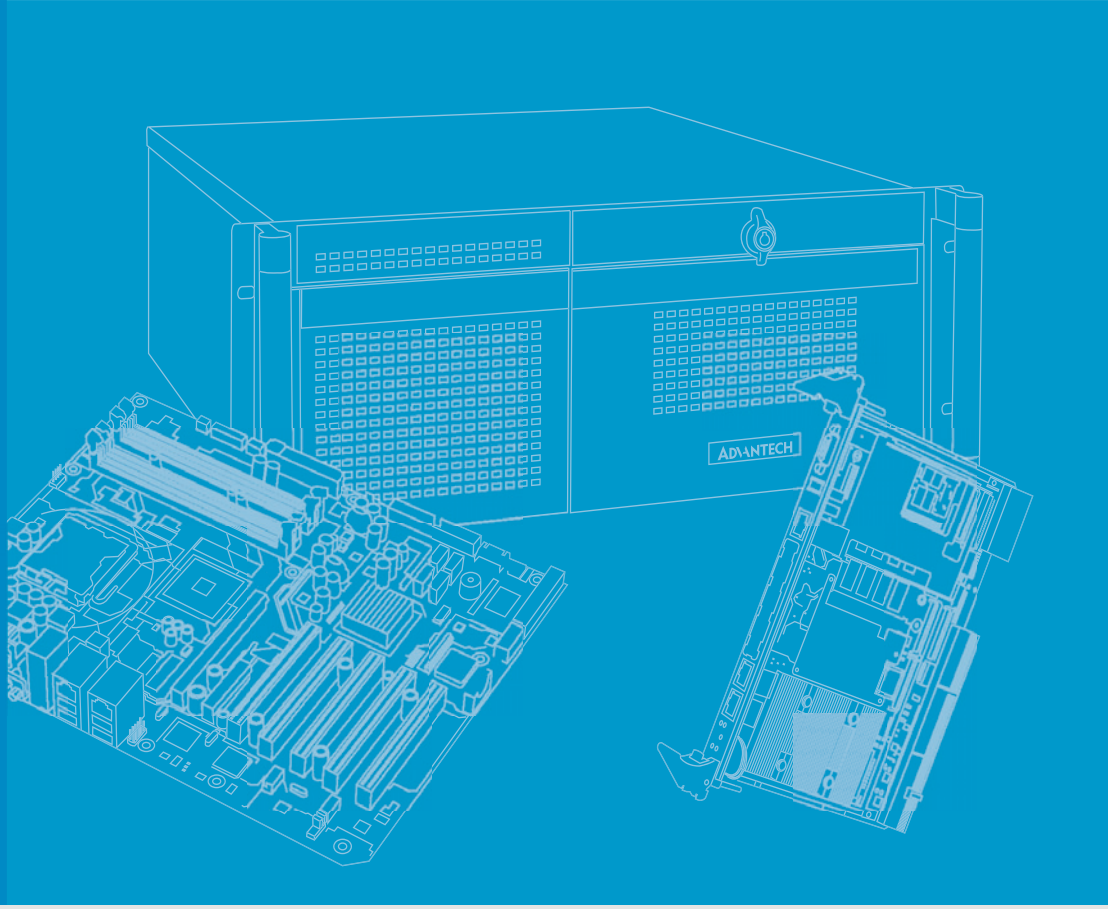

User Manual

AIMC-2100

Micro Computer, Intel® Core™ i7/i5/i3 CPU, 1 Expansion, 250W 80Plus PSU

ADVANTECH

Enabling an Intelligent Planet

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A Message to the Customer

Advantech Customer Services

Each and every Advantech product is built to the most exacting specifications to ensure reliable performance in the harsh and demanding conditions typical of industrial environments. Whether your new Advantech equipment is destined for the laboratory or the factory floor, you can be assured that your product will provide the reliability and ease of operation for which the name Advantech has come to be known.

Your satisfaction is our primary concern. Here is a guide to Advantech's customer services. To ensure you get the full benefit of our services, please follow the instructions below carefully.

Technical Support

We want you to get the maximum performance from your products. So if you run into technical difficulties, we are here to help. For the most frequently asked questions, you can easily find answers in your product documentation. These answers are normally a lot more detailed than the ones we can give over the phone.

So please consult this manual first. If you still cannot find the answer, gather all the information or questions that apply to your problem, and with the product close at hand, call your dealer. Our dealers are well trained and ready to give you the support you need to get the most from your Advantech products. In fact, most problems reported are minor and are able to be easily solved over the phone.

In addition, free technical support is available from Advantech engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products.

Declaration of Conformity

FCC Class A

This device complies with the requirements in part 15 of the FCC rules:

Operation is subject to the following two conditions:

- This device may not cause harmful interference
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this device in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense. The user is advised that any equipment changes or modifications not expressly approved by the party responsible for compliance would void the compliance to FCC regulations and therefore, the user's authority to operate the equipment.

