USER'S MANUAL

POS-3150 Series

Mini POS Terminal Powered by

Intel® Atom™ Platform

POS-3150 Series CM5

POS-3150 Series POS System
With LCD / Touchscreen

PREFACE

COPYRIGHT NOTICE

This user's manual is meant to assist users in installing and setting up the system. The information contained in this document is subject to change without any notice.

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ACKNOWLEDGEMENTS

All trademarks and registered trademarks mentioned herein are the property of their respective owners.

CE NOTICE

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

FCC NOTICE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any change or modifications to the equipment not expressly approve by the party responsible for compliance could void your authority to operate such equipment.

CAUTION! Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.   Dispose of used batteries according to the manufacturer's instructions.
WARNING! Some internal parts of the system may have high electrical voltage. And therefore we strongly recommend that qualified engineers can open and disassemble the system.
The LCD and Touchscreen are easily breakable, please handle them with extra care.

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CHAPTER 4 AWARD BIOS SETUP

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APPENDIX   B   TECHNICAL SUMMARY

APPENDIX   C   QUICK MANUAL

INTRODUCTION

This chapter gives you the information for POS-3150 Series. It also outlines the system specifications.

Sections included:

● About This Manual

● POS System Illustration

● POS System Specifications

● Safety Precautions

Experienced users can jump to chapter 2 on page 2-1 for a quick start.

1-1. ABOUT THIS MANUAL

Thank you for purchasing our POS-3150 Series System. The POS-3150 is an updated system designed to be comparable with the highest performance of IBM AT personal computers. The POS-3150 provides faster processing speed, greater expandability and can handle more tasks than before. This manual is designed to assist you how to install and set up the whole system. It contains four chapters and three appendixes. Users can configure the system according to their own needs.

Chapter 1 Introduction

This chapter introduces you to the background of this manual. It also includes illustrations and specifications for the whole system. The final section of this chapter indicates some safety reminders on how to take care of your system.

Chapter 2 System Configuration

This chapter outlines the location of motherboard components and their function. You will learn how to set the jumper and configure the system to meet your own needs.

Chapter 3 Software Utilities

This chapter contains helpful information for proper installations of the Intel Utility, VGA Utility, LAN Utility, Sound Utility, T and ouch Screen Utility. It also describes the Wireless Utility.

Chapter 4 Award BIOS Setup

This chapter indicates you how to change the BIOS configurations.

Appendix A System Assembly

This appendix gives you the exploded diagrams and part numbers of the POS-3150.

Appendix B Technical Summary

This appendix gives you the information about the allocation maps for the system resources, Watchdog Timer Configuration, and Flash BIOS Update.

Appendix C Quick Manual

This appendix gives you the information about the assembly procedures of Advertisement board and the 2nd Display.

1-2. POS SYSTEM ILLUSTRATION

POS-3150 80 degree

Front View
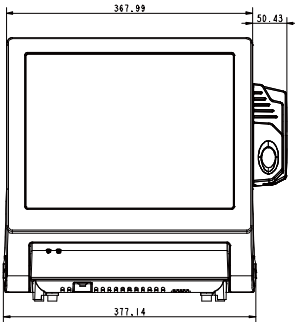
Rear View
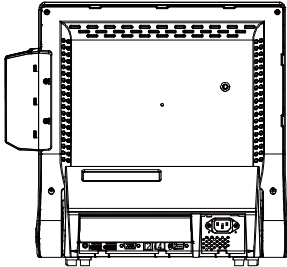
Side View
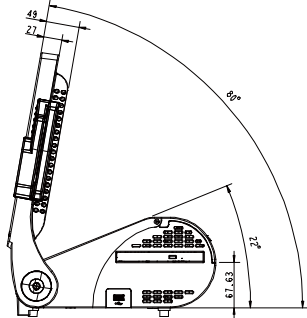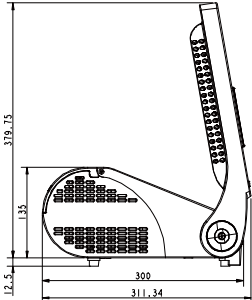
Top View
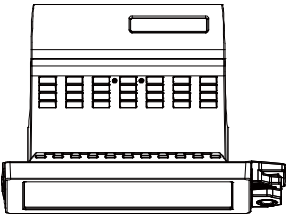
Bottom View
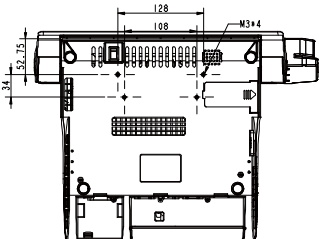
I/O View
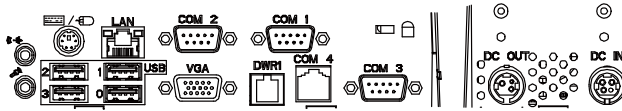
Quarter View
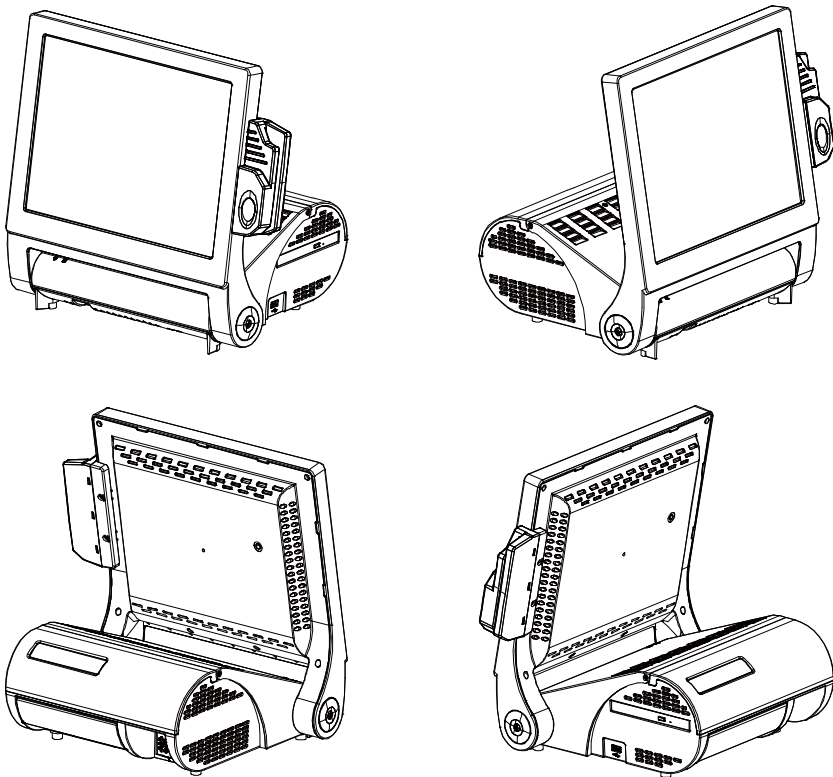
POS-3150 40 degree

Front View

367.99
50.43
377.14

Rear View

274.82

Side View

293.38
135
12.5
300

49
2.1
40°
22°
67.63

Top View

Bottom View

128
108
M3*4
52.75
34
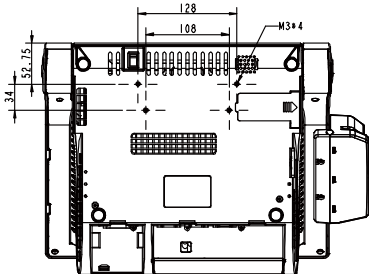
I/O View
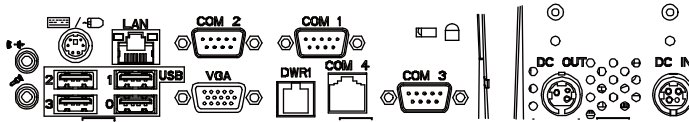
Quarter View
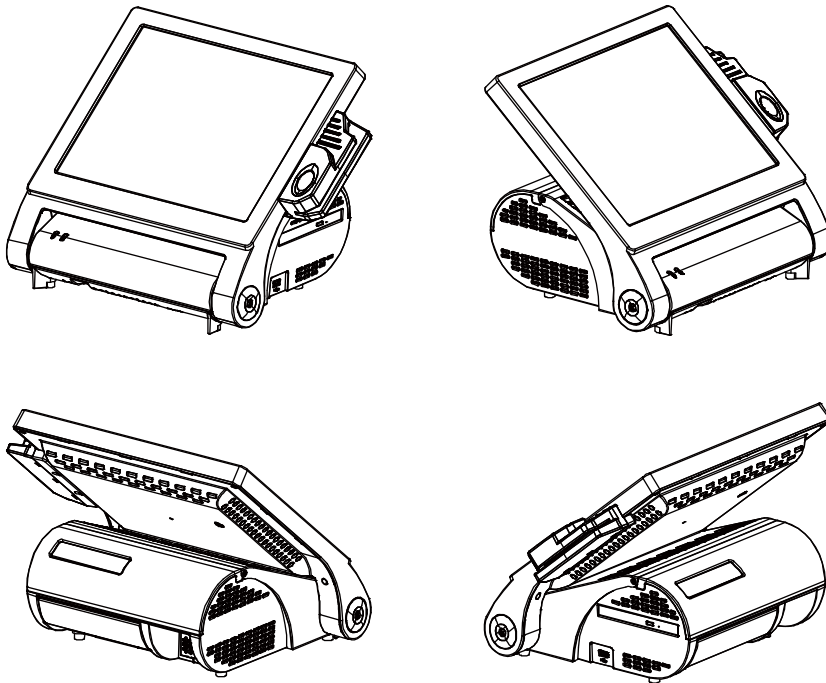
1-3. SYSTEM SPECIFICATIONS

MAINBOARD

● **CPU Type:**
Intel® ATOM N270

● **Chipset:**
Intel® 945GSE + ICH7M

● **Memory:**
One 200-pin DDRII SO-DIMM socket on board, up to 1GB

● **Cache:**
Depended on CPU

● **Real-Time Clock / Calendar:**
Embedded in Intel® ICH7M South Bridge

● **BIOS:**
Phoenix Award PnP BIOS
4Mbytes with VGA BIOS

● **Keyboard Connector:**
PS/2 Keyboard, with mini DIN connecter on rear panel

● **Mouse Connector:**
PS/2 Mouse, with mini DIN connecter on rear panel

● **Serial Port:**
3 x DB-9(COM 1/2/3), 1 x RJ45 (COM4),
+5/12V Selectable (COM 1~4)

● **Universal Serial Bus Port:**
4 x USB2.0 ports
1 x USB2.0 on side bezel

● **LAN Function:**
1 x 10/100/1000 Mbps

● **AUDIO Function:**
　　1 x 2W Speaker

● **VGA Function:**
　　1 x DB-15 VGA Interface

● **Dimension (W x H x D):**
　　368mm x 291mm x 301mm (angle: 40 degrees)

● **System Weight:**
　　8.3 kg (without DVD inside)

● **LCD Panel:**

Type	XGA
Max. Resolution	1024 x 768
Size/Type	15" / TFT
Viewing Angel (degree)	0~65 degrees
Pixel Pitch	0.297(H) x 0.297(V)
Brightness	250 cd / m^2
Signal Interface (bit)	TTL (24-bit)

● **Touch Panel:**
　　15" 5wire Analog resistive

● **WIRELESS LAN (Optional):**
　　Mini PCIe Wireless LAN Module (802.11b/g)

● **MSR (Optional):**
　　Hang aside type, JIS-I or II, ISO Tracker 1+2+3 (PS2 Interface)

1-4. SAFETY PRECAUTIONS

The following messages are safety reminders on how to protect your systems from damages, and extending the life cycle of the system.

1. Check the Line Voltage
   a. The operating voltage for the power supply should be within the range of 100V to 240V AC; otherwise the system may be damaged.

2. Environmental Conditions
   a. Place your POS-3150 on a sturdy, level surface. Be sure to allow enough space around the system to have easy access needs.
   b. Avoid installing your POS-3150 Series POS system in extremely hot or cold places.
   c. Avoid exposure to sunlight for a long period of time (for example, in a closed car in summer time. Also avoid the system from any heating device.). Or do not use the POS-3150 when it has been left outdoors in a cold winter day.
   d. Bear in mind that the operating ambient temperature is between 0°C and 35°C (32°F and 95°F).
   e. Avoid moving the system rapidly from a hot place to a cold place, and vice versa, because condensation may occur inside the system.
   f. Protect your POS-3150 against strong vibrations, which may cause hard disk failure.
   g. Do not place the system too close to any radio-active device. Radio-active device may cause signal interference.
   h. Always shutdown the operating system before turning off the power.

3. Handling
   a. Avoid placing heavy objects on the top of the system.
   b. Do not turn the system upside down. This may cause the hard drive to malfunction.
   c. Do no allow any objects to fall into this product.
   d. If water or other liquid spills into the product, unplug the power cord immediately.

4. Good Care

    a. When the outside case gets stained, remove the stains using neutral washing agent with a dry cloth.

    b. Never use strong agents such as benzene and thinner to clean the surface of the case.

    c. If heavy stains are present, moisten a cloth with diluted neutral washing agent or alcohol and then wipe thoroughly with a dry cloth.

    d. If dust is accumulated on the case surface, remove it by using a special vacuum cleaner for computers.

SYSTEM CONFIGURATION
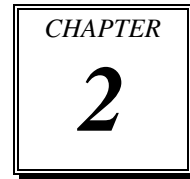
Helpful information that describes the jumper and connector settings, and component locations.

Sections included:

● Jumper & Connector Quick Reference Table

● Component Locations

● Configuration and Jumper settings

● Connector Pin Assignments

2-1. JUMPER & CONNECTOR QUICK REFERENCE TABLE

Connector & Jumper	Name	Page
COM Port & VGA Connector	COM1,COM3,COM4, J5	2-7
COM Port RI and Voltage Selection	JP_COM1, JP_COM2, JP_COM3, JP_COM4	2-10
MINI-DIM and USB Connector	MINI-DIM,J4,USB1	2-11
LAN & USB Connector	JRJ45USB1	2-12
Cash Drawer Connector	DRW1	2-13
Cash Drawer Power Selection	JP2	2-14
Power LED and HDD LED Connector	J7	2-15
External Speaker Connector	SPK_OUT1	2-15
Inverter Connector	J16	2-15
MSR/ Card Reader Connector	J2	2-16
LVDS Connector	J15	2-17
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SATA Connector	SATA1, SATA2	2-19
SATA Power Connector	JPWR_4P1, PWR_4P2	2-19
Touch Panel Connector	J4	2-20
Clear CMOS Data Selection	JP1	2-20
Compact Flash Connector	CF1	2-21
Printer Connector	LPT1	2-22
DC Output Connector	J3	2-23

2-2. COMPONENT LOCATIONS

M/B: PROX-A3150LF/N-G1A
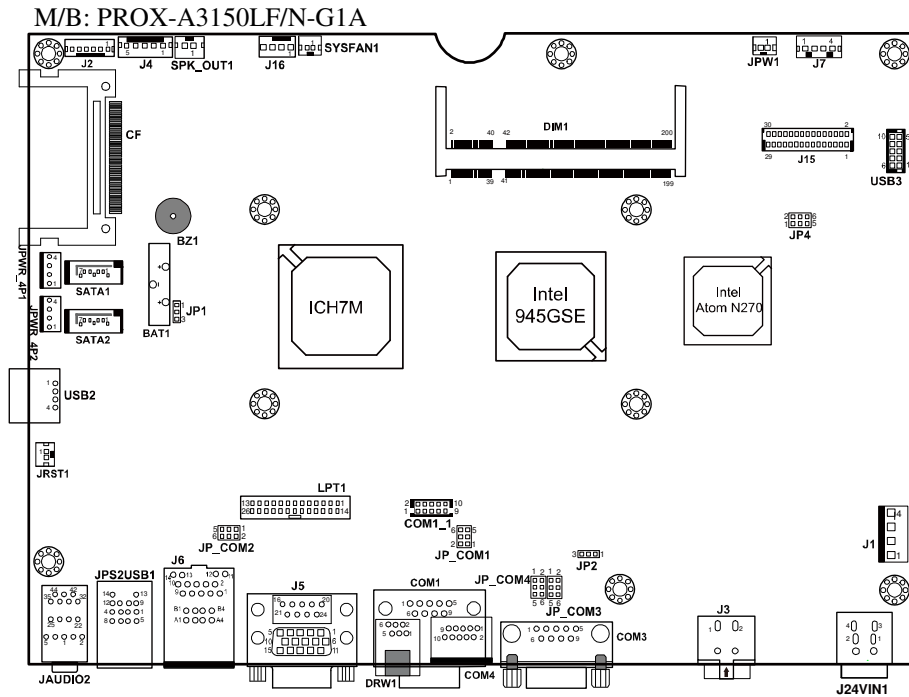
POS-3150 Mainboard Front Connector, Jumper and Component locations

M_PCIE1
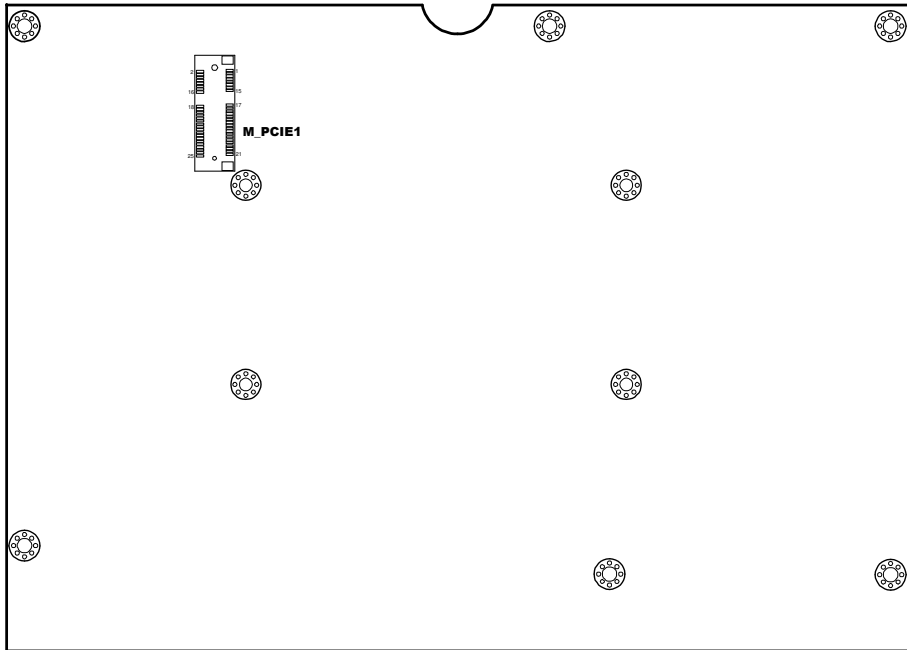
POS-3150 Mainboard Rear Connector, Jumper and Component locations

2-3. HOW TO SET THE JUMPERS

You can configure your board by setting the jumpers. Jumper is consists of two or three metal pins with a plastic base mounted on the card, and by using a small plastic "cap", Also known as the jumper cap (with a metal contact inside), you are able to connect the pins.   So you can set-up your hardware configuration by "opening" or "closing" pins.

