

## 12.1”/15” TFT

## Intel® Pentium® III / Celeron

## *Wireless Touch POS*

**User’s Manual** (Version 1.31a)

## Copyright Notice



## Trademarks

## Unpacking

After unpacking the **FlexPOS 120/150** carton, check and see if the following items are included and in good condition.

- **FlexPOS main system** x 1
- Accessories
  - Power cord x 1
  - External IDE cable x 1
  - Utilities, drivers & user manual CD diskette x 1

Make sure that all of the items listed above are present. If any of the above items is missing, contact your dealer immediately.

## Warranty

All products manufactured by the manufacturer are warranted against defective materials for one year starting from the date of delivery to the original purchaser.

Warranty Policy & RMA Form download at
http://www.hei-sei.com/service/service.htm

## Important Safety Precautions

Before getting started, read these instructions and save them for later reference.

1. Turn off the computer before cleaning. Clean with a damp or dry cloth only. Do not spray any liquid cleaner on screen directly.
2. The power outlet socket used to plug in the computer power cord must be located near the system and easily accessible. Do not use outlets on the same circuit of the systems that regularly switched on and off.
3. Make sure the voltage of the power source is correct before connecting the computer to the power outlet.
4. If the computer is sharing an extension cord with other devices, make sure the total ampere rating of the devices plugged into the extension cord does not exceed the cord's ampere rating.
5. Do not expose the power cord, extension cord and power outlet to moisture.
6. Install the computer on a reliable surface to prevent damage caused by dropping.
7. This computer is not equipped with an operating system. An operating system must be loaded first before installing any software into the computer.
8. Disconnect the power cord from the computer before any installation. Make sure both the computer and the external devices are turned off. The sudden surge of power may ruin any sensitive components. Also make sure the computer is properly grounded.
9. During installation of any internal components, be sure to ground yourself to keep from any static charge. Most electronic components are sensitive to the static electric charge. Use a grounding wrist strap and place all electronic components in any static-shielded devices.

10. The openings on the computer enclosure are for the cabin ventilation to prevent the computer from overheating. DO NOT COVER THE OPENINGS.
11. The brightness of the flat panel display will decrease with use. However, hours of use will vary depending on the application environment.
12. If the computer is equipped with a touch panel, avoid using sharp objects to operate the touch panel. Scratches on the touch panel may cause mal-calibration or non-function to the panel.
13. The LCD panel display is not subject to shock or vibration. When assembling the computer, make sure it is securely installed.

# Table of Contents

# 1. INTRODUCTION

This chapter provides background information and detail specification on the FlexPOS 120/150. Sections in this chapter include:

- General Information
- What covers in this Manual
- Specification
- Dimension

## 1.1. General Information

The **FlexPOS** is a series of 12.1”/15” multimedia Intel Celeron or Pentium® III panel PCs designed to serve as a friendly POS-machine for easy integration into any space-constricted retail and information applications.

In terms of panel size, the FlexPOS has 12.1” and 15” models.

Onboard features include super I/Os, XGA, 12.1”/15” TFT flat panel, touch screen, Ethernet and multimedia functions. The full PC functionality coupled with its multi-I/Os stand ready to accommodate a wide range of PC peripherals. Special industrial features not commonly seen in commercial systems such as watchdog timer and water/dust proof front panel make it a best choice for the operation in any hostile environments.

Fully configurable and with its sleek outlook, the **FlexPOS** is an ideal platform for any retail and information applications.

## 1.2. What Covers in this Manual

This handbook contains most information you need to set up and use the FlexPOS system. You do not need to read everything in this handbook to use the system.

For a quick start, see the following chapter summaries;

**Chapter 1** (the current chapter) provides background information and detail specification on the FlexPOS 120/150.

**Chapter 2** identifies the FlexPOS system exterior components and provides instructions to help you to use the system as soon as possible.

**Chapter 3** details the FlexPOS standing, mounting.

**Chapter 4** provides the procedures to connect external devices to the I/O interface

**Chapter 5** explains the AWARD BIOS setup.

**Chapter 6** details the procedures to install the touch screen software drivers under DOS and Windows operation

**Chapter 7** Peripherals devices

**Appendix A** explains how to program the watchdog timer.

**Appendix B** How to Enable and Use COM 6.

## 1.3. Specifications

### SYSTEM

**Flat Panel**

- **FlexPOS 120**: 12.1" TFT, 800*600
- **FlexPOS 150**: 15" TFT, 1024*768

**CPU (Socket 370)**

- Intel Tualatin FCPGA2 up to 1.5GHz
- Intel Pentium III FCPGA 100/133 up to 1GHz
- Celeron FCPGA 66/100 up to 1.5GHz

**System BIOS**

- Award PnP Flash BIOS

**System Memory**

- 2*168pin DIMM socket supporting SDRAM up to 1 GB

**L2 Cache**

- CPU built-in

**Standard I/O**

- 4 x Serial Ports ( COM1, COM 4, COM 5, COM6) with +5V/12V power output on pin 9: 3 x RS-232, 1 x RS-232/422/485 (COM4), 1 x reserved for IrDA (COM 2) & 1 x reserved for Touch screen (COM 3)
- 1 x Parallel Port supports SPP/EPP/ECP
- 3 x USB ports
- 1 x VGA port
- 1 x RJ-45 LAN port
- 2 x RJ-11 modem phone jack
- 1 x PS/2 Keyboard connector
- 1 x PS/2 Mouse connector
- 1 x RJ-12 6 pin cash drawer connector
- 1 x External IDE port
- 1 x Compact Flash Slot

**Ethernet**

100/10 Base-T Ethernet with RJ-45 phone jack

Wireless 100/10 Base-T Ethernet (option)

**Watchdog Timer**

- 64 level time intervals

**Display**

- Integrating VGA/LCD/Controller, advance hardware 2D/3D GUI engine
- Share System Memory Architecture which can flexibly utilize the frame buffer size up to 64MB

**Front Bezel**

- 1 x IrDA Data transmission SIR
- 1 x Power On/Off Switch
- 1 x Floppy Disk Drive Bay
- 3 x LED for HDD, LAN, Power

## PERIPHERAL & STORAGE DEVICES

**Touch screen** (optional, sharing COM3)

- 12.1”/15” analog resistive type with RS-232 controller

**Optional devices**

- Wireless LAN 802.11b with Antenna
- VFD, 20 columns x 2 lines
- LCD, 30 columns x 4 lines
- Internal 56K Modem Module
- MSR 2 tracks or 3 tracks
- USB port for USB ID key for security control

**Power Supply**

- AC 150W, input range: 100~230VAC @47~63Hz

**Speakers**

- Speakers*2

## MECHANICAL & ENVIRONMENTAL

**Construction**

- Inside: heavy-duty steel
- Outside: fire-proof resilient plastic

**Color** (standard)

- Black: Pantone 3x2X

**Dimension**

- FlexPOS 120 / 150: 368*321.7*107.5 mm (This does not include the dimension of the stand.)

**Mounting**

- Wall mount with mounting kits

**Versatile Stand**

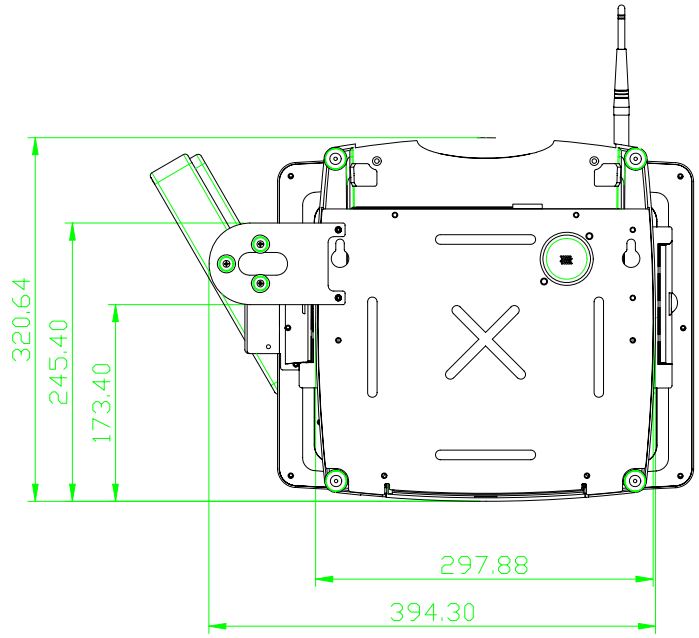
- STAND: -10~85°

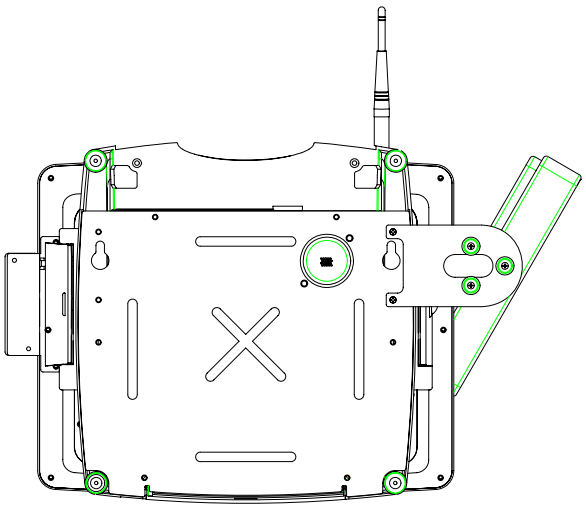
▪ *Specifications are subject to change without notice.*

## 1.4. Dimensions

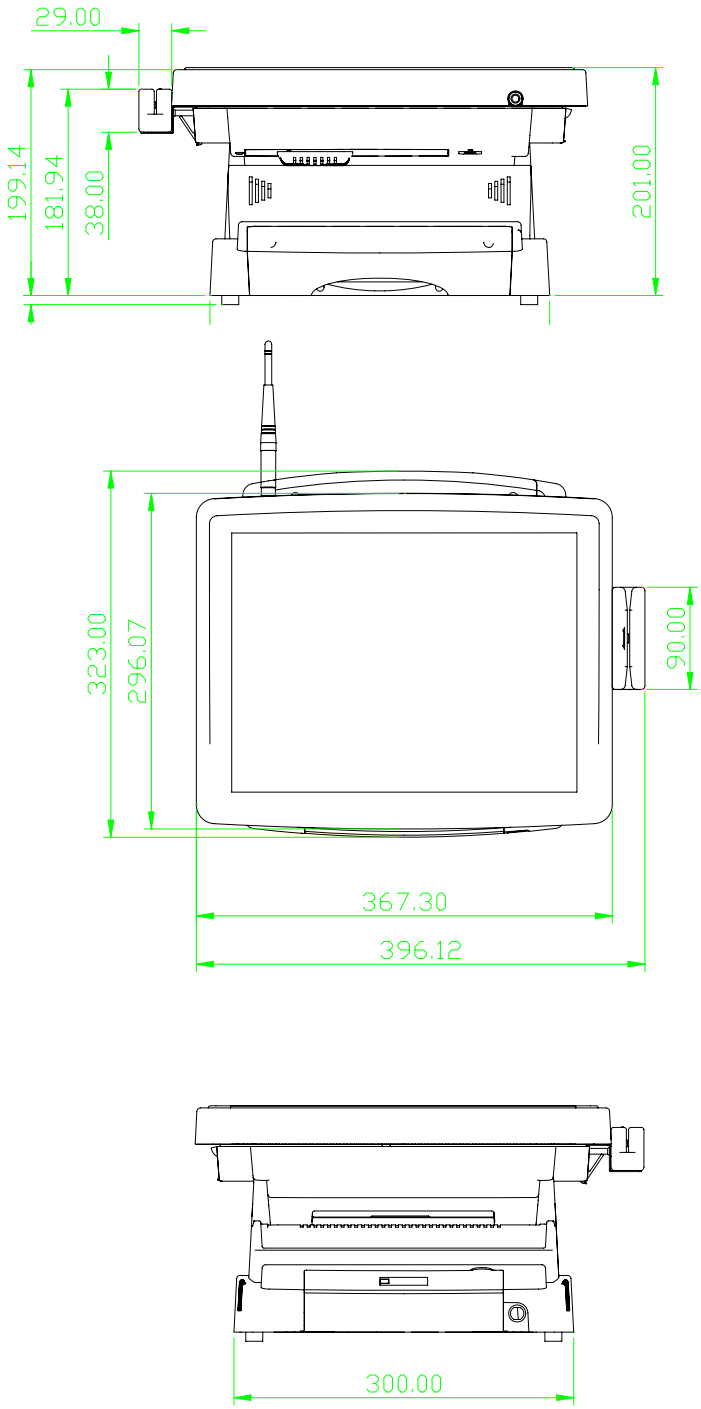
The FlexPOS 150 and FlexPOS 120 shares the same Base but differ in the cut window size of the front bezel.

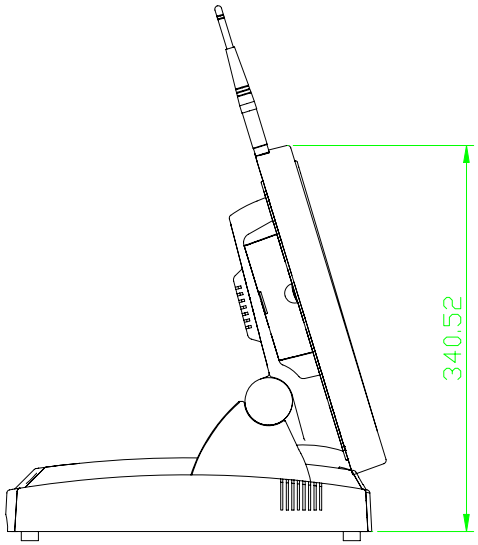
### 1.4.1. Base Dimensions w/customer display kits.



