AIS-E2

Advanced System Controller
2.5” HDD/SSD x 1
Gigabit Ethernet x 2
COM x 6, USB2.0 x 2, USB3.0 x 4
HD Audio Codec

AIS-E2 Manual 1st Ed.
November 2012

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Packing List

Before you begin operating your PC, please make sure that the following materials are enclosed:

- 1 9761E20000 Gift Box (Including 84W Power adapter, CPU Cooler)
- 1 DVD-ROM for manual (in PDF format) and drivers
- 1 AIS-E2

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

Safety & Warranty

1. Read these safety instructions carefully.
2. Keep this user's manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
4. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a firm surface during installation. Dropping it or letting it fall could cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENINGS.
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
12. Never pour any liquid into an opening. This could cause fire or electrical shock.
13. Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.
14. If any of the following situations arises, get the equipment checked by service personnel:
    a. The power cord or plug is damaged.
    b. Liquid has penetrated into the equipment.
    c. The equipment has been exposed to moisture.

d. The equipment does not work well, or you cannot get it to work according to the user's manual.

e. The equipment has been dropped and damaged.

f. The equipment has obvious signs of breakage.

15. DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20°C (-4°F) OR ABOVE 60°C (140°F). IT MAY DAMAGE THE EQUIPMENT.

FCC

This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

Caution:
There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions and your local government's recycling or disposal directives.

Below Table for China RoHS Requirements
产品中有毒有害物质或元素名称及含量

AAEON Boxer/ Industrial System

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	×	○	○	○	○	○
外壳	×	○	○	○	○	○
中央处理器与内存	×	○	○	○	○	○
硬盘	×	○	○	○	○	○
电源	×	○	○	○	○	○

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。

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。

备注：
一、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。
二、上述部件物质中央处理器、内存、硬盘、电源为选购品。

Contents

Chapter

1

General Information

1.1 Introduction

AIS-E2 adopts the Intel® Core™ i7/ i5/ i3/ Celeron® QC/DC Processor up to 45W. The chipset is equipped with Intel® QM77. Moreover, the system memory features two DDR3 1066/1333/1600 MHz SODIMM up to 16 GB. It deploys two LAN ports that consist of 10/100/1000Base-TX Ethernet RJ-45 ports. AIS-E2 condensed appearance features desktop and wallmount form factor that fits nicely into a space-limited environment.

This AIS-E2 supports up to two 2.5" HDD/SSD. Moreover, the flexible expansion interfaces feature one Mini PCIe socket, and one CFast™. In addition, this model supports one RS-232/422/485 port, optional up to five RS-232 ports, and two USB2.0 and four USB3.0 ports. Furthermore, the Realtek ALC892 supports HD audio codec and the AIS-E2 can support three independent displays with VGA, DVI-D, DP, and HDMI.

With the increasing demands of high performance in audio and video, AAEON released the specific Advanced System Controller to fulfill the needs of the applications, such as Factory Automation, Building Automation, and etc.

1.2 Features

- Socket 988B, Intel® 3nd Generation Core™ i3/i5/i7 Processor, Up to 45W
- 204-pin Dual Channel DDR3 1066/1333/1600 MHz SODIMM x 2 (Up to 16GB)
- Intel® Integrated Graphics Engine Supports Dual Independent Displays By DP1.1a, VGA, DVI, HDMI
- LAN 1 : Intel® PHY WG82579LM Gigabit Ethernet
  LAN 2 : Realtek RTL 8111E Gigabit Ethernet
- SATA 6.0Gb/s x 2, SATA 3.0Gb/s x 2
- USB 2.0 x 6, USB 3.0 x 4, COM x 2 (Optional extra 4 COM ports)
- Mini PCIe Socket x 1, CFast™ x 1, TPM

1.3 Specifications

● CPU		Socket 988B, Intel® 3nd Generation Core™ i3/i5/i7 Processor, Up to 45W
● Chipset		Intel® QM77
● System Memory		204-pin Dual Channel DDR3 1066/1333/1600 MHz SODIMM x2, up to 16GB
● Display Interface	VGA	DB-15 x 1
	DVI	DVI-D x 1
	Others	HDMI x 1, DP x 1
● Storage Device	SSD	CFast x 1
	HDD	2.5" SATA HDD bay x 1 (optional 2nd HDD bay)
● Network	LAN	Gigabit Ethernet
	Wireless	Optional by Mini Card
● Front I/O	USB Host	USB2.0 x 2
	Others	Power Switch x 1
● Rear I/O	USB Host	USB3.0 x 4
	LAN	RJ-45 x 2
	Serial Port	RS-232/422/485 x 1
	Audio	Mic-in, Line-in, Line-out
	KB/MS	PS2 x 2
	Others	Power input x 1

● Expansion	Mini Card	Mini Card x 1
● Indicator	Front	PWR, HDD
● Power Requirement		12V DC-in
● System Cooling		CPU cooler x 1 System Cooler x 1
● Mounting		Wallmount
● Operating Temperature		32°F ~ 113°F (0°C ~ 45°C)
● Storage Temperature		-40°F ~ 176°F (-40°C ~ 80°C)
● Anti-Vibration		0.5g rms / 5 ~ 500Hz / operation – HDD 3.5g rms / 5~ 500Hz / operation – SSD
● Anti-Shock		10 G peak acceleration (11 msec. duration) – HDD 20 G peak acceleration (11 msec. duration) – SSD
● Certification	EMC	CE/ FCC class A
● Dimension (W x H x D)		12.4" x 2.76" x 11.81" (315mm x 70mm x 300mm)
● OS Support		Windows® XP Pro, Windows® 7, Linux Kernal 2.6.x

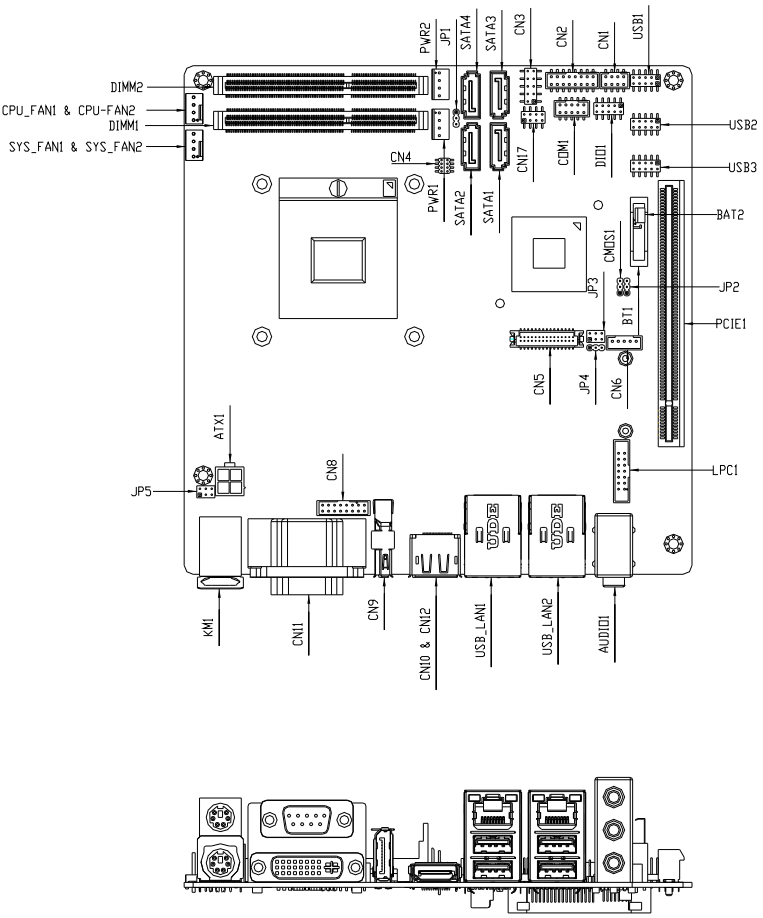
Chapter

2

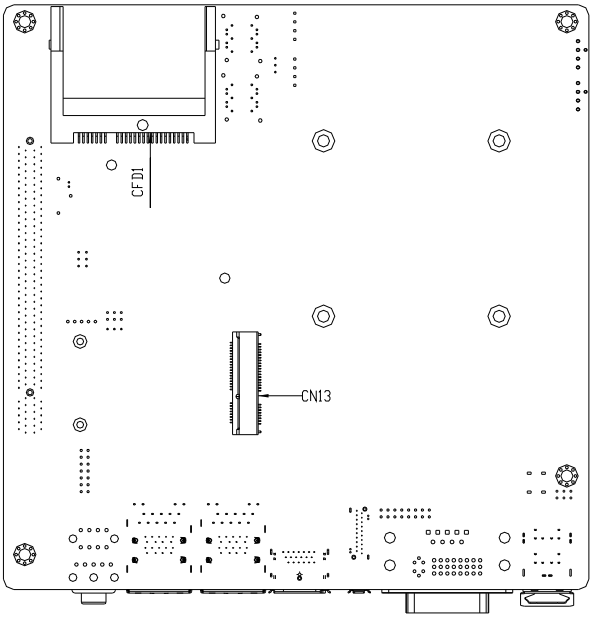
Hardware Installation

2.1 Location of Connectors (Main Board)

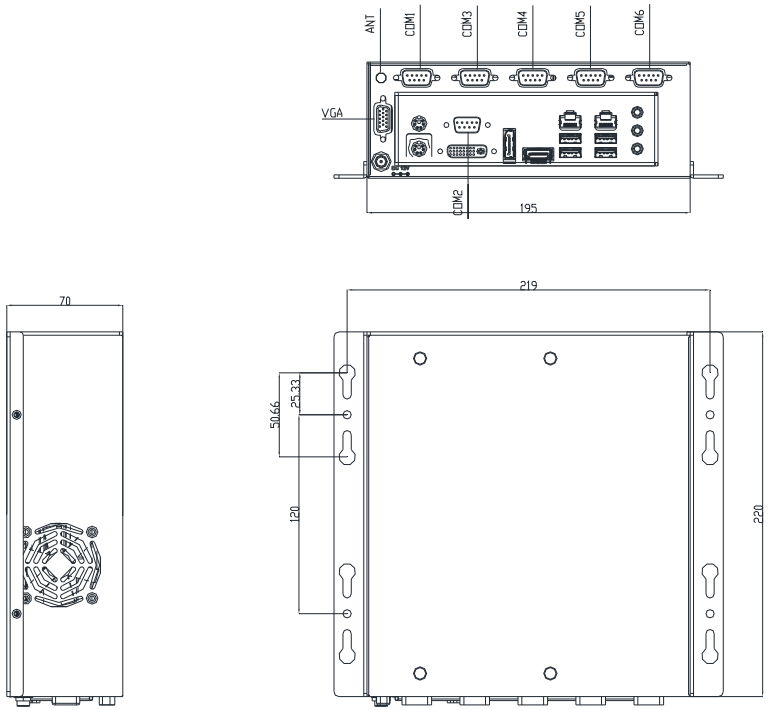
Component Side



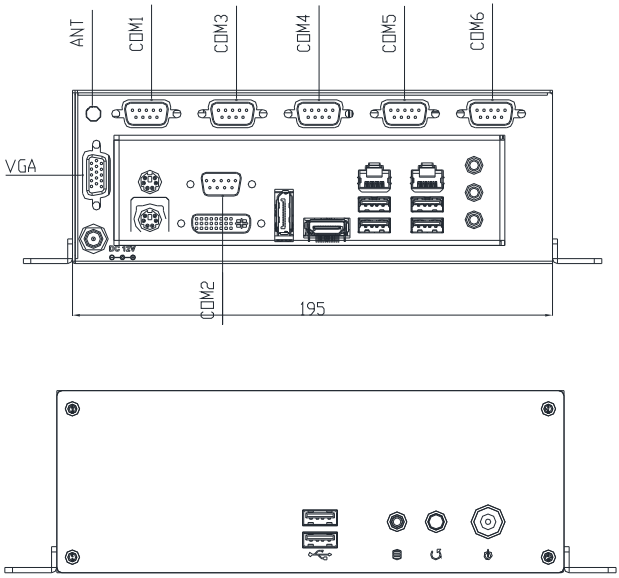
Solder Side



2.2 Mechanical Drawing of AIS-E2



I/O Ports



2.3 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
CMOS1	CMOS Setting Selection
JP1	Auto Power Buttom
JP2	ME Setting Selection
JP5	+12V/+5V/RING Selection

2.4 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 of the board's connectors:

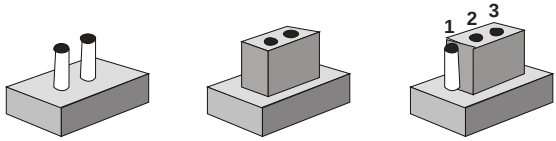
Label	Function
PWR1 ~ PWR2	SATA POWER
COM2	COM2 RS232/422/485 D-SUB9 Connector
COM1,3~6	COM3~6 RS232 D-SUB9 Connector
CN3	Front Panel Connector
DVI	DVI-D Connector
VGA	VGA Connector
DP	DP2 Connector
HDMI	HDMI Connector (co-layout)
CN13	Mini Card Connector

CN14	CFast Connector
KM1	Keyboard/Mouse Connector
SATA1~SATA2	SATA 3.0 Connector
USB_LAN1 ~ USB_LAN2	LAN / USB Connector
DIMM1,DIMM2	DDR3 DIMM Slot
USB1	USB Box Header
FAN1~ FAN2	4 Pin Fan Connector
AUDIO1	AUDIO Connector
ATX1	4 pin 12V DC-IN Connector

2.5 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.



Open **Closed** **Closed 2-3**

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.

2.6 Clear CMOS (CMOS1)

CMOS1	Function
1-2	Normal (Default)
2-3	Clear CMOS

2.7 Auto Power Button (JP1)

JP1	Function
1-2	ATX (Default)
2-3	AT

2.8 Clear ME (JP2)

JP2	Function
1-2	Save ME RTC Register (Default)
2-3	Clear ME RTC Register

2.9 +12V/+5V/RING Selection (JP5)

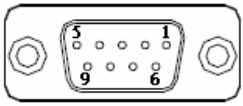
JP5	Function
1-2	+12V
3-4	Ring (Default)
5-6	+5V

2.10 SATA POWER (PWR1 ~ PWR2)

Pin	Signal
1	+12V

2	GND
3	GND
4	+5V

2.11 COM Port Connector (COM2)



RS-232

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI / +5V / +12V		

RS-422

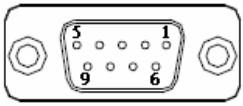
Pin	Signal	Pin	Signal
1	RS422_TX-	2	RS422_RX+
3	RS422_TX+	4	RS422_RX-
5	NC	6	NC
7	NC	8	NC
9	NC / +5V / +12V		

RS-485

Pin	Signal	Pin	Signal
1	RS485_D-	2	NC

3	RS485_D+	4	NC
5	NC	6	NC
7	NC	8	NC
9	NC / +5V / +12V		

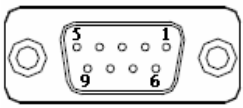
2.12 COM Port Connector (COM1)



RS-232

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI / +5V / +12V		

2.13 COM Port Connector (COM3~ COM6)

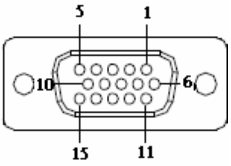


RS-232

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR

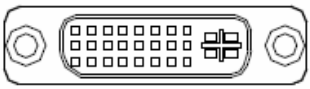
5	GND	6	DSR
7	RTS	8	CTS
9	NC		

2.14 VGA Port Connector (VGA)



Pin	Signal	Pin	Signal
1	Red	2	Green
3	Blue	4	NC
5	GND	6	GND
7	GND	8	GND
9	+5V_CRT	10	GND
11	CRT_PLUG#	12	DDC_DATA
13	CRT_OHSYNCF	14	CRT_OVSYNCF
15	DDC_CLK		

2.15 DVI-D Port Connector (DVI)



Pin	Signal	Pin	Signal
1	DATA2_N	2	DATA2_P
3	GND	4	NC

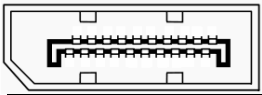
5	NC	6	DDC_CLK
7	DDC_DATA	8	NC
9	DATA1_N	10	DATA1_P
11	GND	12	NC
13	NC	14	+5V_DVI
15	GND	16	HPD#
17	DATA0_N	18	DATA0_P
19	GND	20	NC
21	NC	22	GND
23	CLK_P	24	CLK_N

2.16 HDMI Port Connector (HDMI)

Pin	Signal	Pin	Signal
1	DATA2_P	2	GND
3	DATA2_N	4	DATA1_P
5	GND	6	DATA1_N
7	DATA0_P	8	GND
9	DATA0_N	10	CLK_P
11	GND	12	CLK_N
13	NC	14	NC
15	DDC_CLK	16	DDC_DATA
17	GND	18	+5V_HDMI

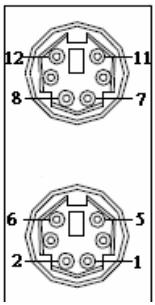
19	HPD#

2.17 Display Port Connector (DP)



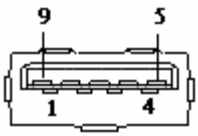
Pin	Signal	Pin	Signal
1	LANE0_P	2	GND
3	LANE0_N	4	LANE1_P
5	GND	6	LANE1_N
7	LANE2_P	8	GND
9	LANE2_N	10	LANE3_P
11	GND	12	LANE3_N
13	GND	14	GND
15	AUX_CH_P	16	GND
17	AUX_CH_N	18	HPD#
19	Return	20	DP_PWR

