

IMBA-967

Intel® Core™ i3/i5/i7 Desktop Processor

Dual View VGA, DVI, HDMI

Four 240-pin DDR3 1066/1333 MHz DIMM

6 SATA 3/2, 1 PCI-Express[x16],

1 PCI-Express[x4], 1 PCI-Express[x1], 4 PCI

12 USB 2.0, 6 COM, 1 LPT

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Packing List

Before you begin installing your card, please make sure that the following materials have been shipped:

- 1 IMBA-967 ATX Main Board
- 4 SATA Signal Cable
- 1 COM Port Cable with DB-9
- 1 USB Cable
- 1 I/O Shield
- 1 DVD-ROM for Manual (in PDF Format) and Drivers

If any of these items should be missing or damaged, please contact your distributor or sales representative immediately.

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Chapter

1

**General
Information**

1.1 Introduction

The IMBA-967 supports Intel® Core™ i3/i5/i7 Desktop processor. Moreover it supports DDR3 1066/1333MHz memory up to 32GB. This model accommodates two Intel® PCI-Express Gigabit Ethernet controllers that those are controlled by Intel® 82579LM and Intel® 82574L/82583V. This configuration provides outstanding computing ability, fast network connections and multi-task data transmission.

The graphic controller is integrated on Intel® Gen 6.0 that support dual view with VGA, DVI, and HDMI to meet the demand of the media and high definition. In addition, IMBA-967 deploys 12 USB 2.0, 6 COMs, two PS/2 ports, and multiple extended bus for a flexible expansion selection. The storage of IMBA-967 supports four SATA 3.0 Gb/s and two SATA 6.0 Gb/s to support RAID 0, 1, 5, 10 function.

The IMBA-967 provides an ideal combination of high performance, widely expandable interfaces and compact size that is easy to apply for multiple applications. The IMBA-967 will be an ideal product for your requirement.

1.2 Features

- Intel® 4C/2C 32nm Core™ i7/i5/i3 LGA1155 CPU Integrated Graphics & Memory Controller
- Intel® Q67
- Dual-Channel DDR3 1066/1333 MHz Memory up to 32 GB
- Intel® Gigabit Ethernet x 2 Support Intel® AMT 7.0
- Intel® Integrated Graphics Engine Supports Dual View With VGA, DVI, HDMI
- SATA 3.0 Gb/s x 4 And SATA 6.0 Gb/s x 2 Support RAID 0, 1, 5, 10
- USB 2.0 x 12, COM x 6, LPT x 1, TPM 1.2 (Optional)
- PCI-Express [x16] x 1, PCI-Express [x4] x 1, PCI-Express [x1] x 1, PCI x 4
- 24-Pin ATX Power Connector x 1, 4-Pin +12V Connector x 1

1.3 Specifications

System

- Form Factor ATX
- Processor Intel® 4C/2C 32nm Core™ i3/i5/i7 Hi-K CPU, TDP: 4C 95W/65W, 2C 65W
- System Memory Supports Dual Channel with 4 x 240-pin DDR3 1066/1333MHz, up to 32 GB
- Chipset Intel® Q67
- Ethernet Intel® PCI-Express 10/100/1000Base-TX, RJ-45 x 2
LAN1: Intel® 82579LM PHY(supports Intel® AMT 7.0);
LAN2: Intel® 82574L/82583V
- Audio Realtek ALC662
- BIOS AMI BIOS 64Mb SPI Flash ROM
- I/O Chip Winbond W83627UHG
- Storage SATA 3.0 Gb/s x 4, SATA 6.0 Gb/s x 2, support RAID 0,1,5,10 by riser card
- DIO Programmable 16-bit digital I/O interface (8 input/8 output)
- Watchdog Timer Reset: 1 ~255 steps by software

- TPM
Infineon SLB9635 TT 1.2
(Optional)
- H/W Status Monitor
Monitoring system temperature,
voltage, and cooling fan status
- Expansion Interface
PCI-Express[x16] x 1,
PCI-Express[x4] x 1,
PCI-Express[x1] x 1, PCI x 4
- Power Requirement
Standard ATX 24-pin connector,
4-pin +12V connector
- Board Size (L x W)
12" x 9.6" (305 x 244 mm)
- Gross Weight
1.76(0.8 Kg)
- Operating Temperature
32°F ~140°F (0°C ~60°C)
- Storage Temperature
-4°F ~158°F (-20°C ~70°C)
- Storage Humidity
5%~90%, non-condensing
- EMC
CE & FCC Class A

Display

- Chipset
Intel® Core™ i3/i5/i7 + Q67
- Graphic Engine
Intel® integrated Graphics
Engine
- Resolution
Analog up to 2048x1536 @ 75
Hz; Flat panels up to 1920x1080
@ 60 Hz
- Output Interface
VGA x 1, DVI-D x 1, HDMI x 1

I/O

- Serial Port COM x 6,
COM1/COM2: RS-232
COM3: RS-232/422/485
COM4~6: RS-232 (Optional
RS-422/485)
- Keyboard & Mouse PS/2 with Keyboard & Mouse x 2
- Universal Serial Bus USB 2.0 x 12 (pin header x 8,
Type A port x 4)
- Audio Audio Jack x 3 (Mic-in, Line-in,
Line-out)
- Ethernet RJ-45 x 2 (with LED)
- Parallel LPT x 1 (onboard header)
- IrDA Tx/Rx x 1 (onboard header)
- Display VGA x 1, DVI-D x 1, HDMI x 1

Chapter

2

**Quick
Installation
Guide**

2.1 Safety Precautions

Warning!

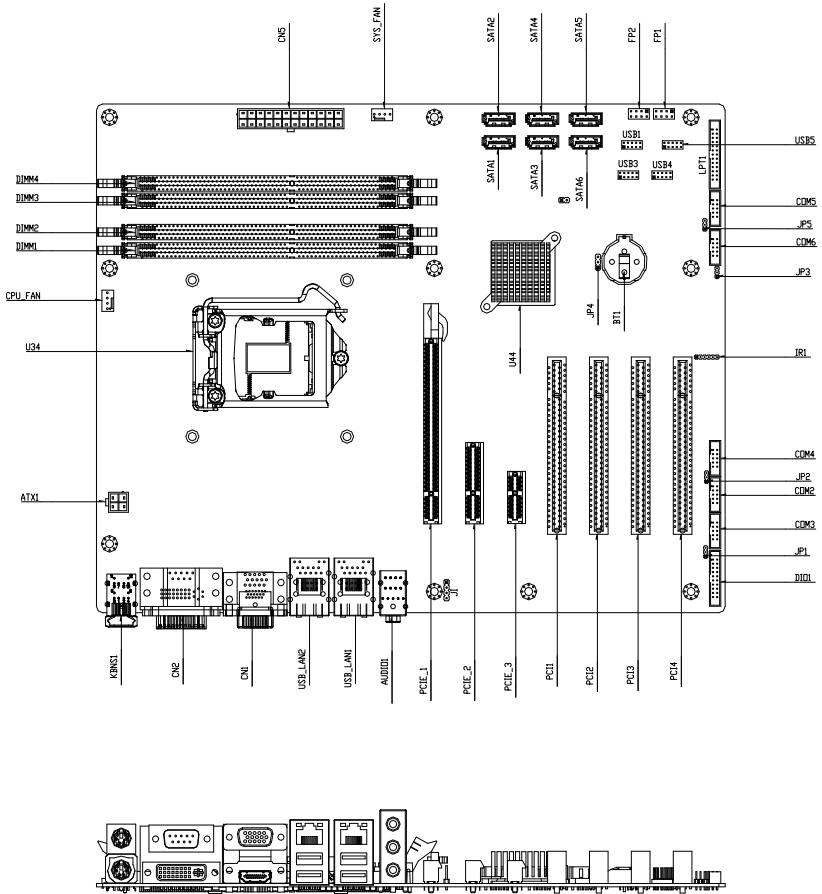
Always completely disconnect the power cord from your board whenever you are working on it. Do not make connections while the power is on, because a sudden rush of power can damage sensitive electronic components.

Caution!

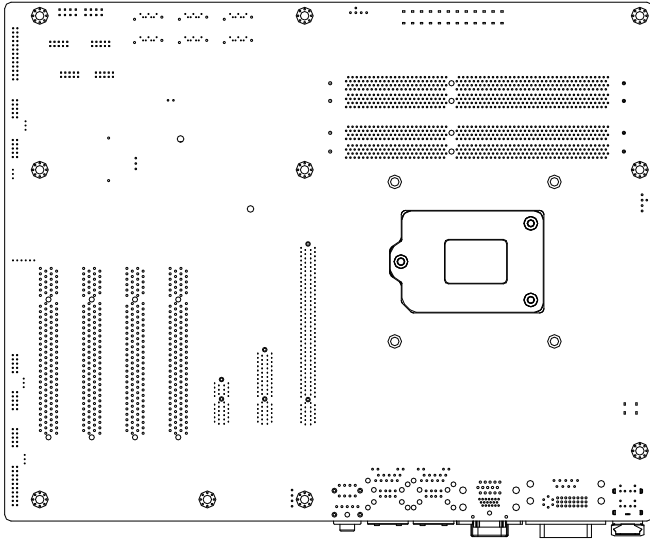
Always ground yourself to remove any static charge before touching the board. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not in the chassis

2.2 Location of Connectors and Jumpers

Component Side

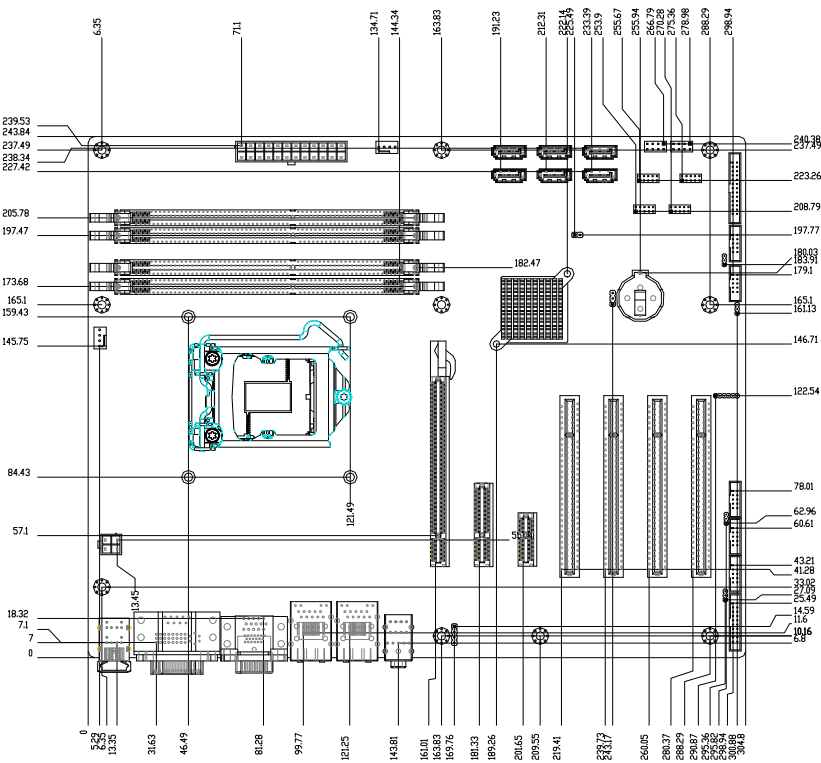


Solder Side

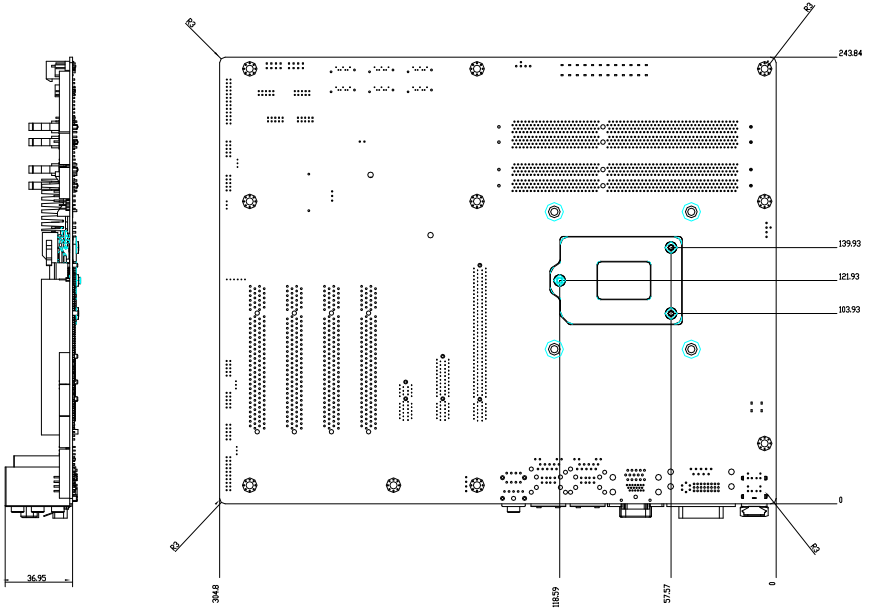


2.3 Mechanical Drawing

Component Side



Solder Side



2.4 List of Jumpers

The board has a number of jumpers that allow you to configure your system to suit your application.

The table below shows the function of each of the board's jumpers:

Label	Function
JP4	Clear CMOS

2.5 List of Connectors

The board has a number of connectors that allow you to configure your system to suit your application. The table below shows the function of each board's connectors:

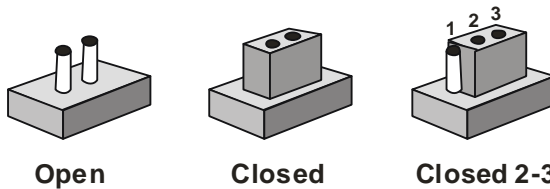
Label	Function
FP1	Front Panel Connector 1
FP2	Front Panel Connector 2
VGA1	VGA Port Connector
COM1	RS-232 Connector
COM2	RS-232 Pin Header
COM3	RS-232/422/485 Pin Header
COM4	RS-232 Pin Header
COM5	RS-232 Pin Header
COM6	RS-232 Pin Header
DIO1	Digital I/O Pin Header
LPT1	Parallel Port Pin Header
USB1	USB Pin Header
USB3	USB Pin Header
USB4	USB Pin Header
USB5	USB Pin Header
BT1	Battery

IR1	IR Pin Header
SATA1~SATA6	SATA Connector
USB_LAN1	USB & 10/100/1000Base-TX Ethernet Connector
USB_LAN2	USB & 10/100/1000Base-TX Ethernet Connector
DIMM1	DDR3 DIMM Slot
DIMM2	DDR3 DIMM Slot
DIMM3	DDR3 DIMM Slot
DIMM4	DDR3 DIMM Slot
AUDIO1	AUDIO Connector
CPU_FAN	4-Pin Fan Connector
SYS_FAN	4-Pin Fan Connector
CN2	DVI-D / COM1
CN1	HDMI / VGA
KBMS1	PS/2 KB / MS
ATX1	4-Pin ATX 12V
CN5	ATX Connector
PCIE_1	PCIE x16 Connector
PCIE_2	PCIE x4 Connector
PCIE_3	PCIE x1 Connector

2.6 Setting Jumpers

You configure your card to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch. It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To “close” a jumper you connect the pins with the clip.

To “open” a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2 and 3. In this case you would connect either pins 1 and 2 or 2 and 3.



A pair of needle-nose pliers may be helpful when working with jumpers.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any change.

Generally, you simply need a standard cable to make most connections.