The jumper can be combined into sets that called jumper blocks. When the jumpers are all in the block, you have to put them together to set up the hardware configuration. The figure below shows how this looks like.

JUMPERS AND CAPS

| 2 Pin Jumper | 3 Pin Jumper | Jumper Block | Jumper Cap |
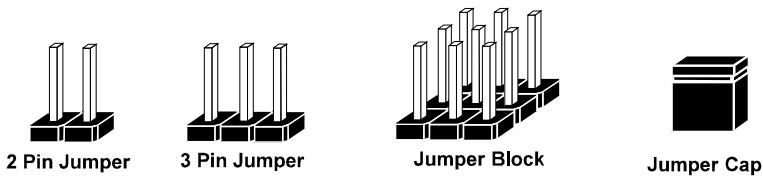
If a jumper has three pins for example, labelled PIN1, PIN2, and PIN3. You can connect PIN1 & PIN2 to create one setting and shorting. You can either connect PIN2 & PIN3 to create another setting. The same jumper diagrams are applied all through this manual. The figure below shows what the manual diagrams look and what they represent.

JUMPER DIAGRAMS

Jumper Cap looks like this
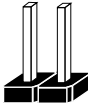
2 pin Jumper looks like this
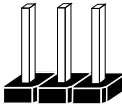
3 pin Jumper looks like this
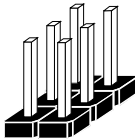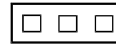
Jumper Block looks like this
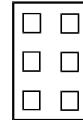
JUMPER SETTINGS

2 pin Jumper closed(enabled) looks like this

1

3 pin Jumper 2-3 pin closed(enabled) looks like this

1

Jumper Block 1-2 pin closed(enabled) looks like this

1   2
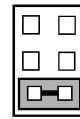
2-4. COM PORT CONNECTOR

There are four COM ports enhanced in this board namely: COM1, COM2, COM3 and COM4.

COM1: COM1 Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	DCD1
2	RXD1
3	TXD1
4	DTR1
5	GND
6	DSR1
7	RTS1
8	CTS1
9	RI / +5V / +12V selectable
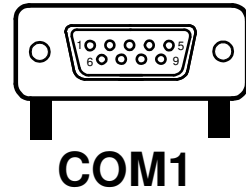
COM3: COM3 Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	DCD3
2	RXD3
3	TXD3
4	DTR3
5	GND
6	DSR3
7	RTS3
8	CTS3
9	RI / +5V / +12V selectable
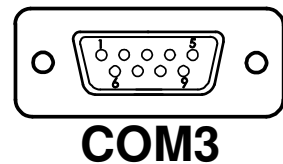
COM4: COM4 Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	DCD4
2	RXD4
3	TXD4
4	DTR4
5	GND
6	DSR4
7	RTS4
8	CTS4
9	RI/+5V/+12 selectable
10	NC
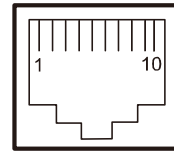
COM1_1: COM1_1 Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	DCD2
2	RXD2
3	TXD2
4	DTR2
5	GND
6	DSR2
7	RTS2
8	CTS2
9	RI/+5V/+12 selectable
10	NC

 COM2 and COM1_1 can't be used simultaneously.

J5: COM2 & VGA Connector
The pin assignments are as follows:

J5

PIN	ASSIGNMENT
1	RED
2	GREEN
3	BLUE
4	NC
5	GND
6	GND
7	GND
8	GND
9	+5V
10	GND
11	NC
12	DDCA DATA
13	HSYNC
14	VSYNC
15	DDCA CLK
16	DCD2
17	RXD2
18	TXD2
19	DTR2
20	GND
21	DSR2
22	RTS2
23	CTS2
24	RI/+5V/+12 selectable
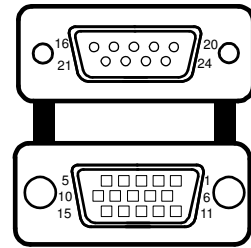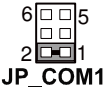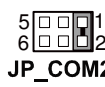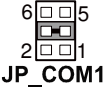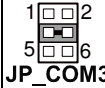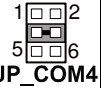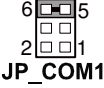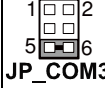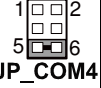
 All COM port is selectable for RI, +5V or +12V. For more
   information, please refer to our "COM RI and Voltage Selection".

2-5. COM PORT RI & VOLTAGE SELECTION

JP_COM1 , JP_COM2, JP_COM3, JP_COM4 : COM Port RI &
Voltage Selection
The selections are as follows:

SELECTION	JUMPER SETTINGS	JUMPER ILLUSTRATION			
RI	1-2	JP_COM1	JP_COM2	JP_COM3	JP_COM4
VCC12	3-4	JP_COM1	JP_COM2	JP_COM3	JP_COM4
VCC	5-6	JP_COM1	JP_COM2	JP_COM3	JP_COM4

***Manufacturing Default – RI

2-6. MINI-DIM AND USB CONNECTOR

JPS2USB1: Two USB Ports Connector and MINI-DIM
MINI-DIN connector can support keyboard, Y-cable. Please use Y-cable if using PS/2 mouse.
The pin assignments are as follows:

PIN	ASSIGNMENT
1	GND
2	USB2+
3	USB2-
4	VCC5
5	GND
6	USB3+
7	USB3-
8	VCC5
9	GND
10	KDAT
11	MDAT
12	V5SB
13	KCLK
14	MCLK
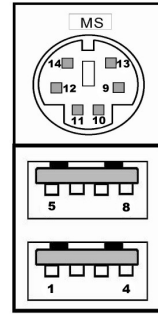
2-7. LAN & USB Connector

J6: LAN & USB Connector
The pin assignments are as follows:

Orange   Green

J6

PIN	ASSIGNMENT
1	LAN1_MDIP0
2	LAN1_MDIN0
3	LAN1_MDIP1
4	LAN1_MDIN1
5	LAN1_MDIP2
6	LAN1_MDIN2
7	LAN1_MDIP3
8	LAN1_MDIN3
PIN	**ASSIGNMENT**
A1	VCC5
A2	USB0-
A3	USB0+
A4	GND
B1	VCC5
B2	USB1-
B3	USB1+
B4	GND
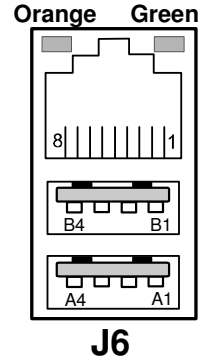
USB3: Internal USB Ports Connector
The pin assignments are as follows:

USB3

PIN	ASSIGNMENT
1	VCC
2	USB5-
3	USB5+
4	GND
5	GND
6	VCC
7	USB7-
8	USB7+
9	GND
10	GND
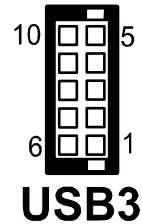
2-8. Cash Drawer Connector

DRW1: Cash Drawer Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	GND
2	Drawer Open
3	Drawer Sense
4	+12V / +24V
5	NC
6	GND
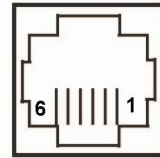
Cash drawer control in GPIO port
To Open Drawer 1 (GPIO 12)
Write "48Dh" to I/O Port "00"h
To Close Drawer
Write "48Dh" to I/O Port "10"h

Detect Drawer1 Status (GPIO 14)
Read I/O "48D"h
Definition (BIT6)

2-9. CASH DRAWER POWER SELECTION

JP2: Cash Drawer Power Selection
The jumper settings are as follows:

SELECTION	JUMPER SETTINGS	JUMPER ILLUSTRATION
+12V (default)	2-3	3 ▢■▢ 1 **JP2**
+24V	1-2	3 ▢■ 1 **JP2**

*** Manufactory default – +12V

2-10. POWER LED AND HDD LED CONNECTOR

J7: Power LED and HDD LED Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	VCC_HD_LED
2	HD_LED
3	PWRLED
4	VCC_PWR_LED
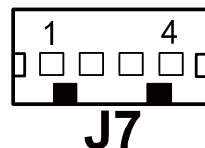
2-11. EXTERNAL SPEAKER CONNECTOR

SPK_OUT1: External Speaker Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	SPK_OUT
2	SPK_GND
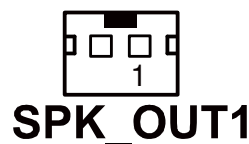
2-12. Inverter Connector

J16: Inverter Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	+12V
2	GND
3	LVDS_BKLTEN
4	BRCTR

2-13. MSR/ CARD READER CONNECTOR

J2: MSR (PS/2 interface) Card Reader Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	KB_CLK (Output)
2	KB_CLK_C (Input)
3	KB_DATA_C (Input)
4	KB_DATA (Output)
5	+5V
6	GND
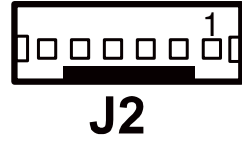
📖 Jumper Setting: Pin1-Pin2, Pin3-Pin4 (Default)

2-14. LVDS Connector

J15: LVDS connector
The pin assignments are as follows:

30   2

⬜⬜⬜⬜⬜⬜⬜⬜⬜⬜⬜⬜⬜⬜⬜
⬜⬜⬜⬜⬜⬜⬜⬜⬜⬜⬜⬜⬜⬜⬜

29   **J15**   1
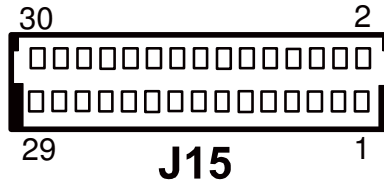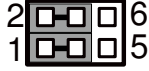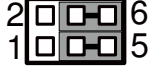
PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	LVDS_VCC	2	GND
3	CLKE-	4	CLKE+
5	GND	6	RINE2-
7	RINE2+	8	GND
9	RINE1-	10	RINE1+
11	RINE3+	12	RINE3-
13	RINE0+	14	RINE0-
15	GND	16	CLKO+
17	CLKO-	18	GND
19	RINO2+	20	RINO2-
21	GND	22	RINO1+
23	RINO1-	24	GND
25	RINO0+	26	RINO0-
27	RINO3+	28	RINO3-
29	LVDS_VCC	30	LVDS_VCC

2-15 Panel Voltage Selection

JP4: Panel voltage selection.
The jumper settings are as follows:

SELECTION	JUMPER SETTINGS	JUMPER ILLUSTRATION
3.3V (Default)	1-3, 2-4	2 ▢▬▢ 6 1 ▢▬▢ 5 **JP4**
5V	3-5, 4-6	2 ▢ ▬▢ 6 1 ▢ ▬▢ 5 **JP4**

*** Manufactory default – 3.3V

2-16. SATA CONNECTOR

SATA1, SATA2: Serial ATA Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	G1
2	TX+
3	TX-
4	G2
5	RX-
6	RX+
7	G3
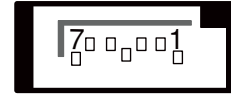
SATA1

SATA2

2-17. SATA POWER CONNECTOR

JPWR_4P1, JPWR_4P2: Serial ATA Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	VCC
2	GND
3	GND
4	VCC12

JPWR_4P1

JPWR_4P2

2-18. TOUCH PANEL CONNECTOR

J4: Touch Panel Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	LR (Low Right)
2	LL (Low Left)
3	Probe
4	UR (Up Right)
5	UL (Up Left)
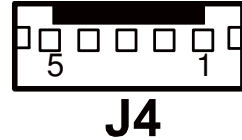
2-19. CLEAR CMOS DATA SELECTION

JP1: Clear CMOS Data Selection
The selections are as follows:

FUNCTION	JUMPER SETTING (pin closed)	JUMPER ILLUSTRATION
CLEAR CMOS	2-3	
NORMAL	1-2	

*** Manufacturing Default – Normal

  To clear CMOS data, user must power-off the computer and set the jumper to "Clear CMOS" as illustrated above.   After five to six seconds, set the jumper back to "Normal" and power-on the computer.

2-20. COMPACT FLASH CONNECTOR

CF1: Compact Flash Connector.
The pin assignments are as follows:

PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	GND	26	GND
2	D03	27	D11
3	D04	28	D12
4	D05	29	D13
5	D06	30	D14
6	D07	31	D15
7	CSJ1	32	CSJ3
8	GND	33	GND
9	GND	34	SDIORDJ
10	GND	35	SDIOWRJ
11	GND	36	+5V
12	GND	37	IRQ14
13	+5V	38	+5V
14	GND	39	-CSEL
15	GND	40	NC
16	GND	41	RESETJ
17	GND	42	IORDJ
18	A02	43	REQ
19	A01	44	ACKJ
20	A00	45	CF_LEDJ
21	D00	46	-PDIAG
22	D01	47	D08
23	D02	48	D09
24	NC	49	D10
25	GND	50	GND

2-21. Printer Connector

LPT1: Printer Connector
The pin assignments are as follows:

```
13 □ □ □ □ □ □ □ □ □ □ □ □ □ 1
26 □ □ □ □ □ □ □ □ □ □ □ □ □ 14
```
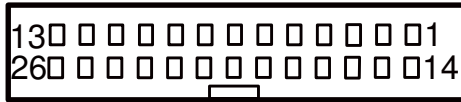
LPT1

PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	STBJ	14	ALFJ
2	PDR0	15	ERRJ
3	PDR1	16	PAR_INITJ
4	PDR2	17	SLCTINJ
5	PDR3	18	GND
6	PDR4	19	GND
7	PDR5	20	GND
8	PDR6	21	GND
9	PDR7	22	GND
10	ACKJ	23	GND
11	BUSY	24	GND
12	PE	25	GND
13	SLCTJ		

2-22. DC OUTPUT CONNECTOR

J3: DC Output Connector.
The pin assignments are as follows:

PIN	ASSIGNMENT
1	+24VDC
2	GND
3	NC
Shell	Frame GND
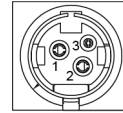
J3

SOFTWARE UTILITIES

This chapter provides the detailed information users need to install driver utilities for the system.

Sections included:

● Intel® Chipset Software Installation Utility

● VGA Driver Utility

● LAN Driver Utility

● Sound Driver Utility

● Touch Screen Driver Utility

● Wireless Driver Utility (Optional)

3-1. INTRODUCTION

Enclosed with the POS-3150 Series package is our driver utilities, which comes in a CD ROM format. Refer to the following table for driver locations.

Filename (Assume that CD ROM drive is D:)	Purpose
D:\Driver\Plaform\XP,POSReady2009 (32-bit)\Main Chip or D:\Driver\Plaform\Win7,POSReady7(32-bit)\Main Chip	Intel® Chipset Software Installation Utility
D:\Driver\Plaform\XP,POSReady2009 (32-bit)\VGA or D:\Driver\Plaform\Win7,POSReady7(32-bit)\VGA	Intel® Graphics Media Accelerator 950 for VGA driver installation
D:\Driver\Plaform\XP,POSReady2009 (32-bit)\LAN or D:\Driver\Plaform\Win7,POSReady7(32-bit)\LAN	Realtek® 8111DL for LAN Driver installation
D:\Driver\Plaform\XP,POSReady2009 (32-bit)\Sound or D:\Driver\Plaform\Win7,POSReady7(32-bit)\Sound	Realtek® ALC262 High Definition Audio Codecs for Sound driver installation
D:\Driver\Device	Driver installation for touchscreen, embedded printer, wireless, MSR, etc.

✎ Users must install the driver utilities right after the OS is fully installed.

3-2. INTEL® CHIPSET SOFTWARE INSTALLATION UTILITY

3-2-1. Introduction

The Intel® Chipset Software Installation Utility installs to the target system the Windows* INF files that outline to the operating system how the chipset components will be configured. This is needed for the proper functioning of the following features.

- Core PCI and ISAPNP Services
- AGP Support
- SATA Storage Support
- USB Support
- Identification of Intel® Chipset Components in Device Manager

3-2-2. Installation of Intel® Chipset Driver

The utility pack is to be installed only for Windows XP/ 7 series, and it should be installed right after the OS installation. Please follow the steps below:

1. Connect the USB-CD ROM device to the POS-3150 and insert the driver disk inside.
2. Enter the "Main Chip" folder where the Chipset driver is located (depending on your OS platform).
3. Click **Setup.exe** file for driver installation.
4. Follow the on-screen instructions to complete the installation.
5. Once installation is completed, shut down the system and restart the POS-3150 for the changes to take effect.