Caution! *There is a danger of a new battery exploding if it is incorrectly installed. Do not attempt to recharge, force open, or heat the battery. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.*

CPU Compatibility

CPU Family	Speed	Core Stepping	TDP	L3 cache
Intel i7-3610QE	2.3 GHz	D-4	45 W	6 MB
Intel i7-2710QE	2.1 GHz	D-4	45 W	6 MB
Intel i5-3610ME	2.7 GHz	D-2	35 W	3 MB
Intel i5-2510E	2.5 GHz	D-2	35 W	3 MB
Intel i3-3120ME	2.4 GHz	D-2	35 W	3 MB
Intel i3-2330	2.2 GHz	D-2	35 W	3 MB
Inel Celeron B810	1.6 GHz	D-2	35 W	2 MB

Memory Compatibility

Test Item	Description						Result	Remark
Brand	Size	Speed	Type	ECC	Vendor PN	Memory		
Transcend	1GB	DDR3 1066	SODIMM DDR3	N	TS128MS K64V1U	SEC K4B1G0846G-BCH9	PASS	
Transcend	2GB	DDR3 1066	SODIMM DDR3	N	TS128MS K64V1U	SEC HCH9 K4B1G0846D (128x8)	PASS	
Transcend	4GB	DDR3 1066	SODIMM DDR3	N	TS7KSN28 420-1Y	HYNIX H5TQ2G83BFR (256x8)	PASS	
Apacer	4GB	DDR3 1066	SODIMM DDR3	N	78.B2GC8. AF1	HYNIX H5TQ2G83BFR (256x8)	PASS	
Transcend	1GB	DDR3 1333	SODIMM DDR3	N	TS128MS K64V3U	ELPIDA J1108BFBG-DJ-F	PASS	
Transcend	2GB	DDR3 1333	SODIMM DDR3	N	TS256MS K64V3N	HYNIX H5TQ2G83CFR	PASS	
Transcend	4GB	DDR3 1333	SODIMM DDR3	N	TS512MS K64V3N	HYNIX H5TQ2G83BFR (256x8)	PASS	
Transcend	8GB	DDR3 1333	SODIMM DDR3	N	TS1GSK6 4V3H	MICRON IVD22 D9PBC	PASS	
Apacer	1GB	DDR3 1333	SODIMM DDR3	N	78.02GC6. AF0	HYNIX H5TQ1G83DFR-H9C	PASS	
	1GB	DDR3 1333	SODIMM DDR3	N		HYNIX H5TQ1G83TFR-H9C	PASS	
Apacer	2GB	DDR3 1333	SODIMM DDR3	N	78.A2GC9. 4200C	ELPIDA J2108BCSE-DJ-F	PASS	
Apacer	4GB	DDR3 1333	SODIMM DDR3	N	78.B2GC9. AF1	HYNIX H5TQ2G83BFR (256x8)	PASS	
Apacer	4GB	DDR3 1333	SODIMM DDR3	N	78.B2GC9. 4210C	ELPIDA J2108BCSE-DJ-F	PASS	
DSL	4GB	DDR3 1333	SODIMM DDR3	N	D3SH5608 2XH15AA	HYNIX H5TQ2G83BFR (256x8)	PASS	
DSL	2GB	DDR3 1600	SODIMM DDR3	N	D3SS5608 1XH12AA	SEC 113 HCK0 K4B2G0846C (256x8)	PASS	
DSL	4GB	DDR3 1600	SODIMM DDR3	N	D3SS5608 2XH12AA	SEC 113 HCK0 K4B2G0846C (256x8)	PASS	
Transcend	2GB	DDR3 1600	SODIMM DDR3	N	TS256MS K64V6N	MICRON IVM77 D9PFJ	PASS	
Transcend	4GB	DDR3 1600	SODIMM DDR3	N	TS512MS K64N6N	MICRON IRM72 D9PFJ	PASS	

Ordering Information

Part Number	Chipset
AIMC-2100-00A1E	Micro Computer, Intel® Core™ i7/i5/i3 CPU, 1 Expansion, 250W 80Plus PSU

Product Warranty (2 years)

Advantech warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for two years from the date of purchase.

This warranty does not apply to any products which have been repaired or altered by persons other than repair personnel authorized by Advantech, or which have been subject to misuse, abuse, accident or improper installation. Advantech assumes no liability under the terms of this warranty as a consequence of such events.

Because of Advantech's high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, you will be billed according to the cost of replacement materials, service time and freight. Please consult your dealer for more details.

If you think you have a defective product, follow these steps:

1. Collect all the information about the problem encountered. (For example, CPU speed, Advantech products used, other hardware and software used, etc.) Note anything abnormal and list any onscreen messages you get when the problem occurs.
2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.
3. If your product is diagnosed as defective, obtain an RMA (return merchandise authorization) number from your dealer. This allows us to process your return more quickly.
4. Carefully pack the defective product, a fully-completed Repair and Replacement Order Card and a photocopy proof of purchase date (such as your sales receipt) in a shippable container. A product returned without proof of the purchase date is not eligible for warranty service.
5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

Initial Inspection

Before you begin installing your motherboard, please make sure that the following materials have been shipped2 x SATA HDD cable

- AIMC-2100 Bare System PN: AIMC-2100-00A1E x 1
- CPU Cooler PN: 1960051292N001 x 1
- Driver CD for Mainboard PN: 2066027300 x 1
- SATA Power Cable PN: 1700003194 x 2
- SATA HDD Cable PN: 1703150102 x 2
- Mounting Brackets PN: 1960014487T00C x 2
- Rubber Foot PN: 1990005896S000 x 4

If any of these items are missing or damaged, contact your distributor or sales representative immediately. We have carefully inspected the AIMC-2100 mechanically and electrically before shipment. It should be free of marks and scratches and in perfect working order upon receipt. As you unpack the AIMC-2100, check it for signs of shipping damage. (For example, damaged box, scratches, dents, etc.) If it is damaged or it fails to meet the specifications, notify our service department or your local sales representative immediately. Also notify the carrier. Retain the shipping carton and packing material for inspection by the carrier. After inspection, we will make arrangements to repair or replace the unit.