## 1.4.2. FlexPOS150 system dimensions:

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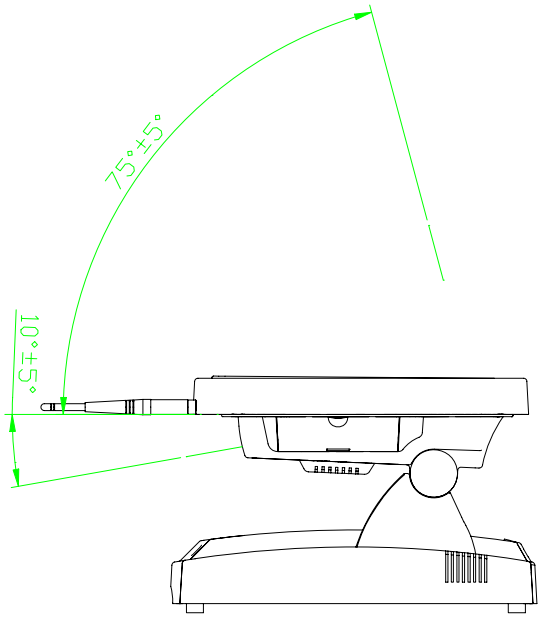
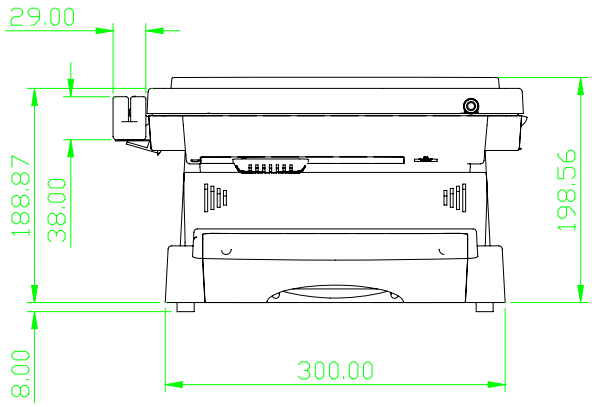
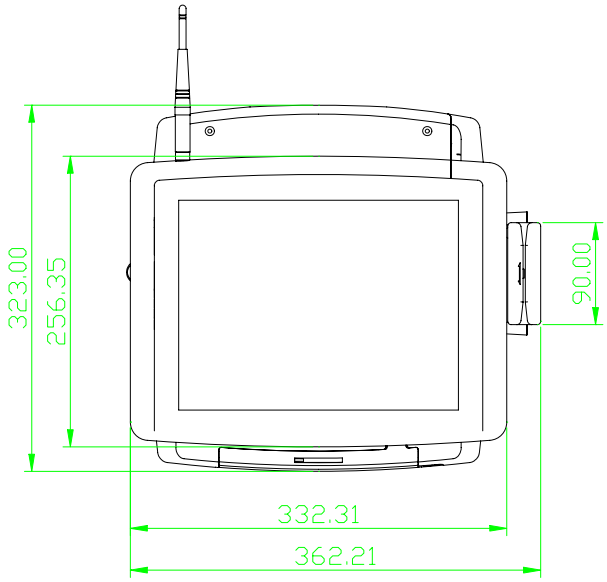
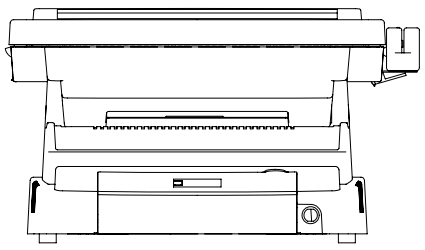
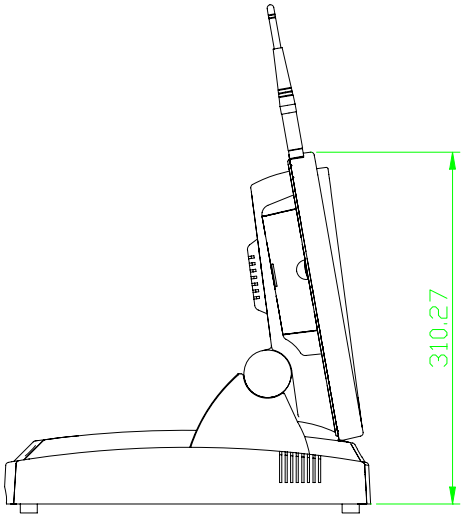

75°±5°
10°±5°

## 1.4.3. FlexPOS120 system dimensions:

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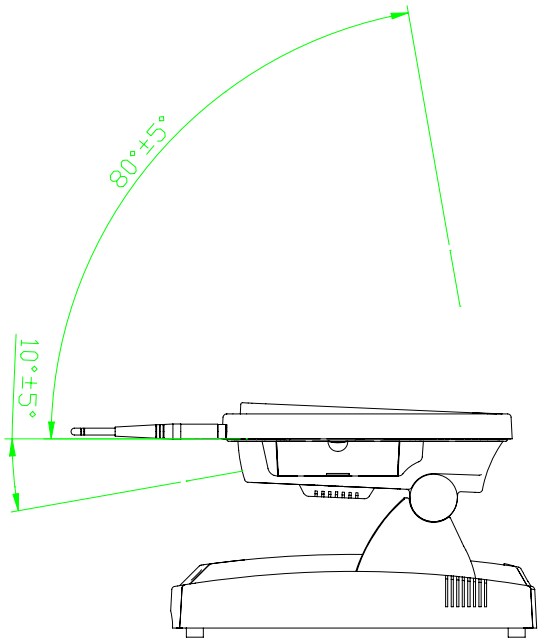

80°±5°
10°±5°

# 2. USING THE SYSTEM

- Identifying the FlexPOS system
- System setup for the first-time use

## 2.1. Identifying the System

Before getting started, take a moment to familiarize yourself with the system and the I/O arrangement of the FlexPOS 120/150 .

### 2.1.1. Front View

When the FlexPOS 120/150 is put upright on the desktop with the provided pedestal, its front view appears as below.

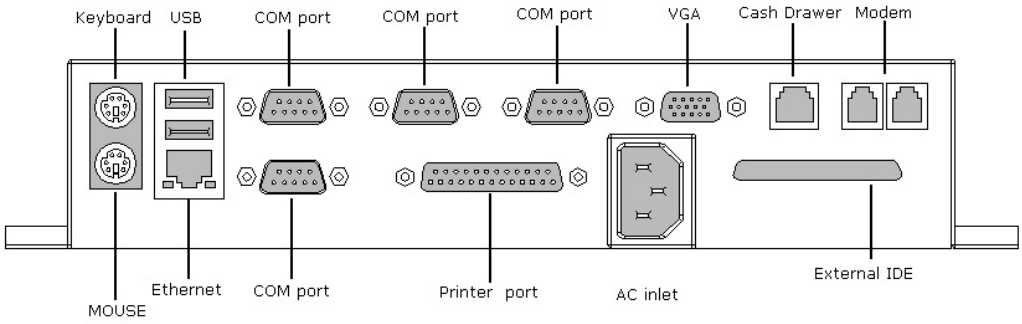
The illustrations of the FlexPOS 120/150 may differ slightly because the FlexPOS system series has two different LCD size: 12.1" & 15".

### 2.1.2. Side Views

The left side of the panel PC appears as below:

### 2.1.3. I/O Outlets

When you turn around the FlexPOS system, you will find the power switch and all the I/O ports are located at the rear cover of the stand.




## 2.2. System Setup for the First-time Use

To set up the FlexPOS 120/150 for the first-time use, you should have the following items ready. The items are either in the accessory box or available in any computer stores.

- AC power cord
- PS/2 keyboard
- PS/2 mouse

### 2.2.1. Installation Procedures

The FlexPOS system can be powered either by an AC electrical outlet (100 ~ 230V, 50 ~ 60Hz).

1. Connect the female end of the power cord to the AC inlet located at the rear side of the FlexPOS.
2. Connect the 3-pin male end of the power cord to an electrical outlet.
3. Connect a PS/2 keyboard to keyboard port.
4. Connect the PS/2 mouse to the PS/2 mouse port.
5. Power on the FlexPOS by switching the power switch located at the front side cover.

### 2.2.2. Running the BIOS Setup

If you are a commercial user, the FlexPOS 120/150 should have been properly set up and configured by your dealer. You may still find it necessary to change the system configuration information. In this case, you need to run the system's BIOS setup program.

Under the following conditions, the CMOS settings are to be changed.

1. The system is starting for the first time.
2. The hardware devices attached to the FlexPOS system have been changed.
3. The CMOS memory has lost power and the configuration information has been erased.

The BIOS setup program is stored in ROM, which can be accessed by pressing <DEL> key on the keyboard immediately when the system is powered on.

In order to retain the specified setup information when the system power is turned off, the system setup information is stored in a battery-backed CMOS RAM. The battery is to ensure the settings will not be erased when the computer is turned off or reset. When the computer is powered on again, the system will read the settings stored in the CMOS RAM and compare them to the equipment check conducted during the power on self-test (POST). If any error or mismatch occurs, an error message will be shown on the screen and the computer will be prompted to run the setup program.

To change the BIOS setup, please refer to Chapter 5 for more information.

******Notice: Built-in MSR will test function by itself. It makes beep sound twice, when boot-up system and passed testing.***

### 2.2.3. Operating System and Driver Installation

The FlexPOS system is not equipped with an operating system when delivered from the original manufacturer. If you are a commercial user, the system is likely to have been pre-installed proper operating system and software drivers by your dealer or system integrator.

If the system is not pre-installed with any system OS and drivers or you intend to install your preferred ones, there are several ways to load OS and software into the system.

1. Via the external FDD or internal FDD
2. Via the external CD-ROM
3. Via Ethernet: You can boot up the system via Ethernet boot ROM and download system OS or software from the network.

Recent releases of operating systems always include setup programs that load automatically and guide you through the installation. You can also refer to your OS user manual for instructions on formatting or partitioning the hard disk drive before any software installation.

The FlexPOS system provides the following utility drivers stored in the CD-ROM diskette;

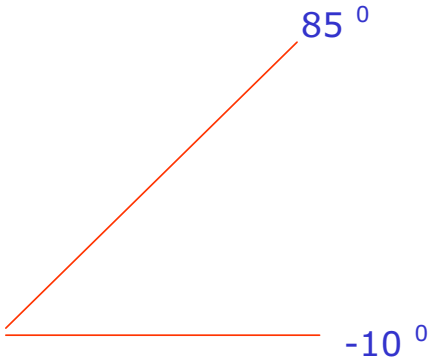
- ✧ Ethernet utilities
- ✧ Wireless utilies
- ✧ VGA utilities
- ✧ Audio drivers
- ✧ Touch screen drivers
- ✧ USB ID Key
- ✧ MMR / VFD

# 3. VERSATILE STAND & MOUNTING

- Angle free Desktop standing
- Wall Mounting

## 3.1. -10 to 85° Desktop Standing

The sleek and stable pedestal assembled with the base enables the FlexPOS system to endure the long-time operation in any public sectors. The 2 side hinges pulling the base up and down, the angle can be adjusted from -10 to $85^0$.




Versatile stand design for (-10° to 85°) desktop standing

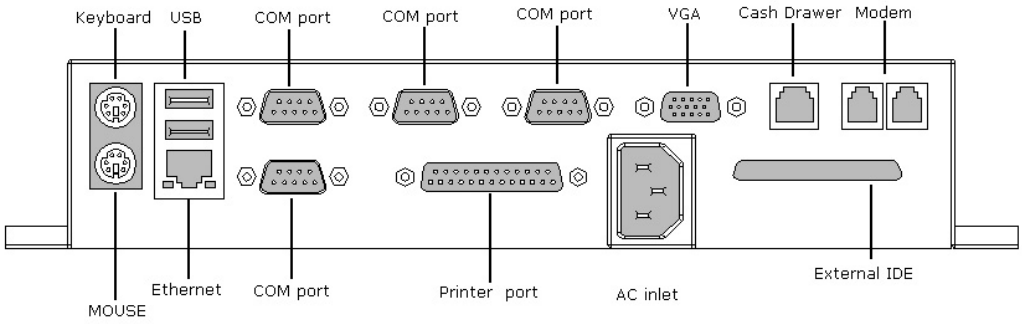
## 3.2. Wall Mounting Applications

For setup Wall mounting applications.

# 4. I/O CONNECTION

This chapter describes the FlexPOS system I/O ports and how to use the I/O interface to connect to external devices.

The I/O interfaces located at the back side of the chassis are used to connect external peripheral devices, such as a mouse, a keyboard, a monitor, serial devices or parallel printer…etc. Before any connection, make sure that the computer and the peripheral devices are turned off.




## 4.1. Parallel Port

The FlexPOS 120/150 can support the latest EPP and ECP parallel port protocols. It can be used to connect to a wide array of printers, ZIP drive, parallel scanner and any other parallel devices. The printer interface on the FlexPOS 120/150 is a 25-pin female D-SUB connector. To connect any parallel device, follow the steps below:

1. Turn off the system and the parallel devices.
2. Plug in the male connector of the parallel device to the 25-pin female D-SUB connector and fasten the retaining screws.
3. Turn on the system and the attached parallel devices.
4. Refer to the parallel device's manual for instruction to configure the operation environment to recognize the new attached devices.
5. You may need to run the CMOS setup to change the hardware device setup.

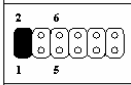
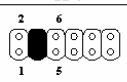
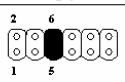
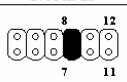
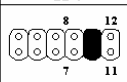
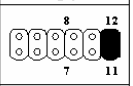
## 4.2. COM Ports x 4

The FlexPOS 120/150 features with four onboard COM ports located at the rear side of the chassis, ready to connect to a wide range of serial devices. COM1, COM5 & COM6 are RS-232 and COM4 is RS-232/422/485, selected via jumper setting. COM 2 reserved for IrDA & COM3 for Touch screen. Each COM port is with +5V/+12V power capabilities on pin 9, providing easy accommodation to a broad range of serial devices.

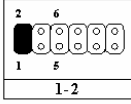
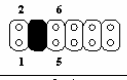
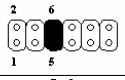
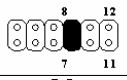
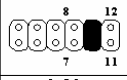
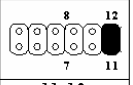
The COM port 5V/12 power is selected via jumper setting on the IO–TR board. The IO-TR is the IO board docked to the system motherboard to connect the onboard signal out to the external I/O ports.

Please refer to the following for the 5V/12 power selection.