2.7 Clear CMOS (JP4)

JP4	Function
1-2	Protected (Default)
2-3	Clear

2.8 Front Panel Connector (FP1)

Pin	Signal	Pin	Signal
1	Power On Button (+)	2	Reset Switch (+)
3	Power On Button (-)	4	Reset Switch (-)
5	HDD LED (+)	6	Power LED (+)
7	HDD LED (-)	8	Power LED (-)

2.9 Front Panel Connector (FP2)

Pin	Signal	Pin	Signal
1	External Speaker (+)	2	Key Board Lock (+)
3	NC	4	GND
5	Internal Buzzer (-)	6	I2C Bus SMB Clock
7	External Speaker (-)	8	I2C Bus SMB Data

Note: Internal Buzzer Enable: Close Pin 5,7

2.10 RS-232/422/485 Serial Port Connector (COM3)

RS-232			
Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

RS-422

Pin	Signal	Pin	Signal
1	RS422_TX-	2	RS422_RX+
3	RS422_TX+	4	RS422_RX-
5	GND	6	NC
7	NC	8	NC
9	NC		

RS-485

Pin	Signal	Pin	Signal
1	485DATA-	2	NC
3	485DATA+	4	NC
5	GND	6	NC
7	NC	8	NC
9	NC		

2.11 RS-232 Serial Port Connector (COM1,2,4,5,6)

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

2.12 IR Pin Header (IR1)

Pin	Signal
1	+5V
2	NC
3	RX

4	GND
5	TX

2.13 Digital I/O Pin Header (DIO1)

The DIO Address is 0X9C.

Pin	Signal	Pin	Signal
1	DIO2_0	2	DIO2_1
3	DIO2_2	4	DIO2_3
5	DIO2_4	6	DIO2_5
7	DIO2_6	8	DIO2_7
9	+3.3V	10	GND
11	+3.3V	12	GND
13	DIO1_0	14	DIO1_1
15	DIO1_2	16	DIO1_3
17	DIO1_4	18	DIO1_5
19	DIO1_6	20	DIO1_7

Below Table for China RoHS Requirements

产品中有毒有害物质或元素名称及含量

AAEON Main Board/ Daughter Board/ Backplane

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板 及其电子组件	○	○	○	○	○	○
外部信号 连接器及线材	○	○	○	○	○	○
<p>O: 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 标准规定的限量要求以下。</p> <p>X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 标准规定的限量要求。</p> <p>备注: 此产品所标示之环保使用期限, 系指在一般正常使用状况下。</p>						

Chapter

3

**AMI
BIOS Setup**

3.1 System Test and Initialization

These routines test and initialize board hardware. If the routines encounter an error during the tests, you will either hear a few short beeps or see an error message on the screen. There are two kinds of errors: fatal and non-fatal. The system can usually continue the boot up sequence with non-fatal errors.

System configuration verification

These routines check the current system configuration against the values stored in the CMOS memory. If they do not match, the program outputs an error message. You will then need to run the BIOS setup program to set the configuration information in memory.

There are three situations in which you will need to change the CMOS settings:

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

The IMBA-967 CMOS memory needs an integral lithium battery backup for data retention. You have to replace the battery when it finally runs down.

3.2 AMI BIOS Setup

AMI BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

Entering Setup

Power on the computer and press or <F2> immediately. This will allow you to enter Setup.

Main

Set the date, use tab to switch between date elements.

Advanced

Enable/disable boot option for legacy network devices.

Chipset

Host bridge parameters.

Boot

Enables/disables quiet boot option.

Security

Set setup administrator password.

Save&Exit

Exit system setup after saving the changes.

Setup Menu

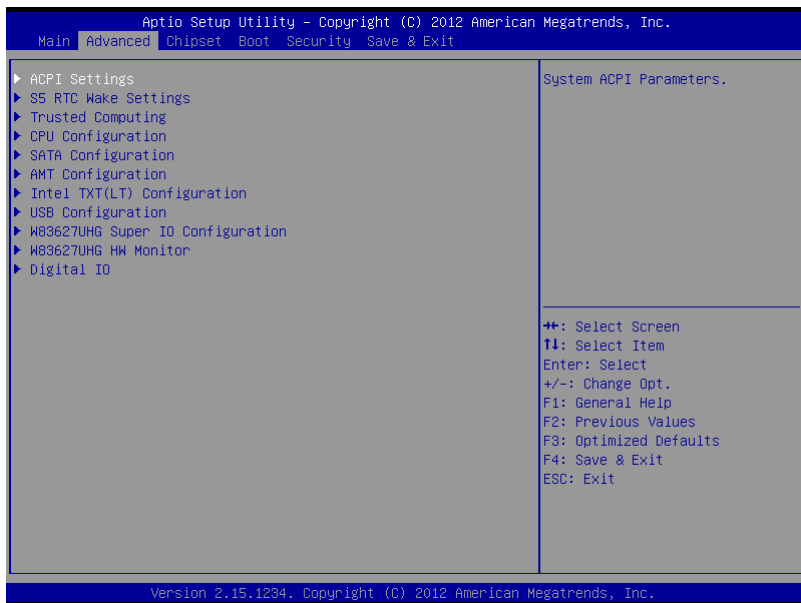
Setup submenu: Main (For IMBA-967-G2 SKU)

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.	
Main Advanced Chipset Boot Security Save & Exit	
BIOS Information IMBA-967-G2 R2.2(IA67AM22) (07/08/2013)	Set the Date. Use Tab to switch between Date elements.
BIOS Vendor American Megatrends Core Version 4.6.5.4 Compliancy UEFI 2.3.1; PI 1.2	
System Date [Wed 11/13/2013] System Time [16:32:33]	
Access Level Administrator	
	++: Select Screen T1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.15.1234. Copyright (C) 2012 American Megatrends, Inc.	

(For IMBA-967-VG SKU)

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.	
Main Advanced Chipset Boot Security Save & Exit	
BIOS Information IMBA-967-VG R2.2(IA67BM20) (07/08/2013)	Set the Date. Use Tab to switch between Date elements.
BIOS Vendor American Megatrends Core Version 4.6.5.4 Compliancy UEFI 2.3.1; PI 1.2	
System Date [Wed 11/13/2013] System Time [16:32:33]	
Access Level Administrator	
	++: Select Screen T1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.15.1234. Copyright (C) 2012 American Megatrends, Inc.	

Setup submenu: Advanced



ACPI Settings

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Advanced

<p>ACPI Settings</p> <p>ACPI Sleep State [S3 only(Suspend to ...)]</p>	<p>Select ACPI sleep state the system will enter when the SUSPEND button is pressed.</p> <hr/> <p> ++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit </p>
--	--

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Options summary:

ACPI Sleep State	Suspend Disabled
	S3 only (Suspend to RAM)
Select ACPI sleep state the system will enter when the SUSPEND button is pressed.	

S5 RTC Wake Settings

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.		
Advanced		
Wake system with Fixed Time	[Disabled]	Enable or disable System wake on alarm event. When enabled, System will wake on the hr::min::sec specified
Wake system with Dynamic Time	[Disabled]	
		++: Select Screen ↑: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.15.1234. Copyright (C) 2012 American Megatrends, Inc.		

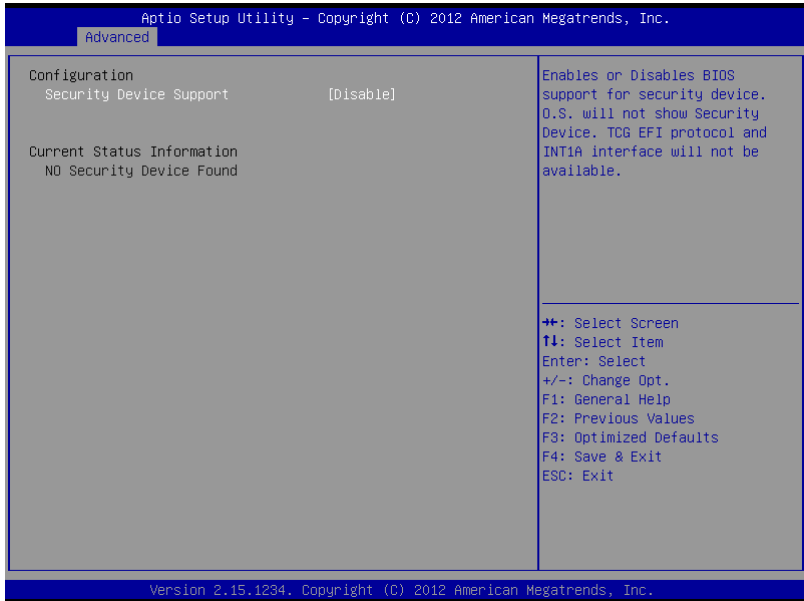
Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.		
Advanced		
Wake system with Fixed Time	[Enabled]	Enable or disable System wake on alarm event. When enabled, System will wake on the hr::min::sec specified
Wake up day	0	
Wake up hour	0	
Wake up minute	0	
Wake up second	0	
Wake system with Dynamic Time	[Disabled]	
		++: Select Screen ↑: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.15.1234. Copyright (C) 2012 American Megatrends, Inc.		



Options summary:

Wake system with Fixed Time	Disabled
	Enabled
Enable or disable System wake on alarm event. When enable, System will wake on the hr::min::sec specified.	
Wake up day	0
Select 0 for daily system wake up, 1-31 for which day of month that you would like the system to wake up.	
Wake up hour	0
Select 0-23 For example enter 3 for 3am and 15 for 3pm.	
Wake up minute	0
0-59	
Wake up second	0
0-59	
Wake system with Dynamic Time	Disabled
	Enabled
Enable or disable System wake on alarm event. When enabled, System will wake on the current time + Increase minute(s).	
Wake up minute increase	1
1-5	

Trusted Computing



Options summary:

Trusted Computing	Disabled
	Enabled
Enables or Disables BIOS support for security device. O.S. Will not show Security Device. TCG EFI protocol and INT1A interface will not be available.	

CPU Configuration

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.

Advanced

CPU Configuration		Enabled for Windows XP and Linux (OS optimized for Hyper-Threading Technology) and Disabled for other OS (OS not optimized for Hyper-Threading Technology). When Disabled only one thread per enabled core is enabled.
Intel(R) Core(TM) i3-3220 CPU @ 3.30GHz		
CPU Signature	306a9	
Microcode Patch	15	
Max CPU Speed	3300 MHz	
Min CPU Speed	1600 MHz	
CPU Speed	3300 MHz	
Processor Cores	2	
Intel HT Technology	Supported	
Intel VT-x Technology	Supported	
Intel SMX Technology	Not Supported	
64-bit	Supported	
L1 Data Cache	32 KB x 2	
L1 Code Cache	32 KB x 2	
L2 Cache	256 KB x 2	
L3 Cache	3072 KB	
Hyper-threading	[Enabled]	
Intel Virtualization Technology	[Disabled]	

++: Select Screen
 ↑↓: Select Item
 Enter: Select
 +/-: Change Opt.
 F1: General Help
 F2: Previous Values
 F3: Optimized Defaults
 F4: Save & Exit
 ESC: Exit

Version 2.15.1234. Copyright (C) 2012 American Megatrends, Inc.

Options summary :

Hyper-threading	Disabled
	Enabled
Enabled for Windows XP and Linux (OS optimized for Hyper-Threading Technology) and Disabled for other OS (OS not optimized for Hyper-Threading Technology). When Disabled only on thread per enabled core is enabled.	
Intel Virtualization Technology	Disabled
	Enabled
When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.	

SATA Configuration (IDE)

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Advanced

SATA Controller(s)	[Enabled]	Enable or disable SATA Device.
SATA Mode Selection	[IDE]	
Serial ATA Port 0	Empty	++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Software Preserve	Unknown	
Serial ATA Port 1	Empty	
Software Preserve	Unknown	
Serial ATA Port 2	Empty	
Software Preserve	Unknown	
Serial ATA Port 3	Empty	
Software Preserve	Unknown	
Serial ATA Port 4	Empty	
Software Preserve	Unknown	
Serial ATA Port 5	Empty	
Software Preserve	Unknown	

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Options summary :

SATA Controller(s)	Disabled
	Enabled
Enable or disable SATA Device.	
SATA Mode Selection	IDE
	AHCI
	RAID
Determines how SATA controller(s) operate.	
IDE Legacy / Native Mode Selection	Native
	Legacy
IDE Legacy / Native Mode Selection.	

SATA Configuration (AHCI)

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Advanced

SATA Controller(s)	[Enabled]	Identify the SATA port is connected to Solid State Drive or Hard Disk Drive.
SATA Mode Selection	[AHCI]	
SATA Controller Speed	[Default]	
Serial ATA Port 0	Empty	++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Software Preserve	Unknown	
Port 0	[Enabled]	
Hot Plug	[Disabled]	
External SATA	[Disabled]	
SATA Device Type	[Hard Disk Drive]	
Spin Up Device	[Disabled]	
Serial ATA Port 1	Empty	
Software Preserve	Unknown	
Port 1	[Enabled]	
Hot Plug	[Disabled]	
External SATA	[Disabled]	
SATA Device Type	[Hard Disk Drive]	
Spin Up Device	[Disabled]	
Serial ATA Port 2	Empty	
Software Preserve	Unknown	
Port 2	[Enabled]	
Hot Plug	[Disabled]	
External SATA	[Disabled]	
SATA Device Type	[Hard Disk Drive]	
Spin Up Device	[Disabled]	

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Options summary :

SATA Controller Speed	Disabled
	Enabled
Enable or disable SATA Device.	
SATA Mode Selection	Default
	Gen1
	Gen2
	Gen3
Indicates the maximum speed the SATA controller can support.	
Port	Disabled
	Enabled
Enable or Disable SATA Port	
Hot Plug	Disabled
	Enabled
Designates this port as Hot Pluggable.	
External SATA	Disabled
	Enabled
External SATA Support.	

SATA Device Type	Hard Disk Drive
	Solid State Drive
Identify the SATA port is connected to Solid State Drive or Hard Disk Drive.	

SATA Configuration (RAID)

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.

Advanced

SATA Controller(s)	[Enabled]	Determines how SATA controller(s) operate.
SATA Mode Selection	[RAID]	
SATA Controller Speed	[Default]	
Serial ATA Port 0	Empty	++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Software Preserve	Unknown	
Port 0	[Enabled]	
Hot Plug	[Disabled]	
External SATA	[Disabled]	
SATA Device Type	[Hard Disk Drive]	
Spin Up Device	[Disabled]	
Serial ATA Port 1	Empty	
Software Preserve	Unknown	
Port 1	[Enabled]	
Hot Plug	[Disabled]	
External SATA	[Disabled]	
SATA Device Type	[Hard Disk Drive]	
Spin Up Device	[Disabled]	
Serial ATA Port 2	Empty	
Software Preserve	Unknown	
Port 2	[Enabled]	
Hot Plug	[Disabled]	
External SATA	[Disabled]	
SATA Device Type	[Hard Disk Drive]	
Spin Up Device	[Disabled]	

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Options summary :

SATA Controller Speed	Disabled
	Enabled
Enable or disable SATA Device.	
SATA Mode Selection	Default
	Gen1
	Gen2
	Gen3
Indicates the maximum speed the SATA controller can support.	
Port	Disabled
	Enabled
Enable or Disable SATA Port	
Hot Plug	Disabled
	Enabled
Designates this port as Hot Pluggable.	
External SATA	Disabled
	Enabled
External SATA Support.	

SATA Device Type	Hard Disk Drive
	Solid State Drive
Identify the SATA port is connected to Solid State Drive or Hard Disk Drive.	

AMT Configuration

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Advanced

Intel AMT	[Enabled]	Enable/Disable Intel (R) Active Management Technology BIOS Extension. Note : iAMT H/W is always enabled. This option just controls the BIOS extension execution. If enabled, this requires additional firmware in the SPI device
Un-Configure ME	[Disabled]	

++: Select Screen
 ↑↓: Select Item
 Enter: Select
 +/-: Change Opt.
 F1: General Help
 F2: Previous Values
 F3: Optimized Defaults
 F4: Save & Exit
 ESC: Exit

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Options summary :

Intel AMT	Disabled
	Enabled
Enable/Disable Intel® Active Management Technology BIOS Extension. Note: iAMT H/W is always enabled. This option just controls the BIOS extension execution. If enabled, this requires additional	
SATA Mode Selection	Default
	Gen1
	Gen2
	Gen3
Indicates the maximum speed the SATA controller can support.	
Port	Disabled
	Enabled
Enable or Disable SATA Port	
Hot Plug	Disabled
	Enabled
Designates this port as Hot Pluggable.	