3-3. VGA DRIVER UTILITY

The VGA interface embedded with the POS-3150 series can support a wide range of display types. You can have dual displays via CRT and LVDS interfaces work simultaneously.


```
1. Win XP Series
2. Win 7 Series
```
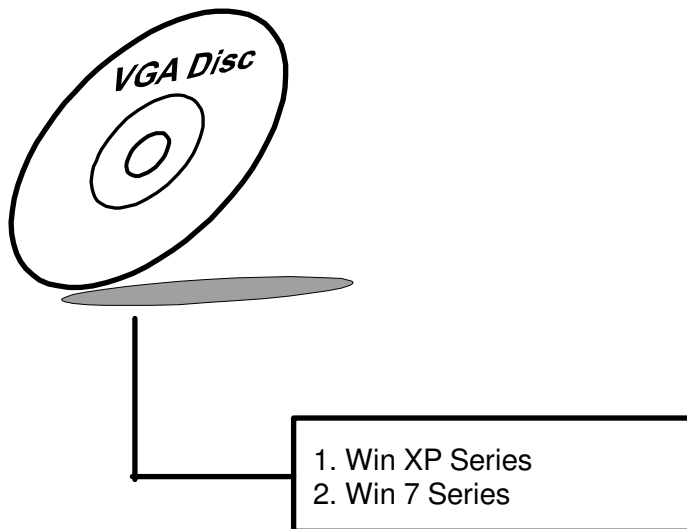
3-3-1. Installation of VGA Driver

To install the VGA Driver, follow the steps below:

1. Connect the USB-CD ROM device to the POS-3150 and insert the driver disk inside.
2. Enter the "VGA" folder where the VGA driver is located (depending on your OS platform).
3. Click **Setup.exe** file for driver installation.
4. Follow the on-screen instructions to complete the installation.
5. Once installation is completed, shut down the system and restart the POS-3150 for the changes to take effect.

3-4. LAN DRIVER UTILITY

The POS-3150 Series is enhanced with LAN function that can support various network adapters. Installation platform for the LAN driver is listed as follows:
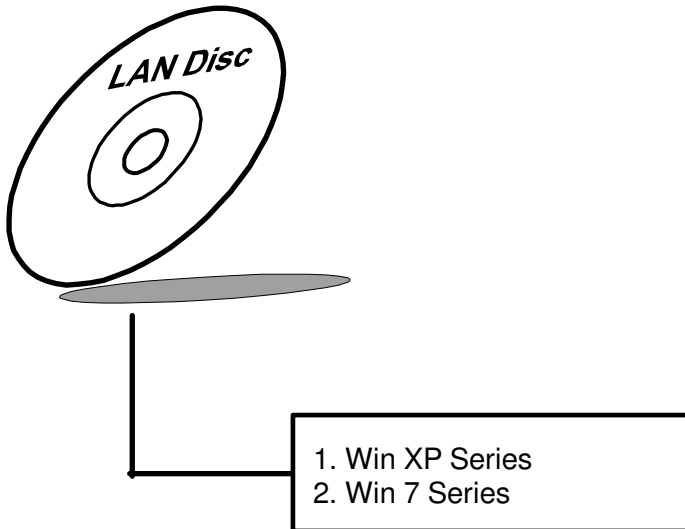
For more details on the Installation procedure, please refer to the Readme.txt file found on LAN Driver Utility.

3-4-1. Installation of LAN Driver

To install the LAN Driver, follow the steps below:

1. Connect the USB-CD ROM device to the POS-3150 and insert the driver disk inside.
2. Enter the "LAN" folder where the LAN driver is located (depending on your OS platform).
3. Click **Setup.exe** file for driver installation.
4. Follow the on-screen instructions to complete the installation.
5. Once installation is completed, shut down the system and restart the POS-3150 for the changes to take effect.

3-5. SOUND DRIVER UTILITY

The sound function enhanced in this system is fully compatible with Windows XP/ 7 series. Below, you will find the content of the Sound driver.

1. Win XP Series
2. Win 7 Series
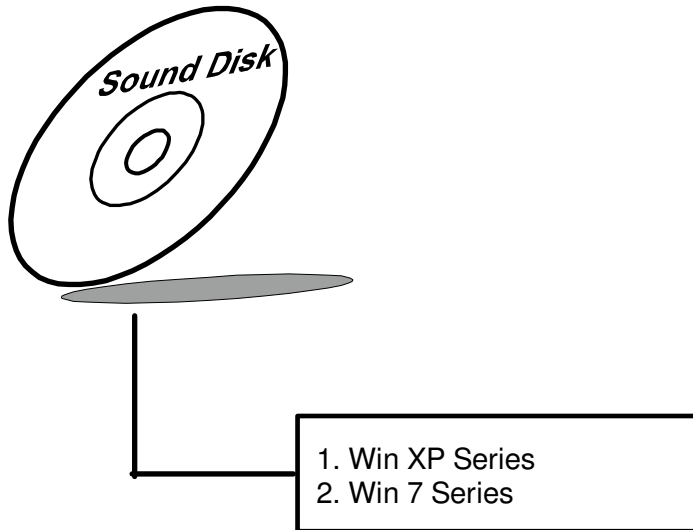
3-5-1. Installation of Sound Driver

To install the Sound Driver, refer to the readme.txt file on the driver disc (:\Sound\Realtek\Readme.txt).

1. Connect the USB-CD ROM device to the POS-3150 and insert the driver disk inside.
2. Enter the "Sound" folder where the Sound driver is located (depending on your OS platform).
3. Click **Setup.exe** file for driver installation.
4. Follow the on-screen instructions to complete the installation.
5. Once installation is completed, shut down the system and restart the POS-3150 for the changes to take effect.

3-6. TOUCHSCREEN DRIVER UTILITY

The touchscreen driver utility can only be installed on a Windows platform (XP/ 7 series), and it should be installed right after the OS installation.

1. Win XP Series
2. Win 7 Series
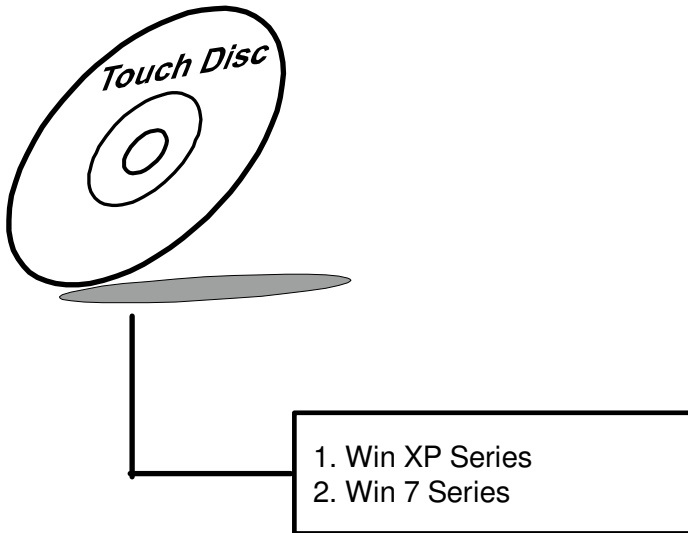
3-6-1. Installation of Touchscreen Driver

To install the Touchscreen Driver, follow the steps below:

1. Connect the USB-CD ROM device to the POS-3150 and insert the driver disk inside.
2. Enter the "Device/Touchscreen" folder where the Touchscreen driver is located.
3. Click **Setup.exe** file for driver installation.
4. Follow the on-screen instructions to complete the installation.
5. Once installation is completed, shut down the system and restart the POS-3150 for the changes to take effect.

3-7. WIRELESS DRIVER UTILITY (OPTIONAL)

The wireless driver utility can only be installed on a Windows platform (XP/ 7 series), and it should be installed right after the OS installation.

1. Win XP Series
2. Win 7 Series
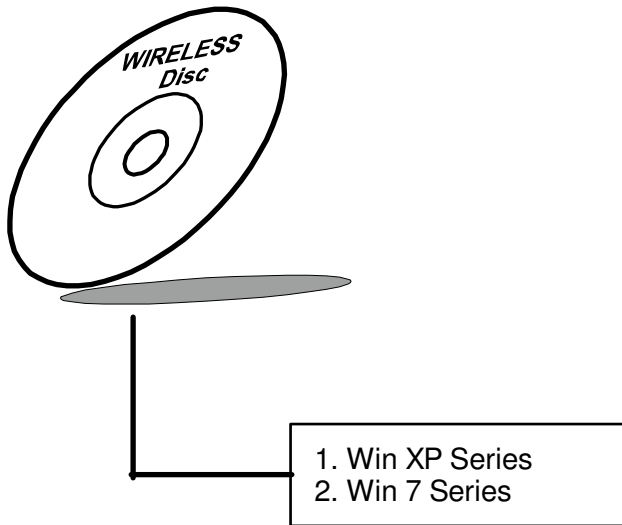
3-7-1. Installation of Wireless Driver

To install the Wireless Driver, follow the steps below:

1. Connect the USB-CD ROM device to the POS-3150 and insert the driver disk inside.
2. Enter the "Device/Embedded Wireless Module" folder where the Wireless driver is located.
3. Click **Setup.exe** file for driver installation.
4. Follow the on-screen instructions to complete the installation.
5. Once installation is completed, shut down the system and restart the POS-3150 for the changes to take effect.

AWARD BIOS SETUP

This chapter shows how to configure the Award BIOS settings.

Sections included:

- Introduction
- Entering Setup
- The Standard CMOS Features
- The Advanced BIOS Features
- The Advanced Chipset Features
- Integrated Peripherals
- Power Management Setup
- PNP/PCI Configuration
- PC Health Status
- Load Fail-Safe Defaults
- Load Optimized Defaults
- Password Setting
- Save and Exit Setup
- Exit Without Saving

4-1. INTRODUCTION

This chapter will show you the function of the BIOS in managing the features of your system. The POS-3150 Series POS Terminal is equipped with the BIOS for system chipset from Phoenix -Award Software Inc. This page briefly explains the function of the BIOS in managing the special features of your system. The following pages describe how to use the BIOS for system chipset Setup menu.

Your application programs (such as word processing, spreadsheets, and games) rely on an operating system such as DOS or OS/2 to manage such things as keyboard, monitor, disk drives, and memory.

The operating system relies on the BIOS (Basic Input and Output system), a program stored on a ROM (Read-only Memory) chip, to initialize and configure your computer's hardware. As the interface between the hardware and the operating system, the BIOS enables you to make basic changes to your system's hardware without having to write a new operating system.

The following diagram illustrates the interlocking relationships between the system hardware, BIOS, operating system, and application program:

Application Program

Operation System

BIOS

System Hardware
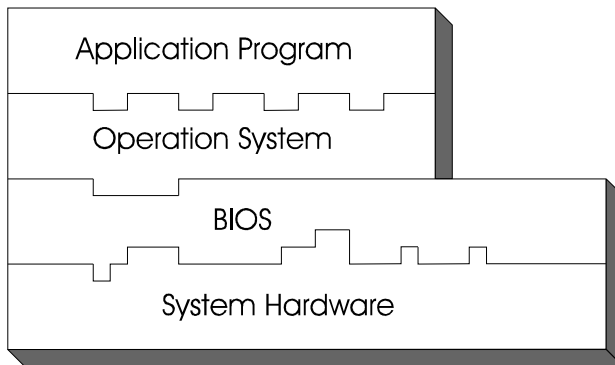
4-2. ENTERING SETUP

When the system is powered on, the BIOS will enter the Power-On Self Test (POST) routines and the following message will appear on the lower screen:

PRESS <DEL> TO ENTER SETUP, ESC TO SKIP MEMORY TEST

As long as this message is present on the screen you may press the <Del> key (the one that shares the decimal point at the bottom of the number keypad) to access the Setup program. In a moment, the main menu of the Award SETUP program will appear on the screen:

Phoenix - AwardBIOS CMOS Setup Utility

►Standard CMOS Features	► Load Fail-Safe Defaults
►Advanced BIOS Features	► Load Optimized Defaults
►Advanced Chipset Features	► Set Supervisor Password
►Integrated Peripherals	► Set User Password
►Power Management Setup	► Save & Exit Setup
►PnP/PCI Configurations	► Exit Without Saving
►PC Health Status	
Esc : Quit F10 : Save & Exit Setup	↑↓→← : Select Item
Time, Date, Hard Disk Type …..	

Setup program initial screen

You may use the cursor the up/down keys to highlight the individual menu items. As you highlight each item, a brief description of the highlighted selection will appear at the bottom of the screen.

4-3. THE STANDARD CMOS FEATURES

Highlight the "STANDARD CMOS FEATURES" and press the <ENTER> key and the screen will display the following table:

Phoenix - AwardBIOS CMOS Setup Utility
Standard CMOS Features

Date (mm:dd:yy)	Thu, Jun 22 2007	Item Help
Time (hh:mm:ss)	13 : 54 : 47	
		Menu Level ►
► IDE Channel 0 Master	[HDS728080PLA380]	
► IDE Channel 0 Slave	[None]	Change the day,
► IDE Channel 2 Master	[None]	month, year and
► IDE Channel 2 Slave	[None]	century
► IDE Channel 3 Master	[None]	
► IDE Channel 3 Slave	[None]	
Video	[EGA/VGA]	
Halt On	[All, But Keyboard]	
Base Memory	640K	
Extended Memory	514048K	
Total Memory	515072K	

↑↓→←: Move   Enter: Select   +/-/PU/PD:Value   F10:Save   ESC:Exit   F1:General Help
F5: Previous Values   F6: Fail-Safe Defaults   F7:Optimized Defaults

CMOS Setup screen

In the above Setup Menu, use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

DATE:
< Month >, < Date > and <Year >. Ranges for each value are in the CMOS Setup Screen, and the week-day will skip automatically.

TIME:
< Hour >, < Minute >, and < Second >. Use 24 hour clock format, i.e., for PM numbers, add 12 to the hour. For example: 4: 30 P.M. You should enter the time as 16:30:00.

IDE CHANNEL 0/2/3 Master:
IDE CHANNEL 0/2/3 Slave:

The BIOS can automatically detect the specifications and optimal operating mode of almost all SATA hard drives. When you select type AUTO for a hard drive, the BIOS detect its specifications during POST, every time system boots.

If you do not want to select drive type AUTO, other methods of selecting drive type are available:

1. Match the specifications of your installed SATA hard drive(s) with the preprogrammed values for hard drive types 1 through 45.
2. Select USER and enter values into each drive parameter field.
3. Use the SATA HDD AUTO DETECTION function in Setup.

Here is a brief explanation of drive specifications:

Type: The BIOS contains a table of pre-defined drive types. Each defined drive type has a specified number of cylinders, number of heads, write precompensation factor, landing zone, and number of sectors. Drives whose specifications do not accommodate any predefine type are classified as type USER.

- Size: Disk drive capacity (approximate). Note that this size is usually greater than the size of a formatted disk given by a disk-checking program.
- Cyls: number of cylinders.
- Head: number of heads.
- Precomp: write precompensation cylinders.
- Landz: landing zone.
- Sector: number of sectors.
- Mode: Auto, Normal, Large or LBA.
  Auto: The BIOS automatically determines the optimal mode.
  - Normal: Maximum number of cylinders, heads, sectors supported are 1024, 16 and 63.
  - Large: For drives that do not support LBA and have more than 1024 cylinders.
  - LBA (Logical Block Addressing): During drive accesses, the SATA controller transforms the data address described by sector, head and cylinder number into a physical block address, significantly improving data transfer rates. For drives greater than 1024 cylinders.

VIDEO:

This category selects the type of video adapter used for the primary system monitor.   Although secondary monitors are supported, you do not have to select the type in Setup.   Available Options are as follows:

EGA/VGA	Enhanced Graphics Adapter/Video Graphics Array. For EGA, VGA, SEGA, SVGA or PGA monitor adapters.
CGA 40	Color Graphics Adapter, power up in 40 column mode.
CGA 80	Color Graphics Adapter, power up in 80 column mode.
MONO	Monochrome adapter, includes high resolution monochrome adapters.

HALT ON:

This category allows user to choose whether the computer will stop if an error is detected during power up. Available options are "All errors", "No errors", "All, But keyboard", "All, But Diskette", and "All But Disk/Key".

BASE MEMORY:

Displays the amount of conventional memory detected during boot up.

EXTENDED MEMORY:

Displays the amount of extended memory detected during boot up.

TOTAL MEMORY:

Displays the total memory available in the system.

4-4. THE ADVANCED BIOS FEATURES

Choose the "ADVANCED BIOS FEATURES" in the main menu, the screen shown as below.

Phoenix - AwardBIOS CMOS Setup Utility
Advanced BIOS Features

► CPU Feature	[Press Enter]	Item Help
► Hard Disk Boot Priority	[Press Enter]	
CPU L1 & L2 Cache	[Enabled]	
Hyper-Threading Technology	[Enabled]	Menu Level ►
Quick Power On Self Test	[Enabled]	
First Boot Device	[Hard Disk]	
Second Boot Device	[Hard Disk]	
Third Boot Device	[LS120]	
Boot Other Device	[Enabled]	
Boot Up NumLock Status	[On]	
Gate A20 Option	[Fast]	
Typematic Rate Setting	[Disabled]	
x Typematic Rate (Chars/Sec)	6	
x Typematic Delay (Msec)	250	
Security Option	[Setup]	
x APIC Mode	Enabled	
MPS Version Control For OS	[1.4]	

↑↓→←: Move   Enter: Select   +/-/PU/PD:Value   F10:Save   ESC:Exit   F1:General Help
F5: Previous Values   F6: Fail-Safe Defaults   F7:Optimized Defaults

BIOS Features Setup Screen

The "BIOS FEATURES SETUP" allow you to configure your system for basic operation.   The user can select the system's boot-up sequence and security.

A brief introduction of each setting is given below.

