USER'S MANUAL

POS-6511 Series

POS System Powered by
Intel® Sandy Bridge Platform

POS-6511 Series M1

POS-6511 Series POS System
With LCD / Touchscreen

PREFACE

COPYRIGHT NOTICE

ACKNOWLEDGEMENTS

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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INTRODUCTION

CHAPTER

1

This chapter gives you the information for the POS-6511. It also outlines the system specifications.

Sections included:

- About This Manual
- POS System Illustration
- 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-6511 Series System. The POS-6511 is an updated system designed to be comparable with the highest performance of IBM AT personal computers. The POS-6511 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, and Touch Screen Utility. It also describes the Wireless Utility.

Chapter 4 AMI 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-6511.

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

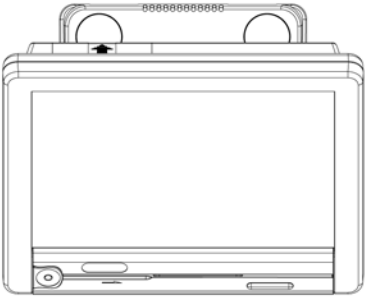
This appendix gives you the information about the VFD assembly procedures and the i-Button decoder API.

1-2. POS SYSTEM ILLUSTRATION

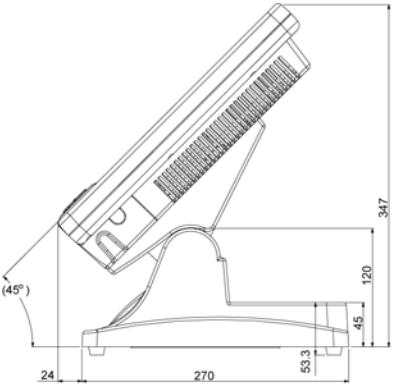
POS-6511

Front View

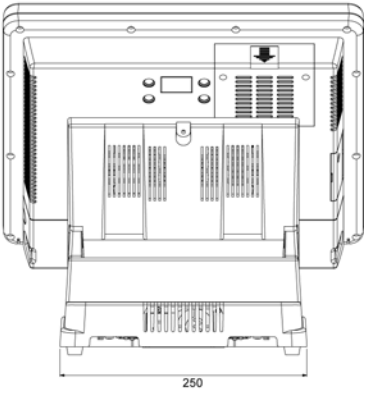
Top View



Side View

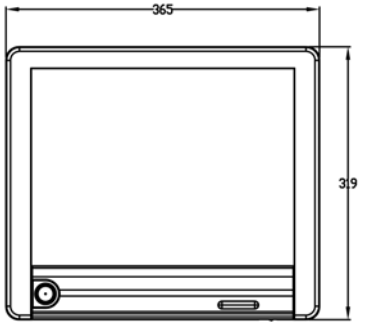


Back View

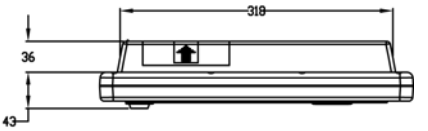


POS-6511-PPC

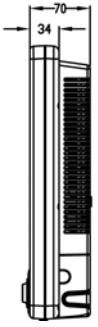
Front View



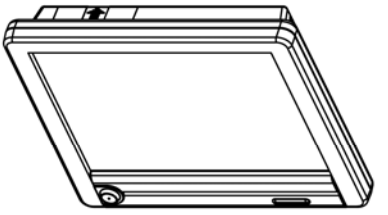
Top View



Side View

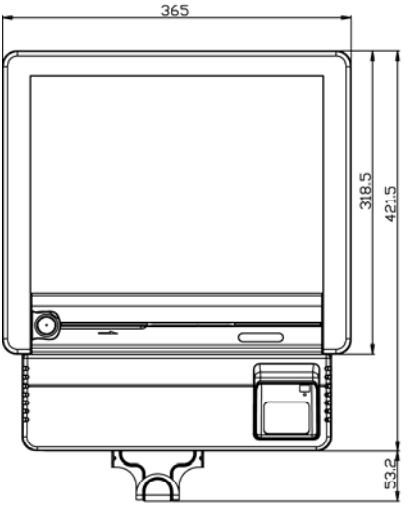


Quarter View

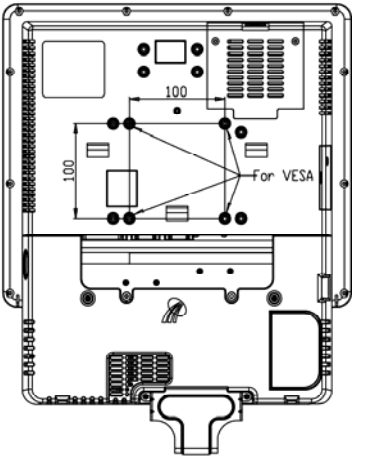


POS-6511-MIT

Front View



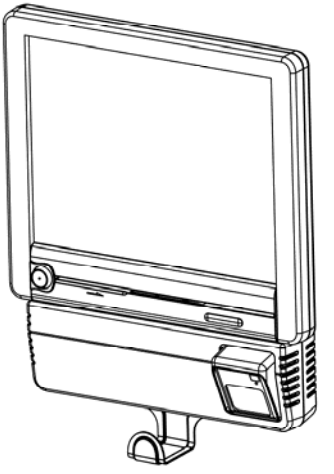
Rear View



Top View

Side View

Quarter View



1-3. SYSTEM SPECIFICATIONS

MAINBOARD (PB-6056RA)

- **CPU Type (with North Bridge):**
  Intel® Celeron B810, 1.60GHz
  Intel® Core i3-2330E processor, 2.2GHz

- **Chipset:**
  Intel® HM65

- **Memory:**
  1 x 204-pin DDRIII SO-DIMM socket on board, up to 4GB

- **Cache:**
  Depended on CPU

- **Real-Time Clock / Calendar:**
  Embedded in Intel® HM65 South Bridge

- **BIOS:**
  AMI SPI BIOS, 64Mbits with VGA BIOS

- **Keyboard & Mouse Connector:**
  PS/2 Keyboard, combined with mini-DIN

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

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

- **PARALLEL PORT:**
  1 x parallel port, bi-directional, supports SPP/EPP/ECP

- **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):**
  [POS-6511] : 365 x 363 x 297 mm (14.37" x 14.37" x 11.69")
  [POS-6511-PPC] : 365 x 318 x 70 mm (14.37" x 12.54" x 2.76")
  [POS-6511-MIT] : 365 x 421.5 x 70 mm (14.37" x 16.59" x 2.76")

- **System Weight:**
  [POS-6511] : 9kg (19.84lb)
  [POS-6511-PPC] : 5.5kg (12.13lb)
  [POS-6511-MIT] : 7.4kg (16.31lb)

- **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 PCI-e Wireless LAN Module (802.11b/g)

- **MSR / Fingerprint (Optional):**
  External vertical module, MSR, Read only, ISO Tracker 1+2+3 (PS/2 KB Interface) + Fingerprint (USB Interface)

- **MSR / i-Button / RFID (Optional):**
  External vertical module, MSR, Read only, JIS-I or II, ISO Tracker 1+2+3; I-button, Read only; RFID, Read / Write, ISO 14443A 13.56MHz (USB 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-6511 on a sturdy, level surface. Be sure to allow enough space around the system to have easy access needs.

b. Avoid installing your POS-6511 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-6511 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-6511 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

CHAPTER

2

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

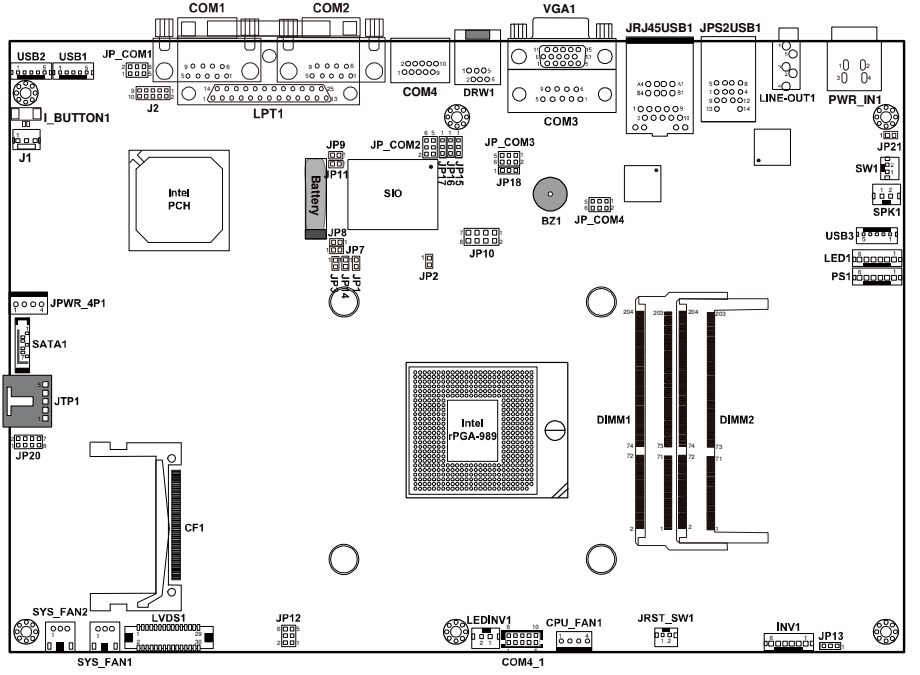
Sections included:

- Jumper & Connector Quick Reference Table
- Component Locations
- Configuration and Jumper settings
- Connector Pin Assignments

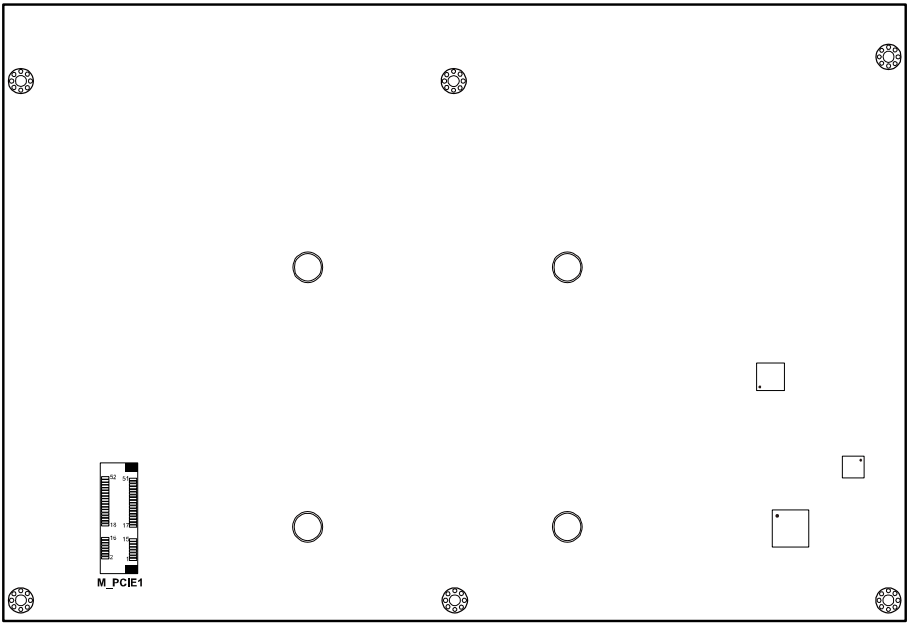
2-1. JUMPER & CONNECTOR QUICK REFERENCE TABLE

2-2. COMPONENT LOCATIONS

M/B: PB-6056RA



POS-6511 Mainboard Front Connector, Jumper and Component locations



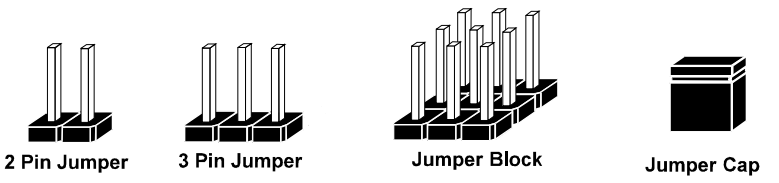
POS-6511 Mainboard Rear Connector, Jumper and Component locations

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

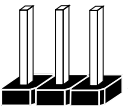


If a jumper has three pins for example, labelled PIN1, PIN2, and PIN3. You can connect PIN1 & PIN2 to create one setting and shorting. You can either connect PIN2 & PIN3 to create another setting. The same jumper diagrams are applied all through this manual. The figure below shows what the manual diagrams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

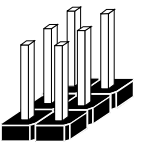
JUMPER DIAGRAMS

Jumper Cap looks like this

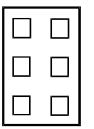
2 pin Jumper looks like this



3 pin Jumper looks like this

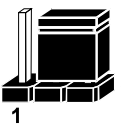


Jumper Block looks like this



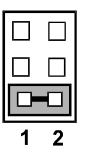
JUMPER SETTINGS

2 pin Jumper closed(enabled)
looks like this



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

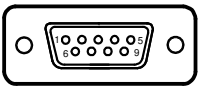
Jumper Block
1-2 pin closed(enabled)
looks like this



2-4. COM PORT CONNECTOR

There are four COM ports enhanced in this board namely: COM1, COM2, COM3, COM4 and COM4_1.

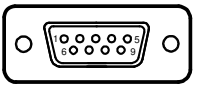
COM1: COM1 Connector
The pin assignments are as follows:



COM1

PIN	ASSIGNMENT
1	DCD1
2	RXD1
3	TXD1
4	DTR1
5	GND
6	DSR1
7	RTS1
8	CTS1
9	RI / +5V / +12V selectable

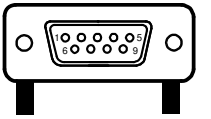
COM2: COM2 Connector
The pin assignments are as follows:



COM2

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

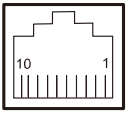
COM3: COM3 Connector
The pin assignments are as follows:



COM3

PIN	ASSIGNMENT
1	DCD3
2	RXD3
3	TXD3
4	DTR3
5	GND
6	DSR3
7	RTS3
8	CTS3
9	RI / +5V / +12V selectable

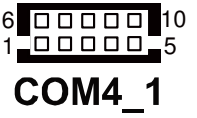
COM4: COM4 Connector
The pin assignments are as follows:



COM4

PIN	ASSIGNMENT
1	DCD4
2	RXD4
3	TXD4
4	DTR4
5	GND
6	DSR4
7	RTS4
8	CTS4
9	RI / +5V / +12V selectable
10	NC

COM4_1: COM4_1 Wafer
The pin assignments are as follows:

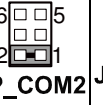
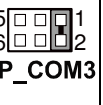
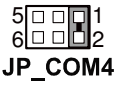
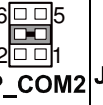
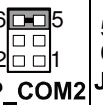
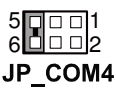


PIN	ASSIGNMENT
1	DCD4
2	RXD4
3	TXD4
4	DTR4
5	GND
6	DSR4
7	RTS4
8	CTS4
9	RI / +5V / +12V selectable
10	NC

🕮 All COM ports are selectable for RI, +5V and +12V. Refer to the section **2-5 COM Port RI & Voltage Selection**.

2-5. COM PORT RI & VOLTAGE SELECTION

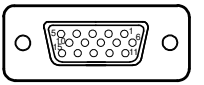
JP_COM1 , JP_COM2, JP_COM3, JP_COM4:
COM Port RI & Voltage Selection
The jumper settings are as follows:

SELECTION	JUMPER SETTINGS	JUMPER ILLUSTRATION			
RI (default)	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. VGA CONNECTOR

VGA1: VGA Connector
The pin assignments are as follows:



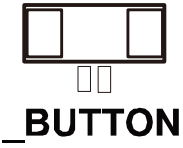
VGA1

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

2-7. I-BUTTON CONNECTOR

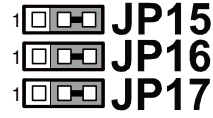
I_BUTTON1: I-Button Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	COM3_DTR_R_I
2	COM3_RXD_R_I



2-8. I-BUTTON FUNCTION SELECTION

JP15, JP16, JP17: i-Button Function Selection
The jumper settings are as follows:

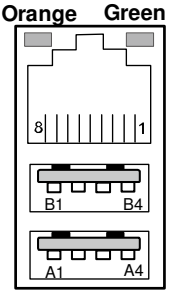
SELECTION	JUMPER SETTINGS	JUMPER ILLUSTRATION
i-Button	2-3	
COM 3 (default)	1-2	

*** Manufacturing Default – COM3

When the jumpers are set as 'i-Button', the COM3 connector is not functional.

2-9. LAN & USB CONNECTOR

JRJ45USB1: LAN & USB Connector
The pin assignments are as follows:



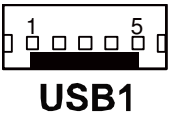
JRJ45USB1

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

2-10. USB CONNECTOR

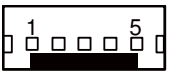
USB1: Internal USB Connector
The pin assignments are as follows:



USB1

PIN	ASSIGNMENT
1	USB4-
2	USB4+
3	GND
4	VCC5
5	GND

USB2: Internal USB Connector
The pin assignments are as follows:



USB2

PIN	ASSIGNMENT
1	USB5-
2	USB5+
3	GND
4	VCC5
5	GND

USB3: Internal USB Connector
The pin assignments are as follows:

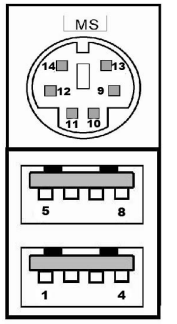
USB3

PIN	ASSIGNMENT
1	USB8-
2	USB8+
3	GND
4	VCC5
5	GND

2-11. MINI-DIN & USB CONNECTOR

JPS2USB1: Mini-DIN and USB Connectors
Mini-DIN connector can support keyboard, Y-cable, or PS/2 Mouse.
The pin assignments are as follows:

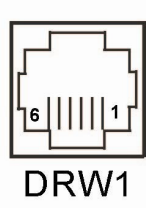
PIN	ASSIGNMENT
1	GND
2	USB3+
3	USB3-
4	VCC5
5	GND
6	USB2+
7	USB2-
8	VCC5
9	GND
10	KDAT
11	MDAT
12	V5SB
13	KCLK
14	MCLK



JPS2USB1

2-12. 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
5	NC
6	GND

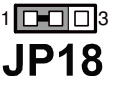
PB-6056RA cash drawer control in GPIO port

To Open Drawer1 (GPIO 7)
Write "0"h to I/O space register "50C"h Bit 7
To Close Drawer1
Write "1"h to I/O space register "50C"h Bit 7

Detect Drawer1 Status
Read I/O space register "50C"h (GPIO 6)
Definition (bit6)

2-13. CASH DRAWER POWER SELECTION

JP18: Cash Drawer Power Selection
The jumper settings are as follows:

SELECTION	JUMPER SETTING	JUMPER ILLUSTRATION
+12V	2-3	
+24V (default)	1-2	

*** Manufacturing Default – +24V

2-14. LED CONNECTOR

LED1: Power, HDD, LAN indication LED Connector
The pin assignments are as follows:

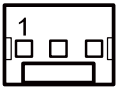
PIN	ASSIGNMENT
1	PWR_LED
2	GND
3	HDD_LED
4	GND
5	LAN_Link
6	GND

LED1

2-15. POWER CONNECTOR

J1: Provide 12 Voltage Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	VCC12
2	GND
3	VCC12



J1

2-16. POWER SWITCH CONNECTOR

SW1: Power Switch Connector
The pin assignments are as follows:

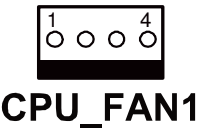
PIN	ASSIGNMENT
1	GND
2	PWR_SW

SW1

2-17. FAN CONNECTOR

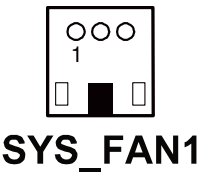
CPU_FAN1: CPU Fan Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	GND
2	12V
3	CPUFANIN
4	CPUFANOUT



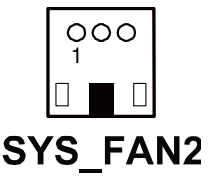
SYS_FAN1: System Fan Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	GND
2	12V
3	CPUFAN



SYS_FAN2: System Fan Connector
The pin assignments are as follows:

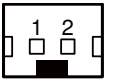
PIN	ASSIGNMENT
1	GND
2	12V
3	CPUFAN



2-18. EXTERNAL SPEAKER CONNECTOR

SPK1: External Speaker Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	SPK_GND
2	SPK_OUT



SPK1

2-19. INVERTER CONNECTOR

INV1: Inverter Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	+12V
2	GND
3	GND
4	BRCTR
5	LVDS_BKLTEN
6	+12V

INV1

2-20. BACKLIGHT TYPE SELECTION

JP13: Backlight type Selection
The jumper settings are as follows:

SELECTION	JUMPER SETTING	JUMPER ILLUSTRATION
CCFL (default)	2-3	 JP13
LED	1-2	 JP13

*** Manufacturing Default – CCFL

2-21. MSR/ CARD READER CONNECTOR

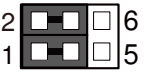
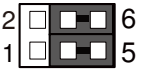
PS1: MSR/ Card Reader Connector
The pin assignments are as follows:

PS1

PIN	ASSIGNMENT
1	KB_CLK (Output)
2	KB_CLK_C (Input)
3	KB_DATA_C (Input)
4	KB_DATA (Output)
5	+5V
6	GND

2-22. LVDS VOLTAGE SELECTION

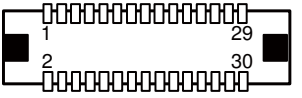
JP12: LVDS Voltage Selection
The pin assignments are as follows:

SELECTION	JUMPER SETTING	JUMPER ILLUSTRATION
3.3V (default)	1-3 2-4	 JP12
5V	3-5 4-6	 JP12

*** Manufacturing Default – 3.3V

2-23. LVDS CONNECTOR

LVDS1: LVDS connector
The pin assignments are as follows:



LVDS1

PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	LVDS_VCC	2	GND
3	NC	4	NC
5	GND	6	NC
7	NC	8	GND
9	NC	10	NC
11	NC	12	NC
13	NC	14	NC
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

2-24. SATA & SATA POWER CONNECTOR

SATA1: 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

JPWR_4P1: Serial ATA Power Connector
The pin assignments are as follows:

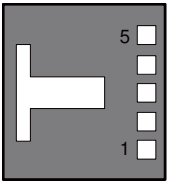
PIN	ASSIGNMENT
1	VCC
2	GND
3	GND
4	VCC12

JPWR_4P1

2-25. TOUCH PANEL CONNECTOR

JTP1: Touch Panel Connector
The pin assignments are as follows:

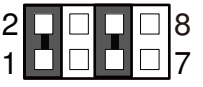
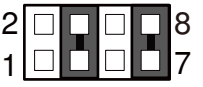
PIN	ASSIGNMENT
1	LR (Low Right)
2	LL (Low Left)
3	Probe
4	UR (Up Right)
5	UL (Up Left)



JTP1

2-26. TOUCH PANEL SELECTION

JP20: Touch Panel Selection
The jumper settings are as follows:

SELECTION	JUMPER SETTING	JUMPER ILLUSTRATION
e-Turbo	1-2 5-6	 **JP20**
Elo (default)	3-4 7-8	 **JP20**

*** Manufacturing Default – Elo

2-27. CLEAR CMOS DATA SELECTION

JP7: Clear CMOS Data Selection
The jumper settings are as follows:

FUNCTION	JUMPER SETTING (pin closed)	JUMPER ILLUSTRATION
Clear CMOS	1-2	
Normal (default)	NC	

*** Manufacturing Default – Normal

📖 To clear CMOS data, users 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.

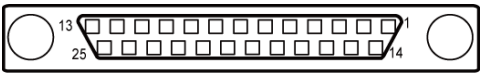
2-28. COMPACT FLASH CONNECTOR

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

2-29. PRINTER CONNECTOR

LPT1: Printer Connector
The pin assignments are as follows:



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	26	NC

SOFTWARE UTILITIES

CHAPTER

3

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-6511 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® HM65 Chipset Software Installation Utility
D:\Driver\Plaform\XP,POSReady2009 (32-bit)\VGA or D:\Driver\Plaform\Win7,POSReady7(32-bit)\VGA	Intel® HD Graphics 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® ALC888S 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

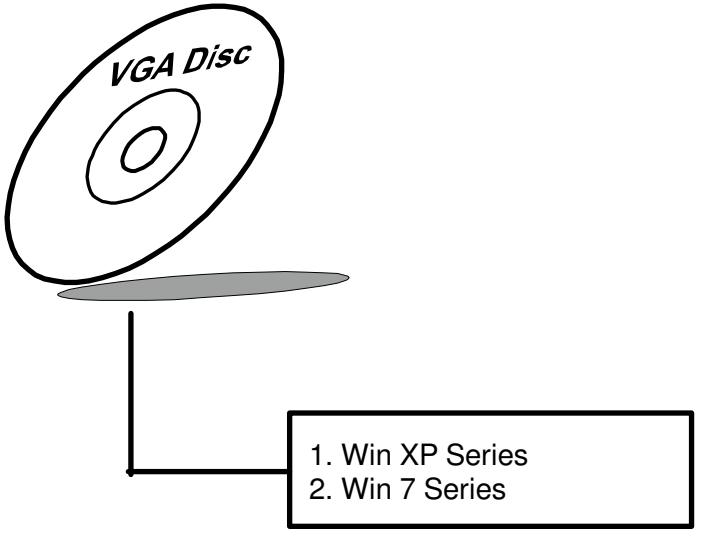
3-2-2. Installation of Intel® Chipset Driver

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-6511 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-6511 for the changes to take effect.

3-3. VGA DRIVER UTILITY

The VGA interface embedded with the POS-6511 series can support a wide range of display types. You can have dual displays via CRT and LVDS interfaces work simultaneously.



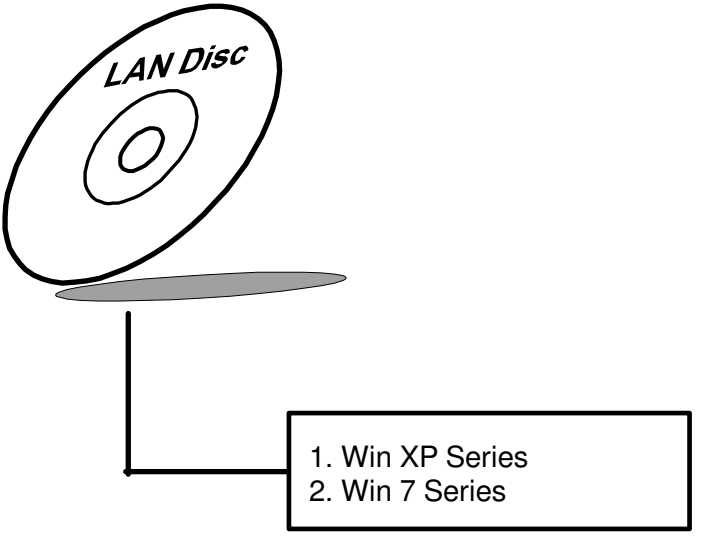
3-3-1. Installation of VGA Driver

To install the VGA Driver, follow the steps below:

1. Connect the USB-CD ROM device to the POS-6511 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-6511 for the changes to take effect.

3-4. LAN DRIVER UTILITY

The POS-6511 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.

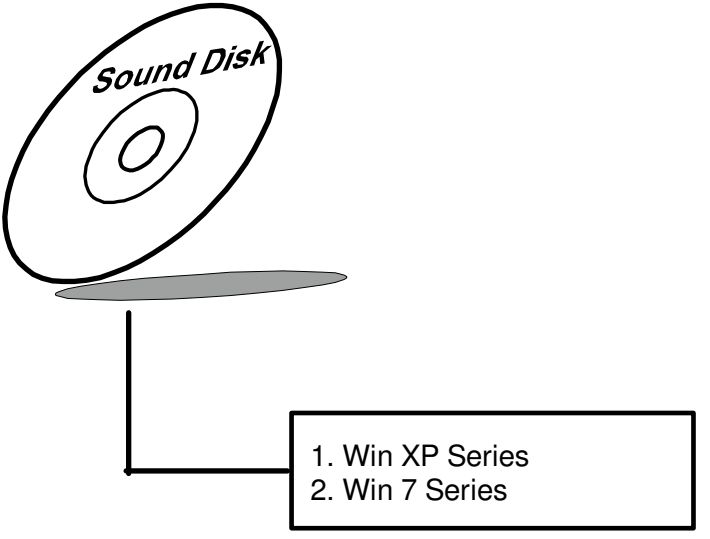
3-4-1. Installation of LAN Driver

To install the LAN Driver, follow the steps below:

1. Connect the USB-CD ROM device to the POS-6511 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-6511 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.



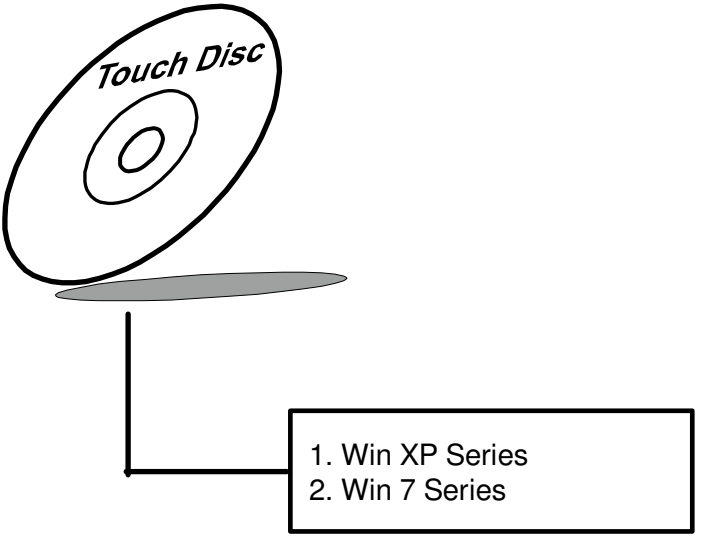
3-5-1. Installation of Sound Driver

To install the Sound Driver, , follow the steps below:

1. Connect the USB-CD ROM device to the POS-6511 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-6511 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.



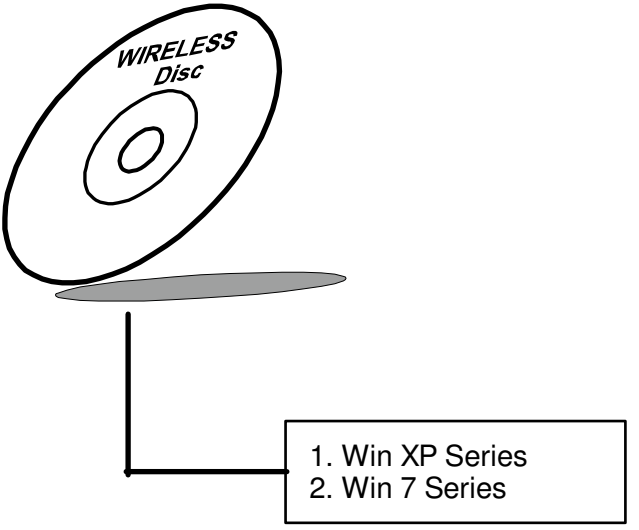
3-6-1. Installation of Touchscreen Driver

To install the Touchscreen Driver, follow the steps below:

1. Connect the USB-CD ROM device to the POS-6511 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-6511 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.



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-6511 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-6511 for the changes to take effect.

AMI BIOS SETUP

CHAPTER

4

This chapter shows how to set up the AMI BIOS.

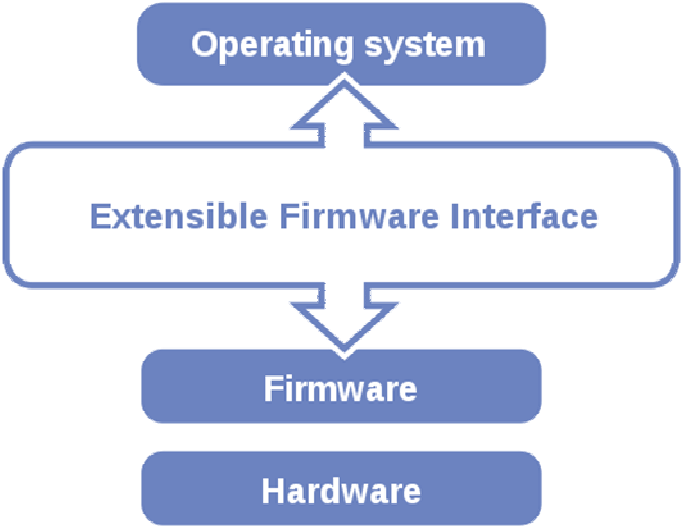
Section includes:

- Introduction
- Entering Setup
- Main
- Advanced
- Chipset
- Boot
- Security
- Save & Exit

4-1. INTRODUCTION

The board POS-6511 uses an AMI Aptio BIOS that is stored in the Serial Peripheral Interface Flash Memory (SPI Flash) and can be updated. The SPI Flash contains the BIOS Setup program, Power-on Self-Test (POST), the PCI auto-configuration utility, LAN EEPROM information, and Plug and Play support.

Aptio is AMI's BIOS firmware based on the UEFI (Unified Extensible Firmware Interface) Specifications and the Intel Platform Innovation Framework for EFI. The UEFI specification defines an interface between an operating system and platform firmware. The interface consists of data tables that contain platform-related information, boot service calls, and runtime service calls that are available to the operating system and its loader. These provide standard environment for booting an operating system and running pre-boot applications. Following illustration shows Extensible Firmware Interface's position in the software stack.



EFI BIOS provides an user interface allow users the ability to modify hardware configuration, e.g. change system date and time, enable or disable a system component, decide bootable device priorities, setup personal password, etc., which is convenient for modifications and customization of the computer system and allows technicians another method for finding solutions if hardware has any problems.

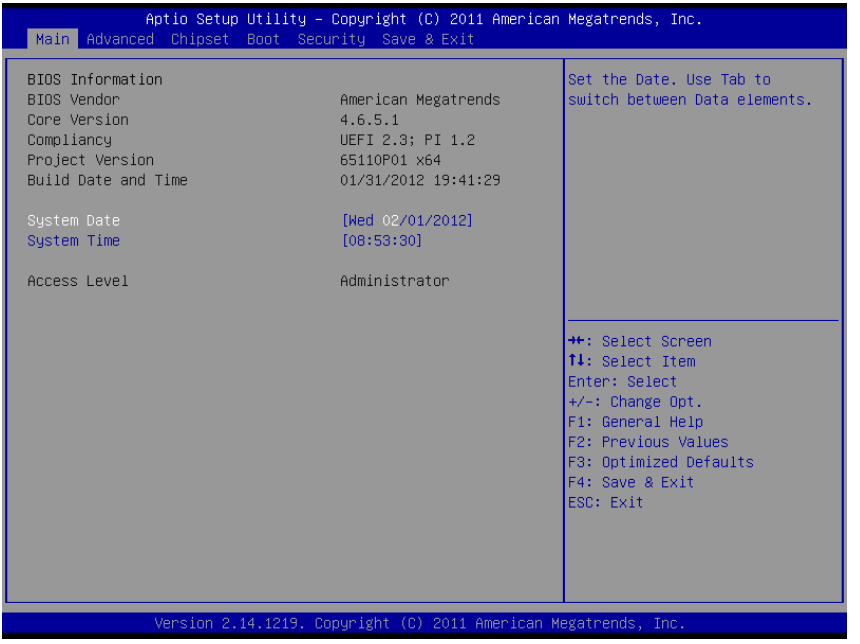
The BIOS Setup program can be used to view and change the BIOS settings for the computer. The BIOS Setup program is accessed by pressing the <Del> or <F2> key after the POST memory test begins and before the operating system boot begins. The settings are shown below.

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:

POST screen

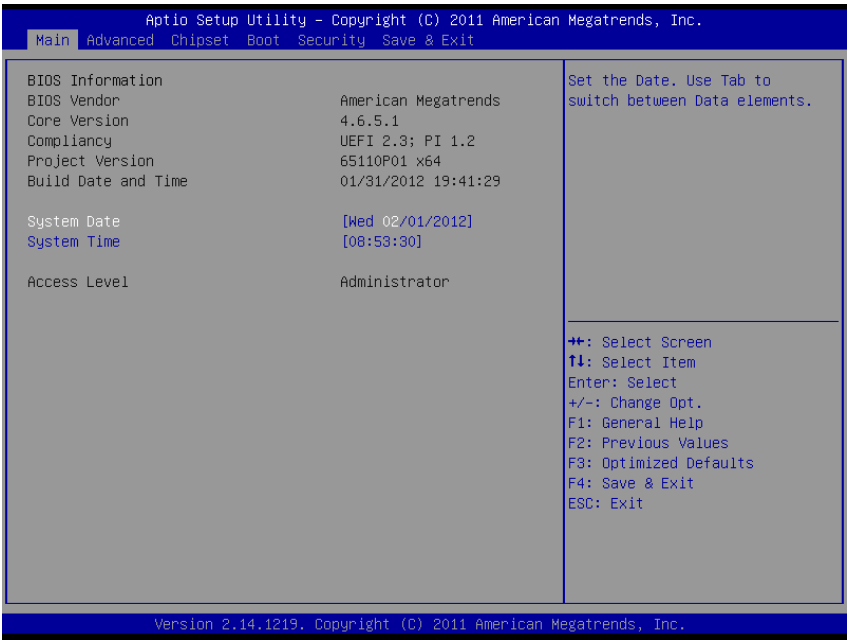
As long as this message is present on the screen you may press the <Del> key (the one that shares the decimal point at the bottom of the number keypad) to access the Setup program. In a moment, the main menu of the Aptio Setup Utility will appear on the screen:



Setup program initial screen

You may move the cursor by 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.

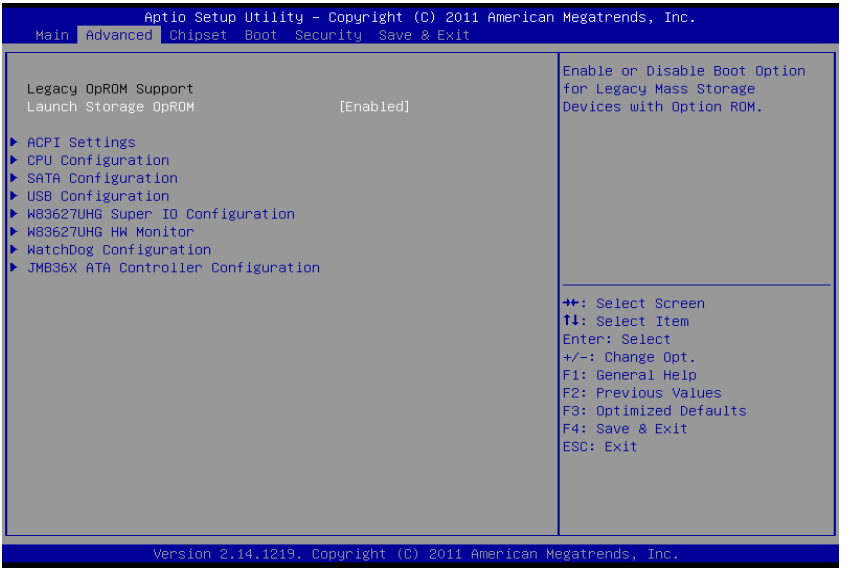
4-3. Main



Main Screen

BIOS Setting	Options	Description/Purpose
BIOS Vendor	No changeable options	Displays the BIOS vendor.
Core Version	No changeable options	Displays the current BIOS core version.
Compliancy	No changeable options	Displays the current UEFI version.
Project Version	No changeable options	Displays the version of the BIOS currently installed on the platform.
Build Date and Time	No changeable options	Displays the date of current BIOS version.
System Date	month, day, year	Specifies the current date.
System Time	hour, minute, second	Specifies the current time.
Access Level	No changeable options	Displays the current user level.

4-4. Advanced

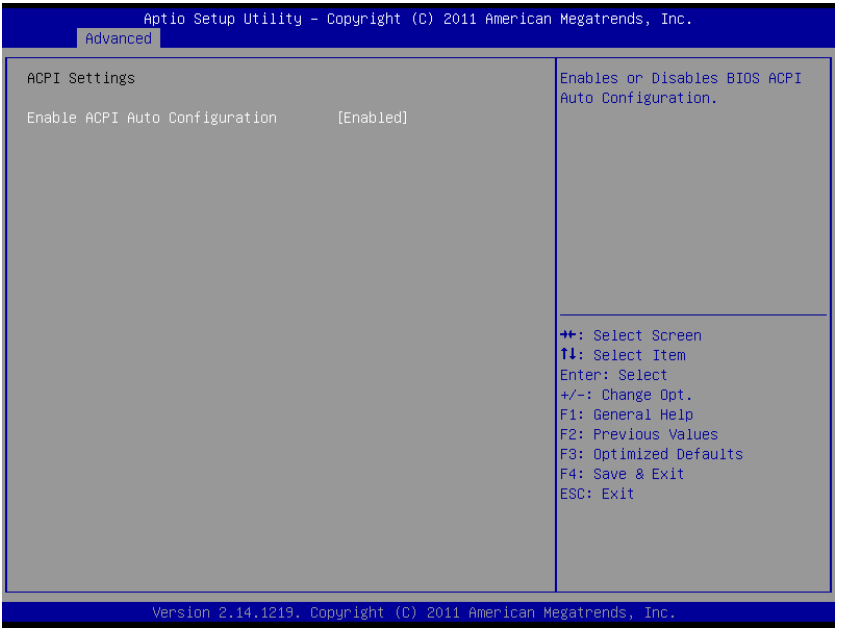


Advanced Screen

BIOS Setting	Options	Description/Purpose
Launch Storage OpROM	-Disabled -Enabled	Enables or disables the boot option for legacy mass storage devices with option ROM.
ACPI Settings	Sub-Menu	System ACPI Parameters.
CPU Configuration	Sub-Menu	CPU Configuration. Parameters.
SATA Configuration	Sub-Menu	SATA Configuration Parameters.
USB Configuration	Sub-Menu	USB Configuration Parameters.
W83627UHG SuperIO Configuration	Sub-Menu	SuperIO Configuration Parameters.
W83627UHG H/W Monitor	Sub-Menu	Monitor hardware status.

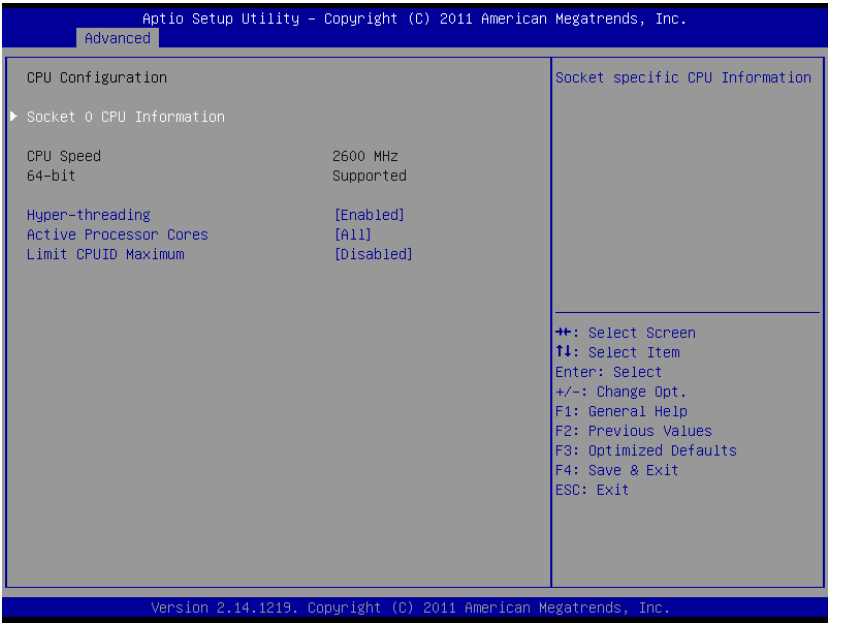
BIOS Setting	Options	Description/Purpose
WatchDog Configuration	multiple options ranging from 0 to 255	Sets the desired value (seconds) for watchdog timer.
JMB36X ATA Controller Configuration	Sub-Menu	Select an operative mode for CF Card controller.