2.18 PS/2 keyboard & Mouse Connector (KM1)



Pin	Signal	Pin	Signal
1	KB_DATA	2	NC
3	GND	4	+5V_KB
5	KB_CLK	6	NC
7	MS_DATA	8	NC
9	GND	10	+5V_KB
11	MS_CLK	12	NC

2.19 USB3.0 Type-A Connector (USB)



Pin	Signal	Pin	Signal
1	+5V_USB	2	USBP_1N
3	USBP_1P	4	GND
5	USB3_RX1_DN	6	USB3_RX1_DP
7	GND	8	USB3_TX1_DN
9	USB3_TX1_DP		

2.20 USB2.0 Type-A Connector (USB)

Pin	Signal	Pin	Signal
1	+5V_USB	2	USBP_1N
3	USBP_1P	4	GND

2.21 Front Panel Connector (CN3)

Pin	Signal	Pin	Signal
1	Power On Button (-)	2	Power On Button (+)
3	HDD LED (-)	4	HDD LED (+)
5	SPEAKER(-)	6	SPEAKER(+)
7	Power LED (-)	8	Power LED (+)
9	Reset Switch (-)	10	Reset Switch (+)

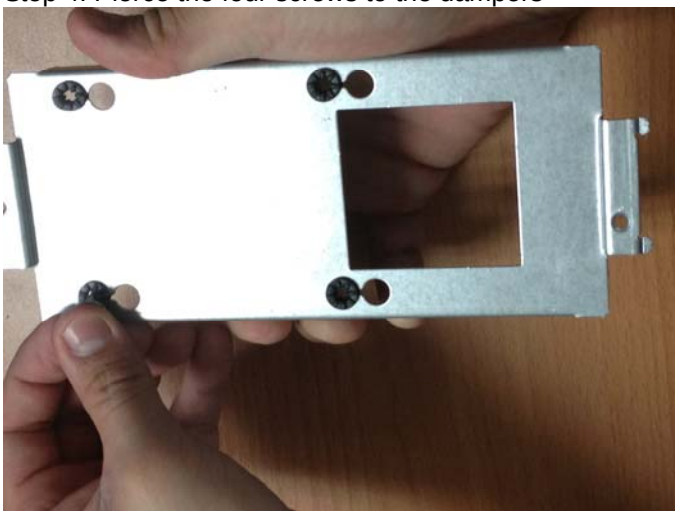
2.22 Installing the 2.5” Hard Disk Drive

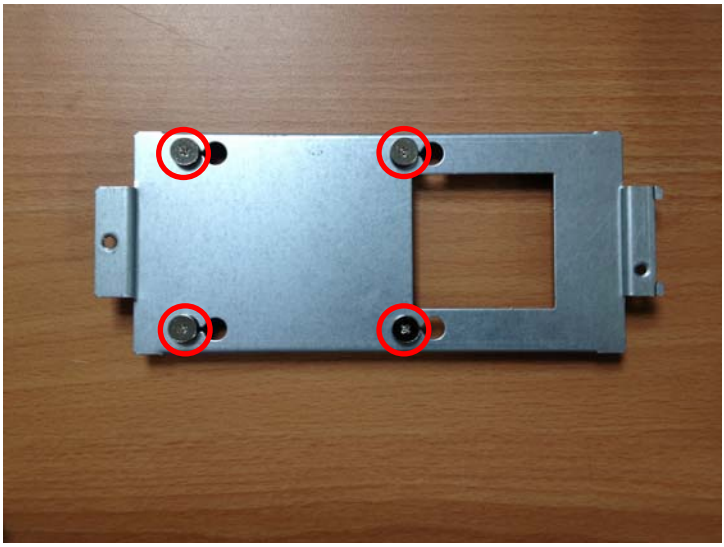
Step 1: Unfasten the screws on the right and left sides of AIS-E2

Step 2: Push back the upper lid of AIS-E2 and open it

Step 3: Get the HDD bracket ready and insert the dampers to the holes on the bracket

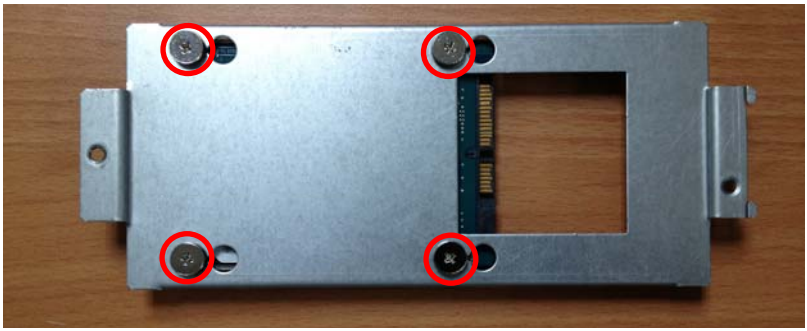
Step 4: Pierce the four screws to the dampers





Step 5: Get the 2.5” HDD ready

Step 6: Put the HDD to the HDD bracket and fasten the four screws



Step 7: Connect the SATA and Power cables

Step 8: Close the HDD bracket and finish the installation

2.23 Installing the CFast Card

Step 1: Unfasten the screw on the bottom lid of AIS-E2

Step 2: Push back the bottom lid of AIS-E2 and open it

Step 3: Insert the CFast Card to the CFast slot and finish installation

2.24 Installing the Mini PCIe Card

Step 1: Unfasten the screw on the bottom lid of AIS-E2

Step 2: Push back the bottom lid of AIS-E2 and open it

Step 3: Insert the Mini PCIe card to the Mini PCIe slot

Step 4: Fasten the two M2.5 screws on the Mini PCIe Card

Step 5: Finish installing the Mini PCIe Card

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 AIS-E2 CMOS memory has an integral lithium battery backup for data retention. However, you will need to replace the complete unit 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 <Del> 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.

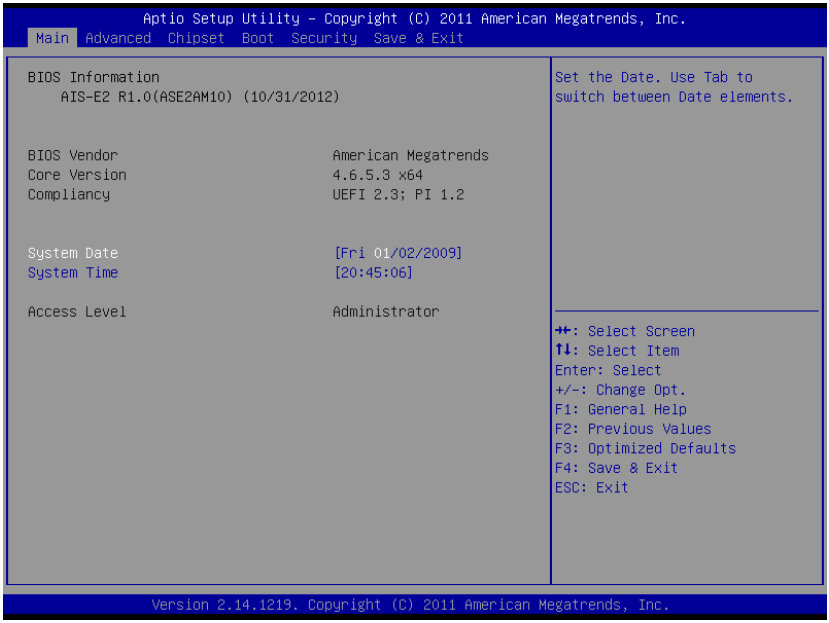
Boot
Enables/disable quiet boot option.

Security
Set setup administrator password.

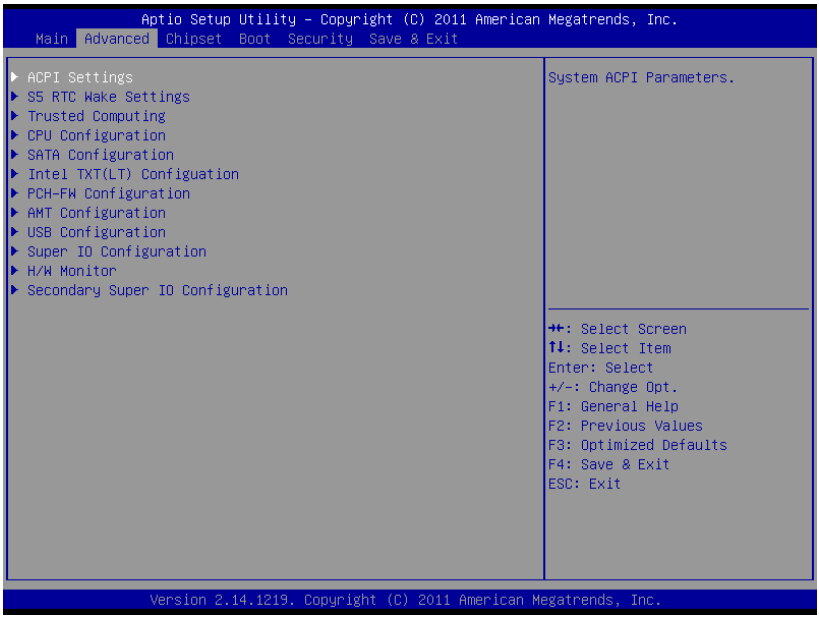
Save&Exit
Exit system setup after saving the changes.

Setup Menu

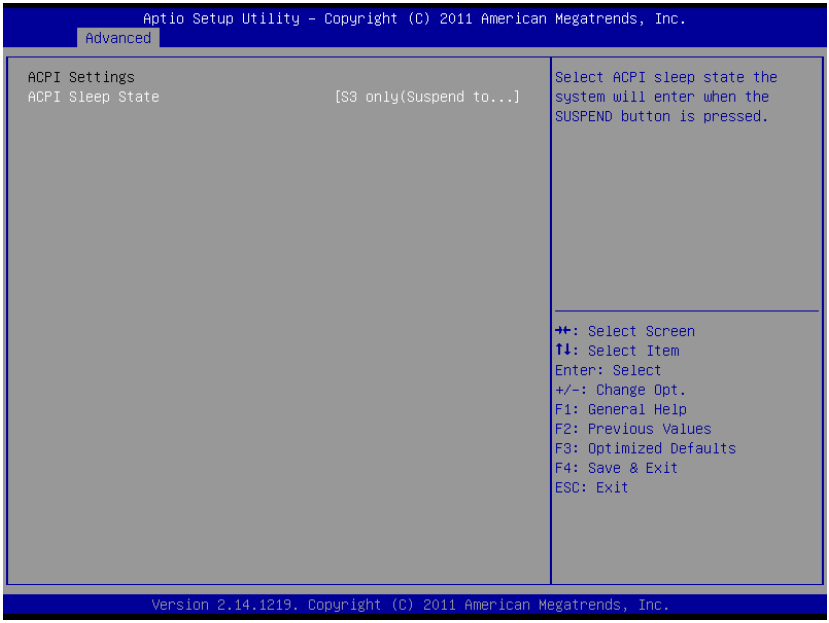
Setup submenu: Main



Setup submenu: Advanced



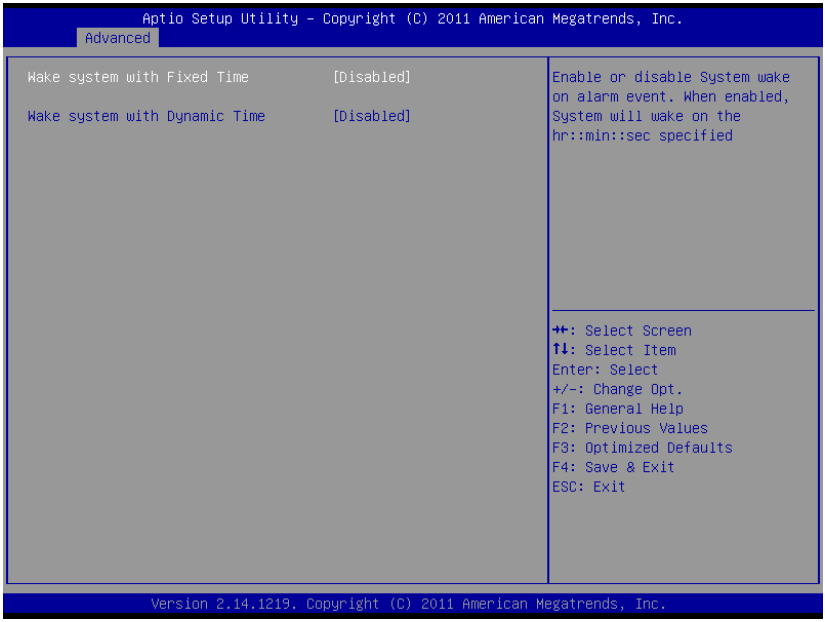
ACPI Settings



Options Summary :

ACPI Sleep State	S1 only(CPU Stop Clock)	
	S3 only(Suspend to RAM)	Default
Select the ACPI sleep state the system will enter when the SUSPEND button is pressed.		

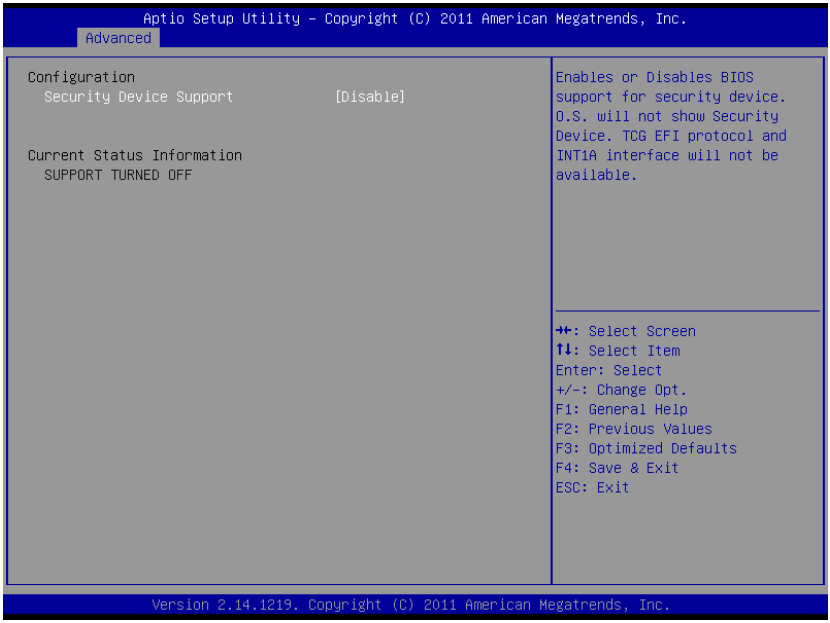
S5 RTC Wake Settings



Options Summary :

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

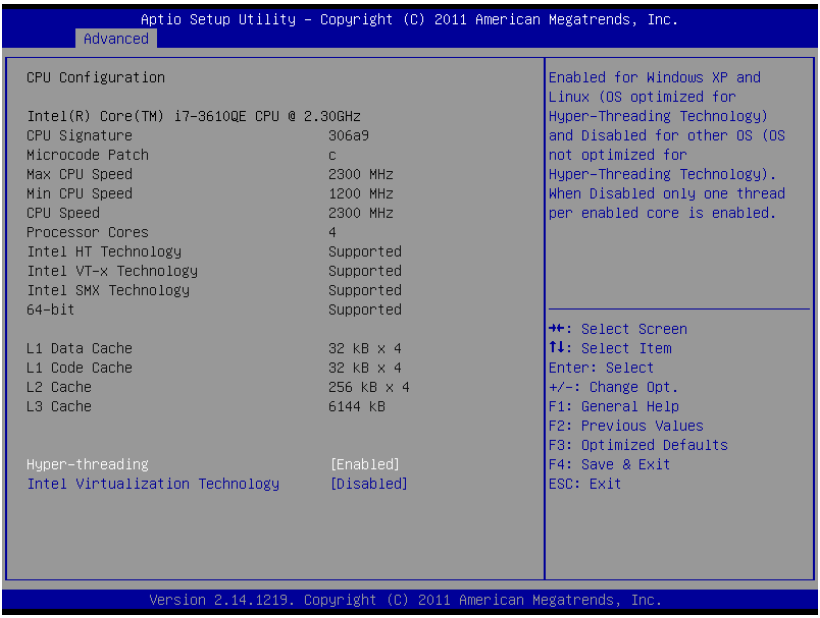
Trusted Computing



Options Summary :

Security Device Support	Disabled	Default
	Enabled	
Enable or Disable BIOS support for security device..		