Intel TXT(LT) Configuration

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Advanced

Intel Trusted Execution Technology Configuration

Intel TXT support only can be enabled/disabled if SMX is enabled. VT and VT-d support must also be enabled prior to TXT.

Secure Mode Extensions (SMX) Disabled

Intel TXT(LT) Support [Disabled]

++: Select Screen
 ↑↓: Select Item
 Enter: Select
 +/-: Change Opt.
 F1: General Help
 F2: Previous Values
 F3: Optimized Defaults
 F4: Save & Exit
 ESC: Exit

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Options summary :

Intel TXT(LT) Support	Disabled
	Enabled
Enable / Disable Intel TXT function.	

USB Configuration

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.

Advanced

<p>USB Configuration</p> <p>USB Devices: 1 Drive, 1 Keyboard, 1 Mouse, 2 Hubs</p> <p>Legacy USB Support [Enabled]</p>	<p>Enables Legacy USB support. AUTO option disables legacy support if no USB devices are connected. DISABLE option will keep USB devices available only for EFI applications.</p> <hr/> <p>++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</p>
---	---

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Options summary:

Legacy USB Support	Enabled
	Disabled
	Auto
Enables Legacy USB support. AUTO option disables legacy support if no USB devices are connected. DISABLE option will keep USB device available only for EFI applications.	

W83627UHG Super IO Configuration (For IMBA-967-G2 SKU)

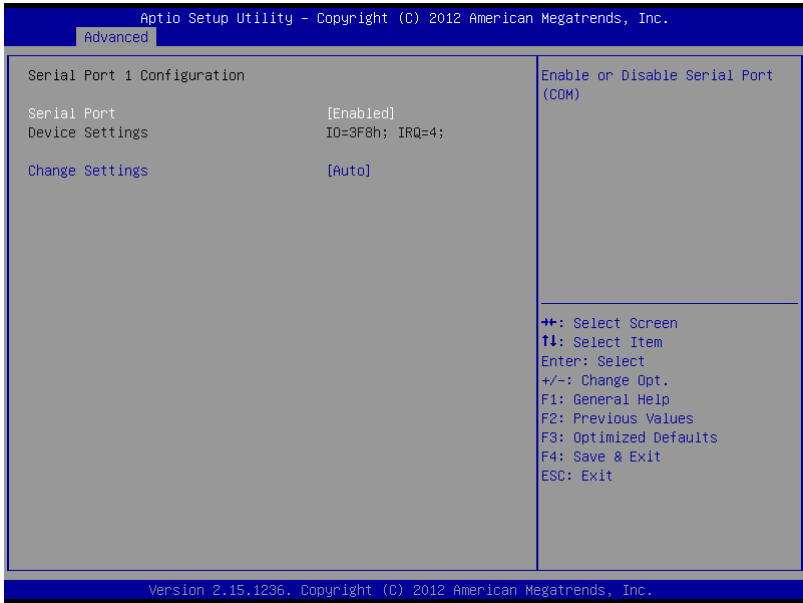
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Advanced

<p>W83627UHG Super IO Configuration</p> <p>W83627UHG Super IO Chip W83627UHG</p> <ul style="list-style-type: none">▶ Serial Port 1 Configuration▶ Serial Port 2 Configuration▶ Serial Port 3 Configuration▶ Serial Port 4 Configuration▶ Serial Port 5 Configuration▶ Serial Port 6 Configuration▶ Parallel Port Configuration	<p>Set Parameters of Serial Port 1 (COMA)</p> <hr/> <p>++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</p>
---	---

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Serial Port 1 Configuration (For IMBA-967-G2 SKU)



Options summary:

Serial Port	Disabled
	Enabled
Enable or Disable Serial Port (COM)	
Change Settings	Auto
	IO=3F8h; IRQ=4;
	IO=3F8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=2F8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;
Select an optimal setting for Super IO device.	

Serial Port 2 Configuration (For IMBA-967-G2 SKU)

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Advanced

Serial Port 2 Configuration		Enable or Disable Serial Port (COM)
Serial Port	[Enabled]	
Device Settings	IO=2F8h; IRQ=3;	
Change Settings	[Auto]	
Device Mode	[Standard Serial Por...]	
		++: Select Screen ↑: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

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Options summary:

Serial Port	Disabled
	Enabled
Enable or Disable Serial Port (COM)	
Change Settings	Auto
	IO=2F8h; IRQ=3;
	IO=3F8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=2F8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;
Select an optimal setting for Super IO device.	

Serial Port 3 Configuration (For IMBA-967-G2 SKU)

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Advanced

Serial Port 3 Configuration		Enable or Disable Serial Port (COM)
Serial Port	[Enabled]	
Device Settings	IO=3E8h; IRQ=7;	
Change Settings	[Auto]	
Com3 Mode Select	[RS232]	

++: Select Screen
 ↑↓: Select Item
 Enter: Select
 +/-: Change Opt.
 F1: General Help
 F2: Previous Values
 F3: Optimized Defaults
 F4: Save & Exit
 ESC: Exit

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Options summary:

Serial Port	Disabled
	Enabled
Enable or Disable Serial Port (COM)	
Change Settings	Auto
	IO=3E8h; IRQ=7;
	IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=3E0h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=2F0h; IRQ=3,4,5,6,7,9,10,11,12;
Select an optimal setting for Super IO device.	
COM3 Mode Select	RS232
	RS422
	RS485
Select RS232, RS422 or RS485.	

Serial Port 4 Configuration (For IMBA-967-G2 SKU)

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Advanced

<p>Serial Port 4 Configuration</p> <p>Serial Port [Enabled]</p> <p>Device Settings IO=2E8h; IRQ=7;</p> <p>Change Settings [Auto]</p>	<p>Enable or Disable Serial Port (COM)</p> <p>++: Select Screen ↑: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</p>
--	--

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Options summary:

Serial Port	Disabled
	Enabled
Enable or Disable Serial Port (COM)	
Change Settings	Auto
	IO=2E8h; IRQ=7;
	IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=3E0h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=2F0h; IRQ=3,4,5,6,7,9,10,11,12;
Select an optimal setting for Super IO device.	

Serial Port 5 Configuration (For IMBA-967-G2 SKU)

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.	
Advanced	
Serial Port 5 Configuration	Enable or Disable Serial Port (COM)
Serial Port	[Enabled]
Device Settings	IO=2E0h; IRQ=10;
Change Settings	[Auto]
++: Select Screen ↑: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	
Version 2.15.1234. Copyright (C) 2012 American Megatrends, Inc.	

Options summary:

Serial Port	Disabled
	Enabled
Enable or Disable Serial Port (COM)	
Change Settings	Auto
	IO=2E0h; IRQ=10;
	IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=3E0h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=2F0h; IRQ=3,4,5,6,7,9,10,11,12;
Select an optimal setting for Super IO device.	

Serial Port 6 Configuration (For IMBA-967-G2 SKU)

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Advanced

Serial Port 6 Configuration		Enable or Disable Serial Port (COM)
Serial Port	[Enabled]	
Device Settings	IO=2F0h; IRQ=10;	
Change Settings	[Auto]	

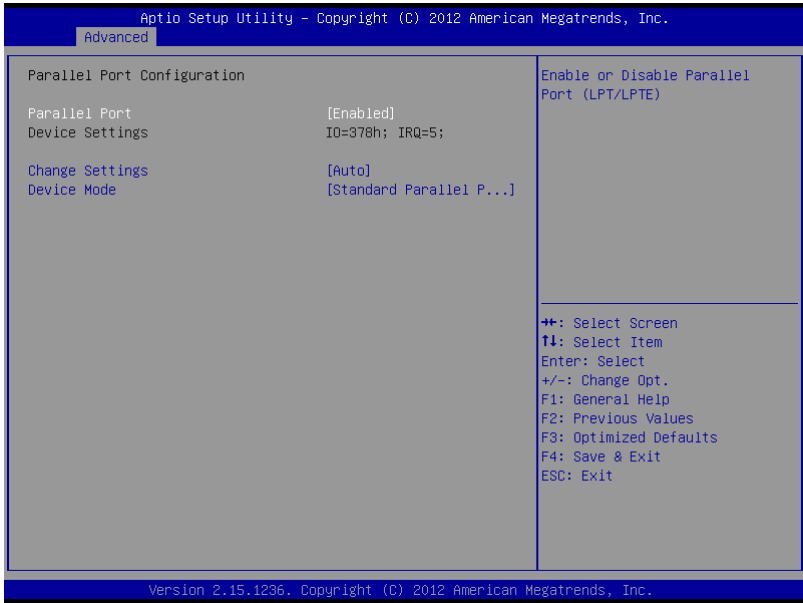
++: Select Screen
 ↑↓: Select Item
 Enter: Select
 +/-: Change Opt.
 F1: General Help
 F2: Previous Values
 F3: Optimized Defaults
 F4: Save & Exit
 ESC: Exit

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Options summary:

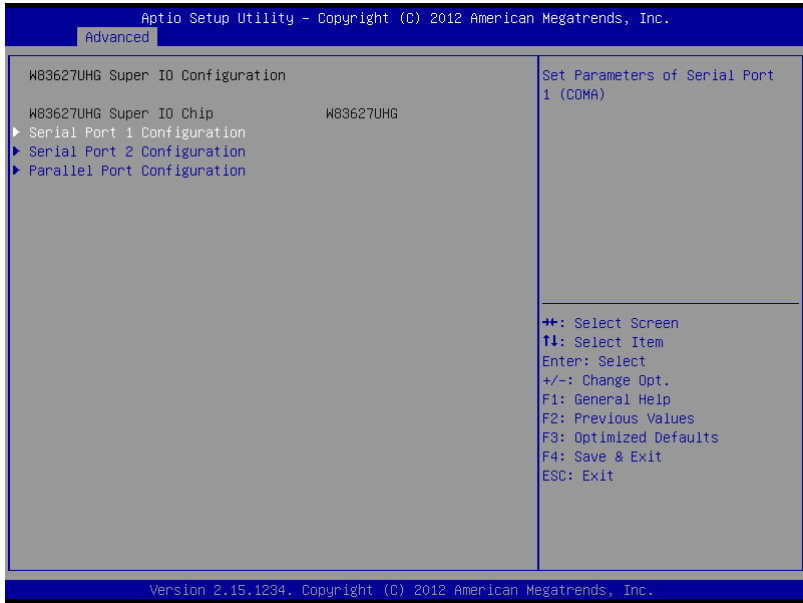
Serial Port	Disabled
	Enabled
Enable or Disable Serial Port (COM)	
Change Settings	Auto
	IO=2F0h; IRQ=10;
	IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=3E0h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=2F0h; IRQ=3,4,5,6,7,9,10,11,12;
Select an optimal setting for Super IO device.	

Parallel Port Configuration (For IMBA-967-G2 SKU)



Options summary:

Parallel Port	Disabled
	Enabled
Enable or Disable Serial Port (COM)	
Change Settings	Auto
	IO=378h; IRQ=5;
	IO=378h; IRQ=5,6,7,9,10,11,12;
	IO=278h; IRQ=5,6,7,9,10,11,12;
	IO=3BCh; IRQ=5,6,7,9,10,11,12;
Select an optimal setting for Super IO device.	
Device Mode	Standard Parallel Port Mode
	EPP Mode
	ECP Mode
	EPP Mode & ECP Mode
Change the Printer Port mode.	

W83627UHG Super IO Configuration (For IMBA-967-VG SKU)

Serial Port 1 Configuration (For IMBA-967-VG SKU)

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Advanced

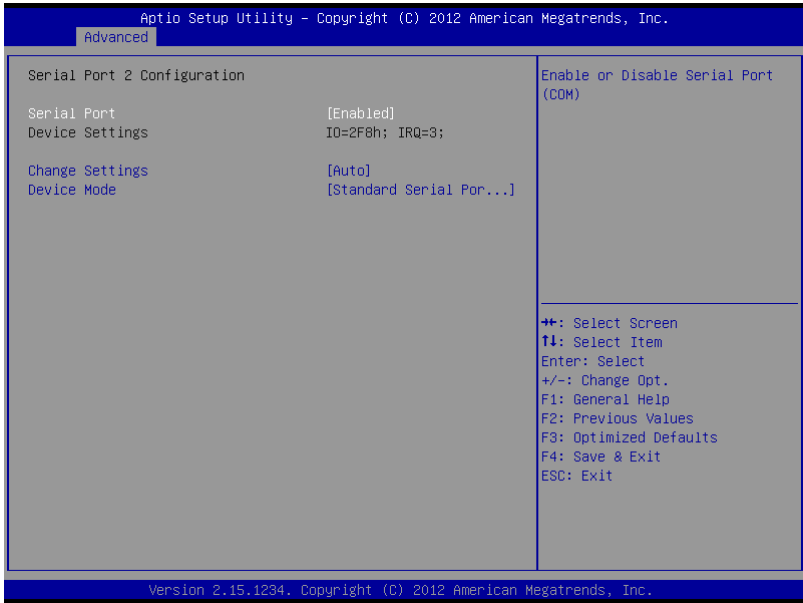
<p>Serial Port 1 Configuration</p> <p>Serial Port [Enabled]</p> <p>Device Settings IO=3F8h; IRQ=4;</p> <p>Change Settings [Auto]</p>	<p>Enable or Disable Serial Port (COM)</p> <p>++: Select Screen ↑: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</p>
--	--

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Options summary:

Serial Port	Disabled
	Enabled
Enable or Disable Serial Port (COM)	
Change Settings	Auto
	IO=3F8h; IRQ=4;
	IO=3F8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=2F8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;
Select an optimal setting for Super IO device.	

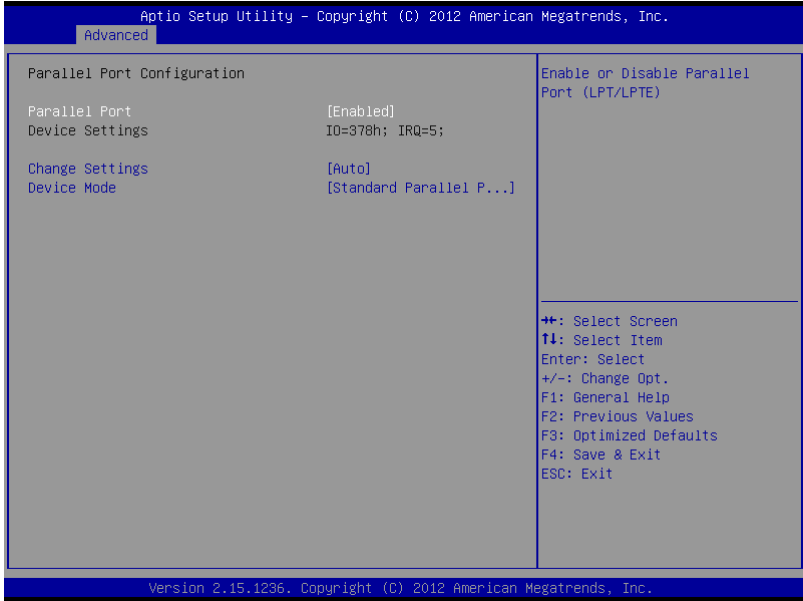
Serial Port 2 Configuration (For IMBA-967-VG SKU)



Options summary:

Serial Port	Disabled
	Enabled
Enable or Disable Serial Port (COM)	
Change Settings	Auto
	IO=2F8h; IRQ=3;
	IO=3F8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=2F8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12;
	IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;
Select an optimal setting for Super IO device.	