4-4.1. Advanced – ACPI Settings



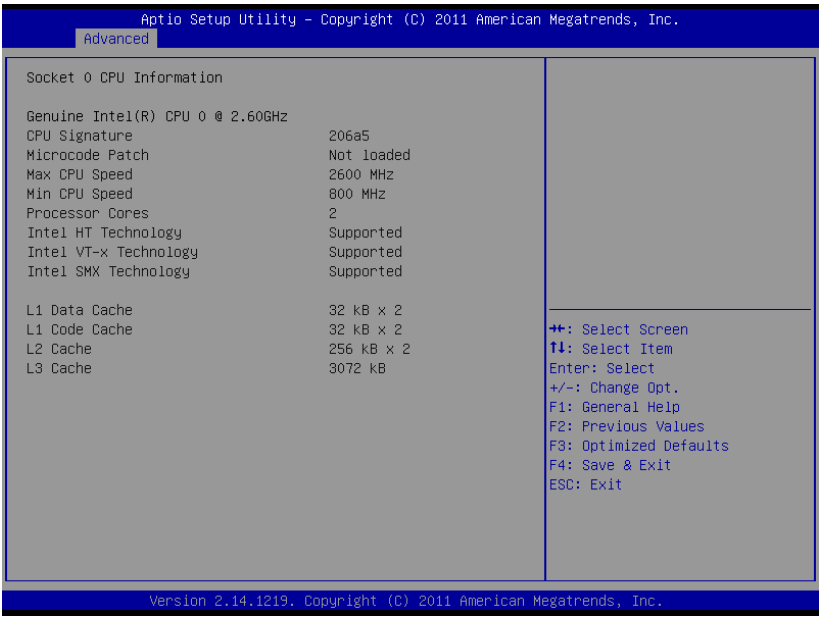
BIOS Setting	Options	Description/Purpose
Enable ACPI Auto Configuration	-Disabled -Enabled	Enables Advanced Configuration and Power Interface automatic configuration. When enabled, option ACPI Sleep State option is not available.

4-4.2. Advanced – CPU Configuration



BIOS Setting	Options	Description/Purpose
Socket 0 CPU Information	Sub-Menu	Socket specific CPU information
CPU Speed	No changeable options	Displays the current processor frequency
64-bit	No changeable options	Reports if 64-bit is supported by processor.
Hyper-threading	-disabled -enabled	When disabled, only one thread per active core will operate.
Active Processor Cores	-All -1 -2	Indicates the number of cores to enable in processor.
Limit CPUID Maximum	-disabled -enabled	Enables for legacy operating systems to boot processors with extended CPUID functions.

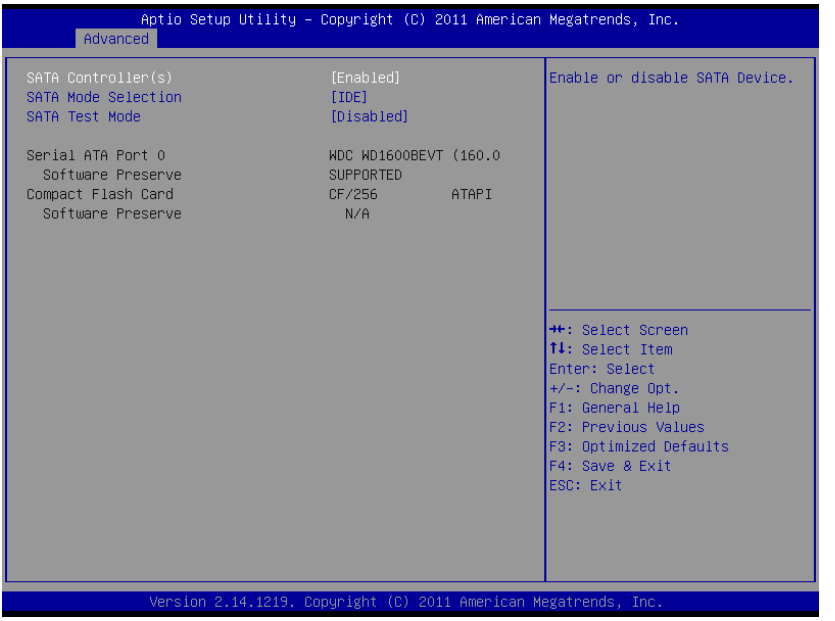
4-4.2.1. Advanced – CPU Configuration – Socket 0 CPU Information



BIOS Setting	Options	Description/Purpose
CPU Signature	No changeable options	Reports the CPU Signature
Microcode Patch	No changeable options	Reports the CPU Microcode Patch Version.
Max CPU Speed	No changeable options	Reports the Max CPU Speed.
Min CPU Speed	No changeable options	Reports the Min CPU Speed.
Processor Cores	No changeable options	Displays number of physical cores in processor.
Intel HT Technology	No changeable options	Reports if Intel Hyper-Threading Technology is supported by processor.
Intel VT-x Technology	No changeable options	Reports if Intel VT-x Technology is supported by processor.
Intel SMX Technology	No changeable options	Reports if Intel SMX Technology is supported by processor.

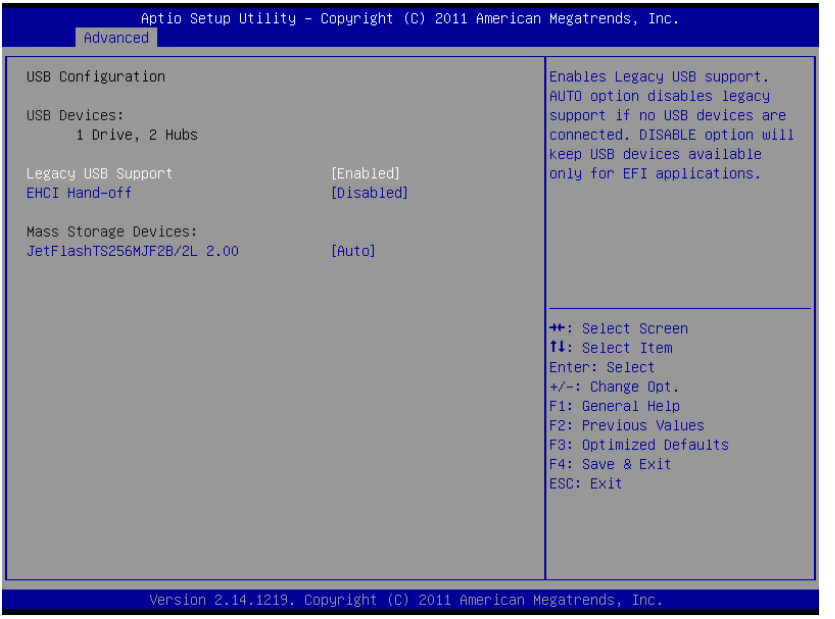
BIOS Setting	Options	Description/Purpose
L1 Data Cache	No changeable options	Displays size of L1 Data Cache.
L1 Code Cache	No changeable options	Displays size of L1 Code Cache.
L2 Cache	No changeable options	Displays size of L2 Cache.
L3 Cache	No changeable options	Displays size of L3 Cache.

4-4.3. Advanced – SATA Configuration



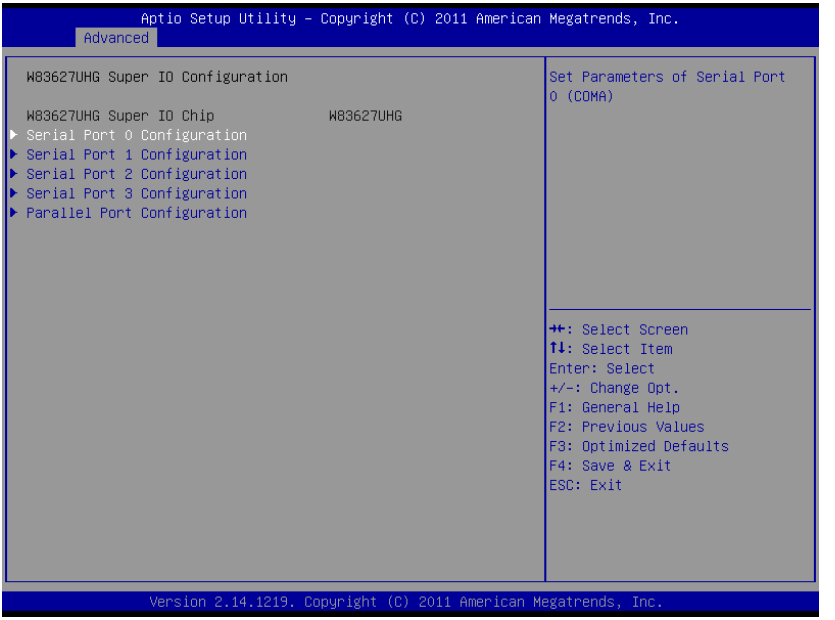
BIOS Setting	Options	Description/Purpose
SATA Controller(s)	- Disabled - Enabled	Enable or disable SATA Device.
SATA Mode Selection	IDE Mode	IDE Mode only.
SATA Test Mode	- Disabled - Enabled	Enable or disable SATA Test Mode.
Serial ATA Port 0	[drive]	Displays the drive installed on this SATA port. Shows [Empty] if no drive is installed.
Compact flash Card	[drive]	Displays the drive installed on this SATA port. Shows [Empty] if no drive is installed.

4-4.4. Advanced – USB Configuration



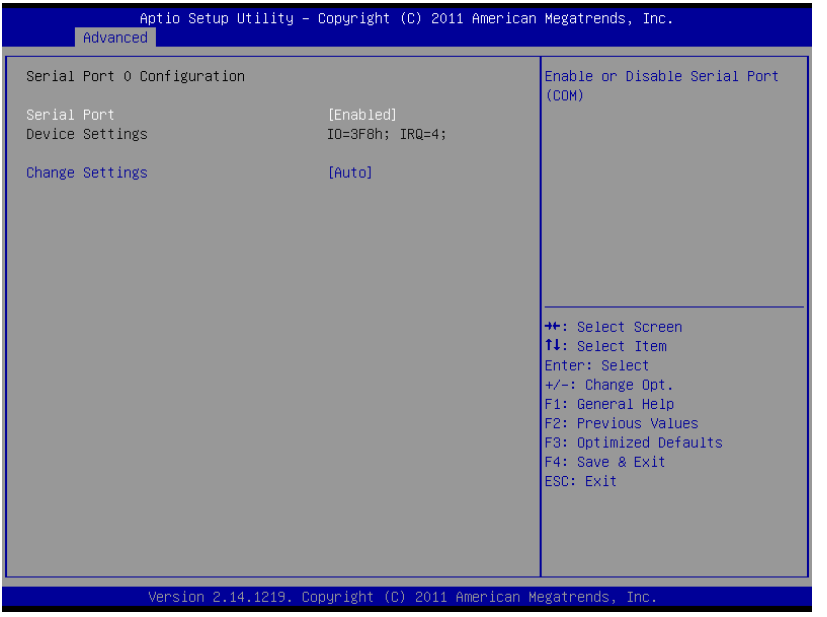
BIOS Setting	Options	Description/Purpose
USB Devices	No changeable options	Displays number of available USB devices.
Legacy USB Support	-Disabled -Enabled -Auto	Enables support for legacy USB.
EHCI Hand-off	-Disabled -Enabled	This is a workaround for OSes w/o EHCI hand-off support.

4-4.5. Advanced – W83627UHG Super IO Configuration



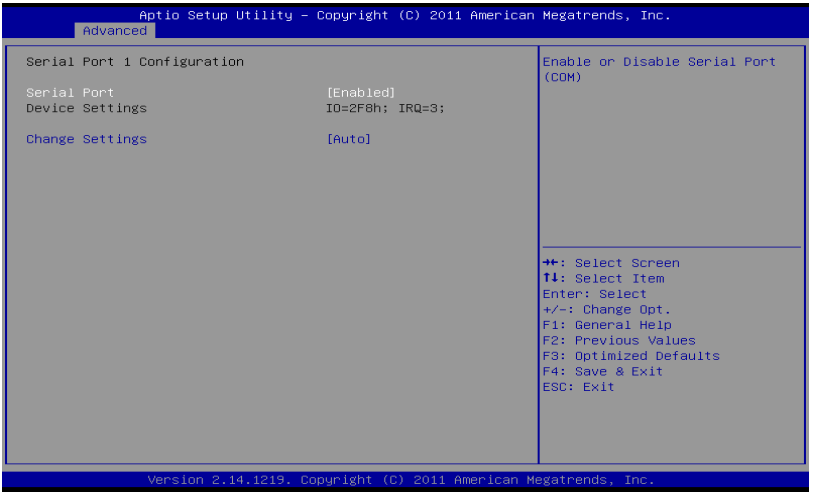
BIOS Setting	Options	Description/Purpose
Super IO Chip	No changeable options	Displays the super IO chip model and its manufacturer.

4-4.5.1. Advanced – W83627UHG Super IO Configuration – Serial Port 0 Configuration



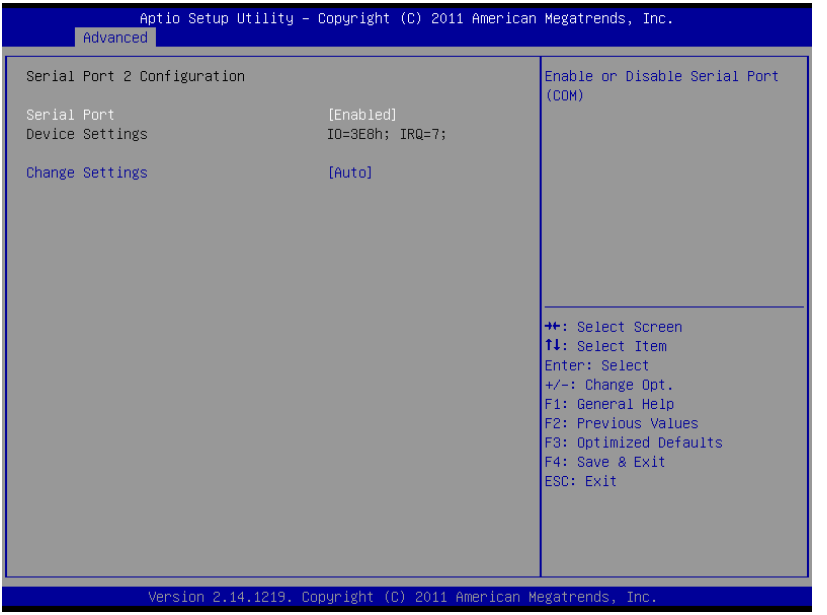
BIOS Setting	Options	Description/Purpose
Serial Port	-disabled -enabled	Configures the serial port 0.
Device Settings	No changeable options	Reports the current serial port 0 setting.
Change Settings	-Auto -IO=3F8h; IRQ=4 -IO=3F8h; IRQ=3,4,5,6,7,10,11,12 -IO=2F8h; IRQ=3,4,5,6,7,10,11,12 -IO=3E8h; IRQ=3,4,5,6,7,10,11,12 -IO=2E8h; IRQ=3,4,5,6,7,10,11,12	Specifies the base I/O address and interrupt request for the serial port 0 if enabled.

4-4.5.2. Advanced – W83627UHG Super IO Configuration – Serial Port 1 Configuration



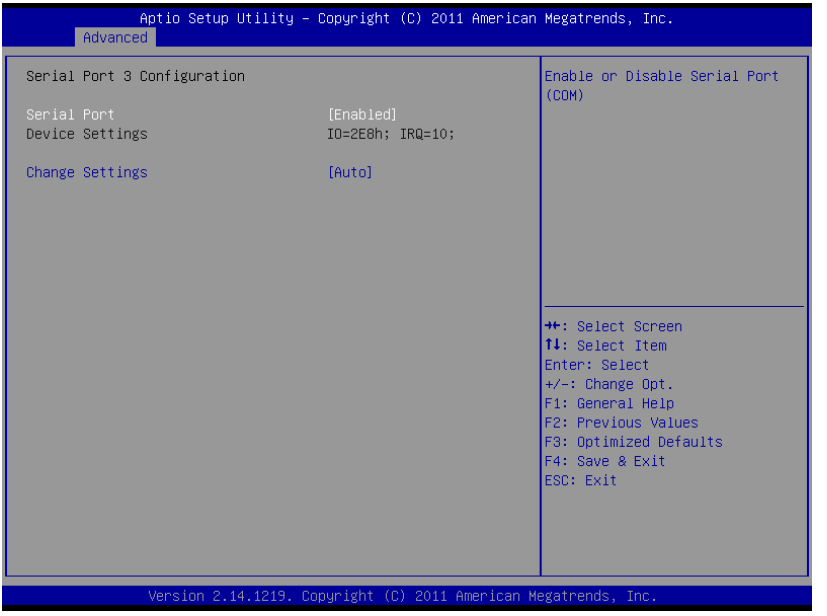
BIOS Setting	Options	Description/Purpose
Serial Port	-disabled -enabled	Configures the serial port 1.
Device Settings	No changeable options	Reports the current serial port 1 setting.
Change Settings	-Auto -IO=3F8h; IRQ=4 -IO=3F8h; IRQ=3,4,5,6,7,10,11,12 -IO=2F8h; IRQ=3,4,5,6,7,10,11,12 -IO=3E8h; IRQ=3,4,5,6,7,10,11,12 -IO=2E8h; IRQ=3,4,5,6,7,10,11,12	Specifies the base I/O address and interrupt request for the serial port 1 if enabled.

4-4.5.3. Advanced – W83627UHG Super IO Configuration – Serial Port 2 Configuration



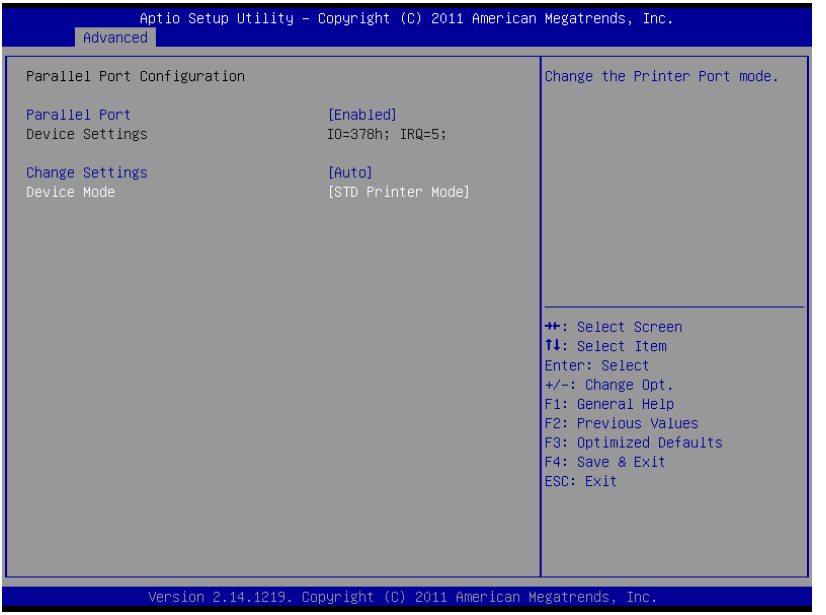
BIOS Setting	Options	Description/Purpose
Serial Port	-disabled -enabled	Configures the serial port 2.
Device Settings	No changeable options	Reports the current serial port 2 setting.
Change Settings	-Auto -IO=3F8h; IRQ=4 -IO=3F8h; IRQ=3,4,5,6,7,10,11,12 -IO=2F8h; IRQ=3,4,5,6,7,10,11,12 -IO=3E8h; IRQ=3,4,5,6,7,10,11,12 -IO=2E8h; IRQ=3,4,5,6,7,10,11,12	Specifies the base I/O address and interrupt request for the serial port 2 if enabled.

4-4.5.4. Advanced – W83627UHG Super IO Configuration – Serial Port 3 Configuration



BIOS Setting	Options	Description/Purpose
Serial Port	-disabled -enabled	Configures the serial port 3.
Device Settings	No changeable options	Reports the current serial port 3 setting.
Change Settings	-Auto -IO=3F8h; IRQ=4 -IO=3F8h; IRQ=3,4,5,6,7,10,11,12 -IO=2F8h; IRQ=3,4,5,6,7,10,11,12 -IO=3E8h; IRQ=3,4,5,6,7,10,11,12 -IO=2E8h; IRQ=3,4,5,6,7,10,11,12	Specifies the base I/O address and interrupt request for the serial port 3 if enabled.

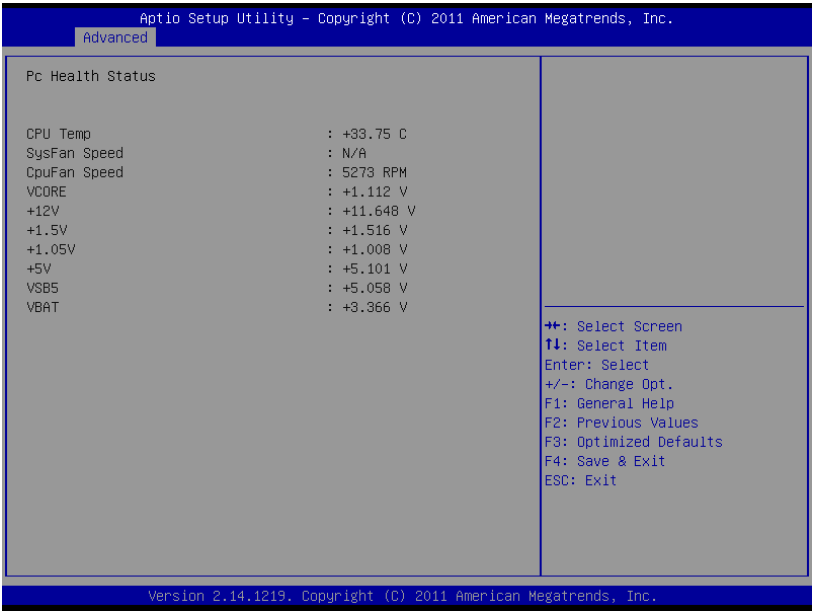
4-4.5.5. Advanced – W83627UHG Super IO Configuration – Parallel Port Configuration



BIOS Setting	Options	Description/Purpose
Parallel Port	-disabled -enabled	Configures the parallel port.
Device Settings	No changeable options	Reports the current parallel port setting.
Change Settings	-Auto -IO=378h; IRQ=5 -IO=378h; IRQ=5,6,7,10,11,12 -IO=278h; IRQ=5,6,7,10,11,12 -IO=3BCh; IRQ=5,6,7,10,11,12 -IO=378h; -IO=278h; -IO=3BCh;	Specifies the base I/O address and interrupt request for the parallel port if enabled.

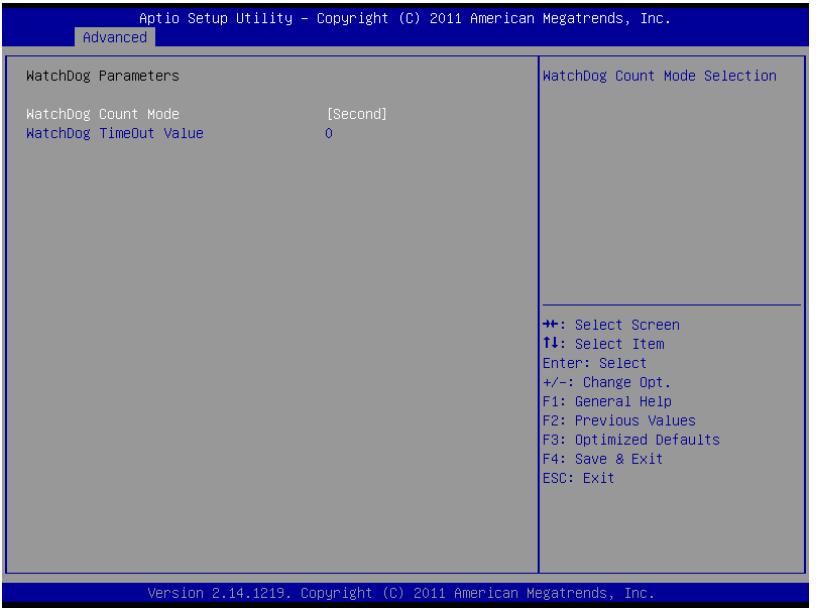
BIOS Setting	Options	Description/Purpose
Device Mode	-STD Printer Mode -SPP Mode -EPP-1.9 and SPP Mode -EPP-1.7 and SPP Mode -ECP Mode -ECP and EPP 1.9 Mode -ECP and EPP 1.7 Mode	Selects the mode for the parallel port. Not available if the parallel port is disabled. **SPP** is Standard Parallel Port mode, a bi-directional mode for printers. **EPP** is Enhanced Parallel Port mode, a high-speed bi-directional mode for non-printer peripherals. **ECP** is Enhanced Capability Port mode, a high-speed bi-directional mode for printers and scanners.

4-4.6. Advanced – W83627UHG H/W Monitor



BIOS Setting	Options	Description/Purpose
CPU Temperature	No changeable options	Displays processor's temperature.
CPU Fan Speed	No changeable options	Displays fan speed of the CPU fan.
System Fan Speed	No changeable options	Displays fan speed of the chassis fan.
VCORE	No changeable options	Displays voltage level of the +VCORE in supply.
+12V	No changeable options	Displays voltage level of the +12V in supply.
+1.5V	No changeable options	Displays voltage level of the +1.5V in supply.
+5V	No changeable options	Displays voltage level of the +5V in supply.
VSB5	No changeable options	Displays voltage level of the +VSB5 in supply.
VBAT	No changeable options	Displays voltage level of the backup CMOS battery.

4-4.7. Advanced – Watchdog Configuration

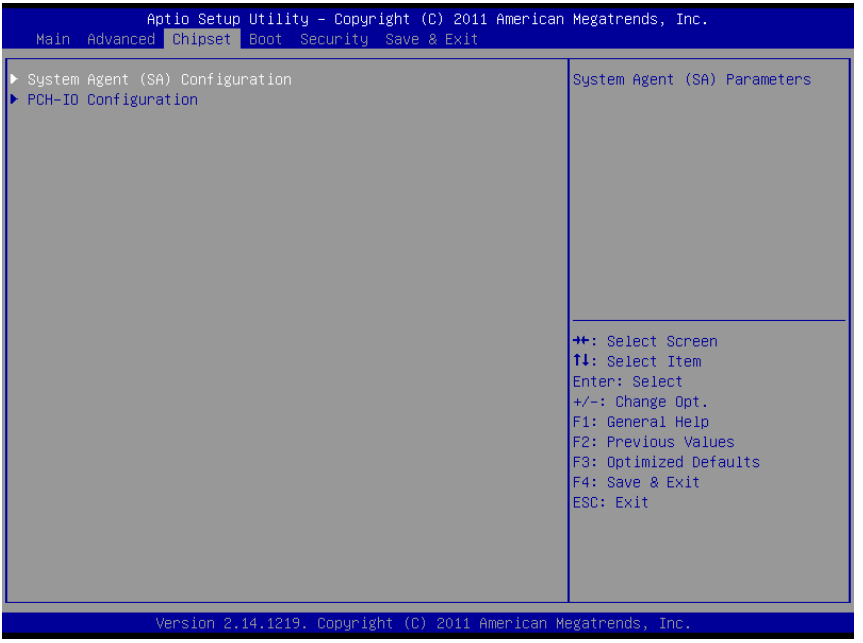


BIOS Setting	Options	Description/Purpose
Watch Dog Timer Time-Out Value	multiple options ranging from 0 to 255	Sets the desired value (seconds) for watchdog timer.

4-4.8. Advanced – JMB36X ATA Controller Configuration

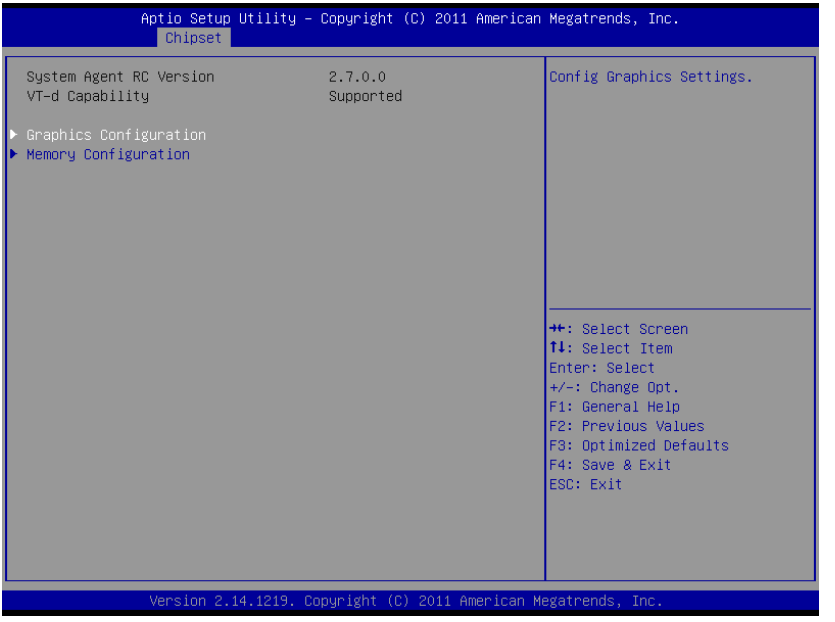
BIOS Setting	Options	Description/Purpose
JMB368 ATA Controller Configuration	Sub-Menu	Select an operative mode for CF Card controller.

4-5. Chipset



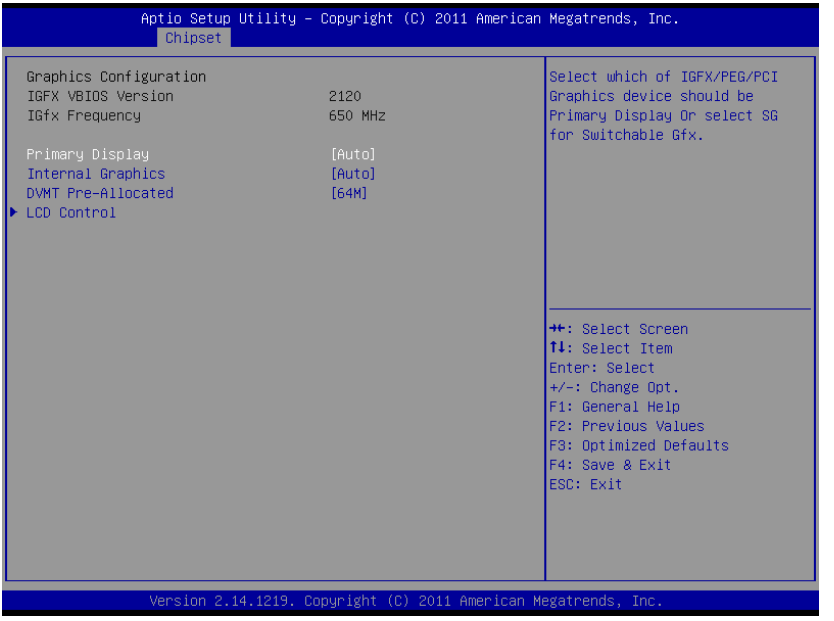
BIOS Setting	Options	Description/Purpose
System Agent (SA) Configuration	Sub-Menu	Sets Parameter for Sandy Bridge (North Bridge) configuration.
PCH-IO Configuration	Sub-Menu	Sets Parameter for Cougar Point (South Bridge) configuration.

4-5.1. Chipset – System Agent (SA) Configuration



BIOS Setting	Options	Description/Purpose
System Agent RC Version	No changeable options	Displays the SNB source code module version.
VT-d Capability	No changeable options	Display this chipset support VT-d or not.
Graphics Configuration	Sub-menu	Configure Graphic Settings.
Memory Configuration	Sub-menu	Memory Configuration Parameters.

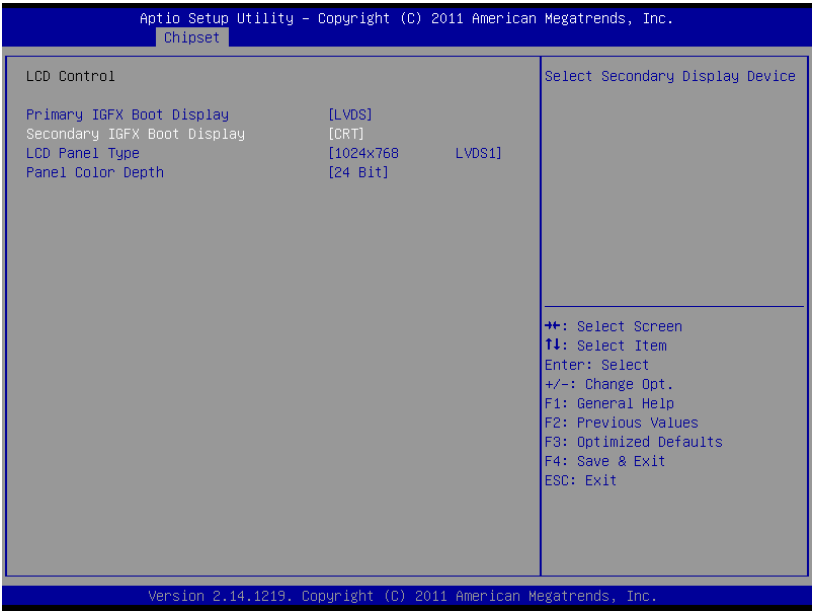
4-5.1.2. Chipset – System Agent (SA) Configuration – Graphics Configuration



BIOS Setting	Options	Description/Purpose
IGFX VBIOS Version	No changeable options	Displays the VBIOS version of integrated graphic controller.
IGfx Frequency	No changeable options	Displays the frequency integrated graphic controller.
Primary Display	- AUTO - IGFX - PEG - PCI - SG	Select which of IGFX/PEG/PCI Graphics device should be Primary Display Or select SG for Switchable Gfx.
Internal Graphics	- AUTO - Disabled - Enabled	Keep IGD enabled based on the setup options.
DVMT Pre-Allocated	0MB to 512MB (32mb increments)	Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.

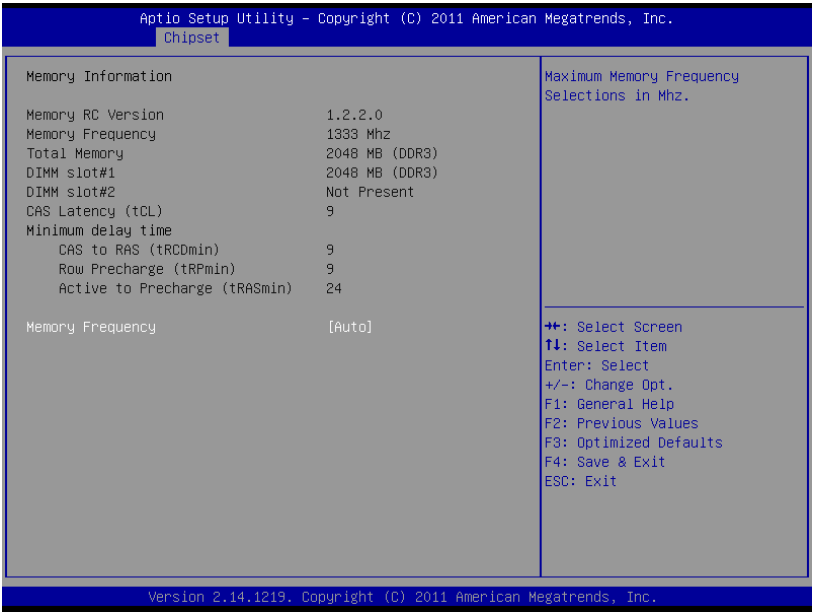
BIOS Setting	Options	Description/Purpose
LCD Control	Sub-menu	LCD Control Parameters.

4-5.1.2.1. Chipset – System Agent (SA) Configuration – Graphics Configuration – LCD Control



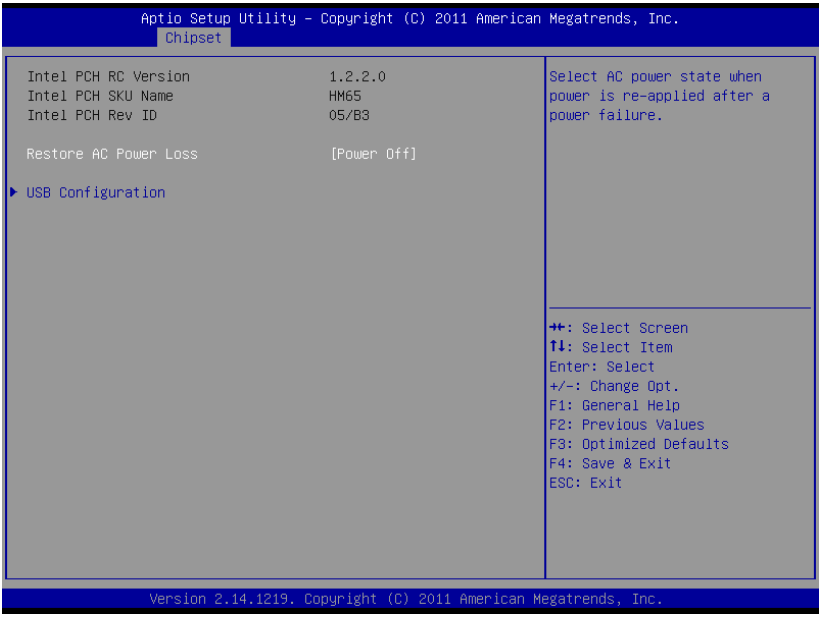
BIOS Setting	Options	Description/Purpose
Primary IGFX Boot Display	- CRT - LVDS - DP1 - DP2	Select primary display device.
Secondary IGFX Boot Display	- Disabled - CRT - LVDS - DP1 - DP2	Select secondary display device.
LCD Panel Type	- 800x600 - 1024x768 - 1280x1024	Select panel resolution.
Panel Color Depth	- 18 Bit - 24 Bit	Select the LFP panel color depth.

4-5.1.3. Chipset – System Agent (SA) Configuration – Memory Configuration



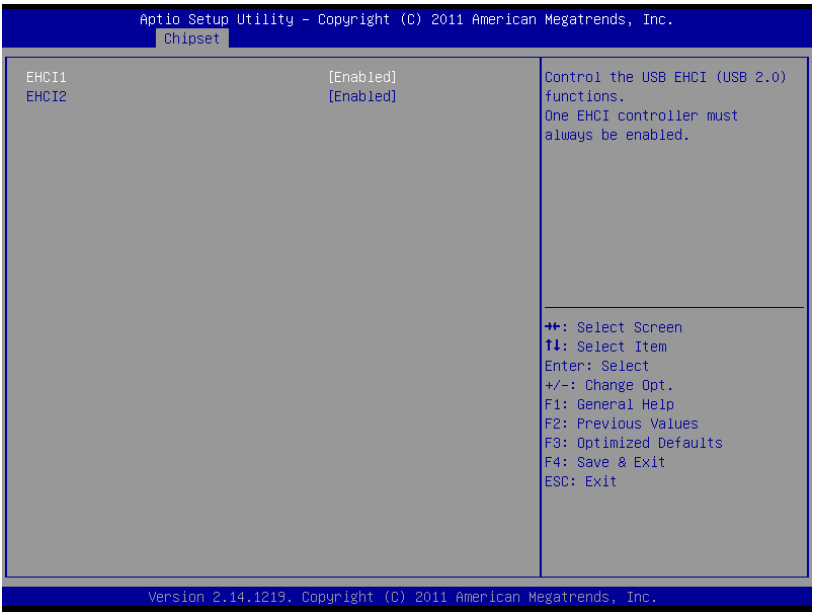
BIOS Setting	Options	Description/Purpose
Memory Information	No changeable option lists.	Displays the detail DRAM information on platform.
Memory Frequency	- AUTO - 1067 - 1033	Maximum memory frequency selection in Mhz.

4-5.2. Chipset – PCH-IO Configuration



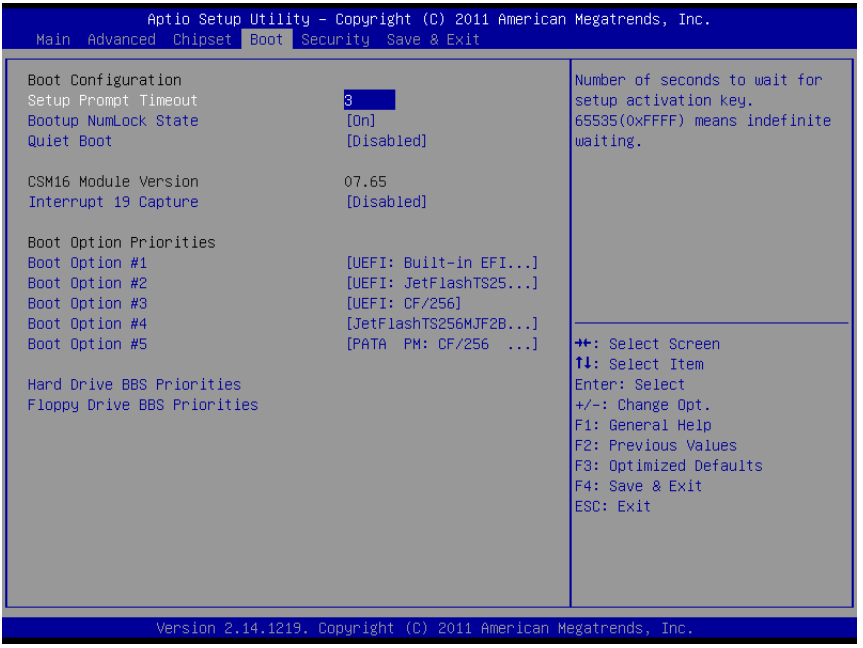
BIOS Setting	Options	Description/Purpose
Restore AC Power Loss	-Power Off -Power On	Determines the mode of operation in case of power loss. **Power Off** keeps the power off till the power button is pressed. **Power On** restores power to the computer.
USB Configuration	Sub-menu	USB Configuration Settings.

4-5.2.1. Chipset – PCH-IO Configuration – USB Configuration



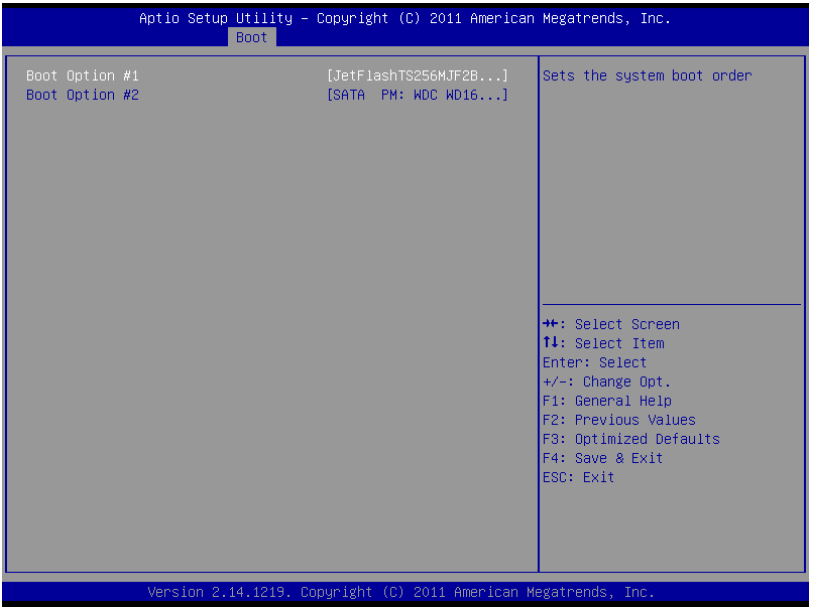
BIOS Setting	Options	Description/Purpose
EHCI1	- Disabled - Enabled	Enables Enhanced Host Controller Interface 1 for high-speed USB functions (USB 2.0).
EHCI 2	- Disabled - Enabled	Enables Enhanced Host Controller Interface 2 for high-speed USB functions (USB 2.0).