CPU FEATURE:

The options for these items are found in its sub menu. By pressing the <ENTER> key, you are prompt to enter the sub menu of the detailed options as shown below:

Phoenix – Award CMOS Setup Utility
CPU Feature

Delay Prior to Thermal	[16 Min]	Item Help
Limit CPUID MaxVal	[Disabled]	
C1E Function	[Enabled]	
Execute Disable Bit	[Enabled]	Menu Level ►

↑↓→←:Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values   F6:Fail-Safe Defaults   F7:Optimized Defaults

Descriptions on each item above are as follows:

1. **DELAY PRIOR TO THERMAL:**
   The Delay Prior To Thermal BIOS feature controls the activation of the Thermal Monitor's automatic mode. It allows you to determine when the Pentium-M's Thermal Monitor should be activated in automatic mode after the system boots.

2. **LIMIT CPUID MAXVAL:**
   The CPUID instruction of some CPUs will return a value greater than 3.If you are using Windows operating system. Please disable this feature.

3. **C1E FUNCTION:**
   This is enabled to reduce power during idle operation.

4. **EXECUTE DISABLE BIT:**
   To select enable or disable the No-Execution Page Protection Technology.

HARD DISK BOOT PRIORITY:

The options for these items are found in its sub menu. By pressing the <ENTER> key, you are prompt to enter the sub menu of the detailed options as shown below:

Phoenix – Award CMOS Setup Utility
Hard Disk Boot Priority

1. SATA 1. : HDS728080PLA380 2. Bootable Add-in Cards	Item Help
	Menu Level ► Use<↑> or <↓> to select a device, then press <+> to move it up, or <-> to move it down the list. Press <ESC> to exit this menu.
↑↓→←:Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults	

Select Hard Disk Boot Device Priority

CPU L1 & L2 CACHE:

This item allows you to enable or disable CPU internal Cache.

HYPER-THREADING TECHNOLOGY:

This item allows you to enable or disable CPU Hyper-Threading Technology function.

QUICK POWER ON SELF TEST:

This item allows you to speed up Power On Self Test (POST) after power-up the computer. When enabled, the BIOS will shorten or skip some check items during POST.

FIRST/SECOND/ THIRD/ OTHER BOOT DEVICE:

The BIOS attempt to load the operating system from the devices in the sequence selected in these items.

BOOT UP NUMLOCK STATUS:

Select power on state for NumLock.

GATE 20A OPTION:

This entry allows you to select how the gate A20 is handled. When Normal was set, a pin in the keyboard controller controls Gate A20. And when Fast was set, the chipset controls Gate A20.

TYPEMATIC RATE SETTING:

Enable this item if you wish to be able to configure the characteristics of your keyboard. Typematic refers to the way in which characters are entered repeatedly if a key is held down. For example, if you press and hold down the "A" key, the letter "a" will repeatedly appear on your screen on your screen until you release the key. When enabled, the typematic rate and typematic delay can be selected.

TYPEMATIC RATE (CHARS/SEC):

This item sets the number of times a second to repeat a key stroke when you hold the key down.

TYPEMATIC DELAY (MSEC):

The item sets the delay time after the key is held down before it begins to repeat the keystroke.

SECURITY OPTION:

This category allows you to limit access to the system and Setup, or just to Setup.

System	The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt.
Setup	The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt.

✍ To disable security, select PASSWORD SETTING at Main Menu and then you will be asked to enter password. Do not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you can enter Setup freely.

APIC MODE:

To Enable Advanced Programmable Interrupt Controller

MPS VERSION CONTROL FOR OS:

This option is only valid for multiprocessor motherboards as it specifies the version of the Multiprocessor Specification (MPS) that the motherboard will use. The MPS is a specification by which PC manufacturers design and build Intel architecture systems with two or more processors.

4-5. ADVANCED CHIPSET FEATURES

Choose the "ADVANCED CHIPSET FEATURES" from the main menu, the screen shown as below.

Phoenix - AwardBIOS CMOS Setup Utility
Advanced Chipset Features

DRAM Timing Selectable	[By SPD]	Item Help
X CAS Latency Time	Auto	
X DRAM RAS# to CAS# Delay	Auto	
X DRAM RAS# Precharge	Auto	Menu Level ►
X Precharge dealy (tRAS)	Auto	
X System Memory Frequency	By SPD	
System BIOS Cacheable	[Enabled]	
Video BIOS Cacheale	[Disabled]	
** VGA Setting **		
On-Chip Frame Buffer Size	[8MB]	
DVMT Mode	[DVMT]	
DVMT/ FIXED Memory Size	[128 MB]	
Boot Display	[CRT+LFP2]	
Panel Type	[1024x768]	
PCI SERR# NMI	[Disabled]	

↑↓→←: Move   Enter: Select   +/-/PU/PD:Value   F10:Save   ESC:Exit   F1:General Help
F5: Previous Values   F6: Fail-Safe Defaults   F7:Optimized Defaults

Chipset Features Setup Screen

This parameter allows you to configure the system based on the specific features of the installed chipset. The chipset manages bus speed and access to system memory resources, such as DRAM and the external cache.

It also coordinates communications between conventional ISA bus and the PCI bus. It must be stated that these items should never need to be altered. The default settings have been chosen because they provide the best operating conditions for the system. The only time you might consider making any changes would be if you discovered that data was being lost while using your system.

DRAM TIMEING SELECTABLE:

The value in this field depends on performance parameters of the installed memory chips (DRAM). Do not change the value from the factory setting unless you install new memory that has a different performance rating than the original DRAMs.

CAS LATENCY TIME:

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.

DRAM RAS# TO CAS# DELAY:

This item let you insert a timing delay between the CAS and RAS strobe signals, used when DRAM is written to, read from, or refreshed.   Fast gives faster performance; and Slow gives more stable performance.   This field applies only when synchronous DRAM is installed in the system.   The choices are 2 and 3.

DRAM RAS# PRECHARGE TIME:

If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete and the DRAM may fail to retain data. Fast gives faster performance; and Slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system. The choices are 2 & 3.

PRECHARGE DEALY (tRAS):

Precharge Delay This setting controls the precharge delay, which determines the timing delay for DRAM precharge

SYSTEM MEMORY FREQUENCY:

Allow to choose different frequency of memory module.

SYSTEM BIOS CACHEABLE:

This item allows you to enable caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance.   However, if any program writes to this memory area, a system error may result.

VIDEO BIOS CACHEABLE:

This item allows you to enable caching of the video BIOS, resulting in better system performance.   However, if any program writes to this memory area, a system error may result.

MEMORY HOLE AT 15-16M:
You can reserve this area of system memory for ISA adapter ROM.   When this area is reserved, it cannot be cached.   The user information of peripherals that need to use this area of system memory usually discusses their memory requirements

ON-CHIP FRAME BUFFER SIZE:
The On-Chip Frame Buffer Size can be set as 8MB. This memory is shared with the system memory.

DVMT MODE:
Intel Dynamic Video Memory Technology Mode.

DVMT/FIXED MEMORY SIZE:
DVMT Memory Size Select.

BOOT DISPLAY:
To select the boot-up display type.

PANEL NUMBER:
This field allows user to decide the LVDS panel resolution

PCI SERR# NMI:
To Enable/Disable the PCI SERR# interrupt.

4-6. INTEGRATED PERIPHERALS

Choose "INTEGRATED PERIPHERALS" from the main setup menu, a display will be shown on screen as below:

Phoenix - AwardBIOS CMOS Setup Utility
Integrated Peripherals

▶ OnChip IDE Device	[Press Enter]	Item Help
▶ Onboard Device	[Press Enter]	
▶ SuperIO Device	[Press Enter]	Menu Level ▶
Onboard Lan Boot ROM	[Enabled]	
Onboard Serial Port 3	[3E8/IRQ10]	
Onboard Serial Port 4	[2E8/IRQ11]	
▶ USB Device Setting	[Press Enter]	

↑↓→←: Move   Enter: Select   +/-/PU/PD:Value   F10:Save   ESC:Exit   F1:General Help
    F5: Previous Values   F6: Fail-Safe Defaults   F7:Optimized Defaults

Integrated Peripherals Setup Screen

By moving the cursor to the desired selection and by pressing the <F1> key, the all options for the desired selection will be displayed for choice.

♤ If bios setup menu item supports USB device boot, it will cause Win9x detects the same storages twice when the system is rebooted, and USB HDD will fail. Note: this cause just happen under Win9x, the phenomenon is a limitation.

ONCHIP IDE DEVICE:

The options for these items are found in its sub menu. By pressing the <ENTER> key, you are prompt to enter the sub menu of the detailed options as shown below:

Phoenix – Award CMOS Setup Utility
OnChip IDE Device

		Item Help
IDE HDD Block Mode	[Enabled]	
IDE DMA transfer access	[Enabled]	
On-Chip Primary PCI IDE	[Enabled]	
IDE Primary Master PIO	[Auto]	Menu Level ▶
IDE Primary Slave PIO	[Auto]	
IDE Primary Master UDMA	[Auto]	If your IDE hard drive
IDE Primary Slave UDMA	[Auto]	supports block mode
On-Chip Secondary PCI IDE	[Enabled]	select Enabled for
IDE Secondary Master PIO	[Auto]	automatic detection of
IDE Secondary Slave PIO	[Auto]	the optional number of
IDE Secondary Master UDMA	[Auto]	block read/writes per
IDE Secondary Slave UDMA	[Auto]	sector the drive can
		support.
*** On-Chip Serial ATA Setting ***		
SATA Mode	[IDE]	
On-Chip Serial ATA	[Disabled]	
X PATA IDE Mode	Secondary	
SATA Port	P0, P2 is Primary	
↑↓→←:Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help		
F5: Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults		

Descriptions on each item above are as follows:

1. **IDE HDD BLOCK MODE:**
   Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support.

2. **IDE DMA TRANSTER ACCESS:**
   To Enable/Disable the IDE DMA transfer access.

3. **ON-CHIP PRIMARY/SECONDARY PCI IDE:**
   The integrated peripheral controller contains an IDE interface with
   support for two IDE channels. Select Enabled to activate each channel
   separately.

4. **PRIMARY MASTER/SLAVE PIO:**
   SECONDARY MASTER/SLAVE PIO:
   The four IDE PIO fields allow you to 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.

5. **PRIMARY MASTER/SLAVE UDMA:**
   SECONDARY MASTER/SLAVE UDMA:
   Ultra DMA/33 implementation is possible only if your IDE hard drive
   supports it and the operating environment includes a DMA driver
   (Windows 95 OSR2 or a third-party IDE bus master driver).　 If you
   hard drive and your system software both support Ultra DMA/33,
   select Auto to enable BIOS support.

6. **SATA MODE:**
   Set the Serial ATA configuration. When set in Advanced Host
   Controller Interface (AHCI) , the SATA controller is set to Native
   mode. Configuration options: [IDE] [AHCI]

7. **ON-CHIP SERIAL ATA:**
   [Disabled]: Disabled SATA Controller.
   [Enhanced Mode]: Enable both SATA and PATA. Max.of 6 IDE drives
   　　　　　　　are supported.
   [SATA Only]: SATA is operating in legacy mode.

8. **PATA IDE MODE:**
   To select PATA IDE Mode sequence.

9. **SATA PORT:**
   According PATA IDE Mode to determine SATA sequence.

ONBOARD DEVICE:

The options for these items are found in its sub menu. By pressing the <ENTER> key, you are prompt to enter the sub menu of the detailed options as shown below:

Phoenix – Award CMOS Setup Utility
Onboard Device

Audio Function	[Auto]	Item Help
		Menu Level ►
↑↓→←:Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults		

Descriptions on each item above are as follows:

1. AUDIO FUNCTION:

This item allows you to enable or disable onboard Audio function.

SUPER IO DEVICE:

The options for these items are found in its sub menu. By pressing the <ENTER> key, you are prompt to enter the sub menu of the detailed options as shown below:

Phoenix – Award CMOS Setup Utility
SuperIO Device

Onboard Serial Port 1	[3F8/IRQ4]	Item Help
Onboard Serial Port 2	[2F8/IRQ3]	
Onboard Parallel Port	[Disabled]	
X Parallel Port Mode	Standard	Menu Level ►
X ECP Mode Use DMA	3	

↑↓→←:Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values   F6:Fail-Safe Defaults   F7:Optimized Defaults

Descriptions on each item above are as follows:

1. ONBOARD SERIAL PORT 1/2:
Select an address and corresponding interrupt for the first and second serial ports.

2. ONBOARD PARALLEL PORT
This item allows you to determine access onboard parallel port controller with which I/O address.

3. PARALLEL PORT MODE
Select an operating mode for the onboard parallel (printer) port. Select *Normal, Compatible,* or *SPP* unless you are certain your hardware and software both support one of the other available modes.

4. ECP MODE USE DMA
Select a DMA channel for the parallel port for use during ECP mode.

ONBOARD SERIAL PORT 3/4:
Select an address and corresponding interrupt for the third and forth serial ports

ONBOARD LAN BOOT ROM

It is for diskless boot. The ROM on the network chip knows how to look for a boot server from the local network (LAN), and load an OS kernel from that server. The kernel then loads the rest of the OS from the server.

USB DEVICE SETTING:

The options for these items are found in its sub menu. By pressing the <ENTER> key, you are prompt to enter the sub menu of the detailed options as shown below:

Phoenix – Award CMOS Setup Utility
Onboard Device

USB 1.0 Controller	[Enabled]	Item Help
USB 2.0 Controller	[Enabled]	
USB Operation Mode	[High Speed]	
USB Keyboard Function	[Enabled]	Menu Level ►
USB Mouse Function	[Enabled]	
USB Storage Function	[Enabled]	
*** USB Mass Storage Device Boot	Setting ***	
USB Flash Disk 2.00	[Auto mode]	

↑↓→←:Move   Enter: Select   +/-/PU/PD:Value   F10:Save   ESC:Exit   F1:General Help
   F5: Previous Values   F6:Fail-Safe Defaults   F7:Optimized Defaults

Descriptions on each item above are as follows:

1. **USB 1.0 CONTROLLER:**
   This should be enabled if your system has a USB installed on the system board and you want to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature.

2. **USB 2.0 CONTROLLER:**
   Enable the USB 2.0 controller.

3. **USB OPERATION MODE:**
   This item allows the user to decide USB device operation mode.

4. **USB KEYBOARD FUNCTION:**
   Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard.

5. **USB MOUSE FUNCTION:**
   Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have a USB Mouse.

6. **USB STORAGE FUNCTION:**
   Enable the USB Storage Function

7. **USB FLASH DISK 2.00:**
   Select USB Flash Disk Type.

4-7. POWER MANAGEMENT SETUP

Choose "POWER MANAGEMENT SETUP" option on the main menu, a display will be shown on screen as below :

Phoenix - AwardBIOS CMOS Setup Utility
Power Management Setup

ACPI Function	[Enabled]	Item Help
ACPI Suspend Type	[S1(POS)]	
MODEM Use IRQ	[3]	
Soft-Off by PWR-BTTN	[Instand-Off]	
Wake-Up by Lan	[Disabled]	
PWRON After PWR-Fail	[On]	
Resume by Alarm	[Disabled]	
X Date (of Month) Alarm	0	
X Time (hh:mm:ss) Alarm	0 : 0: 0	
		Menu Level ▶

↑↓→←: Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values   F6: Fail-Safe Defaults   F7:Optimized Defaults

Power Management Setup Screen

The "Power Management Setup" allows the user to configure the system to the most effectively save energy while operating in a manner consistent with your own style of computer use.

ACPI FUNCTION:

Users are allowed to enable or disable the Advanced Configuration and Power Management (ACPI).

ACPI SUSPEND TYPE:

This item allows the user to decide ACPI suspend mode

MODEM USE IRQ:

This item enables you to name the interrupt request (IRQ) line assigned to the modem (if any) on your system. Activity of the selected IRQ always awakens the system

SOFT-OFF BY PWR-BTTN:

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has "hung".   The choices are Delay 4 Sec and Instant-Off.

WAKE-UP BY LAN:

This item allows you to select if you want to wake-up the system by LAN. The choice: Off and On.

PWRON AFTER PWR-FAIL:

This item allows you to select if you want to power on the system after power failure. The choice: Off and On.

RESUME BY ALARM:

When enabled, you can set the date and time at which the RTC alarm awakens the system from Suspend mode.

4-8. PNP/PCI CONFIGURATION

Choose "PNP/PCI CONFIGURATION" from the main menu, a display will be shown on screen as below:

Phoenix - AwardBIOS CMOS Setup Utility
PnP/PCI Configurations

Reset Configuration Data	[Disabled]	Item Help
Resources Controlled By	[Auto (ESCD)]	Menu Level ►
X IRQ Resources	Press Enter	
↑↓→←: Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help		
F5: Previous Values F6: Fail-Safe Defaults F7:Optimized Defaults		

PNP/PCI Configuration Setup Screen

The PNP/PCI Configuration Setup describes how to configure PCI bus system. PCI, also known as Personal Computer Interconnect, is a system, which allows I/O devices to operate at speeds nearing the speed of the CPU itself uses when communicating with its own special components.

This section covers technical items, which is strongly recommended for experienced users only.

RESET CONFIGURATION DATA:
Normally, you leave this field Disabled.   Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system configuration has caused such a serious conflict that the operating system cannot boot.

RESOURCE CONTROLLED BY:
The Award Plug and Play Bios can automatically configure all of the booth and Plug and Play-compatible devices.   However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows 95.   By choosing "manual", you are allowed to configure the *IRQ Resources and DMA Resources*.

IRQ RESOURCES:

The options for these items are found in its sub menu. By pressing the <ENTER> key, you are prompt to enter the sub menu of the detailed options as shown below:

Phoenix – Award CMOS Setup Utility
IRQ Resources

IRQ-3 assigned to	[PCI Device]	Item Help
IRQ-4 assigned to	[PCI Device]	
IRQ-5 assigned to	[PCI Device]	
IRQ-7 assigned to	[PCI Device]	Menu Level ►
IRQ-9 assigned to	[PCI Device]	
IRQ-10 assigned to	[PCI Device]	Legacy ISA for devices
IRQ-11 assigned to	[PCI Device]	compliant with the original PC
IRQ-12 assigned to	[PCI Device]	AT bus specification, PCI/ISA
IRQ-14 assigned to	[PCI Device]	PnP for devices compliant
IRQ-15 assigned to	[PCI Device]	with the Plug and Play
		standard whether designed for
		PCI or ISA bus architecture
↑↓→←:Move Enter: Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help		
F5: Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults		

Descriptions on each item above are as follows:

1. **IRQ-n Assigned to:**

   You may assign each system interrupt a type, depending on the type of device using the interrupt.