Parallel Port Configuration (For IMBA-967-VG SKU)



Options summary:

Parallel Port	Disabled
	Enabled
Enable or Disable Serial Port (COM)	
Change Settings	Auto
	IO=378h; IRQ=5;
	IO=378h; IRQ=5,6,7,9,10,11,12;
	IO=278h; IRQ=5,6,7,9,10,11,12;
	IO=3BCh; IRQ=5,6,7,9,10,11,12;
Select an optimal setting for Super IO device.	
Device Mode	Standard Parallel Port Mode
	EPP Mode
	ECP Mode
	EPP Mode & ECP Mode
Change the Printer Port mode.	

W83627HUG HW Monitor

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Advanced

<p>Pc Health Status</p> <p>Smart Fan Function [Disabled]</p> <p>CpuFan Duty-Cycle 255</p> <p>SysFan Duty-Cycle 255</p> <p>System temperature : +31 %</p> <p>CPU temperature : +46.0 %</p> <p>SysFan Speed : N/A</p> <p>CpuFan Speed : 1917 RPM</p> <p>VCORE : +1.016 V</p> <p>12V : +11.923 V</p> <p>3.3V : +3.344 V</p> <p>1.5V : +1.581 V</p> <p>AVCC : +5.079 V</p> <p>5VCC : +5.066 V</p> <p>VSB5 : +5.079 V</p> <p>VBAT : +3.174 V</p>	<p>Enable or Disable Smart Fan</p> <p>++: Select Screen</p> <p>F1: Select Item</p> <p>Enter: Select</p> <p>+/-: Change Opt.</p> <p>F1: General Help</p> <p>F2: Previous Values</p> <p>F3: Optimized Defaults</p> <p>F4: Save & Exit</p> <p>ESC: Exit</p>
---	--

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Options summary:

Smart Fan Function	Disabled
	Enabled
Enable or Disable Smart Fan	
CpuFan Duty-Cycle	255 (0-255)
CpuFan duty. 255 means 100% duty and 0 means 0% duty.	
SysFan Duty-Cycle	255 (0-255)
CpuFan duty. 255 means 100% duty and 0 means 0% duty.	

Smart Fan Mode Configuration

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Advanced

Smart Fan Mode Configuration		System Fan Target Temperature.
SysFan Target Temp	55	
Sysfan Tolerance Temp	5	
CpuFan Target Temp	55	
CpuFan Tolerance	5	
Fan Duty Step-up Time	3	
Fan Duty Step-down Time	3	

++: Select Screen
 ↑↓: Select Item
 Enter: Select
 +/-: Change Opt.
 F1: General Help
 F2: Previous Values
 F3: Optimized Defaults
 F4: Save & Exit
 ESC: Exit

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Options summary:

SysFan Target Temp	55
System Fan Target Temperature.	
Sysfan Tolerance Temp	5
System Fan Tolerance	
CpuFan Target Temp	55
Cpu Fan Target Temperature.	
CpuFan Tolerance	5
Cpu fan tolerance temperature	
Fan Duty Step-up Time	3
Set-up time for fan duty-cycle. The units are intervals of 0.1 second.	
Fan Duty Step-down Time	3
Step-down time for fan duty-cycle. The units are intervals of 0.1 second.	

Digital IO

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Advanced

DIO_P#1	[Input]	Set GPIO as Input or Output
DIO_P#2	[Input]	
DIO_P#3	[Input]	
DIO_P#4	[Input]	
DIO_P#5	[Output]	
DIO_P#5 Direction	[Hi]	
DIO_P#6	[Output]	
DIO_P#6 Direction	[Hi]	
DIO_P#7	[Output]	
DIO_P#7 Direction	[Hi]	
DIO_P#8	[Output]	
DIO_P#8 Direction	[Hi]	
DIO_P#11	[Input]	
DIO_P#12	[Input]	
DIO_P#13	[Input]	
DIO_P#14	[Input]	
DIO_P#15	[Output]	
DIO_P#15 Direction	[Hi]	
DIO_P#16	[Output]	
DIO_P#16 Direction	[Hi]	
DIO_P#17	[Output]	
DIO_P#17 Direction	[Hi]	
DIO_P#18	[Output]	
DIO_P#18 Direction	[Hi]	

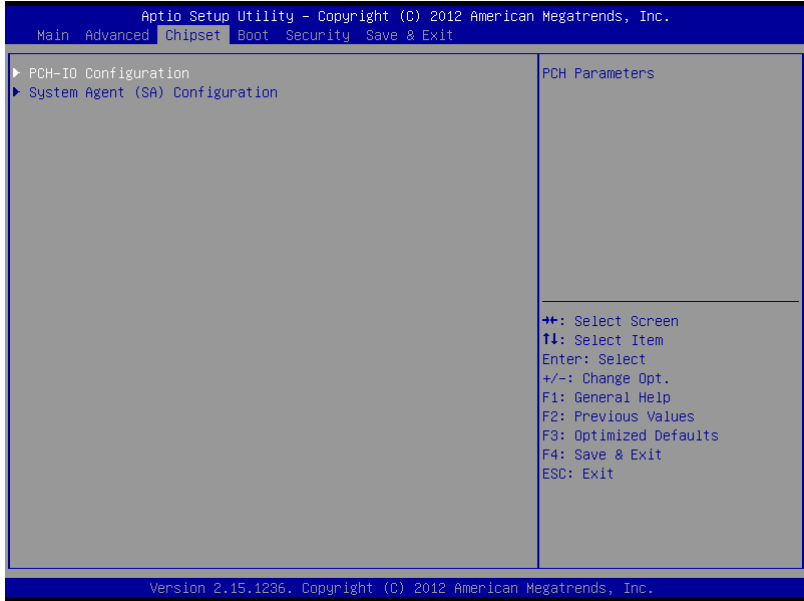
++: Select Screen
 ↑↓: Select Item
 Enter: Select
 +/-: Change Opt.
 F1: General Help
 F2: Previous Values
 F3: Optimized Defaults
 F4: Save & Exit
 ESC: Exit

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Options summary:

DIO_P# 1,2,3,4	Input
DIO_P# 11,12,13,14	Output
Set GPIO as Input or Output.	
DIO_P# 5,6,7,8	Input
DIO_P# 15,16,17,18	Output
Set GPIO as Input or Output.	
DIO_P# Direction	Low
	High
Set GPIO Output as Hi or Low	

Setup submenu: Chipset



PCH-IO Configuration

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Chipset

Power Mode	[ATX Type]	Select power supply mode.
▶ PCH Azalia Configuration		
▶ PCI Express Configuration		
PCH LAN Controller	[Enabled]	
Resume on Ring	[Enabled]	
Resume on PCIe Wake	[Enabled]	
Resume on Ring	[Enabled]	
Restore AC Power Loss	[Last State]	

++: Select Screen
 ↑↓: Select Item
 Enter: Select
 +/-: Change Opt.
 F1: General Help
 F2: Previous Values
 F3: Optimized Defaults
 F4: Save & Exit
 ESC: Exit

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Options summary:

Power Mode	ATX Type
	AT Type
Select power supply mode.	
PCH LAN Controller	Enabled
	Disabled
Enable or disable onboard NIC.	
Resume on Ring	Enabled
	Disabled
Enabled/Disabled resuming from RI# signal.	
Resume on PCIe Wake	Enabled
	Disabled
Enabled/Disabled resuming from PCIe wake message and wake# signal.	
Restore AC Power Loss	Power Off
	Power On
	Last State
Select aC power state when power is re-applied after power failure.	

PCH Azalia Configuration

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Chipset

<p>PCH Azalia Configuration</p> <p>Azalia [Enabled]</p> <p>Azalia Internal HDMI Codec [Disabled]</p>	<p>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.</p> <hr/> <p> ++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit </p>
--	---

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Options summary:

Azalia	Disabled
	Enabled
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.	
Azalia Internal HDMI Code	Disabled
	Enabled
Enabled or disable internal HDMI code for Azalia.	

PCI Express Configuration

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Chipset

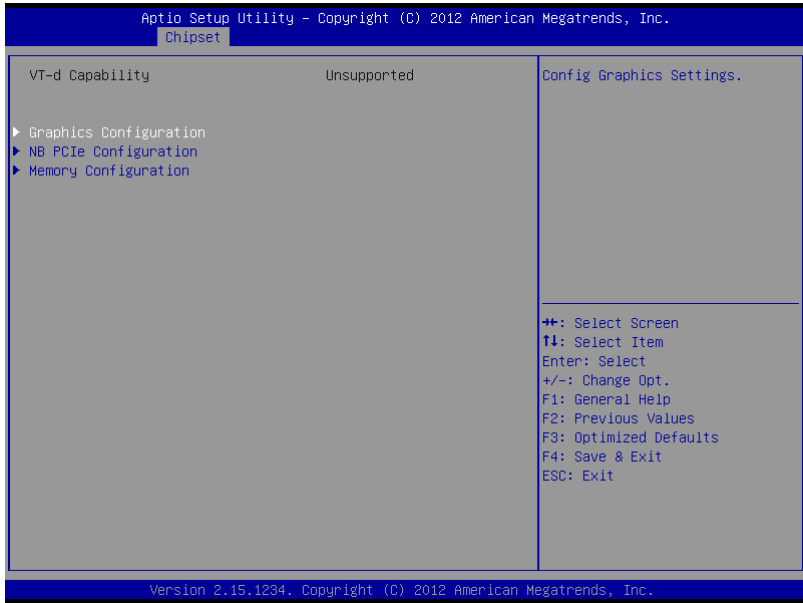
PCI Express Configuration PCIe_2 Slot (Root Port) [Enabled] PCIe Speed [Auto] PCIe_3 Slot [Enabled] PCIe Speed [Auto]	Control the PCI Express Root Port. ++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
---	--

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Options summary:

PCIe_2 Slot (Root Port)	Disabled
	Enabled
Control the PCI Express Root Port.	
PCIe Speed	Auto
	Gen1
	Gen2
Select PCI Express port speed.	
PCIe_3 Slot (Root Port)	Disabled
	Enabled
Control the PCI Express Root Port.	
PCIe Speed	Auto
	Gen1
	Gen2
Select PCI Express port speed.	

System Agent (SA) Configuration



Options summary :

VT-d	Disabled
	Enabled
Check to enable VT-d function on MCH.	

Graphics Configuration

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Chipset		
Graphics Configuration		Select which of IGFX/PEG/PCI Graphics device should be Primary Display Or select SG for Switchable Gfx.
Primary Display	[Auto]	
Internal Graphics	[Auto]	
DVMT Pre-Allocated	[64M]	
DVMT Total Gfx Mem	[256M]	
Primary IGFX Boot Display	[VBIOS Default]	
		++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.15.1234. Copyright (C) 2012 American Megatrends, Inc.		

Options summary :

Primary Display	Auto
	IGFX
	PEG
	PCI
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	32M
	64M
	96M
	128M
	160M
	192M
	224M
256M	

	288M
	320M
	352M
	384M
	416M
	448M
	480M
	512M
	1024M
Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.	
DVMT Total Gfx Mem	128M
	256M
	MAX
Select DVMT5.0 Total Graphic Memory size used by the Internal Graphics Device.	
Primary IGFX Boot Display	VBIOS Default
	CRT
	HDMI
	DVI
Select the Video Device which will be activated during POST. This has no effect if external graphics present. Secondary boot display selection will appear based on your selection. VGA mode will be supported only on primary display.	
Secondary IGFX Boot Display	Disabled
	CRT
	HDMI
	DVI
Select Secondary Display Device	

NB PCIe Configuration

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Chipset

NB PCIe Configuration		Configure PEG0 B0:D1:F0 Gen1-Gen3
PEG0 - Gen X	[Auto]	
Enable PEG	[Enabled]	

++: Select Screen
 ↑↓: Select Item
 Enter: Select
 +/-: Change Opt.
 F1: General Help
 F2: Previous Values
 F3: Optimized Defaults
 F4: Save & Exit
 ESC: Exit

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Options summary :

PEG0 - Gen X	Auto
	Gen1
	Gen2
	Gen3
Configuration PEG0 B0:D1:F0 Gen1-Gen3	
Enable PEG	Disabled
	Enabled
To enable or disable the PEG.	

Memory Information

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Chipset

Memory Information	
Memory RC Version	1.7.0.0
Memory Frequency	1333 Mhz
Total Memory	4096 MB (DDR3)
DIMM#0	4096 MB (DDR3)
DIMM#1	Not Present
DIMM#2	Not Present
DIMM#3	Not Present
CAS Latency (tCL)	9
Minimum delay time	
CAS to RAS (tRCDmin)	9
Row Precharge (tRPmin)	9
Active to Precharge (tRASmin)	24
XMP Profile 1	Not Supported
XMP Profile 2	Not Supported

++: Select Screen
 ↑↓: Select Item
 Enter: Select
 +/-: Change Opt.
 F1: General Help
 F2: Previous Values
 F3: Optimized Defaults
 F4: Save & Exit
 ESC: Exit

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Boot

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.

Main Advanced Chipset **Boot** Security Save & Exit

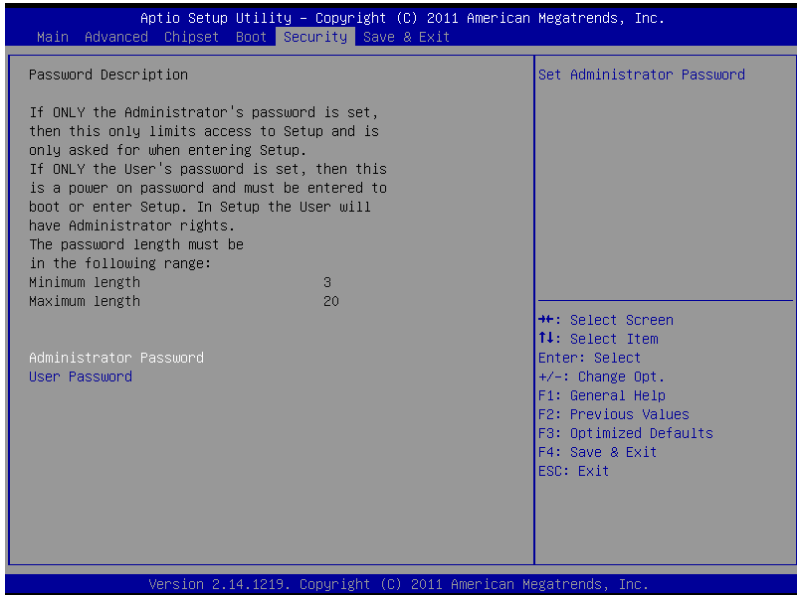
Boot Configuration		Enables or disables Quiet Boot option
Quiet Boot	[Enabled]	
Launch I82579LM PXE OpROM	[Disabled]	
Launch I82574L PXE OpROM	[Disabled]	
Boot Option Priorities		
Boot Option #1	[ADATA USB Flash Dri...]	
Boot Option #2	[UEFI: ADATA USB Fla...]	
Hard Drive BBS Priorities		
		++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

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Options summary :

Quiet Boot	Disabled
	Enabled
Enables or disables Quiet Boot option.	
Launch 82579LM # PXE OpROM	Disabled
	Enabled
Enable or Disable Legacy Boot Option for I82579LM.	
Launch 82574L # PXE OpROM	Disabled
	Enabled
Enable or Disable Legacy Boot Option for 82574L.	