4-6. Boot

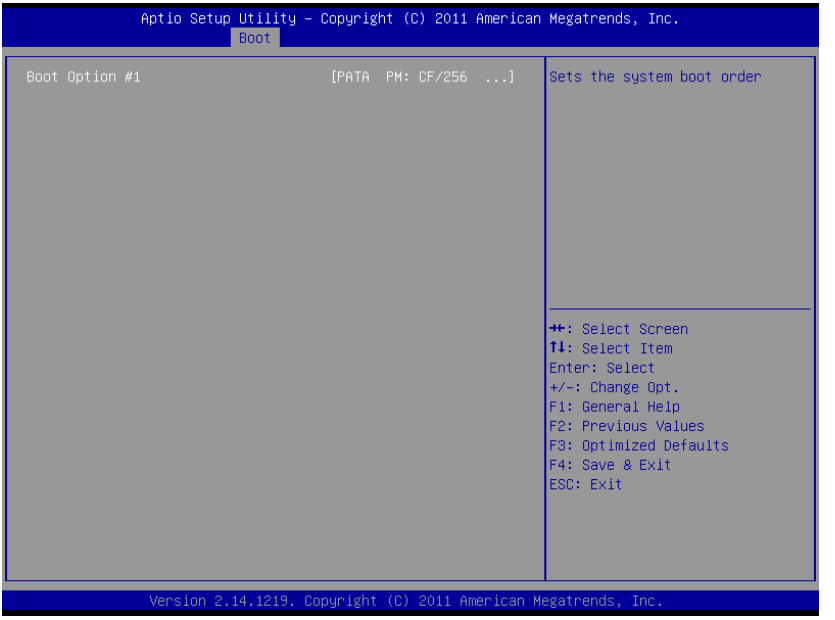


BIOS Setting	Options	Description/Purpose
Setup Prompt Timeout	Numeric	Number of seconds to wait for setup activation key.
Bootup NumLock Status	-On -Off	Specifies the power-on state of the NumLock key.
Quiet Boot	-Dsabled -Eabled	Enable/Disable Quiet Boot Options.
CSM16 Module Version	No changeable options	Displays the current Compatibility Support Module version.
Interrupt 19 Capture	- Disabled - Enabled	When enabled it allows host adapters ROM BIOS to capture Interrupt 19 during the boot process and eventually boot from disk(s) connected to those adapters.
Boot Option #1~#5	- [Drive(s)] - Disabled	Allows setting boot option listed in Hard Drive BBS Priorities.

4-6.1. Boot – Hard Drive BBS Priorities

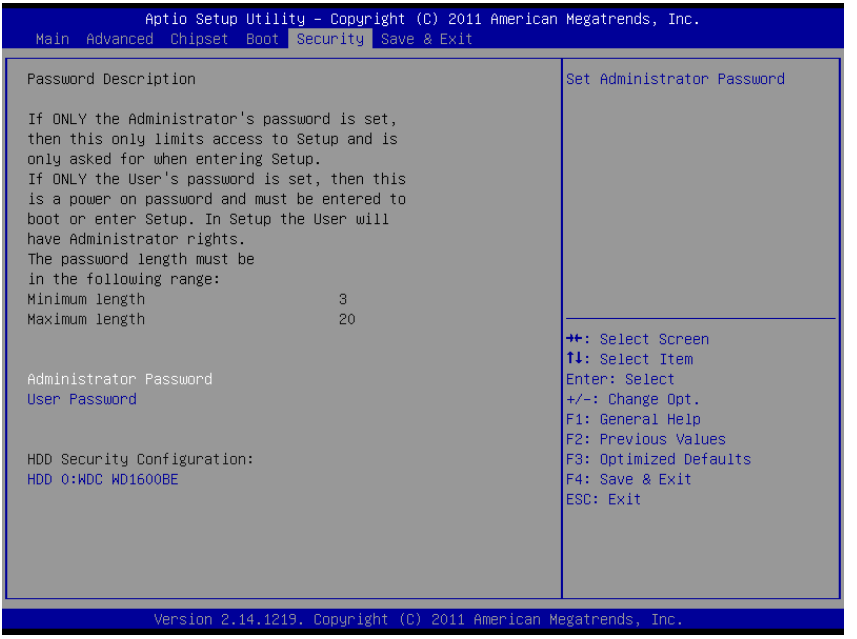


BIOS Setting	Options	Description/Purpose
Boot Option #1 - #2	-[Drive(s)] -Disabled	Allows setting the boot order of available drive(s).



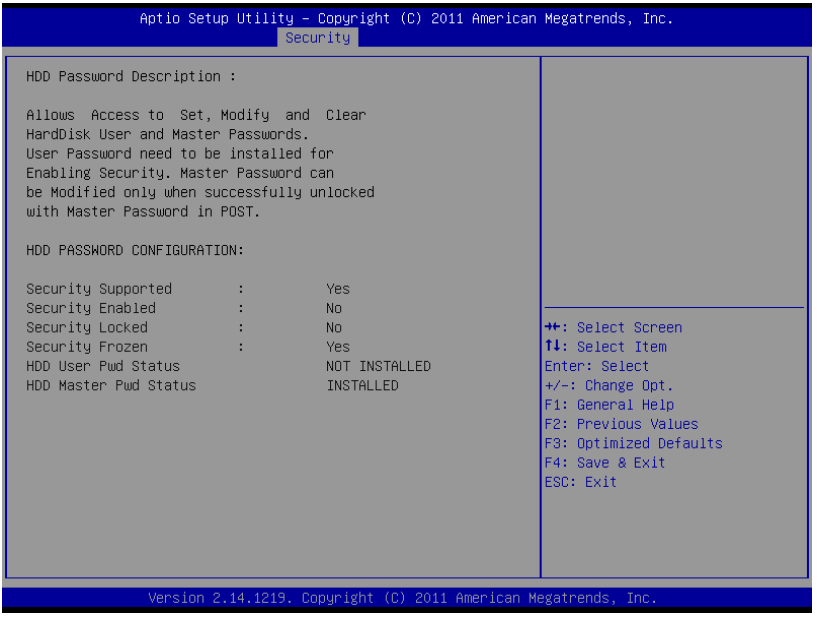
BIOS Setting	Options	Description/Purpose
Boot Option #1	-[Drive(s)] -Disabled	Allows setting the boot order of available drive(s).

4-7. Security



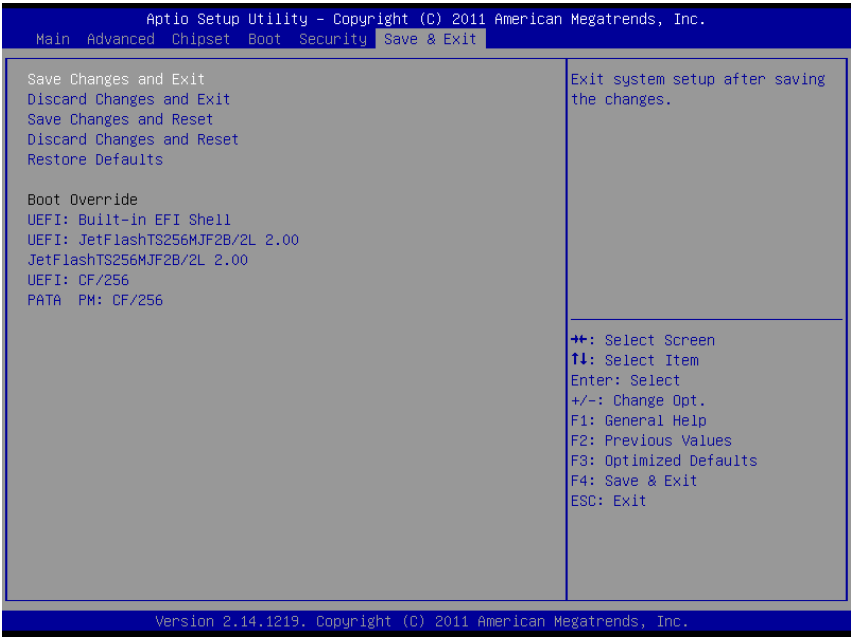
BIOS Setting	Options	Description/Purpose
Administrator Password	Password can be 3-20 alphanumeric characters.	Specifies the administrator password.
User Password	Password can be 3-20 alphanumeric characters.	Specifies the user password.
HDD Security Configuration	Sub-menu	Set HDD password.

4-7.1. Security – HDD Security Configuration – HDD 0: [drive]



BIOS Setting	Options	Description/Purpose
Security Supported	No changeable options	Reports if there is security feature available.
Security Enabled	No changeable options	Reports if there is security feature enabled.
Security Locked	No changeable options	Reports if there is security feature locked.
Security Frozen	No changeable options	Reports if there is security feature frozen.
HDD User Pwd Status	No changeable options	Reports if there is HDD User Password installed.
HDD Master Pwd Status	No changeable options	Reports if there is HDD Master Password installed.
Set User Password	Password can be up to 32 alphanumeric characters.	Specifies the user password. (Need TPM module)
Set Master Password	Password can be up to 32 alphanumeric characters.	Specifies the master password.

4-8. Save & Exit



BIOS Setting	Options	Description/Purpose
Save Changes and Exit	No changeable options	Exits and saves the changes in NVRAM.
Discard Changes and Exit	No changeable options	Exits without saving any changes made in BIOS settings.
Save Changes and Reset	No changeable options	Saves the changes in NVRAM and resets.
Discard Changes and Reset	No changeable options	Resets without saving any changes made in BIOS settings.
Restore Defaults	No changeable options	Loads the optimized defaults for BIOS settings.
Boot Override	-[Drive(s)]	Forces to boot from selected [drive(s)].

SYSTEM ASSEMBLY

APPENDIX

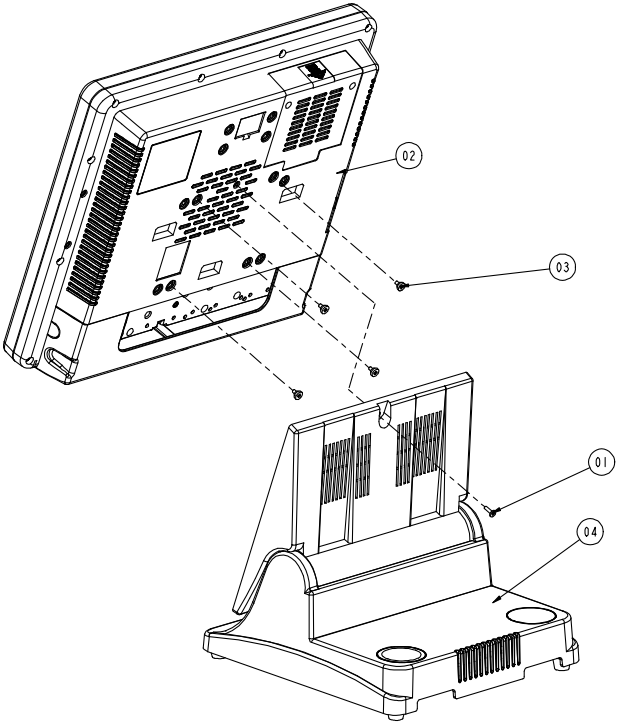
A

This appendix contains exploded diagrams and part numbers of the POS-6511 system.

Sections included:

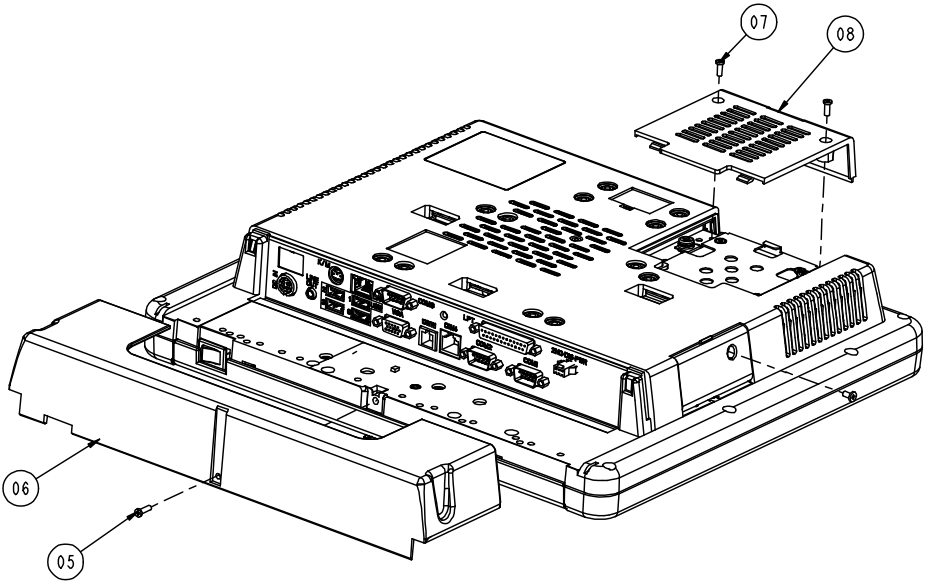
- Exploded Diagram for POS-6511 System with Stand
- Exploded Diagram for POS-6511 System Assembly
- Exploded Diagram for POS-6511 Back Cover Assembly
- Exploded Diagram for POS-6511 Top Cover Assembly
- Exploded Diagram for POS-6511 Mainboard Assembly
- Exploded Diagram for POS-6511 Touch Panel Assembly
- Exploded Diagram for POS-6511 Case Assembly
- Exploded Diagram for POS-6511 Stand Assembly
- Exploded Diagram for POS-6511 Power Assembly

EXPLODED DIAGRAM FOR POS-6511 SYSTEM WITH STAND



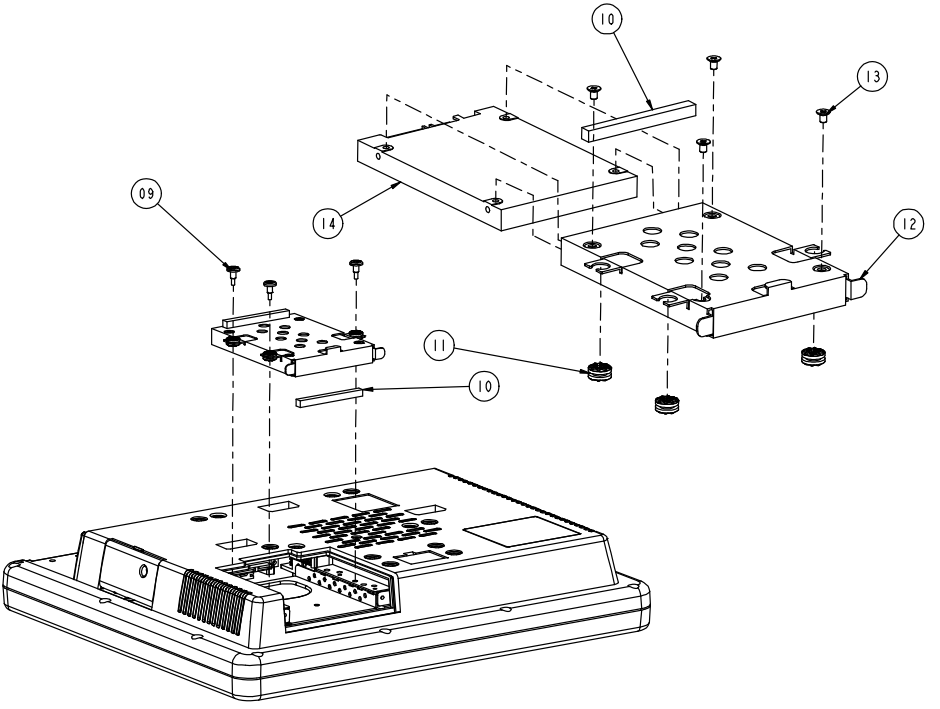
No.	Name	P/N No.	Qt'y
04	Stand Assembly	See Page A-16	1
03	M4x0.7Px4	22-272-40004911	4
02	6511 SYS Assembly	See Page A-3	1
01	M3_L12_1_Ni	22-272-30012011	1
	M3_L12_1_Black	22-275-30010011	

EXPLODED DIAGRAM FOR POS-6511 SYSTEM ASSEMBLY



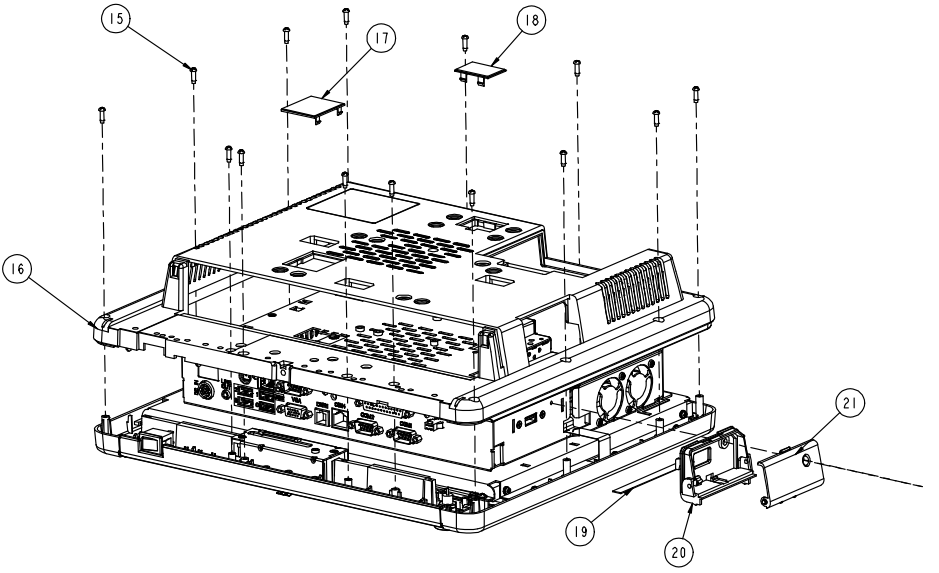
No.	Name	P/N No.	Qt'y
08	HDD_COVER_BLACK	30-002-08520010	1
07	M3_L8_1_B	22-275-30008018	2
06	Cable Cover Black	30-002-08500010	1
05	M3_L12_1_B	22-275-30010011	1

EXPLODED DIAGRAM FOR POS-6511 BACK COVER ASSEMBLY

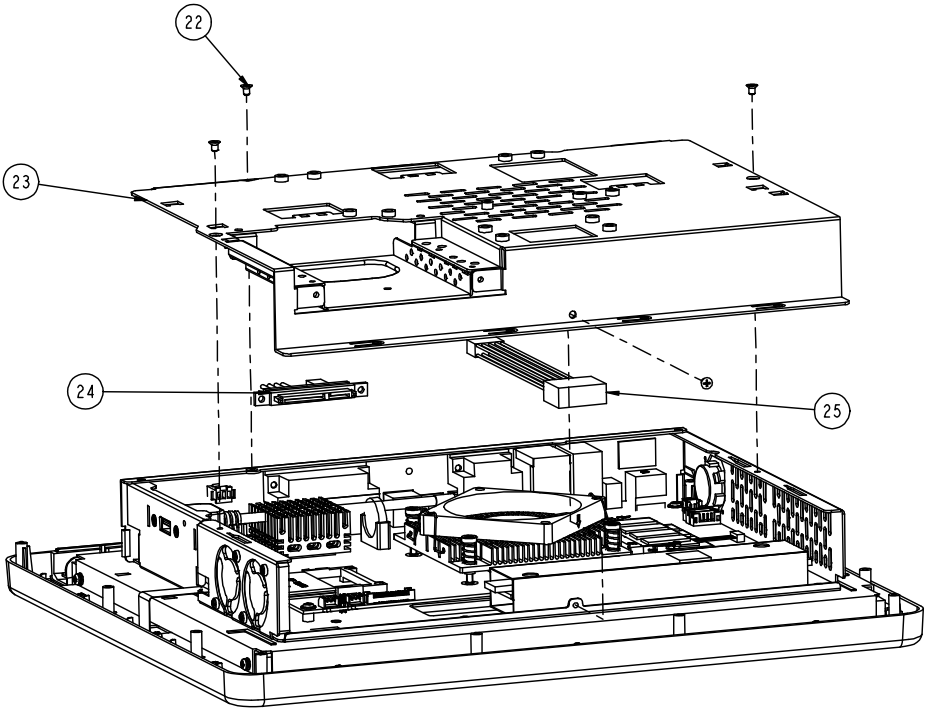


14	2.5" HDD	xxx	1
13	M3_L4.5_F_B	22-222-30004011	4
12	HDD holder	20-006-02021010	1
11	Rubber	23-680-39580963	3
10	EMI Sponge	20-028-00001010	2
09	M2.5_L5_H5.8_Ni	22-272-25011011	3
No.	Name	P/N No.	Qt'y

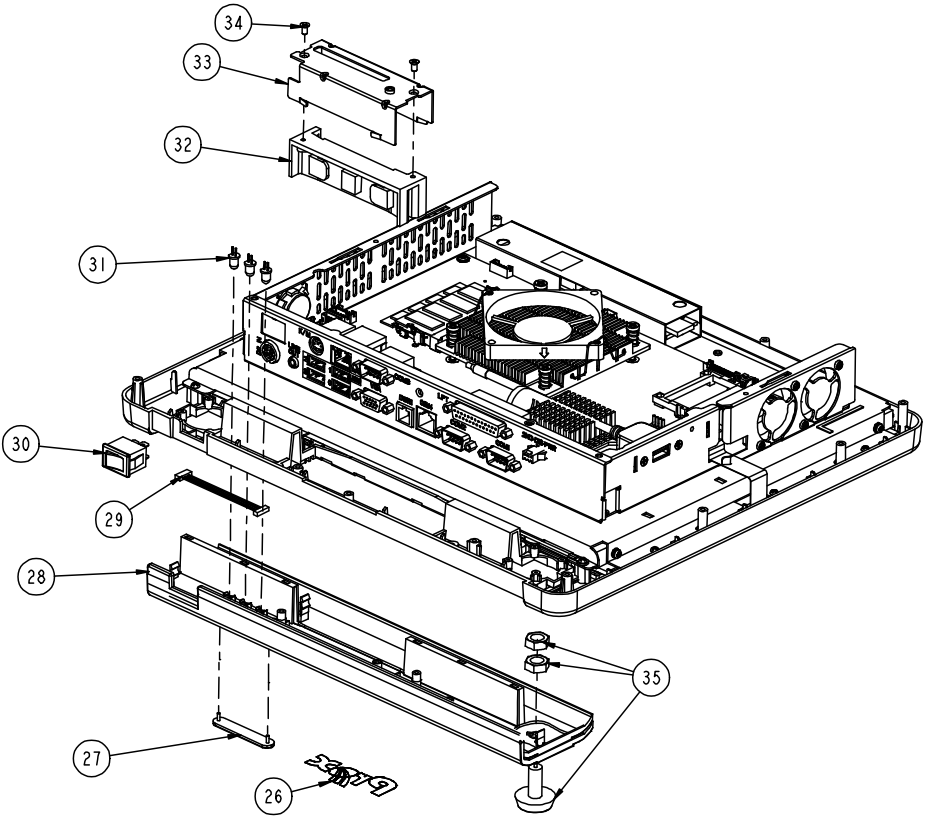
EXPLODED DIAGRAM FOR POS-6511 TOP COVER ASSEMBLY



No.	Name	P/N No.	Qt'y
21	CF_COVER	30-002-08600010	1
20	PS6511_USB_BASE	30-027-28110230	1
19	Pron	30-036-24100004	1
18	BACK COVER S2	30-002-08200010	1
17	BACK COVER-S	30-002-08100010	1
16	6511back cover Black	30-002-28110230	1
15	T3_L10_R_B	22-145-30010011	14



No.	Name	P/N No.	Qt'y
25	VFD CABLE	27-053-01002111	1
24	SATA CABLE	27-012-12804081	1
23	6511 metal Back cover	20-004-03001230	1
22	M3_L4.5_F_B	22-222-30004011	4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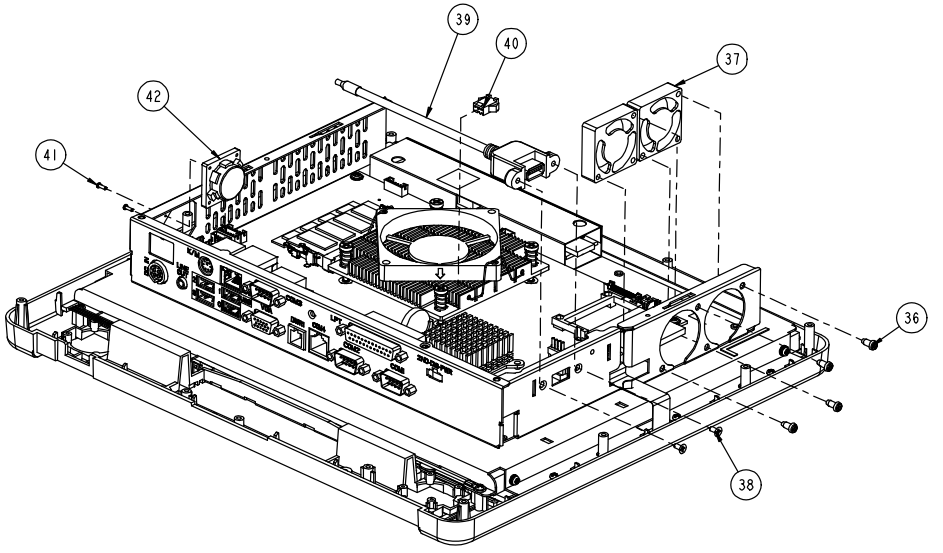
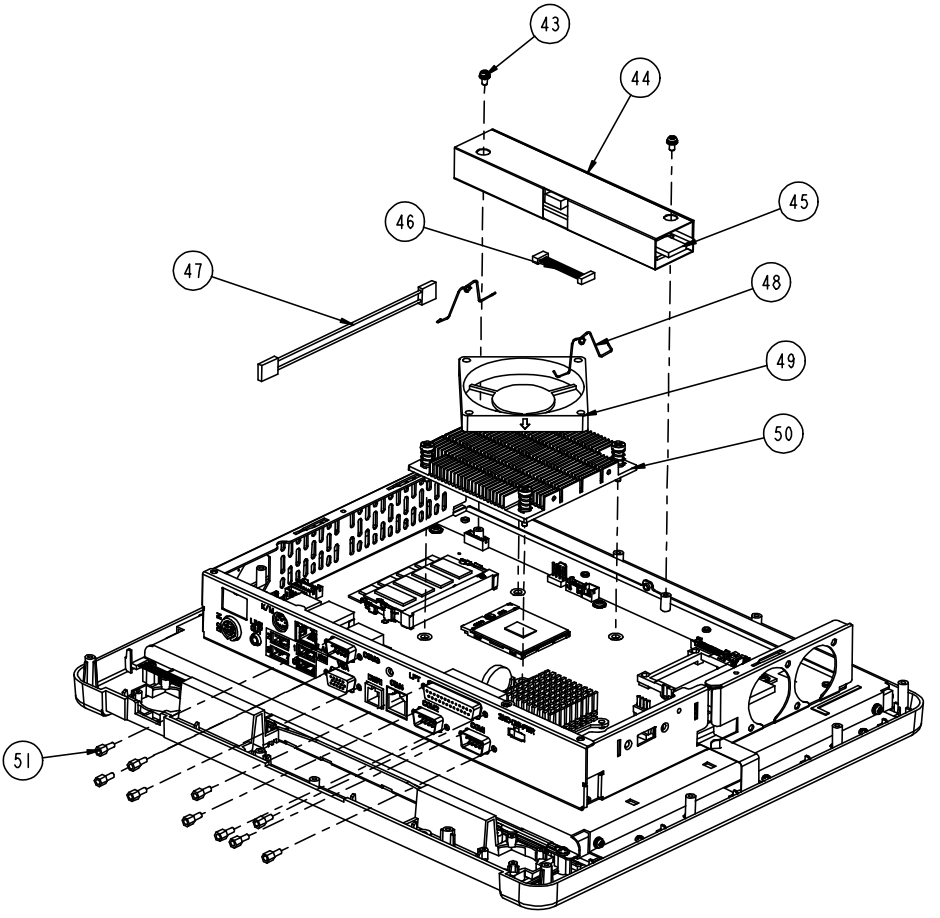
35	I-BUTTOM	See Order	I
34	M3_L6_F_B	22-215-30060011	2
33	MSR Holder	20-029-03006010	I
32	MSR	See Order	I
31	led cable	27-018-12805111	I
30	switch cable	27-019-12804071	I
29	MSR cable(Extend)	27-014-21706112	I
28	Cover Open White(New)	30-002-08140128	I
	Cover Close Black(New)	30-002-08110128	
	Cover Close White	30-002-28610128	
	Cover Open Black(New)	30-002-08120128	
	Cover Open White	30-002-28510128	
27	LED Lens	30-021-10200010	I
26	LOGO	20-005-16001000	I
No.	Name	P/N No.	Qt'y



42	Speacker	13-500-08280018	1
41	MI.6_L5_R_Ni	22-222-16005011	4
40	2nd Cable	27-012-21703071	1
39	USB Cable	27-006-16703111	1
38	No.4_L8_F_B	22-315-40008019	2
37	SYSTEM FAN	21-004-03535001	2
36	T3.5	22-122-35010011	4
No.	Name	P/N No.	Qt'y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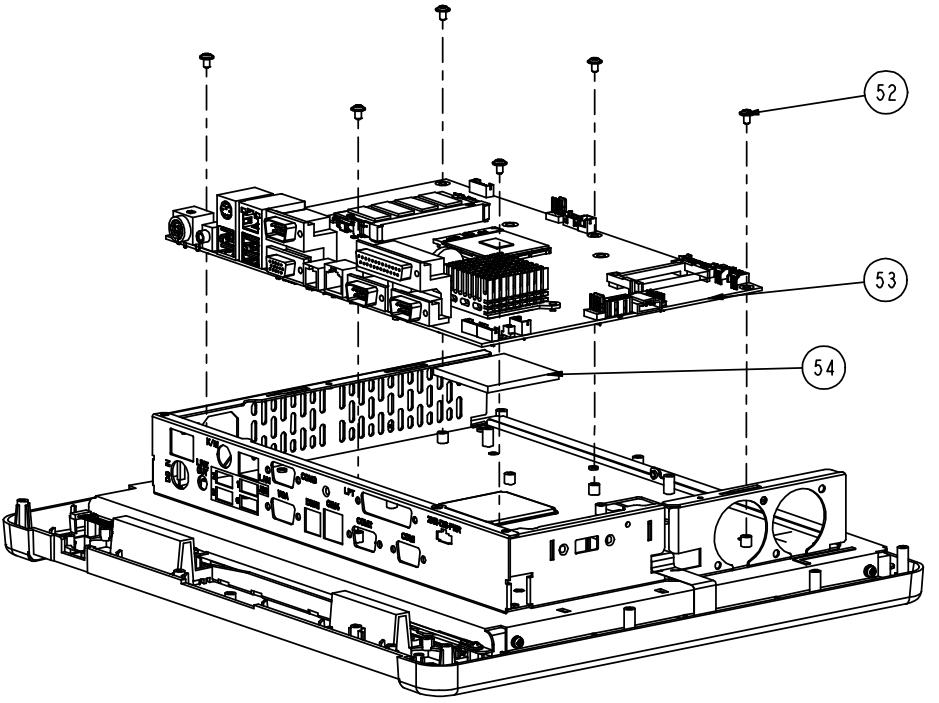
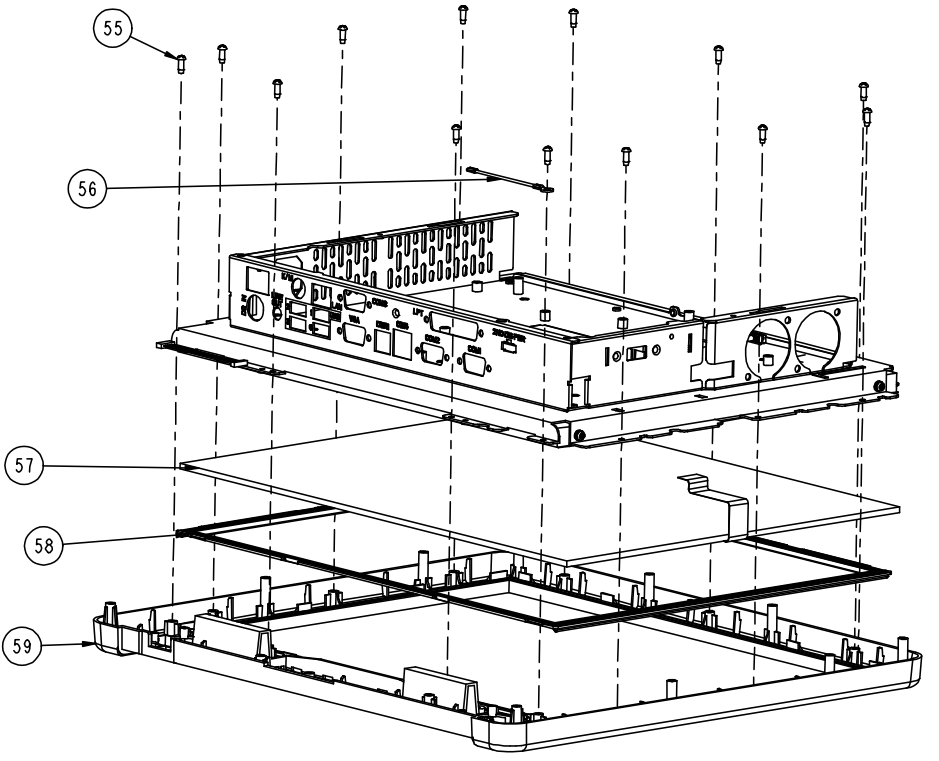
51	No.4_HEX_BOSS	22-692-40048051	10
50	CPU HEATSINK	21-002-19090001	1
49	CPU FAN	21-004-07070174	1
48	Fan Lock Spring	21-001-60000003	2
47	Inverter Extend-cable	21-001-60000003	1
46	Inverter Cable	27-015-33202071	1
45	INVERTER	52-101-15020503	1
44	INVERTER Mylar	90-056-02100230	1
43	M3_L6_S+R_Ni	22-232-30060211	2
No.	Name	P/N No.	Qt'y

EXPLODED DIAGRAM FOR POS-6511 MAINBOARD ASSEMBLY



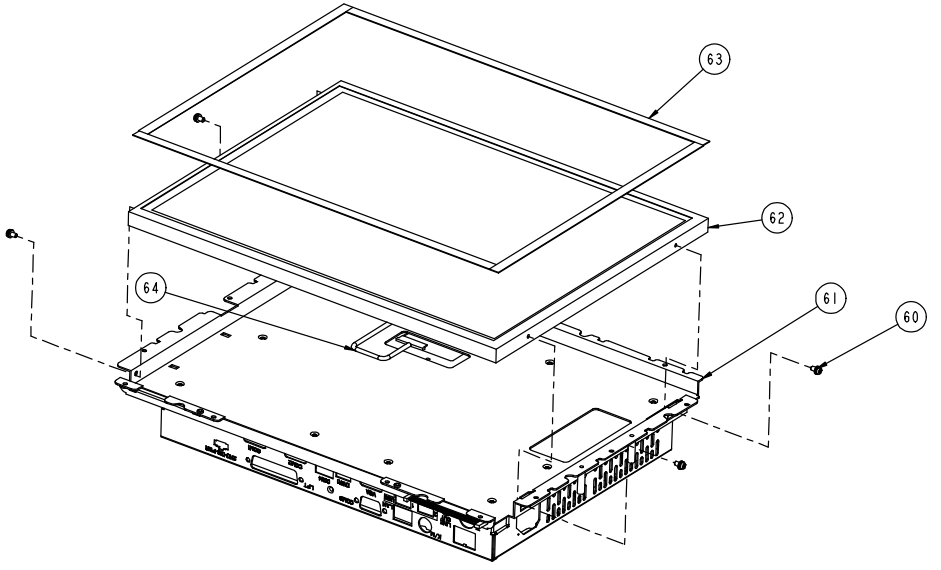
54	45x45x3.5_pad	21-006-04545002	1
53	Prox-6511	--	1
52	M3_L5_W_Ni	22-242-30005311	6
No.	Name	P/N No.	Qt'y

EXPLODED DIAGRAM FOR POS-6511 TOUCH PANEL ASSEMBLY



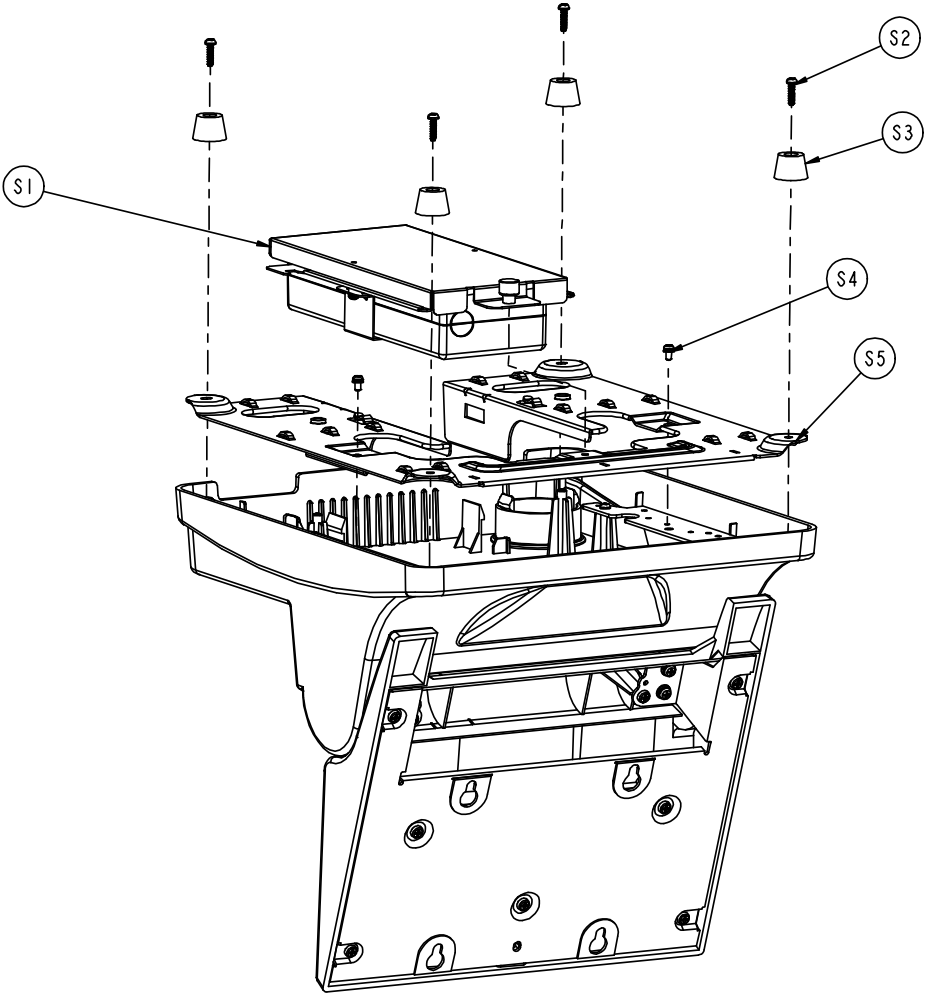
59	Front Case(White)	30-002-28410128	1
	Front Case(Black)	30-003-08110128	
58	LCD Rubber(Capacitive Touch)	30-013-01100010	4
	LCD Rubber	30-013-01100086	
57	ELO Capacitive Touch Panel	52-380-00791701	1
	ELO Touch Panel	52-351-03650511	
56	Ground cable	27-030-01201171	1
55	T3_L8_R_B	22-122-30080011	13
No.	Name	P/N No.	Qt'y

EXPLODED DIAGRAM FOR POS-6511 CASE ASSEMBLY

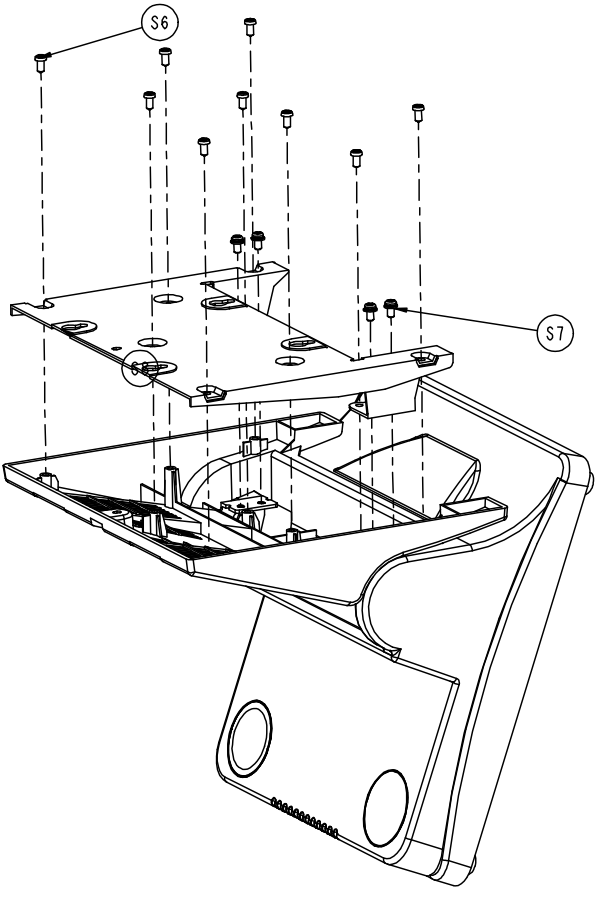


64	LVDS Cable	27-020-23002111	1
63	LCD Pron	30-013-24100000	4
62	15" lcd	52-351-03650519	1
61	6511 inside case	20-040-03001230	1
60	M3_L6_S+R_Ni	52-351-03150128	4
No.	Name	P/N No.	Qt'y

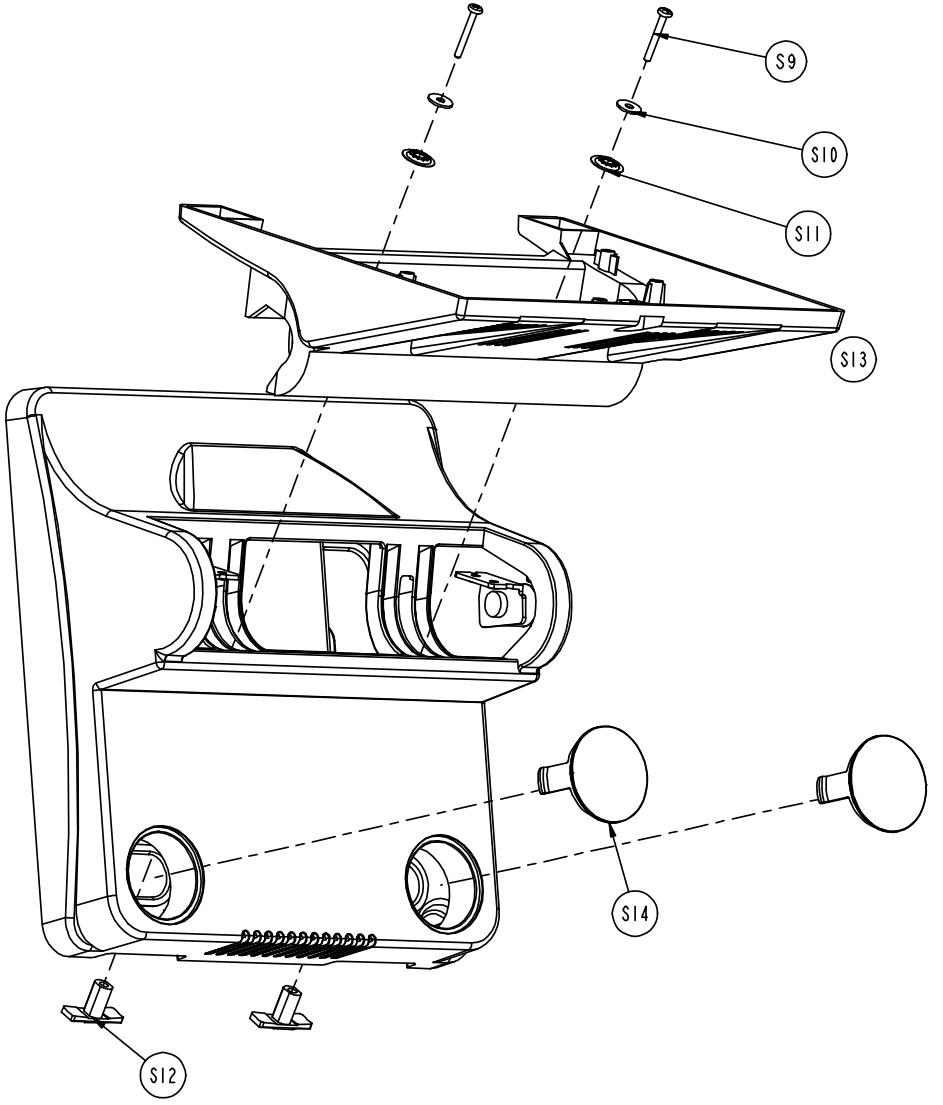
EXPLODED DIAGRAM FOR POS-6511 STAND ASSEMBLY