4-9. PC HEALTH STATUS

Choose "PC HEALTH STATUS" from the main menu, a display will be shown on screen as below:

Phoenix - AwardBIOS CMOS Setup Utility
PC Health Status

Shutdown Temperature	[Disabled]	Item Help
Current CPU Temperature	28℃	
Vcore	0.88V	Menu Level ▶
5V	4.89V	
12V	12.88V	
CPU Fan Speed	4687 RPM	

↑↓→←: Move   Enter: Select   +/-/PU/PD:Value   F10:Save   ESC:Exit   F1:General Help
F5: Previous Values   F6: Fail-Safe Defaults   F7:Optimized Defaults

PC Health Status Setup Screen

The PC Health Status Setup allows you to select whether to choose between monitoring or to ignore the hardware monitoring function of your system.

SHUTDOWN TEMPERATURE:
This item allows you to set up the CPU Warning Temperature.

CURRENT CPU TEMPERATURE:
This item shows you the current CPU temperature.

VCORE:
This item shows you the current system voltage.

5V /12V:
Show you the voltage of 5V/12V.

CPU FAN Speed:
This item shows you the CPU Fan speed.

4-10. LOAD FAIL-SAFE DEFAULTS

By pressing the <ENTER> key on this item, you get a confirmation dialog box with a message similar to the following:

> Load Fail-Safe Defaults (Y/N) ? N

To use the BIOS default values, change the prompt to "Y" and press the <Enter > key. CMOS is loaded automatically when you power up the system.

4-11. LOAD OPTIMIZED DEFAULTS

When you press <Enter> on this category, you get a confirmation dialog box with a message similar to the following:

> Load Optimized Defaults (Y/N) ? N

Pressing "Y" loads the default values that are factory setting for optimal performance system operations.

4-12. PASSWORD SETTING

User is allowed to set either supervisor or user password, or both of them. The difference is that the supervisor password can enter and change the options of the setup menus while the user password can enter only but do not have the authority to change the options of the setup menus.

TO SET A PASSWORD

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

```
Enter Password:
```

Type the password up to eight characters in length, and press < Enter >. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press the < Enter > key. You may also press < Esc > to abort the selection and not enter a password.

✎ User should bear in mind that when a password is set, you will be asked to enter the password everything you enter CMOS setup Menu.

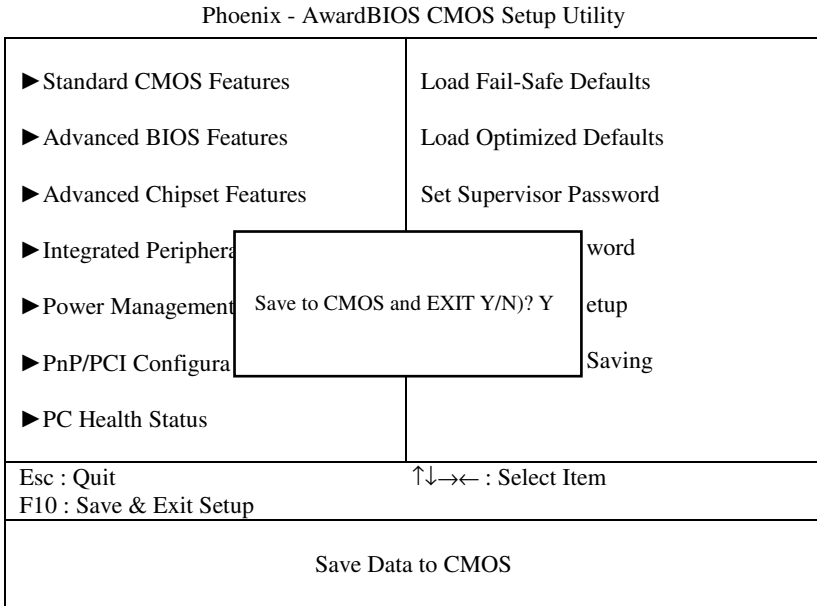### TO DISABLE THE PASSWORD

To disable the password, select this function (do not enter any key when you are prompt to enter a password), and press the <Enter> key and a message will appear at the center of the screen:

```
PASSWORD DISABLED!!!
Press any key to continue...
```

Press the < Enter > key again and the password will be disabled.   Once the password is disabled, you can enter Setup freely.

4-13. SAVE & EXIT SETUP

After you have completed adjusting all the settings as required, you must remember to save these setting into the CMOS RAM. To save the settings, select "SAVE & EXIT SETUP" and press <Enter>, a display will be shown as follows:

Phoenix - AwardBIOS CMOS Setup Utility

►Standard CMOS Features	Load Fail-Safe Defaults
►Advanced BIOS Features	Load Optimized Defaults
►Advanced Chipset Features	Set Supervisor Password
►Integrated Periphera	word
►Power Management	Save to CMOS and EXIT Y/N)? Y	etup
►PnP/PCI Configura	Saving
►PC Health Status	

Esc : Quit　　　　　　　　　　↑↓→← : Select Item
F10 : Save & Exit Setup

Save Data to CMOS

When you confirm that you wish to save the settings, your system will be automatically restarted and the changes you have made will be implemented. You may always call up the setup program at any time to adjust any of the individual items by pressing the <Del> key during boot up.

4-14. EXIT WITHOUT SAVING

If you wish to cancel any changes you have made, you may select the "EXIT WITHOUT SAVING" and the original setting stored in the CMOS will be retained. The screen will be shown as below:
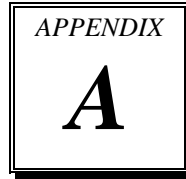
Phoenix - AwardBIOS CMOS Setup Utility

►Standard CMOS Features	Load Fail-Safe Defaults
►Advanced BIOS Features	Load Optimized Defaults
►Advanced Chipset Features	Set Supervisor Password
►Integrated Periphera	word
Quit Without Saving (Y/N)? N	
►Power Management	etup
►PnP/PCI Configura	Saving
►PC Health Status	

Esc : Quit	↑↓→← : Select Item
F10 : Save & Exit Setup	

Abandon all Datas
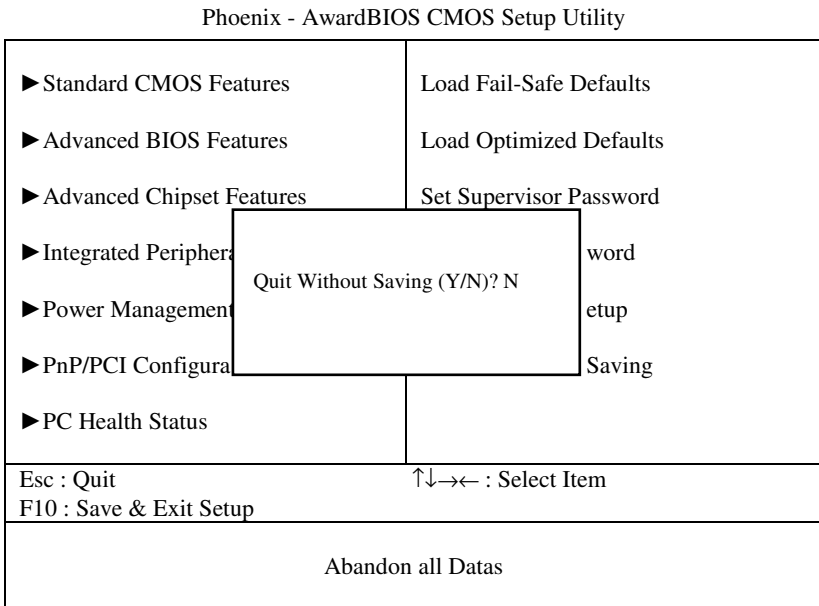
SYSTEM ASSEMBLY

This appendix contains exploded diagrams and part numbers of the POS-3150 system.

Section includes:

- Exploded Diagram for POS-3150 Front Panel

- Exploded Diagram for POS-3150 Wireless LAN Assembly

- Exploded Diagram for POS-3150 Rear Cover

- Exploded Diagram for POS-3150 LCD Assembly

- Exploded Diagram for POS-3150 DVD ROM Assembly

- Exploded Diagram for POS-3150 Bottom Cover Assembly

- Exploded Diagram for POS-3150 Fan Assembly

- Exploded Diagram for POS-3150 Mainboard Assembly

- Exploded Diagram for POS-3150 Bottom Case Assembly

- Exploded Diagram for POS-3150 Top Cover

- Exploded Diagram for POS-3150 HDD Assembly

- Exploded Diagram for POS-3150 VFD Cover
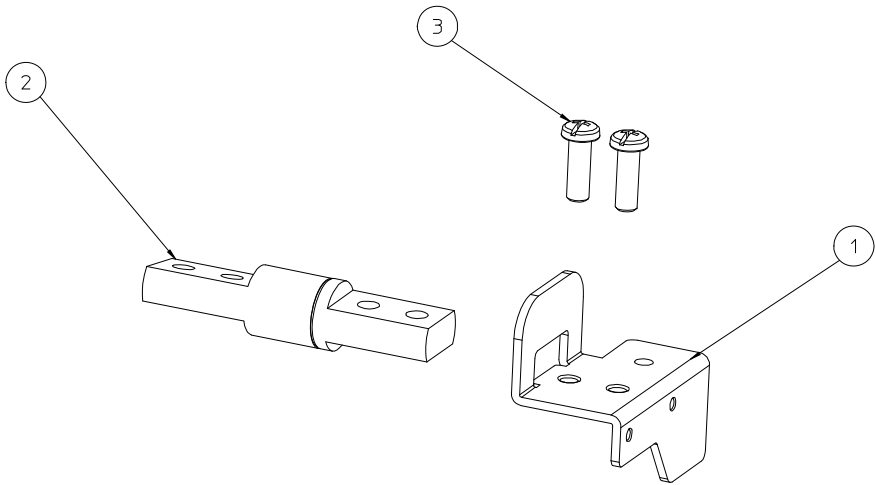
EXPLODED DIAGRAM FOR POS-3150 FRONT PANEL

Type 1 (Black):
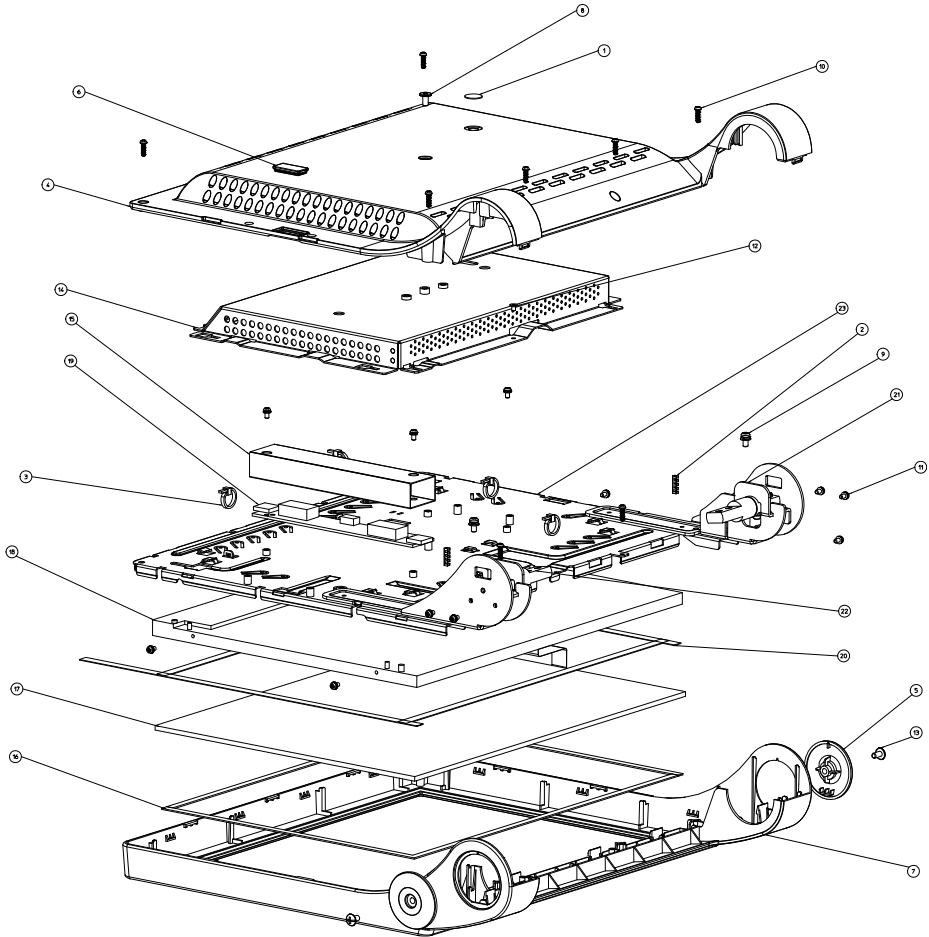
NO.	COMPONENT NAME	PART NO.	Q'TY
1	MYLAR FOR ADJUSTOR	90-056-36100181	1
2	MOVEABLE BUSHING	30-018-04100005	2
3	CABLE TIE	30-015-04100044	4
4	15 IN BACK PANEL	30-003-12210181	1
5	HINGE SIDE COVER	30-002-12211181	2
6	FINGERPRINT COVER	30-013-06100124	1
7	15 IN FRONT PANEL	30-003-12120181	1
8	SCREW	22-275-40008011	1
9	SCREW	22-232-40008211	2
10	SCREW	22-125-30010011	8
11	SCREW	22-232-30060211	11
12	SCREW	22-222-30004011	1
13	SCREW	22-245-40008011	2
14	15IN BACK CHASSIS	20-015-03001181	1
15	MYLAR FOR INVERTER	90-056-02100181	1
16	SPONGE	30-013-15100139	2
17	TOUCH PANEL	**-***-********	1
18	15 IN PANEL	**-***-********	1
19	INVERTER	**-***-********	1
20	PORON	30-013-24100000	4
21	HINGE L ASSY		1
22	HINGE R ASSY		1
23	15IN PANEL HOLDER ASSY	20-029-03003181	1
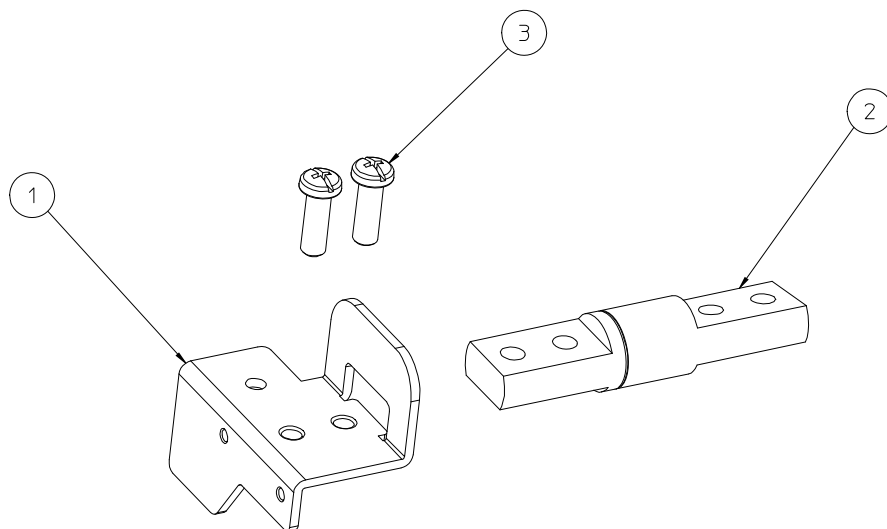
NO.	COMPONENT NAME	PART NO.	Q'TY
1	HINGE BRACKET R	20-006-03001181	1
2	HINGE R	20-012-19001181	1
3	SCREW	22-232-50015011	2

NO.	COMPONENT NAME	PART NO.	Q'TY
1	HINGE BRACKET L	20-006-03002181	1
2	HINGE L	20-012-19002181	1
3	SCREW	22-232-50015011	2