Security



Change User/Supervisor Password

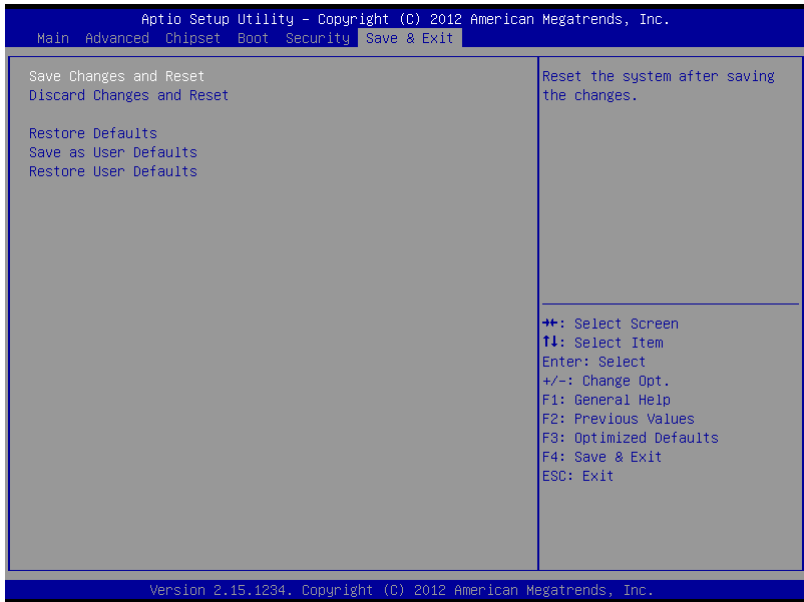
You can install a Supervisor password, and if you install a supervisor password, you can then install a user password. A user password does not provide access to many of the features in the Setup utility.

If you highlight these items and press Enter, a dialog box appears which lets you enter a password. You can enter no more than six letters or numbers. Press Enter after you have typed in the password. A second dialog box asks you to retype the password for confirmation. Press Enter after you have retyped it correctly. The password is required at boot time, or when the user enters the Setup utility.

Removing the Password

Highlight this item and type in the current password. At the next dialog box press Enter to disable password protection.

Setup submenu: Exit



Chapter

4

**Driver
Installation**

The IMBA-967 comes with a DVD-ROM that contains all drivers your need.

Follow the sequence below to install the drivers:

- Step 1 – Install Chipset Driver
- Step 2 – Install VGA Driver
- Step 3 – Install LAN Driver
- Step 4 – Install AUDIO Driver
- Step 5 – Install RAID & AHCI Driver
- Step 6 – Install ME Driver
- Step 7 – Install TPM Driver
- Step 8 – Install UART Driver

Please read following instructions for detailed installations.

4.1 Installation:

Insert the IMBA-967 DVD-ROM into the DVD-ROM Drive. And install the drivers from Step 1 to Step 8 in order.

Step 1 – Install Chipset Driver

1. Click on the **STEP1-Chipset** folder and then double click on the **infinst_autol_9.3.0.1026.exe**
2. Follow the instructions that the window shows
3. The system will help you to install the driver automatically

Step 2 – Install VGA Driver

1. Click on the **STEP2-Graphic** folder and select the OS your system is
2. Double click on **.exe** file located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you to install the driver automatically

Note: Before you install the VGA driver in Windows® XP, you have to install dotnetfx35.ext first.

Step 3 – Install LAN Driver

1. Click on the **STEP3-LAN** folder and select the OS your system is
2. Double click on **.exe** file located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you to install the driver automatically

Step 4 – Install AUDIO Driver

1. Click on the **STEP4-Audio** folder and select OS your system is
2. Double click on **.exe** file located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you to install the driver automatically

Step 5 – Install RAID & AHCI Driver

Please refer to Appendix D RAID & AHCI Settings

Step 6 – Install ME Driver

1. Click on the **STEP6-ME** folder and double click on **setup.exe** file
2. Follow the instructions that the window shows
3. The system will help you to install the driver automatically

Step 7 – Install TPM Driver

1. Click on the **STEP7-TPM** folder and double click on **Setup.exe** file
2. Follow the instructions that the window shows
3. The system will help you to install the driver automatically

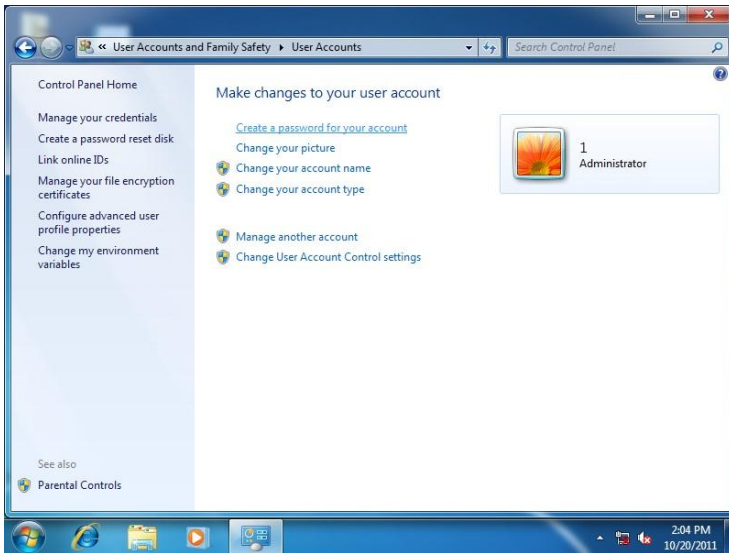
Step 8 – Install UART Driver

For Windows® XP

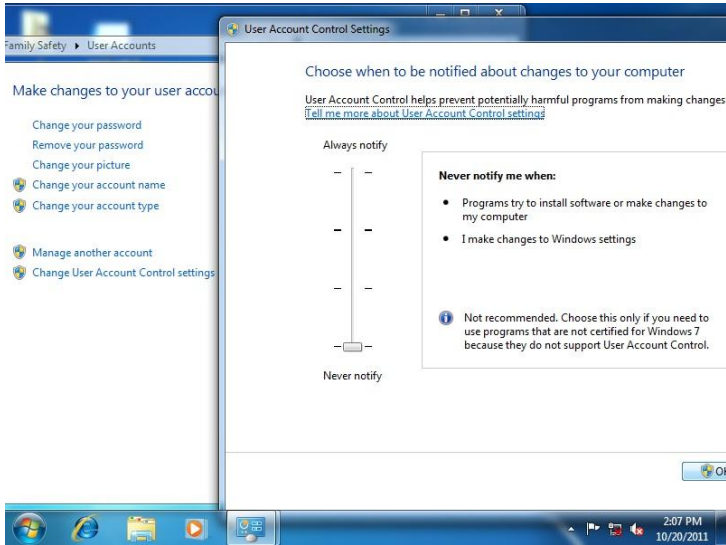
1. Click on the **STEP8-UART** folder and double click on **patch.bat** file
2. Follow the instructions that the window shows
3. The system will help you to install the driver automatically

For Windows® 7

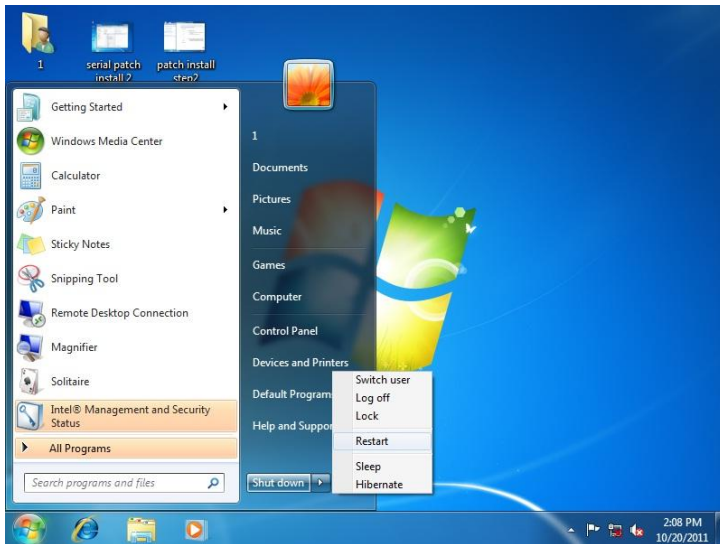
1. Create a password for Administrator account.



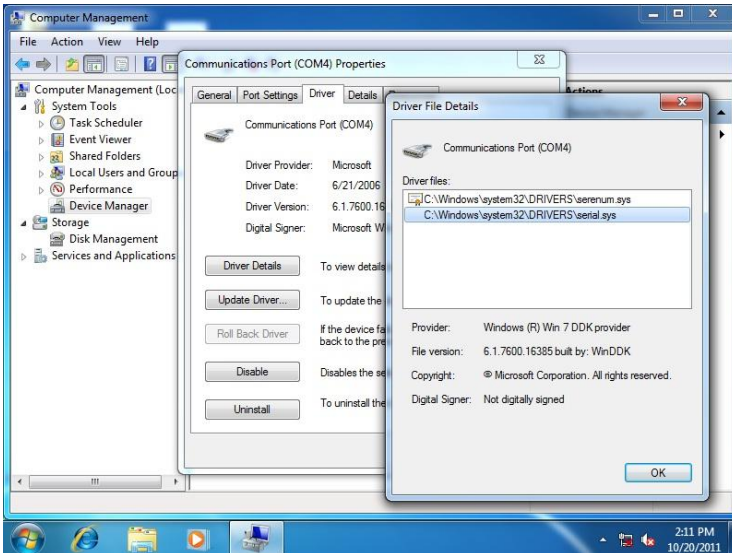
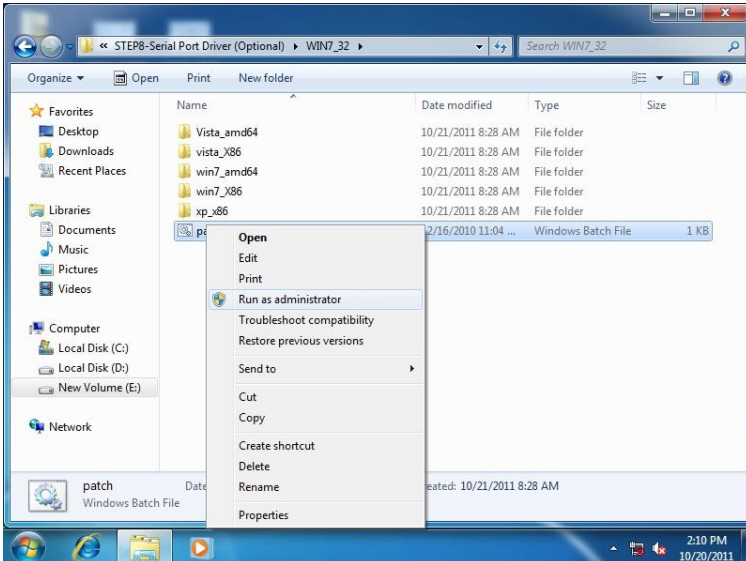
2. Change User Account Control Settings to [Never notify]



3. Reboot and Administrator login.



4. To run patch.bat with [Run as administrator].



Appendix

A

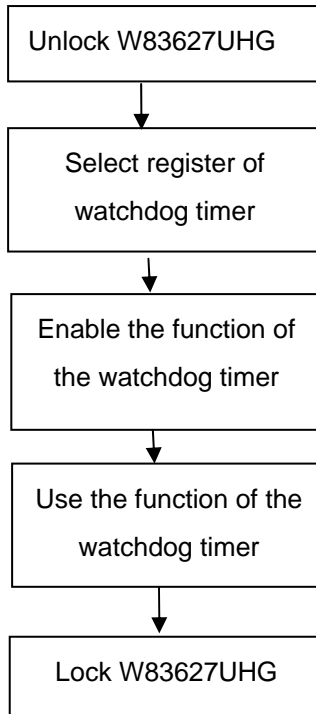
Programming the Watchdog Timer

A.1 Programming

IMBA-967 utilizes W83627UHG chipset as its watchdog timer controller.

Below are the procedures to complete its configuration and the AAEON initial watchdog timer program is also attached based on which you can develop customized program to fit your application.

Configuring Sequence Description



There are three steps to complete the configuration setup:

- (1) Enter the W83627UHG config Mode
- (2) Modify the data of configuration registers

- (3) Exit the W83627UHG config Mode. Undesired result may occur if the config Mode is not exited normally.

(1) Enter the W83627UHG config Mode

To enter the W83627UHG config Mode, two special I/O write operations are to be performed during Wait for Key state. To ensure the initial state of the key-check logic, it is necessary to perform two write operations to the Special Address port (2EH). The different enter keys are provided to select configuration ports (2Eh/2Fh) of the next step.

	Address Port	Data Port
87h,87h:	2Eh	2Fh

(2) Modify the Data of the Registers

All configuration registers can be accessed after entering the config Mode. Before accessing a selected register, the content of Index 07h must be changed to the LDN to which the register belongs, except some Global registers.

(3) Exit the W83627UHG config Mode

The exit key is provided to select configuration ports (2Eh/2Fh) of the next step.

	Address Port	Data Port
0aah:	2Eh	2Fh

CR 30h. (Default 02h)

BIT	READ/WRITE	DESCRIPTION
7~3	Reserved.	
2	R/W	0: GPIO6 is inactive. 1: GPIO6 is active.

1	R/W	0: GPIO5 is inactive. 1: GPIO5 is active.
0	R/W	0: WDTO# and PLED are inactive. 1: WDTO# and PLED are inactive.

CR F5h. (WDTO# and KBC P20 Control Mode Register; Default 00h)

BIT	READ/WRITE	DESCRIPTION
7~5	Reserved.	
4	R/W	1000 time faster in WDTO# count mode. 0: Disable. 1: Enable. (If bit-3 is Second Mode, the count mode is 1/1000 Sec.) (If bit-3 is Minute Mode, the count mode is 1/1000 Min.)
3	R/W	Select WDTO# count mode. 0: Second Mode. 1: Minute Mode.
2	R/W	Enable the rising edge of KBC reset (P20) to issue time-out event. 0: Disable. 1: Enable.
1	R/W	Disable/ Enable the WDTO# output low pulse to the KBRST# pin (PIN60) 0: Disable. 1: Enable.
0	Reserved.	

CR F6h. (WDTO# Counter Register; Default 00h)

BIT	READ/WRITE	DESCRIPTION
7~0	R/W	Watch Dog Timer Time-out value. Writing a non-zero value to this register causes the counter to load the value to Watch Dog Counter and start counting down. If bits 7 and 6 of CR F7h are set, any Mouse Interrupt or Keyboard Interrupt event will also cause the reload of previously-loaded non-zero value to Watch Dog Counter and start counting down. Reading this register returns current value in Watch Dog Counter instead of Watch Dog Timer Time-out value. 00h: Time-out Disable

		01h: Time-out occurs after 1 second/minute 02h: Time-out occurs after 2 second/minutes 03h: Time-out occurs after 3 second/minutes FFh: Time-out occurs after 255 second/minutes
--	--	--

CR F7h. (WDTO# Control & Status Register; Default 00h)

BIT	READ/WRITE	DESCRIPTION
7	R/W	Mouse interrupt reset watch-dog timer enable 0: Watchdog timer is not affected by mouse interrupt. 1: Watchdog timer is reset by mouse interrupt.
6	R/W	Keyboard interrupt reset watch-dog timer enable 0: Watchdog timer is not affected by keyboard interrupt. 1: Watchdog timer is reset by keyboard interrupt.
5	Write "1" Only	Trigger WDTO# event. This bit is self-clearing.
4	R/W Write "0" Clear	WDTO# status bit 0: Watchdog timer is running. 1: Watchdog timer issue time-out event.
3~0	R/W	These bits select IRQ resource for WDTO#. (02h for SMI# event.)