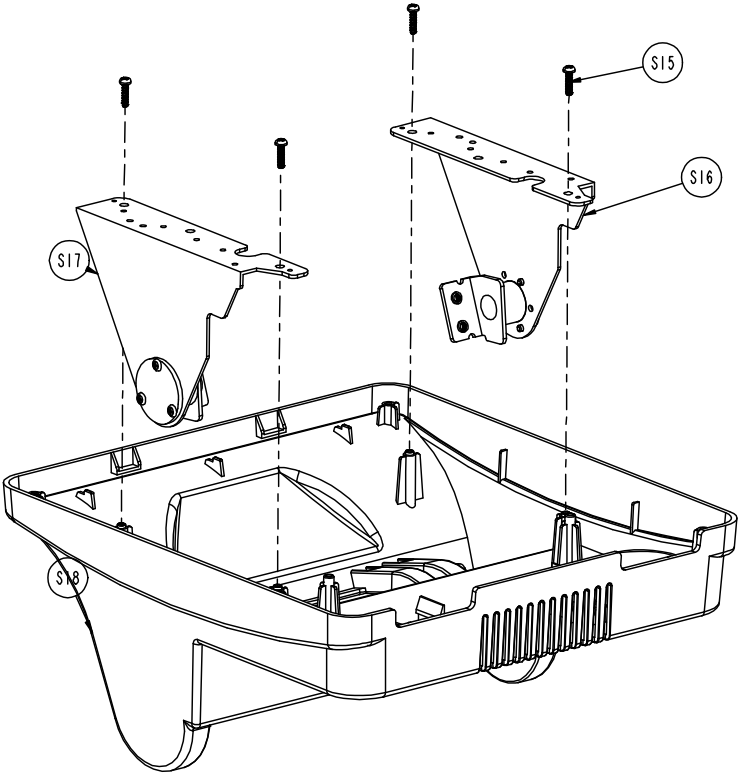
S5	PS-6506 STAND BASE	20-032-03061086	1
S4	M3_L6_S+W_Ni	22-232-30060211	2
S3	Rubber Foot	30-004-06100000	4
S2	T3_L12_Ni	22-122-30012061	4
S1	Power Assembly	See Page A-22	1
No.	Name	P/N No.	Qt'y



S8	PS-6509 BRACKET A	20-015-03003167	1
S7	M4_L8_S+W_Ni	22-232-40008211	4
S6	T4_L8_R_Ni	22-122-40008011	9
No.	Name	P/N No.	Qt'y

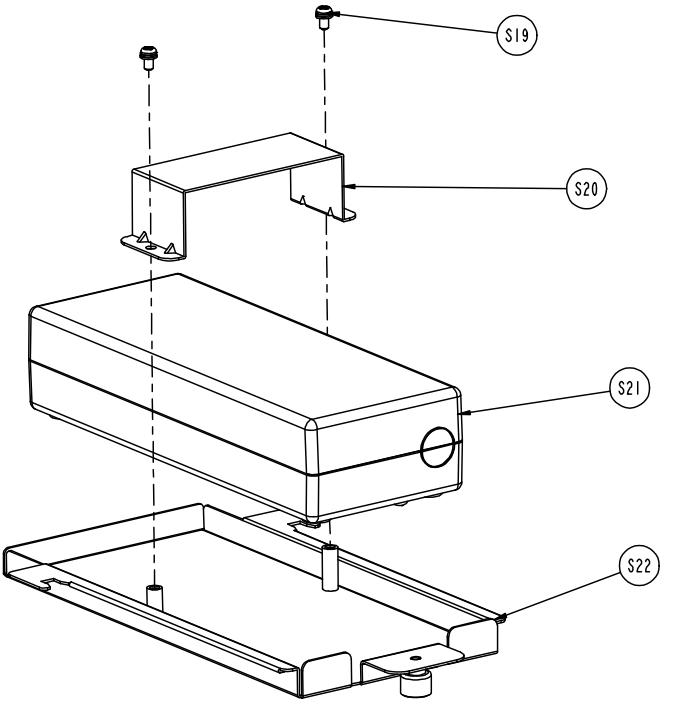

S9
S10
S11
S13
S14
S12

S14	CAP FOR STAND(White)	30-002-28810128	2
	CAP FOR STAND(Black)	30-062-08110086	
S13	ROTATE COVER(White)	30-002-08120010	1
	ROTATE COVER(Back)	30-001-08200010	
S12	PS-8850 Slip block	30-061-02100012	2
S11	OD=16mm,ID=5.8mmx1.8T	23-605-58040161	2
S10	OD=12mm,ID=4.1mmx1T	23-312-40010121	2
S9	M4_L25_S+W_Ni	22-232-40025011	2
No.	Name	P/N No.	Qt'y



S18	STAND COVER(White)	30-002-28910128	1
	STAND COVER(Black)	30-002-08110086	
S17	PS-6506 LEFT HINGE	20-012-03001086	1
S16	PS-6506 RIHGT HINGE	20-012-03002086	1
S15	T3_L12_Ni	22-122-30012061	4
No.	Name	P/N No.	Qt'y

EXPLODED DIAGRAM FOR POS-6511 POWER ASSEMBLY



No.	Name	P/N No.	Qt'y
S22	POWER Tray	20-054-03001128	1
S21	Adapter	52-002-02861001	1
S20	Power Holder	20-029-03001128	1
S19	M3_L6_S+W_Ni	22-232-30060211	2

TECHNICAL SUMMARY

APPENDIX

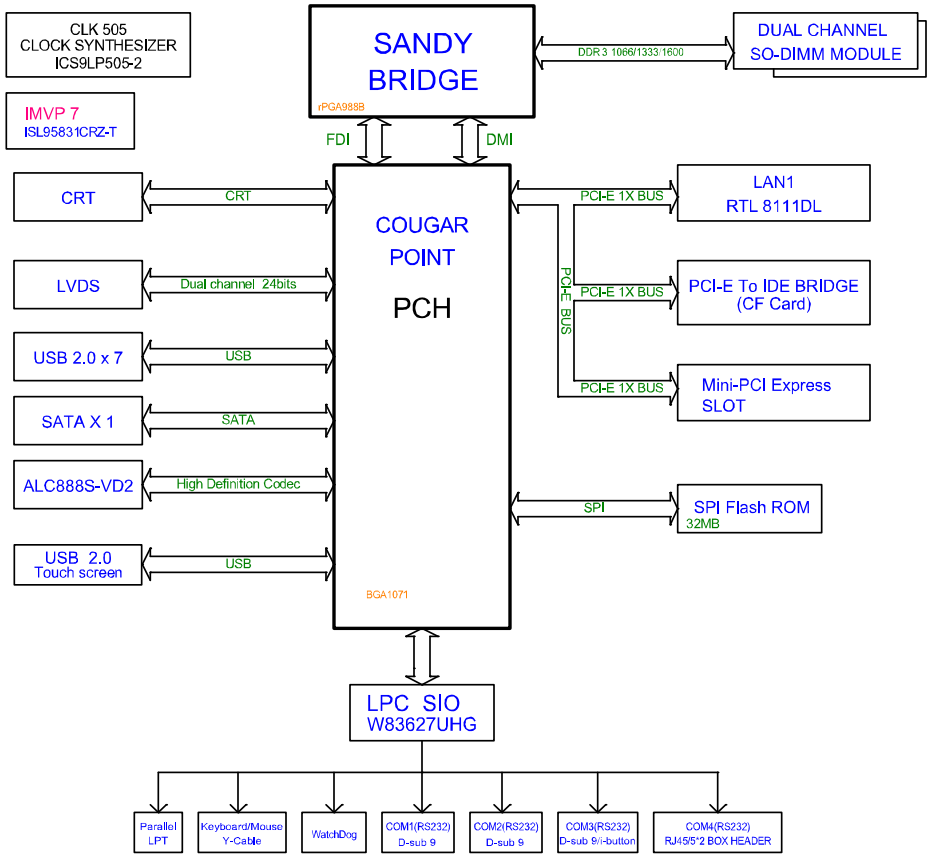
B

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
- Watchdog Timer Configuration
- Flash BIOS Update

BLOCK DIAGRAM



INTERRUPT MAP

IRQ	ASSIGNMENT
0	System Timer
1	Standard PS/2 Keyboard
3	Communications Port (COM2)
4	Communications Port (COM1)
7	Communications Port (COM3)
8	System CMOS/real time clock
10	Communications Port (COM4)
11	Intel(R) 6 Series/C200 Series Chipset Family SMBus Controller - 1C22
12	Microsoft PS/2 Mouse
13	Numeric data processor
16	Intel(R) 6 Series/C200 Series Chipset Family USB Enhanced Host Controller - 1C2D
17	Standard Dual Channel PCI IDE Controlle
19	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C01
19	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C09
22	High Definition Audio Controller
23	Intel(R) 6 Series/C200 Series Chipset Family USB Enhanced Host Controller - 1C26
81	Microsoft ACPI-Compliant System
82	Microsoft ACPI-Compliant System
83	Microsoft ACPI-Compliant System
84	Microsoft ACPI-Compliant System
85	Microsoft ACPI-Compliant System
86	Microsoft ACPI-Compliant System
87	Microsoft ACPI-Compliant System
88	Microsoft ACPI-Compliant System
89	Microsoft ACPI-Compliant System
90	Microsoft ACPI-Compliant System
91	Microsoft ACPI-Compliant System
92	Microsoft ACPI-Compliant System
93	Microsoft ACPI-Compliant System
94	Microsoft ACPI-Compliant System
95	Microsoft ACPI-Compliant System

(Continued)

IRQ	ASSIGNMENT
96	Microsoft ACPI-Compliant System
97	Microsoft ACPI-Compliant System
98	Microsoft ACPI-Compliant System
99	Microsoft ACPI-Compliant System
100	Microsoft ACPI-Compliant System
101	Microsoft ACPI-Compliant System
102	Microsoft ACPI-Compliant System
103	Microsoft ACPI-Compliant System
104	Microsoft ACPI-Compliant System
105	Microsoft ACPI-Compliant System
106	Microsoft ACPI-Compliant System
107	Microsoft ACPI-Compliant System
108	Microsoft ACPI-Compliant System
109	Microsoft ACPI-Compliant System
110	Microsoft ACPI-Compliant System
111	Microsoft ACPI-Compliant System
112	Microsoft ACPI-Compliant System
113	Microsoft ACPI-Compliant System
114	Microsoft ACPI-Compliant System
115	Microsoft ACPI-Compliant System
116	Microsoft ACPI-Compliant System
117	Microsoft ACPI-Compliant System
118	Microsoft ACPI-Compliant System
119	Microsoft ACPI-Compliant System
120	Microsoft ACPI-Compliant System
121	Microsoft ACPI-Compliant System
122	Microsoft ACPI-Compliant System
123	Microsoft ACPI-Compliant System
124	Microsoft ACPI-Compliant System
125	Microsoft ACPI-Compliant System
126	Microsoft ACPI-Compliant System
127	Microsoft ACPI-Compliant System
128	Microsoft ACPI-Compliant System
129	Microsoft ACPI-Compliant System
130	Microsoft ACPI-Compliant System

(Continued)

IRQ	ASSIGNMENT
131	Microsoft ACPI-Compliant System
132	Microsoft ACPI-Compliant System
133	Microsoft ACPI-Compliant System
134	Microsoft ACPI-Compliant System
135	Microsoft ACPI-Compliant System
136	Microsoft ACPI-Compliant System
137	Microsoft ACPI-Compliant System
138	Microsoft ACPI-Compliant System
139	Microsoft ACPI-Compliant System
140	Microsoft ACPI-Compliant System
141	Microsoft ACPI-Compliant System
142	Microsoft ACPI-Compliant System
143	Microsoft ACPI-Compliant System
144	Microsoft ACPI-Compliant System
145	Microsoft ACPI-Compliant System
146	Microsoft ACPI-Compliant System
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152	Microsoft ACPI-Compliant System
153	Microsoft ACPI-Compliant System
154	Microsoft ACPI-Compliant System
155	Microsoft ACPI-Compliant System
156	Microsoft ACPI-Compliant System
157	Microsoft ACPI-Compliant System
158	Microsoft ACPI-Compliant System
159	Microsoft ACPI-Compliant System
160	Microsoft ACPI-Compliant System
161	Microsoft ACPI-Compliant System
162	Microsoft ACPI-Compliant System
163	Microsoft ACPI-Compliant System
164	Microsoft ACPI-Compliant System
165	Microsoft ACPI-Compliant System

(Continued)

IRQ	ASSIGNMENT
166	Microsoft ACPI-Compliant System
167	Microsoft ACPI-Compliant System
168	Microsoft ACPI-Compliant System
169	Microsoft ACPI-Compliant System
170	Microsoft ACPI-Compliant System
171	Microsoft ACPI-Compliant System
172	Microsoft ACPI-Compliant System
173	Microsoft ACPI-Compliant System
174	Microsoft ACPI-Compliant System
175	Microsoft ACPI-Compliant System
176	Microsoft ACPI-Compliant System
177	Microsoft ACPI-Compliant System
178	Microsoft ACPI-Compliant System
179	Microsoft ACPI-Compliant System
180	Microsoft ACPI-Compliant System
181	Microsoft ACPI-Compliant System
182	Microsoft ACPI-Compliant System
183	Microsoft ACPI-Compliant System
184	Microsoft ACPI-Compliant System
185	Microsoft ACPI-Compliant System
186	Microsoft ACPI-Compliant System
187	Microsoft ACPI-Compliant System
188	Microsoft ACPI-Compliant System
189	Microsoft ACPI-Compliant System
190	Microsoft ACPI-Compliant System
4294967290	Realtek PCIe GBE Family Controller
4294967291	Intel(R) HD Graphics Family
4294967292	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 6 - 1C1A
4294967293	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 5 - 1C18
4294967294	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 1 - 1C10

DMA CHANNELS MAP

DMA Channel	Assignment
4	Direct memory access controller

MEMORY MAP

MEMORY MAP	ASSIGNMENT
0x20000000-0x201FFFFF	System board
0x40000000-0x401FFFFF	System board
0x7DA00000-0xFEAFFFFF	PCI bus
0x7DA00000-0xFEAFFFFF	Motherboard resources
0xA0000-0xBFFFF	Intel(R) HD Graphics Family
0xA0000-0xBFFFF	PCI bus
0xD0000-0xD3FFF	PCI bus
0xD4000-0xD7FFF	PCI bus
0xD8000-0xDBFFF	PCI bus
0xDC000-0xDFFFF	PCI bus
0xE0000-0xE3FFF	PCI bus
0xE0000000-0xEFFFFFFF	Intel(R) HD Graphics Family
0xE4000-0xE7FFF	PCI bus
0xF0000000-0xF09FFFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 6 - 1C1A
0xF0A04000-0xF0A04FF	Realtek PCIe GBE Family Controller
0xF0A00000-0xF13FFFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 5 - 1C18
0xF0A00000-0xF13FFFFF	Realtek PCIe GBE Family Controller
0xF1400000-0xF1DFFFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 1 - 1C10
0xF5C00000-0xF5FFFFFF	Intel(R) HD Graphics Family
0xF6000000-0xF69FFFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 6 - 1C1A
0xF6A00000-0xF73FFFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 5 - 1C18
0xF7400000-0xF7DFFFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 1 - 1C10
0xF7E00000-0xF7E03FFF	High Definition Audio Controller
0xF7E05000-0xF7E050FF	Intel(R) 6 Series/C200 Series Chipset Family SMBus Controller - 1C22
0xF7E06000-0xF7E063FF	Intel(R) 6 Series/C200 Series Chipset Family USB Enhanced Host Controller - 1C26
0xF7E07000-0xF7E073FF	Intel(R) 6 Series/C200 Series Chipset Family USB Enhanced Host Controller - 1C2D
0xF8000000-0xFBFFFFFF	Motherboard resources

(Continued)

MEMORY MAP	ASSIGNMENT
0xFED00000-0xFED003FF	High precision event timer
0xFED00000-0xFED003FF	High precision event timer
0xFED1C000-0xFED1FFFF	Motherboard resources
0xFED20000-0xFED3FFFF	Motherboard resources
0xFED40000-0xFED44FFF	System board
0xFED45000-0xFED8FFFF	Motherboard resources
0xFED90000-0xFED93FFF	Motherboard resources
0xFEE00000-0xFEEFFFFF	Motherboard resources
0xFF000000-0xFFFFFFFF	Intel(R) 82802 Firmware Hub Device
0xFF000000-0xFFFFFFFF	Motherboard resources

I/O MAP

I/O MAP	ASSIGNMENT
0x00000000-0x0000001F	Direct memory access controller
0x00000000-0x0000001F	PCI bus
0x00000010-0x0000001F	Motherboard resources
0x00000020-0x00000021	Programmable interrupt controller
0x00000022-0x0000003F	Motherboard resources
0x00000024-0x00000025	Programmable interrupt controller
0x00000028-0x00000029	Programmable interrupt controller
0x0000002C-0x0000002D	Programmable interrupt controller
0x0000002E-0x0000002F	Motherboard resources
0x00000030-0x00000031	Programmable interrupt controller
0x00000034-0x00000035	Programmable interrupt controller
0x00000038-0x00000039	Programmable interrupt controller
0x0000003C-0x0000003D	Programmable interrupt controller
0x00000040-0x00000043	System timer
0x00000044-0x0000005F	Motherboard resources
0x0000004E-0x0000004F	Motherboard resources
0x00000050-0x00000053	System timer
0x00000060-0x00000060	Standard PS/2 Keyboard
0x00000061-0x00000061	Motherboard resources
0x00000062-0x00000063	Motherboard resources
0x00000063-0x00000063	Motherboard resources
0x00000064-0x00000064	Standard PS/2 Keyboard
0x00000065-0x0000006F	Motherboard resources
0x00000065-0x0000006F	Motherboard resources
0x00000067-0x00000067	Motherboard resources
0x00000070-0x00000077	System CMOS/real time clock
0x00000070-0x00000077	Motherboard resources
0x00000072-0x0000007F	Motherboard resources
0x00000080-0x00000080	Motherboard resources
0x00000080-0x00000080	Motherboard resources
0x00000081-0x00000091	Direct memory access controller
0x00000084-0x00000086	Motherboard resources
0x00000088-0x00000088	Motherboard resources
0x0000008C-0x0000008E	Motherboard resources

(Continued)

I/O MAP	ASSIGNMENT
0x00000090-0x0000009F	Motherboard resources
0x00000092-0x00000092	Motherboard resources
0x00000093-0x0000009F	Direct memory access controller
0x000000A0-0x000000A1	Programmable interrupt controller
0x000000A2-0x000000BF	Motherboard resources
0x000000A4-0x000000A5	Programmable interrupt controller
0x000000A8-0x000000A9	Programmable interrupt controller
0x000000AC-0x000000AD	Programmable interrupt controller
0x000000B0-0x000000B1	Programmable interrupt controller
0x000000B2-0x000000B3	Motherboard resources
0x000000B4-0x000000B5	Programmable interrupt controller
0x000000B8-0x000000B9	Programmable interrupt controller
0x000000BC-0x000000BD	Programmable interrupt controller
0x000000C0-0x000000DF	Direct memory access controller
0x000000E0-0x000000EF	Motherboard resources
0x000000F0-0x000000FF	Numeric data processor
0x00000200-0x0000020F	Motherboard resources
0x00000290-0x00000297	Motherboard resources
0x000002E8-0x000002EF	Communications Port (COM4)
0x000002F8-0x000002FF	Communications Port (COM2)
0x00000378-0x0000037F	Printer Port (LPT1)
0x000003B0-0x000003BB	Intel(R) HD Graphics Family
0x000003C0-0x000003DF	Intel(R) HD Graphics Family
0x000003E8-0x000003EF	Communications Port (COM3)
0x000003F8-0x000003FF	Communications Port (COM1)
0x00000400-0x00000453	Motherboard resources
0x00000454-0x00000457	Motherboard resources
0x00000458-0x0000047F	Motherboard resources
0x000004D0-0x000004D1	Programmable interrupt controller
0x000004D0-0x000004D1	Motherboard resources
0x00000500-0x0000057F	Motherboard resources
0x00000680-0x0000069F	Motherboard resources
0x00000D00-0x0000FFFF	PCI bus
0x0000164E-0x0000164F	Motherboard resources
0x0000C000-0x0000CFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 6 - 1C1A

(Continued)

I/O MAP	ASSIGNMENT
0x0000C000-0x0000CFFF	Standard Dual Channel PCI IDE Controller
0x0000C010-0x0000C013	Standard Dual Channel PCI IDE Controller
0x0000C020-0x0000C027	Standard Dual Channel PCI IDE Controller
0x0000C030-0x0000C033	Standard Dual Channel PCI IDE Controller
0x0000C040-0x0000C047	Standard Dual Channel PCI IDE Controller
0x0000D000-0x0000DFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 5 - 1C18
0x0000D000-0x0000DFFF	Realtek PCIe GBE Family Controller
0x0000E000-0x0000EFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 1 - 1C10
0x0000F000-0x0000F03F	Intel(R) HD Graphics Family
0x0000F040-0x0000F05F	Intel(R) 6 Series/C200 Series Chipset Family SMBus Controller - 1C22
0x0000F060-0x0000F06F	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C09
0x0000F070-0x0000F07F	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C09
0x0000F080-0x0000F083	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C09
0x0000F090-0x0000F097	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C09
0x0000F0A0-0x0000F0A3	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C09
0x0000F0B0-0x0000F0B7	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C09
0x0000F0C0-0x0000F0CF	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C01
0x0000F0D0-0x0000F0DF	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C01
0x0000F0E0-0x0000F0E3	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C01
0x0000F0F0-0x0000F0F7	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C01
0x0000F100-0x0000F103	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C01
0x0000F110-0x0000F117	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C01
0x0000FFFF-0x0000FFFF	Motherboard resources
0x0000FFFF-0x0000FFFF	Motherboard resources

WATCHDOG TIMER CONFIGURATION

The I/O port address of the watchdog timer is 2E (hex) and 2F (hex). 2E (hex) is the address port. 2F (hex) is the data port. User must first assign the address of register by writing address value into address port 2E (hex), then write/read data to/from the assigned register through data port 2F (hex).

Configuration Sequence

To program W83627UHG configuration registers, the following configuration sequence must be followed:
(1) Enter the extended function mode.
(2) Configure the configuration registers.
(3) Exit the extended function mode.

(1) Enter the extended function mode

To place the chip into the Extended Function Mode, two successive writes of 0x87 must be applied to Extended Function Enable Registers (EFERs, i.e. 2Eh or 4Eh).

(2) Configure the configuration registers

The chip selects the Logical Device and activates the desired Logical Devices through Extended Function Index Register (EFIR) and Extended Function Data Register (EFDR). The EFIR is located at the same address as the EFER, and the EFDR is located at address (EFIR+1). First, write the Logical Device Number (i.e. 0x07) to the EFIR and then write the number of the desired Logical Device to the EFDR. If accessing the Chip (Global) Control Registers, this step is not required. Secondly, write the address of the desired configuration register within the Logical Device to the EFIR and then write (or read) the desired configuration register through the EFDR.

(3) Exit the extended function mode

To exit the Extended Function Mode, writing 0xAA to the EFER is required. Once the chip exits the Extended Function Mode, it is in the normal running mode and is ready to enter the configuration mode.

Code example for watchdog timer

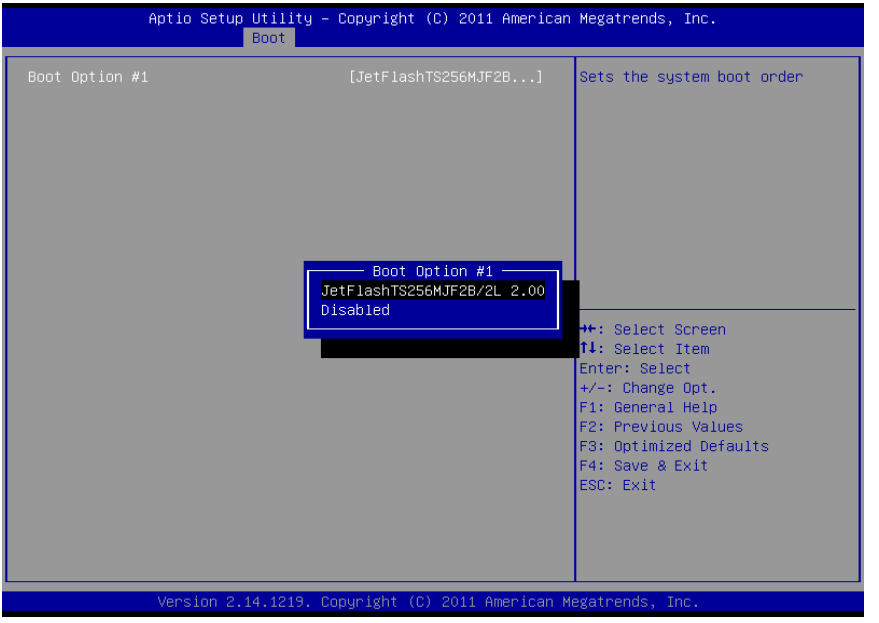
Enable watchdog timer and set 30 sec. as timeout interval.

```
;------ Enter to extended function mode ------------------------------------------------------
Mov     dx,     2eh
Mov     al,     87h
Out     dx,     al
Out     dx,     al
;------ Select Logical Device 8 of watchdog timer ---------------------------------------------
Mov     al,     07h
Out     dx,     al
Inc     dx
Mov     al,     08h
Out     dx,     al
;------ Set second as counting unit ----------------------------------------------------------
Dec     dx
Mov     al,     0f5h
Out     dx,     al
Inc     dx
In      al,     dx
And     al,     not 08h
Out     dx,     al
;------ Set timeout interval as 30seconds and start counting ---------------------------------
Dec     dx
Mov     al,     0f6h
Out     dx,     al
Inc     dx
Mov     al,     30
Out     dx,     al
;------ Exit the extended function mode ------------------------------------------------------
Dec     dx
Mov     al,     0aah
Out     dx,     al
```

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 file (ex. 65110P01.bin) to the bootable device.
3. Copy AMI flash utility – AFUDOS.exe (v2.39) into bootable device.
4. Make sure the target system can first boot to the bootable device.
   (1) Connect the bootable USB device.
   (2) Turn on the computer and press <F2> or <Del> key during boot to enter BIOS Setup.
   (3) System will go into the BIOS setup menu.
   (4) Select [Boot] menu.
   (5) Select [Hard Drive BBS Priorities], set the USB bootable device to be the 1st boot device.
   (6) Press <F4> key to save configuration and exit the BIOS setup menu.



II. AFUDOS Command for System BIOS Update

AFUDOS.exe is the AMI firmware update utility; the command line is shown as below:

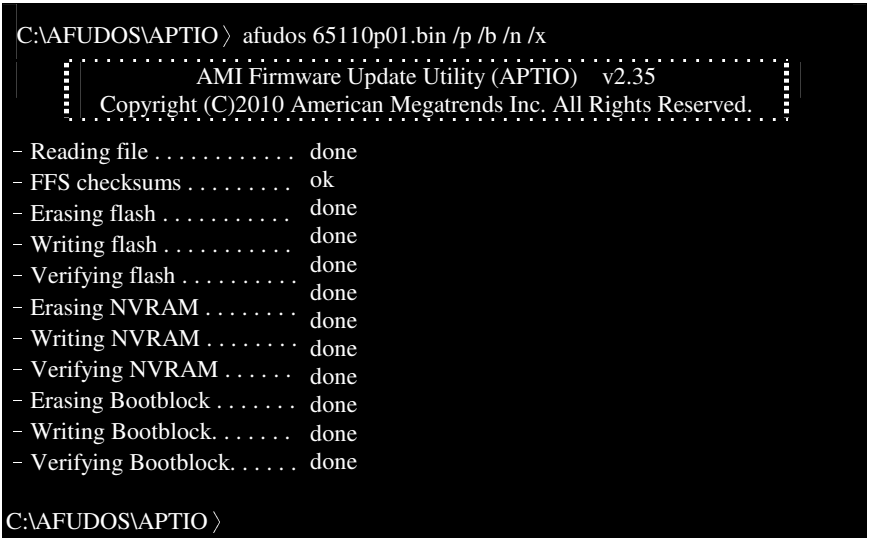
AFUDOS <ROM File Name> [option1] [option2]….

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

/P: Program main BIOS image.
/B: Program Boot Block.
/N: Program NVRAM.
/X: Don't check ROM ID.

III. BIOS Update Procedure

1. Use the bootable USB storage to boot up system into the DOS command prompt.
2. Type "**AFUDOS 6511xxxx.bin /p /b /n /x"** and press enter to start the flash procedure.
   (Note that xxxx means the BIOS revision part, ex. 0P01…)
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 is complete, the messages should be like the figure shown below.



5. User can restart the system and boot up with new BIOS now.
6. Update is complete after restart.
7. Verify during following boot that the BIOS version displayed at initialization screen has changed.

QUICK MANUAL

APPENDIX

C

This appendix contains the assembly procedure of the VFD and the i-Button Decoder API function guide.

Sections included:

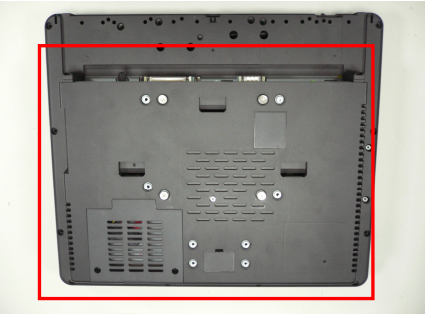
- Assembly Procedure of VFD
- i-Button Decoder API

Assembly Procdure of VFD

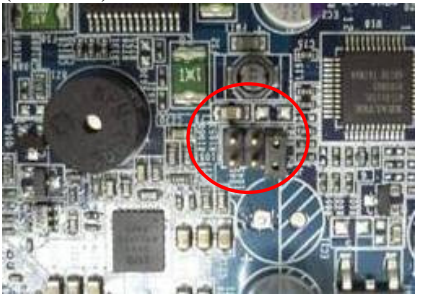
Packing Checklist:

Items	Quantity
VFD Module (w/ cable)	1
VFD Support Bracket	1
Screws	4

Step 1. Remove the 6511 Metal Back Cover.

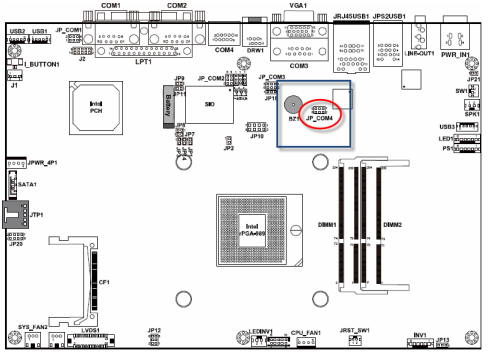


Step 2. Refer to the **COM4 RI & Voltage Selection** table as shown and set the COM4 jumper to "VCC12" (12V DC).

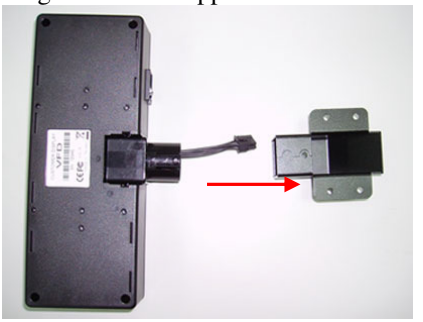


COM4 RI & Voltage Selection

Selection	Jumper Settings	Jumper Illustration
RI	1-2	
VCC12	3-4	
VCC	5-6	



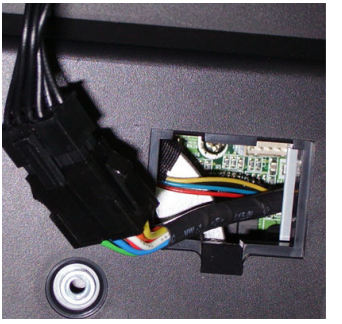
Step 3. Thread the VFD Module cable through the VFD Support Bracket.



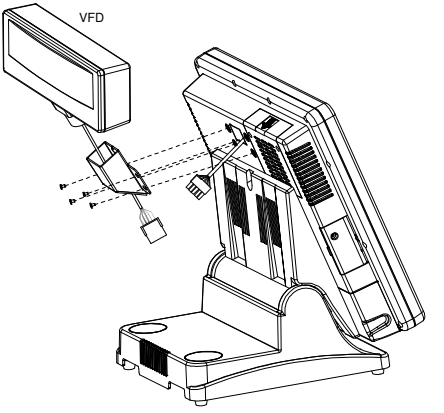
Step 4. Insert the module into the bracket until it clicks into place.

Step 5. After replacing the 6511 Metal Back Cover, remove the Back Cover for VFD.

Step 6. Stretch out the VFD cable and then connect with the VFD Module cable.



Step 7. Secure the VFD Module to the back cover with four screws.



Finished View:

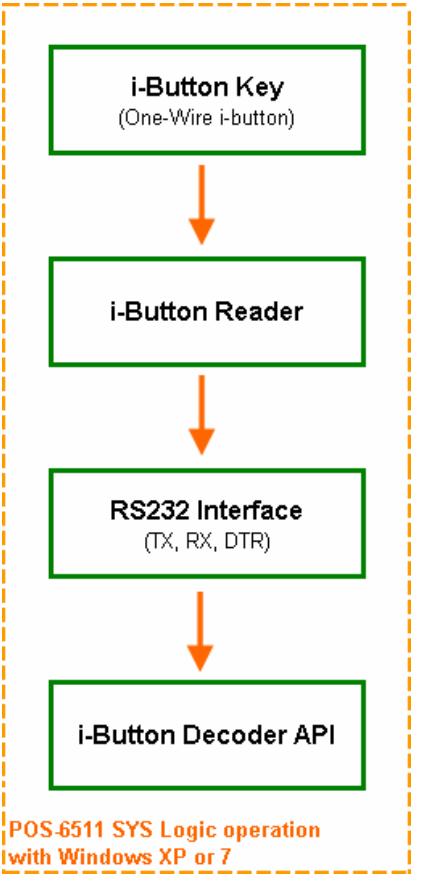
(Front View)

(Side View)

I-BUTTON DECODER API

I. FUNCTION DESCRIPTION

The i-Button Decoder API program must run on a Windows platform, XP or 7. Users can get the i-Button key serial number of the POS-6511 system through the application programming interface.



II. FUNCTION DEMO

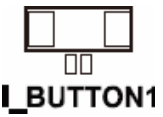
STEP 1: Hardware (Motherboard) Setup

1-1. Refer to the **i-Button Function Selection** table as shown below and set the jumpers to "i-Button".

SELECTION	JUMPER SETTINGS	JUMPER ILLUSTRATION
i-Button	2-3	
COM 3 (default)	1-2	

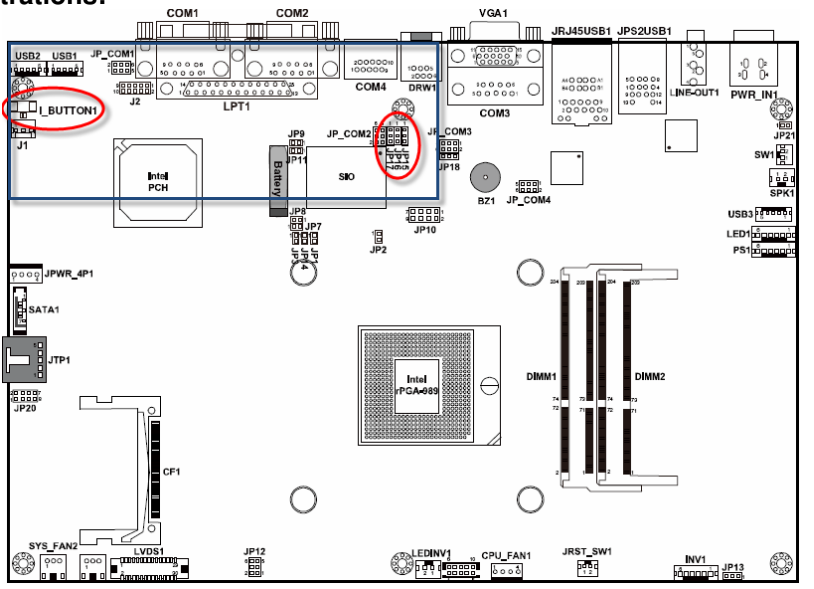
*** Manufacturing Default – COM3

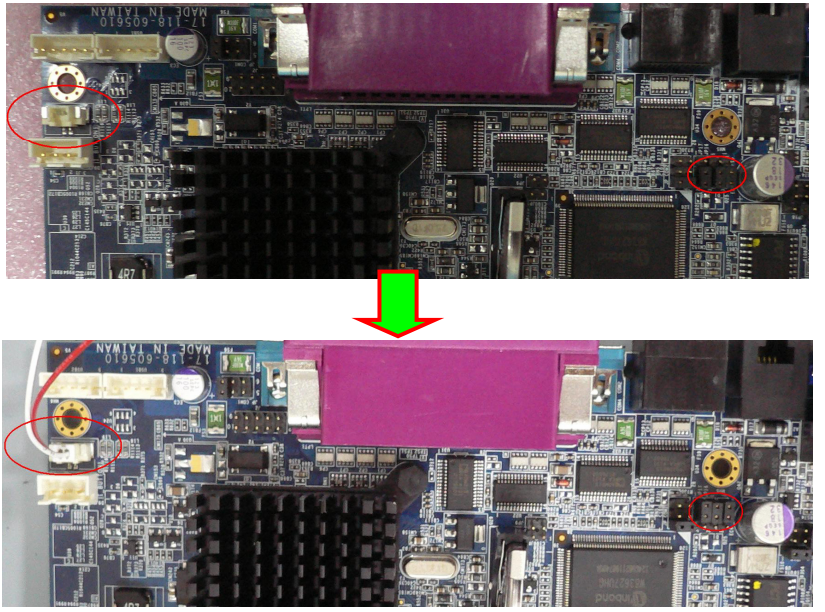
1-2. Refer to the **I_BUTTON1 Pin Assignment** table as shown and connect the i-Button cables to the I_BUTTON1 connector.



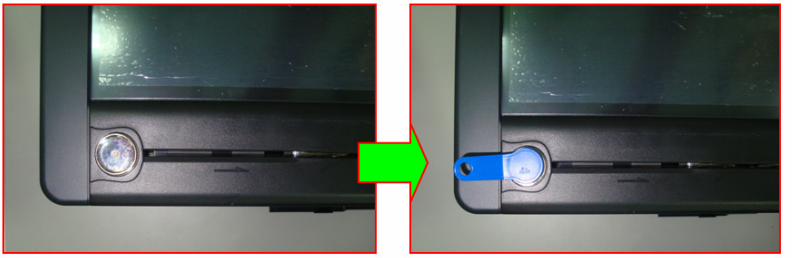
PIN	ASSIGNMENT
1	COM3_DTR_R_I
2	COM3_RXD_R_I

Illustrations:



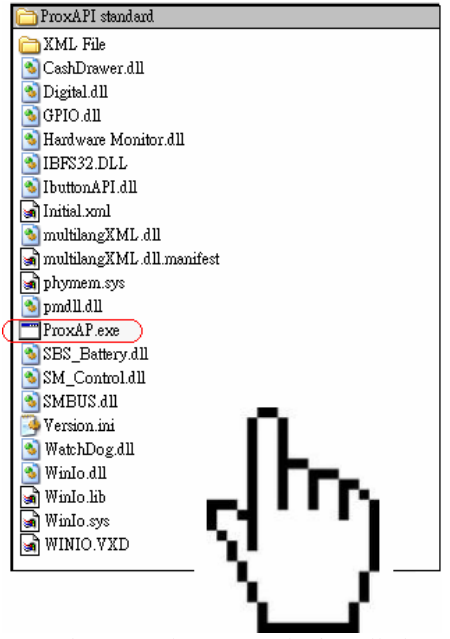


1-3. Place the i-Button key on the POS-6511 as shown below.



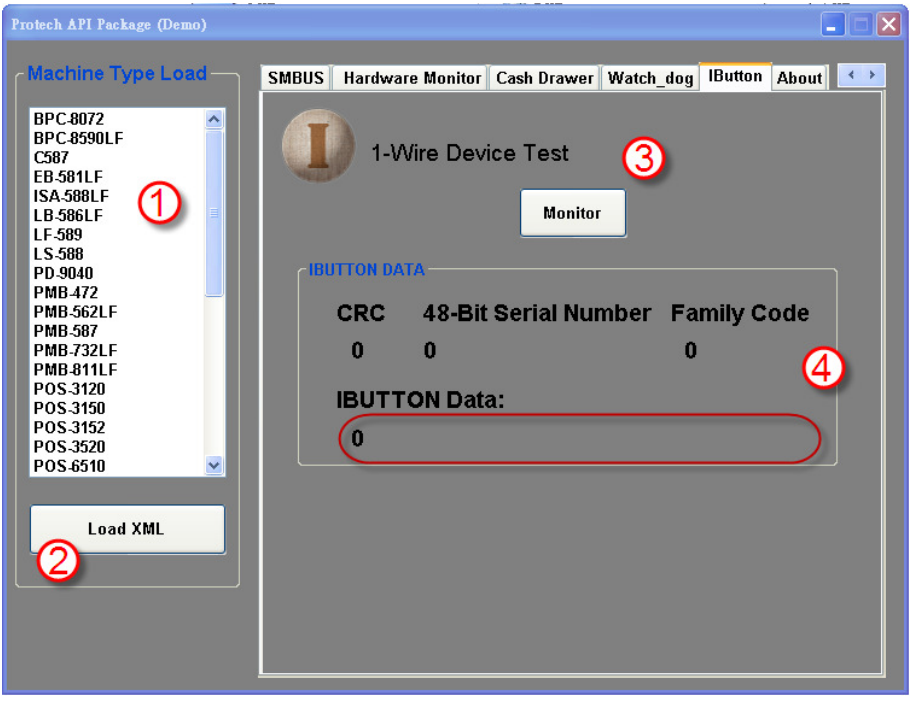
STEP 2: Run Demo Program

2-1. Enter the "ProxAPI standard" folder and double-click the executable file "ProxAP.exe" to open the API program.



Note: (1) .Net Framework 2.0 or above must be installed on the operating system before running the API program, and (2) do not remove any file under the "ProxAPI standard" folder.

STEP 3: API Setting



3-1. Choose "**POS-6511**" from the Machine Type Load list on the left pane.
3-2. Tap **[Load XML]**.
3-3. Switch to the "IButton" tab, and then tap **[Monitor]**.
3-4. The i-Button serial number will be displayed below the **IBUTTON DATA** field.

III. API INFORMATION

Function Files:

Directory	File Name	Description
ProxAPI standard\	IbuttonAPI.dll	Driver to get i-Button
	IBFS32.dll	
	multilangXML.dll	Driver to open XML file
	XML Files\Model Name\Initial.xml	XML file for each model

📖 Model Name is dependent on your machine type.