Type 2 (White):
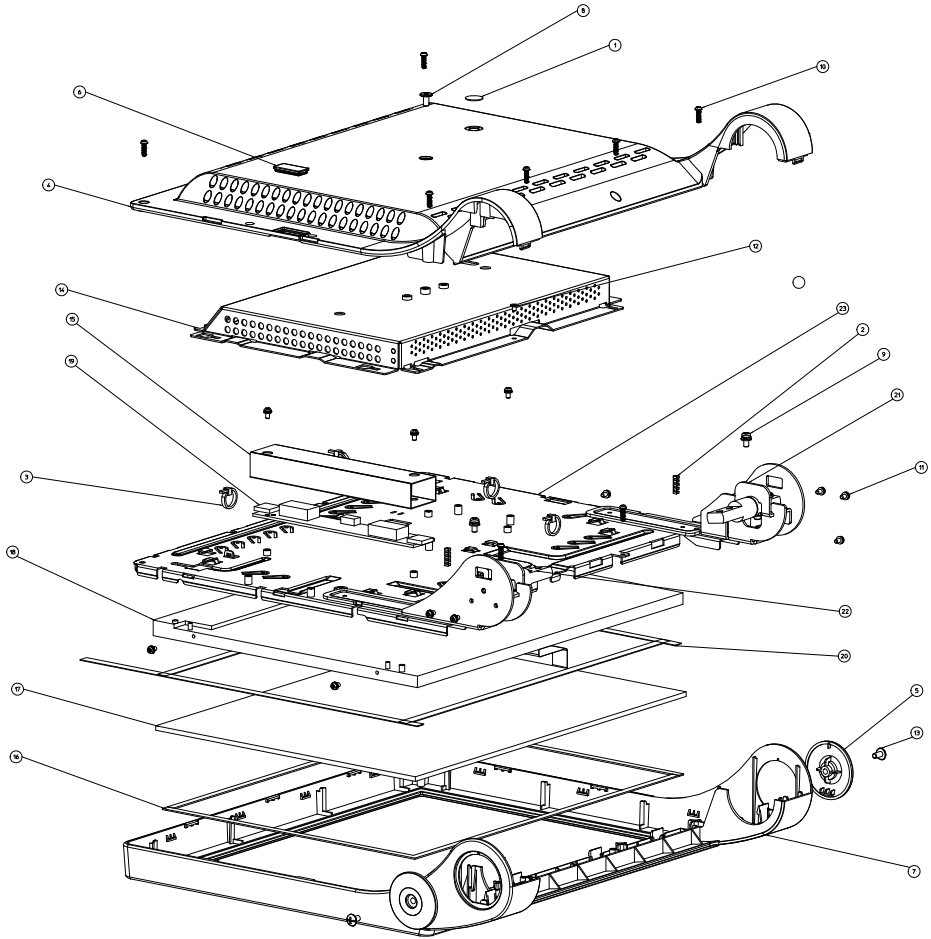
NO.	COMPONENT NAME	PART NO.	Q'TY
1	MYLAR FOR ADJUSTOR	90-056-43100181	1
2	MOVEABLE BUSHING	30-018-04100005	2
3	CABLE TIE	30-015-04100044	4
4	15 IN BACK PANEL	30-003-12130181	1
5	HINGE SIDE COVER	30-002-12111181	2
6	FINGERPRINT COVER	30-013-06100124	1
7	15 IN FRONT PANEL	30-003-12110181	1
8	SCREW	22-272-40008011	1
9	SCREW	22-232-40008211	2
10	SCREW	22-125-30010011	8
11	SCREW	22-232-30060211	11
12	SCREW	22-222-30004011	1
13	SCREW	22-242-40008011	2
14	15IN BACK CHASSIS	20-015-03001181	1
15	MYLAR FOR INVERTER	90-056-02100181	1
16	SPONGE	30-013-15100139	2
17	TOUCH PANEL	**-***-********	1
18	15 IN PANEL	**-***-********	1
19	INVERTER	**-***-********	1
20	PORON	30-013-24100000	4
21	HINGE L ASSY		1
22	HINGE R ASSY		1
23	15IN PANEL HOLDER ASSY	20-029-03003181	1
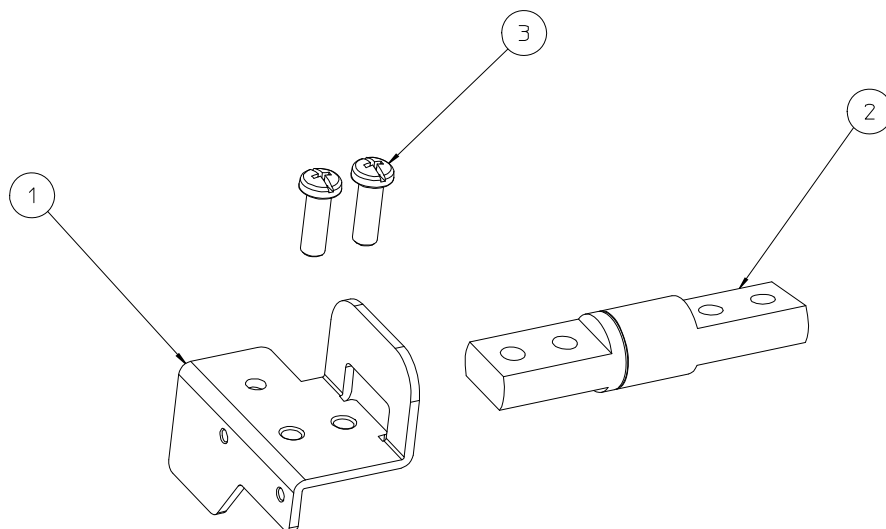
NO.	COMPONENT NAME	PART NO.	Q'TY
1	HINGE BRACKET R	20-006-03001181	1
2	HINGE R	20-012-19001181	1
3	SCREW	22-232-50015011	2

NO.	COMPONENT NAME	PART NO.	Q'TY
1	HINGE BRACKET L	20-006-03002181	1
2	HINGE L	20-012-19002181	1
3	SCREW	22-232-50015011	2

EXPLODED DIAGRAM FOR POS-3150 WIRELESS LAN CARD ASSEMBLY
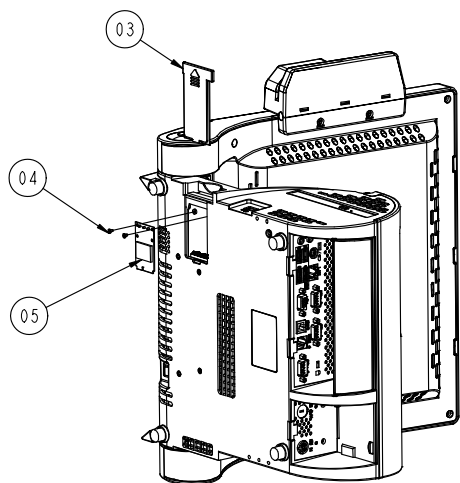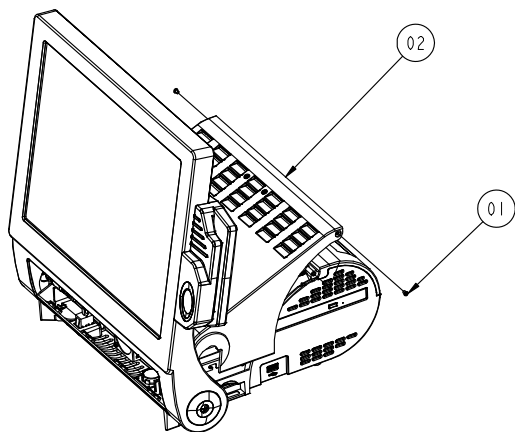
No.	Component Name	Part No.	Q y
1	M3_L4_I_B (black)	22-272-30004318	2
	M3_L4_I_Ni (white)	82-272-30004018	
2	POD3150-TOP Assembly		1
3	MINI_PCIE_DOOR (black)	30-007-28110165	1
	MINI_PCIE_DOOR (white)	30-007-28310165	
4	M2_L4_I_Ni	22-272-20004011	2
5	WIRELESS LAN_CARD	XX-XXX-XXXXXXXX	1

EXPLODED DIAGRAM FOR POS-3150 REAR COVER
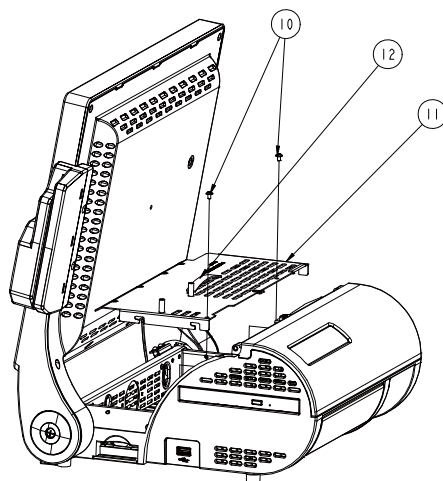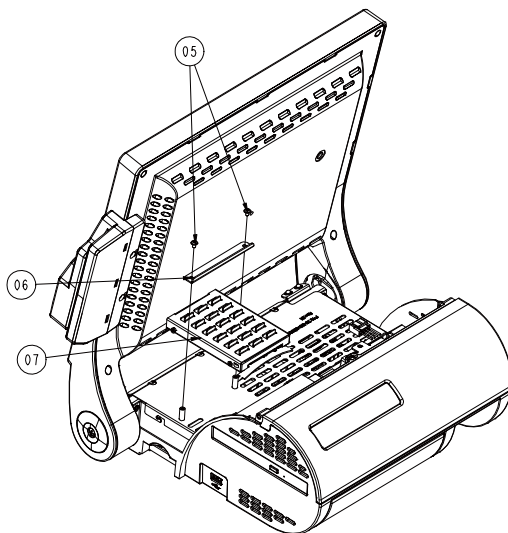
No.	Component Name	Part No.	Q y
5	M3_L5_Washer_Ni	22-242-30005311	2
6	POD3150 HDD LOCK	80-025-0300118	1
7	HDD Assembly		1
8	M3_L5_Washer_Ni	22-242-30005311	1
9	N/A		
10	N/A		
11	POD3150_INSIDE_TOP_CASE	20-001-03001181	1
12	Puller	30-080-04100000	1

EXPLODED DIAGRAM FOR POS-3150 LCD ASSEMBLY

Remove LVDS Cable
DETAIL A

SEE DETAIL A

15

14

13
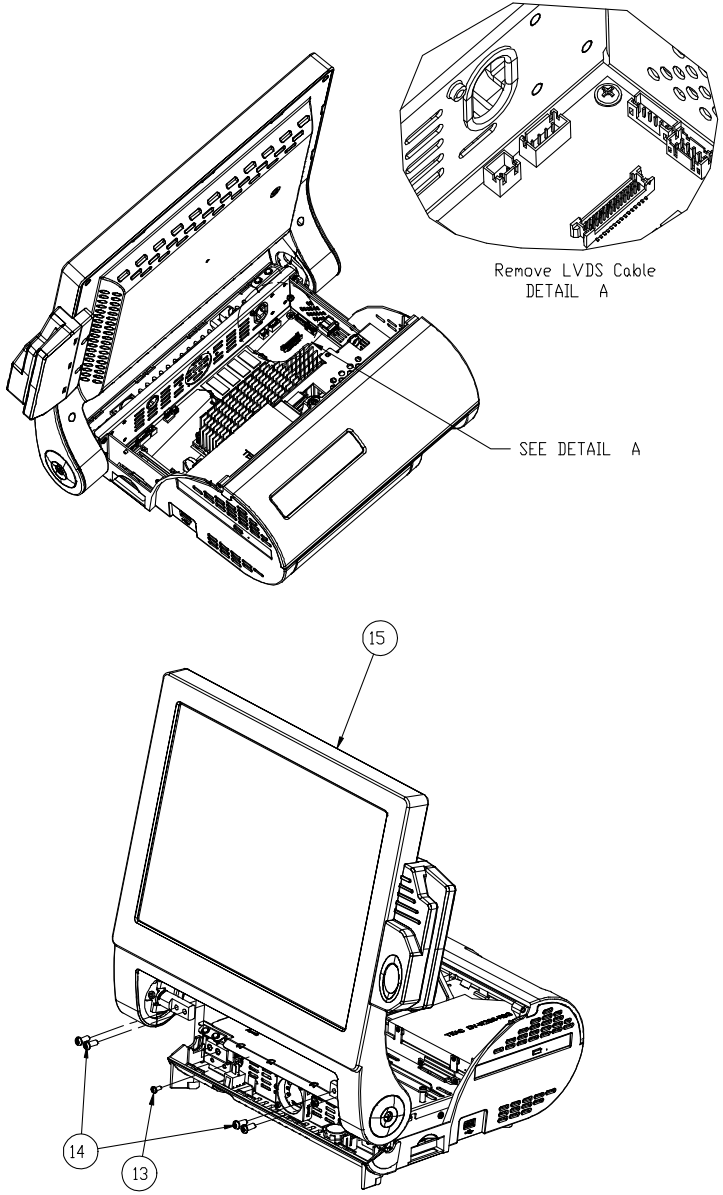
No.	Component Name	Part No.	Q y
13	M3_L5_Washer_Ni	22-242-30005311	1
14	M5_LI5	22-232-50015011	4
15	LCD Assembly		1

EXPLODED DIAGRAM FOR POS-3150 DVD ROM ASSEMBLY
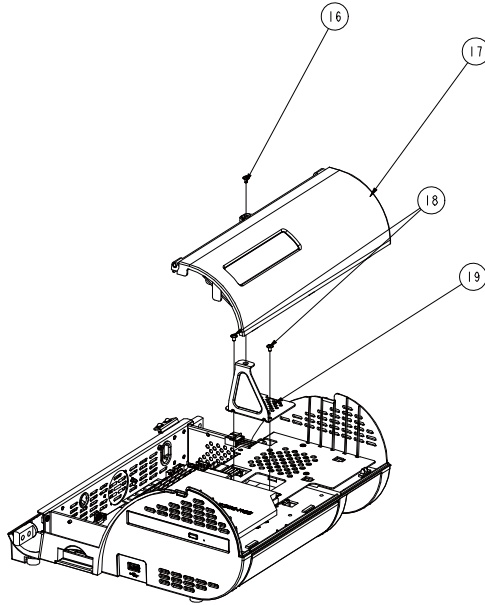
With DVD
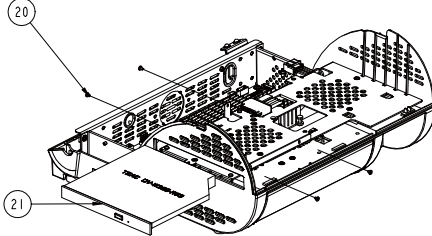
Without Dvd
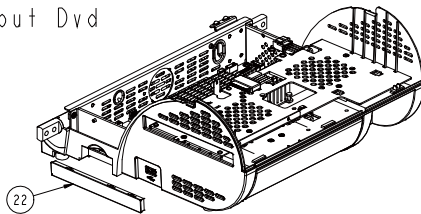
No.	Component Name	Part No.	Q y
16	M4_L8_Ni	22-242-30005311	1
17	VFD Assembly		1
18	M3_L5_Washer_Ni	22-242-30005311	2
19	Jump door	80-047-03001181	1
20	M2_L2_1_Ni	22-272-20002011	4
21	DVD ROM	52-480-05224905	1
22	DVD Cover (black)	30-002-12710181	1
	DVD Cover (white)	30-002-12610181	

EXPLODED DIAGRAM FOR POS-3150 BOTTOM COVER ASSEMBLY
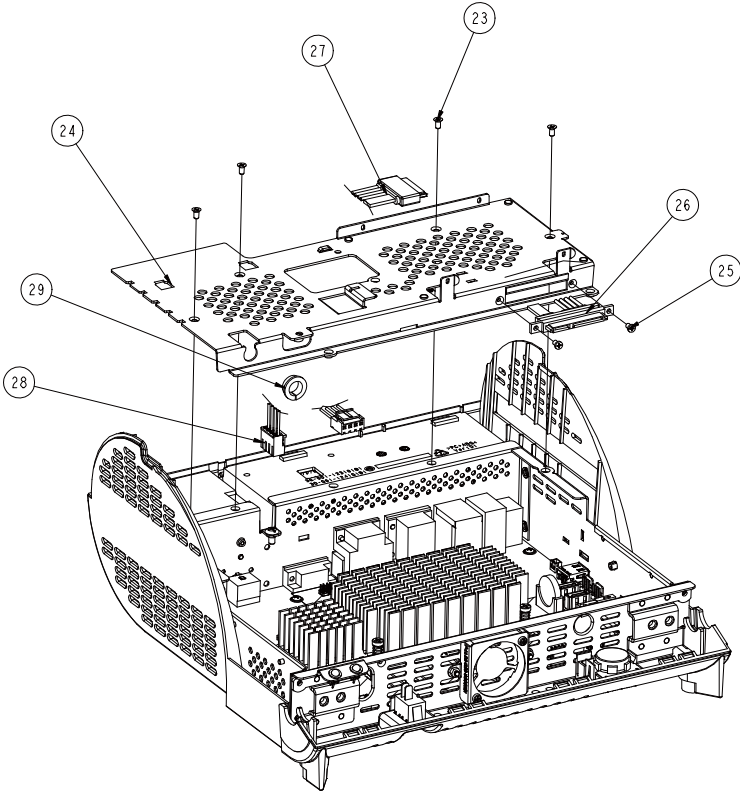
No.	Name	Part No.	Q y
23	M3_6_FLAT_B	22-215-30060011	4
24	INSIDE-TOP-HOLDER	80-029-03001181	1
25	M3_L4_I_B (black)	22-272-30004318	2
26	HDD Cable	27-012-16504081	1
27	DVD Cable	27-008-18105081	1
28	DC Cable	27-012-18103111	1
29	Open Closed Bushing	30-026-04200008	1

EXPLODED DIAGRAM FOR POS-3150 FAN ASSEMBLY
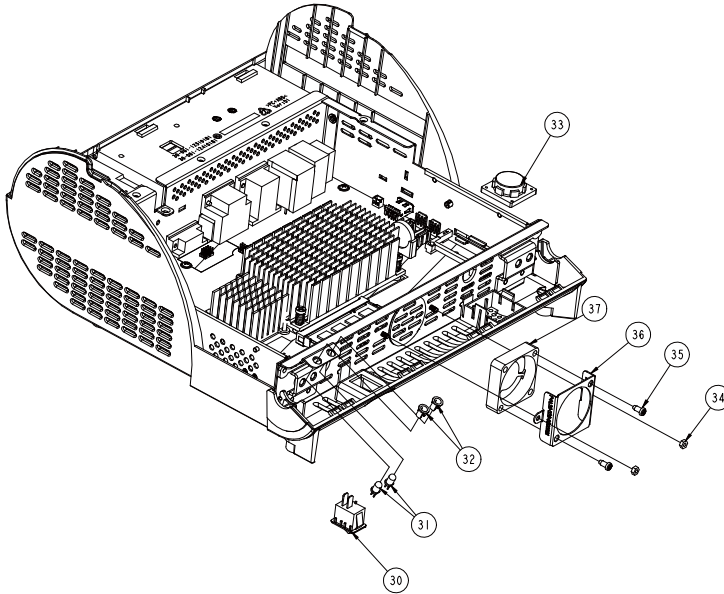
No.	Component Name	Part No.	Q y
30	Switch Cable	27-019-12804071	1
31	LED Cable	27-018-18103071	1
32	LED Support	30-014-04100009	2
33	Speaker	13-500-08280018	1
34	M3_NUT	23-142-30020051	2
35	T4.6_L5_Screw	XX-XXX-XXXXXXXX	2
36	Fan Holder	20-029-03001181	1
37	40 x 10 FAN	XX-XXX-XXXXXXXX	1