A.2 W83627UHG Watchdog Timer Initial Program

Example: Setting 10 sec. as Watchdog timeout interval

```
#include <stdio.h>
```

```
#include <conio.h>
```

```
#define EFER_Port 0x2E
```

```
#define Entry_Key 0x87
```

```
void main (void)
```

```
{
```

```
// Set Entry Key
```

```
outportb(EFER_Port,Entry_Key);
```

```
outportb(EFER_Port,Entry_Key);
```

```
// Enable WatchDog function
```

```
outportb(EFER_Port,0x07);
```

```
outportb(EFER_Port+1,0x08);
```

```
outportb(EFER_Port,0x30);
```

```
outportb(EFER_Port+1,0x01);
```

```
// Set WatchDog time is 10 sec
outportb(EFER_Port,0xf6);
outportb(EFER_Port+1,0x0A);   time is 10 sec
outportb(EFER_Port,0xAA);     exit
}
```

Appendix

B

I/O Information

B.1 I/O Address Map

Input/output (IO)	
[00000000 - 0000000F]	Direct memory access controller
[00000000 - 000003AF]	PCI bus
[00000010 - 0000001F]	Motherboard resources
[00000020 - 00000021]	Programmable interrupt controller
[00000022 - 0000003F]	Motherboard resources
[00000040 - 00000043]	System timer
[00000044 - 0000005F]	Motherboard resources
[00000060 - 00000060]	Standard PS/2 Keyboard
[00000061 - 00000061]	System speaker
[00000062 - 00000063]	Motherboard resources
[00000064 - 00000064]	Standard PS/2 Keyboard
[00000065 - 0000006F]	Motherboard resources
[00000070 - 00000071]	System CMOS/real time clock
[00000072 - 0000007F]	Motherboard resources
[00000080 - 00000080]	Motherboard resources
[00000081 - 00000083]	Direct memory access controller
[00000084 - 00000086]	Motherboard resources
[00000087 - 00000087]	Direct memory access controller
[00000088 - 00000088]	Motherboard resources
[00000089 - 0000008B]	Direct memory access controller
[0000008C - 0000008E]	Motherboard resources
[0000008F - 0000008F]	Direct memory access controller
[00000090 - 0000009F]	Motherboard resources
[000000A0 - 000000A1]	Programmable interrupt controller
[000000A2 - 000000BF]	Motherboard resources
[000000C0 - 000000DF]	Direct memory access controller
[000000E0 - 000000EF]	Motherboard resources
[000000F0 - 000000FF]	Numeric data processor
[00000290 - 0000029F]	Motherboard resources
[000002E0 - 000002E7]	Communications Port (COM6)
[000002E8 - 000002EF]	Communications Port (COM4)
[000002F0 - 000002F7]	Communications Port (COM5)
[000002F8 - 000002FF]	Communications Port (COM2)
[00000378 - 0000037F]	Printer Port (LPT1)
[000003B0 - 000003BB]	Intel(R) HD Graphics Family
[000003B0 - 000003DF]	PCI bus
[000003C0 - 000003DF]	Intel(R) HD Graphics Family
[000003E0 - 000003F7]	PCI bus

























































	[000003E8 - 000003EF]	Communications Port (COM3)
	[000003F8 - 000003FF]	Communications Port (COM1)
	[00000400 - 00000453]	System board
	[00000454 - 00000457]	Motherboard resources
	[00000458 - 0000047F]	System board
	[000004D0 - 000004D1]	Motherboard resources
	[00000500 - 0000057F]	System board
	[00000778 - 0000077F]	Motherboard resources
	[00000D00 - 0000FFFF]	PCI bus
	[00001180 - 0000119F]	System board
	[0000E000 - 0000EFFF]	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 7 - 1C1C
	[0000F000 - 0000F03F]	Intel(R) HD Graphics Family
	[0000F040 - 0000F05F]	Intel(R) 6 Series/C200 Series Chipset Family SMBus Controller - 1C22
	[0000F080 - 0000F08F]	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C08
	[0000F090 - 0000F09F]	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C08
	[0000F0A0 - 0000F0A3]	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C08
	[0000F0B0 - 0000F0B7]	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C08
	[0000F0C0 - 0000F0C3]	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C08
	[0000F0D0 - 0000F0D7]	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C08
	[0000F0E0 - 0000F0EF]	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C00
	[0000F0F0 - 0000F0FF]	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C00
	[0000F100 - 0000F103]	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C00
	[0000F110 - 0000F117]	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C00
	[0000F120 - 0000F123]	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C00
	[0000F130 - 0000F137]	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C00
	[0000F140 - 0000F147]	Intel(R) Active Management Technology - SOL (COM7)
	[0000F150 - 0000F15F]	Standard Dual Channel PCI IDE Controller
	[0000F160 - 0000F163]	Standard Dual Channel PCI IDE Controller
	[0000F170 - 0000F177]	Standard Dual Channel PCI IDE Controller
	[0000F180 - 0000F183]	Standard Dual Channel PCI IDE Controller
	[0000F190 - 0000F197]	Standard Dual Channel PCI IDE Controller


































B.2 1st MB Memory Address Map

Memory	
[000A0000 - 000BFFFF]	Intel(R) HD Graphics Family
[000A0000 - 000BFFFF]	PCI bus
[000C0000 - 000DFFFF]	PCI bus
[3DA00000 - FFFFFFFF]	PCI bus
[D0000000 - DFFFFFFF]	Intel(R) HD Graphics Family
[E0000000 - EFFFFFFF]	System board
[FE000000 - FE3FFFFF]	Intel(R) HD Graphics Family
[FE400000 - FE4FFFFF]	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 7 - 1C1C
[FE440000 - FE45FFFF]	Intel(R) Gigabit CT Desktop Adapter
[FE460000 - FE463FFF]	Intel(R) Gigabit CT Desktop Adapter
[FE500000 - FE51FFFF]	Intel(R) 82579LM Gigabit Network Connection
[FE520000 - FE523FFF]	High Definition Audio Controller
[FE524000 - FE5240FF]	Intel(R) 6 Series/C200 Series Chipset Family SMBus Controller - 1C22
[FE525000 - FE5253FF]	Intel(R) 6 Series/C200 Series Chipset Family USB Enhanced Host Controller - 1C26
[FE526000 - FE5263FF]	Intel(R) 6 Series/C200 Series Chipset Family USB Enhanced Host Controller - 1C2D
[FE527000 - FE527FFF]	Intel(R) 82579LM Gigabit Network Connection
[FE528000 - FE528FFF]	Intel(R) Active Management Technology - SOL (COM7)
[FE529000 - FE52900F]	Intel(R) Management Engine Interface
[FEC00000 - FECFFFFFFF]	System board
[FED00000 - FED003FF]	High precision event timer
[FED08000 - FED08FFF]	System board
[FED10000 - FED19FFF]	System board
[FED1C000 - FED1FFFF]	System board
[FED20000 - FED3FFFF]	System board
[FED40000 - FED44FFF]	Trusted Platform Module 1.2
[FED90000 - FED93FFF]	System board
[FEE00000 - FEE0FFFFF]	System board
[FF000000 - FFFFFFFF]	System board



B.3 IRQ Mapping Chart

Interrupt request (IRQ)	Device
(ISA) 0x00000000 (00)	System timer
(ISA) 0x00000001 (01)	Standard PS/2 Keyboard
(ISA) 0x00000003 (03)	Communications Port (COM2)
(ISA) 0x00000004 (04)	Communications Port (COM1)
(ISA) 0x00000007 (07)	Communications Port (COM3)
(ISA) 0x00000007 (07)	Communications Port (COM4)
(ISA) 0x00000008 (08)	System CMOS/real time clock
(ISA) 0x0000000A (10)	Communications Port (COM5)
(ISA) 0x0000000B (11)	Communications Port (COM6)
(ISA) 0x0000000C (12)	Microsoft PS/2 Mouse
(ISA) 0x0000000D (13)	Numeric data processor
(ISA) 0x00000051 (81)	Microsoft ACPI-Compliant System
(ISA) 0x00000052 (82)	Microsoft ACPI-Compliant System
(ISA) 0x00000053 (83)	Microsoft ACPI-Compliant System
(ISA) 0x00000054 (84)	Microsoft ACPI-Compliant System
(ISA) 0x00000055 (85)	Microsoft ACPI-Compliant System
(ISA) 0x00000056 (86)	Microsoft ACPI-Compliant System
(ISA) 0x00000057 (87)	Microsoft ACPI-Compliant System
(ISA) 0x00000058 (88)	Microsoft ACPI-Compliant System
(ISA) 0x00000059 (89)	Microsoft ACPI-Compliant System
(ISA) 0x0000005A (90)	Microsoft ACPI-Compliant System
(ISA) 0x0000005B (91)	Microsoft ACPI-Compliant System
(ISA) 0x0000005C (92)	Microsoft ACPI-Compliant System
(ISA) 0x0000005D (93)	Microsoft ACPI-Compliant System
(ISA) 0x0000005E (94)	Microsoft ACPI-Compliant System
(ISA) 0x0000005F (95)	Microsoft ACPI-Compliant System
(ISA) 0x00000060 (96)	Microsoft ACPI-Compliant System
(ISA) 0x00000061 (97)	Microsoft ACPI-Compliant System
(ISA) 0x00000062 (98)	Microsoft ACPI-Compliant System
(ISA) 0x00000063 (99)	Microsoft ACPI-Compliant System
(ISA) 0x00000064 (100)	Microsoft ACPI-Compliant System
(ISA) 0x00000065 (101)	Microsoft ACPI-Compliant System
(ISA) 0x00000066 (102)	Microsoft ACPI-Compliant System
(ISA) 0x00000067 (103)	Microsoft ACPI-Compliant System
(ISA) 0x00000068 (104)	Microsoft ACPI-Compliant System
(ISA) 0x00000069 (105)	Microsoft ACPI-Compliant System
(ISA) 0x0000006A (106)	Microsoft ACPI-Compliant System
(ISA) 0x0000006B (107)	Microsoft ACPI-Compliant System
(ISA) 0x0000006C (108)	Microsoft ACPI-Compliant System
(ISA) 0x0000006D (109)	Microsoft ACPI-Compliant System
(ISA) 0x0000006E (110)	Microsoft ACPI-Compliant System
(ISA) 0x0000006F (111)	Microsoft ACPI-Compliant System
(ISA) 0x00000070 (112)	Microsoft ACPI-Compliant System
(ISA) 0x00000071 (113)	Microsoft ACPI-Compliant System
(ISA) 0x00000072 (114)	Microsoft ACPI-Compliant System
(ISA) 0x00000073 (115)	Microsoft ACPI-Compliant System
(ISA) 0x00000074 (116)	Microsoft ACPI-Compliant System
(ISA) 0x00000075 (117)	Microsoft ACPI-Compliant System
(ISA) 0x00000076 (118)	Microsoft ACPI-Compliant System
(ISA) 0x00000077 (119)	Microsoft ACPI-Compliant System
(ISA) 0x00000078 (120)	Microsoft ACPI-Compliant System
(ISA) 0x00000079 (121)	Microsoft ACPI-Compliant System

 (ISA) 0x0000007A (122)	Microsoft ACPI-Compliant System
 (ISA) 0x0000007B (123)	Microsoft ACPI-Compliant System
 (ISA) 0x0000007C (124)	Microsoft ACPI-Compliant System
 (ISA) 0x0000007D (125)	Microsoft ACPI-Compliant System
 (ISA) 0x0000007E (126)	Microsoft ACPI-Compliant System
 (ISA) 0x0000007F (127)	Microsoft ACPI-Compliant System
 (ISA) 0x00000080 (128)	Microsoft ACPI-Compliant System
 (ISA) 0x00000081 (129)	Microsoft ACPI-Compliant System
 (ISA) 0x00000082 (130)	Microsoft ACPI-Compliant System
 (ISA) 0x00000083 (131)	Microsoft ACPI-Compliant System
 (ISA) 0x00000084 (132)	Microsoft ACPI-Compliant System
 (ISA) 0x00000085 (133)	Microsoft ACPI-Compliant System
 (ISA) 0x00000086 (134)	Microsoft ACPI-Compliant System
 (ISA) 0x00000087 (135)	Microsoft ACPI-Compliant System
 (ISA) 0x00000088 (136)	Microsoft ACPI-Compliant System
 (ISA) 0x00000089 (137)	Microsoft ACPI-Compliant System
 (ISA) 0x0000008A (138)	Microsoft ACPI-Compliant System
 (ISA) 0x0000008B (139)	Microsoft ACPI-Compliant System
 (ISA) 0x0000008C (140)	Microsoft ACPI-Compliant System
 (ISA) 0x0000008D (141)	Microsoft ACPI-Compliant System
 (ISA) 0x0000008E (142)	Microsoft ACPI-Compliant System
 (ISA) 0x0000008F (143)	Microsoft ACPI-Compliant System
 (ISA) 0x00000090 (144)	Microsoft ACPI-Compliant System
 (ISA) 0x00000091 (145)	Microsoft ACPI-Compliant System
 (ISA) 0x00000092 (146)	Microsoft ACPI-Compliant System
 (ISA) 0x00000093 (147)	Microsoft ACPI-Compliant System
 (ISA) 0x00000094 (148)	Microsoft ACPI-Compliant System
 (ISA) 0x00000095 (149)	Microsoft ACPI-Compliant System
 (ISA) 0x00000096 (150)	Microsoft ACPI-Compliant System
 (ISA) 0x00000097 (151)	Microsoft ACPI-Compliant System
 (ISA) 0x00000098 (152)	Microsoft ACPI-Compliant System
 (ISA) 0x00000099 (153)	Microsoft ACPI-Compliant System
 (ISA) 0x0000009A (154)	Microsoft ACPI-Compliant System
 (ISA) 0x0000009B (155)	Microsoft ACPI-Compliant System
 (ISA) 0x0000009C (156)	Microsoft ACPI-Compliant System
 (ISA) 0x0000009D (157)	Microsoft ACPI-Compliant System
 (ISA) 0x0000009E (158)	Microsoft ACPI-Compliant System
 (ISA) 0x0000009F (159)	Microsoft ACPI-Compliant System
 (ISA) 0x000000A0 (160)	Microsoft ACPI-Compliant System
 (ISA) 0x000000A1 (161)	Microsoft ACPI-Compliant System
 (ISA) 0x000000A2 (162)	Microsoft ACPI-Compliant System
 (ISA) 0x000000A3 (163)	Microsoft ACPI-Compliant System
 (ISA) 0x000000A4 (164)	Microsoft ACPI-Compliant System
 (ISA) 0x000000A5 (165)	Microsoft ACPI-Compliant System
 (ISA) 0x000000A6 (166)	Microsoft ACPI-Compliant System
 (ISA) 0x000000A7 (167)	Microsoft ACPI-Compliant System
 (ISA) 0x000000A8 (168)	Microsoft ACPI-Compliant System
 (ISA) 0x000000A9 (169)	Microsoft ACPI-Compliant System
 (ISA) 0x000000AA (170)	Microsoft ACPI-Compliant System
 (ISA) 0x000000AB (171)	Microsoft ACPI-Compliant System
 (ISA) 0x000000AC (172)	Microsoft ACPI-Compliant System
 (ISA) 0x000000AD (173)	Microsoft ACPI-Compliant System
 (ISA) 0x000000AE (174)	Microsoft ACPI-Compliant System
 (ISA) 0x000000AF (175)	Microsoft ACPI-Compliant System
 (ISA) 0x000000B0 (176)	Microsoft ACPI-Compliant System
 (ISA) 0x000000B1 (177)	Microsoft ACPI-Compliant System

	(ISA) 0x000000B1 (177)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B2 (178)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B3 (179)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B4 (180)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B5 (181)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B6 (182)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B7 (183)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B8 (184)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B9 (185)	Microsoft ACPI-Compliant System
	(ISA) 0x000000BA (186)	Microsoft ACPI-Compliant System
	(ISA) 0x000000BB (187)	Microsoft ACPI-Compliant System
	(ISA) 0x000000BC (188)	Microsoft ACPI-Compliant System
	(ISA) 0x000000BD (189)	Microsoft ACPI-Compliant System
	(ISA) 0x000000BE (190)	Microsoft ACPI-Compliant System
	(PCI) 0x0000000A (10)	Intel(R) 6 Series/C200 Series Chipset Family SMBus Controller - 1C2D
	(PCI) 0x00000010 (16)	Intel(R) 6 Series/C200 Series Chipset Family USB Enhanced Host Controller - 1C2D
	(PCI) 0x00000010 (16)	Intel(R) Management Engine Interface
	(PCI) 0x00000011 (17)	Intel(R) Active Management Technology - SOL (COM7)
	(PCI) 0x00000012 (18)	Standard Dual Channel PCI IDE Controller
	(PCI) 0x00000013 (19)	Intel(R) 6 Series/C200 Series Chipset Family 4 port Serial ATA Storage Controller - 1C00
	(PCI) 0x00000013 (19)	Intel(R) 6 Series/C200 Series Chipset Family 2 port Serial ATA Storage Controller - 1C08
	(PCI) 0x00000016 (22)	High Definition Audio Controller
	(PCI) 0x00000017 (23)	Intel(R) 6 Series/C200 Series Chipset Family USB Enhanced Host Controller - 1C26
	(PCI) 0xFFFFFFF5 (-11)	Intel(R) Gigabit CT Desktop Adapter
	(PCI) 0xFFFFFFF6 (-10)	Intel(R) Gigabit CT Desktop Adapter
	(PCI) 0xFFFFFFF7 (-9)	Intel(R) Gigabit CT Desktop Adapter
	(PCI) 0xFFFFFFF8 (-8)	Intel(R) Gigabit CT Desktop Adapter
	(PCI) 0xFFFFFFF9 (-7)	Intel(R) Gigabit CT Desktop Adapter
	(PCI) 0xFFFFFFFA (-6)	Intel(R) Gigabit CT Desktop Adapter
	(PCI) 0xFFFFFFFB (-5)	Intel(R) 82579LM Gigabit Network Connection
	(PCI) 0xFFFFFFF4 (-4)	Intel(R) HD Graphics Family
	(PCI) 0xFFFFFFF3 (-3)	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 7 - 1C1C
	(PCI) 0xFFFFFFF2 (-2)	Intel(R) 6 Series/C200 Series Chipset Family PCI Express Root Port 1 - 1C10

B.4 DMA Channel Assignments

-  Direct memory access (DMA)
-  4 Direct memory access controller

Appendix

C

**Mating
Connector**

C.1 List of Mating Connectors and Cables

The table notes mating connectors and available cables.