Function Parameters:

Decode_Ibutton_Process

bool Decode_Ibutton_Process(short[] buffer)

Purpose	Get the i-Button data.
Value	buffer = i-Button read will sent to this buffer
Returned	True (1) on success, False (0) on failure

USER'S MANUAL

POS-6511 Series

POS System Powered by
Intel® Sandy Bridge Platform

POS-6511 Series M2

POS-6511 Series POS System
With LCD / Touchscreen

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.

TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION

CHAPTER 2 SYSTEM CONFIGURATION

CHAPTER 3 SOFTWARE UTILITIES

CHAPTER 4 AMI BIOS SETUP

APPENDIX A SYSTEM ASSEMBLY

APPENDIX B TECHNICAL SUMMARY

APPENDIX C QUICK MANUAL

INTRODUCTION

CHAPTER

1

This chapter gives you the information for the POS-6511. It also outlines the system specifications.

Sections included:

- About This Manual
- POS System Illustration
- 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-6511 Series System. The POS-6511 is an updated system designed to be comparable with the highest performance of IBM AT personal computers. The POS-6511 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, and Touch Screen Utility. It also describes the Wireless Utility.

Chapter 4 AMI 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-6511.

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

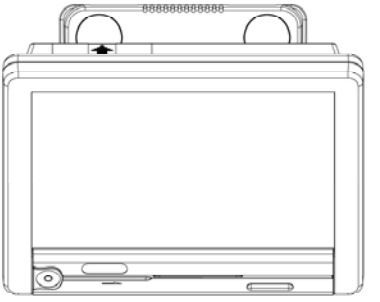
This appendix gives you the information about the VFD assembly procedures and the i-Button decoder API.

1-2. POS SYSTEM ILLUSTRATION

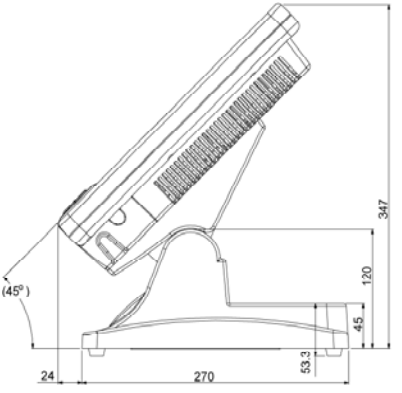
POS-6511

Front View

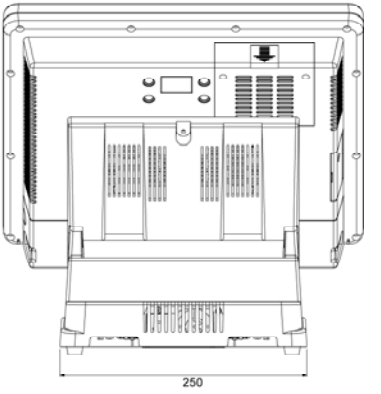
Top View



Side View

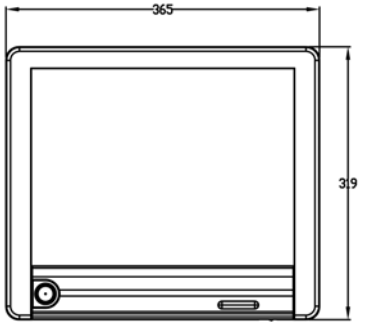


Back View

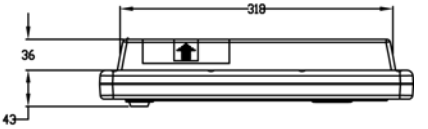


POS-6511-PPC

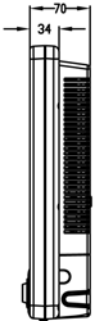
Front View



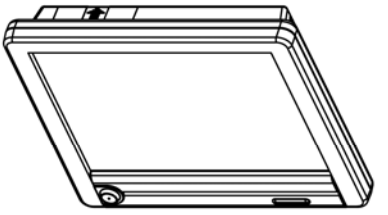
Top View



Side View

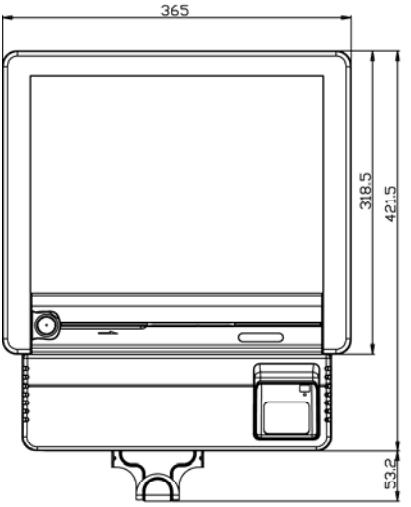


Quarter View

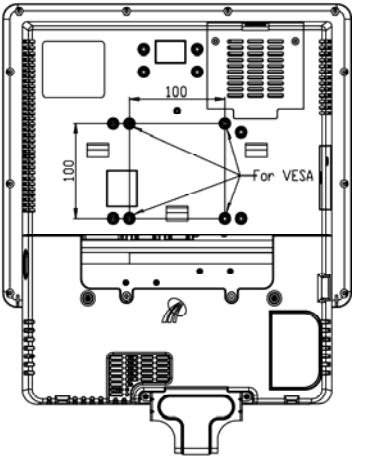


POS-6511-MIT

Front View



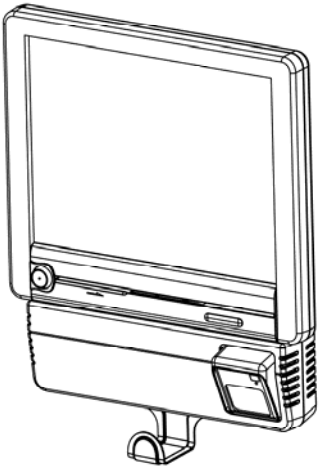
Rear View



Top View

Side View

Quarter View



1-3. SYSTEM SPECIFICATIONS

MAINBOARD (PB-6056RA)

- **CPU Type (with North Bridge):**
  Intel® Celeron B810, 1.60GHz
  Intel® Core i3-2330E processor, 2.2GHz

- **Chipset:**
  Intel® HM65

- **Memory:**
  1 x 204-pin DDRIII SO-DIMM socket on board, up to 4GB

- **Cache:**
  Depended on CPU

- **Real-Time Clock / Calendar:**
  Embedded in Intel® HM65 South Bridge

- **BIOS:**
  AMI SPI BIOS, 64Mbits with VGA BIOS

- **Keyboard & Mouse Connector:**
  PS/2 Keyboard, combined with mini-DIN

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

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

- **PARALLEL PORT:**
  1 x parallel port, bi-directional, supports SPP/EPP/ECP

- **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):**
  [POS-6511] : 365 x 363 x 297 mm (14.37" x 14.37" x 11.69")
  [POS-6511-PPC] : 365 x 318 x 70 mm (14.37" x 12.54" x 2.76")
  [POS-6511-MIT] : 365 x 421.5 x 70 mm (14.37" x 16.59" x 2.76")

- **System Weight:**
  [POS-6511] : 9kg (19.84lb)
  [POS-6511-PPC] : 5.5kg (12.13lb)
  [POS-6511-MIT] : 7.4kg (16.31lb)

- **LCD Panel:**

Type	XGA
Max. Resolution	1024 x 768
Size/Type	15" / TFT
Viewing Angel (degree)	0~70 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 PCI-e Wireless LAN Module (802.11b/g)

- **MSR / Fingerprint (Optional):**
  External vertical module, MSR, Read only, ISO Tracker 1+2+3 (PS/2 KB Interface) + Fingerprint (USB Interface)

- **MSR / i-Button / RFID (Optional):**
  External vertical module, MSR, Read only, JIS-I or II, ISO Tracker 1+2+3; I-button, Read only; RFID, Read / Write, ISO 14443A 13.56MHz (USB 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-6511 on a sturdy, level surface. Be sure to allow enough space around the system to have easy access needs.

b. Avoid installing your POS-6511 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-6511 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-6511 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

CHAPTER

2

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

Sections included:

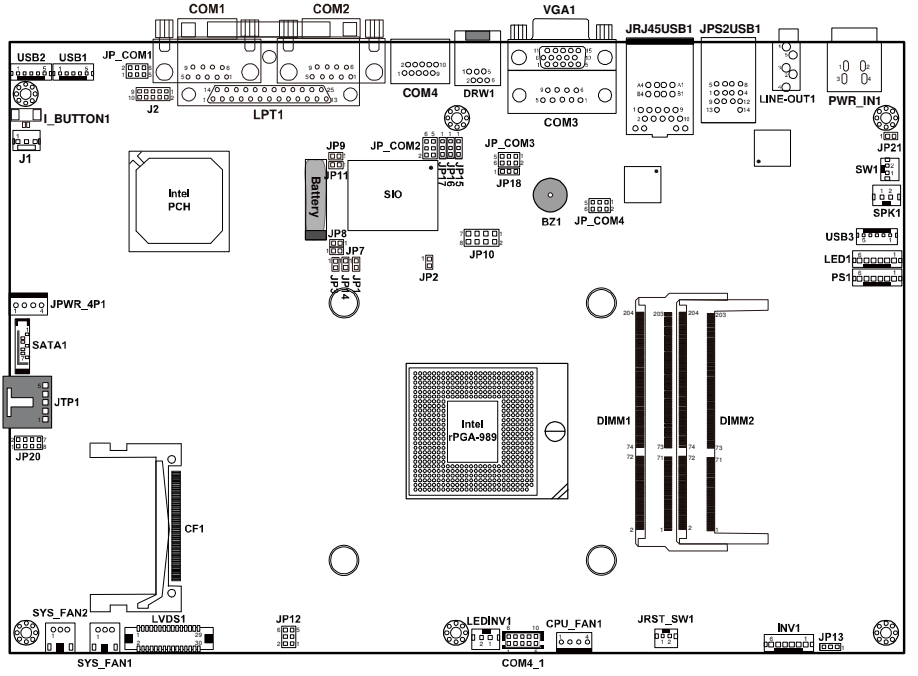
- Jumper & Connector Quick Reference Table
- Component Locations
- Configuration and Jumper settings
- Connector Pin Assignments

2-1. JUMPER & CONNECTOR QUICK REFERENCE TABLE

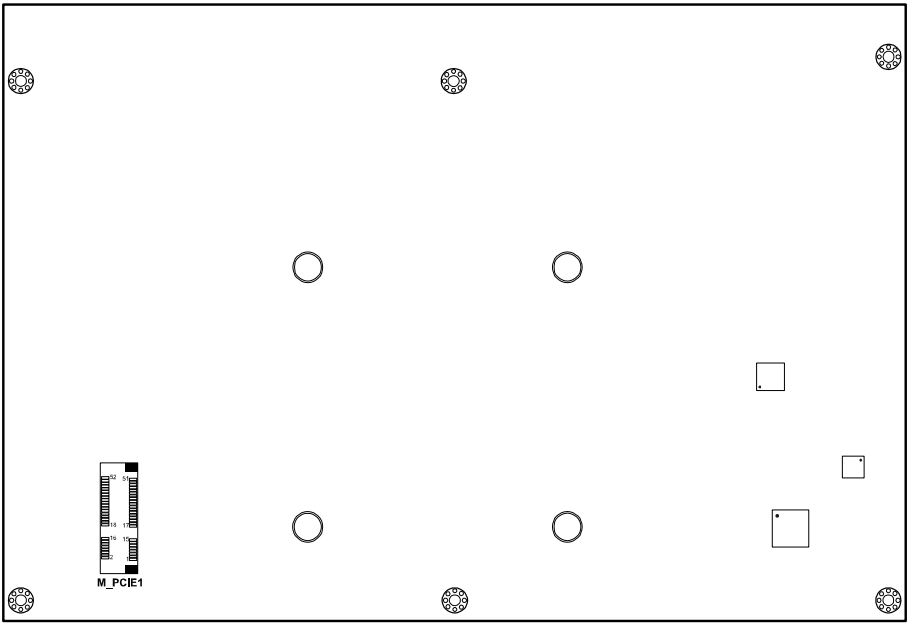
Connector & Jumper	Name	Page
COM Port Connector	COM1, COM2, COM3, COM4, COM4_1	2-7
COM Port RI and Voltage Selection	JP_COM1, JP_COM2, JP_COM3, JP_COM4	2-10
VGA Connector	VGA1	2-11
I-Button Connector	I_BUTTON1	2-12
I-Button Function Selection	JP15, JP16, JP17	2-12
LAN & USB Connector	JRJ45USB1	2-13
USB Connector	USB1, USB2, USB3	2-14
Mini-DIN & USB Connector	JPS2USB1	2-15
Cash Drawer Connector	DRW1	2-16
Cash Drawer Power Selection	JP18	2-16
LED Connector	LED1	2-17
Power Connector	J1	2-17
Power Switch Connector	SW1	2-17
Fan Connector	CPU_FAN1, SYS_FAN1, SYS_FAN2	2-18
External Speaker Connector	SPK1	2-19
Inverter Connector	INV1	2-19
Backlight Type Selection	JP13	2-19
MSR / Card Reader Connector	PS1	2-20
LVDS Voltage Selection	JP12	2-20
LVDS Connector	LVDS1	2-21
SATA & SATA Power Connector	SATA1, JPWR_4P1	2-22
Touch Panel Connector	JTP1	2-23
Clear CMOS Data Selection	JP7	2-23
Touch Panel Type Selection	JP26, JP27, JP28, JP29	2-24
Compact Flash Connector	CF1	2-25
Printer Connector	LPT1	2-26

2-2. COMPONENT LOCATIONS

M/B: PB-6056RA



POS-6511 Mainboard Front Connector, Jumper and Component locations



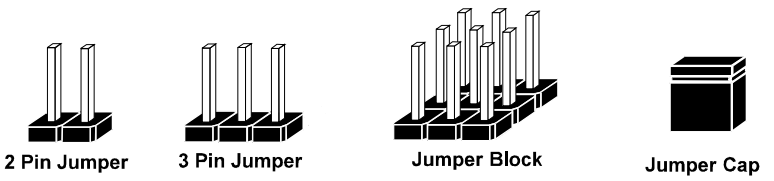
POS-6511 Mainboard Rear Connector, Jumper and Component locations

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

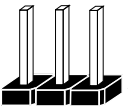


If a jumper has three pins for example, labelled PIN1, PIN2, and PIN3. You can connect PIN1 & PIN2 to create one setting and shorting. You can either connect PIN2 & PIN3 to create another setting. The same jumper diagrams are applied all through this manual. The figure below shows what the manual diagrams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

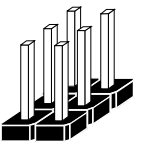
JUMPER DIAGRAMS

Jumper Cap looks like this

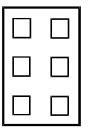
2 pin Jumper looks like this



3 pin Jumper looks like this

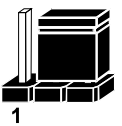


Jumper Block looks like this



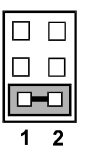
JUMPER SETTINGS

2 pin Jumper closed(enabled)
looks like this



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

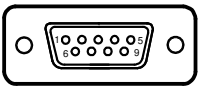
Jumper Block
1-2 pin closed(enabled)
looks like this



2-4. COM PORT CONNECTOR

There are four COM ports enhanced in this board namely: COM1, COM2, COM3, COM4 and COM4_1.

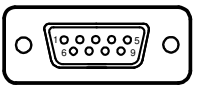
COM1: COM1 Connector
The pin assignments are as follows:



COM1

PIN	ASSIGNMENT
1	DCD1
2	RXD1
3	TXD1
4	DTR1
5	GND
6	DSR1
7	RTS1
8	CTS1
9	RI / +5V / +12V selectable

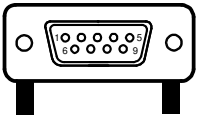
COM2: COM2 Connector
The pin assignments are as follows:



COM2

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

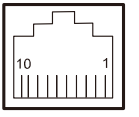
COM3: COM3 Connector
The pin assignments are as follows:



COM3

PIN	ASSIGNMENT
1	DCD3
2	RXD3
3	TXD3
4	DTR3
5	GND
6	DSR3
7	RTS3
8	CTS3
9	RI / +5V / +12V selectable

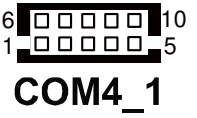
COM4: COM4 Connector
The pin assignments are as follows:



COM4

PIN	ASSIGNMENT
1	DCD4
2	RXD4
3	TXD4
4	DTR4
5	GND
6	DSR4
7	RTS4
8	CTS4
9	RI / +5V / +12V selectable
10	NC

COM4_1: COM4_1 Wafer
The pin assignments are as follows:

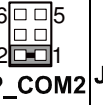
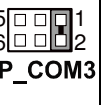
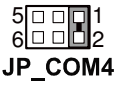
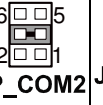
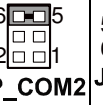
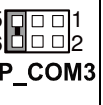
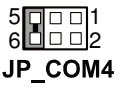


PIN	ASSIGNMENT
1	DCD4
2	RXD4
3	TXD4
4	DTR4
5	GND
6	DSR4
7	RTS4
8	CTS4
9	RI / +5V / +12V selectable
10	NC

🕮 All COM ports are selectable for RI, +5V and +12V. Refer to the section **2-5 COM Port RI & Voltage Selection**.

2-5. COM PORT RI & VOLTAGE SELECTION

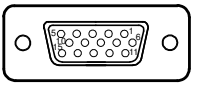
JP_COM1 , JP_COM2, JP_COM3, JP_COM4:
COM Port RI & Voltage Selection
The jumper settings are as follows:

SELECTION	JUMPER SETTINGS	JUMPER ILLUSTRATION			
RI (default)	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. VGA CONNECTOR

VGA1: VGA Connector
The pin assignments are as follows:



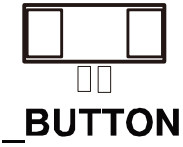
VGA1

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

2-7. I-BUTTON CONNECTOR

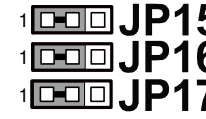
I_BUTTON1: I-Button Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	COM3_DTR_R_I
2	COM3_RXD_R_I



2-8. I-BUTTON FUNCTION SELECTION

JP15, JP16, JP17: i-Button Function Selection
The jumper settings are as follows:

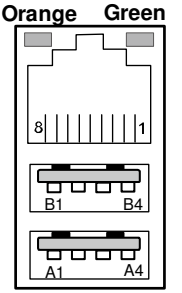
SELECTION	JUMPER SETTINGS	JUMPER ILLUSTRATION
i-Button	2-3	
COM 3 (default)	1-2	

*** Manufacturing Default – COM3

When the jumpers are set as 'i-Button', the COM3 connector is not functional.

2-9. LAN & USB CONNECTOR

JRJ45USB1: LAN & USB Connector
The pin assignments are as follows:



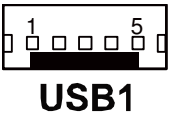
JRJ45USB1

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

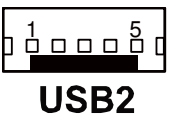
2-10. USB CONNECTOR

USB1: Internal USB Connector
The pin assignments are as follows:



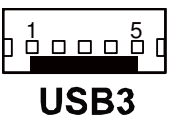
PIN	ASSIGNMENT
1	USB4-
2	USB4+
3	GND
4	VCC5
5	GND

USB2: Internal USB Connector
The pin assignments are as follows:



PIN	ASSIGNMENT
1	USB5-
2	USB5+
3	GND
4	VCC5
5	GND

USB3: Internal USB Connector
The pin assignments are as follows:

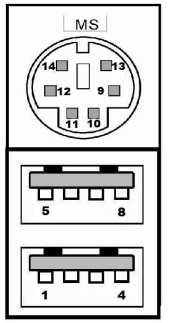


PIN	ASSIGNMENT
1	USB8-
2	USB8+
3	GND
4	VCC5
5	GND

2-11. MINI-DIN & USB CONNECTOR

JPS2USB1: Mini-DIN and USB Connectors
Mini-DIN connector can support keyboard, Y-cable, or PS/2 Mouse.
The pin assignments are as follows:

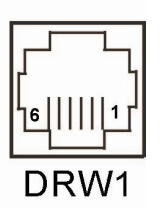
PIN	ASSIGNMENT
1	GND
2	USB3+
3	USB3-
4	VCC5
5	GND
6	USB2+
7	USB2-
8	VCC5
9	GND
10	KDAT
11	MDAT
12	V5SB
13	KCLK
14	MCLK



JPS2USB1

2-12. 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
5	NC
6	GND

PB-6056RA cash drawer control in GPIO port

To Open Drawer1 (GPIO 7)
Write "0"h to I/O space register "50C"h Bit 7
To Close Drawer1
Write "1"h to I/O space register "50C"h Bit 7

Detect Drawer1 Status
Read I/O space register "50C"h (GPIO 6)
Definition (bit6)

2-13. CASH DRAWER POWER SELECTION

JP18: Cash Drawer Power Selection
The jumper settings are as follows:

SELECTION	JUMPER SETTING	JUMPER ILLUSTRATION
+12V	2-3	
+24V (default)	1-2	

*** Manufacturing Default – +24V

2-14. LED CONNECTOR

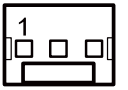
LED1: Power, HDD, LAN indication LED Connector
The pin assignments are as follows:

LED1

PIN	ASSIGNMENT
1	PWR_LED
2	GND
3	HDD_LED
4	GND
5	LAN_Link
6	GND

2-15. POWER CONNECTOR

J1: Provide 12 Voltage Connector
The pin assignments are as follows:



J1

PIN	ASSIGNMENT
1	VCC12
2	GND
3	VCC12

2-16. POWER SWITCH CONNECTOR

SW1: Power Switch Connector
The pin assignments are as follows:

SW1

PIN	ASSIGNMENT
1	GND
2	PWR_SW

2-17. FAN CONNECTOR

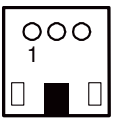
CPU_FAN1: CPU Fan Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	GND
2	12V
3	CPUFANIN
4	CPUFANOUT

CPU_FAN1

SYS_FAN1: System Fan Connector
The pin assignments are as follows:

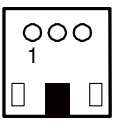
PIN	ASSIGNMENT
1	GND
2	12V
3	CPUFAN



SYS_FAN1

SYS_FAN2: System Fan Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	GND
2	12V
3	CPUFAN

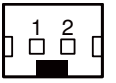


SYS_FAN2

2-18. EXTERNAL SPEAKER CONNECTOR

SPK1: External Speaker Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	SPK_GND
2	SPK_OUT



SPK1

2-19. INVERTER CONNECTOR

INV1: Inverter Connector
The pin assignments are as follows:

PIN	ASSIGNMENT
1	+12V
2	GND
3	GND
4	BRCTR
5	LVDS_BKLTEN
6	+12V

INV1

2-20. BACKLIGHT TYPE SELECTION

JP13: Backlight type Selection
The jumper settings are as follows:

SELECTION	JUMPER SETTING	JUMPER ILLUSTRATION
CCFL (default)	2-3	 JP13
LED	1-2	 JP13

*** Manufacturing Default – CCFL

2-21. MSR/ CARD READER CONNECTOR

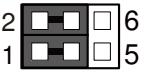
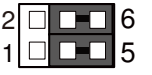
PS1: MSR/ Card Reader Connector
The pin assignments are as follows:

PS1

PIN	ASSIGNMENT
1	KB_CLK (Output)
2	KB_CLK_C (Input)
3	KB_DATA_C (Input)
4	KB_DATA (Output)
5	+5V
6	GND

2-22. LVDS VOLTAGE SELECTION

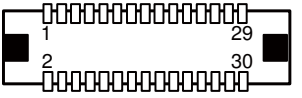
JP12: LVDS Voltage Selection
The pin assignments are as follows:

SELECTION	JUMPER SETTING	JUMPER ILLUSTRATION
3.3V (default)	1-3 2-4	 **JP12**
5V	3-5 4-6	 **JP12**

*** Manufacturing Default – 3.3V

2-23. LVDS CONNECTOR

LVDS1: LVDS connector
The pin assignments are as follows:



LVDS1

PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	LVDS_VCC	2	GND
3	NC	4	NC
5	GND	6	NC
7	NC	8	GND
9	NC	10	NC
11	NC	12	NC
13	NC	14	NC
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

2-24. SATA & SATA POWER CONNECTOR

SATA1: 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

JPWR_4P1: Serial ATA Power Connector
The pin assignments are as follows:

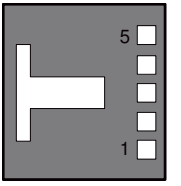
PIN	ASSIGNMENT
1	VCC
2	GND
3	GND
4	VCC12

JPWR_4P1

2-25. TOUCH PANEL CONNECTOR

JTP1: 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)



JTP1

2-26. CLEAR CMOS DATA SELECTION

JP7: Clear CMOS Data Selection
The jumper settings are as follows:

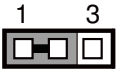
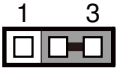
FUNCTION	JUMPER SETTING (pin closed)	JUMPER ILLUSTRATION
Clear CMOS	1-2	 **JP7**
Normal (default)	NC	 **JP7**

*** Manufacturing Default – Normal

🕮 To clear CMOS data, users 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.

2-27. TOUCH PANEL INTERFACE TYPE SELECTION

JP28, J29: USB or RS-232 interface selection for touch panel
The jumper settings are as follows:

SELECTION	JUMPER SETTING	JUMPER ILLUSTRATION
RS-232	1-2	 **JP28/ JP29**
USB	2-3	 **JP28/ JP29**

*** Manufacturing Default – USB

JP26, JP27: USB or RS-232 interface selection for touch panel
The jumper settings are as follows:

SELECTION	JUMPER SETTING	JUMPER ILLUSTRATION
RS-232	Open	 **JP26/ JP27**
USB	Close	 **JP26/ JP27**

*** Manufacturing Default – USB

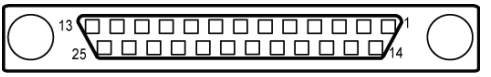
2-28. COMPACT FLASH CONNECTOR

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

2-29. PRINTER CONNECTOR

LPT1: Printer Connector
The pin assignments are as follows:



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	26	NC

SOFTWARE UTILITIES

CHAPTER

3

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-6511 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\[OS]\MainChip	Intel® Chipset Software Installation Utility
D:\Driver\Plaform\[OS]\VGA	Intel® HD Graphics for embedded media and Graphics driver installation
D:\Driver\Plaform\[OS]\LAN	Realtek® RTL8119 for LAN driver installation
D:\Driver\Plaform\[OS]\SOUND	Realtek® ALC888S for sound driver installation
D:\Driver\Device\Touch Screen	eGalax Touch Utility
D:\Driver\Flash BIOS	AMI BIOS Update Utility

🔔 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

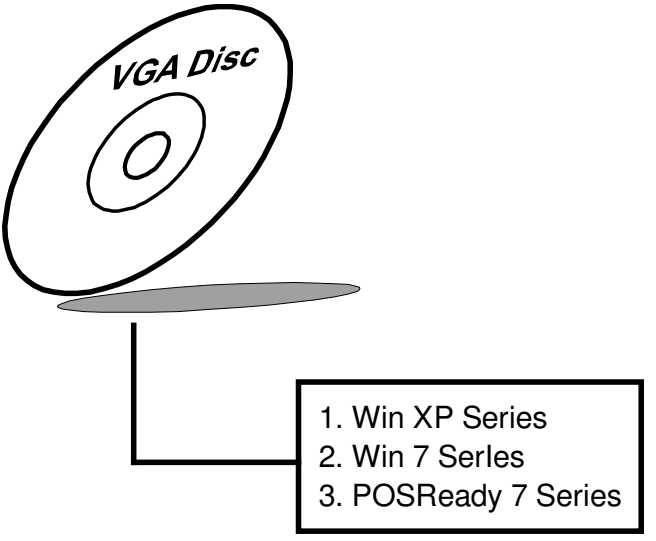
3-2-2. Installation of Intel® Chipset Driver

The utility pack is to be installed only for Windows XP/7/POSReady7 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-6511 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-6511 for the changes to take effect.

3-3. VGA DRIVER UTILITY

The VGA interface embedded with the POS-6511 series can support a wide range of display types. You can have dual displays via CRT and LVDS interfaces work simultaneously.



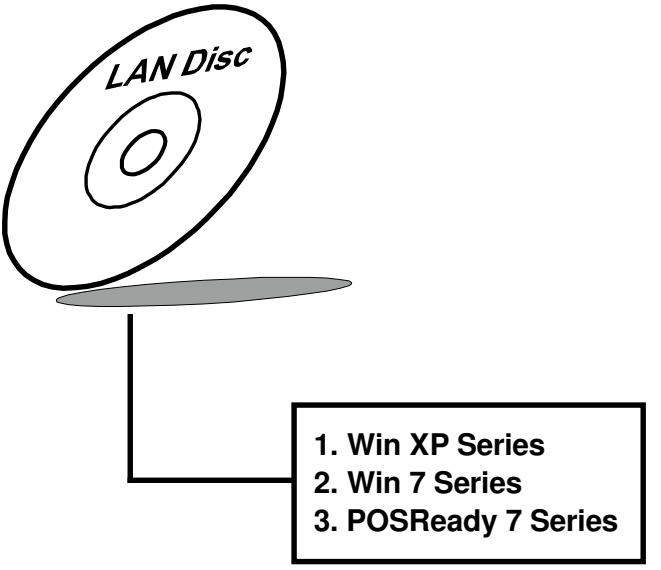
3-3-1. Installation of VGA Driver

To install the VGA Driver, follow the steps below:

1. Connect the USB-CD ROM device to the POS-6511 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-6511 for the changes to take effect.

3-4. LAN DRIVER UTILITY

The POS-6511 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.

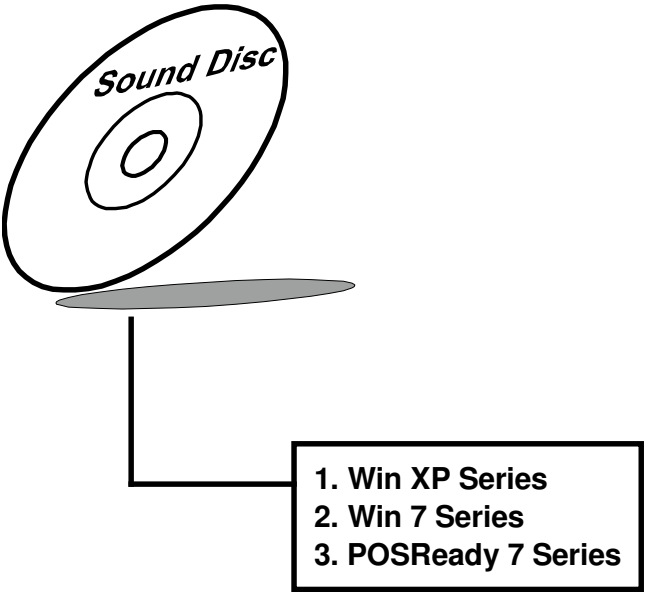
3-4-1. Installation of LAN Driver

To install the LAN Driver, follow the steps below:

1. Connect the USB-CD ROM device to the POS-6511 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-6511 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/POSReady7 series. Below, you will find the content of the Sound driver.



3-5-1. Installation of Sound Driver

To install the Sound Driver, , follow the steps below:

1. Connect the USB-CD ROM device to the POS-6511 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-6511 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/POSReady7 series), and it should be installed right after the OS installation.

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-6511 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-6511 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/POSReady7 series), and it should be installed right after the OS installation.

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-6511 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-6511 for the changes to take effect.

AMI BIOS SETUP

CHAPTER

4

This chapter shows how to set up the AMI BIOS.

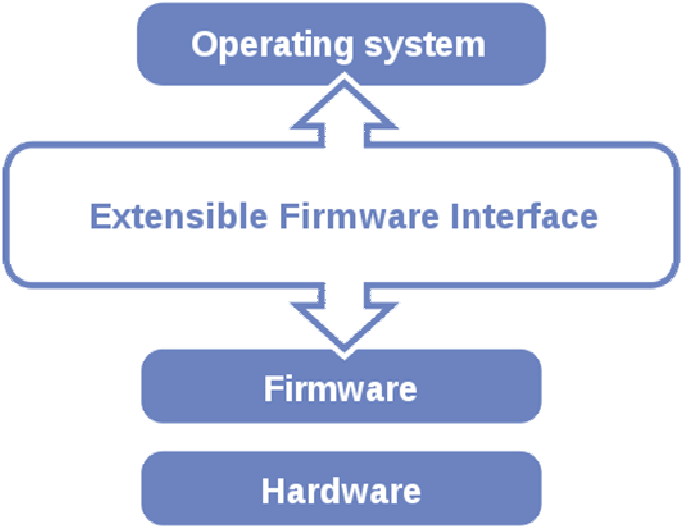
Section includes:

- Introduction
- Entering Setup
- Main
- Advanced
- Chipset
- Boot
- Security
- Save & Exit

4-1. INTRODUCTION

The board POS-6511 uses an AMI Aptio BIOS that is stored in the Serial Peripheral Interface Flash Memory (SPI Flash) and can be updated. The SPI Flash contains the BIOS Setup program, Power-on Self-Test (POST), the PCI auto-configuration utility, LAN EEPROM information, and Plug and Play support.

Aptio is AMI's BIOS firmware based on the UEFI (Unified Extensible Firmware Interface) Specifications and the Intel Platform Innovation Framework for EFI. The UEFI specification defines an interface between an operating system and platform firmware. The interface consists of data tables that contain platform-related information, boot service calls, and runtime service calls that are available to the operating system and its loader. These provide standard environment for booting an operating system and running pre-boot applications. Following illustration shows Extensible Firmware Interface's position in the software stack.



EFI BIOS provides an user interface allow users the ability to modify hardware configuration, e.g. change system date and time, enable or disable a system component, decide bootable device priorities, setup personal password, etc., which is convenient for modifications and customization of the computer system and allows technicians another method for finding solutions if hardware has any problems.

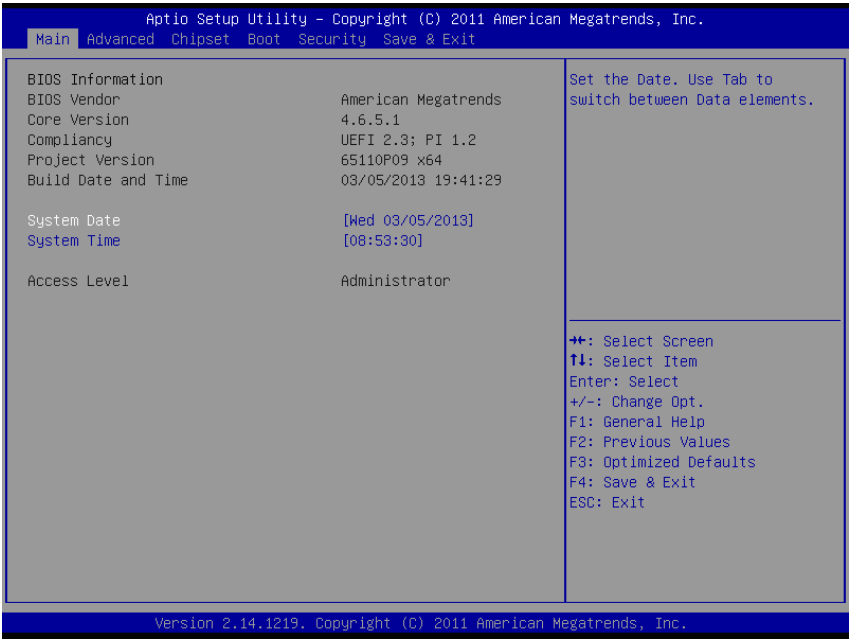
The BIOS Setup program can be used to view and change the BIOS settings for the computer. The BIOS Setup program is accessed by pressing the <Del> or <F2> key after the POST memory test begins and before the operating system boot begins. The settings are shown below.

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:

POST screen

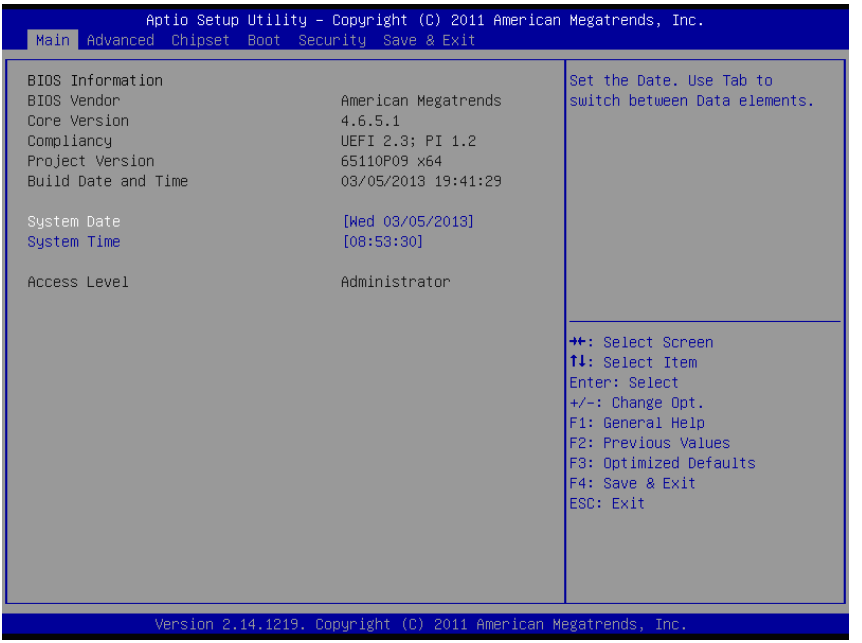
As long as this message is present on the screen you may press the <Del> key (the one that shares the decimal point at the bottom of the number keypad) to access the Setup program. In a moment, the main menu of the Aptio Setup Utility will appear on the screen:



Setup program initial screen

You may move the cursor by 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.

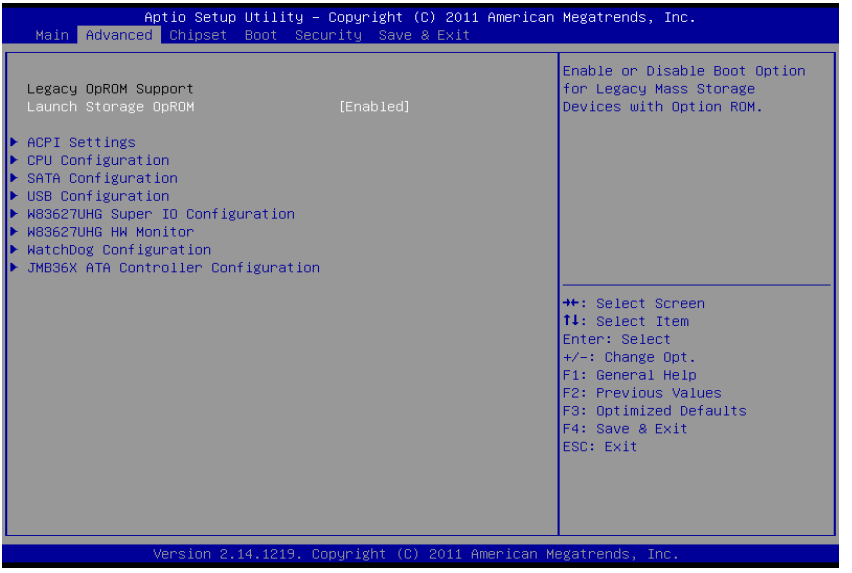
4-3. Main



Main Screen

BIOS Setting	Options	Description/Purpose
BIOS Vendor	No changeable options	Displays the BIOS vendor.
Core Version	No changeable options	Displays the current BIOS core version.
Compliancy	No changeable options	Displays the current UEFI version.
Project Version	No changeable options	Displays the version of the BIOS currently installed on the platform.
Build Date and Time	No changeable options	Displays the date of current BIOS version.
System Date	month, day, year	Specifies the current date.
System Time	hour, minute, second	Specifies the current time.
Access Level	No changeable options	Displays the current user level.

4-4. Advanced

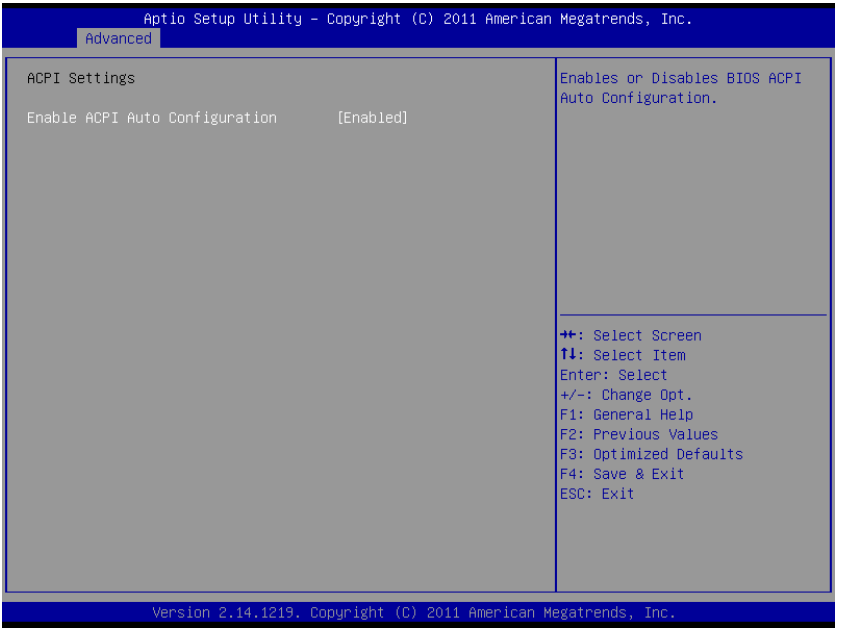


Advanced Screen

BIOS Setting	Options	Description/Purpose
Launch Storage OpROM	-Disabled -Enabled	Enables or disables the boot option for legacy mass storage devices with option ROM.
ACPI Settings	Sub-Menu	System ACPI Parameters.
CPU Configuration	Sub-Menu	CPU Configuration. Parameters.
SATA Configuration	Sub-Menu	SATA Configuration Parameters.
USB Configuration	Sub-Menu	USB Configuration Parameters.
W83627UHG SuperIO Configuration	Sub-Menu	SuperIO Configuration Parameters.
W83627UHG H/W Monitor	Sub-Menu	Monitor hardware status.

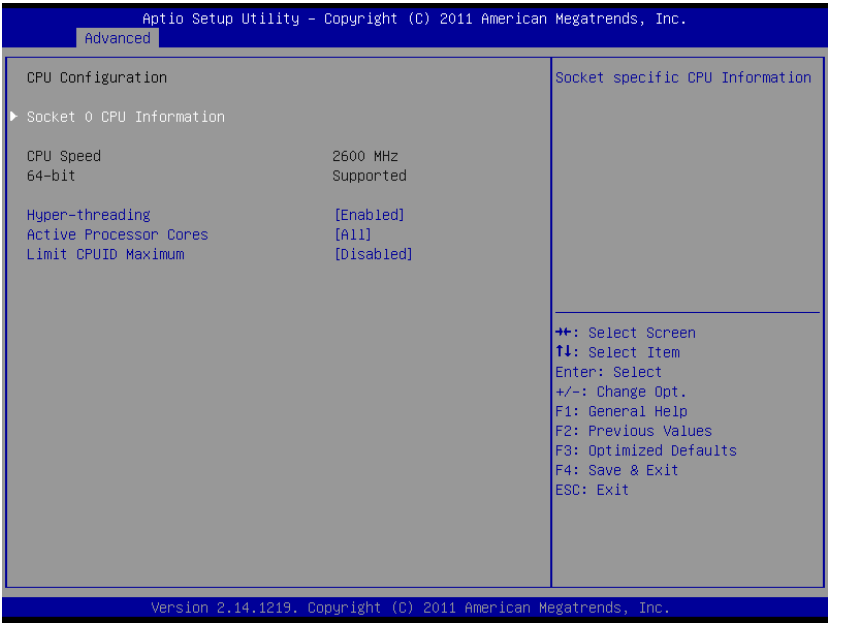
BIOS Setting	Options	Description/Purpose
WatchDog Configuration	multiple options ranging from 0 to 255	Sets the desired value (seconds) for watchdog timer.
JMB36X ATA Controller Configuration	Sub-Menu	Select an operative mode for CF Card controller.

4-4.1. Advanced – ACPI Settings



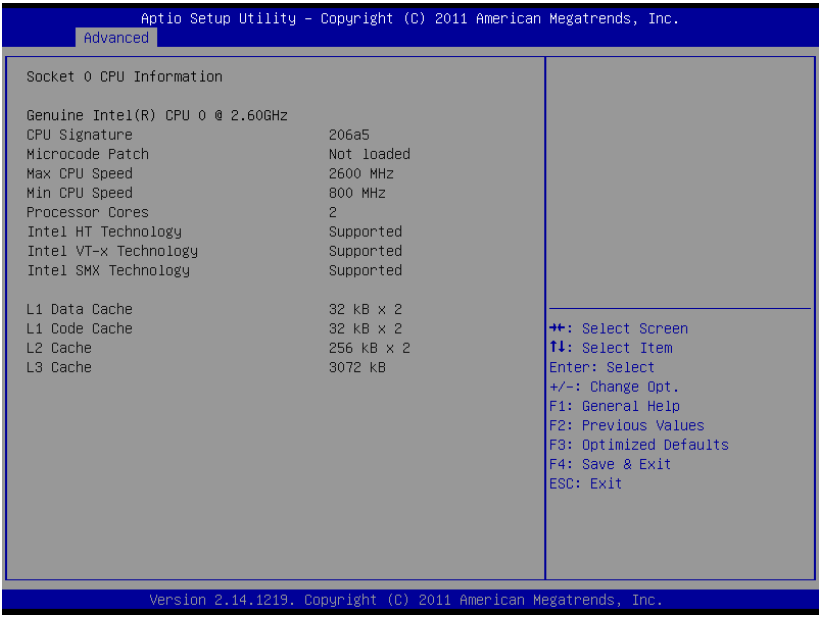
BIOS Setting	Options	Description/Purpose
Enable ACPI Auto Configuration	-Disabled -Enabled	Enables Advanced Configuration and Power Interface automatic configuration. When enabled, option ACPI Sleep State option is not available.

4-4.2. Advanced – CPU Configuration



BIOS Setting	Options	Description/Purpose
Socket 0 CPU Information	Sub-Menu	Socket specific CPU information
CPU Speed	No changeable options	Displays the current processor frequency
64-bit	No changeable options	Reports if 64-bit is supported by processor.
Hyper-threading	-disabled -enabled	When disabled, only one thread per active core will operate.
Active Processor Cores	-All -1 -2	Indicates the number of cores to enable in processor.
Limit CPUID Maximum	-disabled -enabled	Enables for legacy operating systems to boot processors with extended CPUID functions.

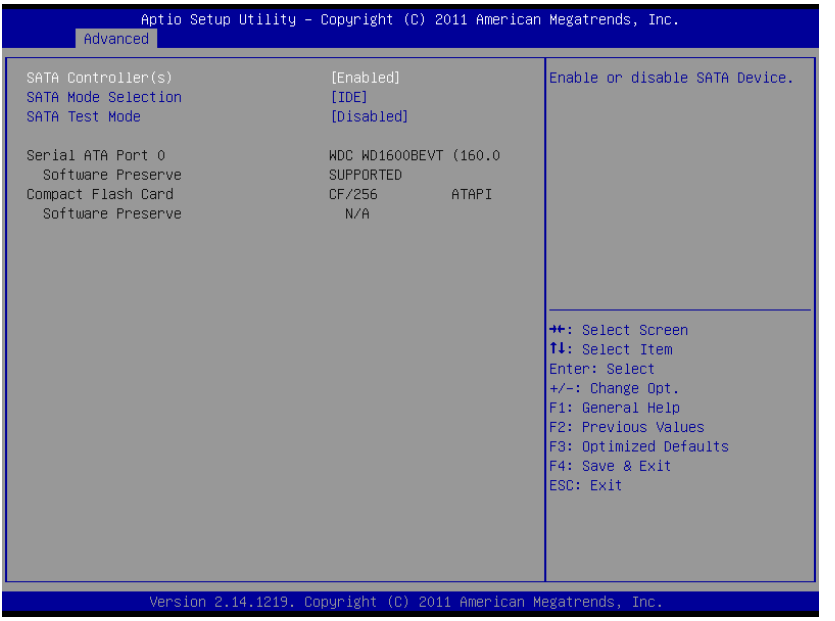
4-4.2.1. Advanced – CPU Configuration – Socket 0 CPU Information



BIOS Setting	Options	Description/Purpose
CPU Signature	No changeable options	Reports the CPU Signature
Microcode Patch	No changeable options	Reports the CPU Microcode Patch Version.
Max CPU Speed	No changeable options	Reports the Max CPU Speed.
Min CPU Speed	No changeable options	Reports the Min CPU Speed.
Processor Cores	No changeable options	Displays number of physical cores in processor.
Intel HT Technology	No changeable options	Reports if Intel Hyper-Threading Technology is supported by processor.
Intel VT-x Technology	No changeable options	Reports if Intel VT-x Technology is supported by processor.
Intel SMX Technology	No changeable options	Reports if Intel SMX Technology is supported by processor.

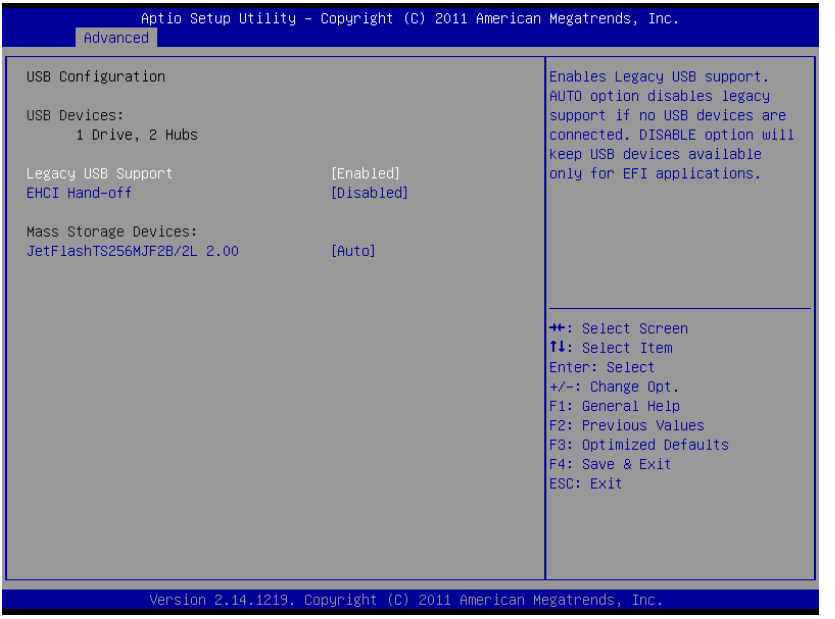
BIOS Setting	Options	Description/Purpose
L1 Data Cache	No changeable options	Displays size of L1 Data Cache.
L1 Code Cache	No changeable options	Displays size of L1 Code Cache.
L2 Cache	No changeable options	Displays size of L2 Cache.
L3 Cache	No changeable options	Displays size of L3 Cache.

4-4.3. Advanced – SATA Configuration



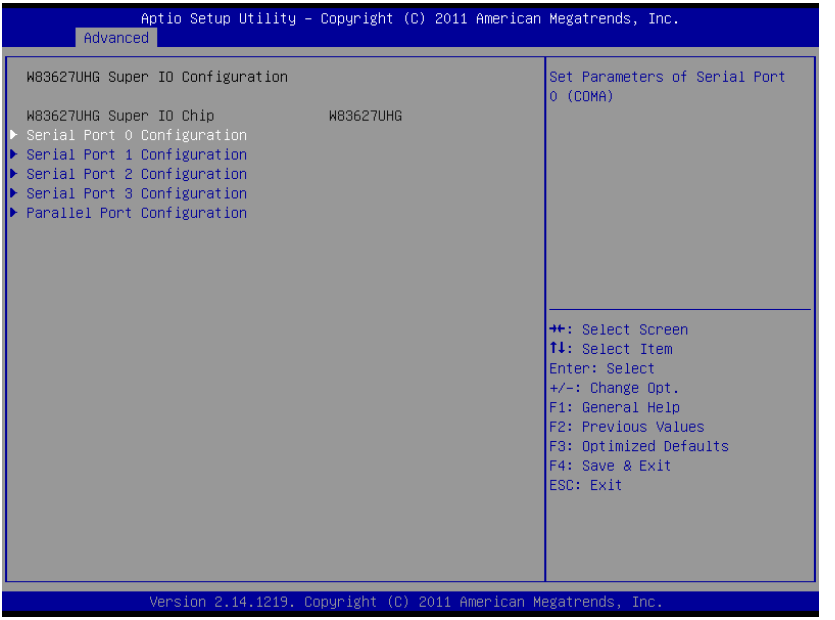
BIOS Setting	Options	Description/Purpose
SATA Controller(s)	- Disabled - Enabled	Enable or disable SATA Device.
SATA Mode Selection	IDE Mode	IDE Mode only.
SATA Test Mode	- Disabled - Enabled	Enable or disable SATA Test Mode.
Serial ATA Port 0	[drive]	Displays the drive installed on this SATA port. Shows [Empty] if no drive is installed.
Compact flash Card	[drive]	Displays the drive installed on this SATA port. Shows [Empty] if no drive is installed.

4-4.4. Advanced – USB Configuration



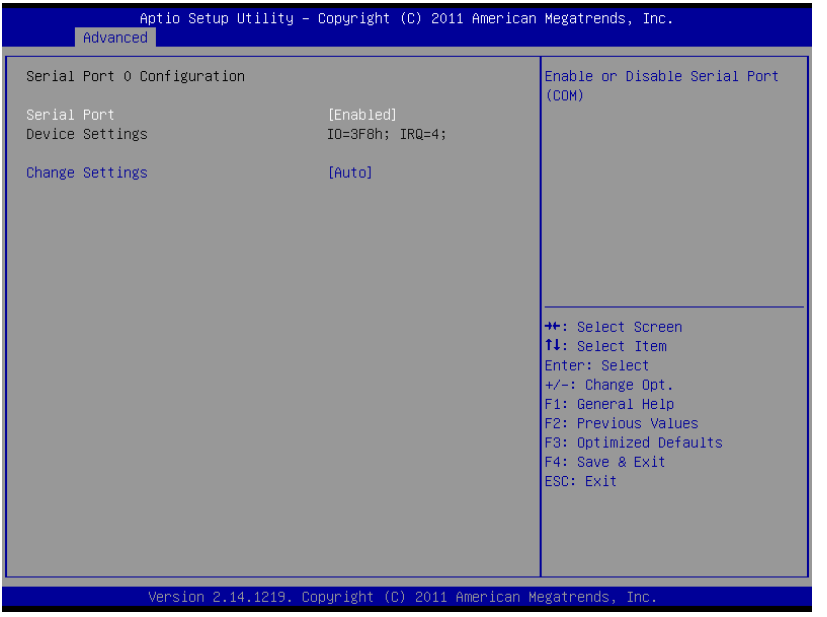
BIOS Setting	Options	Description/Purpose
USB Devices	No changeable options	Displays number of available USB devices.
Legacy USB Support	-Disabled -Enabled -Auto	Enables support for legacy USB.
EHCI Hand-off	-Disabled -Enabled	This is a workaround for OSes w/o EHCI hand-off support.

4-4.5. Advanced – W83627UHG Super IO Configuration



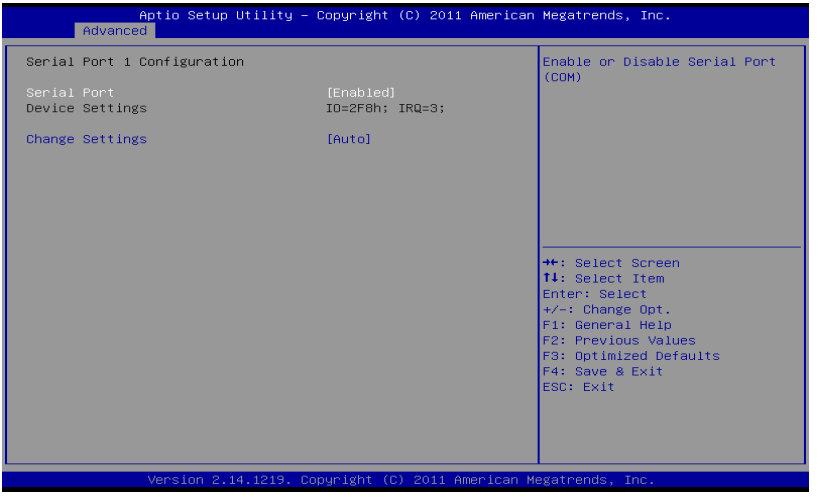
BIOS Setting	Options	Description/Purpose
Super IO Chip	No changeable options	Displays the super IO chip model and its manufacturer.

4-4.5.1. Advanced – W83627UHG Super IO Configuration – Serial Port 0 Configuration



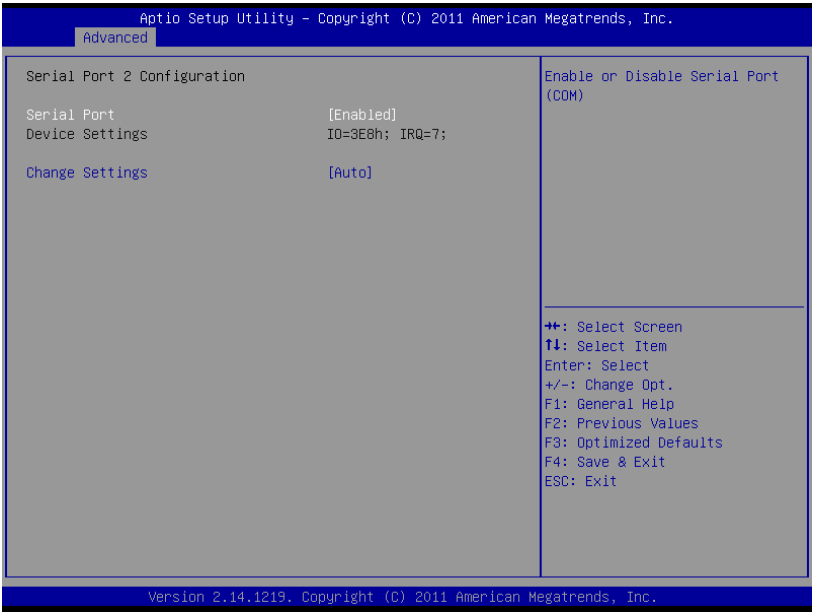
BIOS Setting	Options	Description/Purpose
Serial Port	-disabled -enabled	Configures the serial port 0.
Device Settings	No changeable options	Reports the current serial port 0 setting.
Change Settings	-Auto -IO=3F8h; IRQ=4 -IO=3F8h; IRQ=3,4,5,6,7,10,11,12 -IO=2F8h; IRQ=3,4,5,6,7,10,11,12 -IO=3E8h; IRQ=3,4,5,6,7,10,11,12 -IO=2E8h; IRQ=3,4,5,6,7,10,11,12	Specifies the base I/O address and interrupt request for the serial port 0 if enabled.

4-4.5.2. Advanced – W83627UHG Super IO Configuration – Serial Port 1 Configuration



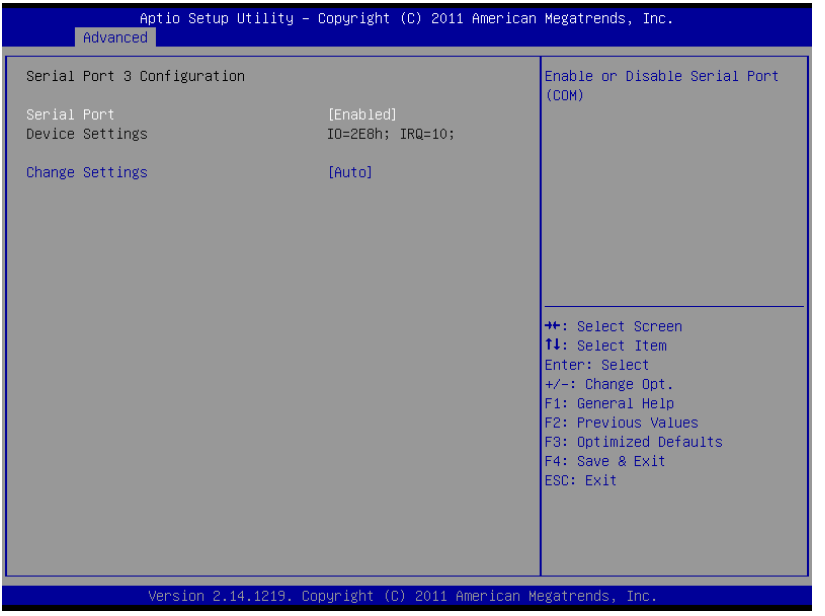
BIOS Setting	Options	Description/Purpose
Serial Port	-disabled -enabled	Configures the serial port 1.
Device Settings	No changeable options	Reports the current serial port 1 setting.
Change Settings	-Auto -IO=3F8h; IRQ=4 -IO=3F8h; IRQ=3,4,5,6,7,10,11,12 -IO=2F8h; IRQ=3,4,5,6,7,10,11,12 -IO=3E8h; IRQ=3,4,5,6,7,10,11,12 -IO=2E8h; IRQ=3,4,5,6,7,10,11,12	Specifies the base I/O address and interrupt request for the serial port 1 if enabled.

4-4.5.3. Advanced – W83627UHG Super IO Configuration – Serial Port 2 Configuration



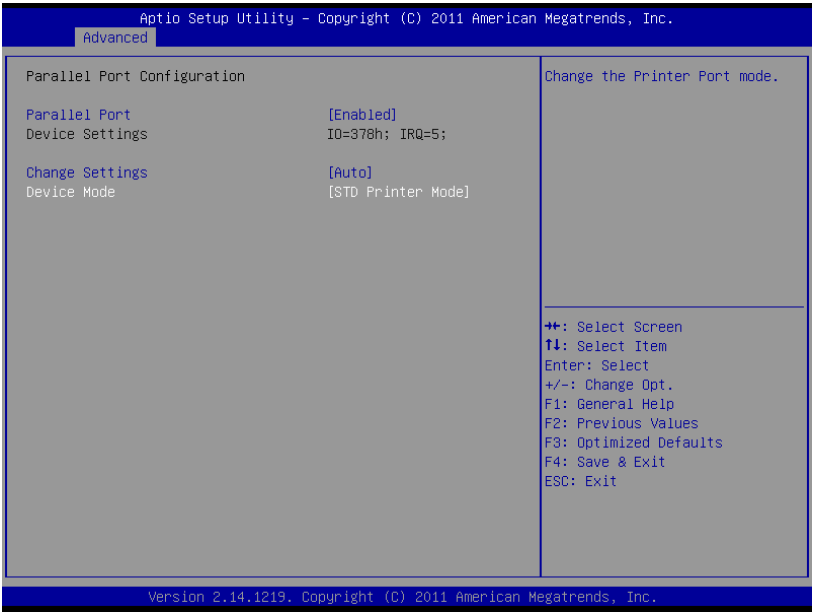
BIOS Setting	Options	Description/Purpose
Serial Port	-disabled -enabled	Configures the serial port 2.
Device Settings	No changeable options	Reports the current serial port 2 setting.
Change Settings	-Auto -IO=3F8h; IRQ=4 -IO=3F8h; IRQ=3,4,5,6,7,10,11,12 -IO=2F8h; IRQ=3,4,5,6,7,10,11,12 -IO=3E8h; IRQ=3,4,5,6,7,10,11,12 -IO=2E8h; IRQ=3,4,5,6,7,10,11,12	Specifies the base I/O address and interrupt request for the serial port 2 if enabled.

4-4.5.4. Advanced – W83627UHG Super IO Configuration – Serial Port 3 Configuration



BIOS Setting	Options	Description/Purpose
Serial Port	-disabled -enabled	Configures the serial port 3.
Device Settings	No changeable options	Reports the current serial port 3 setting.
Change Settings	-Auto -IO=3F8h; IRQ=4 -IO=3F8h; IRQ=3,4,5,6,7,10,11,12 -IO=2F8h; IRQ=3,4,5,6,7,10,11,12 -IO=3E8h; IRQ=3,4,5,6,7,10,11,12 -IO=2E8h; IRQ=3,4,5,6,7,10,11,12	Specifies the base I/O address and interrupt request for the serial port 3 if enabled.

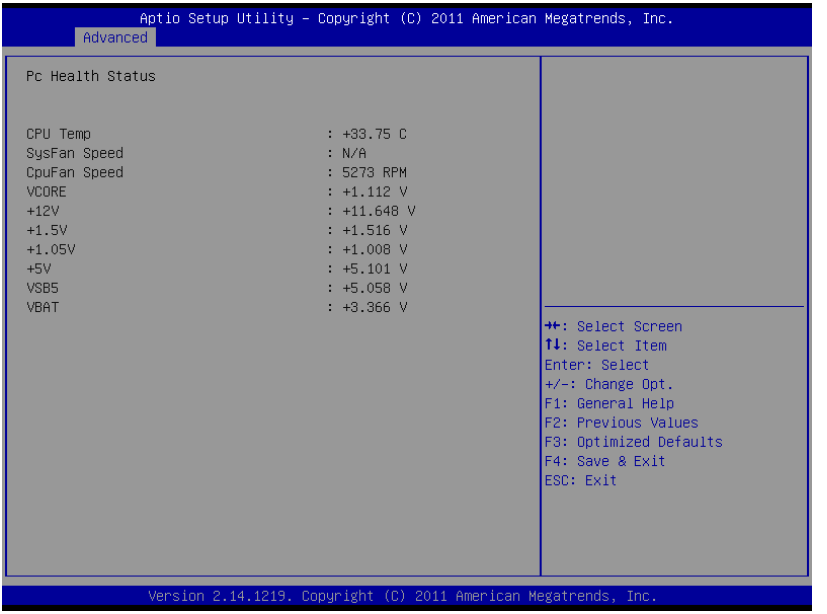
4-4.5.5. Advanced – W83627UHG Super IO Configuration – Parallel Port Configuration



BIOS Setting	Options	Description/Purpose
Parallel Port	-disabled -enabled	Configures the parallel port.
Device Settings	No changeable options	Reports the current parallel port setting.
Change Settings	-Auto -IO=378h; IRQ=5 -IO=378h; IRQ=5,6,7,10,11,12 -IO=278h; IRQ=5,6,7,10,11,12 -IO=3BCh; IRQ=5,6,7,10,11,12 -IO=378h; -IO=278h; -IO=3BCh;	Specifies the base I/O address and interrupt request for the parallel port if enabled.

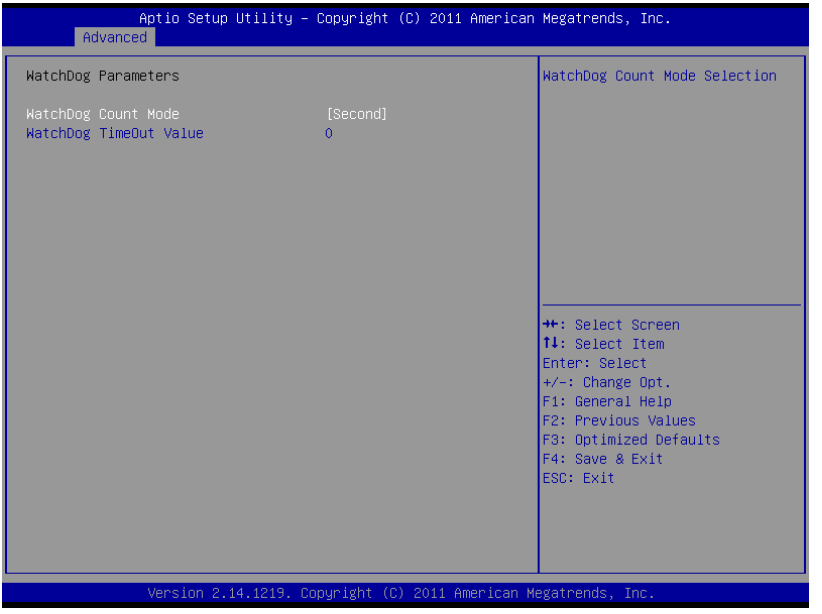
BIOS Setting	Options	Description/Purpose
Device Mode	-STD Printer Mode -SPP Mode -EPP-1.9 and SPP Mode -EPP-1.7 and SPP Mode -ECP Mode -ECP and EPP 1.9 Mode -ECP and EPP 1.7 Mode	Selects the mode for the parallel port. Not available if the parallel port is disabled. **SPP** is Standard Parallel Port mode, a bi-directional mode for printers. **EPP** is Enhanced Parallel Port mode, a high-speed bi-directional mode for non-printer peripherals. **ECP** is Enhanced Capability Port mode, a high-speed bi-directional mode for printers and scanners.

4-4.6. Advanced – W83627UHG H/W Monitor



BIOS Setting	Options	Description/Purpose
CPU Temperature	No changeable options	Displays processor's temperature.
CPU Fan Speed	No changeable options	Displays fan speed of the CPU fan.
System Fan Speed	No changeable options	Displays fan speed of the chassis fan.
VCORE	No changeable options	Displays voltage level of the +VCORE in supply.
+12V	No changeable options	Displays voltage level of the +12V in supply.
+1.5V	No changeable options	Displays voltage level of the +1.5V in supply.
+5V	No changeable options	Displays voltage level of the +5V in supply.
VSB5	No changeable options	Displays voltage level of the +VSB5 in supply.
VBAT	No changeable options	Displays voltage level of the backup CMOS battery.

4-4.7. Advanced – Watchdog Configuration

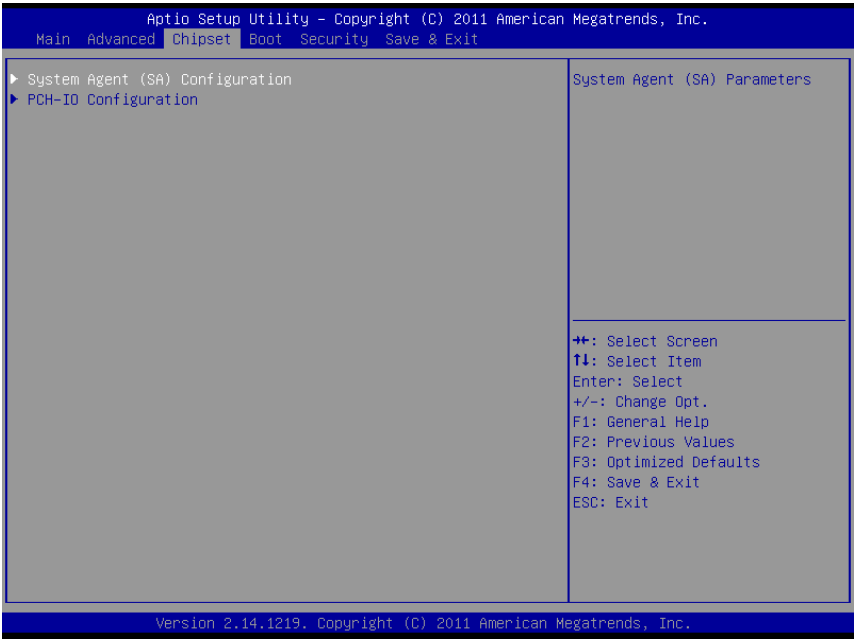


BIOS Setting	Options	Description/Purpose
Watch Dog Timer Time-Out Value	multiple options ranging from 0 to 255	Sets the desired value (seconds) for watchdog timer.

4-4.8. Advanced – JMB36X ATA Controller Configuration

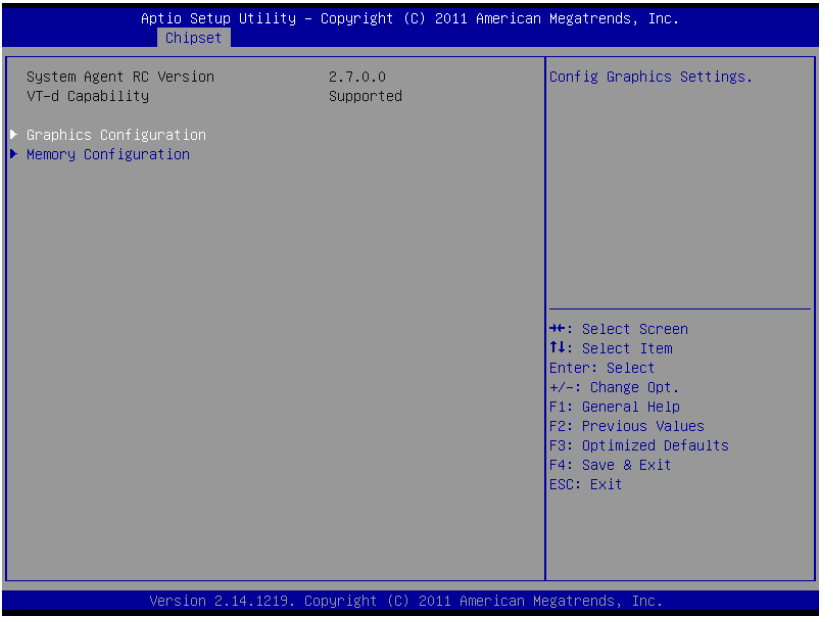
BIOS Setting	Options	Description/Purpose
JMB368 ATA Controller Configuration	Sub-Menu	Select an operative mode for CF Card controller.

4-5. Chipset



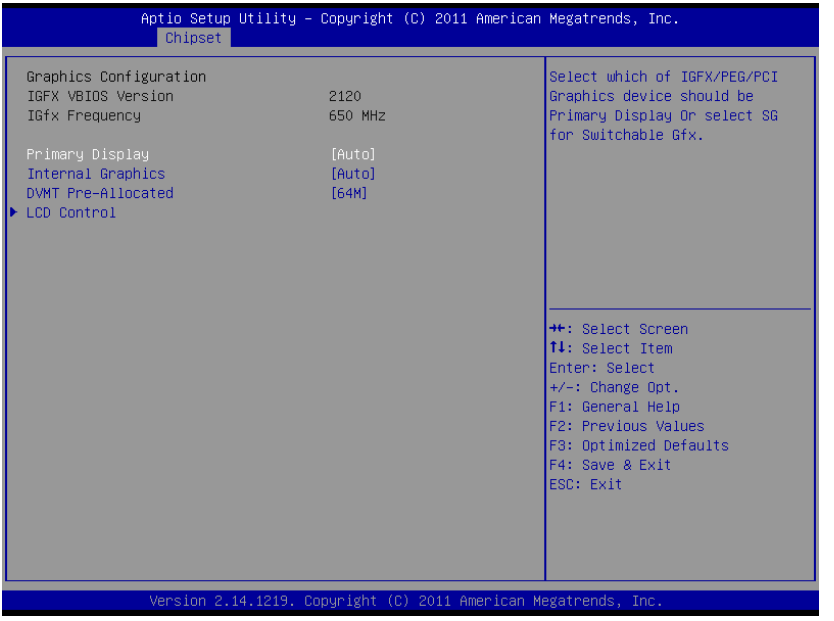
BIOS Setting	Options	Description/Purpose
System Agent (SA) Configuration	Sub-Menu	Sets Parameter for Sandy Bridge (North Bridge) configuration.
PCH-IO Configuration	Sub-Menu	Sets Parameter for Cougar Point (South Bridge) configuration.

4-5.1. Chipset – System Agent (SA) Configuration



BIOS Setting	Options	Description/Purpose
System Agent RC Version	No changeable options	Displays the SNB source code module version.
VT-d Capability	No changeable options	Display this chipset support VT-d or not.
Graphics Configuration	Sub-menu	Configure Graphic Settings.
Memory Configuration	Sub-menu	Memory Configuration Parameters.

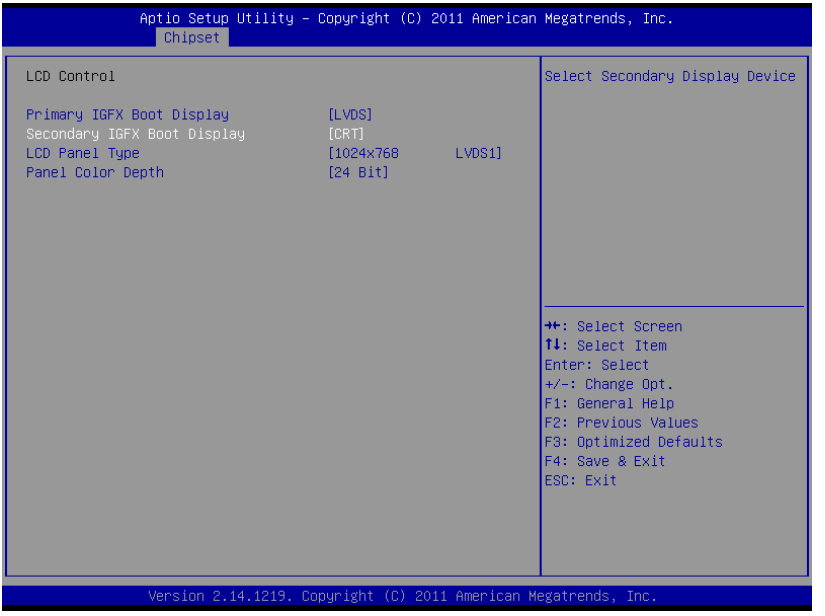
4-5.1.2. Chipset – System Agent (SA) Configuration – Graphics Configuration



BIOS Setting	Options	Description/Purpose
IGFX VBIOS Version	No changeable options	Displays the VBIOS version of integrated graphic controller.
IGfx Frequency	No changeable options	Displays the frequency integrated graphic controller.
Primary Display	- AUTO - IGFX - PEG - PCI - SG	Select which of IGFX/PEG/PCI Graphics device should be Primary Display Or select SG for Switchable Gfx.
Internal Graphics	- AUTO - Disabled - Enabled	Keep IGD enabled based on the setup options.
DVMT Pre-Allocated	0MB to 512MB (32mb increments)	Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.

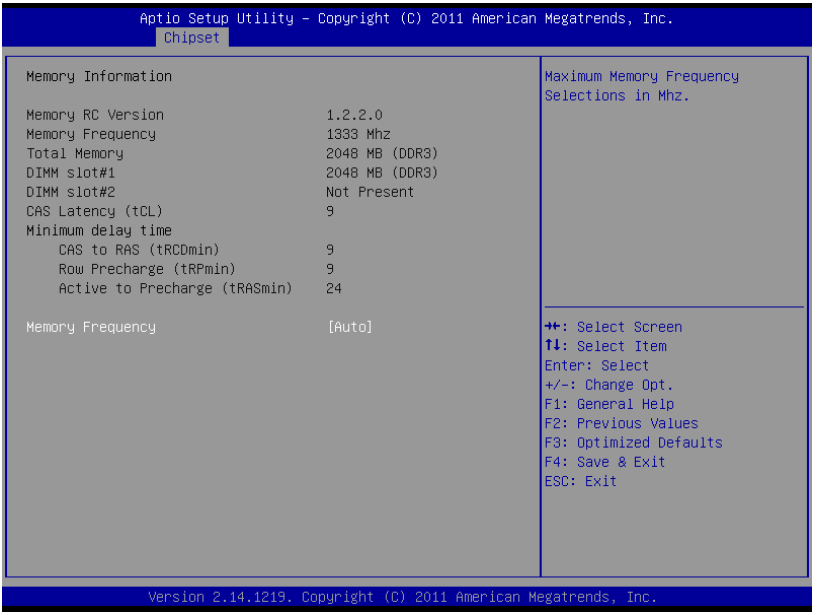
BIOS Setting	Options	Description/Purpose
LCD Control	Sub-menu	LCD Control Parameters.

4-5.1.2.1. Chipset – System Agent (SA) Configuration – Graphics Configuration – LCD Control



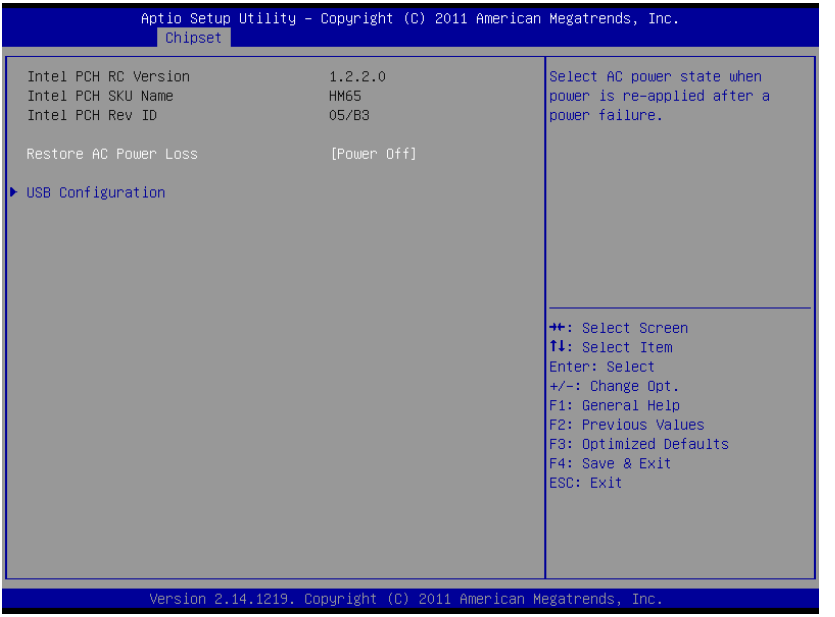
BIOS Setting	Options	Description/Purpose
Primary IGFX Boot Display	- CRT - LVDS - DP1 - DP2	Select primary display device.
Secondary IGFX Boot Display	- Disabled - CRT - LVDS - DP1 - DP2	Select secondary display device.
LCD Panel Type	- 800x600 - 1024x768 - 1280x1024	Select panel resolution.
Panel Color Depth	- 18 Bit - 24 Bit	Select the LFP panel color depth.

4-5.1.3. Chipset – System Agent (SA) Configuration – Memory Configuration



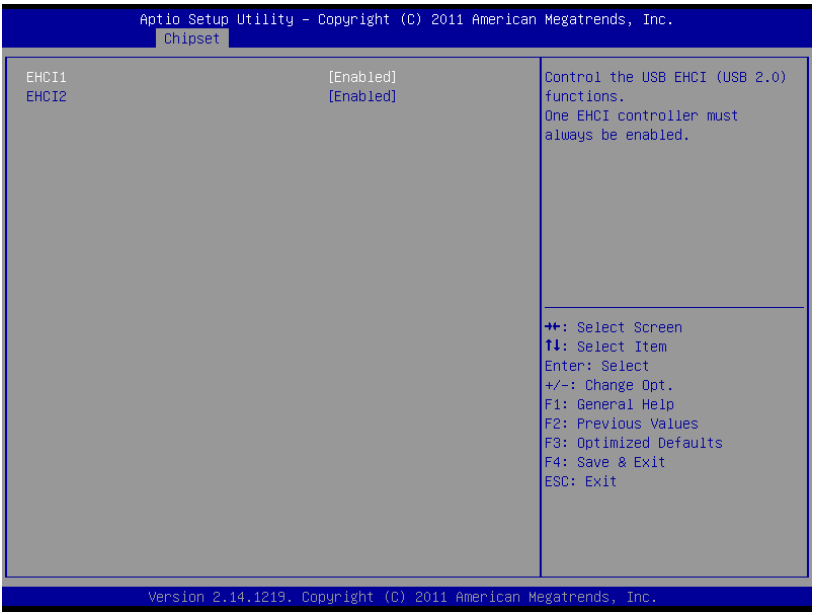
BIOS Setting	Options	Description/Purpose
Memory Information	No changeable option lists.	Displays the detail DRAM information on platform.
Memory Frequency	- AUTO - 1067 - 1033	Maximum memory frequency selection in Mhz.

4-5.2. Chipset – PCH-IO Configuration



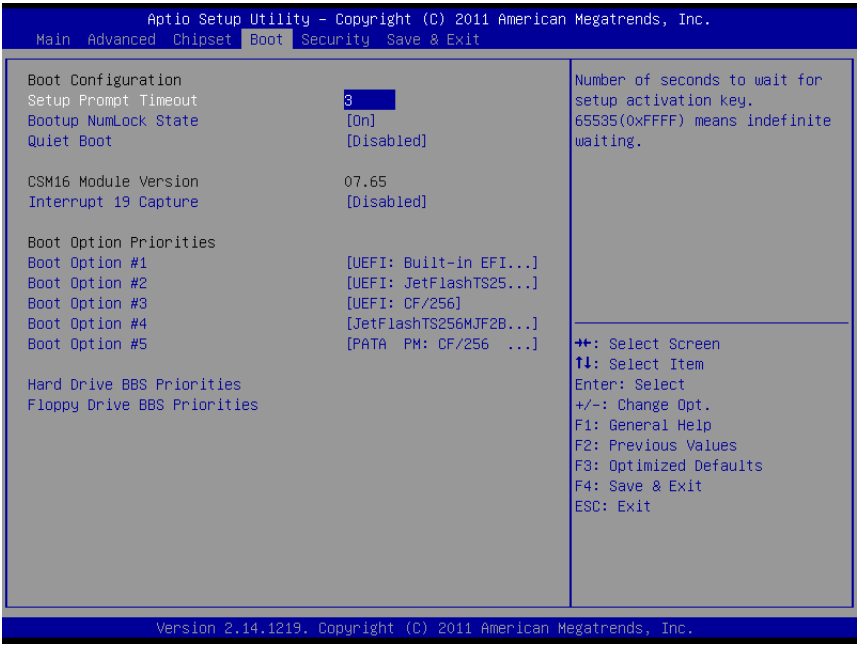
BIOS Setting	Options	Description/Purpose
Restore AC Power Loss	-Power Off -Power On	Determines the mode of operation in case of power loss. **Power Off** keeps the power off till the power button is pressed. **Power On** restores power to the computer.
USB Configuration	Sub-menu	USB Configuration Settings.

4-5.2.1. Chipset – PCH-IO Configuration – USB Configuration



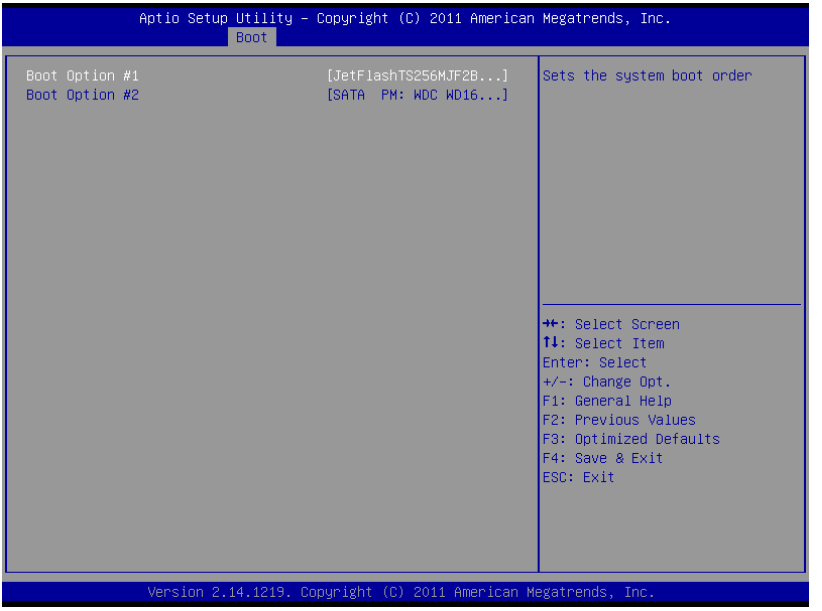
BIOS Setting	Options	Description/Purpose
EHCI1	- Disabled - Enabled	Enables Enhanced Host Controller Interface 1 for high-speed USB functions (USB 2.0).
EHCI 2	- Disabled - Enabled	Enables Enhanced Host Controller Interface 2 for high-speed USB functions (USB 2.0).