Contents

Chapter 1

General Information

1.1 Introduction

AIMC-2100 is designed with the Intel® QM77 for industrial applications that require both performance computing and enhanced power management capabilities. The motherboard supports Intel mobile Core i7-3610QE 2.3GHz / Core i5-3610ME 2.7 GHz / Core i3-3120ME 2.4 GHz / Celeron B810 1.6 GHz processor up to 6 MB L3 cache and DDR3 SO-DIMM 1333/1600 up to 16GB. A rich I/O connectivity of 2 serial ports, 4 USB, dual GbE LAN and 2 SATA HDD Bays.

1.2 Features

- **Intel® QM77 Platform:**
  Intel® 3rd/2nd Core™ i7/i5/i3 mobile CPU (PGA)
  One PCIe x16 Expansion Slot
- **Compact & thoughtful design:**
  Two internal 2.5" SATA HDD bays with shock-resistant
  Front accessible I/O: VGA+HDMI+Display port, 2 GbE LAN, 4 USB3.0, 2 COM
  Ruggedized handle for easy maintenance
  Easy-to-maintain system fan and reusable filter
- **Energy Saving:** 250W 80Plus PSU

1.3 Specifications

1.3.1 System

- **CPU:** uFC-PGA988 Intel mobile Core i7-3610QE 2.3GHz / Core i5-3610ME 2.7 GHz / Core i3-3120ME 2.4 GHz / Celeron B810 1.6 GHz processor
- **BIOS:** AMI EFI 64 Mbit SPI BIOS
- **System chipset:** Intel® QM77
- **SATA hard disk drive interface:**
  - Max Data Transfer Rate: 600 MB/s (SATA3.0) / 300MB/s (SATA2.0)
  - HDD Bay: 2 internal 2.5"
- **CFast Interface:** Supports CFast socket

1.3.2 Memory

- **RAM:** Up to 16 GB in 2 slots 204-pin SODIMM sockets. Supports dual channel DDR3 1333/1600 MHz SDRAM

1.3.3 Input/Output Interface

- **Display:** 1 VGA + 1 HDMI + 2 Display Port (Max triple display, except i7-2710QE, i5-2510E, i3-2330E & B810 CPU)
- **USB:** 4 USB3.0
- **Serial:** 2 (RS-232, COM2 with 5 V/12 V)
- **Mini PCI-E:** 1 internal
- **Audio:** 3 (Mic-in, Line-out, Line-in)
- **PS/2:** 2 (1 x keyboard and 1 x mouse)

1.3.4 Graphics

- **Controller:** Intel® Gfx Gen 7, HD graphics
- **Display memory:** 1 GB maximum shared memory with 2GB and above system memory installed
- **VGA:** Supports VGA up to resolution 2048 x 1536 @ 75Hz refresh rate
- **LVDS:** Supports LVDS up to resolution 1920 x 1200
- **HDMI:** Supports HDMI up to resolution 1920 x 1080 (1080P)
- **Display port:** Supports Display port up to resolution 2560x1600

:

Note! *Triple independent display need to use DP+LVDS+HDMI, DP+DP+HDMI, DP+DP+LVDS, DP+CRT+HDMI.*

Note! *Celeron B810 can't support triple display.*

1.3.5 Ethernet LAN

- Supports dual 10/100/1000 Mbps Ethernet port (s) via PCI Express x1 bus which provides 500 MB/s data transmission rate
- **Controller:** LAN1: Intel 82579LM; LAN2: Intel 82583V

1.3.6 Industrial features

- **Watchdog timer:** Can generate a system reset. The watchdog timer is programmable, with each unit equal to one second or one minute (255 levels)

1.3.7 Mechanical and environmental specifications

- **Operating temperature:** 0 ~ 40° C (32 ~ 104° F)
- **Storage temperature:** -20 ~ 60° C (-4 ~ 140° F)
- **Humidity:** 10 ~ 85% @40° non-condensing
- **Vibration:** 1Grms, random, 5~500Hz, 3 axes, 1hr/axis (operation)
- **Shock:** 10G, half sine wave, 11ms duration

1.3.8 Power Supply

- Output Rating: AC 250W, ATX
- Input Voltage: 100 VAC~240 VAC

1.3.9 Cooling

- Chassis Fan: 2 (6cm / 27.7 CFM)
- Air Filter: Yes

1.3.10 Miscellaneous

- Overheating Protection: System shut-down when over-heated
- LED Indicators: Power, HDD, temperature
- Controller: Power on/off switch

1.3.11 Physical Characteristics

- 272 x 88 x 232 mm
- 3.5 kg

1.4 Jumpers and Connectors

Connectors on the AIMC-2100 motherboard link it to devices such as hard disk drives and a keyboard. In addition, the board has a number of jumpers used to configure your system for your application.