Connector Label	Function	Mating Connector		Available Cable	Cable P/N
		Vendor	Model no		
SATA1	SATA Connector	TECHBEST	161S01-029A-L	SATA Cable	1709070800
SATA2	SATA Connector	TECHBEST	161S01-029A-L	SATA Cable	1709070800
SATA3	SATA Connector	TECHBEST	161S01-025A	SATA Cable	1709070800
SATA4	SATA Connector	TECHBEST	161S01-025A	SATA Cable	1709070800
SATA5	SATA Connector	TECHBEST	161S01-025A	SATA Cable	1709070800
SATA6	SATA Connector	TECHBEST	161S01-025A	SATA Cable	1709070800
LPT1	Parallel Port Connector	Catch Electronics	1147-000-26S	LPT Cable	1701260307
FP1	Front Panel Connector	JIH VEI Electronics	21B22564-XX S10B-01G-6/3 -VXX		N/A
FP2	Front Panel Connector	JIH VEI Electronics	21B22564-XX S10B-01G-6/3 -VXX		N/A
USB1	USB Connector	JIH VEI Electronics	21B22564-10 S10B-01G-6/3 -V10	USB Cable	1709100204
USB3	USB Pin Header	JIH VEI Electronics	21B22564-10 S10B-01G-6/3 -V10	USB Cable	1709100204
USB4	USB Pin Header	JIH VEI Electronics	21B22564-10 S10B-01G-6/3 -V10	USB Cable	1709100204
USB5	USB Pin Header	JIH VEI Electronics	21B22564-10 S10B-01G-6/3 -V10	USB Cable	1709100204

COM2	COM Port Connector	Catch Electronics	1147-000-10S	Serial Port Cable	1701100305
COM3	COM Port Connector	Catch Electronics	1147-000-10S	Serial Port Cable	1701100305
COM4	COM Port Connector	Catch Electronics	1147-000-10S	Serial Port Cable	1701100305
COM5	COM Port Connector	Catch Electronics	1147-000-10S	Serial Port Cable	1701100305
COM6	COM Port Connector	Catch Electronics	1147-000-10S	Serial Port Cable	1701100305
IR1	IrDA Connector	JIH VEI Electronics	21B12050-XX S10B-01G-4/2 .8		N/A
DIO1	DIO Port Connector	Catch Electronics	1147-000-20S		N/A
CN5	ATX 24PIN Connector	Catch Electronics	1121-700-24S		N/A
ATX1	ATX 4PIN Connector	Catch Electronics	1121-700-04S		N/A
CPU_FAN	FAN Connector	Catch Electronics	1190-700-042		N/A
SYS_FAN	FAN Connector	Catch Electronics	1190-700-042		N/A
PCIE_1	PCIE X 16 Connector	TECHBEST	WPCS-164AN 1B22UWL		N/A
PCIE_2	PCIE X 4 Connector	FOXCONN	2EG03217-D2 D-DF		N/A
PCIE_3	PCIE X 1 Connector	FOXCONN	2EG01817-D2 D-DF		N/A
DIMM1	DDR3 204PIN SKT	KORTAK	AR240H-101B -A0H		N/A
DIMM2	DDR3 204PIN SKT	KORTAK	AR240H-031B -A0H		N/A
DIMM3	DDR3 204PIN SKT	KORTAK	AR240H-101B -A0H		N/A

DIMM4	DDR3 204PIN SKT	KORTAK	AR240H-031B -A0H		N/A
PCI1	PCI Connector	FOXCONN	EH06001-HH W-DF		N/A
PCI2	PCI Connector	FOXCONN	EH06001-HH W-DF		N/A
PCI3	PCI Connector	FOXCONN	EH06001-HH W-DF		N/A
PCI4	PCI Connector	FOXCONN	EH06001-HH W-DF		N/A
KBMS1	Keyboard & Mouse	FOXCONN	MH11061-P36 -4F		N/A
CN1	VGA+HDM I	TechBest	D211HA31010 12PN		N/A
CN2	COM1+DV I	TechBast	D205D1B0101 2PN		N/A
USB_LAN1	Dual USB & LAN	FOXCONN.	JFM38U1B-21 U5-4F		N/A
USB_LAN2	Dual USB & LAN	FOXCONN.	JFM38U1B-21 U5-4F		N/A
AUDIO1	AUDIO Connector	LOTES	ABA-JAK-028- K06		N/A

Appendix

D

RAID & AHCI Settings

D.1 Setting RAID

OS installation to setup RAID Mode

Step 1: Copy the files below from “**Driver CD -> Raid Driver -> F6 Floppy - x86**” to Disk

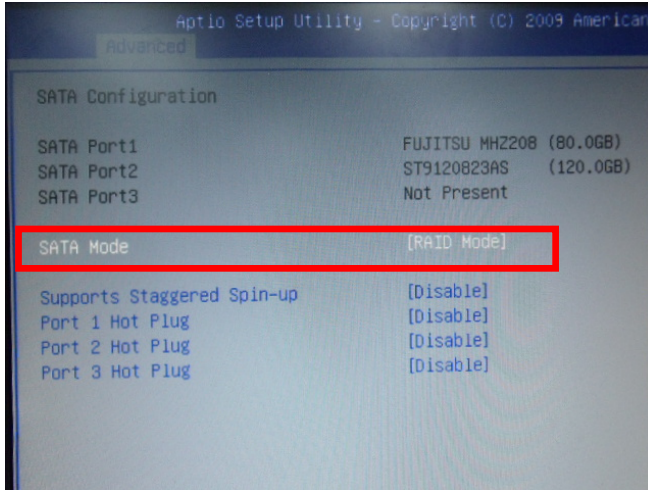
 F6Readme 文字文件 8 KB	 iaAHCI 安全性目錄 9 KB
 iaAHCI 安裝資訊 9 KB	 iaStor 安全性目錄 8 KB
 iaStor 安裝資訊 8 KB	 iaStor 系統檔案 423 KB
 license 文字文件 5 KB	 readme 文字文件 78 KB
 TXTSETUP.OEM OEM 檔案 6 KB	

Step 2: Connect the USB Floppy (disk with RAID files) to the board



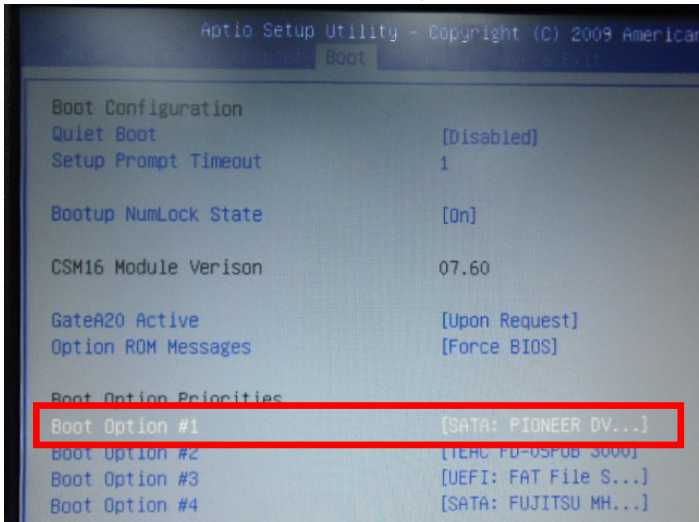
Step 3: The setting procedures “In BIOS Setup Menu”

A: Advanced -> SATA Configuration -> SATA Mode -> RAID Mode



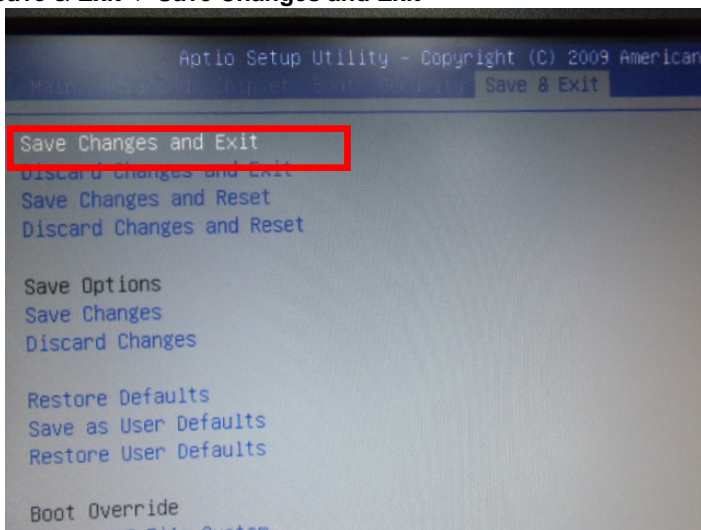
Step 4: The setting procedures “In BIOS Setup Menu”

C: Boot -> Boot Option #1 -> DVD-ROM Type

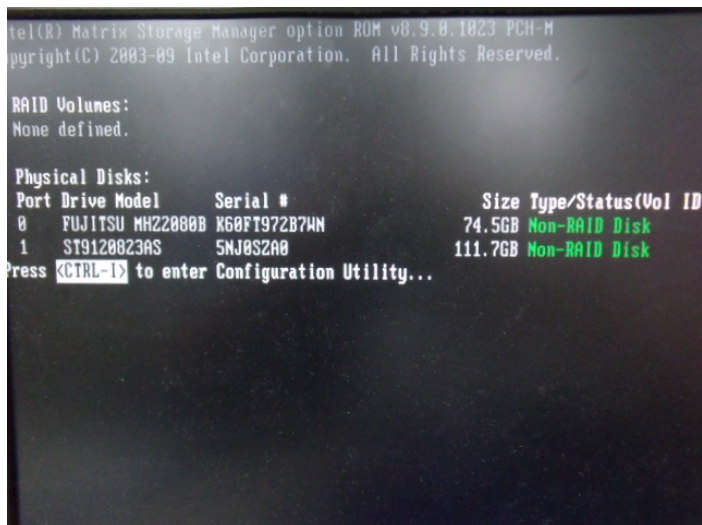


Step 5: The setting procedures "In BIOS Setup Menu"

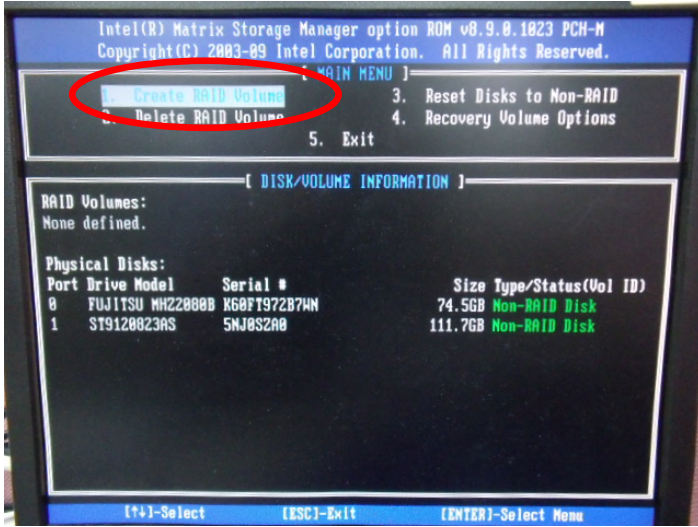
D: Save & Exit -> Save Changes and Exit



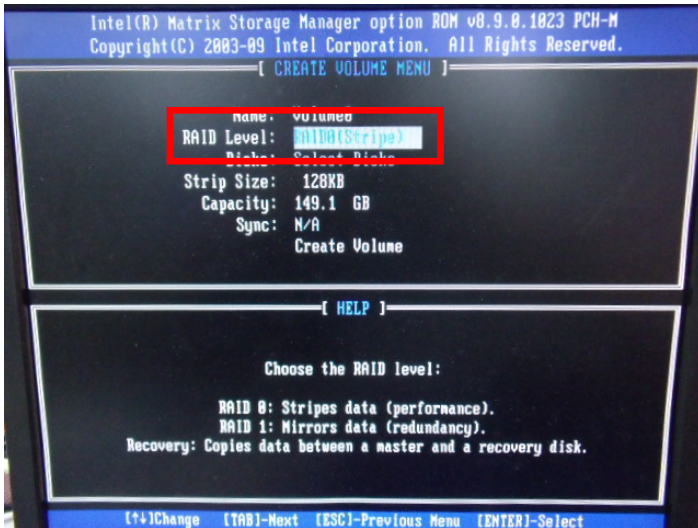
Step 6: Press **Ctrl-I** to enter **MAIN MENU**



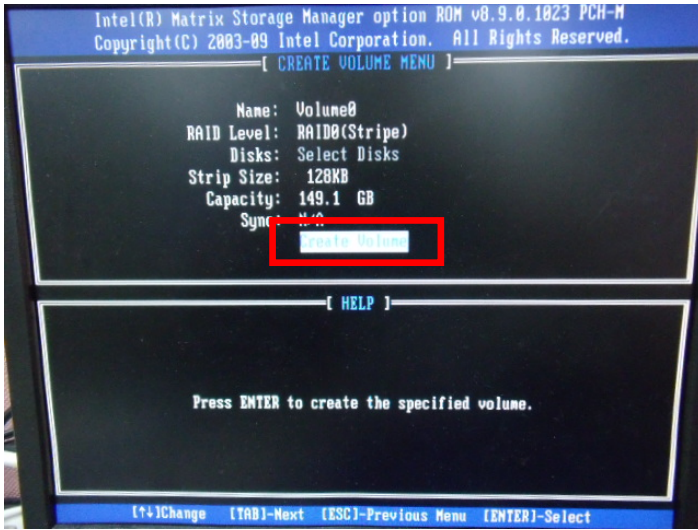
Step 7: Choose "1.Create RAID Volume"



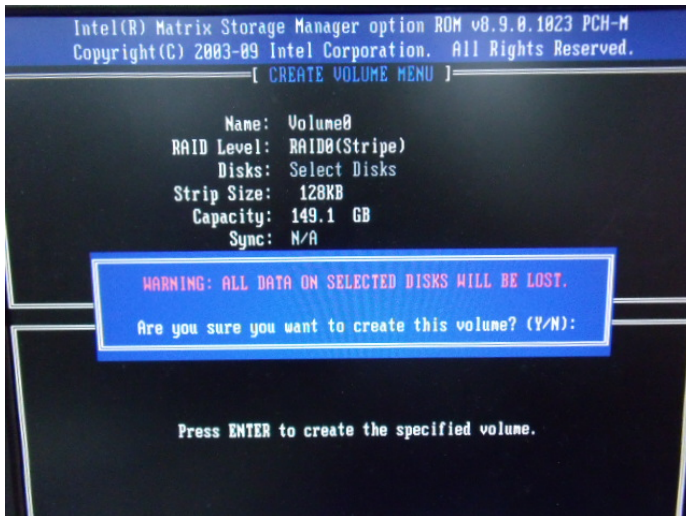
Step 8: RAID Level -> RAID0(Stripe)