**JP2: COM5 &COM6 PIN9 power selection**

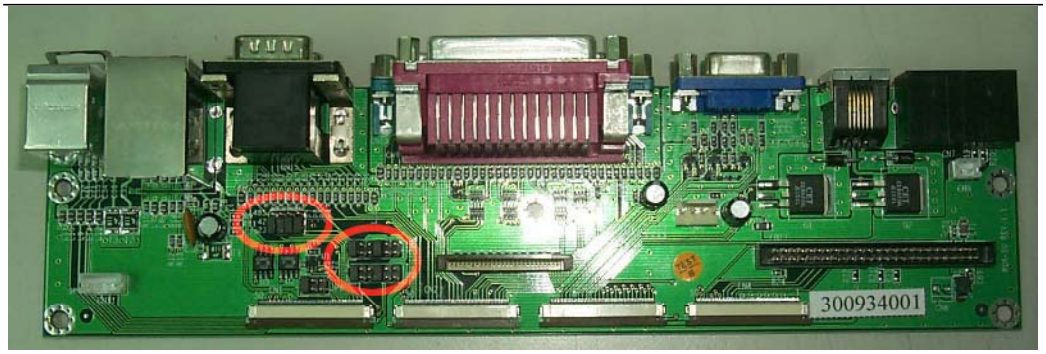
| COM5 | | | COM6 | | |
|---|---|---|---|---|---|
| Normal | +12V | +5V | Normal | +12V | +5V |
|  |  |  |  |  |  |
| 1-2 | 3-4 | 5-6 | 7-8 | 9-10 | 11-12 |

**JP3: COM1 &COM4 PIN9 power selection**

| COM1 | | | COM4 | | |
|---|---|---|---|---|---|
| Normal | +12V | +5V | Normal | +12V | +5V |
|  |  |  |  |  |  |
| 1-2 | 3-4 | 5-6 | 7-8 | 9-10 | 11-12 |

**JP4,5,7,8 JP6: COM4 RS-232 & RS-485/RS422 selection**

| RS-232 | | RS- 422 | | RS- 485 | |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| JP4,5, 7,8 | JP6 | JP4,5, 7,8 | JP6 | JP4,5, 7,8 | JP6 |




If a touch screen module is installed, for factory default setting, its controller will occupy COM3.

COM1,4, 5& 6 are all D-SUB 9-pin connectors. To connect to any serial device; follow the procedures below;

1. Turn off the FlexPOS system and the serial devices.
2. Attach the interface cable of the serial device to the 9-pin D-SUB serial connector. Be sure to fasten the retaining screws.
3. Turn on the computer and the attached serial devices.
4. Refer to the serial device's manual for instruction to configure the operation environment to recognize the new attached devices.
5. If the serial device needs specified IRQ or address, you may need to run the CMOS setup to change the hardware device setup.

If the COM4 is to be set to RS-485 for long distance transmission, the related onboard jumpers have to be set correctly first. Refer to section 6.2.1.2 for the RS-232/485 jumper settings and Appendix D for RS-485 programming.

***Notice:***

For using COM5 & COM 6, please check connecting peripherals and then setup IRQ in BIOS selection.

Example:

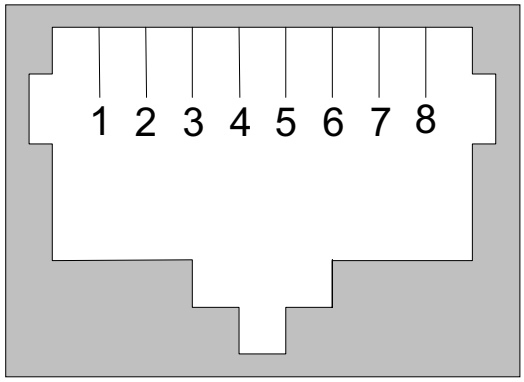
a. Enable IRQ 12 for COM 5 use as PS/2 mouse not installed.
b. Enable IRQ 15 for COM 6 use as 2nd IDE(external)not installed.

| | IRQ Device | Manufacture setting |
|---|---|---|
| IRQ 6 | Floppy | Default |
| IRQ 7 | LPT1 | Default |
| IRQ 3 | COM2 | Default |
| IRQ 4 | COM1 | Default |
| IRQ 5 | COM3 | Default |
| IRQ 10 | COM4 | Default |
| IRQ 11 | USB device, Audio Networking, Compact flash | Default |
| IRQ 9 | | Default |
| IRQ 12 | PS/2 Mouse | Default |
| IRQ 15 | External IDE devices | Default |

## 4.3. 100/10 Base-T Ethernet (RJ-45)

The FlexPOS 120/150 provides a 100/10 Base-T NE2000 compatible Ethernet (RJ-45) interface. For network connection, follow the instructions below.

1. Turn of the FlexPOS system and the Ethernet hubs.
2. Plug in one end of cable of a 100/10 Base-T hub to the system's RJ-45 phone jack. The pin assignment of the RJ-45 is listed as follow;




RJ-45

RJ-45 Connector Pin Assignment

| Pin | Description |
|---|---|
| 1 | Tx+ (data transmission positive) |
| 2 | Tx- (data transmission negative) |
| 3 | Rx+ (data reception positive) |
| 6 | Rx- (data reception negative) |
| others | No use |

## 4.4. VGA Interface

The FlexPOS 120/150 has a 15-pin analog RGB connector located at the rear side of the chassis. It can support its own LCD display and an expansion CRT or analog monitor at the same time. However, as the LCD panel used in the 15" system (FlexPOS 150) is of the resolution of 1024 x 768 and in 12.1" system (FlexPOS 120) is 800 x 600, therefore, to support a CRT or analog monitor simultaneously, the monitor's VGA resolution has to be set to 800 x 600 for FlexPOS 120 and 1024 x 768 for FlexPOS 150. The connection to an analog monitor is an easy plug-in of the VGA D-SUB 15-pin connector to the RGB interface.

There is some application software that is to be executed in 800*600 resolution. When the software is running under FlexPOS 150, only part of the screen will show on the LCD display. If the application has to run in full screen, you need to update the system VGA drivers with an auto expansion utility. However, due to resolution limitation, the text mode will look slightly distorted.

## 4.5. PS/2 Keyboard Interface

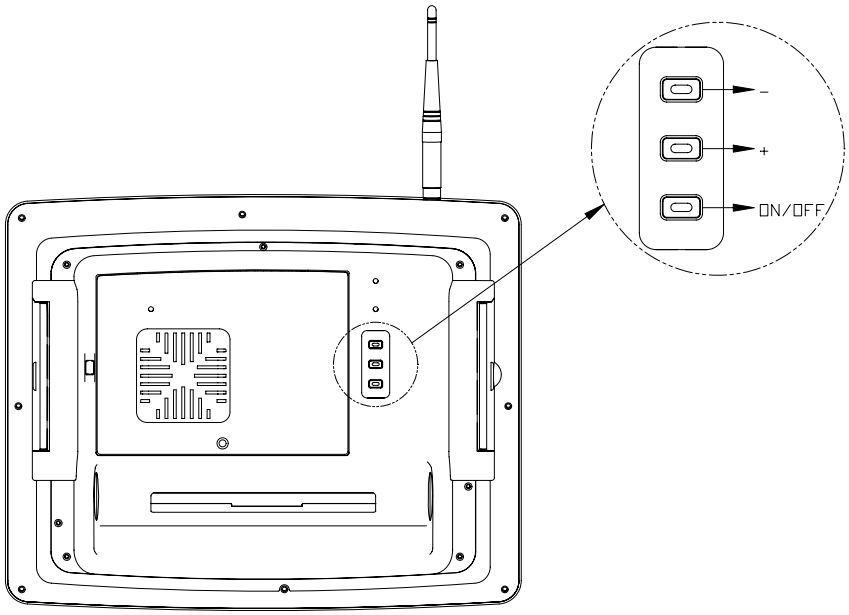
The FlexPOS 120/150 provides a standard PS/2 keyboard connector located at the rear panel. If the user would like to use AT keyboard, then an adapter to connect the PS/2 KB to AT KB is needed.

## 4.6. PS/2 Mouse Interface

The FlexPOS system has one PS/2 mouse connector located at the rear side. A simple plug-in will make the connection.

## 4.7. VR Brightness Control

The FlexPOS system provides a VR control to adjust the brightness of the LCD. The VR control is with two buttons and one on/off button as below.



## 4.8. USB Ports

The FlexPOS 120/150 also provides three USB ports to connect to external USB devices. A simple plug-in of the USB device interface cable to the USB port will make the connection. Before using the USB devices, remember to install the device driver first.

# 5. AWARD BIOS SETUP

The chapter describes how to set up BIOS configuration.

## 5.1. Award BIOS

The Award BIOS ROM builds in a setup program, which allows the users to modify the basic system configuration such as the current date and time or the type of peripheral devices attached to the computer.

Under the following conditions, the CMOS settings are to be changed;

4. The system is starting for the first time
5. The hardware devices attached to the systems have been changed
6. The CMOS memory has lost power and the configuration information has been erased.

The BIOS setup program is stored in ROM, which can be accessed by pressing <DEL> key on the keyboard immediately when the system is powered on.

In order to retain the specified setup information when the system power is turned off, the system setup information is stored in a battery-backed CMOS RAM. The battery is to ensure the settings will not be erased when the computer is turned off or reset. When the computer is powered on again, the system will read the settings stored in the CMOS RAM and compare them to the equipment check conducted during the power on self test (POST). If any error or mismatch occurs, an error message will be shown on the screen and the computer will be prompted to run the setup program.

## 5.2. Control Key Definition

| | |
|---|---|
| Up arrow | Move to previous item |
| Down arrow | Move to next item |
| Left arrow | Move to the item in the left hand |
| Right arrow | Move to the item in the right hand |
| ESC key | Main Menu - Quit and not save changes into CMOS<br>Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu |
| PgUp key | Increase the numeric value or make changes |
| PgDn key | Decrease the numeric value or make changes |
| F1 key | General help, only for Status Page Setup Menu and Option Page Setup Menu |
| F2 key | Item Help |
| F3 key | Reserved |
| F4 key | Reserved |
| F5 key | Restore the previous CMOS value from CMOS, only for Option Page Setup Menu |
| F6 key | Load the Fail safe default CMOS value from BIOS default table, only for Option Page Setup Menu |
| F7 key | Load the Optimize default |
| F8 key | Reserved |
| F9 key | Reserved |
| F10 key | Save all the CMOS changes, only for Main Menu |

# 5.3. Getting Help

## 5.3.1. Main Menu

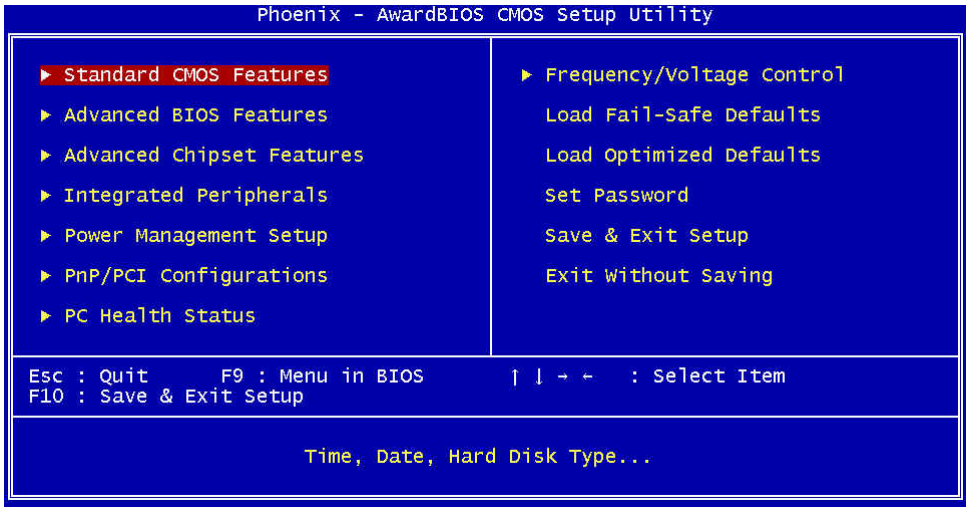
The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Press <F1> to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window, press <ESC>.

# 5.4. AWARD BIOS Setup

## 5.4.1. AWARD BIOS Setup Main Menu

Power on the computer and press <DEL> immediately to run the AWARD BIOS setup. The setup main menu will appear on the screen;

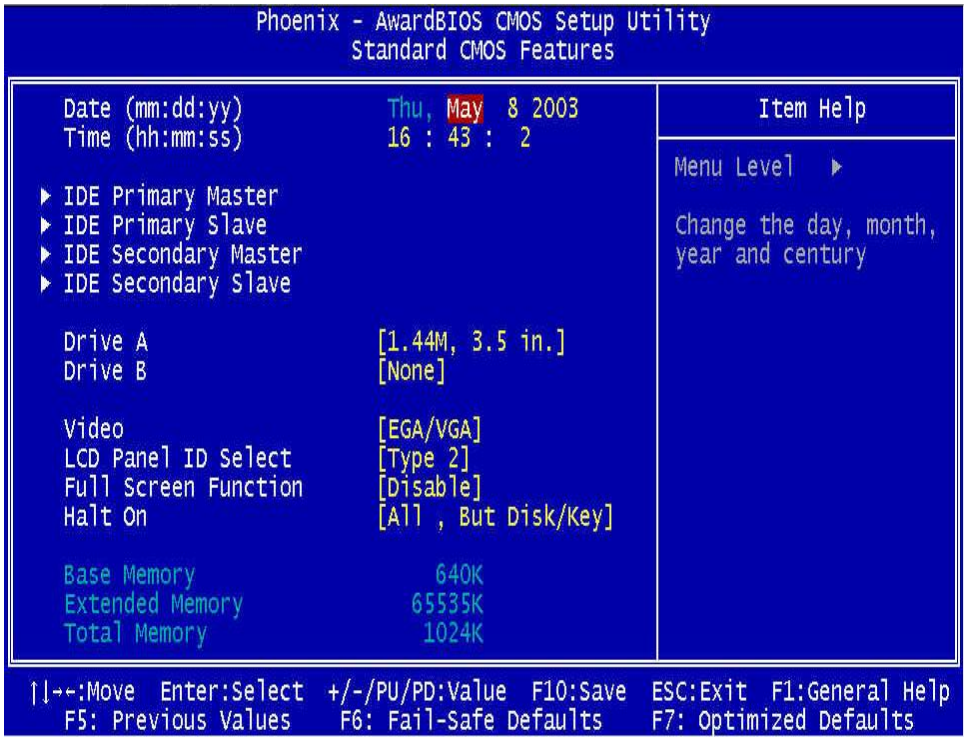



Use the arrow keys to move among the items and press <Enter> to enter the sub-menu.

- **STANDARD CMOS SETUP**: This setup page includes all the items in standard compatible BIOS.
- **ADVANCED BIOS FEATURES**: This setup page includes all the items of Award special enhanced features.
- **ADVANCED CHIPSET FEATURES**: This setup page includes all the items of chipset special features.
- **ADVANCED DRAM CONTROL** : This setup page includes all the items of DRAM special features.
- **INTEGRATED PERIPHERALS**: This setup page includes all onboard peripherals.
- **POWER MANAGEMENT SETUP**: This setup page includes all the items of Green function features.
- **PNP/PCI CONFIGURATION**: This setup page includes all the configurations of PCI & PnP ISA resources.
- **PC HEALTH STATUS**: This setup page auto detects the temperature, voltage and fan speed.
- **FREQUENCY/VOLTAGE CONTROL**: This setup page includes the CPU/SDRAM/PCI frequency setting
- **LOAD FAIL-SAFE DEFAULTS**: BIOS Defaults indicates the most appropriate value of the system parameters that the system would be in safe configuration.
- **LOAD OPTIMIZED DEFAULTS**: Setup Defaults indicates the value of the system parameters that the system would be in the best performance configuration.
- **SET PASSWORD**: Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.
- **SAVE & EXIT SETUP**: Save CMOS value settings to CMOS and exit setup.
- **EXIT WITHOUT SAVING**: Abandon all CMOS value changes and exit setup.

## 5.4.2. Standard CMOS Features

If the **STANDARD CMOS FEATURE** is selected from the main menu, the screen below will appear. This menu allows the users to configure the system components such as date, time, hard disk drive, floppy disk drive and display type. The system BIOS will automatically detect the memory size; therefore no setting is needed.




◆ **DATE**

The date format is <day>, <month> <date> <year>.

| | |
|---|---|
| day | The day, from Sun to Sat, determined by the BIOS and is display-only |
| month | The month, Jan. through Dec. |
| date | The date, from 1 to 31 (or the maximum allowed in the month) |
| year | The year, from 1994 through 2079 |

◆ **TIME**

The times format in <hour> <minute> <second>. The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

◆ **PRIMARY HDDS / SECONDARY HDDS**

The category identifies the types of hard disk from drive C to F that has been installed in the computer. There are two types: auto type, and user definable type. User type is user-definable; Auto type which will automatically detect HDD type.

Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category.

If you select User Type, related information will be asked to enter to the following items. Enter the information directly from the keyboard and press <Enter>. Such information should be provided in the documentation form your hard disk vendor or the system manufacturer.

| | |
|---|---|
| CYLS. | Number of cylinders |
| HEADS | number of heads |
| PRECOMP | write precomp |
| LANDZONE | Landing zone |
| SECTORS | number of sectors |

If a hard disk has not been installed select *NONE* and press <Enter>.

◆ **DRIVE A TYPE / DRIVE B TYPE**

The category identifies the types of floppy disk drive A or drive B that has been installed in the computer.

| | |
|---|---|
| None | No floppy drive installed |
| 360K, 5.25" | 5.25 inch PC-type standard drive; 360K byte |
| 1.2M, 5.25" | 5.25 inch AT-type high-density drive; 1.2M byte (3.5 inch when 3 Mode is Enabled). |
| 720K, 3.5" | 3.5 inch double-sided drive; 720K byte |
| 1.44M, 3.5" | 3.5 inch double-sided drive; 1.44M byte |
| 2.88M, 3.5" | 3.5 inch double-sided drive; 2.88M byte |

◆ **VIDEO**

The category selects the default video device

Options: EGA/VGA/CGA40/CGA80/Mono

◆ **LCD PANEL ID SELECT**

The category lists the ID select of different size LCD.

FlexPOS 120 default is “Type 2”

FlexPOS 150 default is “Type 4”

◆ **FULL SCREEN FUNCTION**

Enable/Disable the full screen function

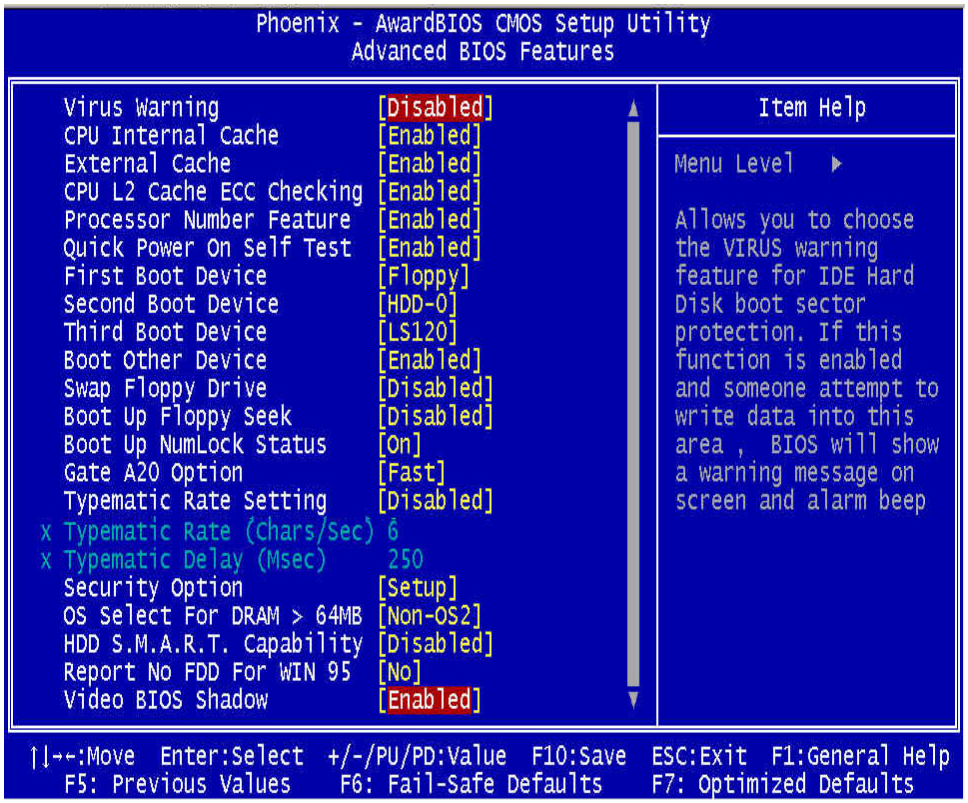
◆ **HALT ON**

The category determines whether the computer will stop if an error is detected during power up.

| | |
|---|---|
| NO Errors | The system boot will not stop for any error that may be detected |
| All Errors | Whenever the BIOS detects a non-fatal error the system will be stopped and you will be prompted |
| All, But Keyboard | The system boot will not stop for a keyboard error; it will stop for all other errors |
| All, But Diskette | The system boot will not stop for a disk error; it will stop for all other errors |
| All, But Disk/Key | The system boot will not stop for a keyboard or disk error; it will stop for all other errors |

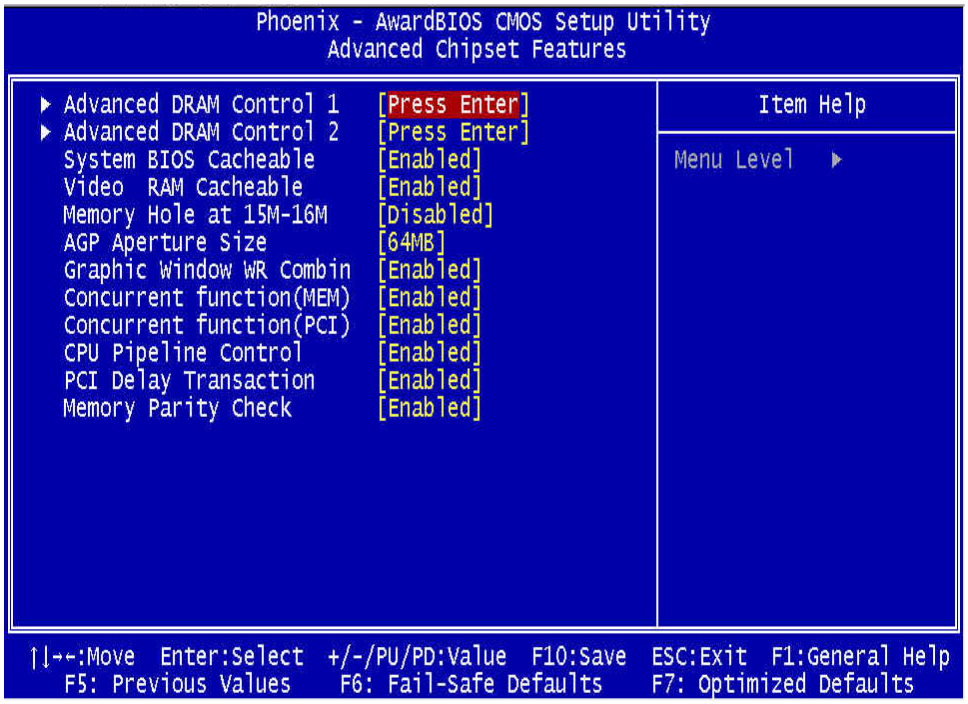
## 5.4.3. Advanced BIOS Features

If the **ADVANCED BIOS FEATURES** option is selected from the main menu, the screen below will appear. The following sample screen consists of the default values for FlexPOS.



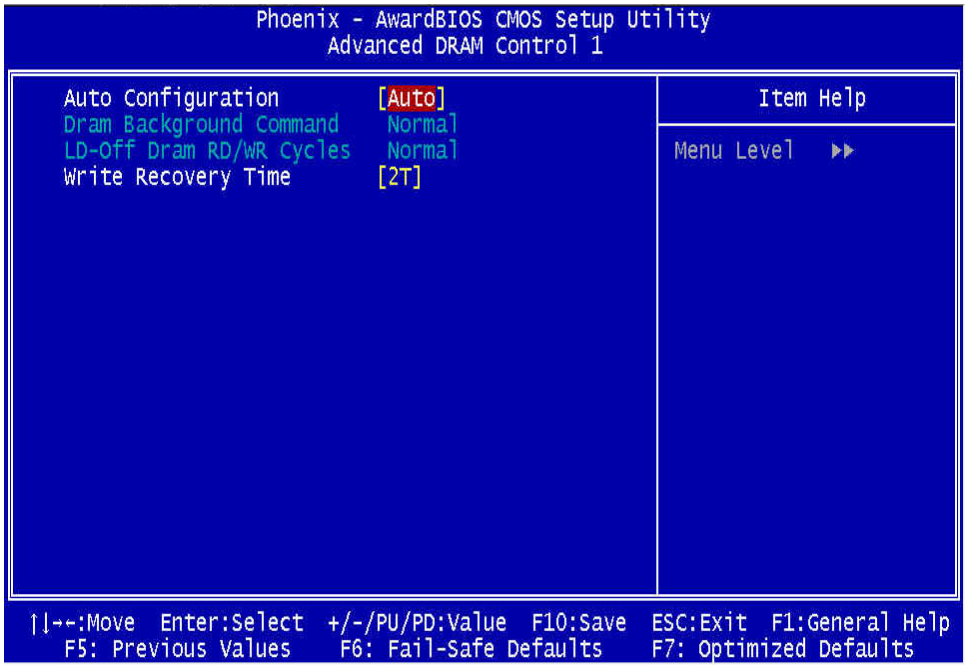
## 5.4.4. Advanced Chipset Features

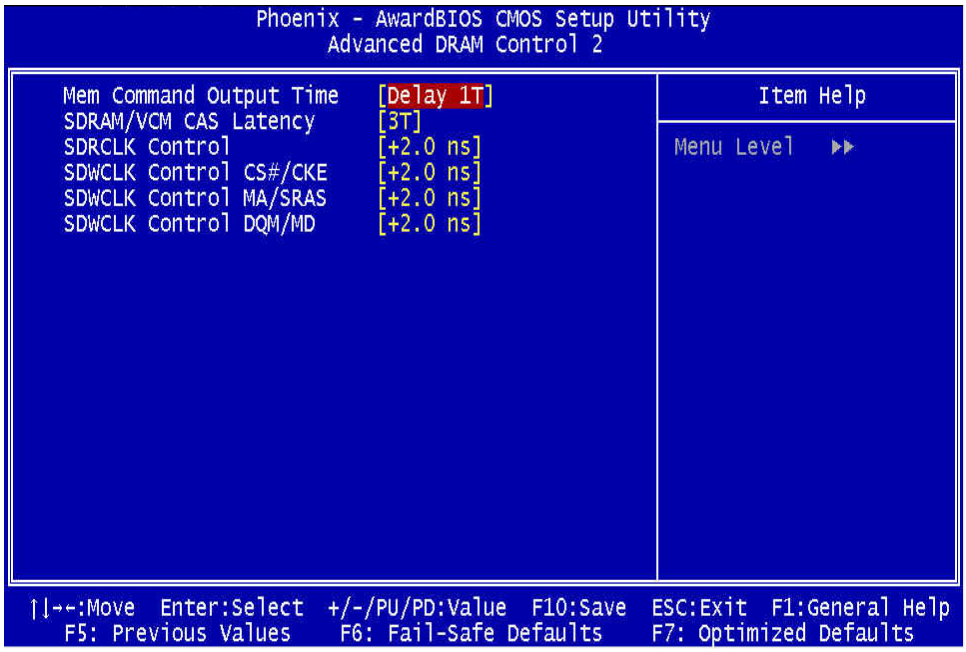
If the **ADVAMCED CHIPSET FEATURES** option is selected from the main menu, the screen below will appear. The following sample screen consists of the default values for FlexPOS.



## 5.4.5. Advanced DRAM Control

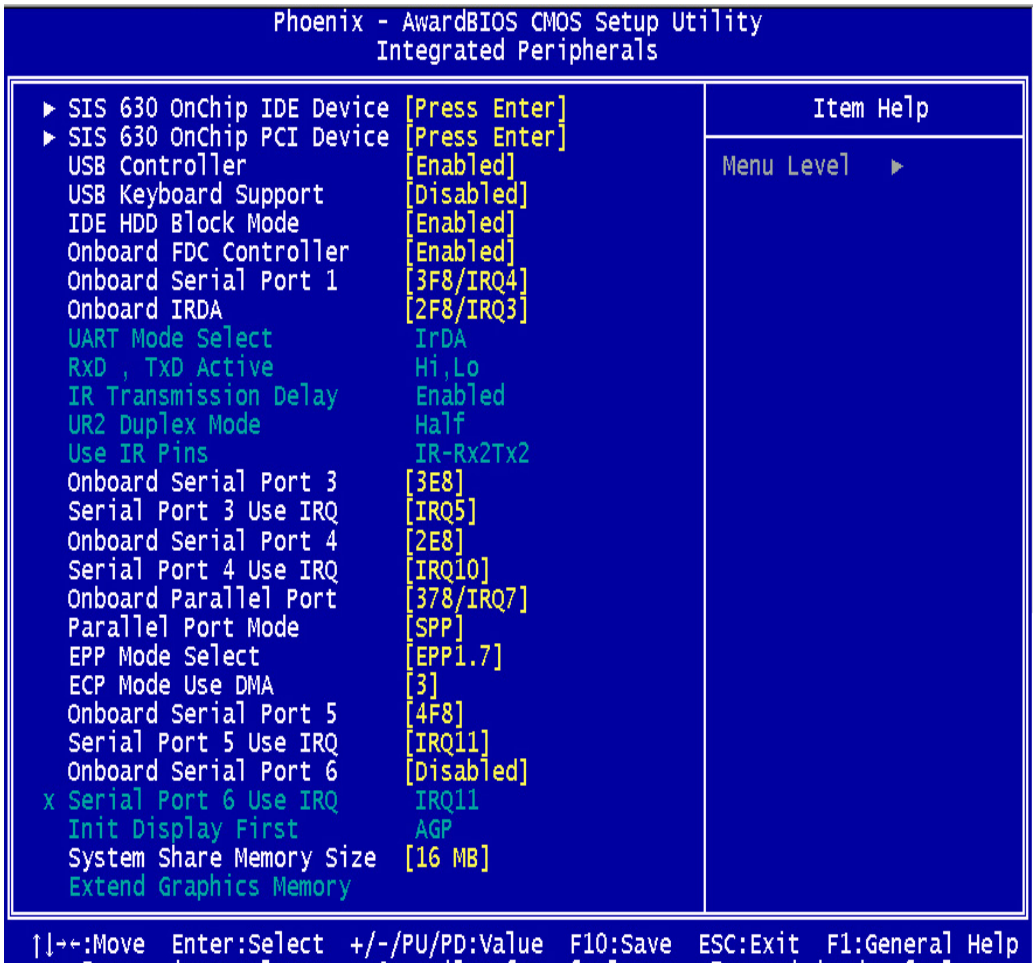
If the **Advanced DRAM Control** option is selected from the main menu, the screen below will appear. The following sample screen consists of the default values for FlexPOS.



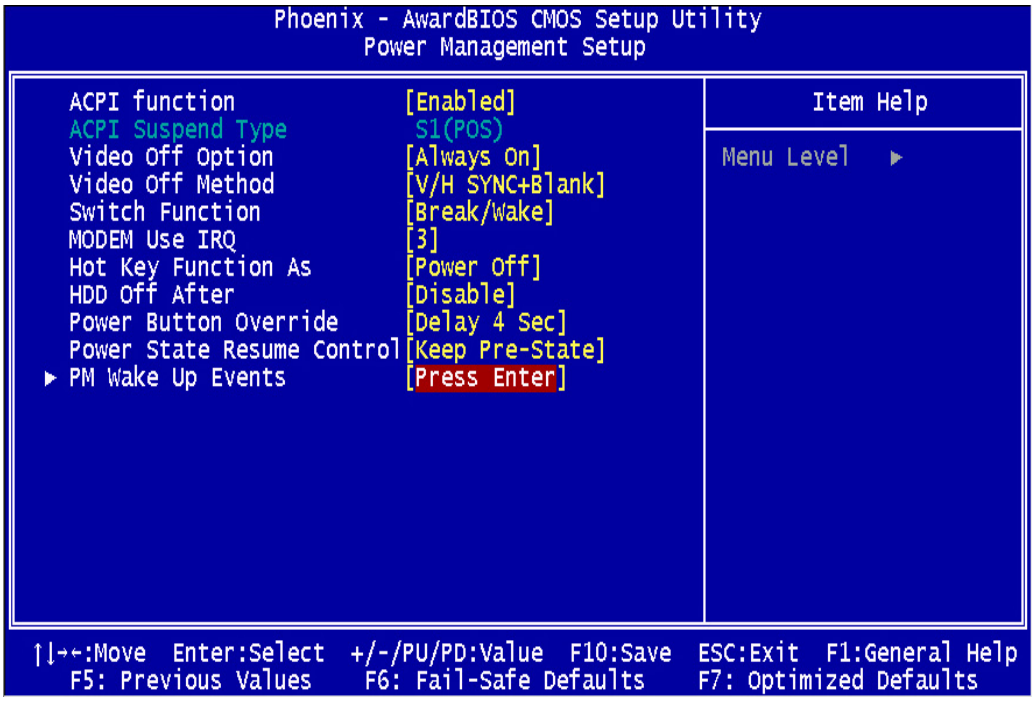
## 5.4.6. Integrated Peripherals

If the **INTEGRATED PERIPHERALS** option is selected from the main menu, the screen below will appear. The following sample screen consists of the default values for FlexPOS.



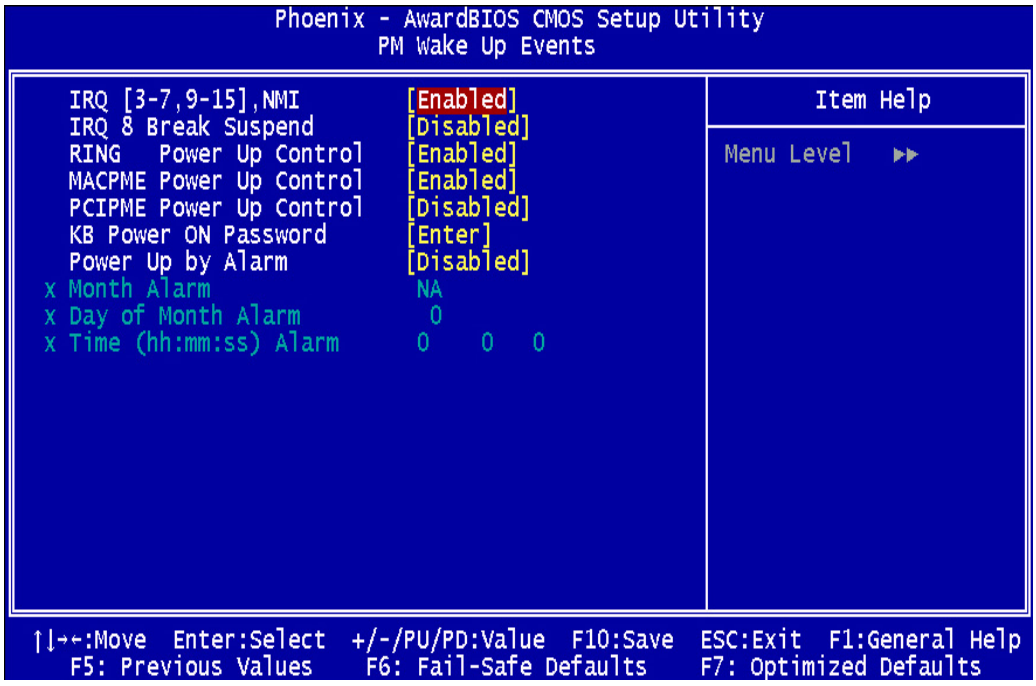
## 5.4.7. Power Management Setup

If the **POWER MANAGEMENT SETUP** option is selected from the main menu, the screen below will appear. The following sample screen consists of the default values for FlexPOS.



## 5.4.8. PM Wake Up Events

If the **PM Wake Up Events** option is selected from the main menu, the screen below will appear. The following sample screen consists of the default values for FlexPOS.

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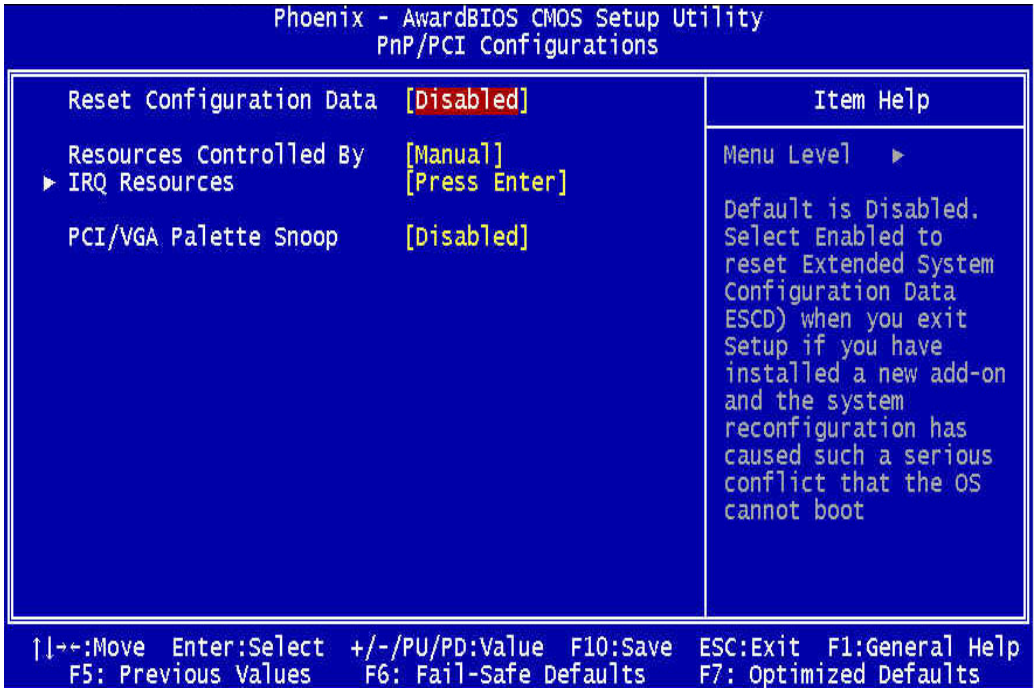
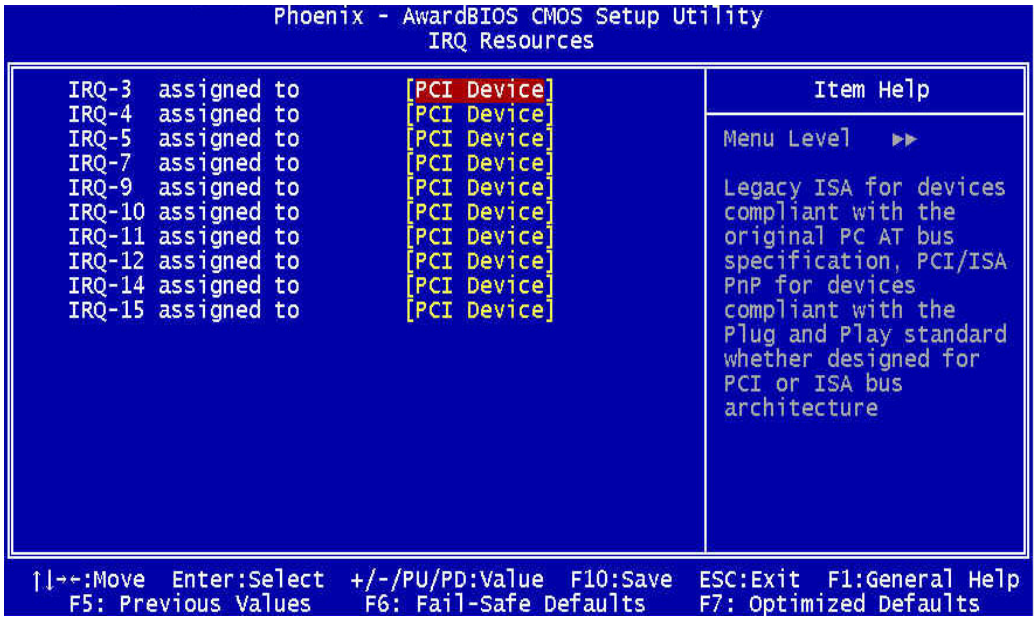
## 5.4.9. PnP/PCI Configuration

If the **PNP/PCI CONFIGURATION** option is selected from the main menu, the screen below will appear. The following sample screen consists of the default values for FlexPOS.