EXPLODED DIAGRAM FOR POS-3150 MAINBOARD ASSEMBLY
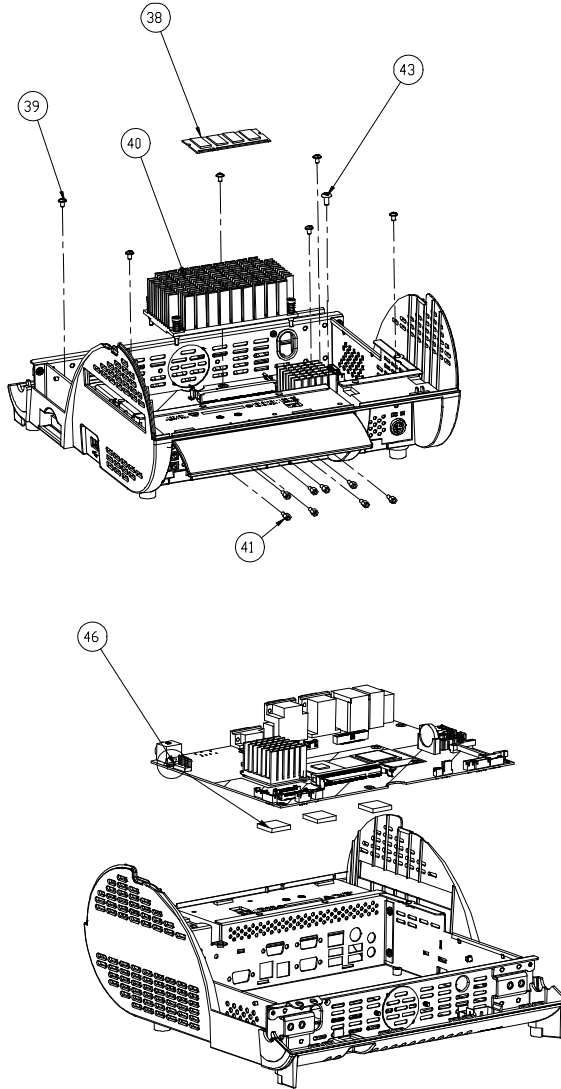
No.	Component Name	Part No.	Q y
38	RAM		1
39	M3_L5_Washer_Ni	22-242-30005311	6
40	Heatsink	21-002-11564002	1
41	No.4 BOSS	22-692-40048051	8
42	N/A		
43	M4_L8_Ni	22-242-40008011	1
44	N/A		
45	N/A		
46	PD-A7510	XX-XXX-XXXXXXXX	1
47	Thermal Pad	21-006-82020002	3

EXPLODED DIAGRAM FOR POS-3150 BOTTOM CASE ASSEMBLY
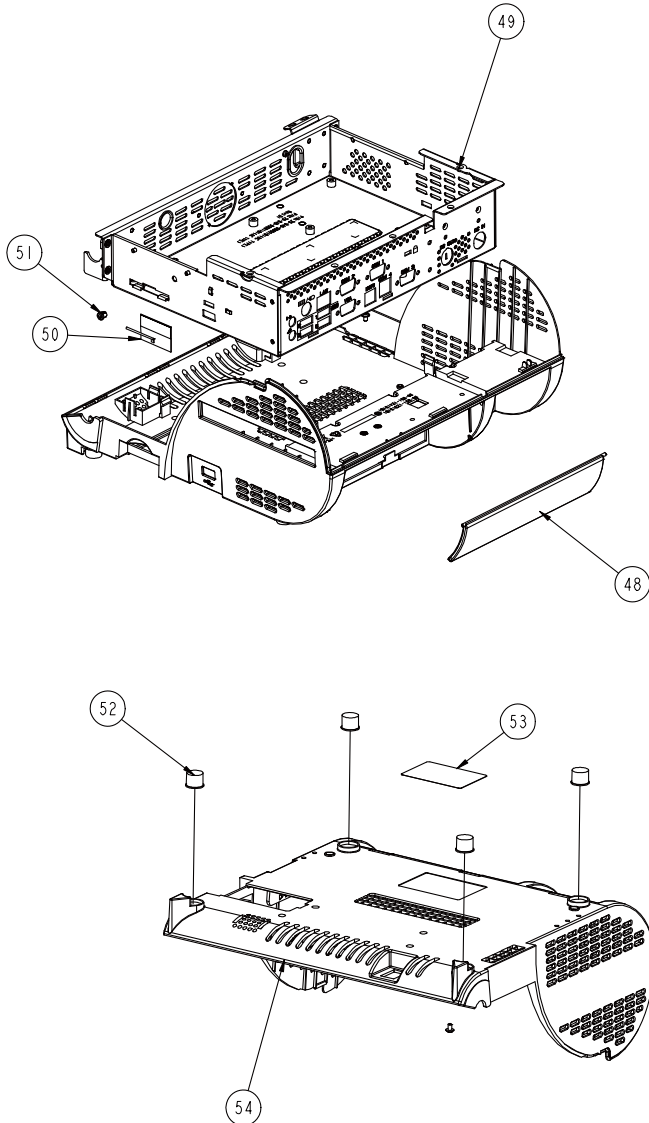
No.	Component Name	Part No.	Q y
48	POD3150 I/O Cover (black)	30-002-12910181	1
	POD3150 I/O Cover (white)	30-002-12810181	
49	POD3150-INSIDE-BOX	20-040-03001181	1
50	WIRELESS_ANTENNA	27-029-00003072	1
51	OPEN CLOSED BUSHING	30-026-04100008	1
52	Foot (R1511)	90-004-01100181	4
53	UL Label	XX-XXX-XXXXXXXX	1
54	POD3150_BOT_CASE (black)	30-001-12410181	1
	POD3150_BOT_CASE (white)	30-001-12310181	

EXPLODED DIAGRAM FOR POS-3150 TOP COVER
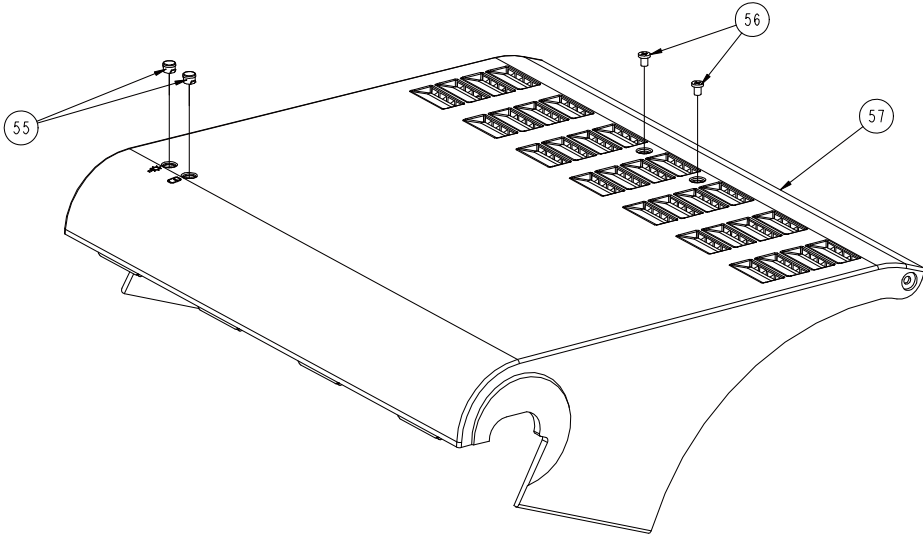
No.	Component Name	Part No.	Q y
55	LED Caps (HHP-4F)	XX-XXX-XXXXXXXX	2
56	M3_L4_I_B (black)	22-272-30004318	2
	M3_L4_I_Ni (white)	82-272-30004018	2
57	POD3150-TOP-CASE (black)	30-001-12210181	1
	POD3150-TOP-CASE (white)	30-001-12110181	

EXPLODED DIAGRAM FOR POS-3150 HDD ASSEMBLY
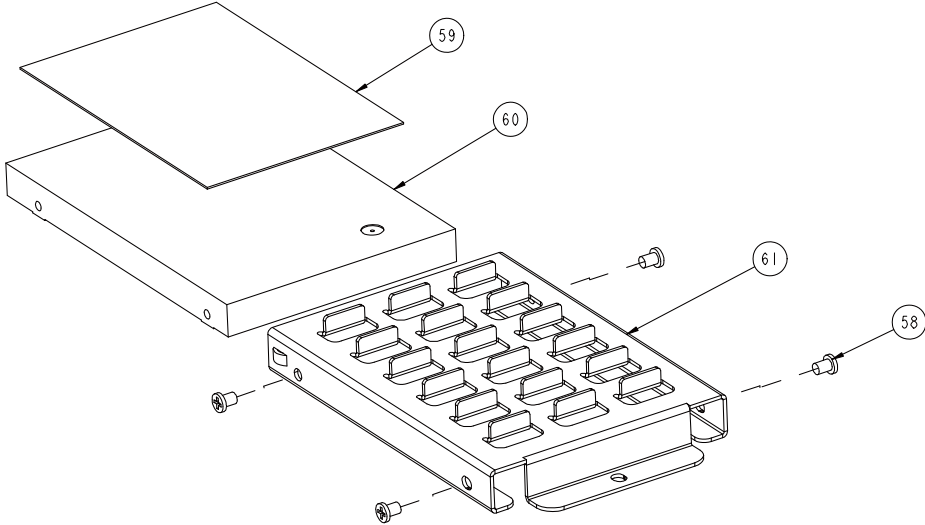
No.	Component Name	Part No.	Q y
58	M3_L4_I_B (black)	22-272-30004318	4
59	Thermal Pad	21-006-88560001	1
60	HDD	XX-XXX-XXXXXXXX	1
61	PS3100_ALU_HDD_HOLDER	20-029-01001165	1

EXPLODED DIAGRAM FOR POS-3150 VFD COVER

Without VFD/Without LOGO

63
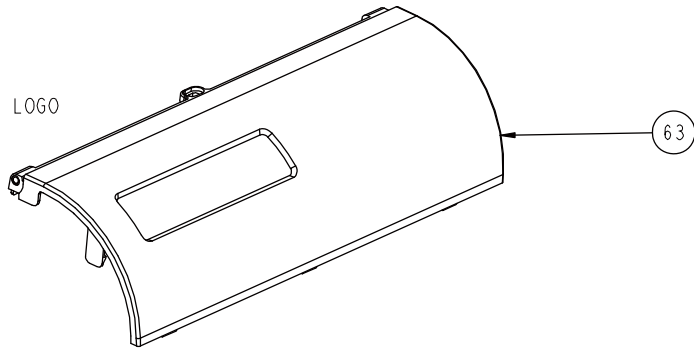
With VFD/Without LOGO

64

66

67

65
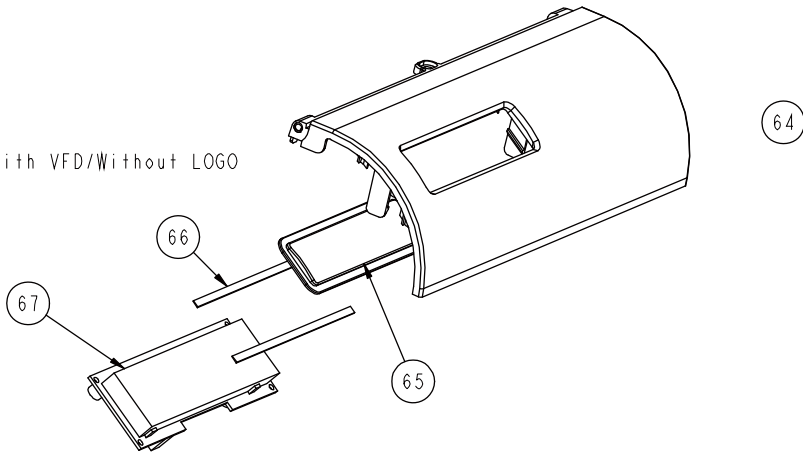
No.	Component Name	Part No.	Q y
63	WithoutVFD-COVER (black)	30-002-12310181	1
	WithouVFD-COVER (white)	30-002-12110181	
64	WithVFD-COVER (black)	30-002-12110181	1
	WithVFD-COVER (white)	30-002-12010181	
65	VFD Windows	30-002-02230165	1
66	PRON Tape	30-013-24700000	2
67	Mini VFD	52-901-17001703	1

TECHNICAL SUMMARY
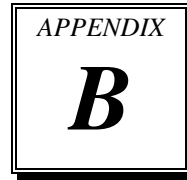
This appendix will give you a brief introduction of the allocation maps for the system resources.

Sections included:

- Block Diagram

- Interrupt Map

- DMA Channels Map

- Memory Map

- I / O Map

- Flash BIOS Update

BLOCK DIAGRAM

INTERRUPT MAP

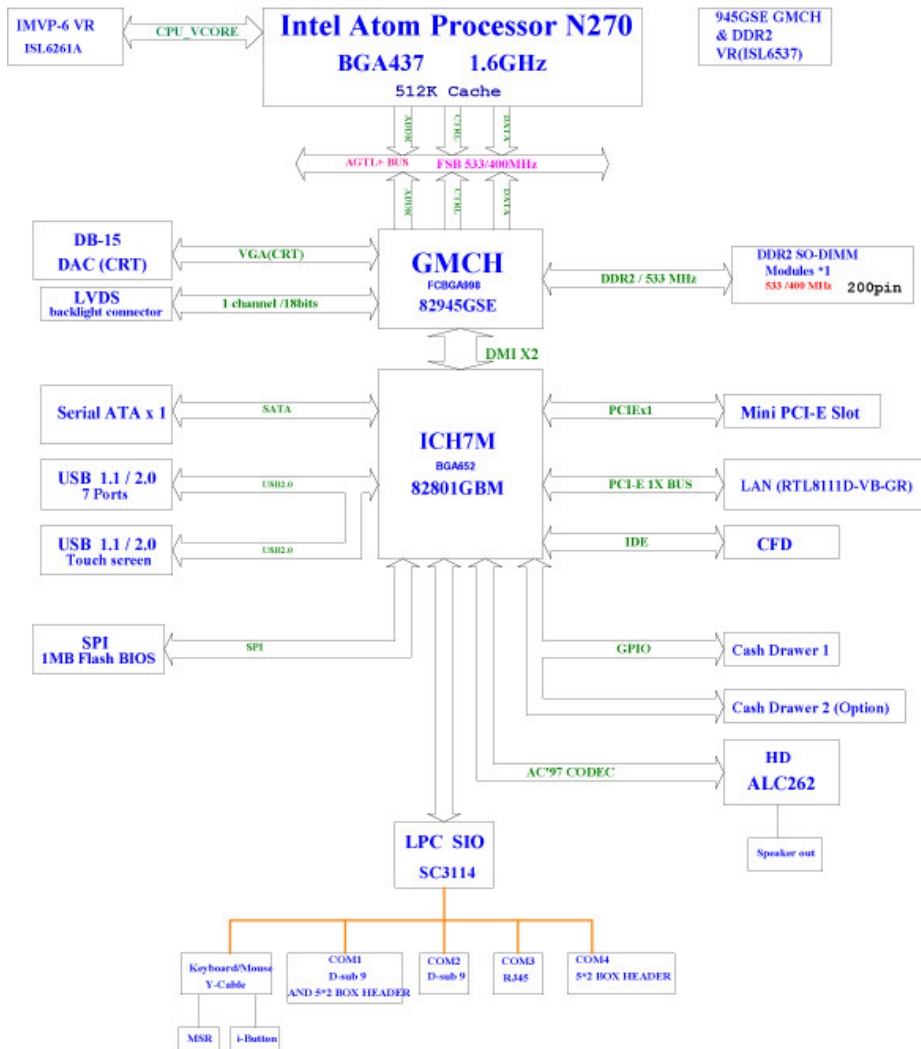| IRQ	ASSIGNMENT
0	System Timer
1	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard
3	Communications Port (COM2)
4	Communications Port (COM1)
6	Standard floppy disk controller
8	System CMOS/real time clock
9	Microsoft ACPI-Compliant System
10	Communications Port (COM3)
11	Communications Port (COM4)
12	PS/2 Compatible Mouse
13	Numeric data processor
14	Primary IDE Channel
15	Intel(R) 82801G (ICH7 Family) SMBus Controller - 27DA
16	Mobile Intel(R) 945 Express Chipset Family
16	Microsoft UAA Bus Driver for High Definition Audio
16	Intel(R) 82801G (ICH7 Family) PCI Express Root Port - 27D0
16	Intel(R) 82801G (ICH7 Family) USB Universal Host Controller - 27CB
17	Intel(R) 82801G (ICH7 Family) PCI Express Root Port - 27D2
17	Realtek PCIe GBE Family Controller
18	Intel(R) 82801G (ICH7 Family) USB Universal Host Controller - 27CA
19	Intel(R) 82801G (ICH7 Family) USB Universal Host Controller - 27C9
19	Intel(R) 82801GBM/GHM (ICH7-M Family) Serial ATA Storage Controller - 27C4
23	Intel(R) 82801G (ICH7 Family) USB Universal Host Controller - 27C8
23	Intel(R) 82801G (ICH7 Family) USB2 Enhanced Host Controller - 27CC

DMA CHANNELS MAP

DMA Channel	Assignment
2	Standard floppy disk controller
4	Direct memory access controller