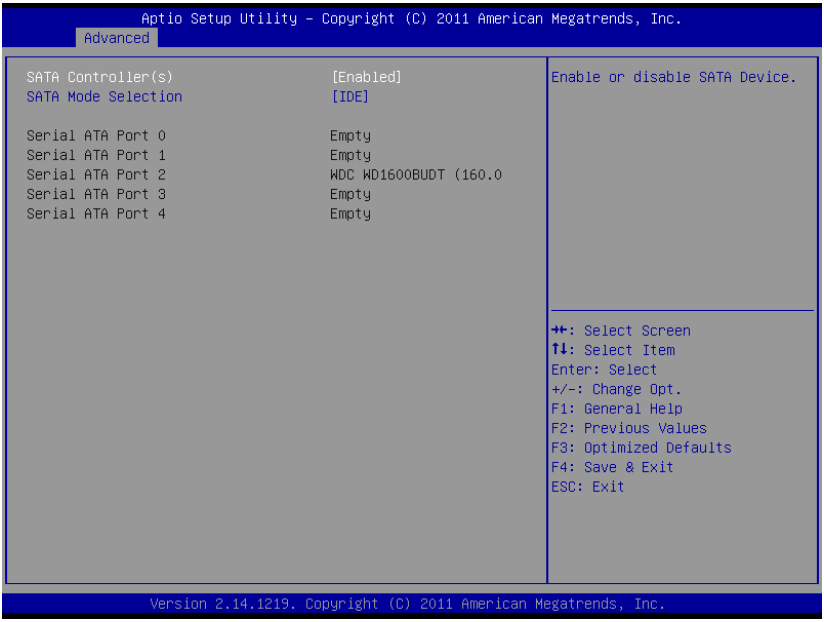
CPU Configuration



Options Summary :

Hyper-Threading	Disabled	
	Enabled	Default
En/Disable CPU Hyper-Threading function		
Intel Virtualization Technology	Disabled	Default
	Enabled	
When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology		

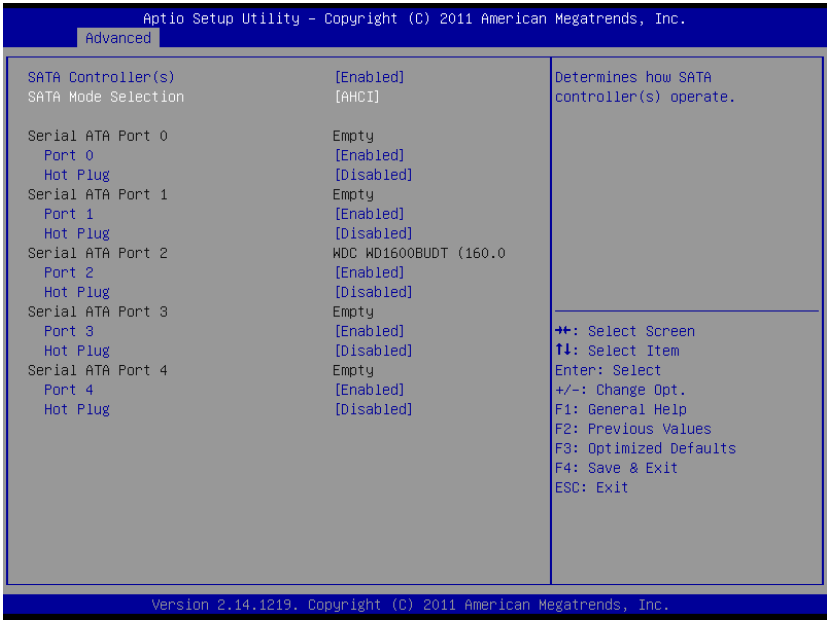
SATA Configuration (IDE)

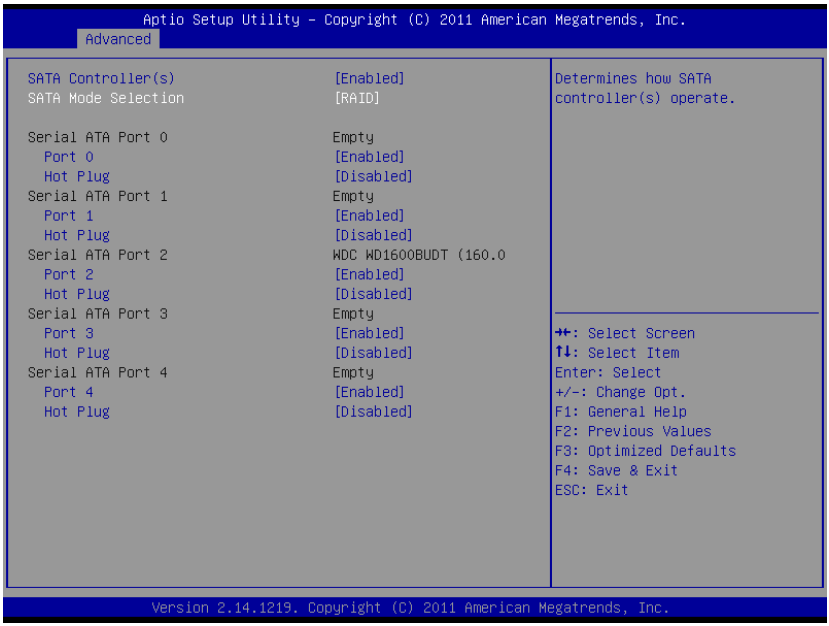


Options Summary :

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

SATA Configuration (AHCI&RAID)

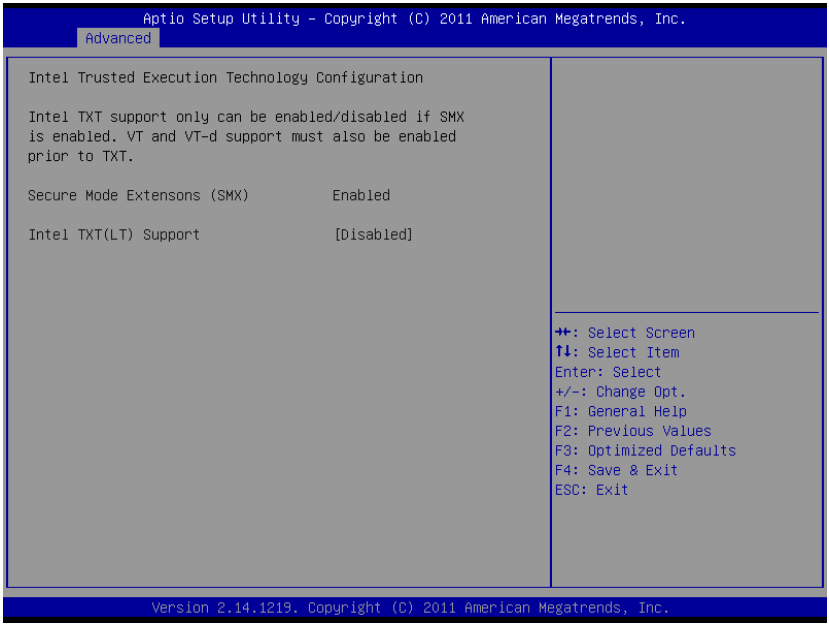




Options Summary :

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

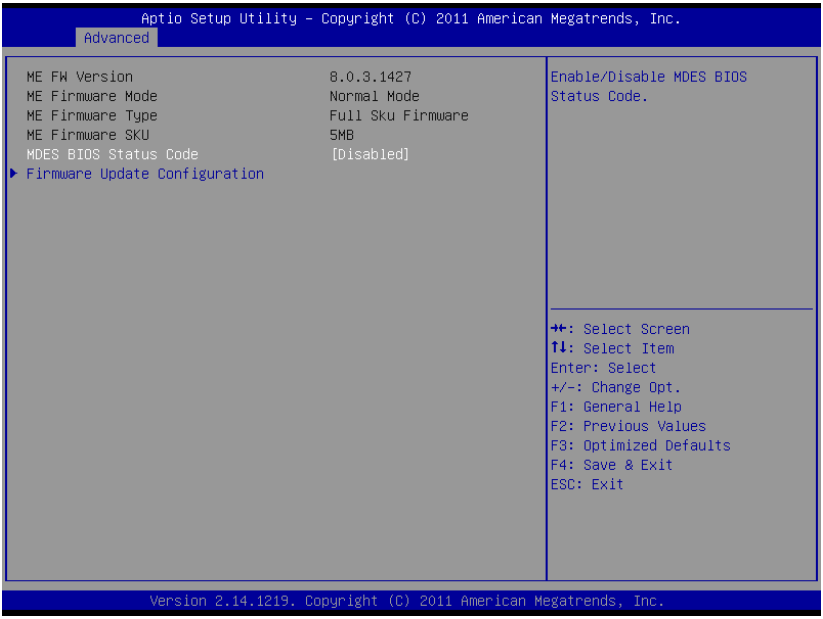
Intel TXT(LT) Configuration



Options Summary :

Intel TXT(LT) Support	Disabled	Default
	Enabled	
En/Disable Intel TXT function. This function only can be enabled/disabled if SMX, VT-x and VT-d support are enabled prior to it.		

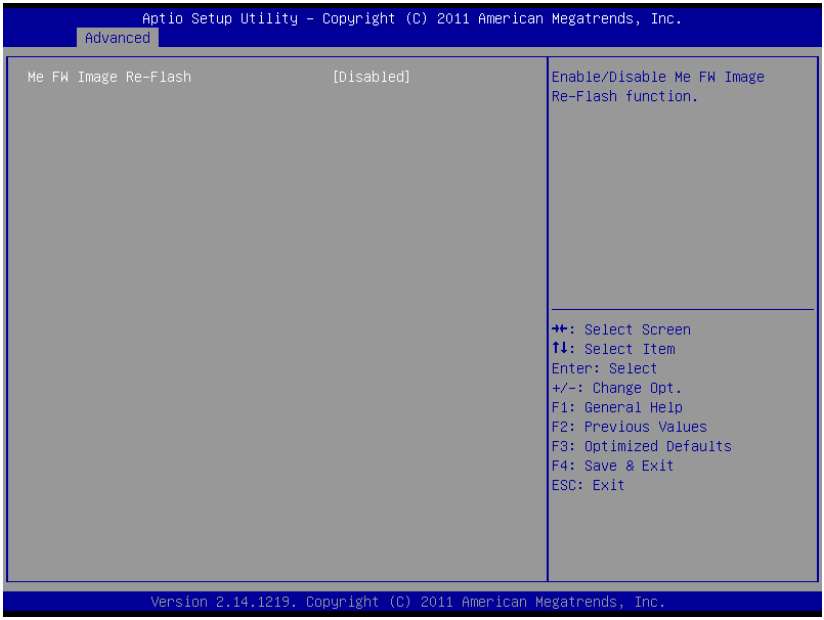
PCH-FW Configuration



Options Summary :

MDES BIOS Status Code	Disabled	Default
	Enabled	
Enable/Disable MDES BIOS Status Code.		

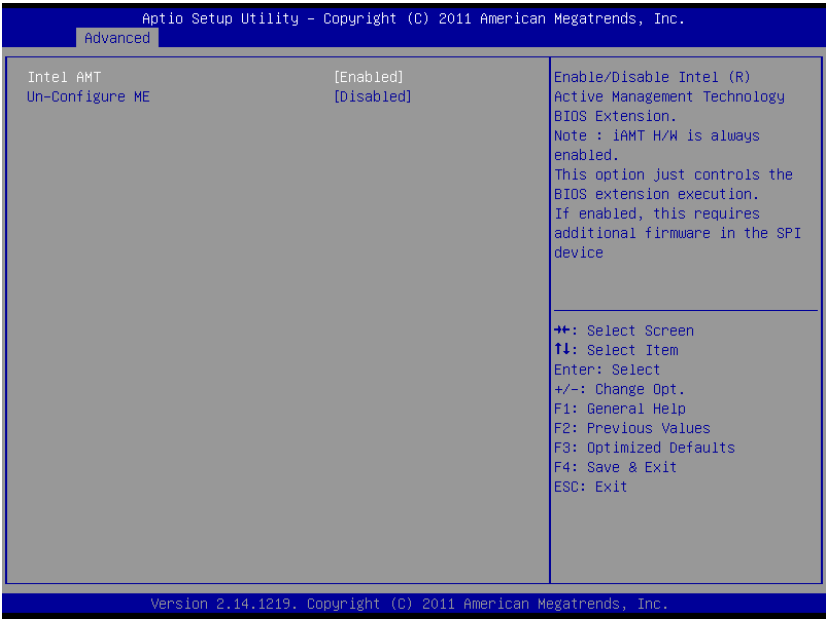
Firmware Update Configuration



Options Summary :

Me FW Image Re-Flash	Disabled	Default
	Enabled	
Enable/Disable Me FW Image Re-Flash function.		

Intel AMT Configuration



Options Summary :

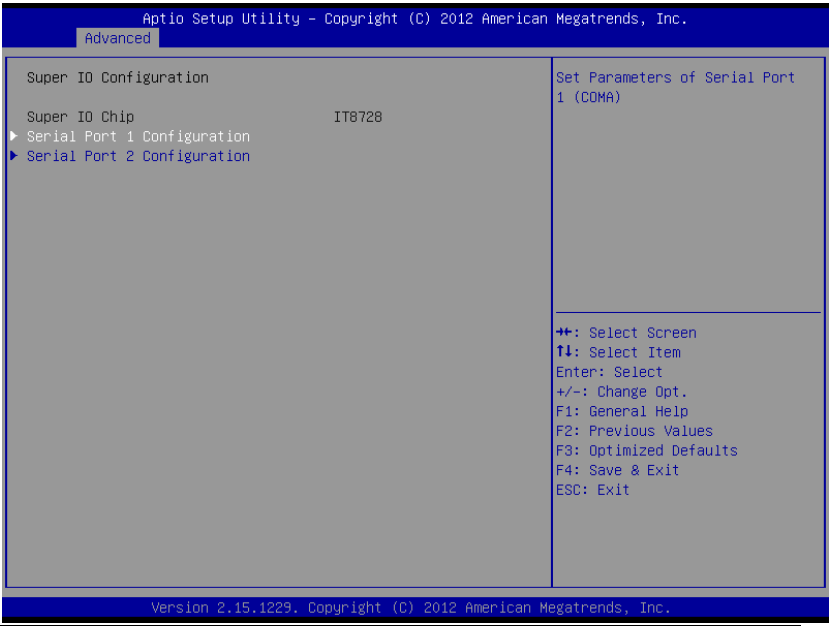
Intel AMT	Disabled	
	Enabled	Default
Enable/Disable Intel ® Active Management Technology BIOS Extension. Note : iAMT H/W is always enabled. This option just controls the BIOS extension execution. If enabled, this requires additional firmware in the SPI device		
Un-Configure ME	Disabled	Default
	Enabled	
OEMFlag Bit 15: Un-Configure ME without password.		

USB Configuration

Options Summary :

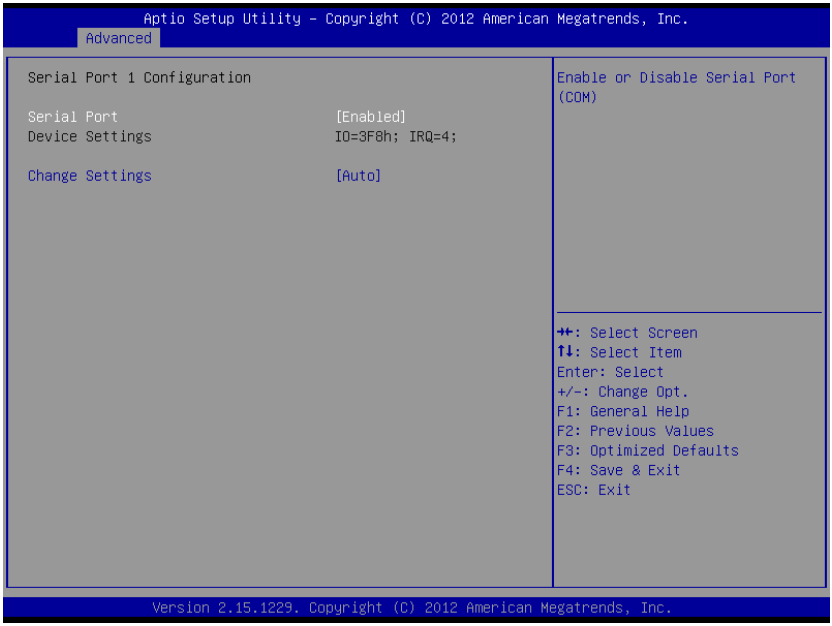
Legacy USB Support	Enabled	Default
	Disabled	
	Auto	
Enables Legacy USB support. AUTO option disables legacy support if no USB devices are connected. DISABLE option will keep USB devices available only for EFI applications.		
xHCI Mode	Enabled	Default
	Disabled	
Enables BIOS Support for xHCI Mode (USB3.0). When disabled, PCH USB3.0 controller will also be disabled. This item should be set to 'Disabled' when using WinXP OS because Intel does not support WinXP for it's USB3.0 controller.		

IT8728 Super IO Configuration

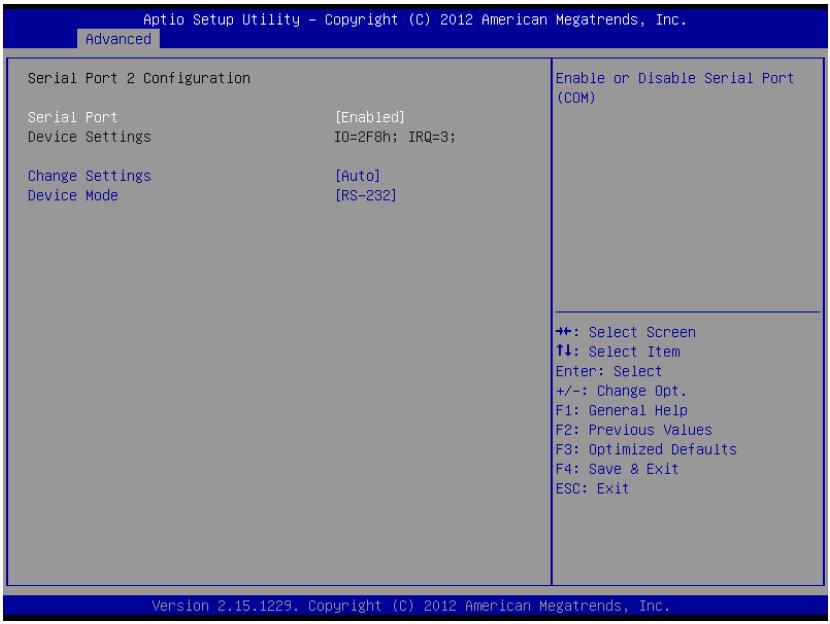


Serial Port 1 Configuration	Set Parameters of Serial Port 1 (COMA)
Serial Port 2 Configuration	Set Parameters of Serial Port 2 (COMB)

Serial Port 1 Configuration



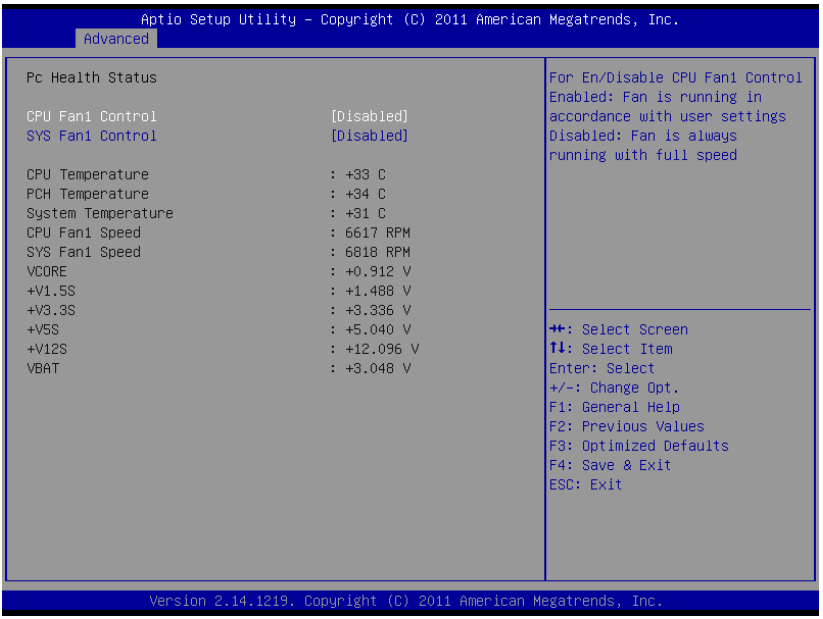
Serial Port 2 Configuration



Options Summary :

Serial Port	Disabled	
	Enabled	Default
Allows BIOS to En/Disable correspond serial port.		
Change Settings (Serial Port 1)	Auto	Default
	IO=3F8h; IRQ=4;	
	IO=3F8h; IRQ=3,4,5,6,7,10,11,12;	
	IO=2F8h; IRQ=3,4,5,6,7,10,11,12;	
	IO=3E8h; IRQ=3,4,5,6,7,10,11,12;	
	IO=2E8h; IRQ=3,4,5,6,7,10,11,12;	
Allows BIOS to Select Serial Port resource.		
Change Settings (Serial Port 2)	Auto	Default
	IO=2F8h; IRQ=3;	
	IO=3F8h; IRQ=3,4,5,6,7,10,11,12;	
	IO=2F8h; IRQ=3,4,5,6,7,10,11,12;	
	IO=3E8h; IRQ=3,4,5,6,7,10,11,12;	
	IO=2E8h; IRQ=3,4,5,6,7,10,11,12;	
Allows BIOS to Select Serial Port resource.		
Device Mode	RS-232	Default
	RS-422	
	RS-485	
Select working model		

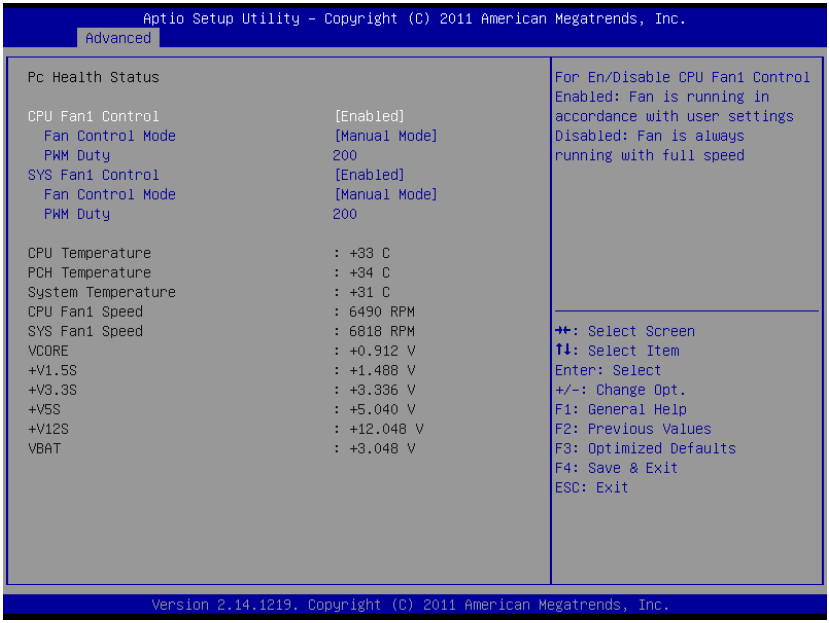
IT8728 HW Monitor



Options Summary :

CPU Fan1 Control	Disabled	Default
	Enabled	
For En/Disable CPU Fan1 Control		
SYS Fan1 Control	Disabled	Default
	Enabled	
For En/Disable SYS Fan1 Control		

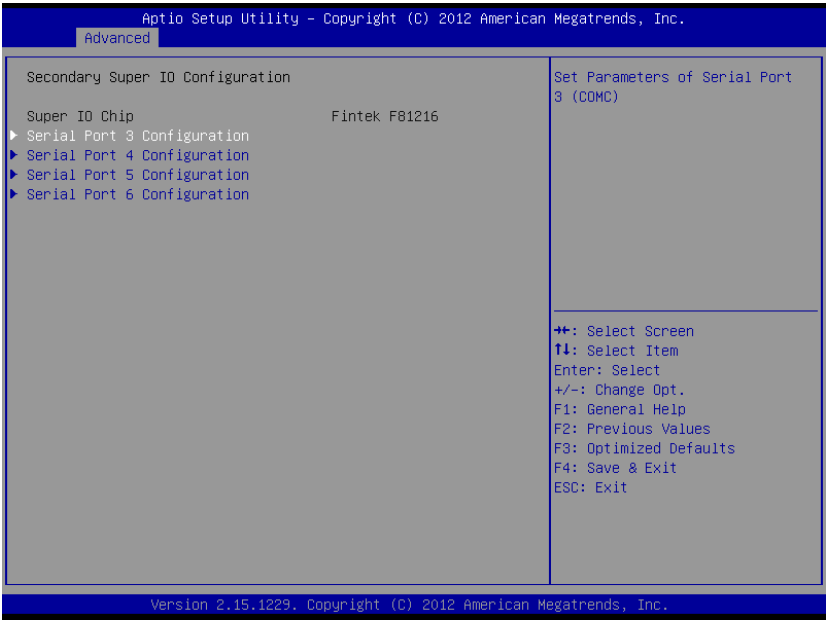
Smart Fan Mode Configuration



Options Summary :

(CPU) Fan Control Mode	Manual Mode	Default
	Automatic Mode	
Select (CPU) Fan Control Mode: Manual Mode: Manually controlling the fan with a given control PWM. Automatic Mode: Automatically controlling the fan with given parameters.		
(SYS) Fan Control Mode	Manual Mode	Default
	Automatic Mode	
Select (SYS) Fan Control Mode: Manual Mode: Manually controlling the fan with a given control PWM. Automatic Mode: Automatically controlling the fan with given parameters.		

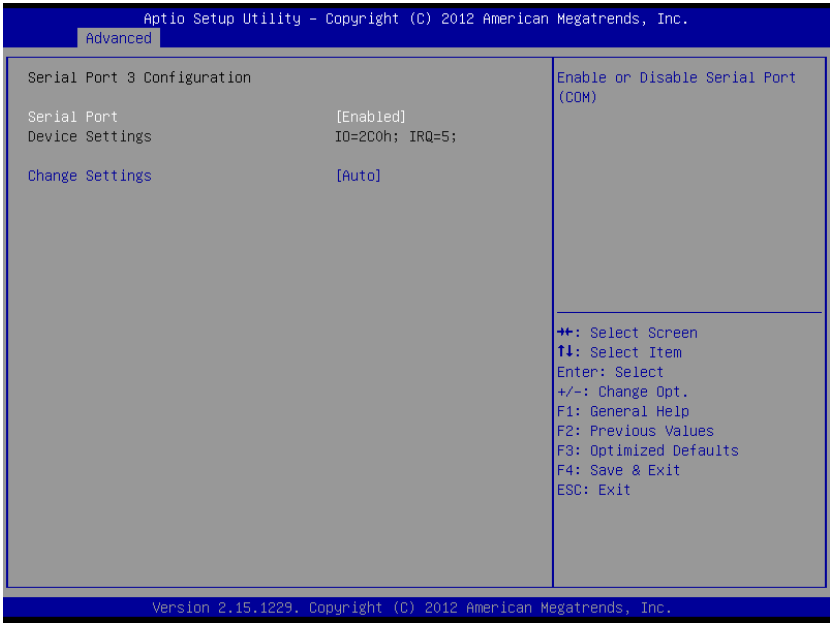
F81216 Second Super IO Configuration



Options Summary :

Serial Port 3 Configuration	Set Parameters of Serial Port 3 (COMC)
Serial Port 4 Configuration	Set Parameters of Serial Port 4 (COMD)
Serial Port 5 Configuration	Set Parameters of Serial Port 5 (COME)
Serial Port 6 Configuration	Set Parameters of Serial Port 6 (COMF)

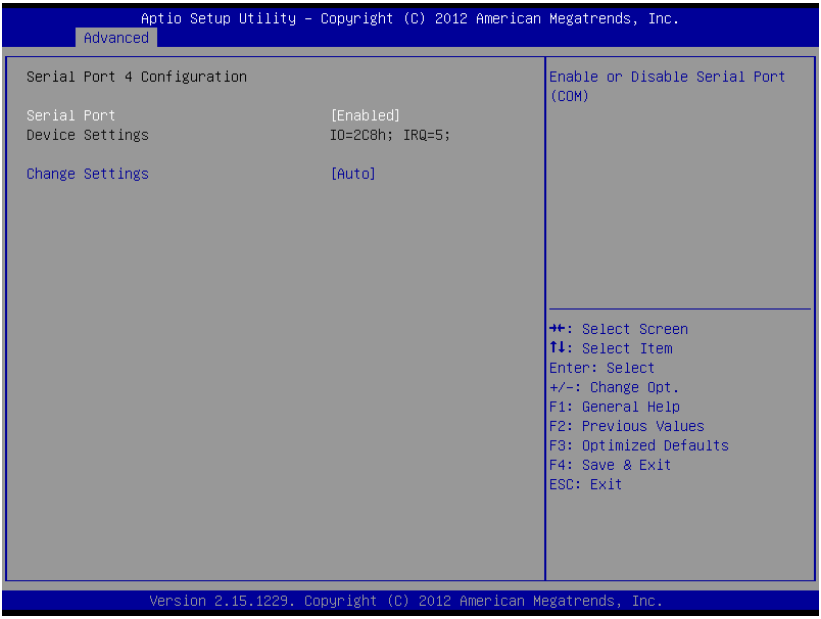
Serial Port 3 Configuration



Options Summary :

Serial Port	Disabled	
	Enabled	Default
Enable or Disable Serial Port (COM)		
Change Settings	Auto	Default
	IO=2C0h; IRQ=5;	
	IO=2C8h; IRQ=5;	
	IO=2B0h; IRQ=5;	
	IO=2B8h; IRQ=5;	
Select an optimal setting for Super IO device.		

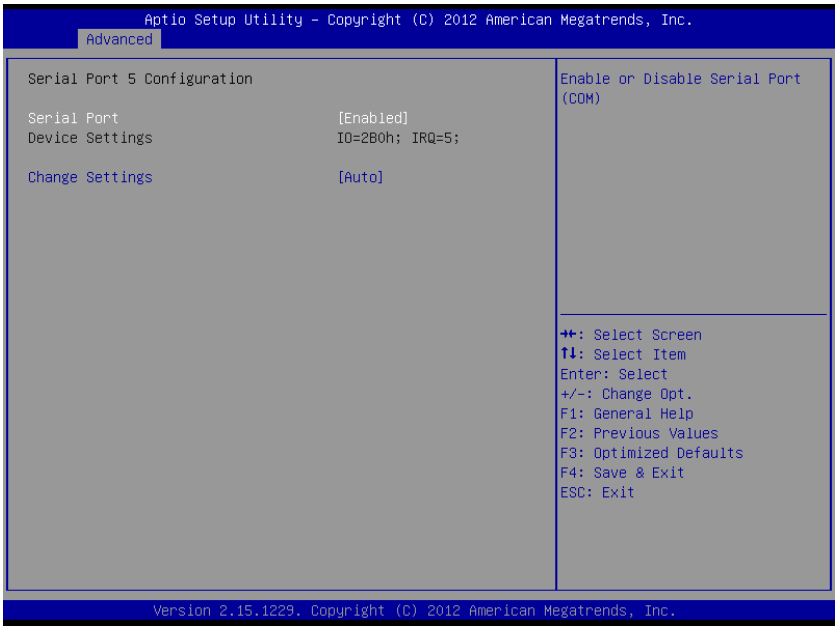
Serial Port 4 Configuration



Options Summary :

Serial Port	Disabled	
	Enabled	Default
Enable or Disable Serial Port (COM)		
Change Settings	Auto	Default
	IO=2C0h; IRQ=5;	
	IO=2C8h; IRQ=5;	
	IO=2B0h; IRQ=5;	
	IO=2B8h; IRQ=5;	
Select an optimal setting for Super IO device.		

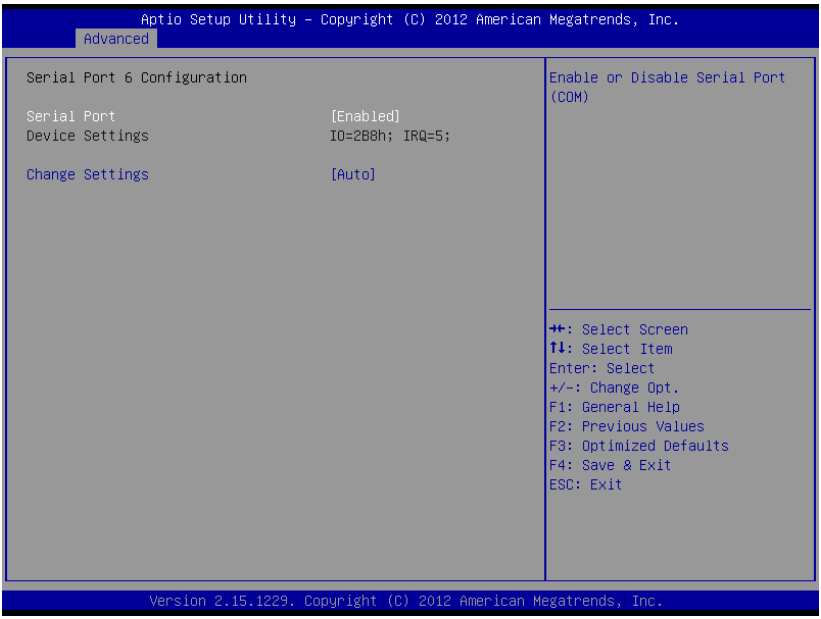
Serial Port 5 Configuration



Options Summary :

Serial Port	Disabled	
	Enabled	Default
Enable or Disable Serial Port (COM)		
Change Settings	Auto	Default
	IO=2C0h; IRQ=5;	
	IO=2C8h; IRQ=5;	
	IO=2B0h; IRQ=5;	
	IO=2B8h; IRQ=5;	
Select an optimal setting for Super IO device.		

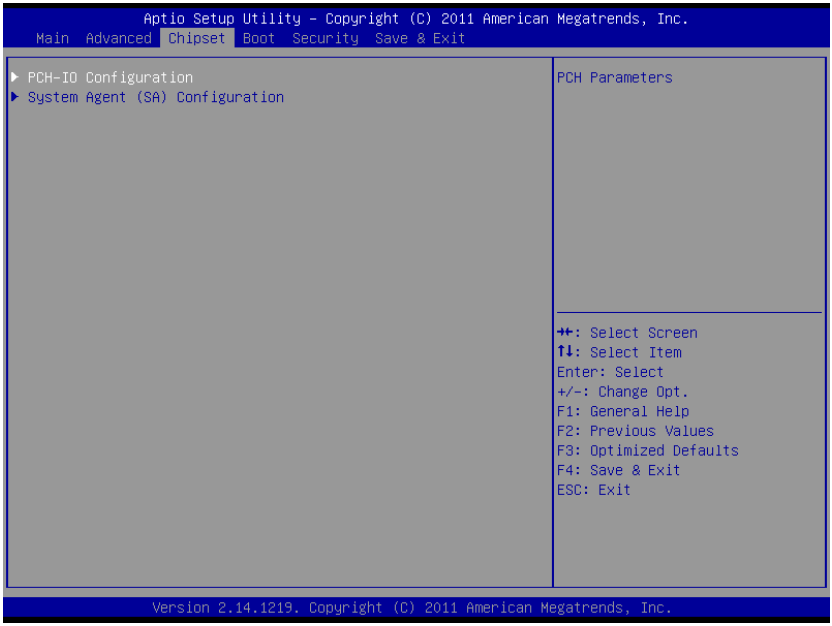
Serial Port 6 Configuration



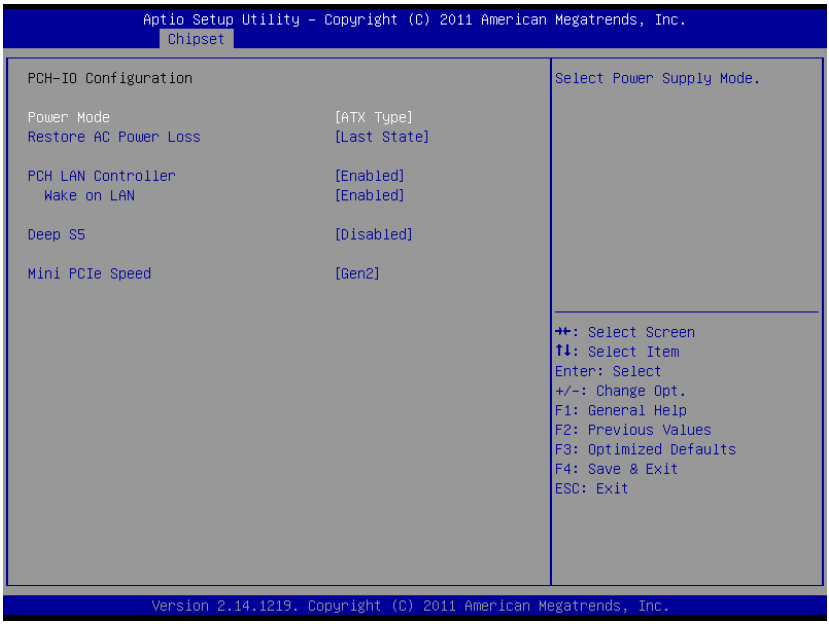
Options Summary :

Serial Port	Disabled	
	Enabled	Default
Enable or Disable Serial Port (COM)		
Change Settings	Auto	Default
	IO=2C0h; IRQ=5;	
	IO=2C8h; IRQ=5;	
	IO=2B0h; IRQ=5;	
	IO=2B8h; IRQ=5;	
Select an optimal setting for Super IO device.		

Setup submenu: Chipset



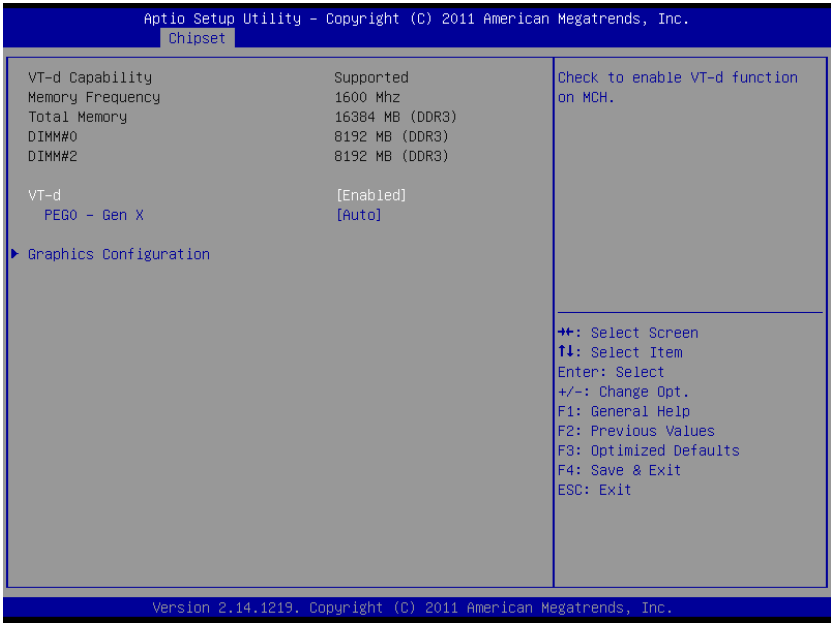
PCH-IO Configuration



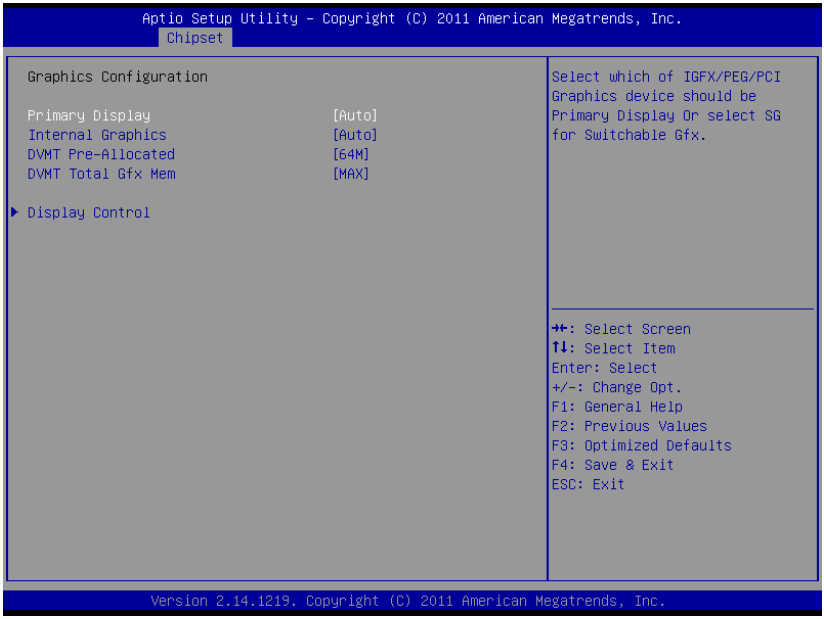
Options Summary :

Power Mode	ATX Type	Default
	AT Type	
Select Power Mode: ATX Type: Normal ACPI support AT Type: Suspend/Sleep disabled, and Always On when restoring from power failure.		
Restore AC Power Loss	Power off	
	Power On	
	Last State	Default
Select the action system to take when restoring from power loss.		
PCH LAN Controller	Disabled	
	Enabled	Default
Enabling/Disabling on-chip GbE controller		
Wake on LAN	Disabled	
	Enabled	Default
Enabling/Disabling PXE boot to PCH LAN		
Deep S5	Disabled	Default
	Enabled	
Enabled/Disabled Deep S5. When Deep S5 is enabled, Intel (R) AMT and Wake On PCH LAN functions are not available in system shut down.		
Mini PCIe Speed	Gen1	
	Gen2	Default
Select Mini PCI Express port speed.		

System Agent (SA) Configuration



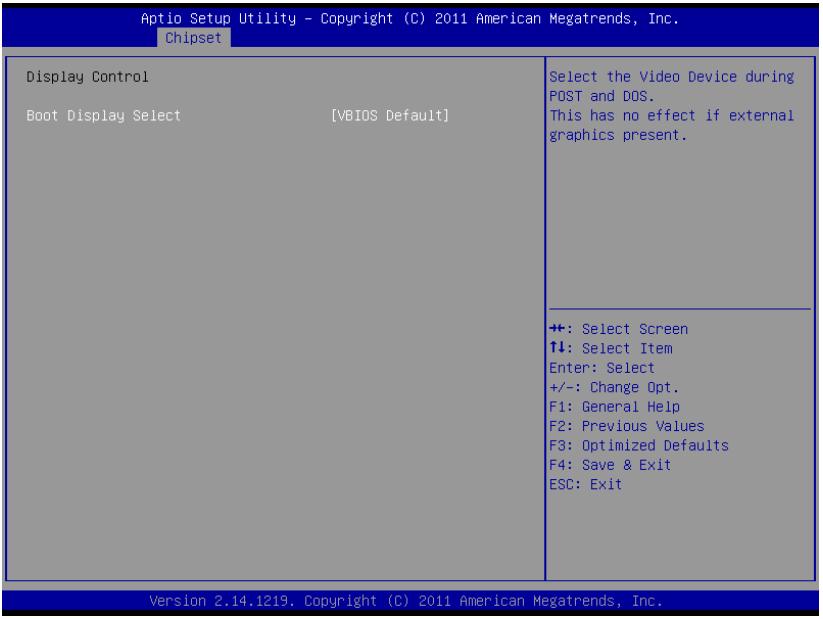
Graphics Configuration



Options Summary :

VT-d	Disabled	
	Enabled	Default
En/Disable chipset Virtualization Technology function.		
PEG0 – Gen x	Auto	Default
	Gen1	
	Gen2	
	Gen3	
Configure PEG0 B0:D1:F0 Gen1-Gen3.		
Primary Display	Auto	Default
	IGFX	
	PEG	
	PCI	
Select graphics adapters to boot.		
Internal Graphics	Auto	Default
	Disabled	
	Enable	
En/Disable internal graphics device		
DVMT Pre-Allocated	32MB~1024MB	64MB as Default
Select the amount of system memory pre-allocated for Internal graphics device.		
DVMT Total Gfx Mem	128MB	
	256MB	
	Max	Default
Select the amount of system memory used by the Internal graphics device.		

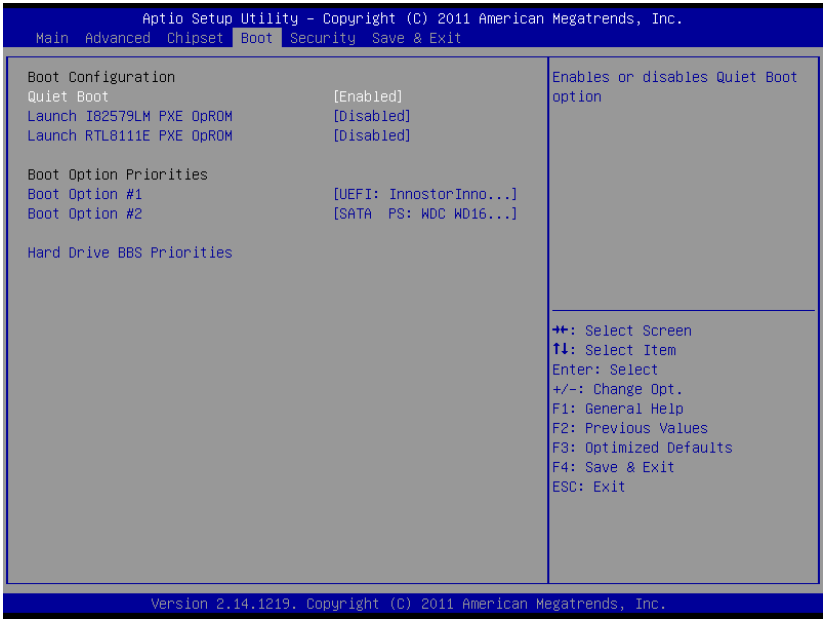
Display Control



Options Summary :

Primary Display	VBIOS Default	Default
	CRT	
	HDMI	
	DVI	
	DisplayPort	
Select boot display device Select the Video Device during POST and DOS. This has no effect if external graphics present. VBIOS Default – Display automatically according to VBIOS algorithm		

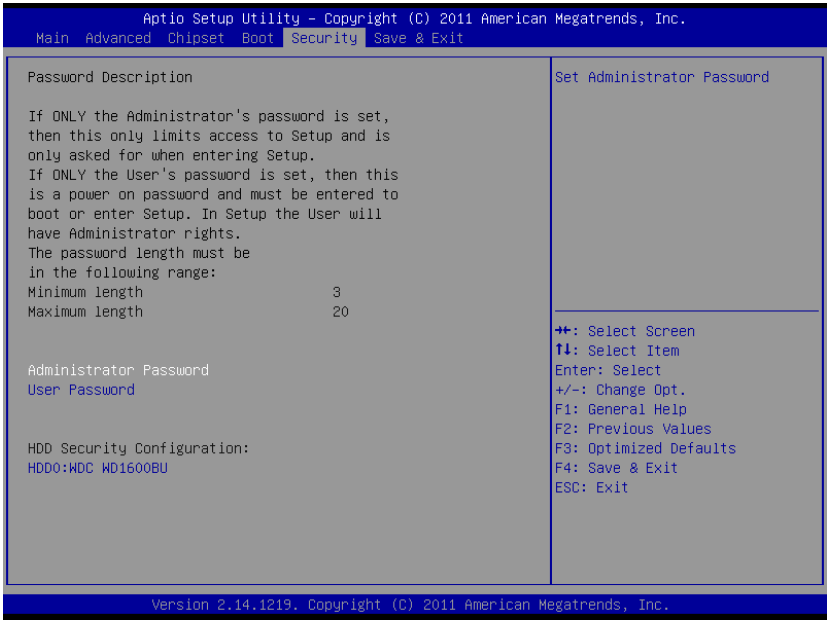
Setup submenu: Boot



Options Summary :

Quiet Boot	Disabled	
	Enabled	Default
En/Disable showing boot logo.		
Launch I82579LM PXE OpROM	Disabled	Default
	Enabled	
Enable or Disable Legacy Boot Option for I82579LM.		
Launch RTL8111E PXE OpROM	Disabled	Default
	Enabled	
Enable or Disable Legacy Boot Option for RTL8111E		

Submenu: Security



Change User/Supervisor Password

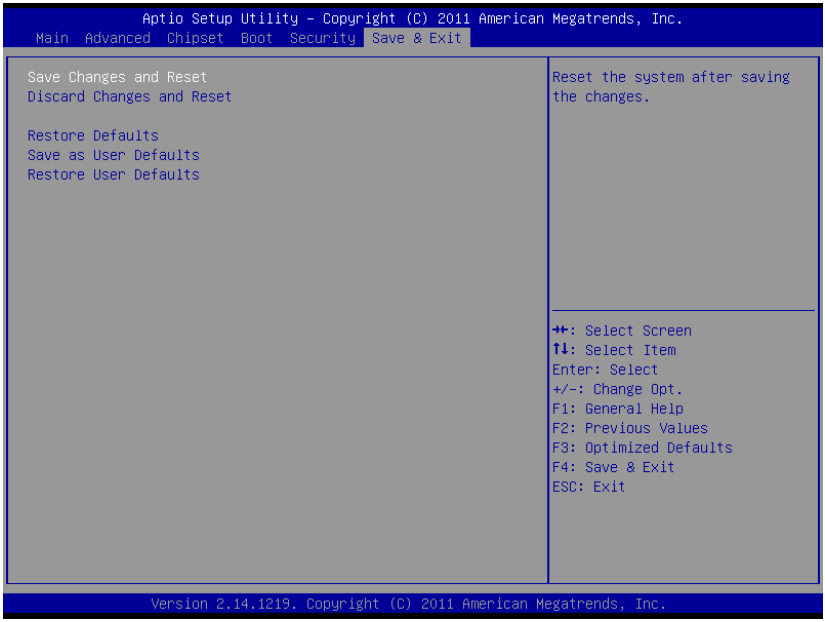
You can install a Supervisor password, and if you install a supervisor password, you can then install a user password. A user password does not provide access to many of the features in the Setup utility.

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

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The AIS-E2 comes with an AutoRun DVD-ROM that contains all drivers and utilities that can help you to install the driver automatically.

Insert the driver DVD, the driver DVD-title will auto start and show the installation guide. If not, please follow the sequence below to install the drivers.

Follow the sequence below to install the drivers:

Step 1 – Install Chipset Driver

Step 2.1 – Install Display Audio Driver

Step 2.2 – Install VGA Driver

Step 3 – Install LAN Driver

Step 4 – Install Audio Driver

Step 5 – Install USB3.0 Driver

Step 6 – Install RAID & AHCI Driver

Step 7 – Install ME Driver

Step 8 – Install Serial Port Driver (Optional)

Note: If you got compatible issue for COM port, please find its driver under STEP 8 folder and then install it by administrative login permission.

Please read instructions below for further detailed installations.

4.1 Installation:

Insert the AIS-E2 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 ***Step 1 - Chipset*** folder and double click on the ***infinst_autol.exe*** file
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Step 2.1 – Install Display Audio Driver

1. Click on the ***Step 2.1 -Display Audio Driver Patch (for WinXP 64bit SP1 only)*** folder double click on the ***WindowsServer2003.WindowsXP-KB901105-v3-x64-ENU*** file
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Step 2.2 –Install VGA Driver

1. Click on the ***Step 2.2 - VGA*** folder and select the OS folder your system is
2. Double click on the ***Setup.exe*** located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Step 3 –Install LAN Driver

1. Click on the ***Step 3 - LAN*** folder and select the folder of LAN chip (***Intel or Realtek***) based on the system adopted.
2. Select the OS folder your system is and double click on the ***.exe*** file located each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Step 4 –Install Audio Driver

5. Click on the ***Step 4 - Audio*** folder and select the OS folder your system is
6. Double click on the ***.exe*** located in each OS folder
7. Follow the instructions that the window shows
8. The system will help you install the driver automatically

Step 5 – Install USB3.0 Driver

1. Click on the ***Step 5 - USB3.0*** folder and double click on the ***Setup.exe***
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Step 6 – Install RAID & AHCI Driver

Please refer to the ***Appendix C RAID & AHCI Settings***

Step 7 – Install ME Driver

1. Click on the ***Step 7 - ME*** folder and double click on the ***setup.exe*** file
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

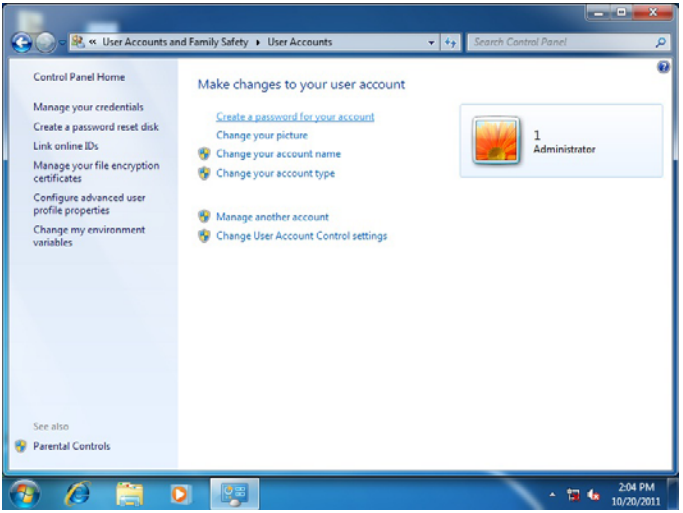
Step 8 –Install Serial Port Driver (Optional)

For Windows® XP 32-bit

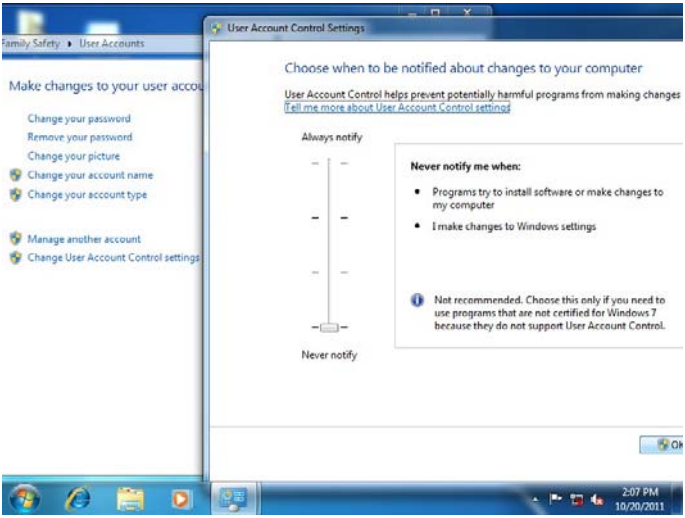
1. Click on the ***Step 8 - Serial Port Driver (Optional)*** folder and double click on the ***patch.bat***
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

For Windows® 7 32-bit/ 64-bit

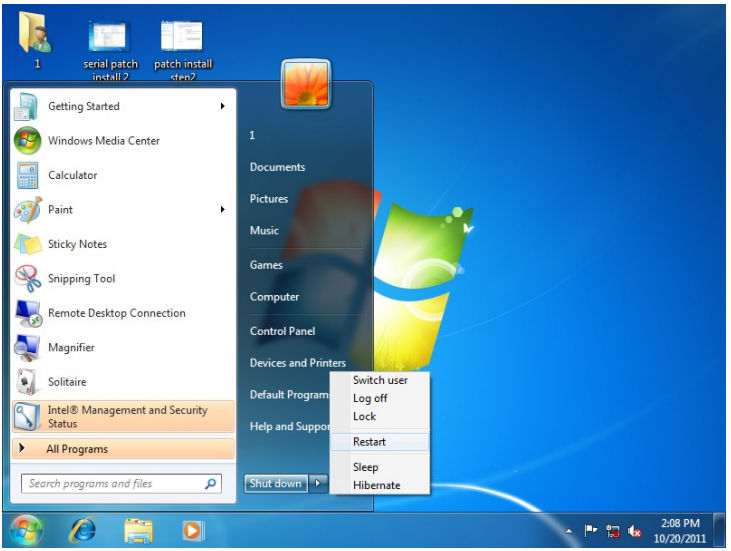
1. Create a password for Administrator account.



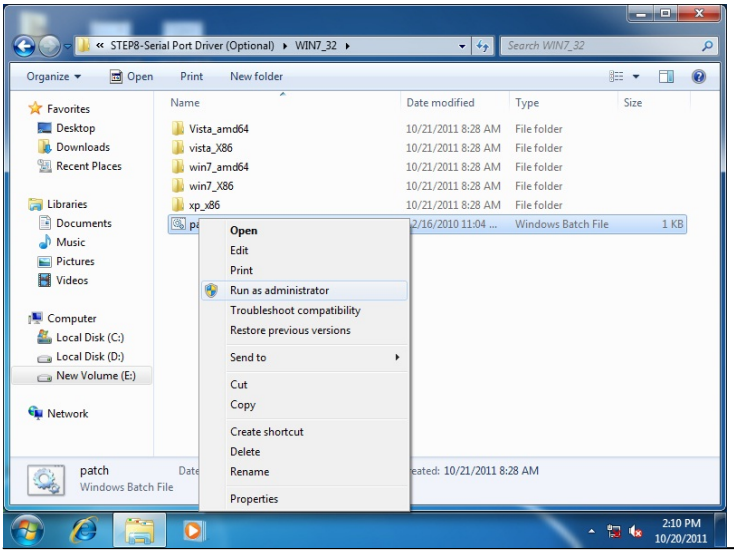
2. Change User Account Control Settings to [Never notify]



3. Reboot and Administrator login.



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



You also can install the serial port driver for Windows 7 by the

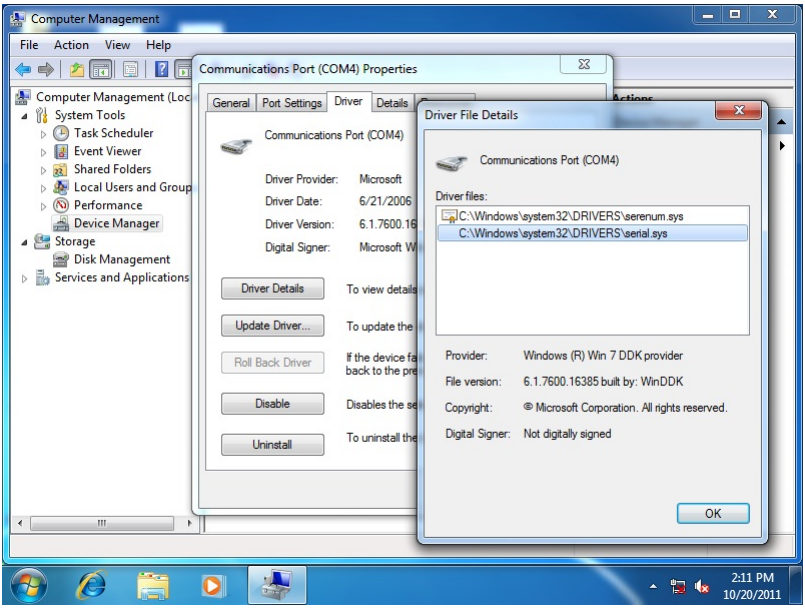
Installation Procedure 2 below:

-Win7 32-bit

Copy the Driver CD\Serial Port Driver (Optional) \WIN7_32\ win7_X86 \serial.sys to C:\WINDOWS\system32\drivers\

-Win7 64-bit

Copy the Driver CD\Serial Port Driver (Optional) \WIN7_64 \win7_amd64\serial.sys to C:\WINDOWS\system32\drivers\



Appendix

A

Programming the Watchdog Timer

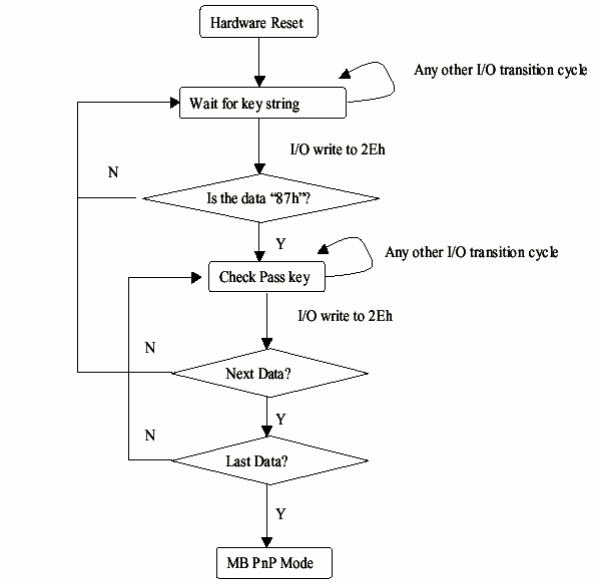
A.1 Programming

AIS-E2 utilizes ITE IT8728 chipset as its watchdog timer controller.

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

Configuring Sequence Description

After the hardware reset or power-on reset, the ITE 8728 enters the normal mode with all logical devices disabled except KBC. The initial state (enable bit) of this logical device (KBC) is determined by the state of pin 121 (DTR1#) at the falling edge of the system reset during power-on reset.



There are three steps to complete the configuration setup: (1) Enter the MB PnP Mode; (2) Modify the data of configuration registers; (3) Exit the MB PnP Mode. Undesired result may occur if the MB PnP Mode is not exited normally.

(1) Enter the MB PnP Mode

To enter the MB PnP Mode, four 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 four write operations to the Special Address port (2EH). Two different enter keys are provided to select configuration ports (2Eh/2Fh) of the next step.

	Address Port	Data Port
87h, 01h, 55h, 55h:	2Eh	2Fh

(2) Modify the Data of the Registers

All configuration registers can be accessed after entering the MB PnP 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 MB PnP Mode

Set bit 1 of the configure control register (Index=02h) to 1 to exit the MB PnP Mode.

WatchDog Timer Configuration Registers

LDN	Index	R/W	Reset	Configuration Register or Action
All	02H	W	N/A	Configure Control
07H	71H	R/W	00H	WatchDog Timer Control Register
07H	72H	R/W	00H	WatchDog Timer Configuration Register
07H	73H	R/W	00H	WatchDog Timer Time-out Value Register

Configure Control (Index=02h)

This register is write only. Its values are not sticky; that is to say, a hardware reset will automatically clear the bits, and does not require the software to clear them.

Bit	Description
7-2	Reserved
1	Returns to the Wait for Key state. This bit is used when the configuration sequence is completed
0	Resets all logical devices and restores configuration registers to their power-on states.

WatchDog Timer Control Register (Index=71h, Default=00h)

Bit	Description
7	WDT is reset upon a CIR interrupt
6	WDT is reset upon a KBC (mouse) interrupt
5	WDT is reset upon a KBC (keyboard) interrupt
4	WDT is reset upon a read or a write to the Game Port base address
3-2	Reserved
1	Force Time-out. This bit is self-clearing
0	WDT Status
	1: WDT value reaches 0.
	0: WDT value is not 0

WatchDog Timer Configuration Register (Index=72h, Default=00h)

Bit	Description
7	WDT Time-out value select
	1: Second
	0: Minute
6	WDT output through KRST (pulse) enable
5-4	Reserved
3-0	Select the interrupt level[Note] for WDT

WatchDog Timer Time-out Value Register (Index=73h, Default=00h)

Bit	Description
7-0	WDT Time-out value 7-0

A.2 ITE8728 Watchdog Timer Initial Program

```
        .MODEL SMALL
        .CODE
Main:
        CALL Enter_Configuration_mode
        CALL Check_Chip
        mov cl, 7
        call Set_Logic_Device
        ;time setting
        mov cl, 10 ; 10 Sec
        dec al
Watch_Dog_Setting:
        ;Timer setting
        mov al, cl
        mov cl, 73h
        call Superio_Set_Reg
        ;Clear by keyboard or mouse interrupt
        mov al, 0f0h
        mov cl, 71h
        call Superio_Set_Reg
        ;unit is second.
        mov al, 0C0H
        mov cl, 72h
        call Superio_Set_Reg
```

```
; game port enable
mov cl, 9
call Set_Logic_Device

Initial_OK:
CALL Exit_Configuration_mode
MOV AH,4Ch
INT 21h

Enter_Configuration_Mode PROC NEAR
MOV SI,WORD PTR CS:[Offset Cfg_Port]

MOV DX,02Eh
MOV CX,04h
Init_1:
MOV AL,BYTE PTR CS:[SI]
OUT DX,AL
INC SI
LOOP Init_1
RET
Enter_Configuration_Mode ENDP

Exit_Configuration_Mode PROC NEAR
MOV AX,0202h
CALL Write_Configuration_Data
```

```
        RET
        Exit_Configuration_Mode ENDP

        Check_Chip PROC NEAR

        MOV AL,20h
        CALL Read_Configuration_Data
        CMP AL,87h
        JNE Not_Initial

        MOV AL,21h
        CALL Read_Configuration_Data
        CMP AL,12h
        JNE Not_Initial

Need_Initial:
        STC
        RET
Not_Initial:
        CLC
        RET
        Check_Chip ENDP
        Read_Configuration_Data PROC NEAR
        MOV DX,WORD PTR CS:[Cfg_Port+04h]
        OUT DX,AL
```

```
MOV DX,WORD PTR CS:[Cfg_Port+06h]
IN AL,DX
RET
Read_Configuration_Data ENDP

Write_Configuration_Data PROC NEAR
MOV DX,WORD PTR CS:[Cfg_Port+04h]
OUT DX,AL
XCHG AL,AH
MOV DX,WORD PTR CS:[Cfg_Port+06h]
OUT DX,AL
RET
Write_Configuration_Data ENDP

Superio_Set_Reg proc near
push ax
MOV DX,WORD PTR CS:[Cfg_Port+04h]
mov al,cl
out dx,al
pop ax
inc dx
out dx,al
ret
Superio_Set_Reg endp.Set_Logic_Device proc near
Set_Logic_Device    proc    near
```

```
push ax
push cx
xchg al,cl
mov cl,07h
call Superio_Set_Reg
pop cx
pop ax
ret
Set_Logic_Device endp

;Select 02Eh->Index Port, 02Fh->Data Port
Cfg_Port DB 087h,001h,055h,055h

DW 02Eh,02Fh
```

END Main

Note: Interrupt level mapping

0Fh-Dh: not valid

0Ch: IRQ12

.

.

03h: IRQ3

02h: not valid

01h: IRQ1

00h: no interrupt selected

Appendix

B

I/O Information

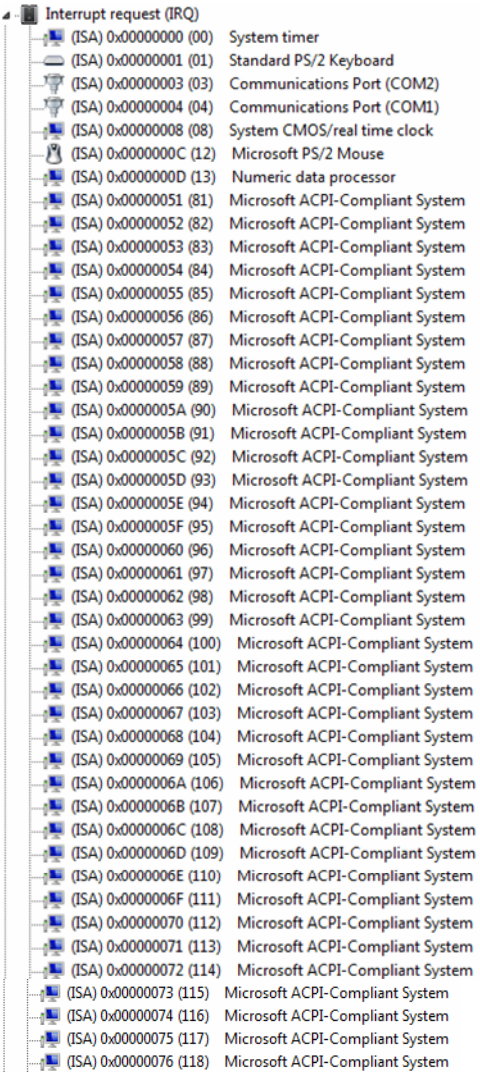
B.1 I/O Address Map

- Input/output (IO)
  - [00000000 - 0000001F] Direct memory access controller
  - [00000000 - 00000CF7] PCI bus
  - [00000010 - 0000001F] Motherboard resources
  - [00000020 - 00000021] Programmable interrupt controller
  - [00000022 - 0000003F] Motherboard resources
  - [00000024 - 00000025] Programmable interrupt controller
  - [00000028 - 00000029] Programmable interrupt controller
  - [0000002C - 0000002D] Programmable interrupt controller
  - [0000002E - 0000002F] Motherboard resources
  - [00000030 - 00000031] Programmable interrupt controller
  - [00000034 - 00000035] Programmable interrupt controller
  - [00000038 - 00000039] Programmable interrupt controller
  - [0000003C - 0000003D] Programmable interrupt controller
  - [00000040 - 00000043] System timer
  - [00000044 - 0000005F] Motherboard resources
  - [0000004E - 0000004F] Motherboard resources
  - [00000050 - 00000053] System timer
  - [00000060 - 00000060] Standard PS/2 Keyboard
  - [00000061 - 00000061] Motherboard resources
  - [00000062 - 00000063] Motherboard resources
  - [00000063 - 00000063] Motherboard resources
  - [00000064 - 00000064] Standard PS/2 Keyboard
  - [00000065 - 00000065] Motherboard resources
  - [00000065 - 0000006F] Motherboard resources
  - [00000067 - 00000067] Motherboard resources
  - [00000070 - 00000070] Motherboard resources
  - [00000070 - 00000077] System CMOS/real time clock
  - [00000072 - 0000007F] Motherboard resources
  - [00000080 - 00000080] Motherboard resources
  - [00000080 - 00000080] Motherboard resources
  - [00000081 - 00000091] Direct memory access controller
  - [00000084 - 00000086] Motherboard resources
  - [00000088 - 00000088] Motherboard resources
  - [0000008C - 0000008E] Motherboard resources
  - [00000090 - 0000009F] Motherboard resources
  - [00000092 - 00000092] Motherboard resources
  - [00000093 - 0000009F] Direct memory access controller
  - [000000A0 - 000000A1] Programmable interrupt controller
  - [000000A2 - 000000BF] Motherboard resources
  - [000000A4 - 000000A5] Programmable interrupt controller
  - [000000A8 - 000000A9] Programmable interrupt controller

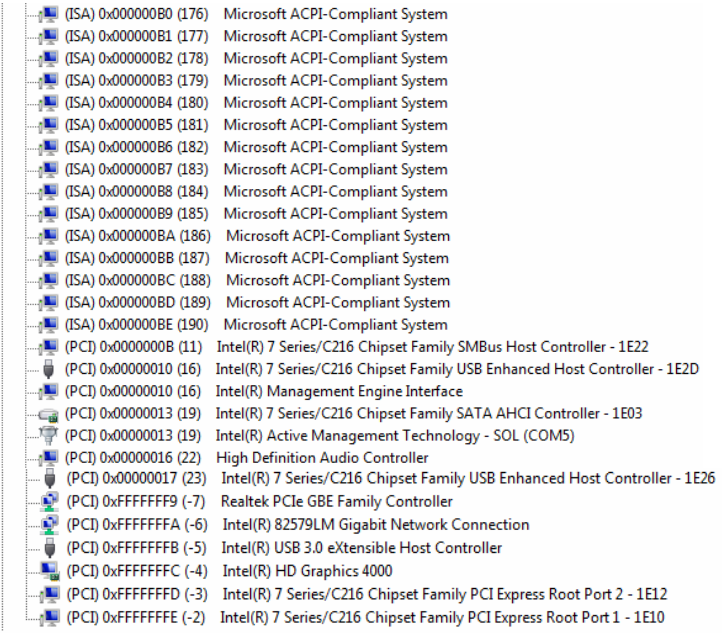
- [000000AC - 000000AD] Programmable interrupt controller
- [000000B0 - 000000B1] Programmable interrupt controller
- [000000B2 - 000000B3] Motherboard resources
- [000000B4 - 000000B5] Programmable interrupt controller
- [000000B8 - 000000B9] Programmable interrupt controller
- [000000BC - 000000BD] Programmable interrupt controller
- [000000C0 - 000000DF] Direct memory access controller
- [000000E0 - 000000EF] Motherboard resources
- [000000F0 - 000000FF] Numeric data processor
- [00000200 - 0000020F] Motherboard resources
- [000002F8 - 000002FF] Communications Port (COM2)
- [000003B0 - 000003BB] Intel(R) HD Graphics 4000
- [000003C0 - 000003DF] Intel(R) HD Graphics 4000
- [000003F8 - 000003FF] Communications Port (COM1)
- [00000400 - 00000453] Motherboard resources
- [00000454 - 00000457] Motherboard resources
- [00000458 - 0000047F] Motherboard resources
- [000004D0 - 000004D1] Motherboard resources
- [000004D0 - 000004D1] Programmable interrupt controller
- [00000500 - 0000057F] Motherboard resources
- [00000680 - 0000069F] Motherboard resources
- [00000A00 - 00000A1F] Motherboard resources
- [00000A20 - 00000A2F] Motherboard resources
- [00000A30 - 00000A3F] Motherboard resources
- [00000D00 - 0000FFFF] PCI bus
- [0000164E - 0000164F] Motherboard resources
- [0000E000 - 0000E0FF] Realtek PCIe GBE Family Controller
- [0000E000 - 0000EFFF] Intel(R) 7 Series/C216 Chipset Family PCI Express Root Port 2 - 1E12
- [0000F000 - 0000F03F] Intel(R) HD Graphics 4000
- [0000F040 - 0000F05F] Intel(R) 7 Series/C216 Chipset Family SMBus Host Controller - 1E22
- [0000F060 - 0000F07F] Intel(R) 7 Series/C216 Chipset Family SATA AHCI Controller - 1E03
- [0000F0A0 - 0000F0A3] Intel(R) 7 Series/C216 Chipset Family SATA AHCI Controller - 1E03
- [0000F0B0 - 0000F0B7] Intel(R) 7 Series/C216 Chipset Family SATA AHCI Controller - 1E03
- [0000F0C0 - 0000F0C3] Intel(R) 7 Series/C216 Chipset Family SATA AHCI Controller - 1E03
- [0000F0D0 - 0000F0D7] Intel(R) 7 Series/C216 Chipset Family SATA AHCI Controller - 1E03
- [0000F0E0 - 0000F0E7] Intel(R) Active Management Technology - SOL (COM5)
- [0000FFFF - 0000FFFF] Motherboard resources
- [0000FFFF - 0000FFFF] Motherboard resources

B.2 Memory Address Map

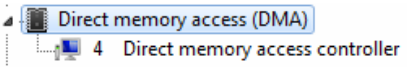
B.3 IRQ Mapping Chart



(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



B.4 DMA Channel Assignments



Appendix

C

RAID & AHCI Settings

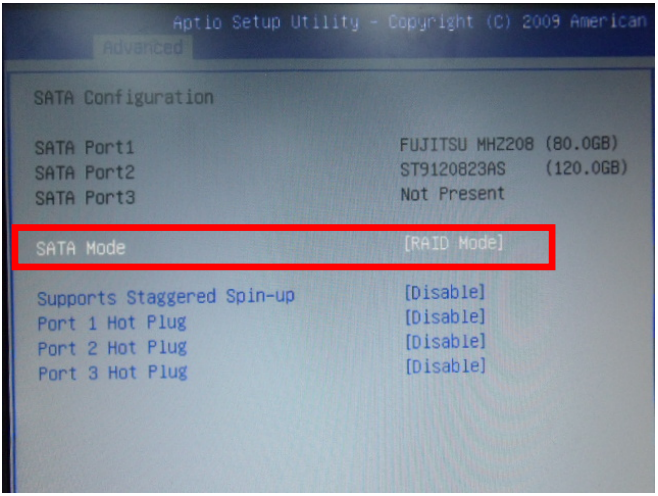
C.1 Setting RAID

OS installation to setup RAID Mode

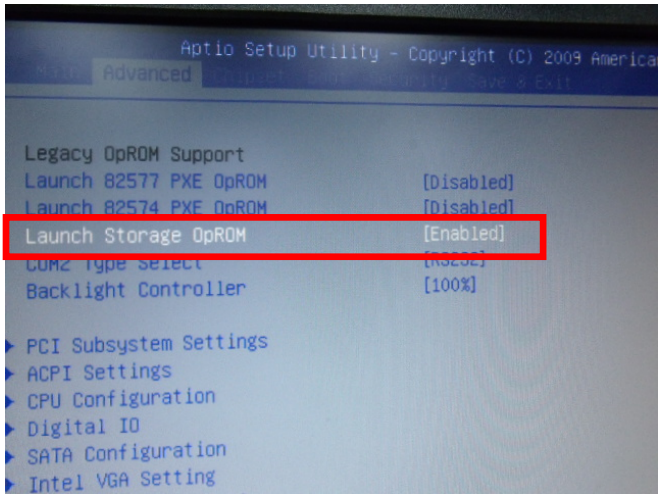
Step 1: Copy the files below from "***Driver CD ->Step 6 - RAID&AHCI ->WinXP_32 or WinXP_64***" to Disk

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

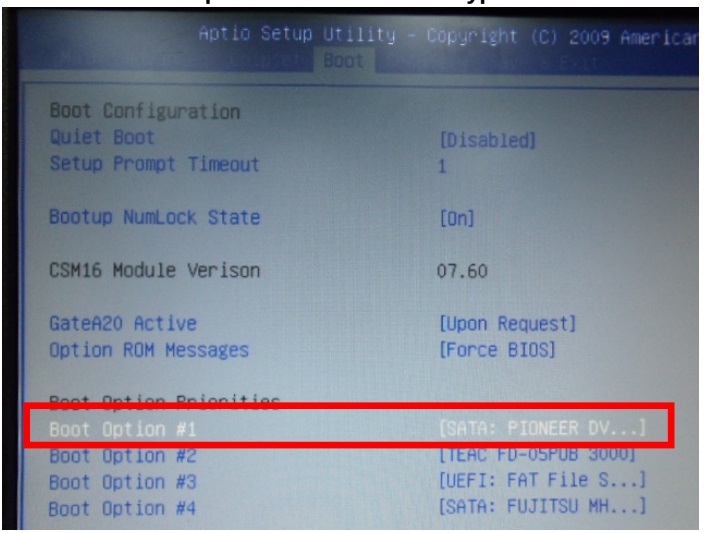
Step 3: The setting procedures " **In BIOS Setup Menu**"
A: Advanced -> SATA Configuration -> SATA Mode -> RAID Mode



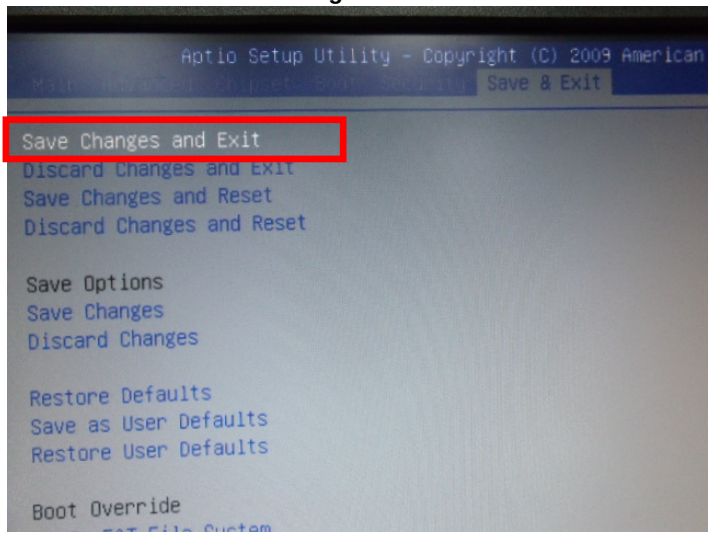
Step 4: The setting procedures "**In BIOS Setup Menu**"
B: Advanced -> Launch Storage OpROM -> Enabled



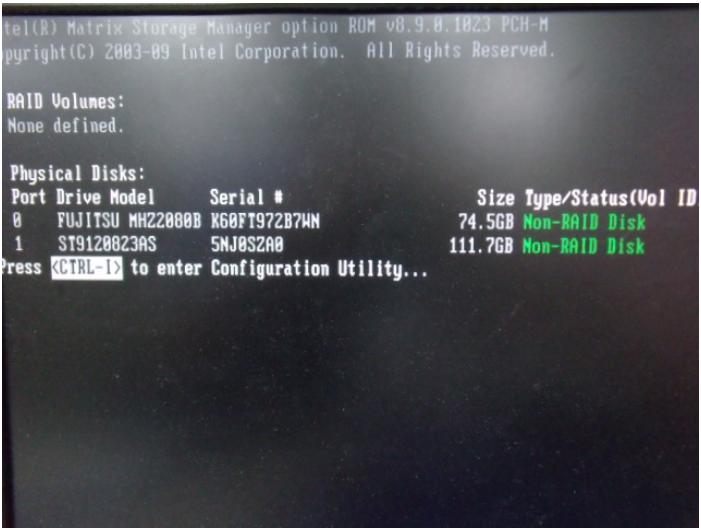
Step 5: The setting procedures "**In BIOS Setup Menu"**
C: Boot -> Boot Option #1 -> DVD-ROM Type



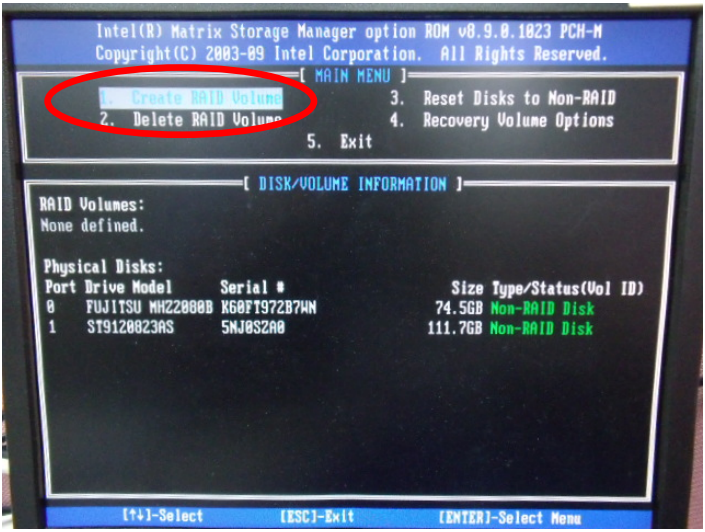
Step 6: The setting procedures "**In BIOS Setup Menu"**
D: Save & Exit -> Save Changes and Exit



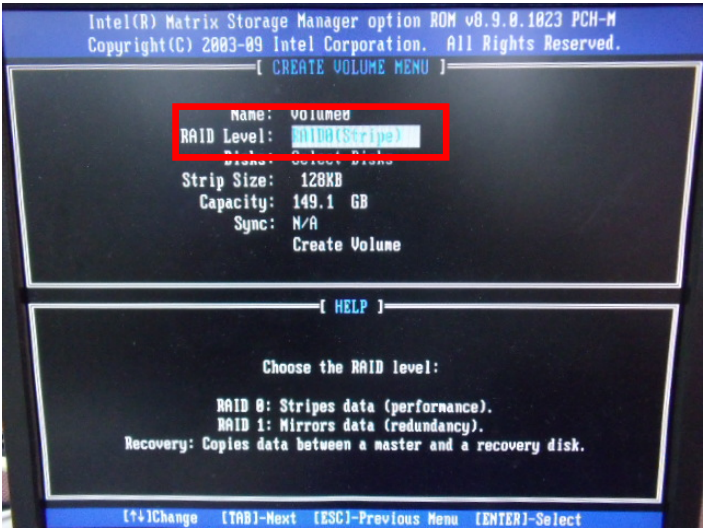
Step 7: Press **Ctrl-I** to enter **MAIN MENU**



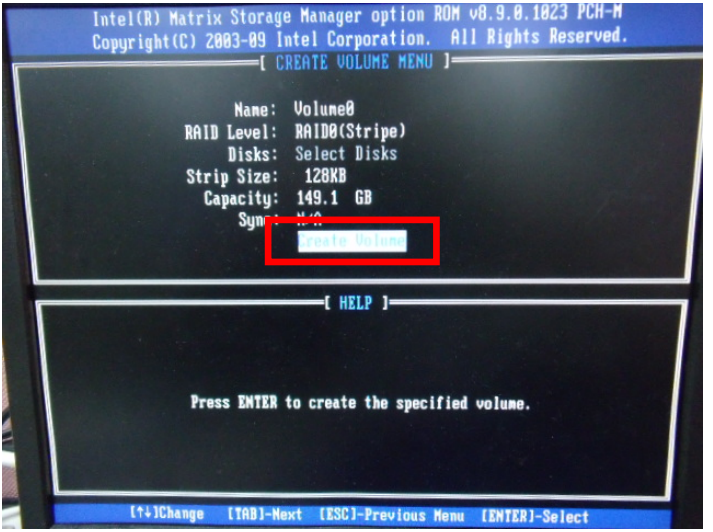
Step 8: Choose "**1.Create RAID Volume**"



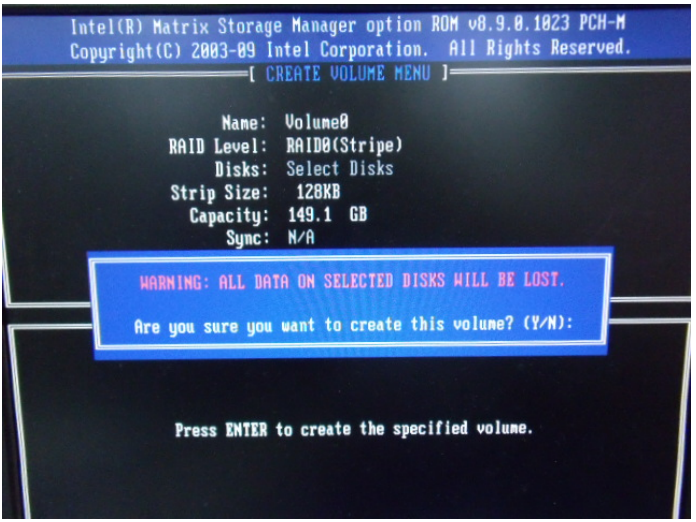
Step 9: RAID Level -> RAID0(Stripe)