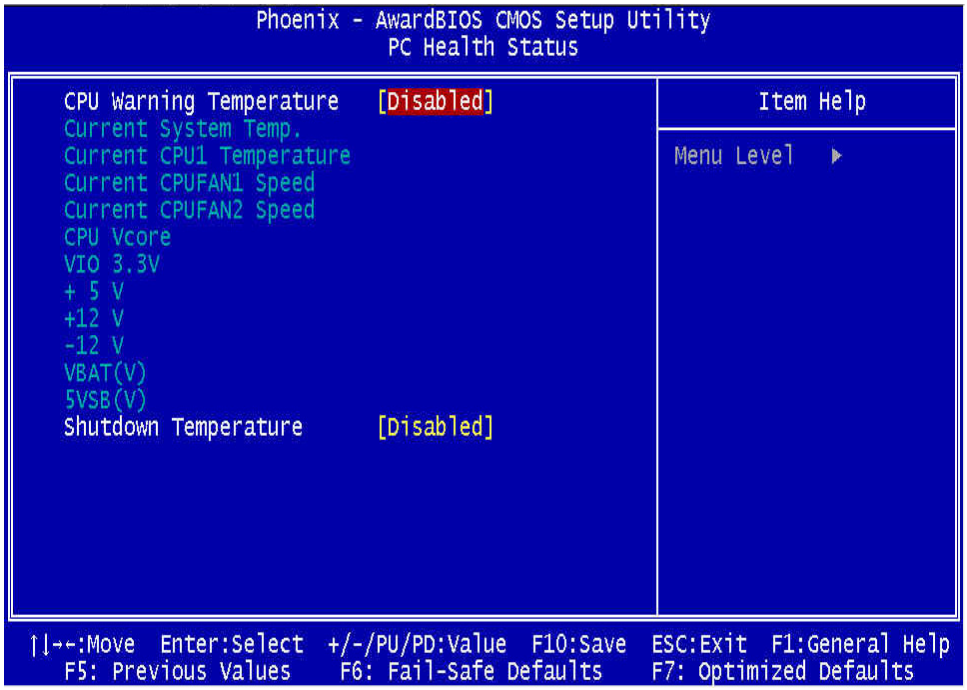



IRQ Resources

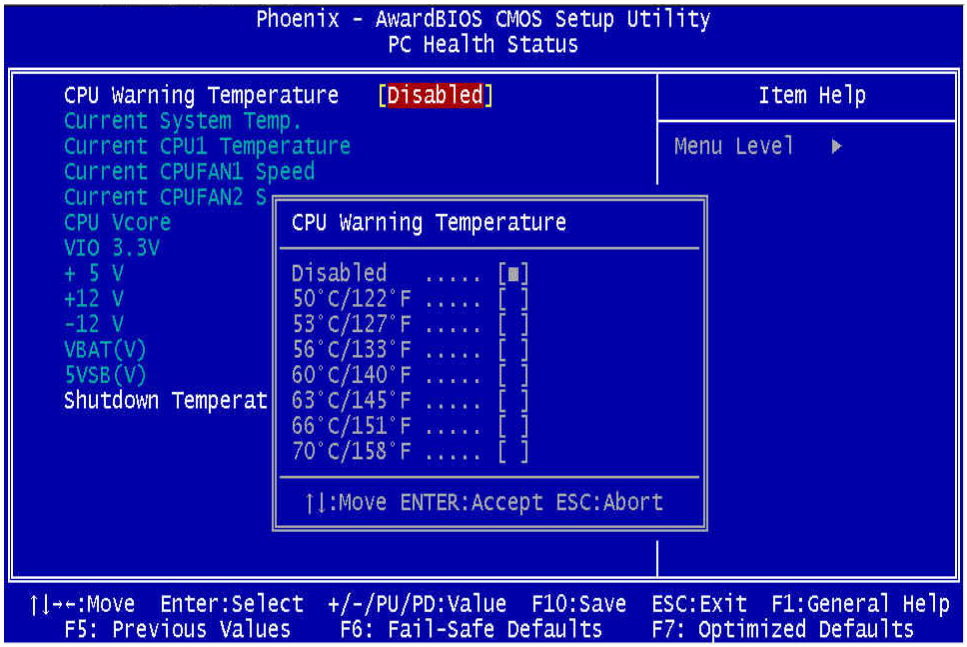


## 5.4.10. PC Health Status

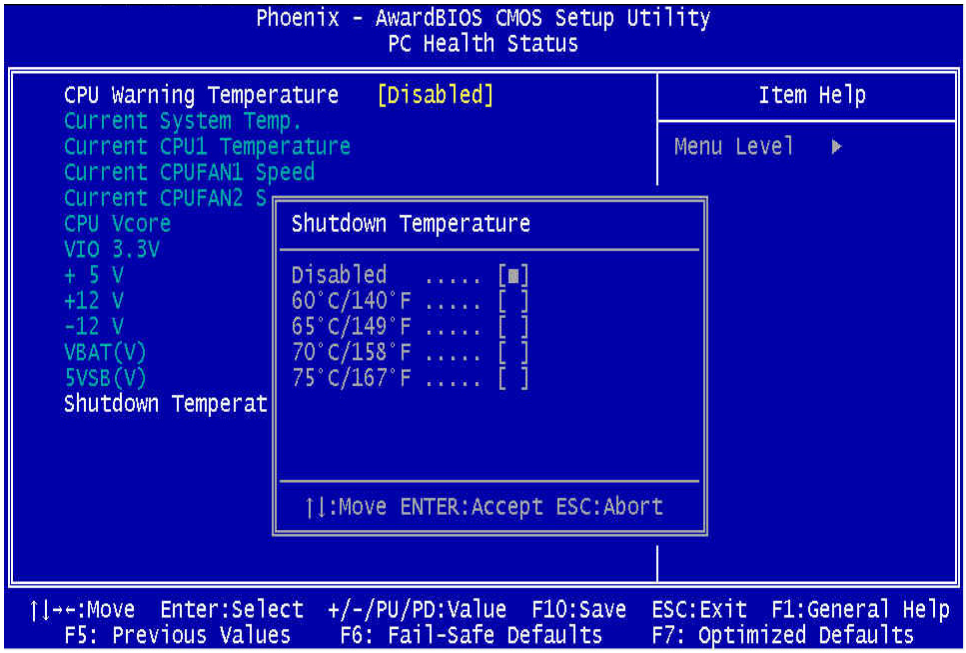
The **PC HEALTH STATUS** auto detects the system's temperature, voltage and fan speed.




CPU Warning Temperature:

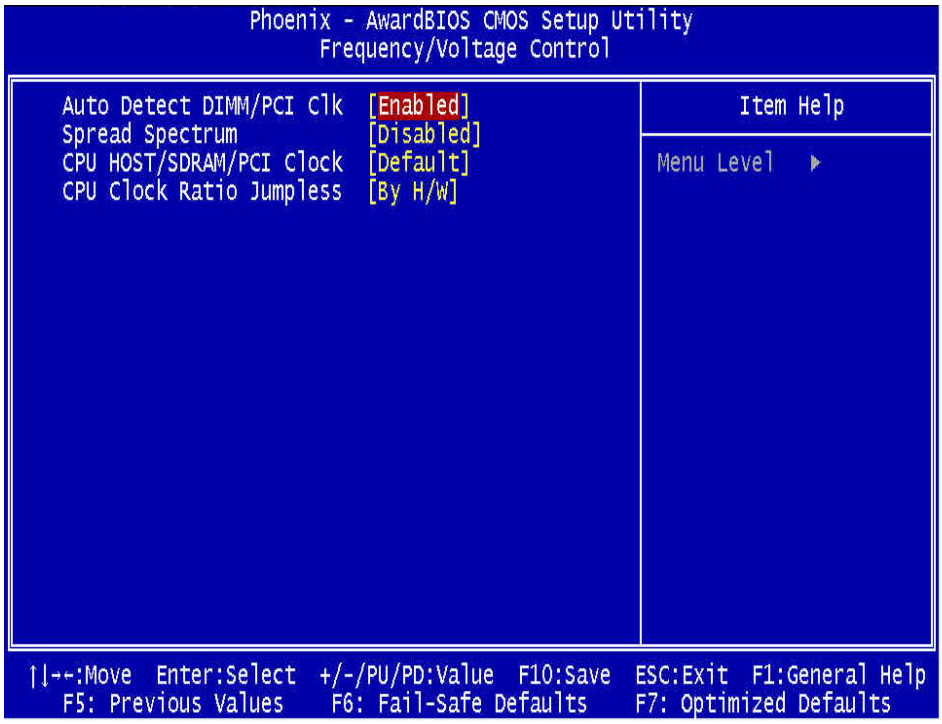


Shutdown Temperature



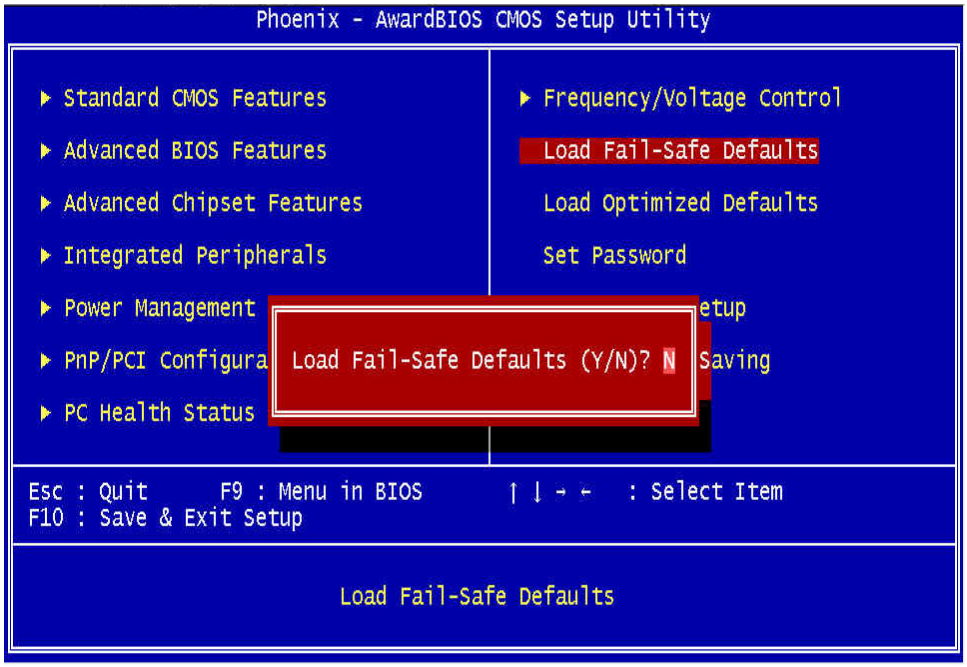
## 5.4.11. Frequency Voltage Control

This setup page is for the CPU, SDRAM and PCI frequency setting.



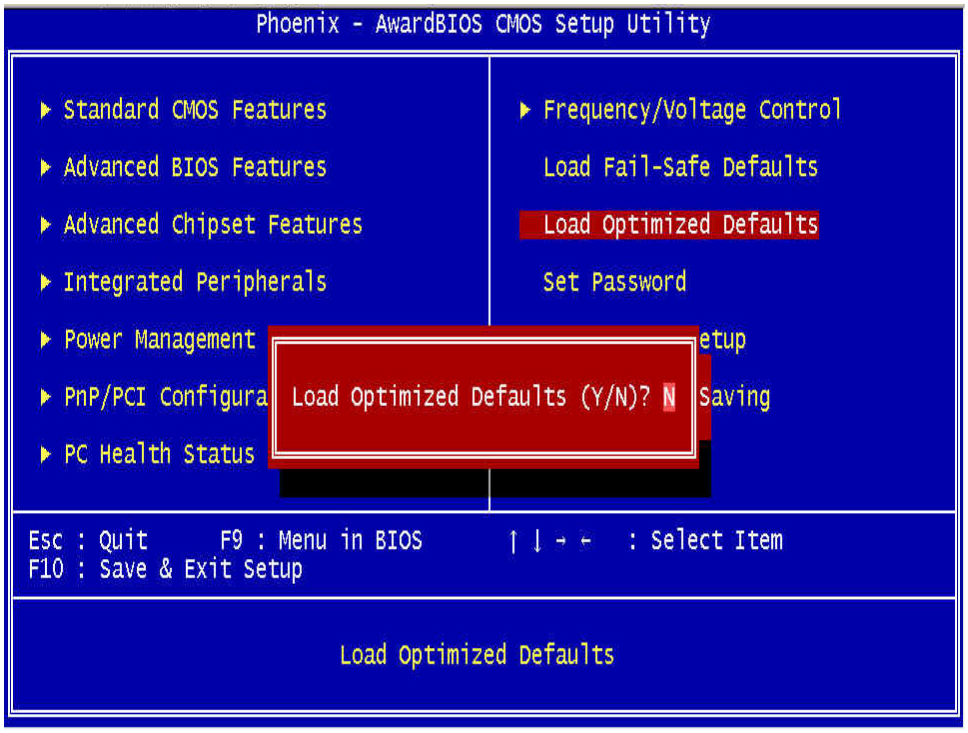
## 5.4.12. Load Fail-Safe Defaults

The default values of the **LOAD FAIL-SAFE DEFAULTS** indicates the most appropriate value of the system parameters that the system would be in safe configuration.



## 5.4.13. Load Optimized Defaults

The default values of the **LOAD OPTIMIZED DEFAULTS** indicates the most appropriate value of the system parameters that the system would be in best performance configuration.



### 5.4.14. User Password

The **USER PASSWORD** is used to set the password. To change the password, select this option from the main menu and press <Enter>.

If the CMOS does not work properly or the **USER PASSWORD** option is selected for the first time, then a default password is stored in the ROM. The following message will appear on the screen;

**Enter Password**

Press <Enter>.

If the CMOS is working properly or the **USER PASSWORD** option is selected to change the default password, then the current password (the ROM password or the use-defined password) stored in the ROM needs to be entered first. The following message will appear on the screen;

**Confirm Password**

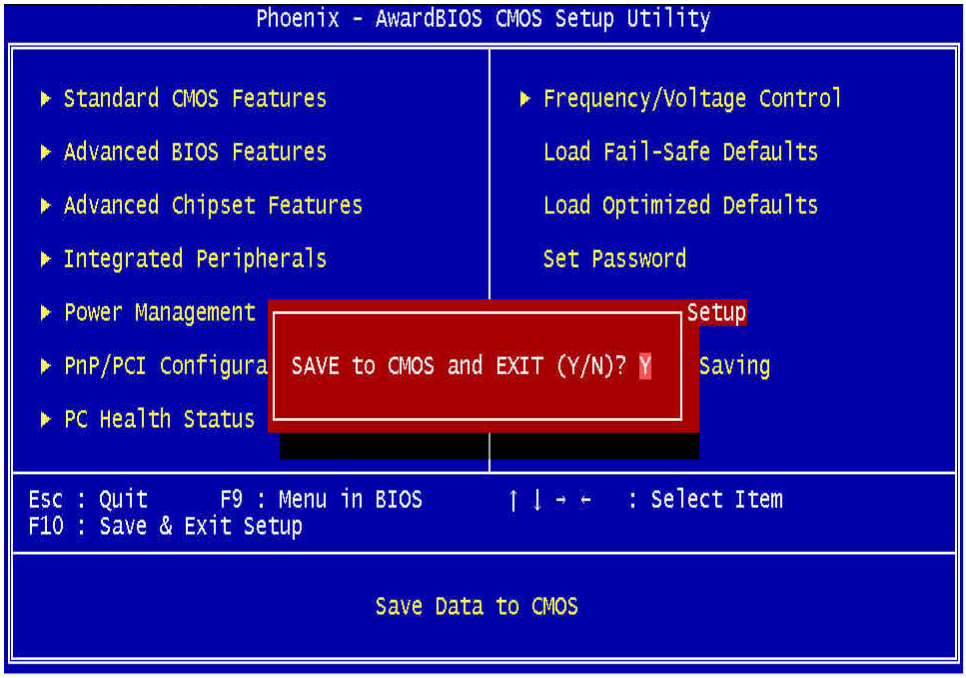
Enter the current password and press <Enter>.

After pressing <Enter>, then the new password (8 characters at most) can be entered now. The new password will be stored in the CMOS.

Please note that to enable this option, either **Setup** or **System** is to be selected from the **ADVANCED BIOS FEATRUES** first.