The tables below list the function of each of the board jumpers and connectors. Later sections in this chapter give instructions on setting jumpers. Chapter 2 gives instructions for connecting external devices to your motherboard.

Table 1.1: Jumpers

Label	Function
JFP1	Power switch/HDD LED/SMBus/Speaker
JFP2	Power LED and Keyboard lock
CMOS1	CMOS clear (Default 1-2)
PSON1	AT(1-2) / ATX(2-3) (Default 2-3)
JWDT1+JOBS1	Watchdog Reset and OBS Alarm
JLVDS1	Voltage 3.3V/5V/12V selector for LVDS1 connector (Default 4-6, 3.3V)
JLVDS_CLT1	Brightness control selector for Analog or Digital (Default 1-2, Linear)
JCOM1	COM1 5V/12V selector (Default 1-2, RI)

Table 1.2: Connectors

Label	Function
LVDS1	LVDS1 connector
INV1	LVDS1 inverter connector
USB56	USB port 5, 6 (on board)
USB78	USB port 7, 8 (on board)
VGA1	VGA connector
COM12	Serial port connector (RS232)
KBMS1	PS/2 Keyboard and Mouse connector
CPUFAN1	CPU FAN connector (3-pin)
SYSFAN1	System FAN1 connector (3-pin)
SYSFAN2	System FAN2 connector (3-pin)
LAN1_USB12	LAN1 / USB port 1, 2
LAN2_USB34	LAN2 / USB port 3, 4
AUDIO1	Audio connector
SPDIF_OUT1	SPDIF Audio out pin header
FPAUD1	HD Audio Front Panel Pin Header
PCIEX16_1	PCIe x16 Slot
SATA1	Serial ATA data connector 1
SATA2	Serial ATA data connector 2
SATA3	Serial ATA data connector 3

Table 1.2: Connectors	
SATA4	Serial ATA data connector 4
DIMMA1	Memory connector channel
DIMMB1	Memory connector channel
SPI_CN1	SPI flash update connector.
GPIO1	GPIO header
ATX12V_1	ATX 12V Auxiliary power connector (for CPU)
ATXPWR1	ATX 20 Pin Main power connector (for System)
CF1	CFast connector
DP+HDMI1	Display port AND HDMI connector
JHDMI1	Display Port to HDMI Convertor F/W Programming Port
MINIPCIE1	Mini PCI Express x1 slot

1.5 Board layout: Jumper and Connector Locations

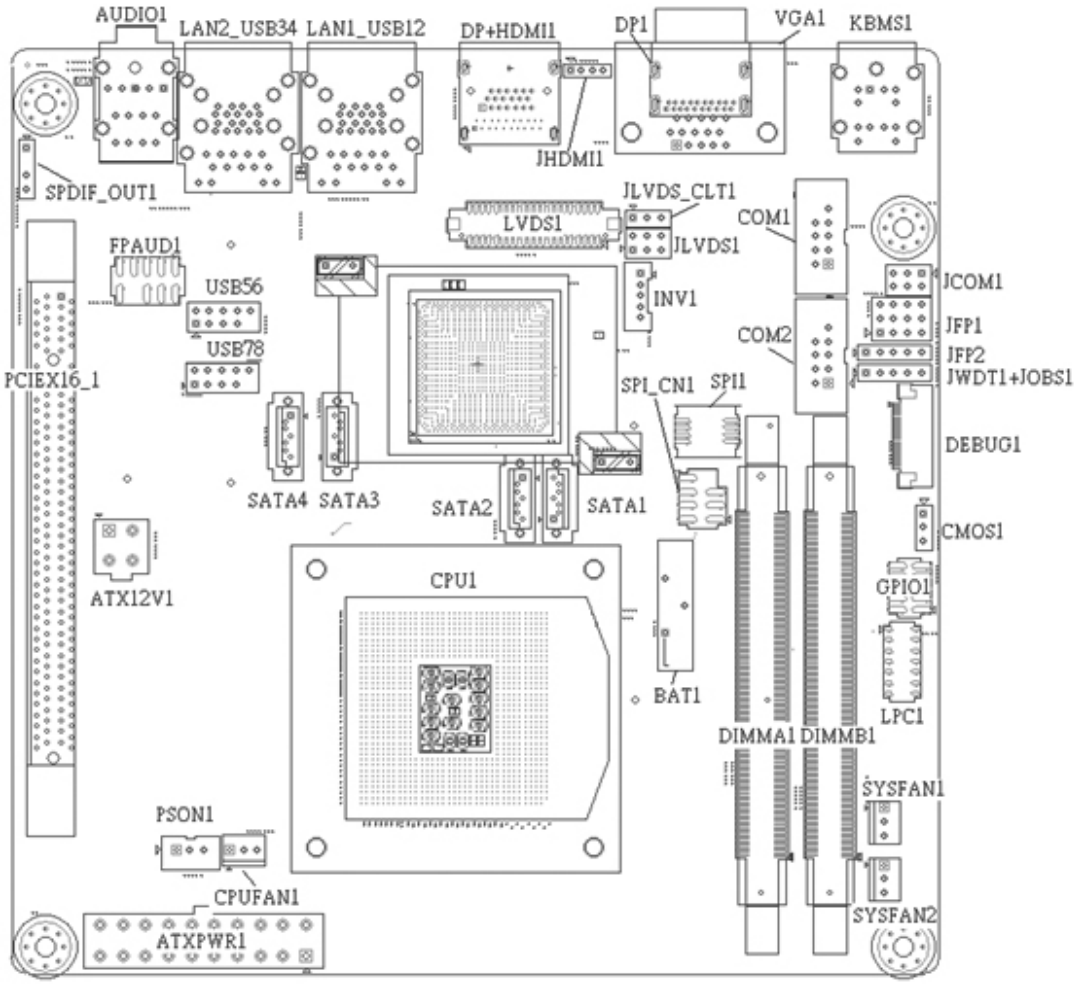


Figure 1.1 Jumper and Connector Location

1.6 Safety Precautions

Warning! *Always completely disconnect the power cord from chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.*

Caution! *Always ground yourself to remove any static charge before touching the motherboard. Modern electronic devices are very sensitive to electrostatic discharges. As a safety precaution, 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.*

Caution! *The computer is provided with a battery-powered real-time clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to manufacturer's instructions.*

Caution! *There is a danger of a new battery exploding if it is incorrectly installed. Do not attempt to recharge, force open, or heat the battery. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.*

1.7 Jumper Settings

This section provides instructions on how to configure your motherboard by setting the jumpers. It also includes the motherboards's default settings and your options for each jumper.

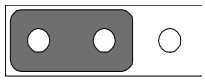
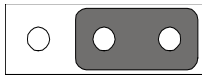
1.7.1 How to Set Jumpers

You can configure your motherboard to match the needs of your application by setting the jumpers. A jumper is a metal bridge that closes an electrical circuit. 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” (or turn ON) a jumper, you connect the pins with the clip. To “open” (or turn OFF) a jumper, you remove the clip. Sometimes a jumper consists of a set of three pins, labeled 1, 2, and 3. In this case you connect either pins 1 and 2, or 2 and 3. A pair of needle-nose pliers may be useful when setting jumpers.

1.7.2 CMOS Clear (CMOS1)

The AIMC-2100 motherboard contains a jumper that can erase CMOS data and reset the system BIOS information. Normally this jumper should be set with pins 1-2 closed. If you want to reset the CMOS data, set CMOS1 to 2-3 closed for just a few seconds, and then move the jumper back to 1-2 closed. This procedure will reset the CMOS to its default setting.

Table 1.3: CMOS1

Function	Jumper Setting	
*Keep CMOS data		1-2 closed
Clear CMOS data		2-3 closed

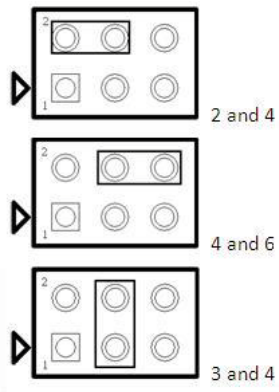
* Default

1.7.3 JLVDS1: LCD Power 3.3 V/5 V/ 12 V Selector

Table 1.4: JLVDS1: LCD Power 3.3 V/5 V/ 12 V Selector

Closed Pins	Result
JLVDS1	
2-4	Jumper for 5V LVDS panel
4-6	Jumper for 3.3V LVDS panel*
3-4	Jumper for 12V LVDS panel

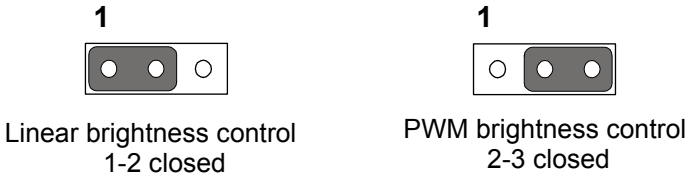
*Default



1.7.4 JLVDS_CLT1: Backlight control selector for LVDS1

Table 1.5: JLVDS_CLT1: Backlight control selector for LVDS1	
Closed Pins	Result
1-2*	Linear brightness control
2-3	PWM brightness control

*Default



Linear brightness control
1-2 closed

PWM brightness control
2-3 closed

1.7.5 PSON1: ATX, AT Mode Selector

Table 1.6: PSON1: ATX, AT Mode Selector	
Closed Pins	**Result**
1-2	AT Mode
2-3*	ATX Mode

*Default

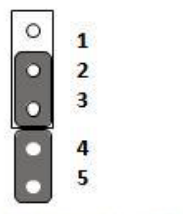
AT Mode
1-2 closed

ATX Mode
2-3 closed

1.7.6 JWDT1+JOBS1: Watchdog Timer Output and OBS Alarm Option

Table 1.7: JWDT1+JOBS1: Watchdog Timer Output and OBS Alarm Option	
Closed Pins	**Result**
1-2	NC
2-3*	Watchdog Timer Output OBS_Beep
4-5*	Error Beep*

*Default



(2 and 3)+(4 and 5)

1.8 Memory Installation Procedures

To install SODIMMs, first make sure the two handles of the SODIMM socket are in the “open” position, i.e., the handles lean outward. Slowly slide the SODIMM module along the plastic guides on both ends of the socket. Then firmly but gently (avoid pushing down too hard) press the SODIMM module well down into the socket, until you hear a click when the two handles have automatically locked the memory module into the correct position of the SODIMM socket. To remove the memory module, just push both handles outward, and the memory module will be ejected by the mechanism.

1.9 Processor Installation

The AIMC-2100 is designed for µFC-PGA988, Intel mobile Core i7/Core i5/Core i3/ Celeron processor.

1.10 Chassis Dimensions

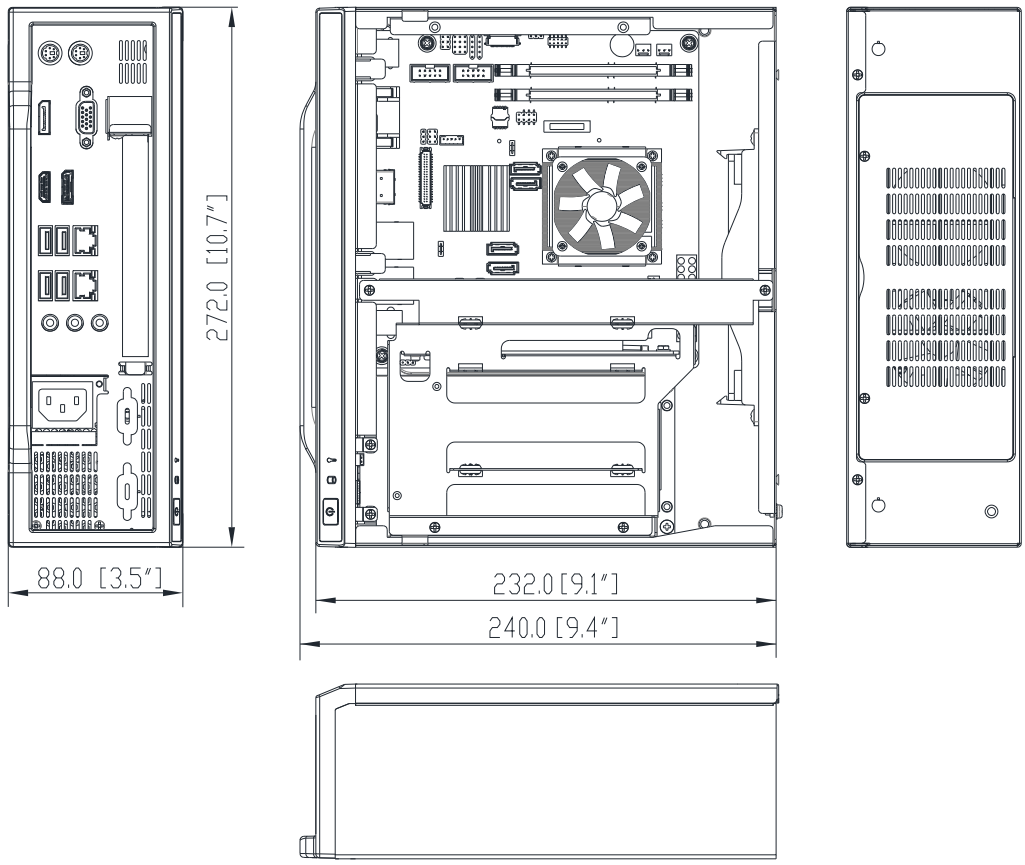


Figure 1.2 Chassis Dimensions

Chapter 2

System Setup and Maintenance

2.1 Removing the Chassis Cover

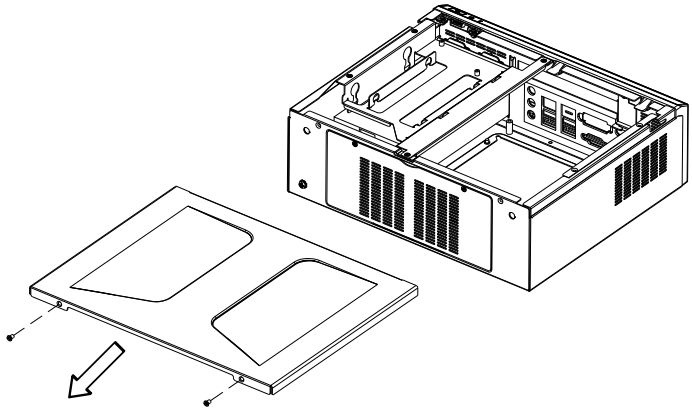


Figure 2.1 Removing the chassis cover

2.2 Installing & Changing the Motherboard

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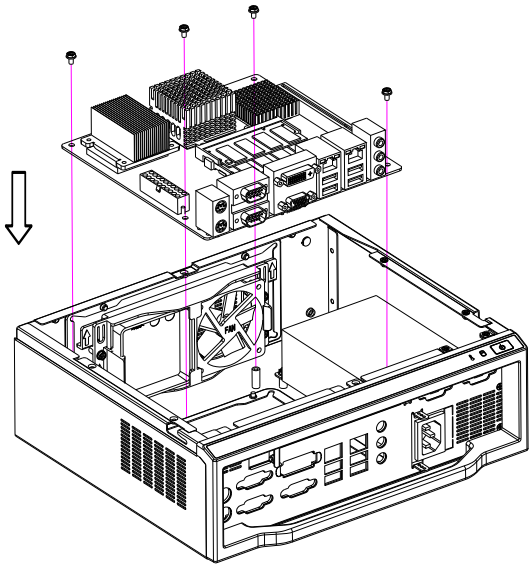

Figure 2.2 Installing the motherboard

2.3 Installing the Disk Drive Drive (s) and Riser Card

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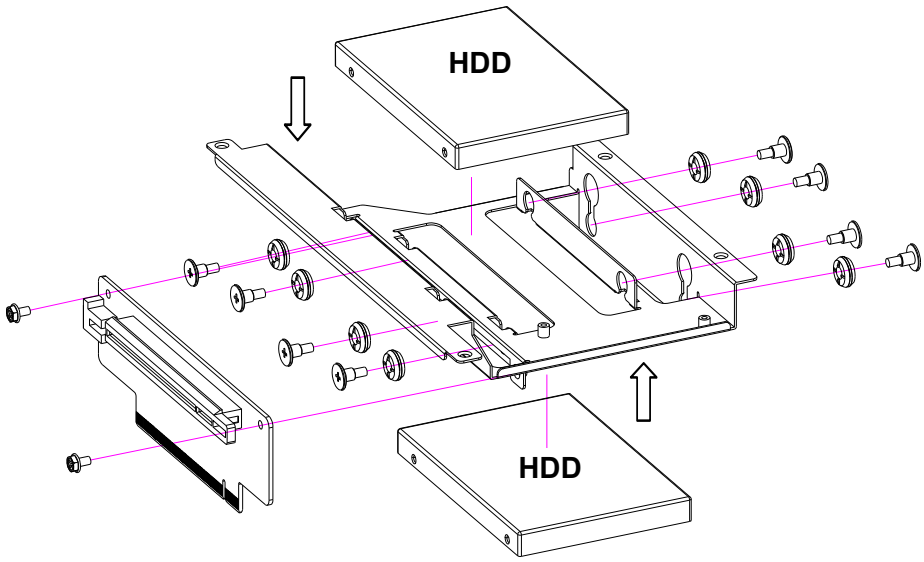


Figure 2.3 Installing the Disk Drive and Riser Card

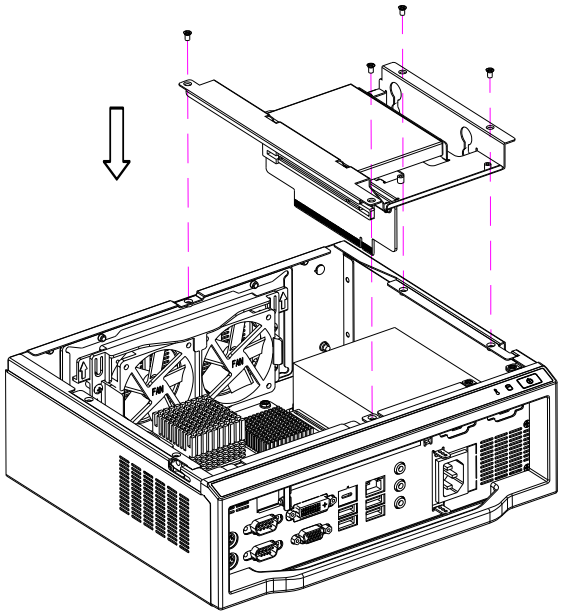


Figure 2.4 Installing the bracket

2.4 Installing Bottom Mounting Brackets

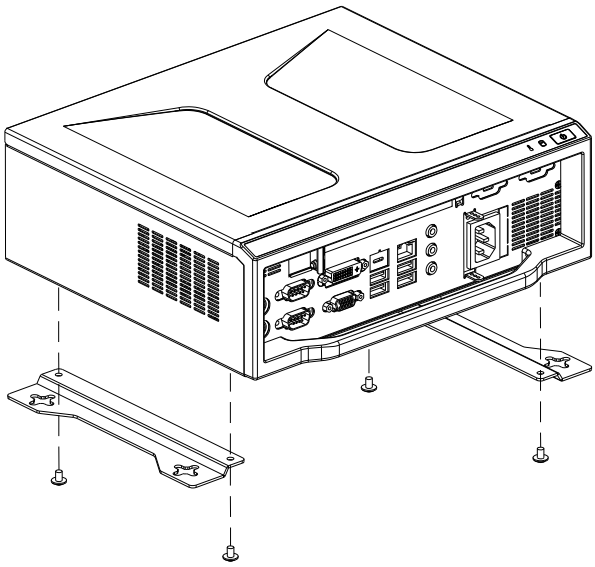


Figure 2.5 Installing Bottom Mounting Brackets

Note! **This pair of wallmount brackets is designed for the bottom side only. Reverse installation is not permitted.**