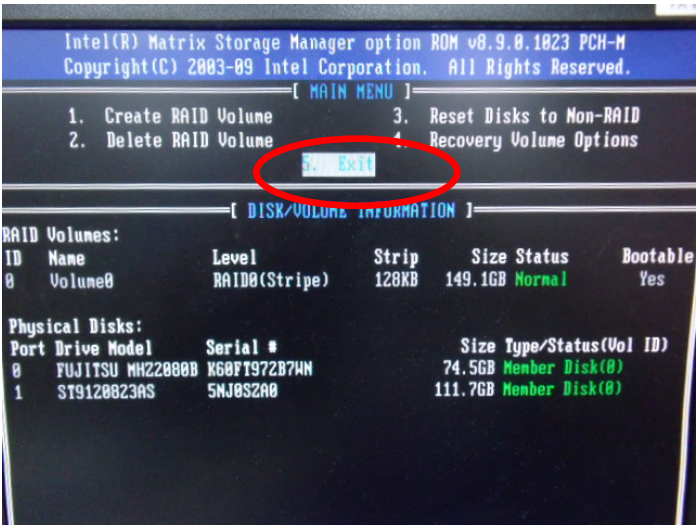
Step 10: Choose "**Create Volume**"



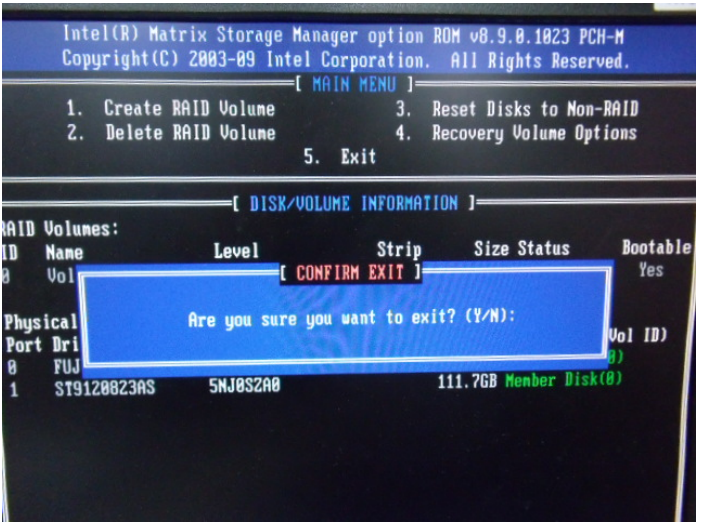
Step 11: Choose "**Y**"



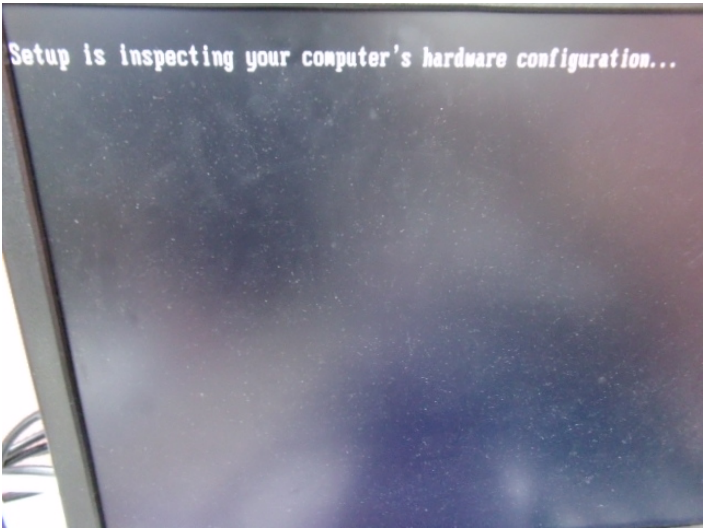
Step 12: Choose "**5. Exit**"



Step 13: Choose "**Y**"

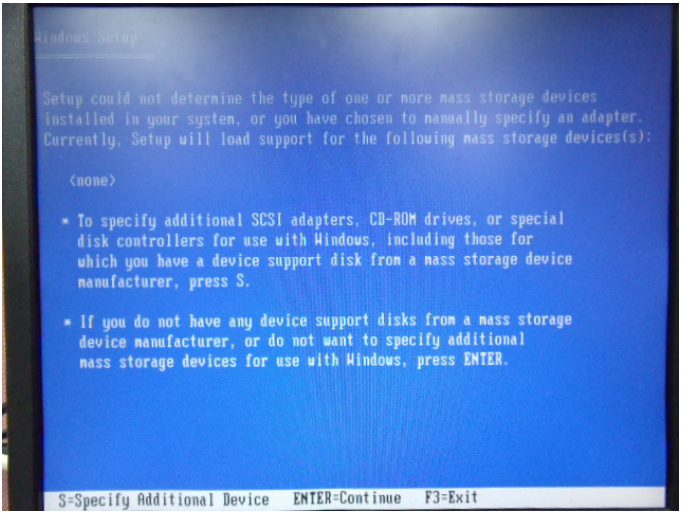


Step 14: Setup OS

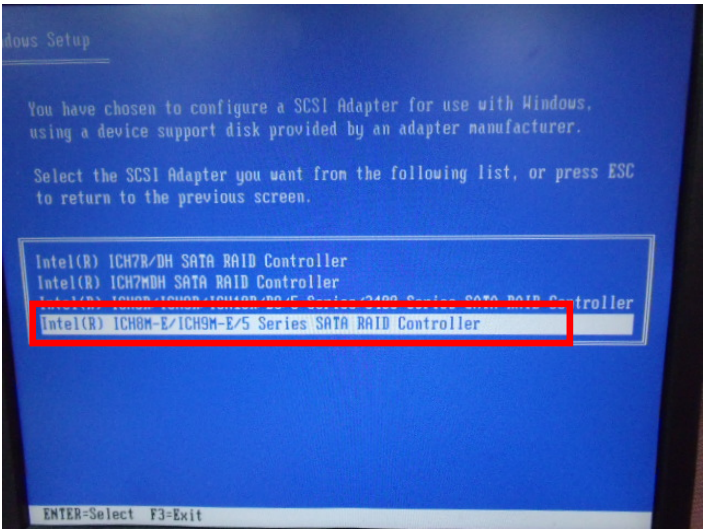


Step 15: Press "**F6**"

Step 16: Choose "**S**"

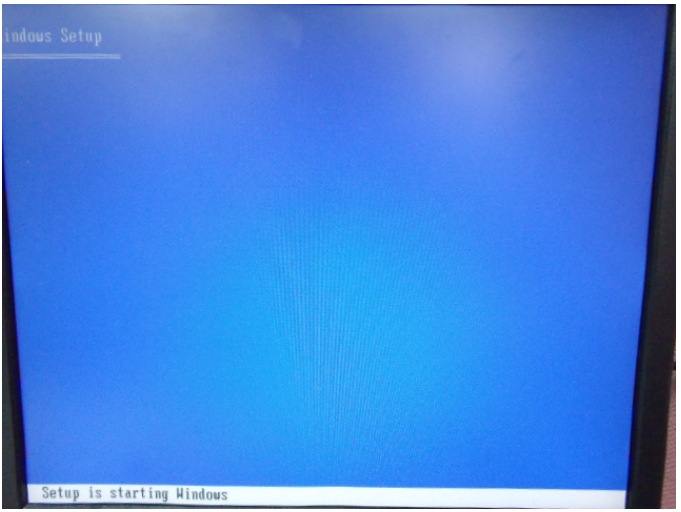


Step 17: Choose "**Intel(R) ICH8M-E/ICH9M-E/5 Series SATA RAID Controller**"



Step 18: It will show the model number you select and then press "**ENTER**"

Step 19: Setup is starting Windows



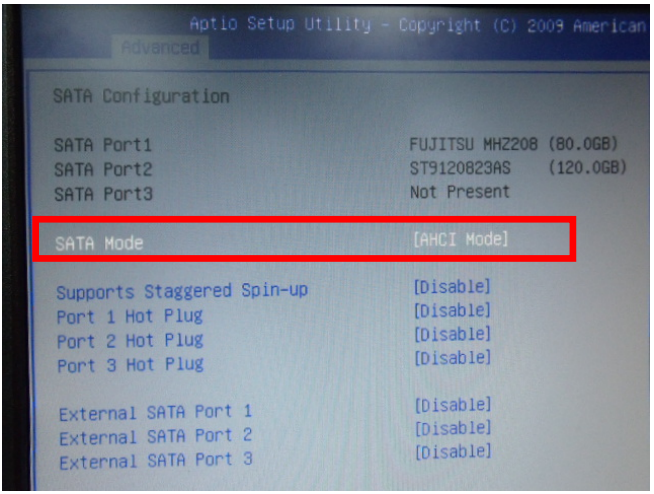
C.2 Setting AHCI

OS installation to setup AHCI Mode

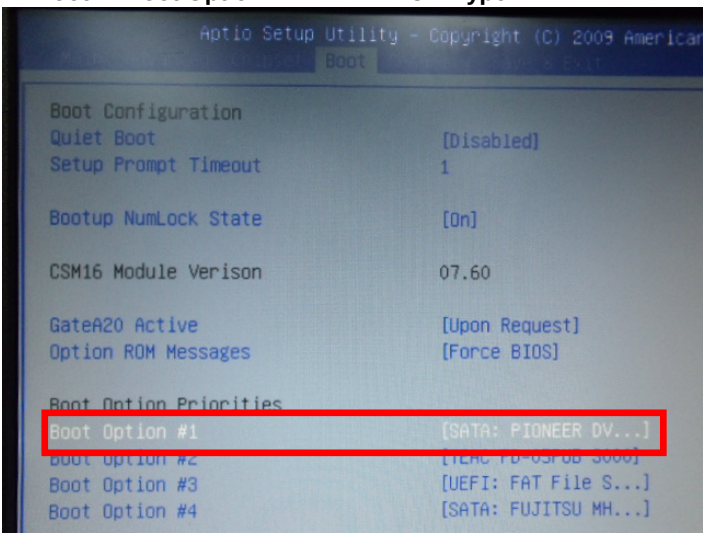
Step 1: Copy the files below from "***Driver CD -> Raid Driver -> F6 Floppy - x86***" to Disk

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

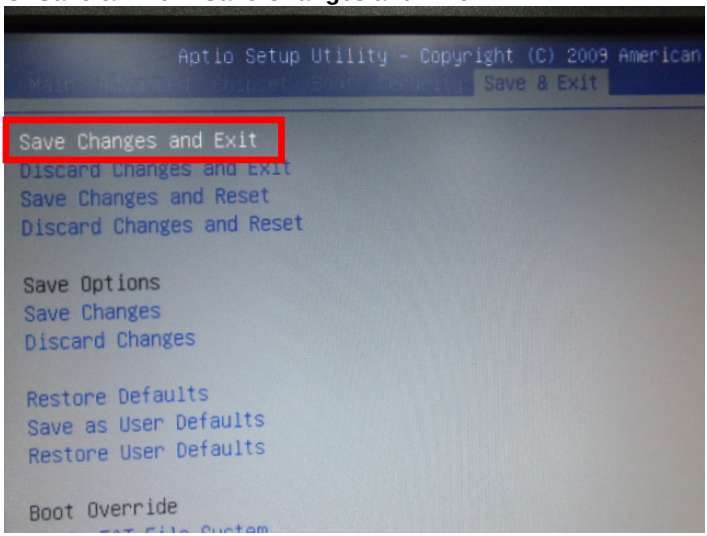
Step 3: The setting procedures " **In BIOS Setup Menu**"
A: Advanced -> SATA Configuration -> SATA Configuration -> SATA Mode -> AHCI Mode



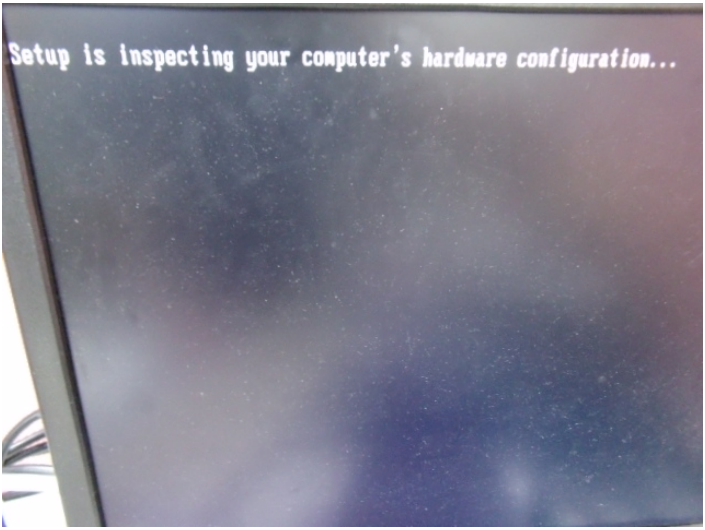
Step 4: The setting procedures "**In BIOS Setup Menu"**
B: Boot -> Boot Option #1 -> DVD-ROM Type



Step 5: The setting procedures "**In BIOS Setup Menu"**
C: Save & Exit -> Save Changes and Exit

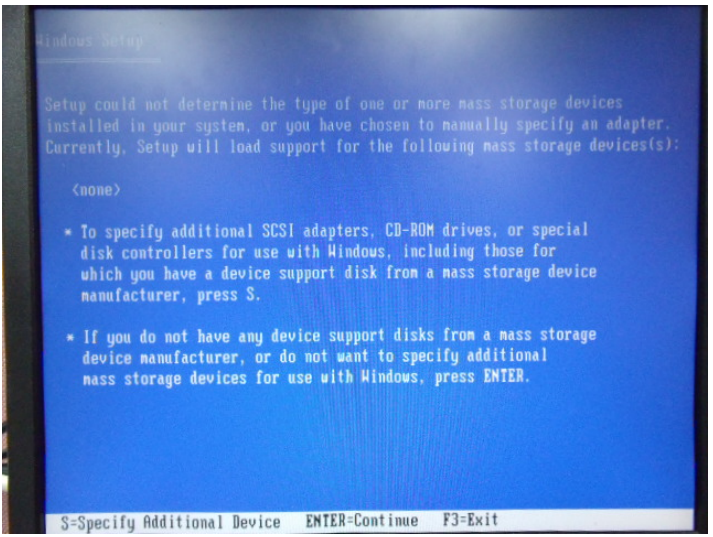


Step 6: Setup OS

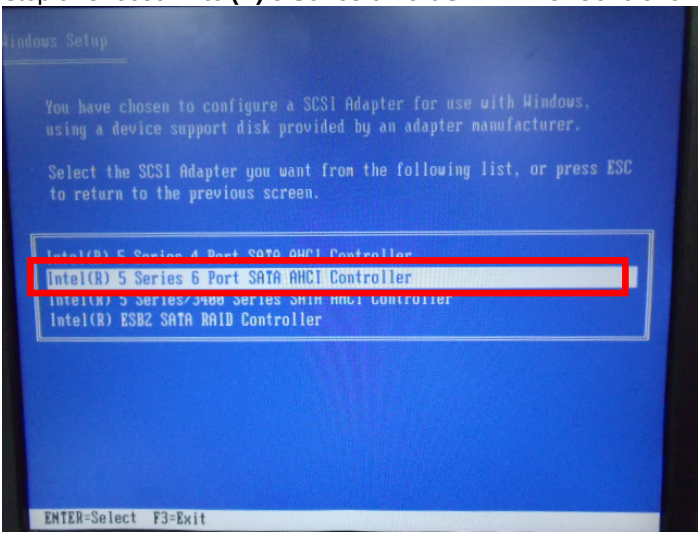


Step 7: Press "**F6**"

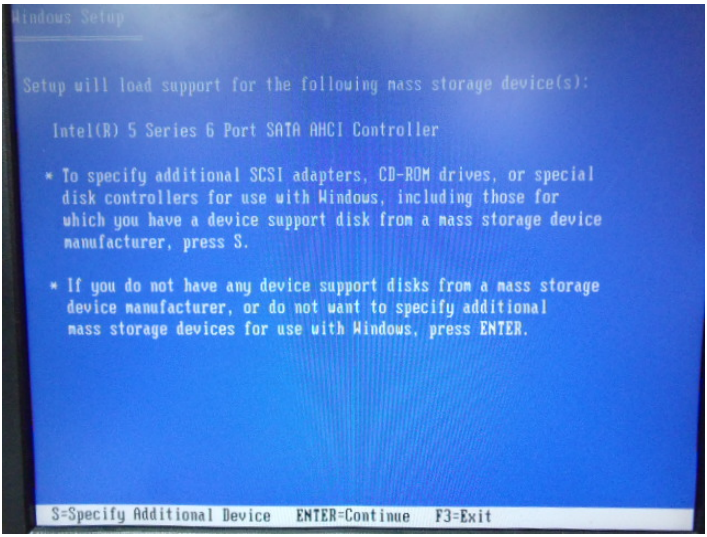
Step 8: Choose "**S**"



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