MEMORY MAP

MEMORY MAP	ASSIGNMENT
0xFDE80000-0xFDEFFFFF	Mobile Intel(R) 945 Express Chipset Family
0xD0000000-0xDFFFFFFF	Mobile Intel(R) 945 Express Chipset Family
0xFDF80000-0xFDFBFFFF	Mobile Intel(R) 945 Express Chipset Family
0xFEB80000-0xFEBFFFFF	Mobile Intel(R) 945 Express Chipset Family
0xFDFF8000-0xFDFFBFFF	Microsoft UAA Bus Driver for High Definition Audio
0xFDB00000-0xFDBFFFFF	Intel(R) 82801G (ICH7 Family) PCI Express Root Port - 27D0
0xFD800000-0xFD8FFFFF	Intel(R) 82801G (ICH7 Family) PCI Express Root Port - 27D0
0xFDD00000-0xFDDFFFFF	Intel(R) 82801G (ICH7 Family) PCI Express Root Port - 27D2
0xFDC00000-0xFDCFFFFF	Intel(R) 82801G (ICH7 Family) PCI Express Root Port - 27D2
0xFDCFF000-0xFDCFFFFF	Realtek PCIe GBE Family Controller
0xFDCF8000-0xFDCFBFFF	Realtek PCIe GBE Family Controller
0xFDFFF000-0xFDFFF3FF	Intel(R) 82801G (ICH7 Family) USB2 Enhanced Host Controller - 27CC
0xFFB80000-0xFFBFFFFF	Intel(R) 82802 Firmware Hub Device
0xFDFFE000-0xFDFFE3FF	Intel(R) 82801GBM/GHM (ICH7-M Family) Serial ATA Storage Controller - 27C4
0xE0000000-0xEFFFFFFF	Motherboard resources
0x0000-0x9FFFF	System board
0xFEC00000-0xFEC00FFF	System board
0xFED13000-0xFED1DFFF	System board
0xFED20000-0xFED8FFFF	System board
0xFEE00000-0xFEE00FFF	System board
0xFFB00000-0xFFB7FFFF	System board
0xFFF00000-0xFFFFFFFF	System board
0xA0000-0xBFFFF	PCI bus
0xA0000-0xBFFFF	Mobile Intel(R) 945 Express Chipset Family
0xC0000-0xDFFFF	PCI bus
0xE0000-0xEFFFF	System board
0xF0000-0xFFFFF	System board
0x100000-0x1F6DFFFF	System board
0x1F6E0000-0x1F6FFFFF	System board
0x1F700000-0xFEBFFFFF	PCI bus

I/O MAP

I/O MAP	ASSIGNMENT
0x00000000-0x00000CF7	PCI bus
0x00000000-0x00000CF7	Direct memory access controller
0x00000010-0x0000001F	Motherboard resources
0x00000020-0x00000021	Programmable interrupt controller
0x00000022-0x0000003F	Motherboard resources
0x00000040-0x00000043	System timer
0x00000044-0x0000005F	Motherboard resources
0x00000060-0x00000060	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard
0x00000061-0x00000061	System speaker
0x00000062-0x00000063	Motherboard resources
0x00000064-0x00000064	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard
0x00000065-0x0000006F	Motherboard resources
0x00000070-0x00000073	System CMOS/real time clock
0x00000074-0x0000007F	Motherboard resources
0x00000080-0x00000090	Direct memory access controller
0x00000091-0x00000093	Motherboard resources
0x00000094-0x0000009F	Direct memory access controller
0x000000A0-0x000000A1	Programmable interrupt controller
0x000000A2-0x000000BF	Motherboard resources
0x000000C0-0x000000DF	Direct memory access controller
0x000000E0-0x000000EF	Motherboard resources
0x000000F0-0x000000FF	Numeric data processor
0x000001F0-0x000001F7	Primary IDE Channel
0x00000274-0x00000277	ISAPNP Read Data Port
0x00000279-0x00000279	ISAPNP Read Data Port
0x000002E8-0x000002EF	Communications Port (COM4)
0x000002F8-0x000002FF	Communications Port (COM2)
0x000003B0-0x000003BB	Mobile Intel(R) 945 Express Chipset Family
0x000003C0-0x000003DF	Mobile Intel(R) 945 Express Chipset Family
0x000003E8-0x000003EF	Communications Port (COM3)
0x000003F0-0x000003F5	Standard floppy disk controller
0x000003F6-0x000003F6	Primary IDE Channel
0x000003F7-0x000003F7	Standard floppy disk controller
0x000003F8-0x000003FF	Communications Port (COM1)

I/O MAP	ASSIGNMENT
0x000004D0-0x000004D1	Motherboard resources
0x00000500-0x0000051F	Intel(R) 82801G (ICH7 Family) SMBus Controller - 27DA
0x00000800-0x0000087F	Motherboard resources
0x00000880-0x0000088F	Motherboard resources
0x00000A79-0x00000A79	ISAPNP Read Data Port
0x00000D00-0x0000FFFF	PCI bus
0x00004000-0x000040BF	Motherboard resources
0x0000C000-0x0000CFFF	Intel(R) 82801G (ICH7 Family) PCI Express Root Port - 27D0
0x0000E000-0x0000EFFF	Intel(R) 82801G (ICH7 Family) PCI Express Root Port - 27D2
0x0000EE00-0x0000EEFF	Realtek PCIe GBE Family Controller
0x0000F500-0x0000F50F	Intel(R) 82801GBM/GHM (ICH7-M Family) Serial ATA Storage Controller - 27C4
0x0000F600-0x0000F603	Intel(R) 82801GBM/GHM (ICH7-M Family) Serial ATA Storage Controller - 27C4
0x0000F700-0x0000F707	Intel(R) 82801GBM/GHM (ICH7-M Family) Serial ATA Storage Controller - 27C4
0x0000F800-0x0000F803	Intel(R) 82801GBM/GHM (ICH7-M Family) Serial ATA Storage Controller - 27C4
0x0000F900-0x0000F907	Intel(R) 82801GBM/GHM (ICH7-M Family) Serial ATA Storage Controller - 27C4
0x0000FA00-0x0000FA0F	Intel(R) 82801G (ICH7 Family) Ultra ATA Storage Controllers - 27DF
0x0000FB00-0x0000FB1F	Intel(R) 82801G (ICH7 Family) USB Universal Host Controller - 27CB
0x0000FC00-0x0000FC1F	Intel(R) 82801G (ICH7 Family) USB Universal Host Controller - 27CA
0x0000FD00-0x0000FD1F	Intel(R) 82801G (ICH7 Family) USB Universal Host Controller - 27C9
0x0000FE00-0x0000FE1F	Intel(R) 82801G (ICH7 Family) USB Universal Host Controller - 27C8
0x0000FF00-0x0000FF07	Mobile Intel(R) 945 Express Chipset Family

Flash BIOS Update

I. Before System BIOS update
1.   Prepare a bootable media (ex. USB storage device) which can boot system to DOS prompt.
2.   Download and save the BIOS BIN (ex.31501LD1.BIN) file to the bootable device.
3.   Copy AWARD flash utility – AWDFLASH.exe (v8.96) into bootable device.

```
C:\3150>dir

 Volume in drive C is JUSTIN
 Volume Serial Number is 6CCA-74A9
 Directory of C:\3150

.                <DIR>        07-07-11  3:16p
..               <DIR>        07-07-11  3:16p
AWDFLASH EXE       64,111  07-02-09  2:36p
31501LD1 BIN    1,048,576  08-10-11  2:30p
          2 file(s)      1,112,687 bytes
          2 dir(s)     124,293,120 bytes free

C:\3150>AWDFLASH 31501LD1.BIN /cc /cd /py /sn /r_
```

4.   Make sure the target system can first boot to the bootable device.
     (1)   Connect the bootable USB device.
     (2)   Turn on the system and press <Del> key during BIOS POST procedure.
     (3)   System will goes into the BIOS setup menu.
     (4)   Select [Advanced BIOS Features].

Phoenix - AwardBIOS CMOS Setup Utility

►Standard CMOS Features	► Load Fail-Safe Defaults
►Advanced BIOS Features	► Load Optimized Defaults
►Advanced Chipset Features	► Set Supervisor Password
►Integrated Peripherals	► Set User Password
►Power Management Setup	► Save & Exit Setup
►PnP/PCI Configurations	► Exit Without Saving
►PC Health Status	

Esc : Quit	↑↓→← : Select Item
F10 : Save & Exit Setup	
Time, Date, Hard Disk Type .…	

(5)   Select [Hard Disk Boot Priority] sub-menu, set the USB bootable device to be the 1st boot device.

Phoenix - AwardBIOS CMOS Setup Utility
Advanced BIOS Features

► CPU Feature	[Press Enter]	Item Help
► Hard Disk Boot Priority	[Press Enter]	
CPU L1 & L2 Cache	[Enabled]	
Hyper-Threading Technology	[Enabled]	Menu Level ►
Quick Power On Self Test	[Enabled]	
First Boot Device	[Hard Disk]	
Second Boot Device	[Hard Disk]	
Third Boot Device	[LS120]	
Boot Other Device	[Enabled]	
Boot Up NumLock Status	[On]	
Gate A20 Option	[Fast]	
Typematic Rate Setting	[Disabled]	
x Typematic Rate (Chars/Sec)	6	
x Typematic Delay (Msec)	250	
Security Option	[Setup]	
x APIC Mode	Enabled	
MPS Version Control For OS	[1.4]	

↑↓→←: Move   Enter: Select   +/-/PU/PD:Value   F10:Save   ESC:Exit   F1:General Help
F5: Previous Values   F6: Fail-Safe Defaults   F7:Optimized Defaults

Phoenix – Award CMOS Setup Utility
Hard Disk Boot Priority

1. USB-HDD0: JetFlashTS256MJF2B/2L	Item Help
2. Ch2 M. : WDC WD1600BEVT-00A23T0	
3. Bootable Add-in Cards	Menu Level ►
	Use<↑> or <↓> to select a device, then press <+> to move it up, or <-> to move it down the list. Press <ESC> to exit this menu.

↑↓→←:Move   Enter: Select   +/-/PU/PD:Value   F10:Save   ESC:Exit   F1:General Help
F5: Previous Values   F6:Fail-Safe Defaults   F7:Optimized Defaults

(6)   Pressing <F10> key to save configuration and exit the BIOS setup menu.

II. AWDFLASH command for system BIOS update
AWDFLASH.exe is the AWARD firmware update utility, the command line is shown as below:

Awdflash [bios name] /cc /cd /py /sn /r

User can type "AWDFLASH /?" to see all the definition of each control options. The recommend option for BIOS ROM update include following parameters:

/CC: Clear BIOS.
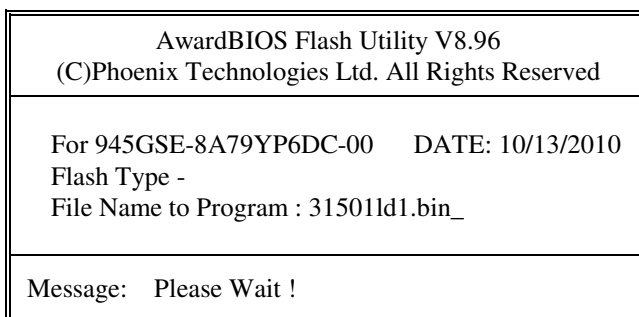**/CD**: Stands for clearing DMI Data pool after reprogramming..
/PY: Stands for answering "yes" to the request concerning the BIOS re-flash.
/SN: Stands for answering "no" to the request about saving the previous version of the BIOS..
/R: Stands for the system reset after re-flash.

III. BIOS update procedure

1. Use the bootable USB storage to boot up system into the DOS command prompt.
2. Type "**AWDFLASH 3150xxxx.BIN /CC /CD /PY /SN /R** " and press enter to start the flash procedure.
   (Note that xxxx means the BIOS revision part, ex. 1LDX…)
3. During the update procedure, you will see the BIOS update process status and its percentage. Beware! Do not turn off system power or reset your computer if the whole procedure are not complete yet, or it may crash the BIOS ROM and make system unable to boot up next time.
4. After BIOS update procedures complete, the messages should be like the figure shown below.

```
          AwardBIOS Flash Utility V8.96
    (C)Phoenix Technologies Ltd. All Rights Reserved


    For 945GSE-8A79YP6DC-00      DATE: 10/13/2010
    Flash Type -
    File Name to Program : 31501ld1.bin_


  Message:    Please Wait !
```

5. User can restart the system and boot up with new BIOS now.

QUICK MANUAL
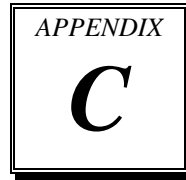
This appendix contains the assembly procedure of the advertisement board and the 2nd display.
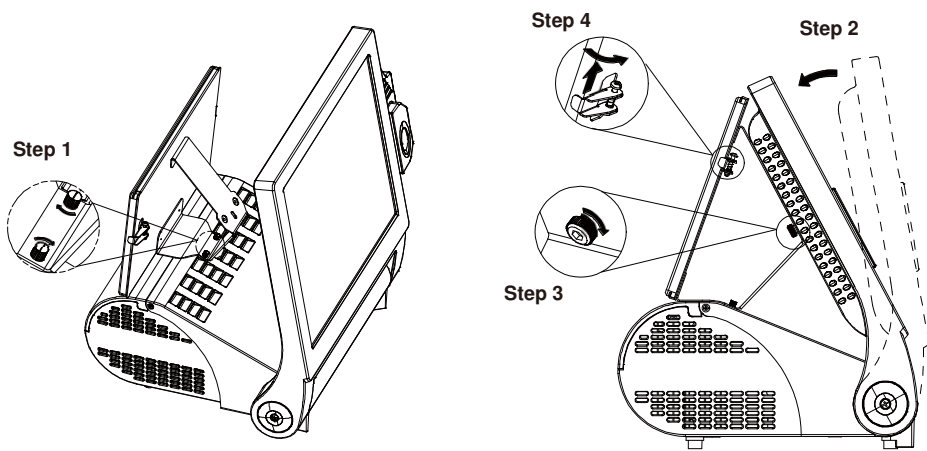
Sections included:

- Assembly Procedure of Advertisement Board

- Assembly Procedure of 2nd Display

Assembly Procdure of Advertisement Board

Packing Checklist:
- Transparent Acrylic   x 1
- Acrylic Bracket   x 1
- LCD Screw   x 1
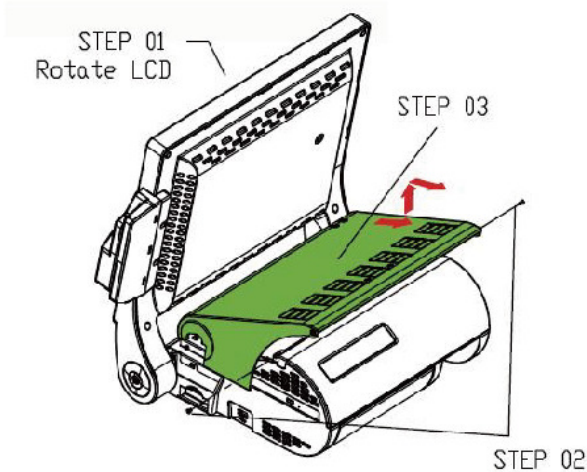- Body Screw   x 2

Fabrication Step:

Assembly Procdure of 2nd Display

Packing Checklist:

- 8.4" LCD   x 1
- Driver CD   x 1
- Power Cable (D-sub 9 to Power Jack)   x 1
- VGA Cable (Twin D-sub 15)   x 1
- LCD Holder (Metal)   x 1
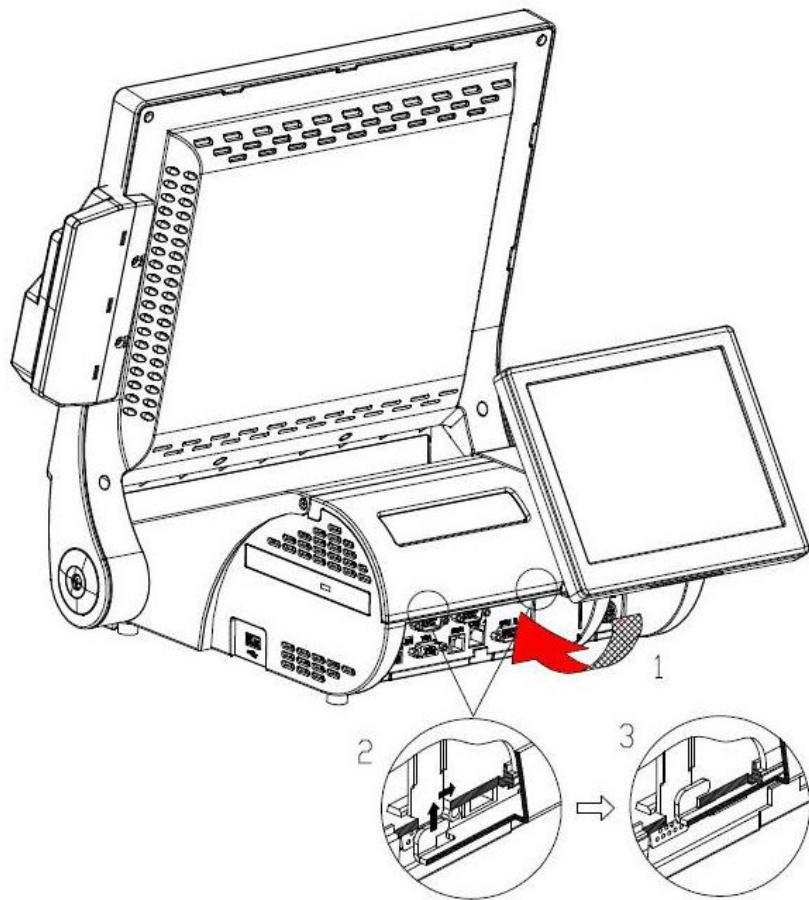- LCD Fixed Screw   x 4
- LCD Bracket Fixed Screw   x 2

STEP 1:

STEP 01
Rotate LCD

STEP 03

STEP 02

STEP 2:

SELEC-TION	JUMPER SETTINGS	
RI	1-2	JP_COM1
VCC12	3-4	JP_COM1
VCC	5-6	JP_COM1

*Manufacturing Default – RI.

STEP 3:

STEP 4:

STEP 5:

STEP 6:

STEP 7:

STEP 8: