



Version V1.0 AUG 2012

Copyright 2012 All Rights Reserved Manual Version 1.0 Model Number: NPT-5851

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# Safety

## **IMPORTANT SAFETY INSTRUCTIONS**

- 1. To disconnect the machine from the electrical power supply, turn off the power switch and remove the power cord plug from the wall socket.
- 2. The wall socket must be easily accessible and in close proximity to the machine.
- 3. Read these instructions carefully. Save these instructions for future reference.
- 4. Follow all warnings and instructions marked on the product.
- 5. Do not use this product near water.
- 6. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
- 7. Slots and openings in the cabinet and the back or bottom are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered.

The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register or in a built-in installation unless proper ventilation is provided.

- 8. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- 9. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
- 10. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock.
- 11. Never spill liquid of any kind on the product.

# CE MARK This 2004, 2006,

This device complies with the requirements of the EEC directive 2004/108/EC with regard to "Electromagnetic compatibility" and 2006/95/EC "Low Voltage Directive"



This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may cause undesired operation.

# **CAUTION ON LITHIUM BATTERIES**

There is a danger of explosion if the battery is replaced incorrectly. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

# **LEGISLATION AND WEEE SYMBOL**

2002/96/EC Waste Electrical and Electronic Equipment Directive on the treatment, collection, recycling and disposal of electric and electronic devices and their components.

The crossed dustbin symbol on the device means that it should not be disposed of with other household wastes at the end of its working life. Instead, the device should be taken to the waste collection centers for activation of the treatment, collection, recycling and disposal procedure.

To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.





This product should not be mixed with other commercial wastes for disposal.

# **Revision History**

Changes to the original user manual are listed below:

Version	Date		Description
1.0	AUG. 2012	•	Initial release

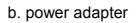
# **Table of Contents**

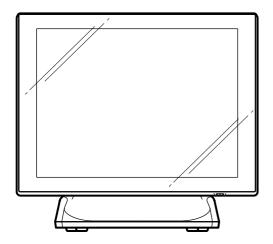
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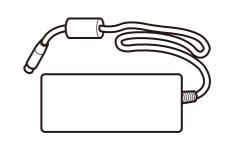
# **1.** Package Checklist

# 1-1 Standard items

a. System





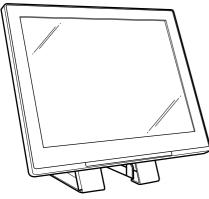


# **1-2** Optional items

a. Second Display

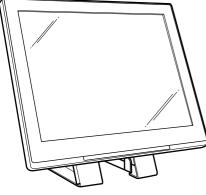
b. Second Display (Pole Type)

c. MSR



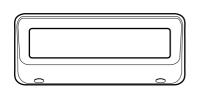


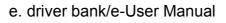






d. VFD

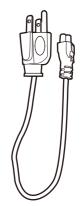




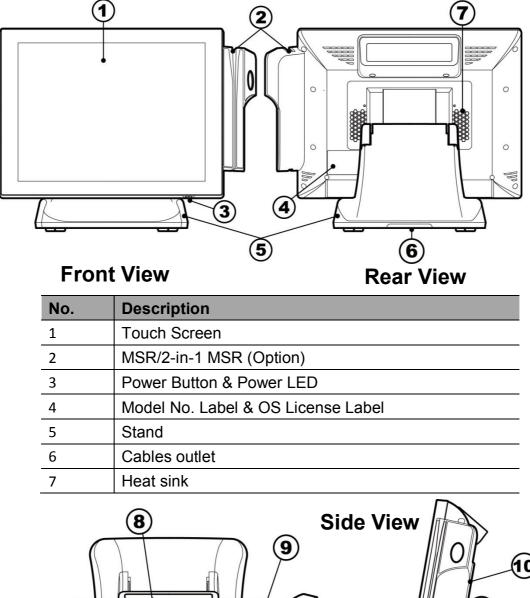


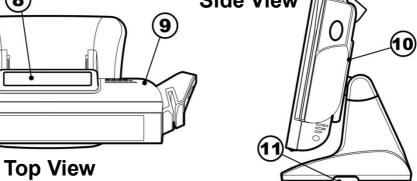


f. power cord



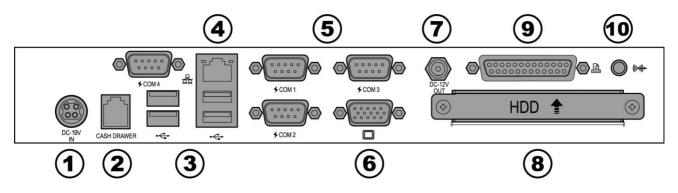
# **2.** System View





No.	Description
8	VFD (OPTION)
9	System Box (Inside with Motherboard)
10	Vesa Cover
11	Cables outlet

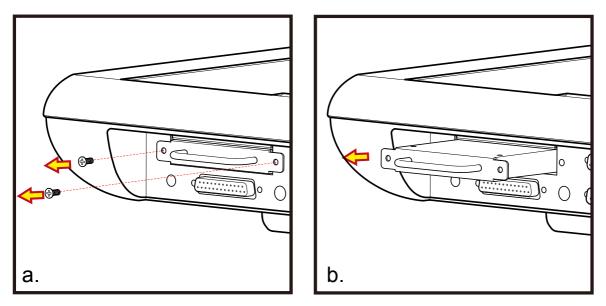
#### **Rear I/O View**



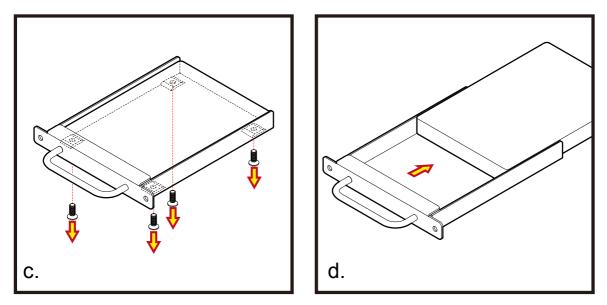
No.	Description
1	DC 19V IN
2	Cash Drawer Port
3	USB (x4)
4	LAN (10/100/1000)
5	COM(x4)
6	2nd VGA
7	DC 12V OUT
8	2.5 HDD
9	Parallel port
10	Line OUT

# 3. System Assembly & Disassembly

## **3-1 Replace the HDD**



- a. Unfasten the screws (x2) to remove the HDD cover.
- b. Disconnect the HDD Cable and take out the HDD with HDD metal handle.

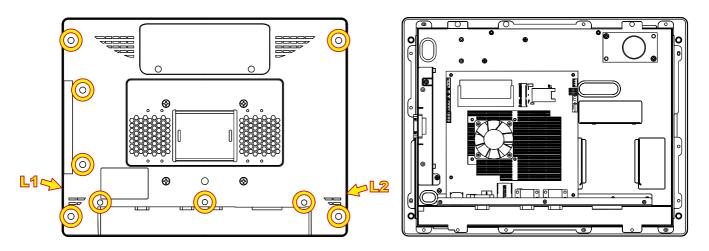


- c. Unfasten the screws (x4) at both sides of HDD metal bracket.
- d. Slide out the HDD from the HDD metal bracket and replace the HDD.

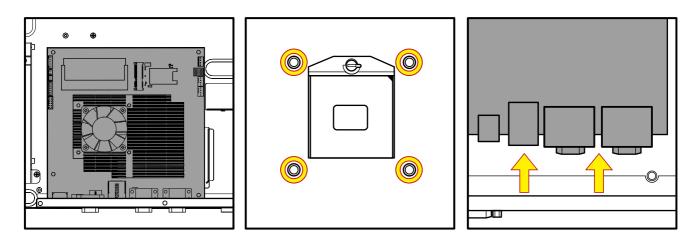
# **3-2 Replace the Motherboard**

To replace the motherboard, please follow the below steps:

- (1) Disconnect the HDD cable from the motherboard (Chapter 3-1, step a,b)
- (2) Open the system box to access the motherboard (See below)



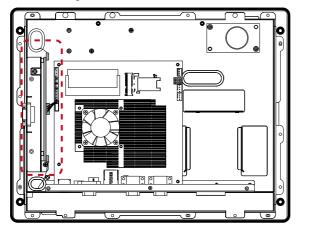
- a. Unfasten the screws(x11) on the back of system box.
- b. Press the Front bezel then separate top and bottom chassis(L1  $\sim$  L2).
- c. Remove the LCD rear cover.

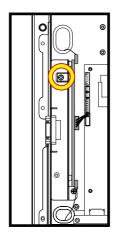


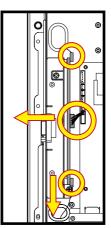
- d. Unfasten the screw(x8) fixing the motherboard and heatsink.
- e. Unfasten the screw(x4) fixing the motherboard.
- f. cable unplug out the motherboard with metal I/O bracket.

## 3-3 Replace the Inverter Board & Touch Board

#### 3-3-1 Replace the Inverter Board

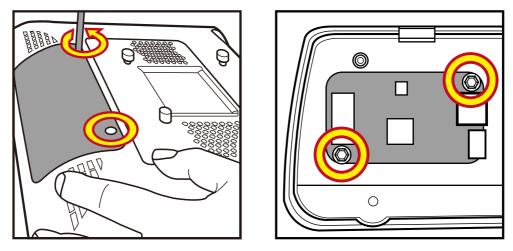






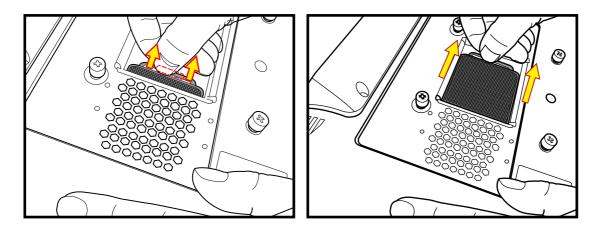
- a. The location of Inverter board on the LCD sheet metal bracket.
- b. Unfasten the screws (x2).
- c. Disconnect the cables (x3).

### 3-3-2 Replace the Touch Board

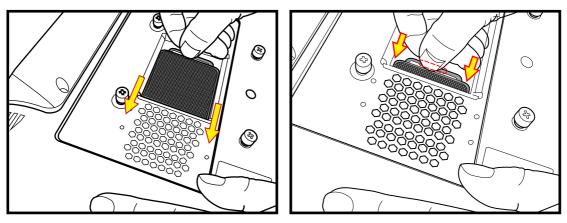


- a. The location of touch board on the LCD sheet metal bracket.
- b. Unfasten the screws (x2).
- c. Disconnect the cables (x2).

## 3-4 Install & Uninstall the Filter



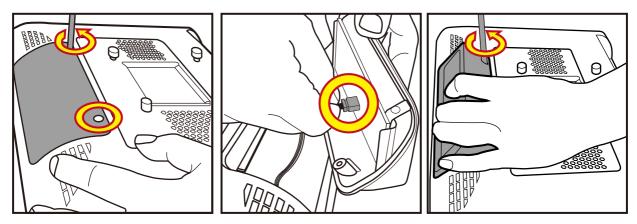
The device uses a filter that is washable and reusable. Insert the filter inside the pocket in the rear cover bracket, the handle backward the device and secure the filter with socket hole.



Draw out the filter from the pocket in the rear cover bracket (Tip: get the snap out of the socket hole first)

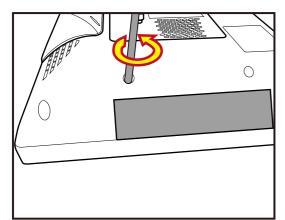
# 3-5 Install VFD & MSR (Optional)

## 3-5-1 VFD install

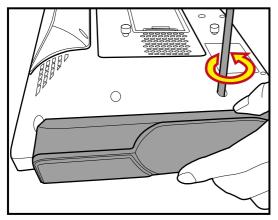


- a. Unfasten the screws.
- b. Install VFD Module on the rear cover.
- c. Tighten the screws.

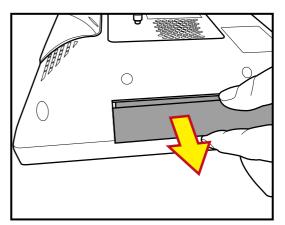
#### 3-5-2 MSR install



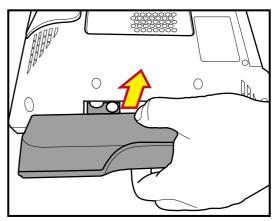
a. Unfasten the screws.



c. Install the MSR Module on the rear cover.



b. Pull the MSR cover from rear cover.



d. Tighten the screws.

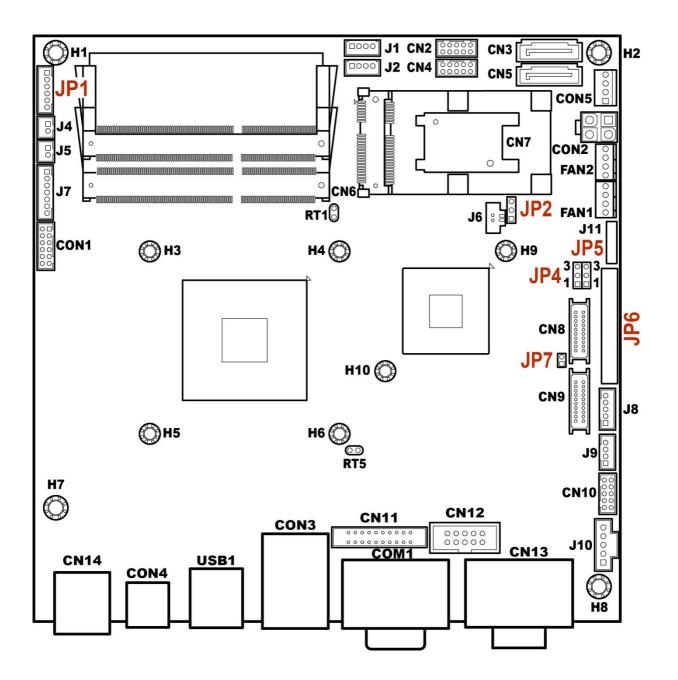
# **4.** Specification

Model Name	NPT-5851		
Motherboard	NP-HM651		
	Default: Intel® Pentium® Processor B940, 2C/2T, 2.0 GHz, 2MB Cache;		
	Upgrade Optional: <b>B950</b> , 2C/2T, 2.10GHz, 2MB Cache; or		
	2nd Generation Intel® Core Mobile Processor:		
Processor	i7-2710QE, 4C/8T, BF_2.1GHz/ 1CT_3.0GHz/ 2CT_2.9GHz, 6MB Cache.		
	i5-2510E, 2C/4T, BF_2.5GHz/ 1CT_3.1GHz/ 2CT_3.0GHz, 3MB Cache.		
	i3-2330E, 2C/4T, BF_2.2GHz, 3MB Cache.		
	Optional: Intel® Celeron® Processor B810, 2C/2T, 1.60 GHz, 2M Cache.		
Chinast	Intel® vPro™ Technology		
Chipset	Intel® Active Management Technology 7.0 paired with QM67 chipset.		
DCU	Default: Intel® BD82HM65 Platform Controller Hub, BD82HM65, FCBGA 989		
PCH	Option: Intel® BD82QM67 Platform Controller Hub, BD82QM67, FCBGA 989		
Outland Manager	Default: 1 x SO-DIMM DDR3 1333 2GB;		
System Memory	Optional: 2 x SO-DIMM DDR3 1600 Maximum up to 8GB		
Graphic Memory	Integrated graphics controller, Intel® HD Graphics 3000		
LCD / Touch Panel			
LCD Size	15" TFT XGA (1024x768) 250cd/m <sup>2</sup> LCD panel		
Touch Screen	15" 5-wire Resistive Zero Bezel Touch Panel		
Tilt Angle	0° ~ 80°		
Storage Device			
Hard Drive	1 x 2.5" SATA HDD 320GB 5,400rpm		
Expansion			
mini-PCle			
Rear I/O			
Serial port	4 x RS-232		
USB port	4 x USB 2.0		
Parallel port	1 x Parallel		
LAN Port	1 x RJ-45 (10/100/1000Mbps Ethernet)		
VGA	1 x VGA		
Cash Drawer Port	1 x RJ-11, support 2 cash drawers (24V, Max 1.1A)		
DC-IN Jack	1 x 19V-IN		
DC-OUT Jack	1 x DC-12V Output for 2nd Display Power (12V, Max 3.0A)		
Line-OUT	1 x Line-OUT for Audio		
Audio	1		

System Buzzer	1 x System Buzzer		
Internal Speaker			
· ·			
System Control/ Indicat			
Power Switch	1 x Power ON/OFF switch		
	wer LED 1 x Power ON LED (Green)		
Power			
Power Supply External AC-DC 19V/ 6.31A 120W Power Brick			
Peripheral (Optional)			
MSR	ISO 3 Tracks MSR (USB or PS/2)		
Customer Display	2 x 20 VFD customer display		
2 <sup>nd</sup> Display	15" LCD monitor		
Certificate			
EMC & Safety	FCC Class A / CE / LVD		
Environment			
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)		
Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)		
Operating Humidity	20% - 80% RH non-condensing		
Storage Humidity	20% - 85% RH non-condensing		
Dimension			
80° tilt angle	366(W) x 331(H) x 210(D) mm (No MSR) /		
	419(W) x 331(H) x 210(D) mm (w/ MSR)		
Display Head	366(W) x 280(H) x 64.5(D) mm (No MSR) /		
	419(W) x 280(H) x 64.5(D) mm (w/ MSR)		
Footprint	249 (W) x 209 (D) mm		
Package Size	490(L) x 390(W) x 350mm(H) (No MSR) /		
	560(L) x 390(W) x 350mm(H) (w/ MSR)		
Weight			
Net Weight	8.0kg (17.6lbs)		
Gross Weight	9.5kg (20.9lbs)		
OS Support			
Windows	POSReady 2009, POS 7, Win 7 Pro, XP Pro, Win CE 6.0.		
Linux	2.6 / 2.4 (Ubuntu, SuSE, Fedora, CENTOS 2.6 Only)		
L			

# **5.** Jumper Settings

# 5-1 HM-651 Motherboard Layout



# **5-2 Connectors Description**

Connector	Purpose	Connector	Purpose
CN2	COM5 Internal connector	CN3	SATA 3 Connector
CN4	COM6 Internal connector	CN5	SATA 3 Connector
CN6	MINI PCI-E	CN7	Sim card holder
CN8	LVDS Connector 48 Bit	CN9	LVDS Connector 48 Bit
CN10	Line-out & MIC	CN11	Print port
CN12	COM4 Internal connector	CN13	VGA Connector
CN14	DC-Power Input Connector		
CON1	MSR connector	CON2	Power output connector
CON3	USB+LAN Connector	CON4	CASH drawing connector
CON5	SATA POWER Connector		
J1	Internal USB connector	J2	Internal USB connector
J4	Power on SW	J5	Reset SW
J6	Battery socket	J7	CCFL Connector
J8	Keyboard connector	J9	Speaker OUT
J10	4/5 Wire touch connector		
JP1	SATA/HD/LAN/POWER LED	JP2	CMOS / ME Clear
JP4	Backlight voltage selection	JP5	LCD Power selection
JP6	SDVO connector	JP7	CASE OPEN Pin header

# **5-3 Jumper Settings**

## Panel Power selection: JP5

Function	JP1 (1-2) (2-3)
©3.3V	
VCC 5V	

**⊘Default setting 1-2 short.** 

#### **CMOS CLEAR SIGNAL: JP2**

Function	JP1 (1-2) (2-3)
ONORMAL	0 3 0 1
CLEAR CMOS	0 3 0 1

**◎Default setting 1-2 short.** 

OPEN

Note:





# 5-4 Install a Cash Drawer

You can install a cash drawer through the cash drawer port. Please verify the pin assignment before installation.

# 6 1

Cash Drawer Pin Assignment

Pin	Signal	
1	CASEOPEN2#	
2	CASH1_P	
3	CASEOPEN#	
4	24V	
5	CASH2_P	
6	GND	

#### **Cash Drawer Controller Register**

The Cash Drawer Controller use one I/O addresses to control the Cash Drawer.

# 6. BIOS Settings

This chapter describes how to use the BIOS setup program for NPT-5850 Series. The BIOS screens in this chapter are for reference only and may change if the BIOS is updated in the future. To check for the latest updates and revisions, visit the NEXCOM Web site at <u>www.nexcom.com.tw</u>.

# 6-1 About BIOS Setup

The BIOS (Basic Input and Output System) Setup program is a menu driven utility that enables you to make changes to the system configuration and tailor your system to suit your individual work needs. It is a ROM-based configuration utility that displays the system's configuration status and provides you with a tool to set system parameters.

These parameters are stored in non-volatile battery-backed-up CMOS RAM that saves this information even when the power is turned off. When the system is turned back on, the system is configured with the values found in CMOS.

With easy-to-use pull down menus, you can configure such items as:

- -- Hard drives, diskette drives, and peripherals.
- -- Video display type and display options.
- Password protection from unauthorized use.
- -- Power management features.

The settings made in the setup program intimately affect how the computer performs. It is important, therefore, first to try to understand all the Setup options, and second, to make settings appropriate for the way you use the computer.

#### When to Configure the BIOS

This program should be executed under the following conditions:

- -- When changing the system configuration.
- -- When a configuration error is detected by the system and you are
- -- prompted to make changes to the Setup program
- -- When resetting the system clock.
- -- When redefining the communication ports to prevent any conflicts.
- -- When making changes to the Power Management configuration.
- -- When changing the password or making other changes to the security setup.

Normally, CMOS setup is needed when the system hardware is not consistent with the information contained in the CMOS RAM, whenever the CMOS RAM has lost power, or the

system features need to be changed.

#### **Default Configuration**

Most of the configuration settings are either predefined according to the Load Optimal Defaults settings which are stored in the BIOS or are automatically detected and configured without requiring any actions. There are a few settings that you may need to change depending on your system configuration.

#### TO ENTER SETUP BEFORE BOOT PRESS **<CTRL-ALT-ESC>** Press the **<Del>**or**<F2>** key to enter Setup

Кеу	Function		
Right and Left arrows	Moves the highlight left or right to select a menu.		
Up and Down arrows	Moves the highlight up or down between submenus or fields.		
<esc></esc>	Exits to the BIOS Setup Utility.		
+ (plus key)	Scrolls forward through the values or options of the highlighted field.		
- (minus key)	Scrolls backward through the values or options of the highlighted field.		
<f1></f1>	Displays General Help.		
<f2></f2>	Previous Value		
<f3></f3>	Load optimized default setting		
<f4></f4>	Saves and exits the Setup program.		
<enter></enter>	Press <enter> to enter the highlighted sub menu.</enter>		

#### Scroll Bar

When a scroll bar appears to the right of the setup screen, it indicates that here are more available fields not shown on the screen.

Use the up and down arrow keys to scroll through all the available fields. Sub menu When " " appears on the left of a particular field, it indicates that a submenu which contains additional options are available for that field. To display the submenu, move the highlight to that field and press **<Enter>** 

#### **BIOS Setup Utility**

Once you enter the AMI BIOS Setup Utility, the Main Menu will appear on the screen. The main menu allows you to select from six setup functions and one exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the submenu.

# 6-2 Main

The Main menu is the first screen that you will see when you enter the BIOS Setup Utility.

	lity - Copyright (C) 2010 Amer	ican Megatrends, Inc.
BIOS Information BIOS Vendor Core Version Compliency Project Version Build Date and Time	American Megatrends 4.6.4.0 UEFI 2.1 S651-005 05/04/2012 17:55:30	Set the Date. Use Tab to switch between Data elements.
******* Memony Information *** Memory Frequency Total Memory DIMM#0 DIMM#2	***** 1333 Mhz 2048 MB (DDR3) Not Present 2048 MB (DDR3)	
ME Firmware Information ME FW Version ME Firmware Mode ME Firmware SKU	7.1.13.1088 Normal Mode 1.5MB	<pre>++: Select Screen  14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values</pre>
System Date System Time	[Fri 05/18/2012] [11:51:46]	F3: Optimized Defaults F4: Saue & Exit Esc: Exit
Version 2.10.1	1208. Copyright (C) 2010 Americ	an Megatrends, Inc.

#### **BIOS Information**

Displays the detected BIOS information.

#### **Memory Information**

Displays the detected system memory information.

#### **ME Firmware Information**

Displays the detected ME Firmware information.

#### System Date

The date format is <day>, <month>, <date>, <year>. Day displays a day, from Sunday to Saturday. Month displays the month, from January to December. Date displays the date, from 1 to 31. Year displays the year, from 1999 to 2099.

#### System Time

The time format is <hour>, <minute>, <second>. The time is based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00. Hour displays hours from 00 to 23. Minute displays minutes from 00 to 59. Second displays seconds from 00 to 59.

# 6-3 Advanced

The Advanced menu allows you to configure your system for basic operation. Some entries are defaults required by the system board, while others, if enabled, will improve the performance of your system or let you set some features according to your preference. Setting incorrect field values may cause the system to malfunction.

	ity - Copyright (C) 2010 Am Security Save & Exit	merican Megatrends, Inc.
Legacy OpROM support Launch LAN PXE OpROM	[Disabled]	Enable or Disable Boot Option for Legacy Network Devices-LAN1.
<ul> <li>ACPI Settings</li> <li>CPU Configuration</li> <li>SATA Configuration</li> <li>AMT Configuration</li> <li>USB Configuration</li> <li>Second Super IO Configuration</li> <li>Super IO Configuration</li> <li>H/W Monitor</li> </ul>		
Sandybridge PPM Configuration		<pre>**: Select Screen 14: Select Iten Enter: Select */-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit Esc: Exit</pre>
Version 2.10.12	208. Copyright (C) 2010 Ame	rican Megatrends, Inc.

#### Legacy OpROM support

Launch LAN PXE OpROM

Enable or disable boot option for legacy network devices.

#### **Default:** [Disabled]

#### **ACPI Setting**

This section is used to set the Advanced Configuration and Power Interface.

#### **CPU** Configuration

This section is used to configure the CPU. It will also display detected CPU information.

#### SATA Configuration

This section is used to configure the SATA drives.

#### **AMT** Configuration

Configures the AMT function.

#### **USB** Configuration

Configures the USB devices.

#### Second Super IO Configuration

The Section is used to configure the I/O function supported by on board Super I/O chip.

#### Super IO Configuration

This section is used to configure the I/O functions supported by the onboard Super I/O chip.

#### **H/W Monitor**

This section is used to configure the hardware monitoring events such as temperature, fan speed and voltages.

#### Sandybridge PPM Configuration

This section is used to configure Sandy bridge PPM Configuration Parameters.

#### **ACPI Setting**

This section is used to set the Advanced Configuration and Power Interface.

Aptio Setup Utility - Copyright (C) 2010 Main Advanced Chipset Boot Security Save & Exit	American Megatrends, Inc.
Legacy OpROM support Launch LAN PXE OpROM [Disabled]	System ACPI Parameters.
<ul> <li>ACPI Settings</li> <li>CPU Configuration</li> </ul>	

Advanced		
Enable Hisbernation ACPI Sleep State	[Enabled] [S3 (Suspend to RAM)]	Enables or Disables System ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some OS.
		<pre>**: Select Screen 14: Select Item Enter: Select */~: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit Esc: Exit</pre>

Enables or Disable System ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some OS.

#### Default:[Enabled]

#### **ACPI Sleep State**

Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.

Default:[S3 (Suspend to RAM)

#### **CPU Configuration**

This section is used to configure the CPU. It will also display detected CPU information.

Aptio Setup Utility - Copyright (C) 2010 American Megatrends, Inc. Main <mark>Advanced</mark> Chipset Boot Security Save & Exit		
Legacy OpROM support Launch LAN PXE OpROM	[Disabled]	CPU Configuration Parameters.
ACPI Settings CPU Configuration SATA Configuration		
AMT Configuration		

Aptio Setup Utility Advanced	- Copyright (C) 2010 Americar	n Megatrends, Inc.
CPU Configuration Intel(R) Core(TM) i3-2330E CPU @ 2. EMT64 Processor Speed Processor Stepping Microcode Revision Processor Cores Intel HT Technology Hyper-threading Hardware prefetcher Intel virtualization Technology	.20GHz Supported 2200 MHz 206a7 25 2 Supported [Enabled] [Disabled]	When enabled, a UMM can utilize the additional hardware capabilities provided by vanderpool Technology
		<pre>**: Select Screen 14: Select Item Enter: Select */-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit Esc: Exit</pre>
Version 2.10.1208.	Copyright (C) 2010 American	Megatrends, Inc.

#### Hyper-Threading

Enable this field for Windows XP and Linux which are optimized for Hyper-Threading technology. Select disabled for other OSes not optimized for Hyper-Threading technology. When disabled, only one thread per enabled core is enabled. Default:[Enabled]

#### Hardware Prefetcher

Turns on or off the MLC steamer prefetcher **Default:[Enabled]** 

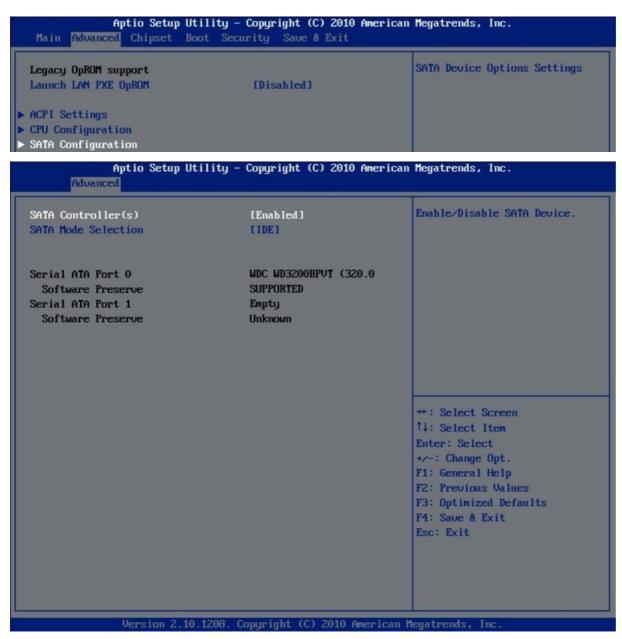
#### Intel Virtualization Technology

When this field is set to Enable, the VMM can utilize the additional hardware capabilities provided by Vanderpool technology.

#### Default:[Disabled]

#### SATA Configuration

This section is used to configure the SATA drives.



#### **SATA Mode**

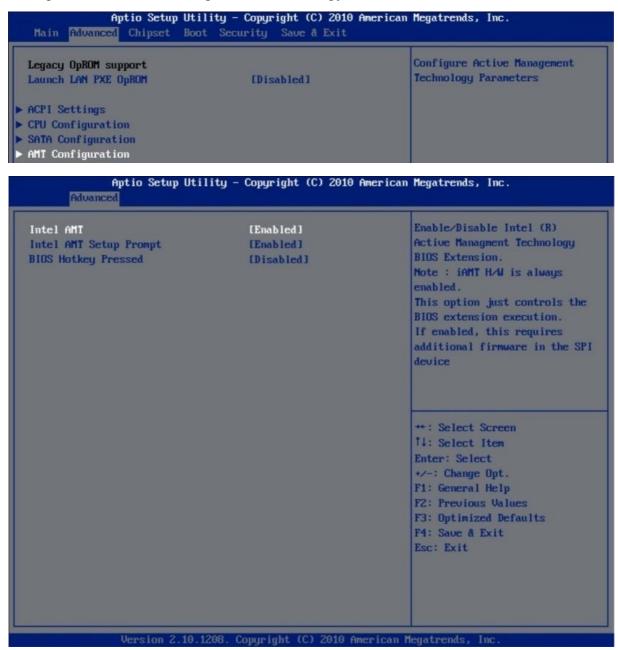
SATA Controller Enble or disable SATA Device Default: [Enabled]

#### SATA Mode Selection

Determines how SATA controller(s) operate. Default: [IDE]

#### **AMT** Configuration

Configures the Active Management Technology function.





**USB** Configuration

#### Configures the USB devices.

Aptio Setup Uti Advanced	lity - Copyright (C) 2010 (	American Megatrends, Inc.
USB Configuration USB Devices: 1 Keyboard, 2 Hubs		Enables Legacy USB support. AUTO option disables legacy support if no USB devices are connected. DISABLE option will keep USB devices available
Legacy USB Support EHCI Hand-off	[Enabled] [Disabled]	only for EFI appliations.
		<pre>**: Select Screen  f4: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit Esc: Exit</pre>
Version 2.10.	1208. Copyright (C) 2010 Am	

#### Legacy USB Support

Enabled - Enables legacy USB.

Auto - Disables support for legacy when no USB devices are connected.

Disabled - Keeps USB devices available only for EFI applications.

#### Default: [Enabled]

#### **EHCI Hand-off**

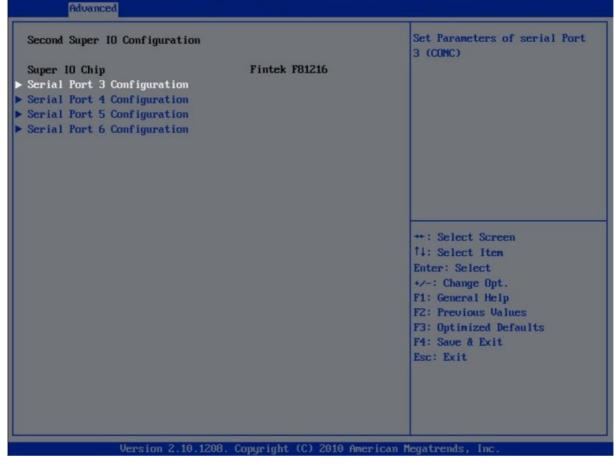
This is a workaround for OSes that does not support EHCI hand-off. TheEHCI ownership change should be claimed by the EHCI driver.

#### **Default:** [Disabled]

#### Second Super IO Configuration

This section is used to configure the I/O functions supported by the onboard Super I/O chip.

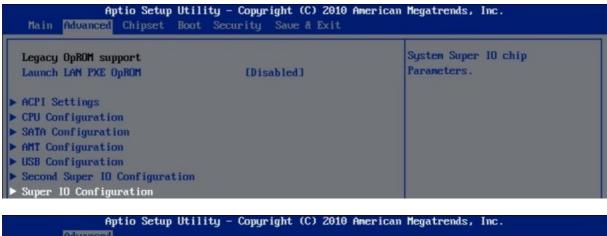
Legacy OpROM support		System Super IO chip
Launch LAN PXE OpROM	[Disabled]	Parameters.
CPI Settings		
CPU Configuration		
SATA Configuration		
AMI Configuration		
ISB Configuration		
Second Super IO Configuration		



Serial Port 3 Configuration to Serial Port 6 Configuration Selects the IO/IRQ setting of the I/O devices.

#### Super IO Configuration

This section is used to configure the I/O functions supported by the onboard Super I/O chip.



Advanced		
Super IO Configuration Super IO Chip > Serial Port 1 Configuration > Serial Port 2 Configuration > Parallel Port Configuration	Winbond W83627H	Set Parameters of serial Port 1 (COMA)
		**: Select Screen 14: Select Item Enter: Select */-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit Esc: Exit
Version 2.10.1208.	Copyright (C) 2010 American	legatrends, Inc.

#### Serial Port 1 Configuration to Serial Port 2 Configuration

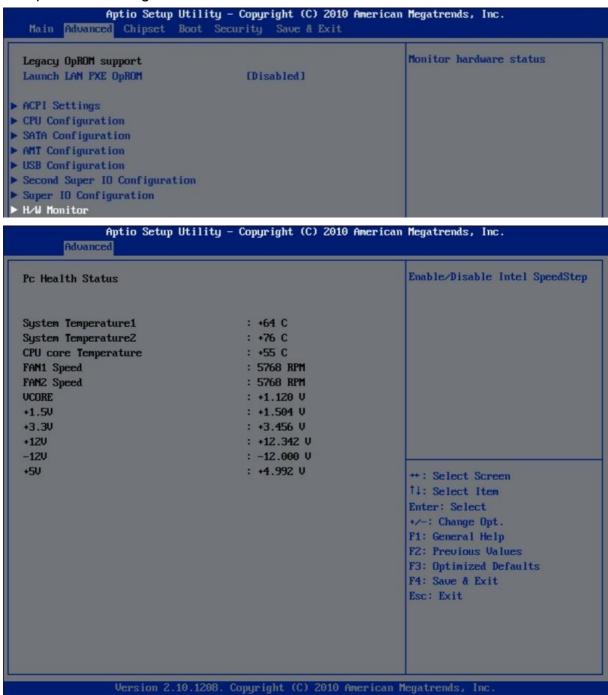
This section is used to configure the I/O functions supported by the onboard Super I/O chip.

#### **Parallel Port Configuration**

Configures the parallel port

#### **H/W Monitor**

This section is used to configure the hardware monitoring events such as temperature, fan speed and voltages.



System Temperature 1 to System Temperature 2 and CPU core Temperature Detects and displays the internal temperature of the system.

#### Fan1 Speed to Fan2 Speed

Detects and displays the current system fan and CPU fan speed in RPM (Revolutions Per Minute).

#### Vcore to +5V

Detects and displays the output voltages.

#### Sandybridge PPM Configuration

This section is used to configure Sandy bridge PPM Configuration Parameters.

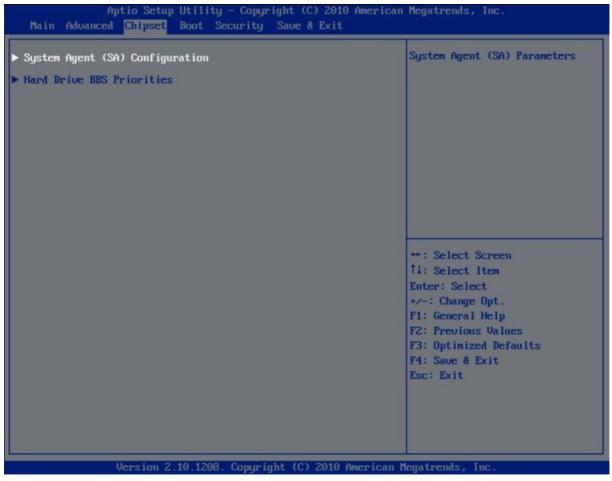
		American Megatrends, Inc.
Main Advanced Chipset Boot	Security Save & Exit	
Legacy OpROM support Launch LAN PXE OpROM	[Disabled]	Sandybridge PPM Configuration Parmeters
► ACPI Settings		
<ul> <li>CPU Configuration</li> <li>SATA Configuration</li> </ul>		
<ul> <li>AMT Configuration</li> <li>USB Configuration</li> </ul>		
Second Super IO Configuration		
<ul> <li>Super IO Configuration</li> <li>H/W Monitor</li> </ul>		
► Sandybridge PPM Configuration		
Aptio Setup Utili	ty - Copyright (C) 2010	American Megatrends, Inc.
Advanced		
Sandybridge PPM Configuration		Enable/Disable Intel SpeedStep
EIST	[Disabled]	
CPU C3 Report	[Disabled]	
CPU C6 report CPU C7 Report	[Disabled] [Disabled]	
		++: Select Screen 11: Select Item
		Enter: Select
		+/-: Change Opt. F1: General Help
		F2: Previous Values
		F3: Optimized Defaults F4: Save & Exit
		Esc: Exit
		merican Megatrends. Inc.

EIST Enable/Disable Intel SpeedStep Default: [Disabled] CPU C3 Report Enable/Disable CPU C3(ACPI C2) report to OS Default: [Disabled]

CPU C6 Report Enable/Disable CPU C6 (ACPI C6) report to OS Default: [Disabled]

CPU C7 Report Enable/Disable CPU C7 (ACPI C7) report to OS Default: [Disabled]

# 6-4 Chipset



#### System Agent (SA) Configuration

System Agent (SA) Parameters

#### **PCH-IO Configuration**

PCH-IO parameters

#### Intel IGFX Configuration

Selects the Graphic chip setting of Intel IGFX Configuration.

Aptio Setup Utility – Copyright (C) 2010 America <mark>Chipset</mark>	n Megatrends, Inc.
▶ Intel IGFX Configuration	Config Intel IGFX Settings.
Aptio Setup Utility – Copyright (C) 2010 America <mark>Chipset</mark>	n Megatrends, Inc.
Intel IGFX Configuration         Aperture Size       [256HB]         DVMT Pre-Allocated       [256H]         DVMT Total Gfx Mem       [256H]         ************************************	Select the Aperture Size **: Select Screen †4: Select Item Enter: Select */-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults
Version 2.10.1208. Copyright (C) 2010 American	F4: Saue & Exit Esc: Exit

Aperture Size Set Aperture Size

Default:[256MB]

#### **DVNT Pre-Allocation**

Internal graphic memory size **Default:[256M]** 

#### **DVMT Total GFX Mem**

Select DVNT5.0 total graphic memory size **Default:[256M]** 

#### **Primary IGFX Boot Display**

Select Video Device which will be activated during POS. This has no effect if external graphics present. Secondary boot display selection will appear based on your selection. VFA modes will be supported only on primary display. **Default:[CRT]** 