4-6. Boot

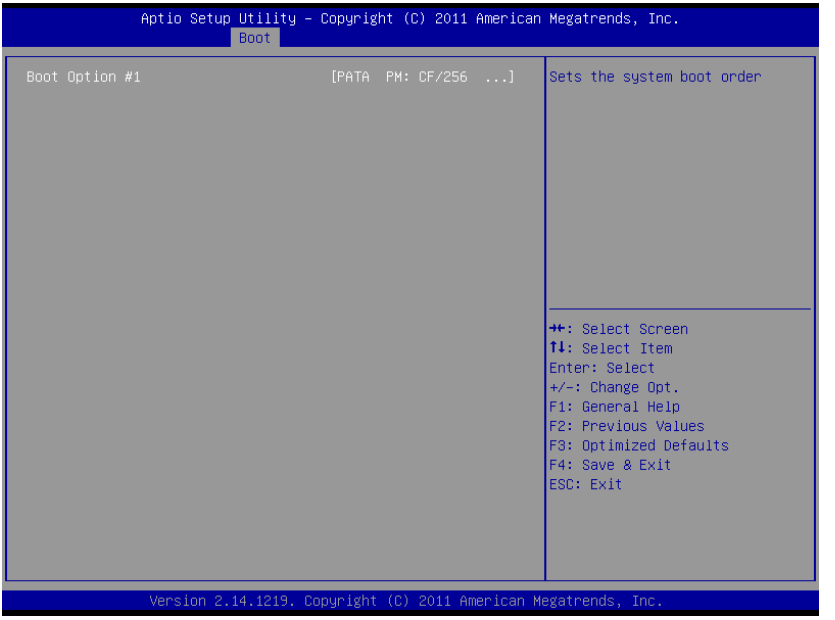


BIOS Setting	Options	Description/Purpose
Setup Prompt Timeout	Numeric	Number of seconds to wait for setup activation key.
Bootup NumLock Status	-On -Off	Specifies the power-on state of the NumLock key.
Quiet Boot	-Dsabled -Eabled	Enable/Disable Quiet Boot Options.
CSM16 Module Version	No changeable options	Displays the current Compatibility Support Module version.
Interrupt 19 Capture	- Disabled - Enabled	When enabled it allows host adapters ROM BIOS to capture Interrupt 19 during the boot process and eventually boot from disk(s) connected to those adapters.
Boot Option #1~#5	- [Drive(s)] - Disabled	Allows setting boot option listed in Hard Drive BBS Priorities.

4-6.1. Boot – Hard Drive BBS Priorities

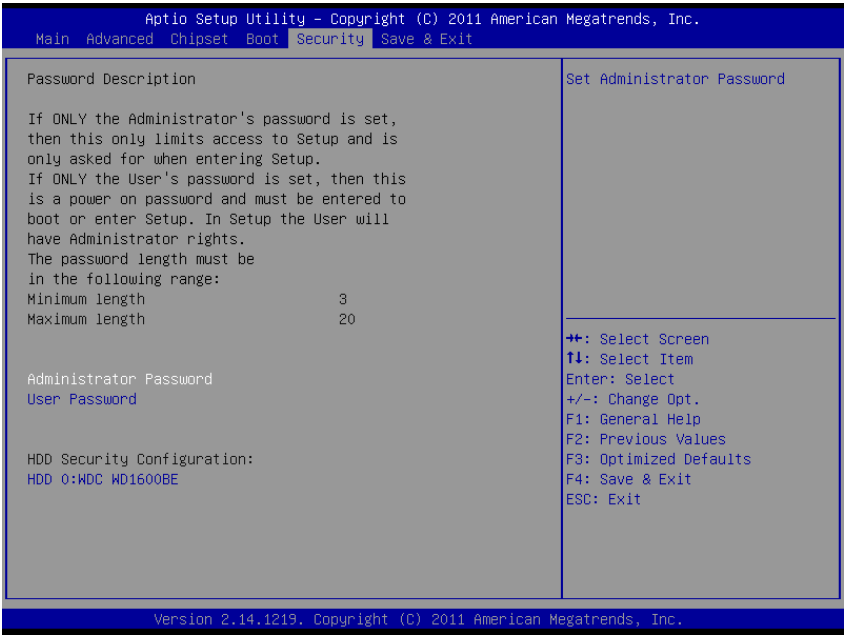


BIOS Setting	Options	Description/Purpose
Boot Option #1 - #2	-[Drive(s)] -Disabled	Allows setting the boot order of available drive(s).



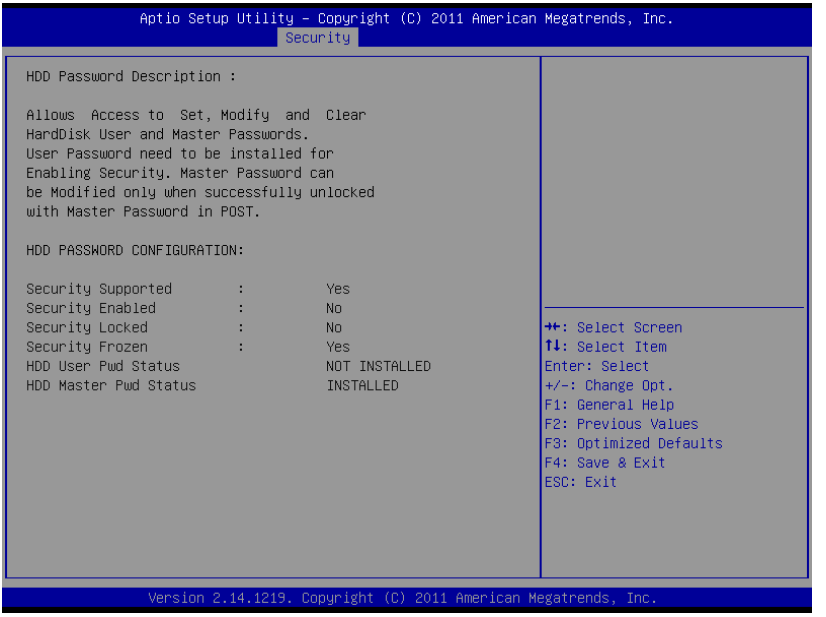
BIOS Setting	Options	Description/Purpose
Boot Option #1	-[Drive(s)] -Disabled	Allows setting the boot order of available drive(s).

4-7. Security



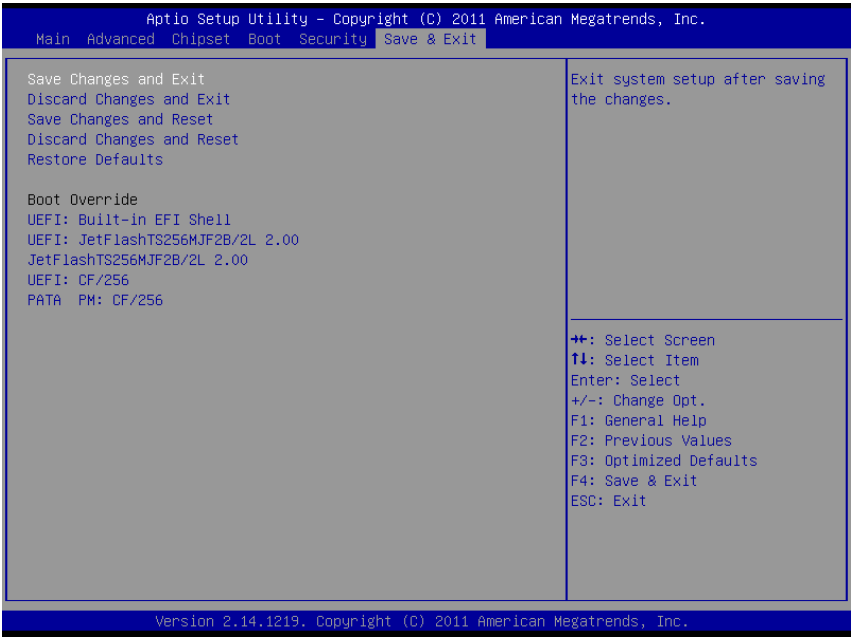
BIOS Setting	Options	Description/Purpose
Administrator Password	Password can be 3-20 alphanumeric characters.	Specifies the administrator password.
User Password	Password can be 3-20 alphanumeric characters.	Specifies the user password.
HDD Security Configuration	Sub-menu	Set HDD password.

4-7.1. Security – HDD Security Configuration – HDD 0: [drive]



BIOS Setting	Options	Description/Purpose
Security Supported	No changeable options	Reports if there is security feature available.
Security Enabled	No changeable options	Reports if there is security feature enabled.
Security Locked	No changeable options	Reports if there is security feature locked.
Security Frozen	No changeable options	Reports if there is security feature frozen.
HDD User Pwd Status	No changeable options	Reports if there is HDD User Password installed.
HDD Master Pwd Status	No changeable options	Reports if there is HDD Master Password installed.
Set User Password	Password can be up to 32 alphanumeric characters.	Specifies the user password. (Need TPM module)
Set Master Password	Password can be up to 32 alphanumeric characters.	Specifies the master password.

4-8. Save & Exit



BIOS Setting	Options	Description/Purpose
Save Changes and Exit	No changeable options	Exits and saves the changes in NVRAM.
Discard Changes and Exit	No changeable options	Exits without saving any changes made in BIOS settings.
Save Changes and Reset	No changeable options	Saves the changes in NVRAM and resets.
Discard Changes and Reset	No changeable options	Resets without saving any changes made in BIOS settings.
Restore Defaults	No changeable options	Loads the optimized defaults for BIOS settings.
Boot Override	-[Drive(s)]	Forces to boot from selected [drive(s)].

SYSTEM ASSEMBLY

APPENDIX

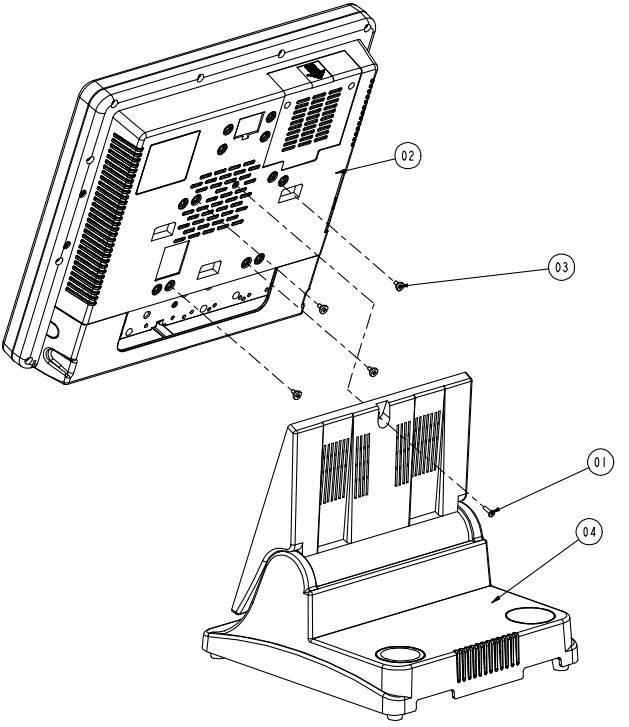
A

This appendix contains exploded diagrams and part numbers of the POS-6511 system.

Sections included:

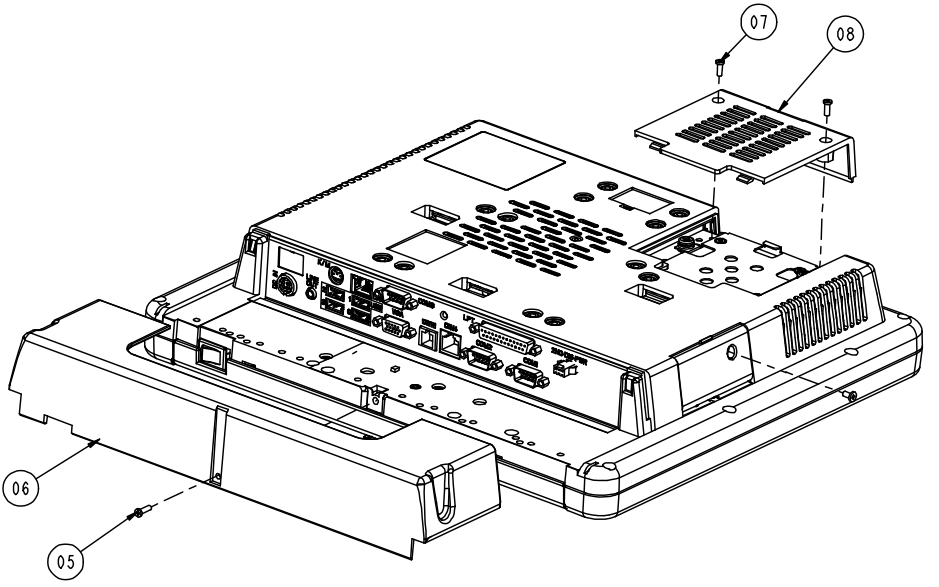
- Exploded Diagram for POS-6511 System with Stand
- Exploded Diagram for POS-6511 System Assembly
- Exploded Diagram for POS-6511 Back Cover Assembly
- Exploded Diagram for POS-6511 Top Cover Assembly
- Exploded Diagram for POS-6511 Mainboard Assembly
- Exploded Diagram for POS-6511 Touch Panel Assembly
- Exploded Diagram for POS-6511 Case Assembly
- Exploded Diagram for POS-6511 Stand Assembly
- Exploded Diagram for POS-6511 Power Assembly

EXPLODED DIAGRAM FOR POS-6511 SYSTEM WITH STAND



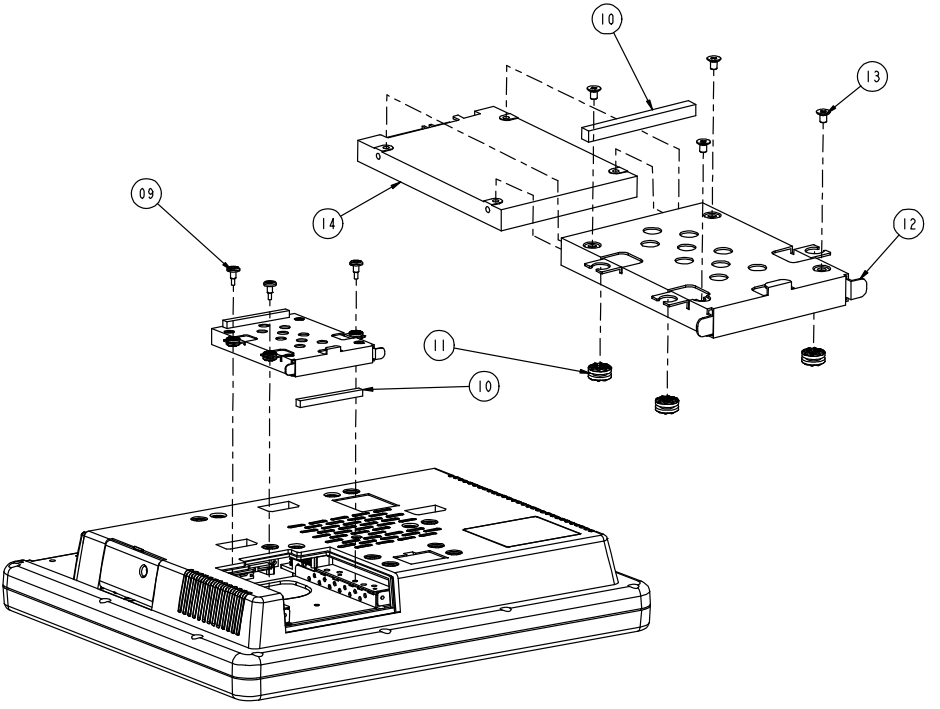
No.	Name	P/N No.	Qt'y
04	Stand Assembly	See Page A-16	1
03	M4x0.7Px4	22-272-40004911	4
02	6511 SYS Assembly	See Page A-3	1
01	M3_L12_1_Ni	22-272-30012011	1
	M3_L12_1_Black	22-275-30010011	

EXPLODED DIAGRAM FOR POS-6511 SYSTEM ASSEMBLY



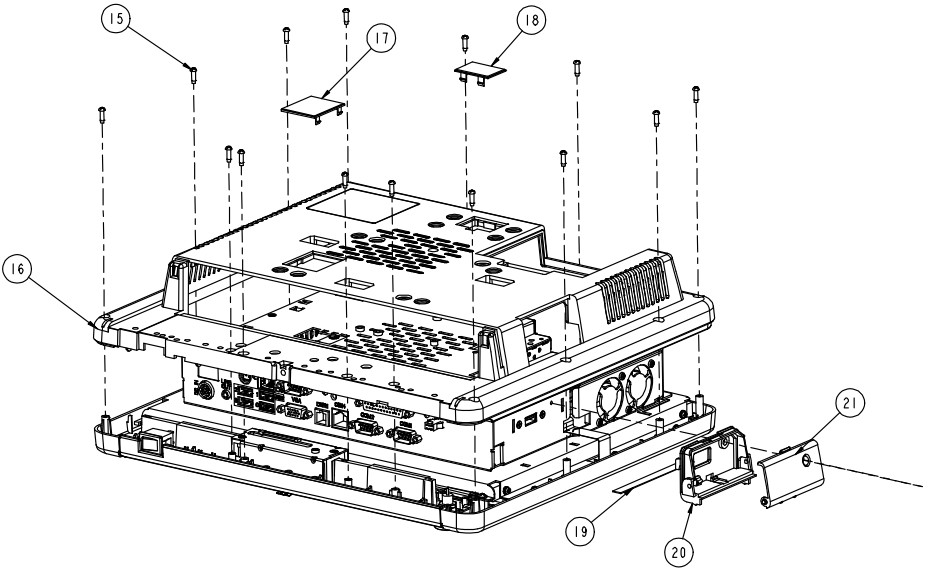
No.	Name	P/N No.	Qt'y
08	HDD_COVER_BLACK	30-002-08520010	1
07	M3_L8_1_B	22-275-30008018	2
06	Cable Cover Black	30-002-08500010	1
05	M3_L12_1_B	22-275-30010011	1

EXPLODED DIAGRAM FOR POS-6511 BACK COVER ASSEMBLY

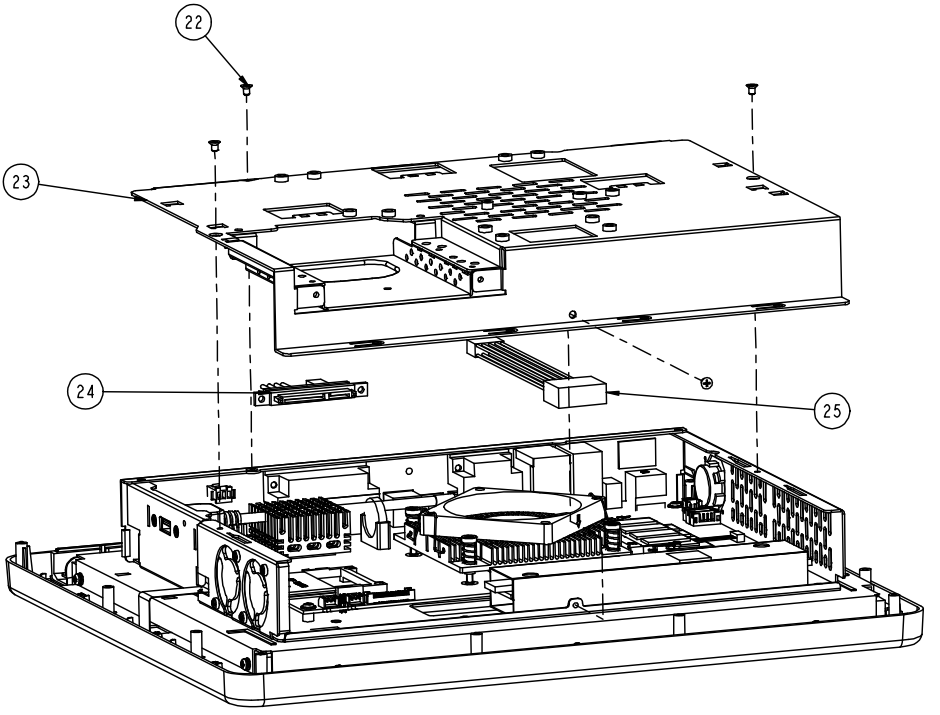


14	2.5" HDD	xxx	1
13	M3_L4.5_F_B	22-222-30004011	4
12	HDD holder	20-006-02021010	1
11	Rubber	23-680-39580963	3
10	EMI Sponge	20-028-00001010	2
09	M2.5_L5_H5.8_Ni	22-272-25011011	3
No.	Name	P/N No.	Qt'y

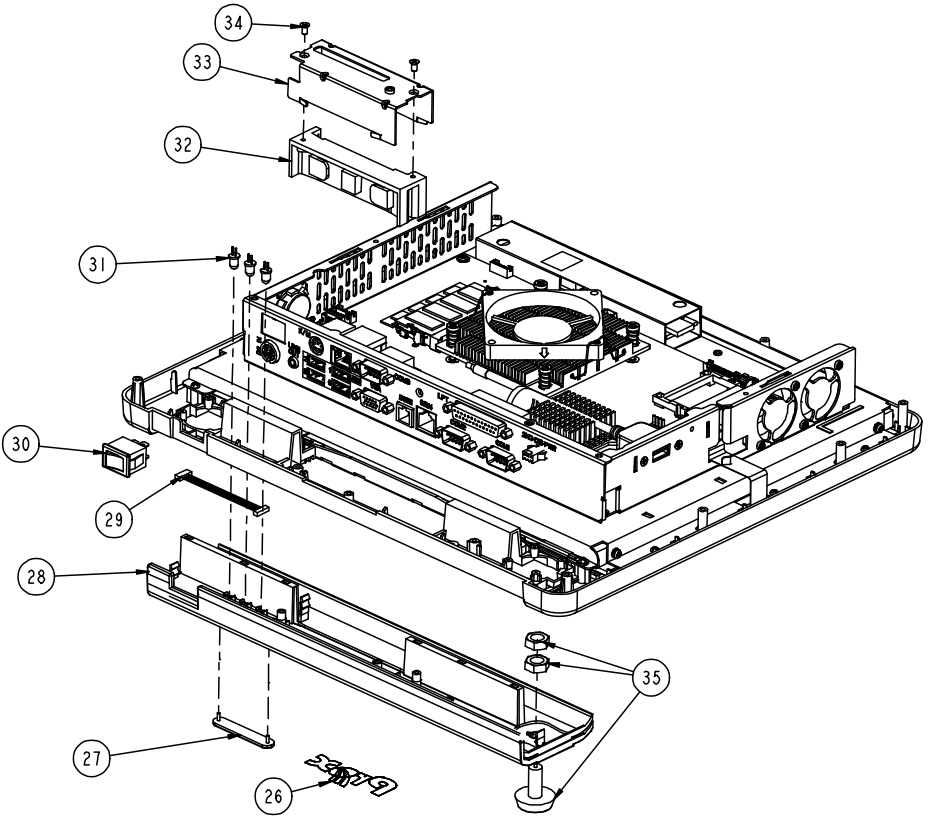
EXPLODED DIAGRAM FOR POS-6511 TOP COVER ASSEMBLY



No.	Name	P/N No.	Qt'y
21	CF_COVER	30-002-08600010	1
20	PS6511_USB_BASE	30-027-28110230	1
19	Pron	30-036-24100004	1
18	BACK COVER S2	30-002-08200010	1
17	BACK COVER-S	30-002-08100010	1
16	6511back cover Black	30-002-28110230	1
15	T3_L10_R_B	22-145-30010011	14



No.	Name	P/N No.	Qt'y
25	VFD CABLE	27-053-01002111	1
24	SATA CABLE	27-012-12804081	1
23	6511 metal Back cover	20-004-03001230	1
22	M3_L4.5_F_B	22-222-30004011	4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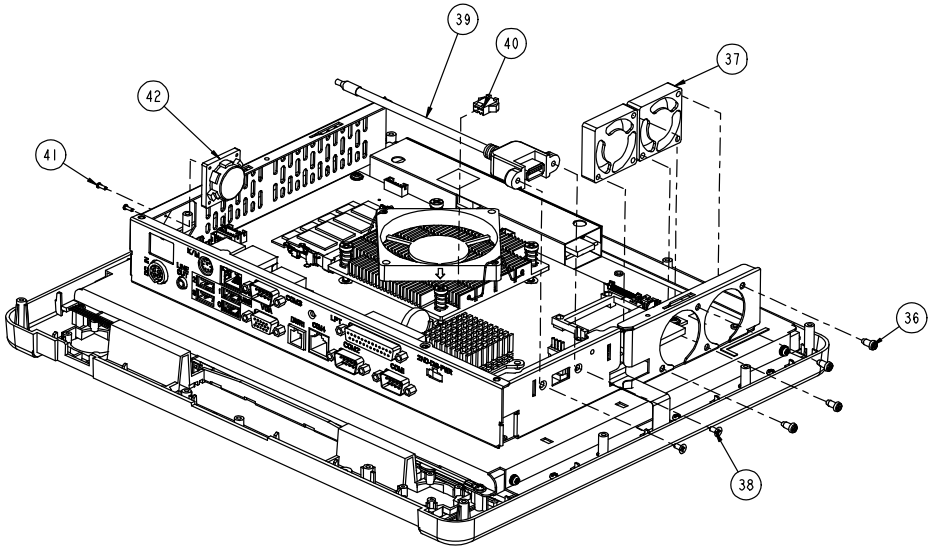
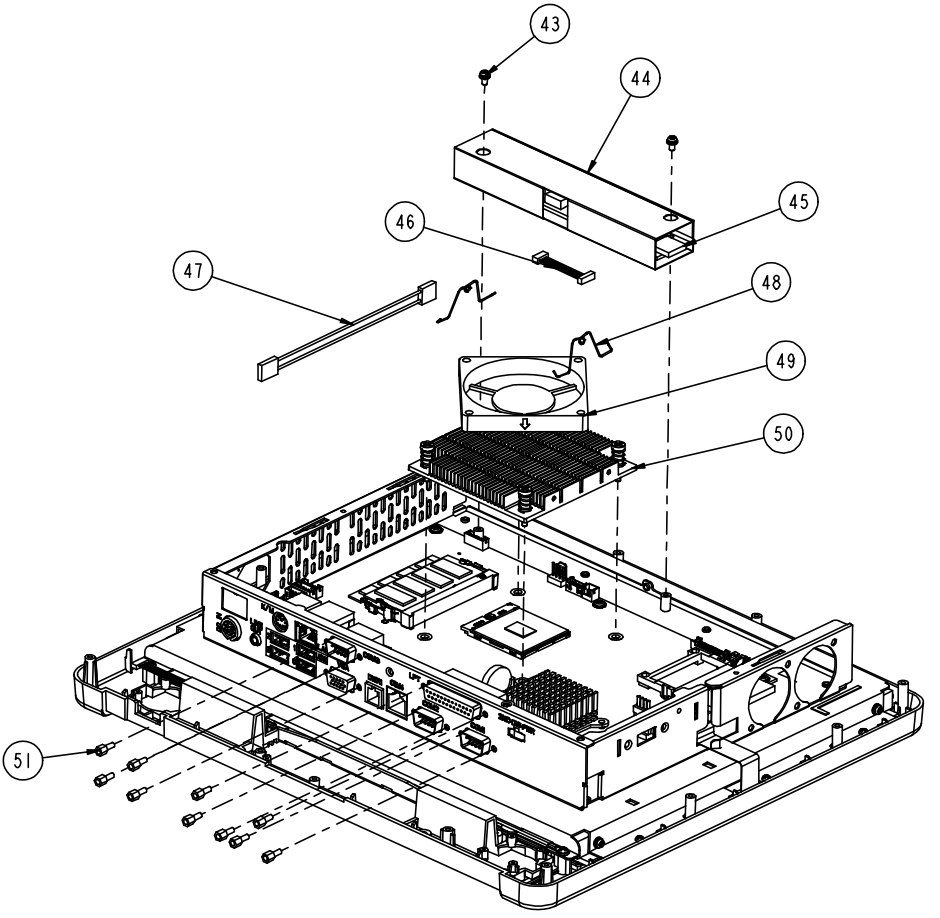
35	I-BUTTOM	See Order	1
34	M3_L6_F_B	22-215-30060011	2
33	MSR Holder	20-029-03006010	1
32	MSR	See Order	1
31	led cable	27-018-12805111	1
30	switch cable	27-019-12804071	1
29	MSR cable(Extend)	27-014-21706112	1
28	Cover Open White(New)	30-002-08140128	1
	Cover Close Black(New)	30-002-08110128	
	Cover Close White	30-002-28610128	
	Cover Open Black(New)	30-002-08120128	
	Cover Open White	30-002-28510128	
27	LED Lens	30-021-10200010	1
26	LOGO	20-005-16001000	1
No.	Name	P/N No.	Qt'y



42	Speacker	13-500-08280018	1
41	MI.6_L5_R_Ni	22-222-16005011	4
40	2nd Cable	27-012-21703071	1
39	USB Cable	27-006-16703111	1
38	No.4_L8_F_B	22-315-40008019	2
37	SYSTEM FAN	21-004-03535001	2
36	T3.5	22-122-35010011	4
No.	Name	P/N No.	Qt'y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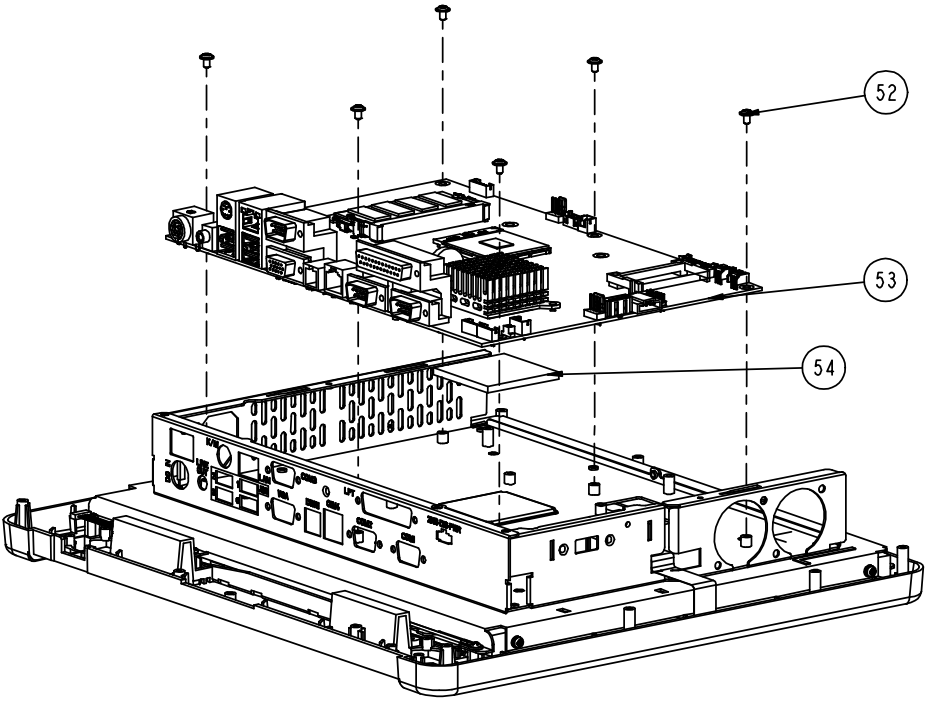
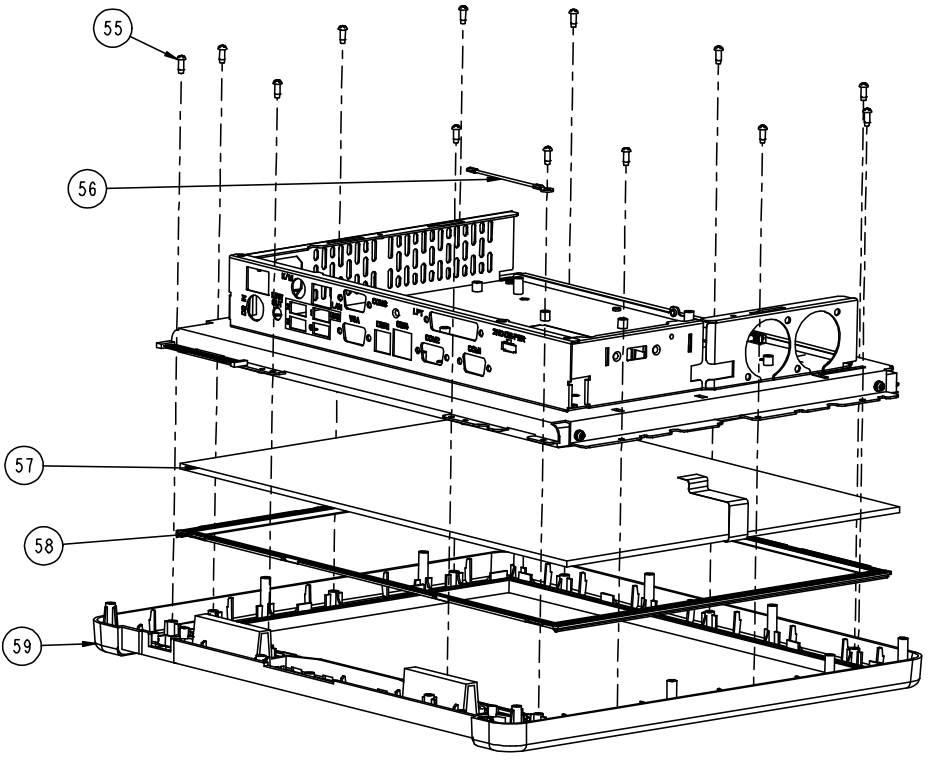
51	No.4_HEX_BOSS	22-692-40048051	10
50	CPU HEATSINK	21-002-19090001	1
49	CPU FAN	21-004-07070174	1
48	Fan Lock Spring	21-001-60000003	2
47	Inverter Extend-cable	21-001-60000003	1
46	Inverter Cable	27-015-33202071	1
45	INVERTER	52-101-15020503	1
44	INVERTER Mylar	90-056-02100230	1
43	M3_L6_S+R_Ni	22-232-30060211	2
No.	Name	P/N No.	Qt'y

EXPLODED DIAGRAM FOR POS-6511 MAINBOARD ASSEMBLY



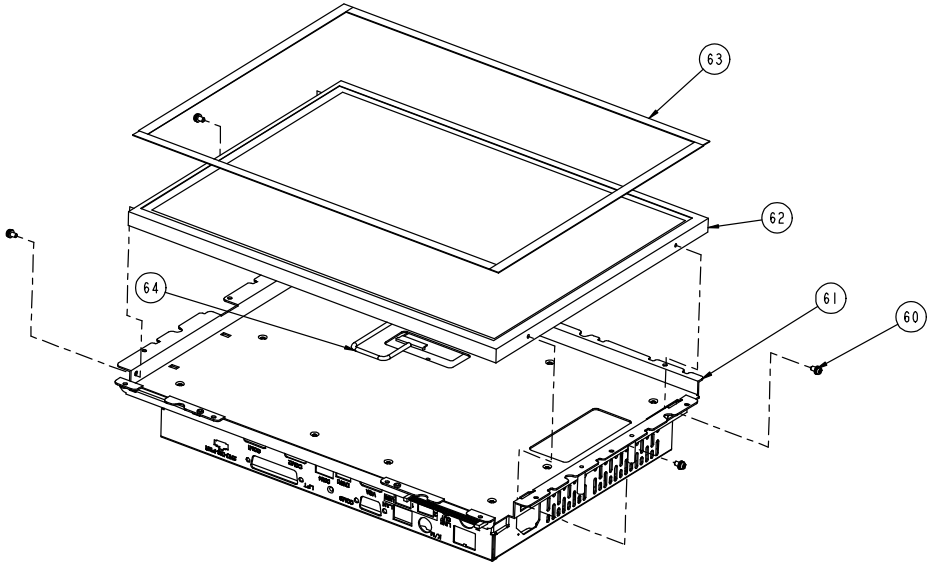
No.	Name	P/N No.	Qt'y
54	45x45x3.5_pad	21-006-04545002	1
53	Prox-6511	--	1
52	M3_L5_W_Ni	22-242-30005311	6

EXPLODED DIAGRAM FOR POS-6511 TOUCH PANEL ASSEMBLY



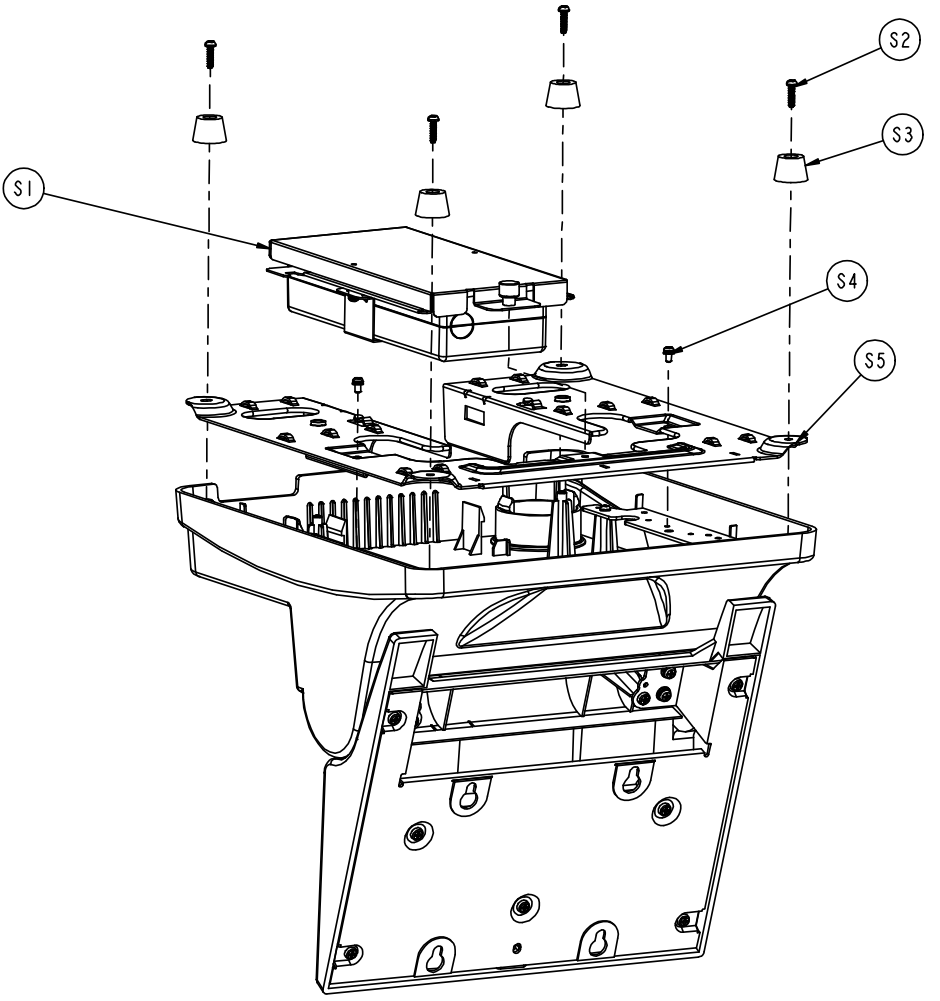
59	Front Case(White)	30-002-28410128	1
	Front Case(Black)	30-003-08110128	
58	LCD Rubber(Capacitive Touch)	30-013-01100010	4
	LCD Rubber	30-013-01100086	
57	ELO Capacitive Touch Panel	52-380-00791701	1
	ELO Touch Panel	52-351-03650511	
56	Ground cable	27-030-01201171	1
55	T3_L8_R_B	22-122-30080011	13
No.	Name	P/N No.	Qt'y

EXPLODED DIAGRAM FOR POS-6511 CASE ASSEMBLY

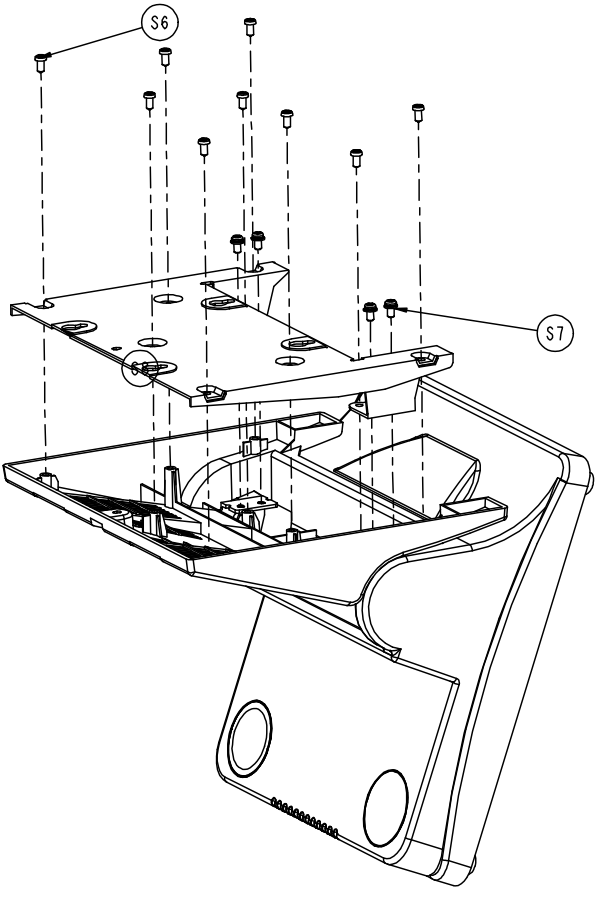


64	LVDS Cable	27-020-23002111	1
63	LCD Pron	30-013-24100000	4
62	15" lcd	52-351-03650519	1
61	6511 inside case	20-040-03001230	1
60	M3_L6_S+R_Ni	52-351-03150128	4
No.	Name	P/N No.	Qt'y

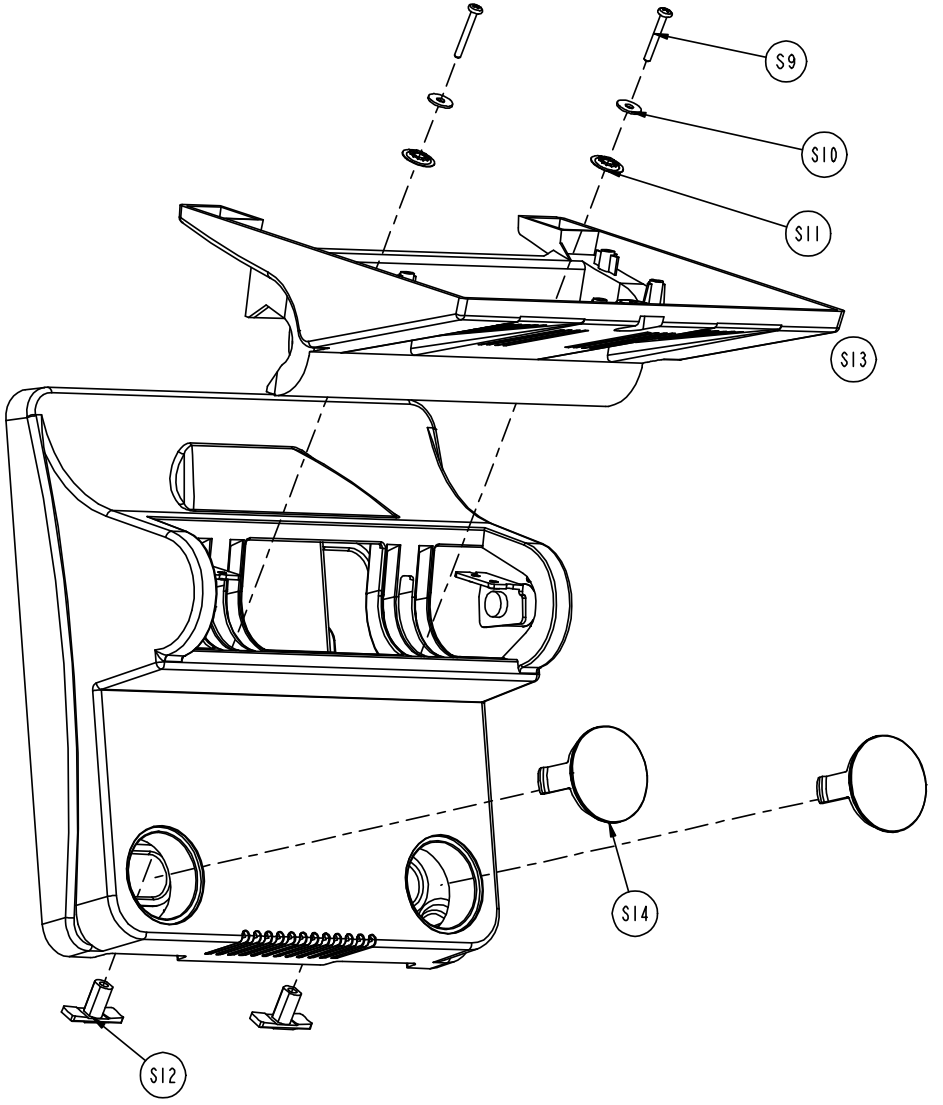
EXPLODED DIAGRAM FOR POS-6511 STAND ASSEMBLY