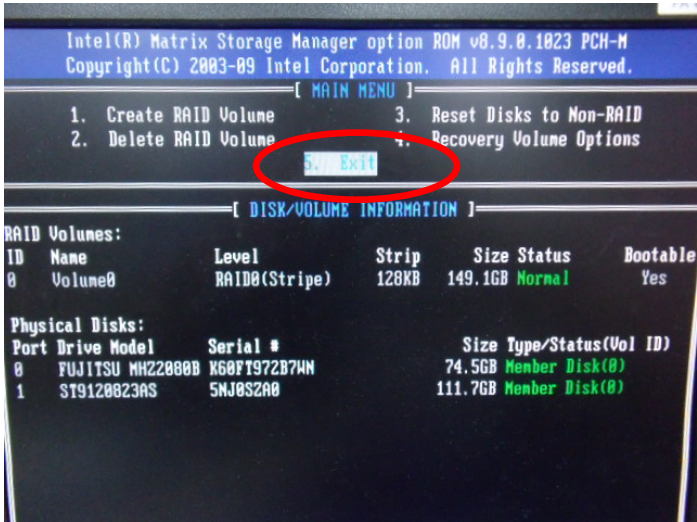
Step 9: Choose “Create Volume”



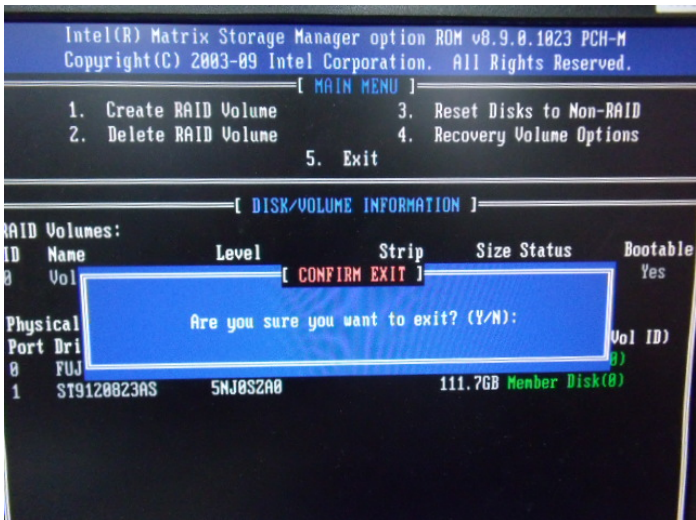
Step 10: Choose “Y”



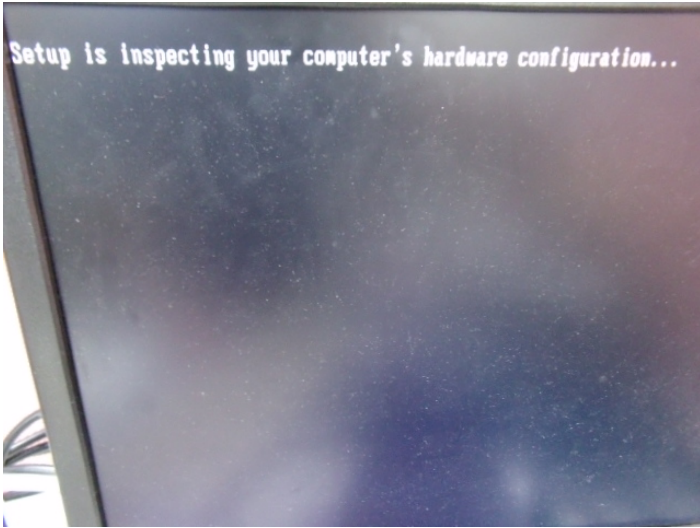
Step 11: Choose "5. Exit"



Step 12: Choose "Y"



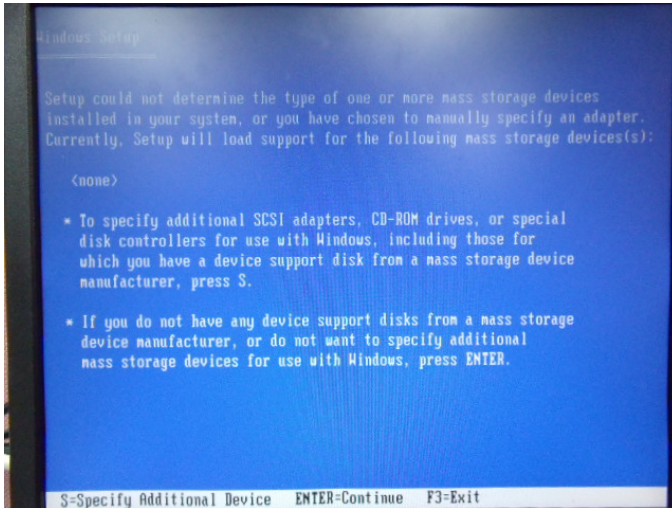
Step 13: Setup OS



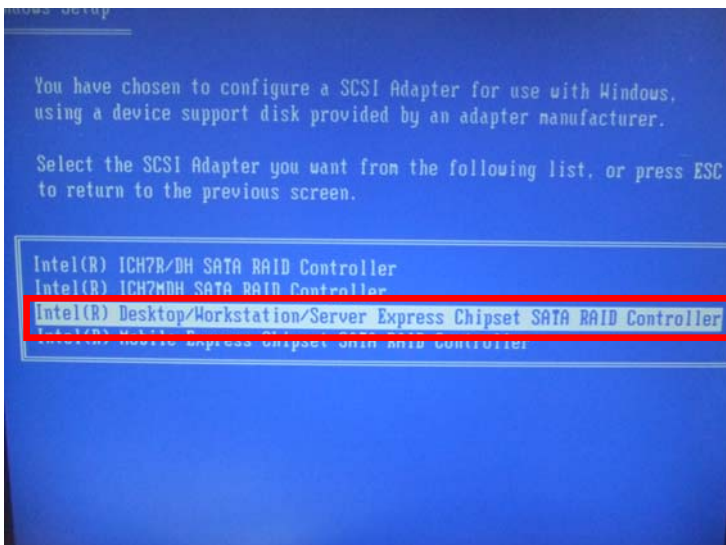
Step 14: Press "F6"



Step 15: Choose “S”



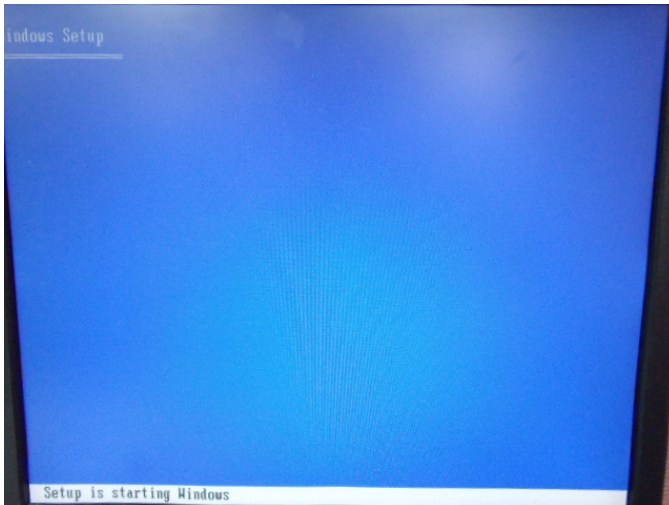
Step 16: Choose “Intel (R) Desktop/Workstation/Server Express Chipset SATA RAID Controller”



Step 17: It will show the model number you select and then press “ENTER”



Step 18: Setup is starting Windows



D.2 Setting AHCI

OS installation to setup AHCI Mode

Step 1: Copy the files below from “**Driver CD -> Raid Driver -> F6 Floppy - x86**” to Disk

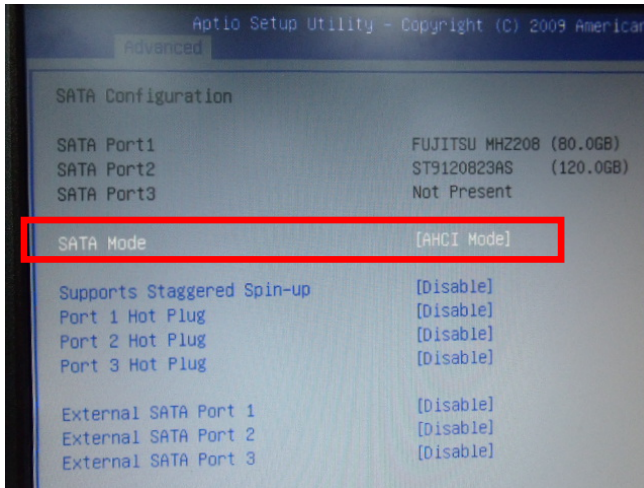


Step 2: Connect the USB Floppy (disk with RAID files) to the board



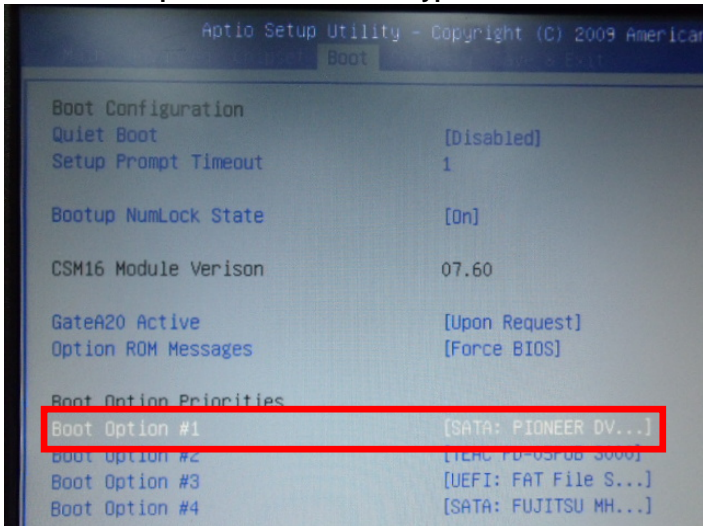
Step 3: The setting procedures “In BIOS Setup Menu”

A: Advanced -> SATA Configuration -> SATA Configuration -> SATA Mode -> AHCI Mode



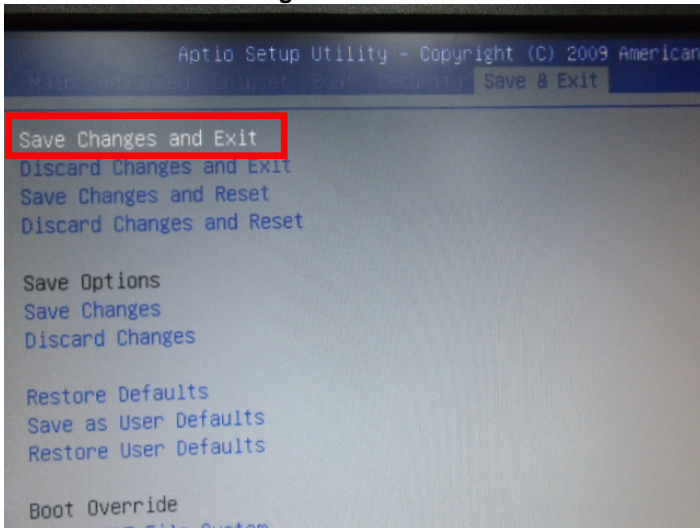
Step 4: The setting procedures “In BIOS Setup Menu”

B: Boot -> Boot Option #1 -> DVD-ROM Type

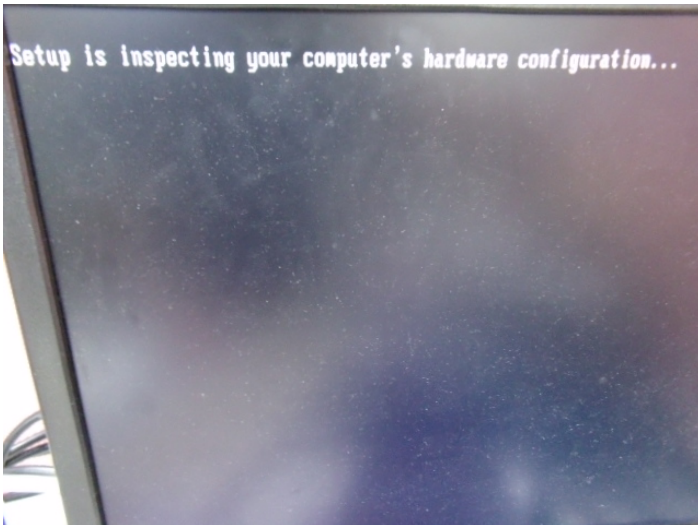


Step 5: The setting procedures "In BIOS Setup Menu"

C: Save & Exit -> Save Changes and Exit



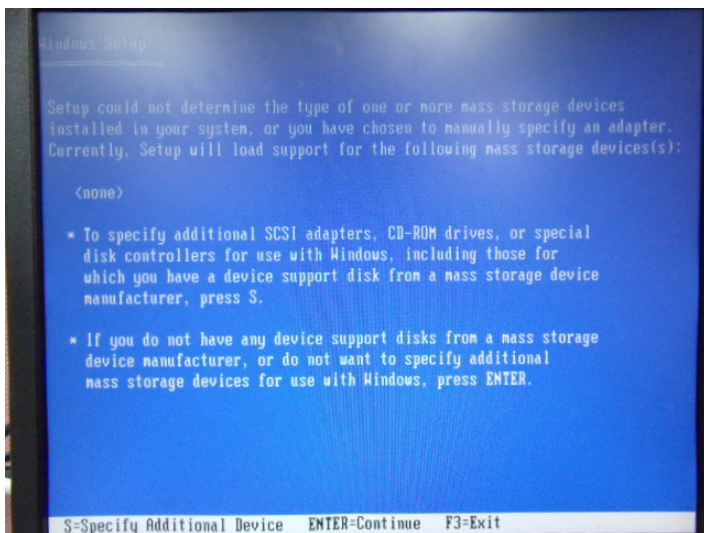
Step 6: Setup OS



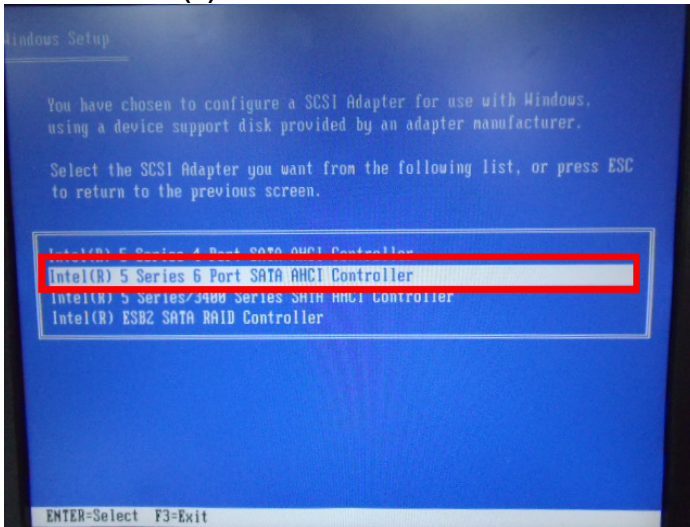
Step 7: Press "F6"



Step 8: Choose "S"



Step 9: Choose "Intel(R) 5 Series 6 Port SATA AHCI Controller"



Step 10: It will show the model number you select and then press "ENTER"



Step 11: Setup is loading files