#### Secondary IGFX Boot Display

Select Secondary Display Device **Default:** [LFP]

#### LCD Panel Type

Select LCD panel used by internal Graphics Device by selecting the appropriate setup item

Default: [1024x768 LVDS]

Panel color Depth Select the LFP Panel Color Depth Default: [18 Bit]

LVDS Backlight Control Back Light Control Setting Default: [100%]

#### **PCH-IO Configuration**

PCH-IO parameters

Aptio Setup Utility - <mark>Chipset</mark>	Copyright (C) 2010 American	Megatrends, Inc.
<ul> <li>System Agent (SA) Configuration</li> <li>PCH-IO Configuration</li> </ul>		PCH Parameters
Aptio Setup Utility - <mark>Chipset</mark>	Copyright (C) 2010 American	Megatrends, Inc.
PCH LAN Controller Wake on LAN Enable Azalia SLP_S4 Assertion width Restore AC Power Loss 3G/Wifi Module Type	[Enabled] [Disabled] [Auto] [4-5 Seconds] [Power off] [Without voice]	Enable/Disable onboard NIC. **: Select Screen 11: Select Item Enter: Select */-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit Esc: Exit
Version 2.10.1208. (	Copyright (C) 2010 American M	legatrends, Inc.

#### **PCH LAN Controller**

Enables or disables onboard NIC.

#### Default: [Enable]

#### Wake on LAN Enable

Enables or disables integrated LAN to wake the system. **Default:** [Disabled]

#### Azalia

Control Detection of the Azalia device. Disabled - Azalia will be unconditionally disabled. Enabled - Azalia will be unconditionally Enabled. Auto - Azalia will be enabled if present, disabled otherwise. **Default: [Auto]** 

#### SLP\_S4 Assertion Width

Select a minimum assertion width of the SLP\_S4# signal **Default: [4-5 Seconds] Restore AC Power Loss** Select AC power state when power is re-applied after a power failure. **Default: [Power off]** 

#### 3G/ Wifi Module Type

Allows BIOS to Select 3G/Wifi Module with/Without Voice function. Default: [without Voice]

# 6-5 Boot

Aptio Setup Ut Main Advanced Chipset Boo	ility — Copyright (C) 2010 American <mark>M</mark> Security Save & Exit	Megatrends, Inc.
Quiet Boot	[Disabled]	Enables or disables Quiet Boot Option
Boot Option Priorities Boot Option #1	ESATA PM: WDC WD32]	
Hard Drive BBS Priorities		
		++: Select Screen
		Enter: Select +/-: Change Opt.
		F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit
		Esc: Exit
Version 2.10.	1208. Copyright (C) 2010 American M	legatrends, Inc.

#### **Quiet Boot**

Enables or disables the quiet boot function. **Default:** [Enable]

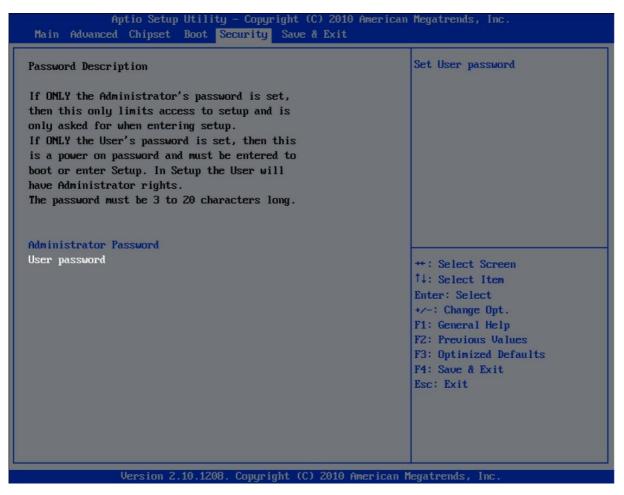
#### Boot Option #1 and Boot Option #2

Selects the boot sequence of the hard drives.

#### Hard Drive BBS Priorities

Sets the order of the legacy devices in this group.

# 6-6 Security



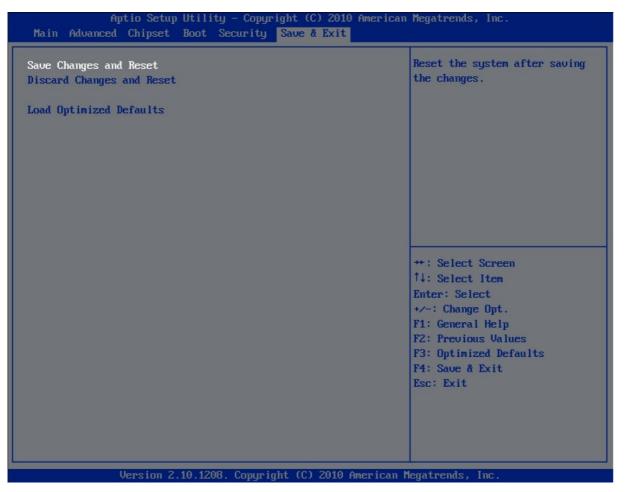
#### **Administrator Password**

Sets the administrator password.

#### **User Password**

Sets the user password

# 6-7 Save & Exit



#### Save Changes and Exit

To save the changes and exit the Setup utility, select this field then press <Enter>. A dialog box will appear. Confirm by selecting Yes. You can also press <F4> to save and exit Setup.

#### **Discard Changes and Exit**

To exit the Setup utility without saving the changes, select this field then press <Enter>. You may be prompted to confirm again before exiting. You can also press <ESC> to exit without saving the changes.

#### Load Optimized Default

To restore / lead default all values for all the setup options. Confirm by selecting Yes to apply optimized default settings.

# Appendix

## **Drivers Installation:**

The shipping package includes a Driver CD. You can find every individual driver and utility that enables you to install the drivers in the Driver CD.

Please insert the Driver CD into the drive and double click on the "index.htm" to pick up the models. You can refer to the drivers installation guide for each driverin the "Driver/Manual List".