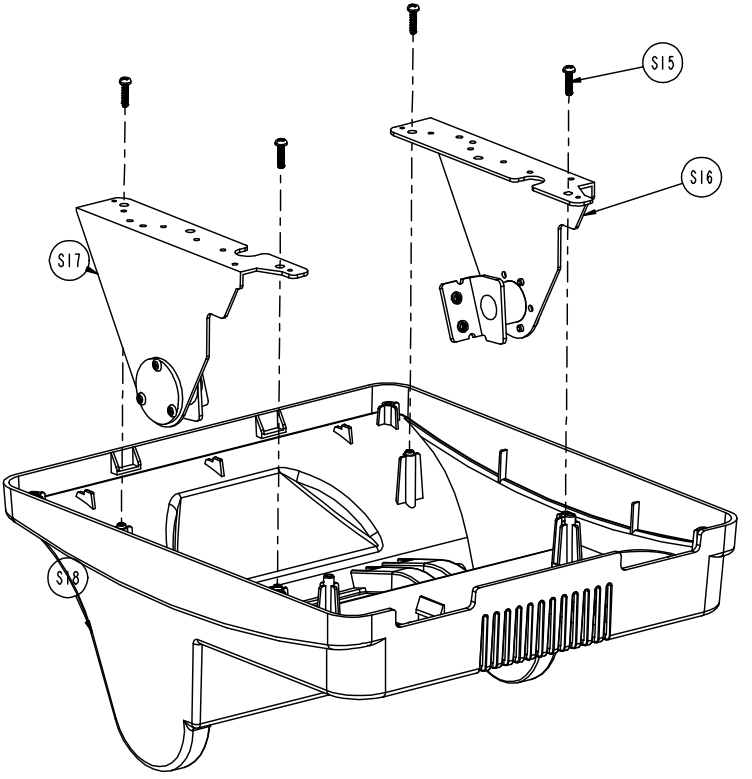
S5	PS-6506 STAND BASE	20-032-03061086	1
S4	M3_L6_S+W_Ni	22-232-30060211	2
S3	Rubber Foot	30-004-06100000	4
S2	T3_L12_Ni	22-122-30012061	4
S1	Power Assembly	See Page A-22	1
No.	Name	P/N No.	Qt'y



S8	PS-6509 BRACKET A	20-015-03003167	1
S7	M4_L8_S+W_Ni	22-232-40008211	4
S6	T4_L8_R_Ni	22-122-40008011	9
No.	Name	P/N No.	Qt'y

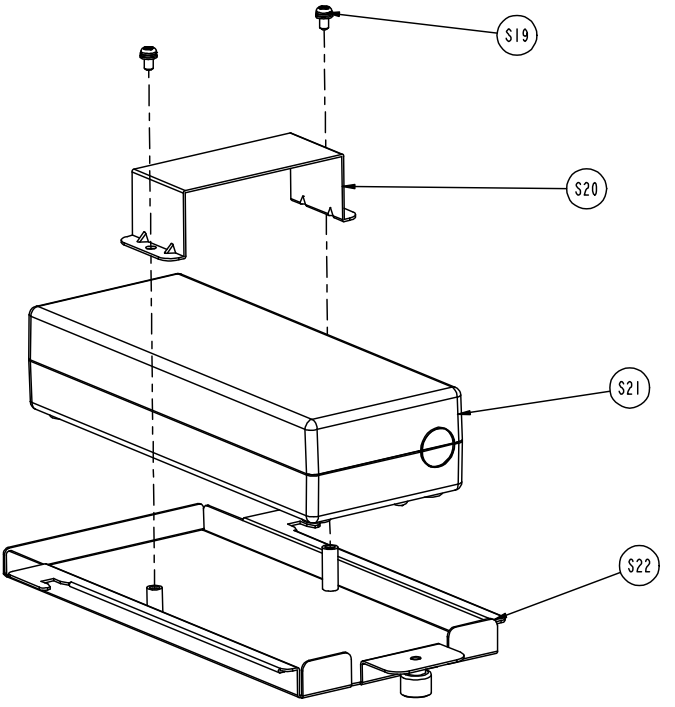

S9
S10
S11
S13
S14
S12

S14	CAP FOR STAND(White)	30-002-28810128	2
	CAP FOR STAND(Black)	30-062-08110086	
S13	ROTATE COVER(White)	30-002-08120010	1
	ROTATE COVER(Back)	30-001-08200010	
S12	PS-8850 Slip block	30-061-02100012	2
S11	OD=16mm,ID=5.8mmx1.8T	23-605-58040161	2
S10	OD=12mm,ID=4.1mmx1T	23-312-40010121	2
S9	M4_L25_S+W_Ni	22-232-40025011	2
No.	Name	P/N No.	Qt'y



S18	STAND COVER(White)	30-002-28910128	1
	STAND COVER(Black)	30-002-08110086	
S17	PS-6506 LEFT HINGE	20-012-03001086	1
S16	PS-6506 RIHGT HINGE	20-012-03002086	1
S15	T3_L12_Ni	22-122-30012061	4
No.	Name	P/N No.	Qt'y

EXPLODED DIAGRAM FOR POS-6511 POWER ASSEMBLY



S22	POWER Tray	20-054-03001128	1
S21	Adapter	52-002-02861001	1
S20	Power Holder	20-029-03001128	1
S19	M3_L6_S+W_Ni	22-232-30060211	2
No.	Name	P/N No.	Qt'y

TECHNICAL SUMMARY

APPENDIX

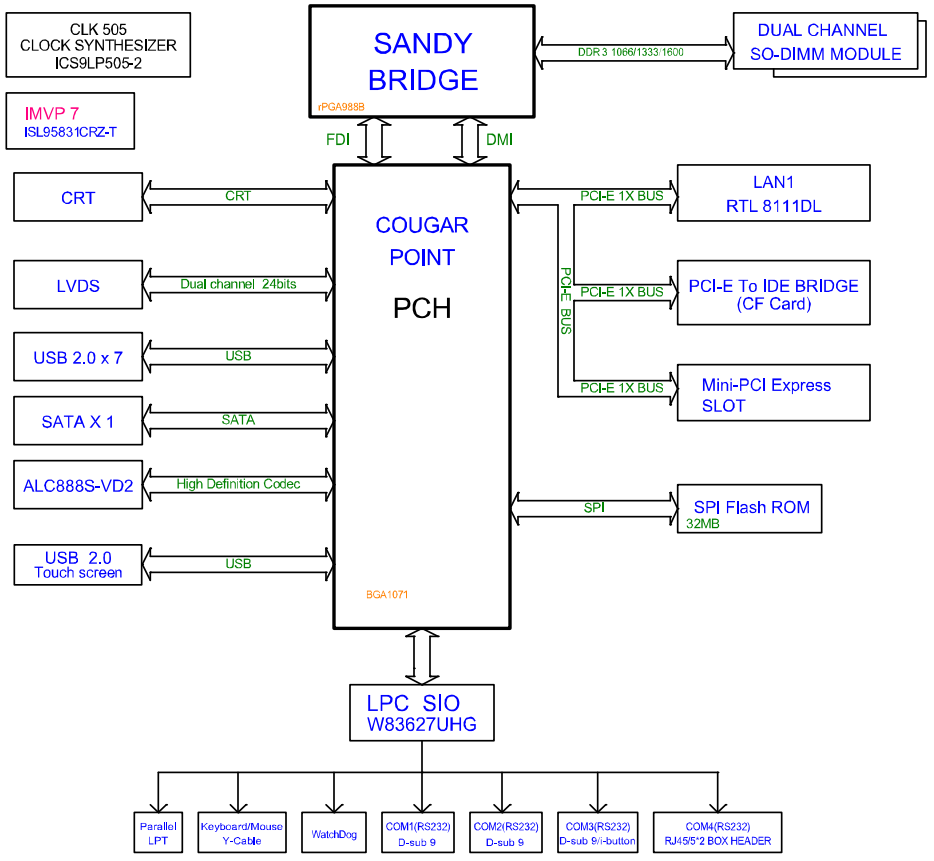
B

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
- Watchdog Timer Configuration
- Flash BIOS Update

BLOCK DIAGRAM



INTERRUPT MAP

IRQ	ASSIGNMENT
0	System Timer
1	Standard PS/2 Keyboard
3	Communications Port (COM2)
4	Communications Port (COM1)
7	Communications Port (COM3)
8	System CMOS/real time clock
10	Communications Port (COM4)
11	Intel(R) 6 Series/C200 Series Chipset Family SMBus Controller - 1C22
12	Microsoft PS/2 Mouse
13	Numeric data processor
16	Intel(R) 6 Series/C200 Series Chipset Family USB Enhanced Host Controller - 1C2D
17	Standard Dual Channel PCI IDE Controlle
19	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C01
19	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C09
22	High Definition Audio Controller
23	Intel(R) 6 Series/C200 Series Chipset Family USB Enhanced Host Controller - 1C26
81	Microsoft ACPI-Compliant System
82	Microsoft ACPI-Compliant System
83	Microsoft ACPI-Compliant System
84	Microsoft ACPI-Compliant System
85	Microsoft ACPI-Compliant System
86	Microsoft ACPI-Compliant System
87	Microsoft ACPI-Compliant System
88	Microsoft ACPI-Compliant System
89	Microsoft ACPI-Compliant System
90	Microsoft ACPI-Compliant System
91	Microsoft ACPI-Compliant System
92	Microsoft ACPI-Compliant System
93	Microsoft ACPI-Compliant System
94	Microsoft ACPI-Compliant System
95	Microsoft ACPI-Compliant System

(Continued)

IRQ	ASSIGNMENT
96	Microsoft ACPI-Compliant System
97	Microsoft ACPI-Compliant System
98	Microsoft ACPI-Compliant System
99	Microsoft ACPI-Compliant System
100	Microsoft ACPI-Compliant System
101	Microsoft ACPI-Compliant System
102	Microsoft ACPI-Compliant System
103	Microsoft ACPI-Compliant System
104	Microsoft ACPI-Compliant System
105	Microsoft ACPI-Compliant System
106	Microsoft ACPI-Compliant System
107	Microsoft ACPI-Compliant System
108	Microsoft ACPI-Compliant System
109	Microsoft ACPI-Compliant System
110	Microsoft ACPI-Compliant System
111	Microsoft ACPI-Compliant System
112	Microsoft ACPI-Compliant System
113	Microsoft ACPI-Compliant System
114	Microsoft ACPI-Compliant System
115	Microsoft ACPI-Compliant System
116	Microsoft ACPI-Compliant System
117	Microsoft ACPI-Compliant System
118	Microsoft ACPI-Compliant System
119	Microsoft ACPI-Compliant System
120	Microsoft ACPI-Compliant System
121	Microsoft ACPI-Compliant System
122	Microsoft ACPI-Compliant System
123	Microsoft ACPI-Compliant System
124	Microsoft ACPI-Compliant System
125	Microsoft ACPI-Compliant System
126	Microsoft ACPI-Compliant System
127	Microsoft ACPI-Compliant System
128	Microsoft ACPI-Compliant System
129	Microsoft ACPI-Compliant System
130	Microsoft ACPI-Compliant System

(Continued)

IRQ	ASSIGNMENT
131	Microsoft ACPI-Compliant System
132	Microsoft ACPI-Compliant System
133	Microsoft ACPI-Compliant System
134	Microsoft ACPI-Compliant System
135	Microsoft ACPI-Compliant System
136	Microsoft ACPI-Compliant System
137	Microsoft ACPI-Compliant System
138	Microsoft ACPI-Compliant System
139	Microsoft ACPI-Compliant System
140	Microsoft ACPI-Compliant System
141	Microsoft ACPI-Compliant System
142	Microsoft ACPI-Compliant System
143	Microsoft ACPI-Compliant System
144	Microsoft ACPI-Compliant System
145	Microsoft ACPI-Compliant System
146	Microsoft ACPI-Compliant System
147	Microsoft ACPI-Compliant System
148	Microsoft ACPI-Compliant System
149	Microsoft ACPI-Compliant System
150	Microsoft ACPI-Compliant System
151	Microsoft ACPI-Compliant System
152	Microsoft ACPI-Compliant System
153	Microsoft ACPI-Compliant System
154	Microsoft ACPI-Compliant System
155	Microsoft ACPI-Compliant System
156	Microsoft ACPI-Compliant System
157	Microsoft ACPI-Compliant System
158	Microsoft ACPI-Compliant System
159	Microsoft ACPI-Compliant System
160	Microsoft ACPI-Compliant System
161	Microsoft ACPI-Compliant System
162	Microsoft ACPI-Compliant System
163	Microsoft ACPI-Compliant System
164	Microsoft ACPI-Compliant System
165	Microsoft ACPI-Compliant System

(Continued)

IRQ	ASSIGNMENT
166	Microsoft ACPI-Compliant System
167	Microsoft ACPI-Compliant System
168	Microsoft ACPI-Compliant System
169	Microsoft ACPI-Compliant System
170	Microsoft ACPI-Compliant System
171	Microsoft ACPI-Compliant System
172	Microsoft ACPI-Compliant System
173	Microsoft ACPI-Compliant System
174	Microsoft ACPI-Compliant System
175	Microsoft ACPI-Compliant System
176	Microsoft ACPI-Compliant System
177	Microsoft ACPI-Compliant System
178	Microsoft ACPI-Compliant System
179	Microsoft ACPI-Compliant System
180	Microsoft ACPI-Compliant System
181	Microsoft ACPI-Compliant System
182	Microsoft ACPI-Compliant System
183	Microsoft ACPI-Compliant System
184	Microsoft ACPI-Compliant System
185	Microsoft ACPI-Compliant System
186	Microsoft ACPI-Compliant System
187	Microsoft ACPI-Compliant System
188	Microsoft ACPI-Compliant System
189	Microsoft ACPI-Compliant System
190	Microsoft ACPI-Compliant System
4294967290	Realtek PCIe GBE Family Controller
4294967291	Intel(R) HD Graphics Family
4294967292	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 6 - 1C1A
4294967293	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 5 - 1C18
4294967294	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 1 - 1C10

DMA CHANNELS MAP

DMA Channel	Assignment
4	Direct memory access controller

MEMORY MAP

MEMORY MAP	ASSIGNMENT
0x20000000-0x201FFFFF	System board
0x40000000-0x401FFFFF	System board
0x7DA00000-0xFEAFFFFF	PCI bus
0x7DA00000-0xFEAFFFFF	Motherboard resources
0xA0000-0xBFFFF	Intel(R) HD Graphics Family
0xA0000-0xBFFFF	PCI bus
0xD0000-0xD3FFF	PCI bus
0xD4000-0xD7FFF	PCI bus
0xD8000-0xDBFFF	PCI bus
0xDC000-0xDFFFF	PCI bus
0xE0000-0xE3FFF	PCI bus
0xE0000000-0xEFFFFFFF	Intel(R) HD Graphics Family
0xE4000-0xE7FFF	PCI bus
0xF0000000-0xF09FFFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 6 - 1C1A
0xF0A04000-0xF0A04FF	Realtek PCIe GBE Family Controller
0xF0A00000-0xF13FFFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 5 - 1C18
0xF0A00000-0xF13FFFFF	Realtek PCIe GBE Family Controller
0xF1400000-0xF1DFFFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 1 - 1C10
0xF5C00000-0xF5FFFFFF	Intel(R) HD Graphics Family
0xF6000000-0xF69FFFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 6 - 1C1A
0xF6A00000-0xF73FFFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 5 - 1C18
0xF7400000-0xF7DFFFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 1 - 1C10
0xF7E00000-0xF7E03FFF	High Definition Audio Controller
0xF7E05000-0xF7E050FF	Intel(R) 6 Series/C200 Series Chipset Family SMBus Controller - 1C22
0xF7E06000-0xF7E063FF	Intel(R) 6 Series/C200 Series Chipset Family USB Enhanced Host Controller - 1C26
0xF7E07000-0xF7E073FF	Intel(R) 6 Series/C200 Series Chipset Family USB Enhanced Host Controller - 1C2D
0xF8000000-0xFBFFFFFF	Motherboard resources

(Continued)

MEMORY MAP	ASSIGNMENT
0xFED00000-0xFED003FF	High precision event timer
0xFED00000-0xFED003FF	High precision event timer
0xFED1C000-0xFED1FFFF	Motherboard resources
0xFED20000-0xFED3FFFF	Motherboard resources
0xFED40000-0xFED44FFF	System board
0xFED45000-0xFED8FFFF	Motherboard resources
0xFED90000-0xFED93FFF	Motherboard resources
0xFEE00000-0xFEEFFFFF	Motherboard resources
0xFF000000-0xFFFFFFFF	Intel(R) 82802 Firmware Hub Device
0xFF000000-0xFFFFFFFF	Motherboard resources

I/O MAP

I/O MAP	ASSIGNMENT
0x00000000-0x0000001F	Direct memory access controller
0x00000000-0x0000001F	PCI bus
0x00000010-0x0000001F	Motherboard resources
0x00000020-0x00000021	Programmable interrupt controller
0x00000022-0x0000003F	Motherboard resources
0x00000024-0x00000025	Programmable interrupt controller
0x00000028-0x00000029	Programmable interrupt controller
0x0000002C-0x0000002D	Programmable interrupt controller
0x0000002E-0x0000002F	Motherboard resources
0x00000030-0x00000031	Programmable interrupt controller
0x00000034-0x00000035	Programmable interrupt controller
0x00000038-0x00000039	Programmable interrupt controller
0x0000003C-0x0000003D	Programmable interrupt controller
0x00000040-0x00000043	System timer
0x00000044-0x0000005F	Motherboard resources
0x0000004E-0x0000004F	Motherboard resources
0x00000050-0x00000053	System timer
0x00000060-0x00000060	Standard PS/2 Keyboard
0x00000061-0x00000061	Motherboard resources
0x00000062-0x00000063	Motherboard resources
0x00000063-0x00000063	Motherboard resources
0x00000064-0x00000064	Standard PS/2 Keyboard
0x00000065-0x0000006F	Motherboard resources
0x00000065-0x0000006F	Motherboard resources
0x00000067-0x00000067	Motherboard resources
0x00000070-0x00000077	System CMOS/real time clock
0x00000070-0x00000077	Motherboard resources
0x00000072-0x0000007F	Motherboard resources
0x00000080-0x00000080	Motherboard resources
0x00000080-0x00000080	Motherboard resources
0x00000081-0x00000091	Direct memory access controller
0x00000084-0x00000086	Motherboard resources
0x00000088-0x00000088	Motherboard resources
0x0000008C-0x0000008E	Motherboard resources

(Continued)

I/O MAP	ASSIGNMENT
0x00000090-0x0000009F	Motherboard resources
0x00000092-0x00000092	Motherboard resources
0x00000093-0x0000009F	Direct memory access controller
0x000000A0-0x000000A1	Programmable interrupt controller
0x000000A2-0x000000BF	Motherboard resources
0x000000A4-0x000000A5	Programmable interrupt controller
0x000000A8-0x000000A9	Programmable interrupt controller
0x000000AC-0x000000AD	Programmable interrupt controller
0x000000B0-0x000000B1	Programmable interrupt controller
0x000000B2-0x000000B3	Motherboard resources
0x000000B4-0x000000B5	Programmable interrupt controller
0x000000B8-0x000000B9	Programmable interrupt controller
0x000000BC-0x000000BD	Programmable interrupt controller
0x000000C0-0x000000DF	Direct memory access controller
0x000000E0-0x000000EF	Motherboard resources
0x000000F0-0x000000FF	Numeric data processor
0x00000200-0x0000020F	Motherboard resources
0x00000290-0x00000297	Motherboard resources
0x000002E8-0x000002EF	Communications Port (COM4)
0x000002F8-0x000002FF	Communications Port (COM2)
0x00000378-0x0000037F	Printer Port (LPT1)
0x000003B0-0x000003BB	Intel(R) HD Graphics Family
0x000003C0-0x000003DF	Intel(R) HD Graphics Family
0x000003E8-0x000003EF	Communications Port (COM3)
0x000003F8-0x000003FF	Communications Port (COM1)
0x00000400-0x00000453	Motherboard resources
0x00000454-0x00000457	Motherboard resources
0x00000458-0x0000047F	Motherboard resources
0x000004D0-0x000004D1	Programmable interrupt controller
0x000004D0-0x000004D1	Motherboard resources
0x00000500-0x0000057F	Motherboard resources
0x00000680-0x0000069F	Motherboard resources
0x00000D00-0x0000FFFF	PCI bus
0x0000164E-0x0000164F	Motherboard resources
0x0000C000-0x0000CFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 6 - 1C1A

(Continued)

I/O MAP	ASSIGNMENT
0x0000C000-0x0000CFFF	Standard Dual Channel PCI IDE Controller
0x0000C010-0x0000C013	Standard Dual Channel PCI IDE Controller
0x0000C020-0x0000C027	Standard Dual Channel PCI IDE Controller
0x0000C030-0x0000C033	Standard Dual Channel PCI IDE Controller
0x0000C040-0x0000C047	Standard Dual Channel PCI IDE Controller
0x0000D000-0x0000DFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 5 - 1C18
0x0000D000-0x0000DFFF	Realtek PCIe GBE Family Controller
0x0000E000-0x0000EFFF	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 1 - 1C10
0x0000F000-0x0000F03F	Intel(R) HD Graphics Family
0x0000F040-0x0000F05F	Intel(R) 6 Series/C200 Series Chipset Family SMBus Controller - 1C22
0x0000F060-0x0000F06F	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C09
0x0000F070-0x0000F07F	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C09
0x0000F080-0x0000F083	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C09
0x0000F090-0x0000F097	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C09
0x0000F0A0-0x0000F0A3	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C09
0x0000F0B0-0x0000F0B7	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C09
0x0000F0C0-0x0000F0CF	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C01
0x0000F0D0-0x0000F0DF	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C01
0x0000F0E0-0x0000F0E3	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C01
0x0000F0F0-0x0000F0F7	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C01
0x0000F100-0x0000F103	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C01
0x0000F110-0x0000F117	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C01
0x0000FFFF-0x0000FFFF	Motherboard resources
0x0000FFFF-0x0000FFFF	Motherboard resources

WATCHDOG TIMER CONFIGURATION

The I/O port address of the watchdog timer is 2E (hex) and 2F (hex). 2E (hex) is the address port. 2F (hex) is the data port. User must first assign the address of register by writing address value into address port 2E (hex), then write/read data to/from the assigned register through data port 2F (hex).

Configuration Sequence

To program W83627UHG configuration registers, the following configuration sequence must be followed:
(1) Enter the extended function mode.
(2) Configure the configuration registers.
(3) Exit the extended function mode.

(1) Enter the extended function mode

To place the chip into the Extended Function Mode, two successive writes of 0x87 must be applied to Extended Function Enable Registers (EFERs, i.e. 2Eh or 4Eh).

(2) Configure the configuration registers

The chip selects the Logical Device and activates the desired Logical Devices through Extended Function Index Register (EFIR) and Extended Function Data Register (EFDR). The EFIR is located at the same address as the EFER, and the EFDR is located at address (EFIR+1). First, write the Logical Device Number (i.e. 0x07) to the EFIR and then write the number of the desired Logical Device to the EFDR. If accessing the Chip (Global) Control Registers, this step is not required. Secondly, write the address of the desired configuration register within the Logical Device to the EFIR and then write (or read) the desired configuration register through the EFDR.

(3) Exit the extended function mode

To exit the Extended Function Mode, writing 0xAA to the EFER is required. Once the chip exits the Extended Function Mode, it is in the normal running mode and is ready to enter the configuration mode.

Code example for watchdog timer

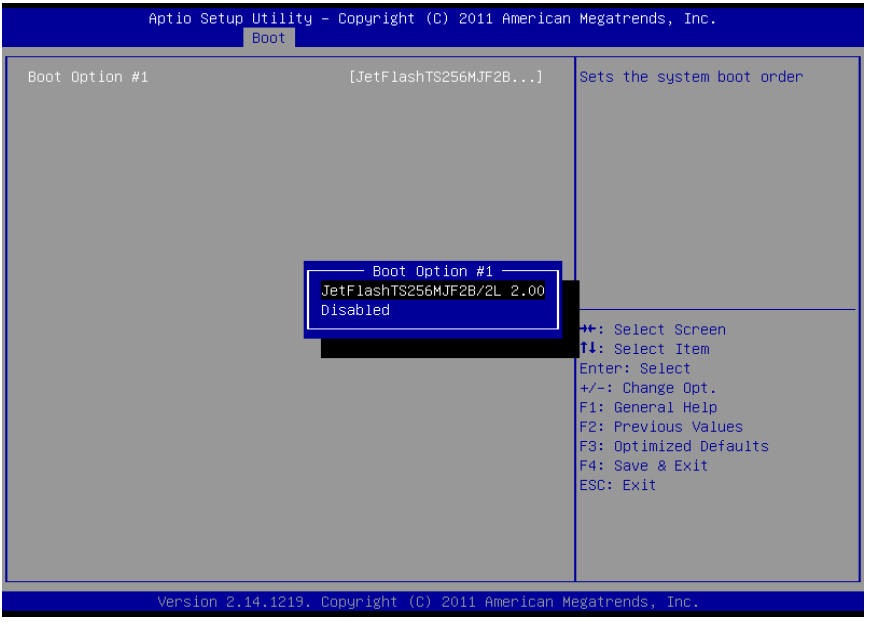
Enable watchdog timer and set 30 sec. as timeout interval.

```
;------ Enter to extended function mode ------------------------------------------------------
Mov     dx,     2eh
Mov     al,     87h
Out     dx,     al
Out     dx,     al
;------ Select Logical Device 8 of watchdog timer --------------------------------------------
Mov     al,     07h
Out     dx,     al
Inc     dx
Mov     al,     08h
Out     dx,     al
;------ Set second as counting unit ----------------------------------------------------------
Dec     dx
Mov     al,     0f5h
Out     dx,     al
Inc     dx
In      al,     dx
And     al,     not 08h
Out     dx,     al
;------ Set timeout interval as 30seconds and start counting ---------------------------------
Dec     dx
Mov     al,     0f6h
Out     dx,     al
Inc     dx
Mov     al,     30
Out     dx,     al
;------ Exit the extended function mode ------------------------------------------------------
Dec     dx
Mov     al,     0aah
Out     dx,     al
```

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 file (ex. 65110P01.bin) to the bootable device.
3. Copy AMI flash utility – AFUDOS.exe (v2.39) into bootable device.
4. Make sure the target system can first boot to the bootable device.
   (1) Connect the bootable USB device.
   (2) Turn on the computer and press <F2> or <Del> key during boot to enter BIOS Setup.
   (3) System will go into the BIOS setup menu.
   (4) Select [Boot] menu.
   (5) Select [Hard Drive BBS Priorities], set the USB bootable device to be the 1st boot device.
   (6) Press <F4> key to save configuration and exit the BIOS setup menu.



II. AFUDOS Command for System BIOS Update

AFUDOS.exe is the AMI firmware update utility; the command line is shown as below:

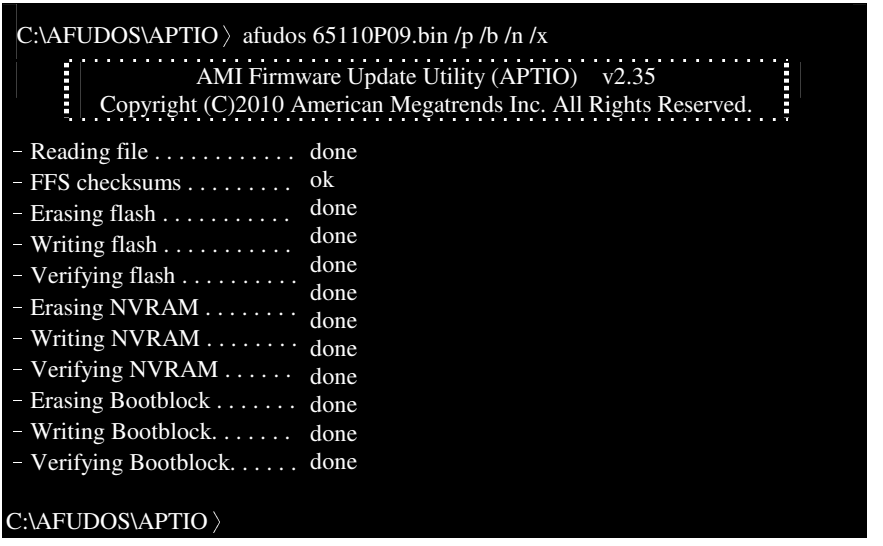
AFUDOS <ROM File Name> [option1] [option2]….

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

/P: Program main BIOS image.
/B: Program Boot Block.
/N: Program NVRAM.
/X: Don't check ROM ID.

III. BIOS Update Procedure

1. Use the bootable USB storage to boot up system into the DOS command prompt.
2. Type "**AFUDOS 6511xxxx.bin /p /b /n /x"** and press enter to start the flash procedure.
   (Note that xxxx means the BIOS revision part, ex. 0P01…)
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 is complete, the messages should be like the figure shown below.



5. User can restart the system and boot up with new BIOS now.
6. Update is complete after restart.
7. Verify during following boot that the BIOS version displayed at initialization screen has changed.

QUICK MANUAL

APPENDIX

C

This appendix contains the assembly procedure of the VFD and the i-Button Decoder API function guide.

Sections included:

- Assembly Procedure of VFD
- i-Button Decoder API

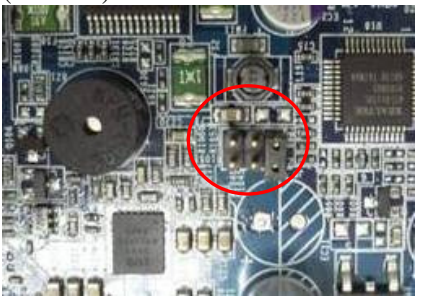
Assembly Procdure of VFD

Packing Checklist:

Items	Quantity
VFD Module (w/ cable)	1
VFD Support Bracket	1
Screws	4

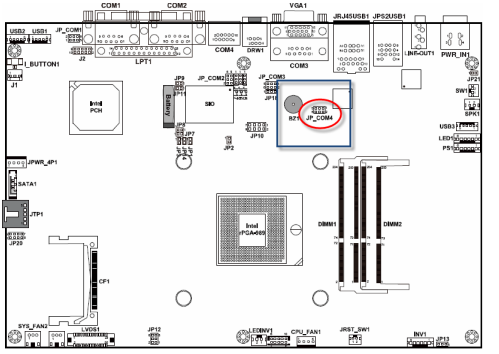
Step 1. Remove the 6511 Metal Back Cover.

Step 2. Refer to the **COM4 RI & Voltage Selection** table as shown and set the COM4 jumper to "VCC12" (12V DC).

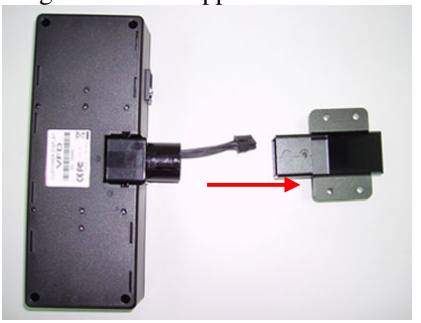


COM4 RI & Voltage Selection

Selection	Jumper Settings	Jumper Illustration
RI	1-2	
VCC12	3-4	
VCC	5-6	



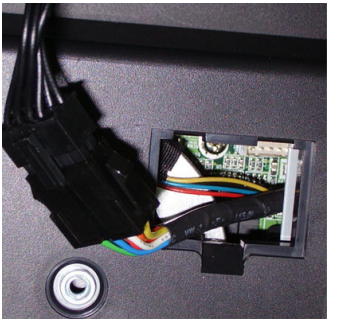
Step 3. Thread the VFD Module cable through the VFD Support Bracket.



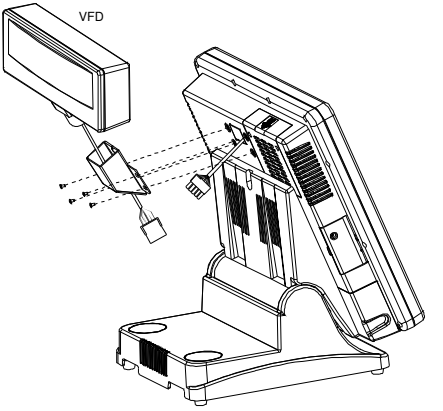
Step 4. Insert the module into the bracket until it clicks into place.

Step 5. After replacing the 6511 Metal Back Cover, remove the Back Cover for VFD.

Step 6. Stretch out the VFD cable and then connect with the VFD Module cable.



Step 7. Secure the VFD Module to the back cover with four screws.



Finished View:

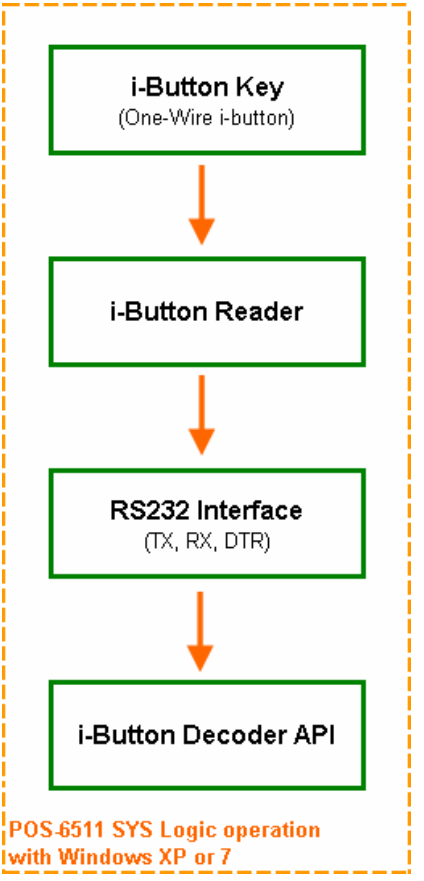
(Front View)

(Side View)

I-BUTTON DECODER API

I. FUNCTION DESCRIPTION

The i-Button Decoder API program must run on a Windows platform, XP or 7. Users can get the i-Button key serial number of the POS-6511 system through the application programming interface.



II. FUNCTION DEMO

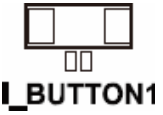
STEP 1: Hardware (Motherboard) Setup

1-1. Refer to the **i-Button Function Selection** table as shown below and set the jumpers to "i-Button".

SELECTION	JUMPER SETTINGS	JUMPER ILLUSTRATION
i-Button	2-3	
COM 3 (default)	1-2	

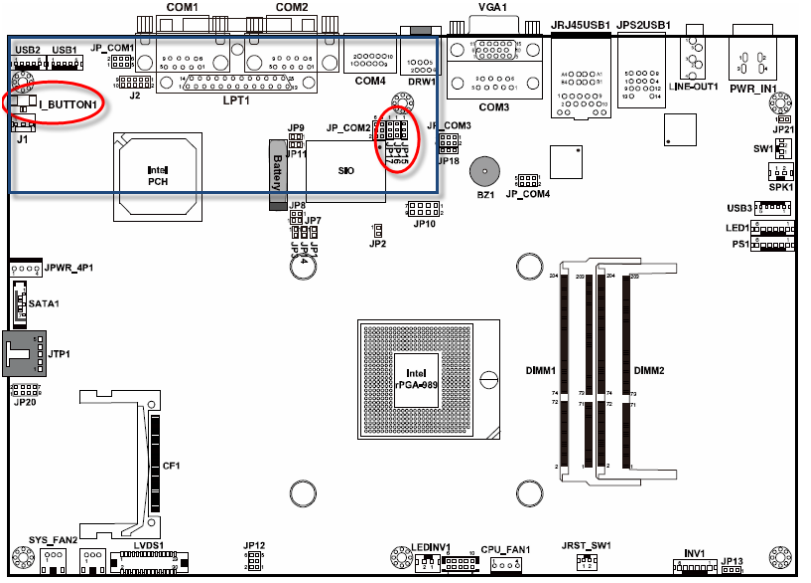
*** Manufacturing Default – COM3

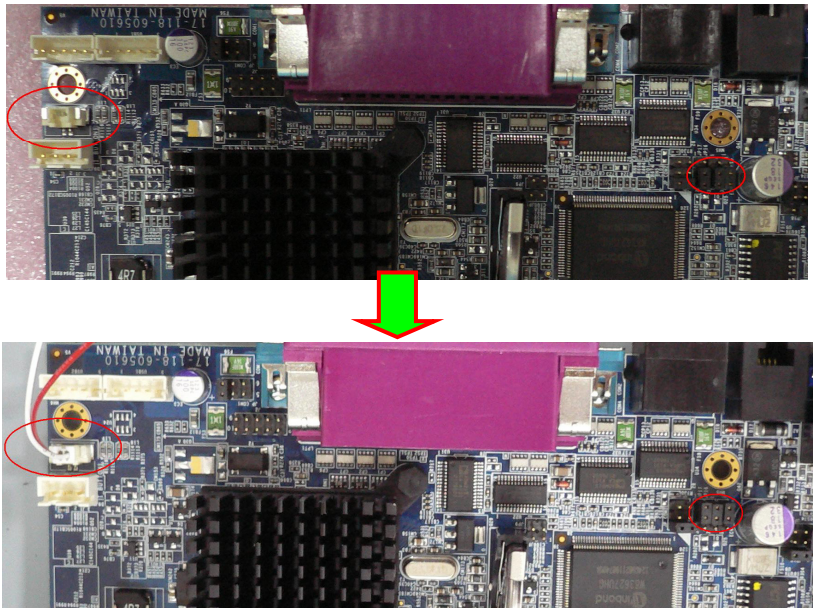
1-2. Refer to the **I_BUTTON1 Pin Assignment** table as shown and connect the i-Button cables to the I_BUTTON1 connector.



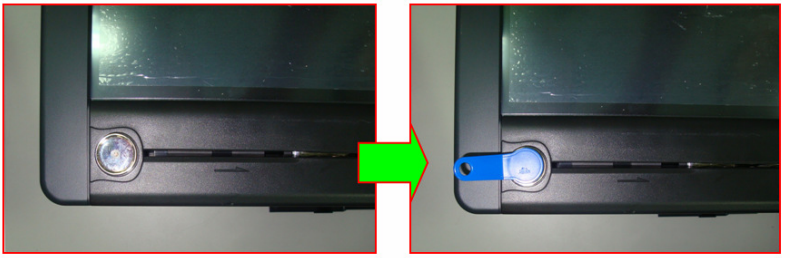
PIN	ASSIGNMENT
1	COM3_DTR_R_I
2	COM3_RXD_R_I

Illustrations:



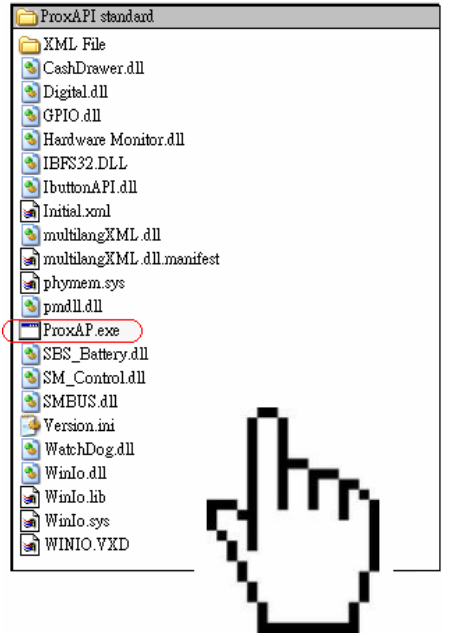


1-3. Place the i-Button key on the POS-6511 as shown below.



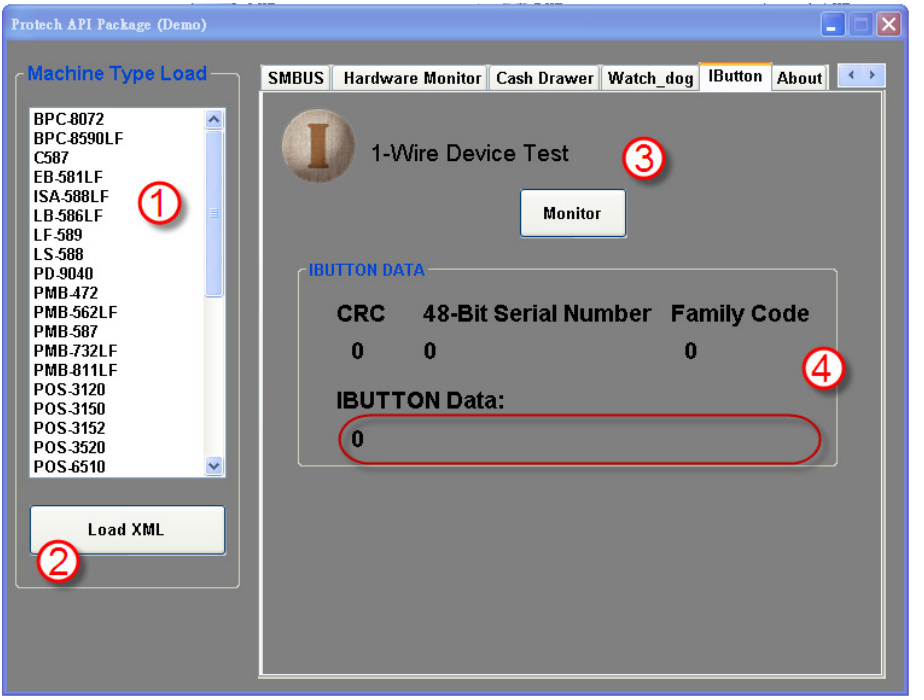
STEP 2: Run Demo Program

2-1. Enter the "ProxAPI standard" folder and double-click the executable file "ProxAP.exe" to open the API program.



Note: (1) .Net Framework 2.0 or above must be installed on the operating system before running the API program, and (2) do not remove any file under the "ProxAPI standard" folder.

STEP 3: API Setting



3-1. Choose "**POS-6511**" from the Machine Type Load list on the left pane.
3-2. Tap **[Load XML]**.
3-3. Switch to the "IButton" tab, and then tap **[Monitor]**.
3-4. The i-Button serial number will be displayed below the **IBUTTON DATA** field.

III. API INFORMATION

Function Files:

Directory	File Name	Description
ProxAPI standard\	IbuttonAPI.dll	Driver to get i-Button
	IBFS32.dll	
	multilangXML.dll	Driver to open XML file
	XML Files\Model Name\Initial.xml	XML file for each model

📖 Model Name is dependent on your machine type.

Function Parameters:

Decode_Ibutton_Process

bool Decode_Ibutton_Process(short[] buffer)

Purpose	Get the i-Button data.
Value	buffer = i-Button read will sent to this buffer
Returned	True (1) on success, False (0) on failure