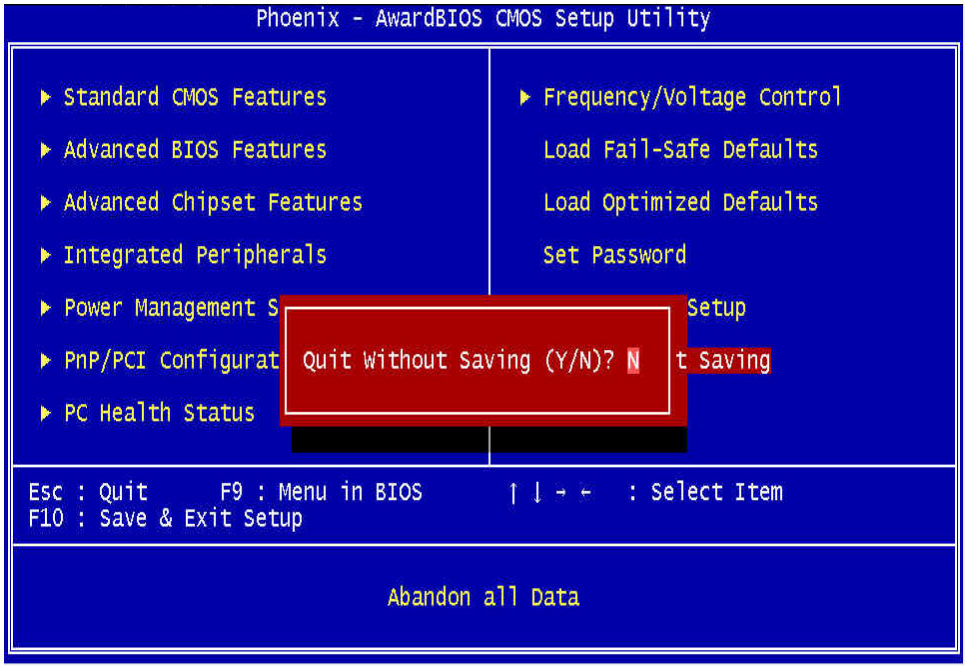
## 5.4.15. Save and Exit Setup

If the **SAVE & EXIT SETUP** option is selected, the values entered the setup utilities will be saved in the chipset's CMOS memory. When the system is turned on every time, the CPU will check the CMOS to compare the CMOS data to see whether it matches the system. These data are very important for the system operation.



## 5.4.16. Exit Without Saving

If the **EXIT WITHOUT SAVING** option is selected and <ENTER> is pressed, you will exit the Setup program without saving any new values. The CMOS will still keep the old values.



# 6. TOUCH SCREEN

For keyboard less operation, the FlexPOS 120/150 provides an optional touch screen. The FlexPOS system can use either ELO resistive type touch screen or 5 wires resistive touch screen. This chapter details the procedures to install the software drivers under DOS and Windows operation.

## 6.1. Elo Touch screen Driver Installation

The Elo resistive touch and Intelli touch will use the same drivers and utilities which are stored in the Driver CD diskette.

### 6.1.1. System Requirements

The DOS drivers will run on any system with DOS 2.0 or later version. The Windows drivers will run on any system with Windows 3.1 or later versions. The DOS demonstration program requires a VGA color display. The touch screen calibration program for DOS supports standard and VESA-compatible display modes. Otherwise, all software is video independent. An Elo touch screen must be installed on the display and connected to a serial or bus controller.

### 6.1.2. About Elo Software

**Software Included**

The accompanying DOS and Windows Driver Disk contains the following Elo driver software:

**EloDEV** Touch screen driver program for DOS : This program makes all Elo touch screen controllers, including serial RS-232, PC-Bus, and Micro Channel versions look the same to other driver and application programs.

**MonitorMouse for DOS** Mouse emulation driver for DOS : This program combines touch input from EloDEV and mouse input from your mouse driver into a single MOUSE.COM-compatible application interface.

**MonitorMouse for Windows** Mouse emulation driver for Microsoft Windows : This program allows all Windows programs to be used with a touch screen. Your mouse may be used in conjunction with the touch screen. DOS mouse-driven programs run from Windows may also use the touch screen.

**TouchBack** Keystroke emulation driver for DOS : Applications must be specially written for use with TouchBack. Your application documentation should specify if TouchBack is required.

The DOS and Windows Driver Disk also contains the following software:

**EloDEMO** A VGA-graphics program for DOS which demonstrates the capabilities of the touch screen hardware and many techniques for touch screen software.

**Utility and Diagnostic Programs** An assortment of programs are included to calibrate the touch screen and verify the operation of serial ports, touch screen controllers, and driver programs.

## 6.1.3. Installation

This section details the installation procedures for the software on the DOS and Windows Driver Disk. Four steps are required:

Step 1 Configuring the touch screen controller

Step 2 Installing the controller

Step 3 Running the INSTALL program

Step 4 Calibrating the touch screen

### STEP 1 - CONFIGURING THE TOUCH SCREEN CONTROLLER

THE MANUFACTURER ships most touch screen controllers preconfigured for use with Elo software.

### STEP 2 - INSTALLING THE CONTROLLER

If you need help when installing the touch screen controller or making the connections, please contact the Manufacturer's Customer Service department.

### STEP 3 - RUNNING THE INSTALL PROGRAM

The DOS and Windows Driver Disk contains an installation program which will automatically transfer all necessary files to the hard disk.

If you intend to install the Windows drivers, make sure that the Windows has been installed and operating properly before proceeding. *You must have a DOS mouse driver (MOUSE.COM) installed for your mouse if you wish to continue using your mouse along with the touch screen in DOS or Windows.*

If you only want to change the configuration of your touch screen controller, *see Changing Your Hardware Configuration with SETUP.*

Respond to the on-screen prompts and instructions. You will be asked to specify the model and configuration of your

controller, then select between **DOS Express Installation**, **Windows Express Installation**, **or Selective Installation**. **The touch screen controller of the FlexPOS 120/150 I is serial type. The model number is E271-2210 AccuTouch. Baud rate of the controller is "9600". The FlexPOS 120/150 I uses onboard COM3 to drive this controller, IRQ is selected by BIOS setting. IRQ10 is the factory default setting for COM3.** The software to be installed and disk space requirements will be displayed for each installation option. You may specify the drive and directory for the files you choose to install, or use the default (C:\TOUCH).

The INSTALL program will modify your AUTOEXEC.BAT file, (and SYSTEM.INI file for Windows installations). Copies of the original files will be saved as AUTOEXEC.OLD and SYSTEM.OLD.

### 6.1.4. Installing MonitorMouse for Windows system

1. Turn on your computer.
2. To install the software, insert the Driver CD. The path as x:\Drivers\Elo Touch\ (X = your CD device number)
3. Open one folder which same as your operating system.
4. Double click the only one file in this folder and Unzip to a folder such as "c:\EloWin9X".
5. Chang to "c:\EloWin9X" double click setup.exe.
6. Following the instructions on the screen.
7. The Touch screen Setup Wizard will appear. You will need to specify the type of touch screen controller you are using and how it is connected.

   Control type: serial

   SmartSet: 2xx0

   COM port: COM3
8. Complete the Setup program.
9. Restart your system.
10. Click the Start button, then click Settings, and then click *Control Panel*.
11. Double-click *Elo Touch screen* to run the Touch screen Control panel.
12. Click the *Calibrate* button and touch each of the three targets as they appear on the screen. Click *Yes* when the cursor lines up correctly with your finger. Click *OK* to close the Touch screen Control panel.

**NOTES**

- Full-screen DOS mode is not supported. However, Windowed DOS mode is fully supported. A touch to a full-screen DOS session will cause your system to immediately return to your Windows desktop. A mouse can be used to access programs run in full-screen DOS mode.

- Windows 95 may lock up during startup if the resource settings in the Setup dialog of the *Touch screen Control Panel* do not match the actual controller configuration. Use *Safe Mode* to start Windows 95 and change the resource settings to match the controller configuration, then restart Windows 95.
- The touch screen driver may cause Windows 95 to lock up during Shutdown if the touch screen is activated after Shutdown is initiated.

**Removing the Mouse Pointer**

If you wish to eliminate the mouse pointer, you may replace it with the null cursor file, NULL.CUR, supplied with MonitorMouse for Windows 95. Follow the following steps to install the null cursor file;

1. Open the *Control Panel* and select *Mouse*.
2. Select the *Pointers* tab.
3. Highlight the *Normal Select* cursor then select *Browse*.
4. Type " null.cur" in the space provided and select *Open*.
5. Select *OK* to select the option.
6. Exit from the *Mouse Control Panel*. You should notice that the arrow cursor has disappeared. Note that all other cursors will still function as before.

**MonitorMouse for Windows 95 Uninstall Procedure**

1. Close the Windows *Control Panel* if it is open.
2. Delete the following files from your \Windows\System folder: MONMOUSE.VXD, MONMOUSE.HLP, and MONMOUSE.CPL.
3. Start the REGEDIT.EXE program to edit the registry (click the *Start* button, click *Run*, type "regedit" and press <Enter>). Delete the following keys from the registry:

HKEY_CURRENT_USER\Control Panel\desktop\DoubleClickHeight

HKEY_CURRENT_USER\Control Panel\desktop\DoubleClickWidth

Delete the following registry key folders and their contents:

HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\VxD\

MonMouse

HKEY_LOCAL_MACHINE\SOFTWARE\Elo TouchSystems

4. Use Notepad to delete the following line from the [386Enh] section of the SYSTEM.INI file:

   device=monmouse.vxd

5. Delete the directory C:\Elo to remove the touch screen diagnostic programs and sample Z-axis and calibration programs.

Restart Windows.

### 6.1.5. Getting More Information

For more information on installing the Elo software driver to the FlexPOS system or to download Elo touch screen drivers, please visit Elo Touchsystem website

http://www.elotouch.com

Click the *Support* button and follow the instruction on the screen to download Elo software or documentation.

If after consulting the documentation, you still need help with the setup of the Elo touch software to the system, you can click the *Technical* button to locate Elo global service points for help.

## 6.2. 5 Wires Resistive Touch screen Driver Installation

### 6.2.1. For Windows 98 / Me / NT4 / 2000 / XP

TouchKit is software, which contains drivers of the touch panel controllers for the specified communication connectors, RS232, PS/2 and USB, and the other two utilities:

#### 6.2.1.1. Touch Tray support

This is utility for simulating the right and left button of your mouse through controlling touch panel. You can toggle between right or left mouse buttons by this utility. Also, you can toggle the mouse mode for click or drawing application.

#### 6.2.1.2. Configuration support

The calibration and draw test of touch panel are done by this utility. Besides, you can add or search for new RS-232 or PS/2 touch panel devices.

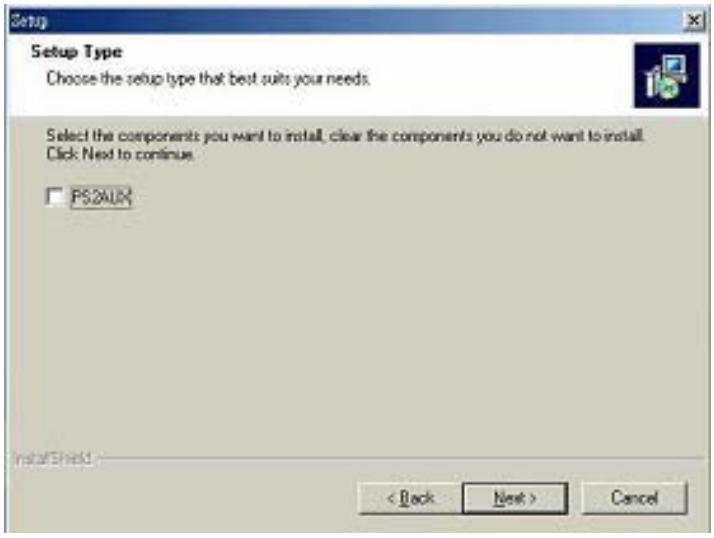
**FOLLOW THESE STEPS TO INSTALL *TOUCHKIT*.**

**(AN EXAMPLE FOR WINDOWS 98.)**

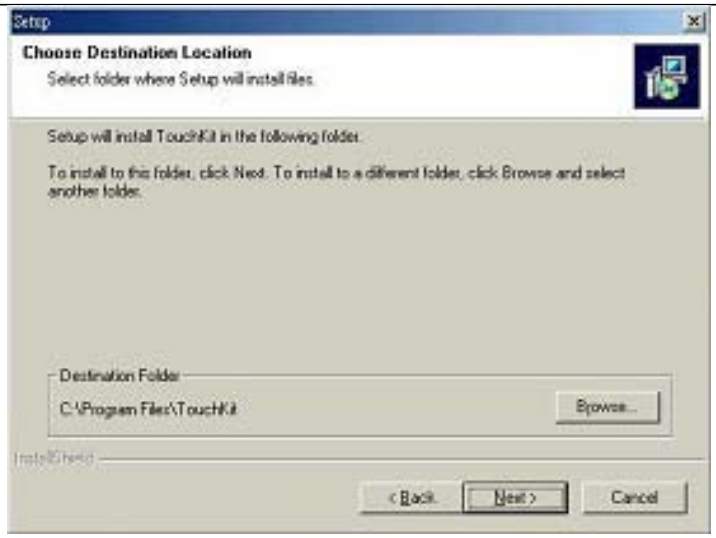
1. **PUT THE *TOUCHKIT* CD TO YOUR CD-ROM.**
2. **CHANGE DIRECTORY TO "WIN98ME."**

   **(OR CHANGE TO "NT_4.0", "WINXP2000" RESPECTIVELY)**
3. **DOUBLE CLICK THE SETUP.EXE, THEN WINDOWS STARTS TO RUN THE INSTALLATION PROGRAM.**
4. **JUST CLICK** [NEXT>] **BUTTON TO CONTINUE INSTALLATION.**


5. **THEN CHECK THE CHECK BOX IF PS/2 TOUCH CONTROLLER IS TO BE INSTALLED. THE DEFAULT IS UNCHECKED. THEN PRESS** [ NEXT >] **TO CONTINUE INSTALLATION.**

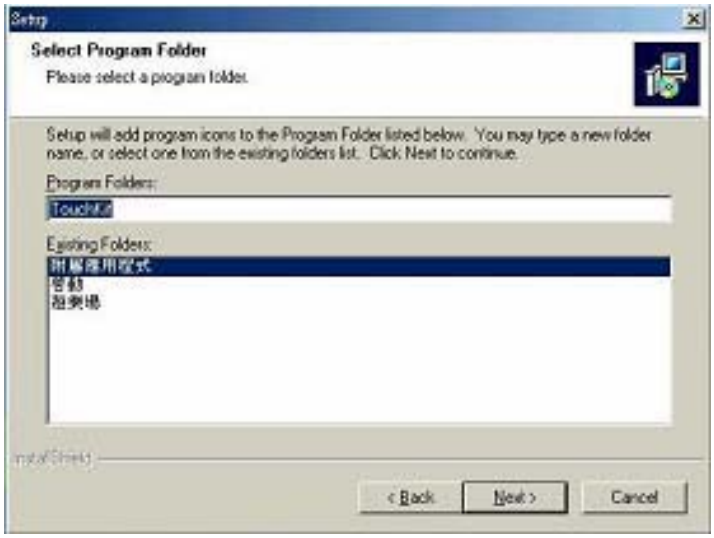



6. **SELECT APPROPRIATE FOLDER WHERE SET UP WILL INSTALL FILES.**

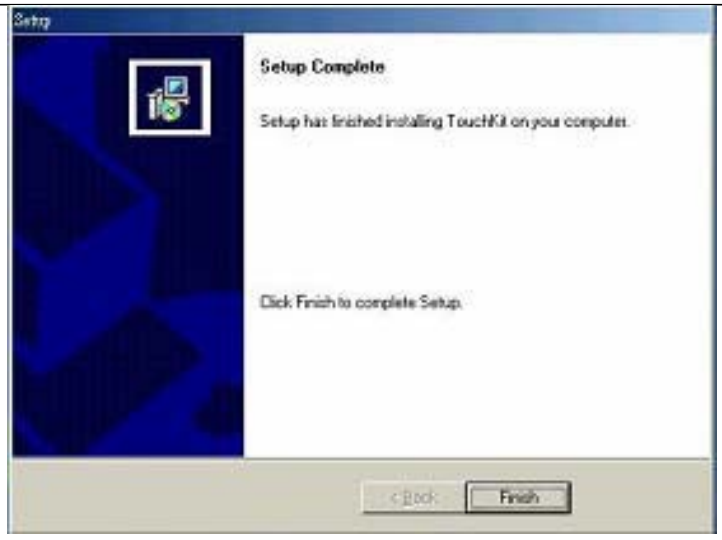



**PRESS ON THE** [NEXT>] **BUTTON TO CONTINUE.**

7. **THEN TYPE IN YOUR PROGRAM FOLDER'S NAME FOR TOUCHKIT OR PRESS ON** [NEXT>] **TO CONTINUE. THERE WILL BE A DEFAULT NAME FOR IT.**




8. **WINDOWS IS COPYING FILES TO DISK AND THE SETUP IS COMPLETE. CLICK** [FINISH>] **TO TERMINATE.**




**9. WINDOWS WILL REQUEST YOU TO RE-BOOT YOUR COMPUTER. PRESS** [YES>] **OR** [NO>] **TO RE-BOOT AND THE INSTALLATION IS FINISHED.**


**SETUP IS COMPLETE.**

# 7. PERIPHERAL DEVICES

- Wireless LAN
- Compact Flash Slot
- Customer Display
- Magnetic stripe reader

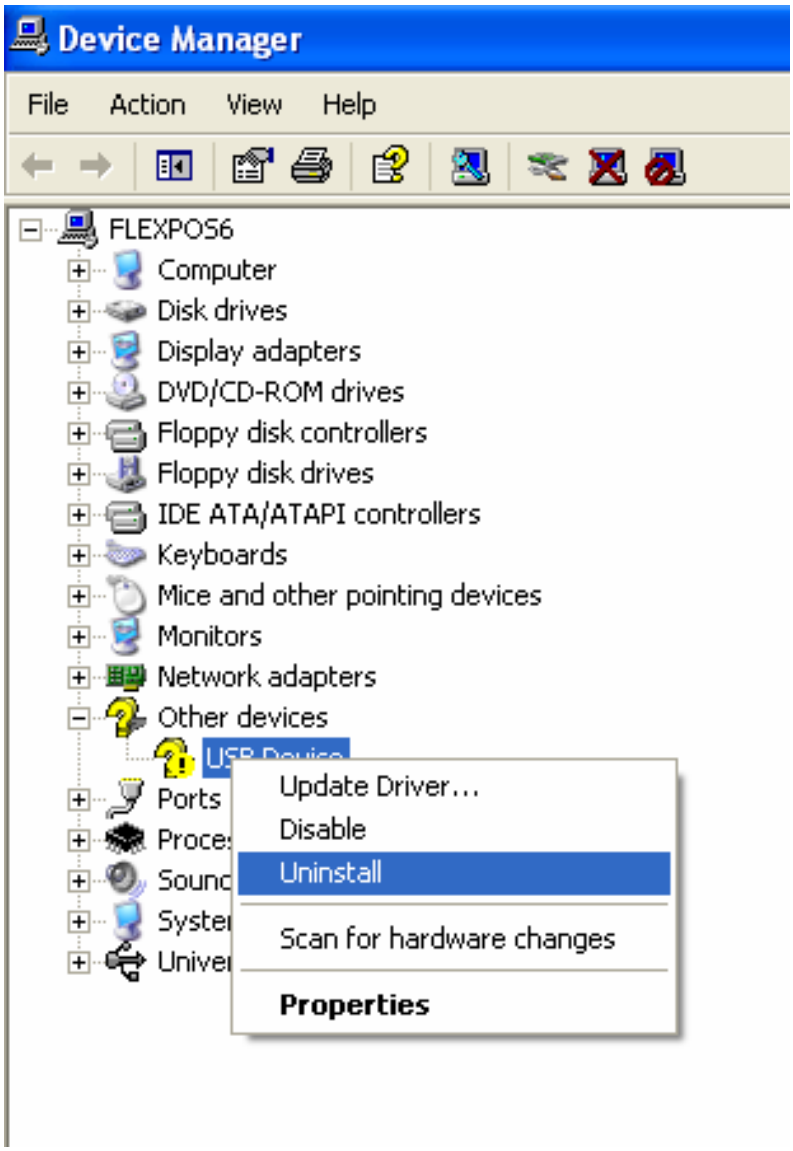
## 7.1. Wireless LAN

A wireless LAN (WLAN) is a flexible data communication system implemented as an extension to or as an alternative for, a wired LAN within a building or campus. Using electromagnetic waves, WLANs transmit and receive data over the air, minimizing the need for wired connections. Thus, WLANs combine data connectivity with user mobility, and, through simplified configuration, enable movable LANs.

For more information please turn to same folder as this manual location. Named “Wireless User Manual.pdf”

****Notice:** Please follow our procession to enable your Wireless LAN device as next page.

1. Please remove the wireless device after installed Windows system.




2. Insert the FlexPOS CD into external CD-ROM and run X:\Drivers\Wireless LAN\Setup.exe.

3. Reboot your system

## 7.2. IDE Compact Flash Slot

FlexPOS Supporting Compact Flash Type I/II. Compact Flash cards are designed with flash technology, a nonvolatile storage solution that does not require a battery to retain data indefinitely.

The only difference between CF Type I and CF Type II cards is the card thickness. CF Type I is 3.3 mm thick and CF Type II cards are 5mm thick. A CF Type I card will operate in a CF Type I or CF Type II slot. A CF Type II card will only fit in a CF Type II slot. The electrical interfaces are identical. Compact Flash is available in both CF Type I and CF Type II cards, though predominantly in CF Type I cards. The Microdrive is a CF Type II card. Most CF I/O cards are CF Type I, but there are some CF Type II I/O cards.

***Notice:**

***Please do not remove IDE compact flash card during system operating.***

## 7.3. Customer Display

The Customer Display is an artistic design POS system peripheral device.
It is for use with POS system to display the purchased prices and the amount of change to customers. Also it is capable to display the advertising Message.

RS-232 interface Customer Display connecting with either one COM port for operating.

## 7.4. Magnetic stripe reader (MSR)

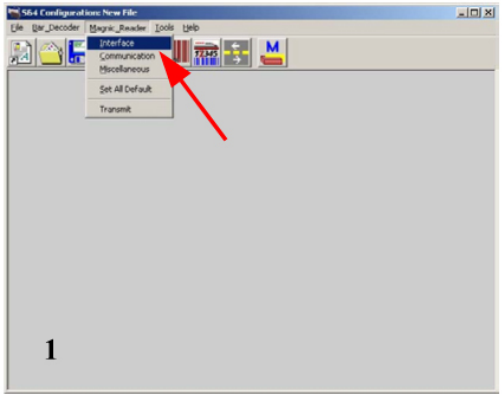
The built-in magnetic stripe readers (MSR) are designed to read high or low coercive magnetic cards. They decode and verify the data tracks simultaneously. It is able to read magnetic data from any available track encoded per ISO 7810-7813 standards and is designed for use in access control, retail and time attendance applications, etc. The TTL output allows the reader to be universally accepted by most decoders.

1. Setting the Card Reader:

(1) Click " 564 Decoder " Icon.

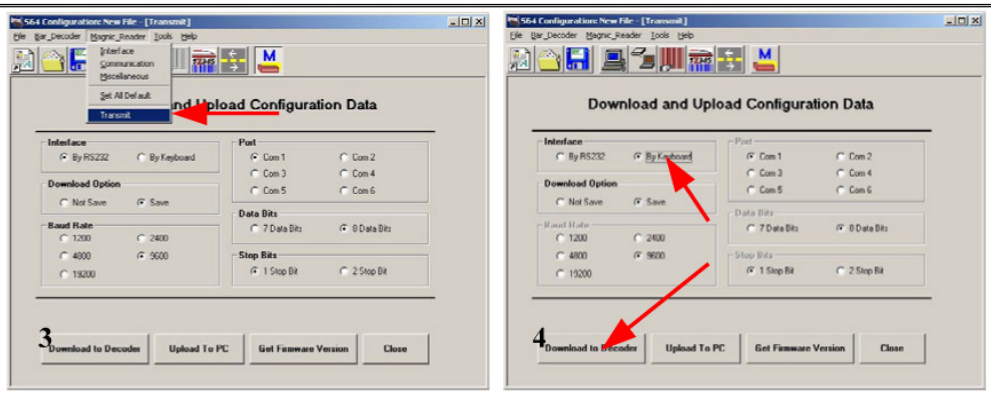
(2) Click "Magnic_Reader" and choose "Interface". (See Picture 1)

(3) Choose "Interface" Folder and "Keyboard Mode" Icon. If you want to use card reader with keyboard, don't choose the "Disable External Keyboard", or choose it if don't use keyboard. (See Picture 2)




(4) Click "Magnic_Reader" and choose "Transmit" to "Download and Upload Configuration Data". (See Picture 3)

(5) Choose " By Keyboard" Icon in the "Interface" Block, and click "Download to Decoder" Bottom to save the settings to the Card Reader. (See Picture 4)




(6) Restart the system and Finish the setting.

2. Open WordPad or Notepad and take a card to scan, then the Code of the card show on the WordPad or Notepad.

***Notice:**

1. ***When system boot-up with 2003/12 version of MSR, it makes beep sound twice after passed self testing.***
2. ***Tools CD ver. 1.31a included advance MSR setup program X:\Drivers\MSR***
3. ***MSR is an optional device, specification change without notice***

# APPENDIX

## A: Programming the Watchdog Timer

The *FlexPOS* features a watchdog timer that can generate a system reset if the CPU processing comes to a halt. This feature ensures the system dependability during unattended operation.

The following is the Watchdog Timer instruction:

⊙ IOW 444(Hex),Timer(Hex) ---------

Enable/Setting/refresh Watchdog Timer

Timer: 64 levels setting (1 ~ 64 seconds, tolerance +-20%)

⊙ IOR 441(Hex) --------------------------

Disable Watchdog Timer

⊙ Watchdog Timer table

A:\DEBUG

O 444 (T)

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (T) | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 0A | 0B | 0C | 0D | 0E | 0F |
| | 64 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 |
| (T) | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 1A | 1B | 1C | 1D | 1E | 1F |
| | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
| (T) | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 2A | 2B | 2C | 2D | 2E | 2F |
| | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 |
| (T) | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 3A | 3B | 3C | 3D | 3E | 3F |
| | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 |

* T : Time

If you want to use the watchdog timer, you must write a program which writes I/O port address 444(Hex) at timer setting intervals. The first time your program writes the port, it sets and enables the watchdog timer. Program must write the port at time intervals. Otherwise the watchdog timer will activate and reset the CPU. When you want to disable the watchdog timer, your program should read I/O port 441(Hex).

If CPU processing come to a standstill because of a software bug or EMI, program's signals to I/O port address 444(Hex) to the timer will be interrupted. The watchdog timer will automatically reset the CPU, and data processing will continue normally.

Example program

```
 5   REM  Watchdog timer
10   X=OUTP(&H444)Timer   REM Enable / Setting the Watchdog timer
15   GOSUB 500
20   X=OUTP(&H444)Timer   REM Refresh the Watchdog timer
25   GOSUB 600
30   X=OUTP(&H444)Timer   REM Refresh the Watchdog timer
35   GOSUB 800
 X=INP(&H441)   REM Disable Watchdog timer
45   END
500 REM Subroutine takes shorter than setting level  to complete
.
550 RETURN
600 REM Subroutine takes shorter than setting level  to complete
.
680 RETURN
800 REM Subroutine takes shorter than setting level  to complete
.
870 RETURN
```

# B. How to Enable and Use COM6

As the IRQ resource is limited and not enough to provide for COM6 , so the user must set and change IRQ Setting under BIOS Setup in order to Enable COM6 Port .

◆ For Windows 2000 / XP :

Step (1) Set Onboard FDC Controller : Disable under Integrated Peripheral Setup

Set Floppy A: None under BIOS CMOS Setup

Step (2) Set COM5 : IRQ 6 / 4F8

COM6 : IRQ 7 / 4E8

Under Windows 2000/XP , Parallel Port can work and not occupying IRQ7 , so it can release IRQ7 for COM6.

◆ For Windows 98 / ME :

Step (1) Set Onboard FDC Controller : Disable under Integrated Peripheral Setup

Set Floppy A: None under BIOS CMOS Setup

Step (2) Set COM5 : IRQ 6 / 4F8

COM6 : IRQ 7 / 4E8

Step (3) Set Onboard Parallel Port : Disable to release IRQ 7

So, the user can not use Parallel Port if they want to Enable and use COM6 for their COM Port device.

# C. DIO (Digital Input & Output) for Cash Drawers

The *FlexPOS* also equipped with a digital I/O that provide one digital in and 2 Cash drawer (12V) out interface.

The following are the Digital I/O instruction :

Bit 0 is valid data (The signals normally pull low)

⊙ Digital in :

IOR 440(Hex)

Bit 0 is valid data ( The signals normally pull low )

⊙ Cash Drawer out : If you want to open the Cash Drawer , please make a low to high signal to trigger the data bit 0 ( Cash 1 ) or bit 1 ( Cash 2 )

Cash Drawer 1:

IOW 440(Hex), 0 ( initial data to low )

IOW 440(Hex), 1 ( trigger data to high )

Cash Drawer 2:

IOW 440(Hex), 0 ( initial data to low )

IOW 440(Hex), 2 ( trigger data to high )