2.5 The Front Side

2.5.1 Power Button

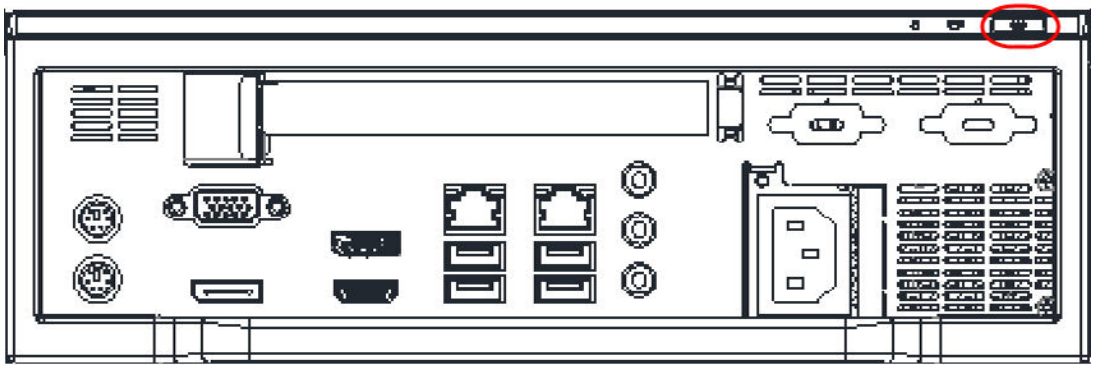


Figure 2.6 Power button location

2.5.2 Replacing the Front Bezel

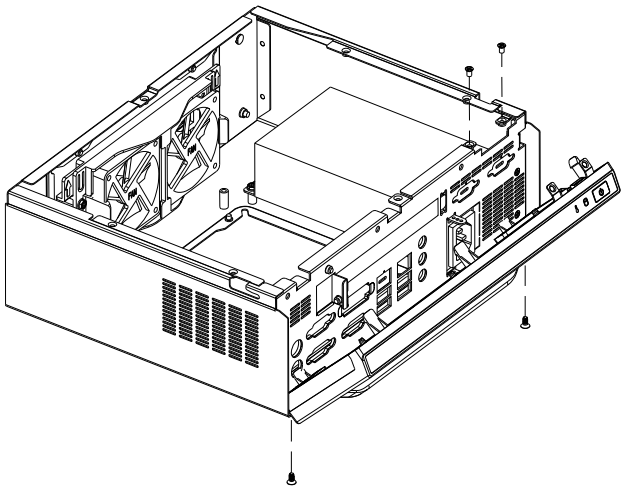


Figure 2.7 Replacing the front bezel

2.5.3 LED Indicators

Table 2.1: Definition of LED indicators

Icon	LED	Description	Blue	No light
	Power	Power	Normal	Off or failure
	HDD	HDD	Reading	NO reading
	Temp	Over-heating	Normal	Over (Red)

2.6 The Rear Side

2.6.1 Replacing the System Fans

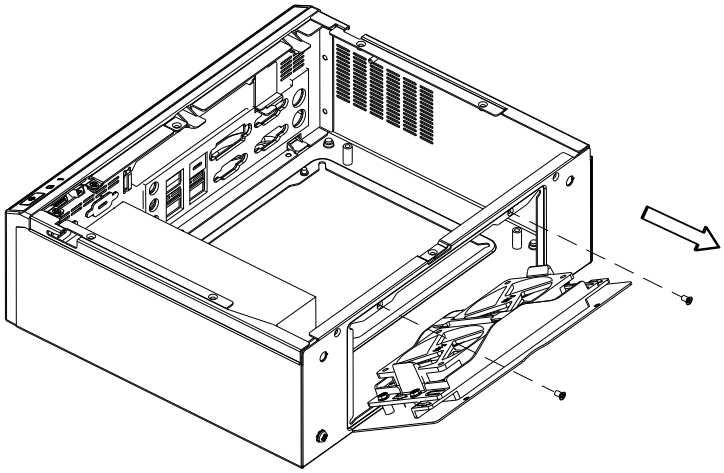


Figure 2.8 Loosen the rear cover screws

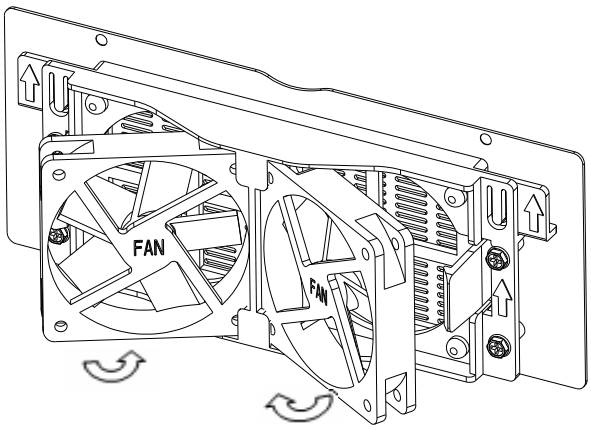


Figure 2.9 Replacing the system fans

2.6.2 Replacing the Filter

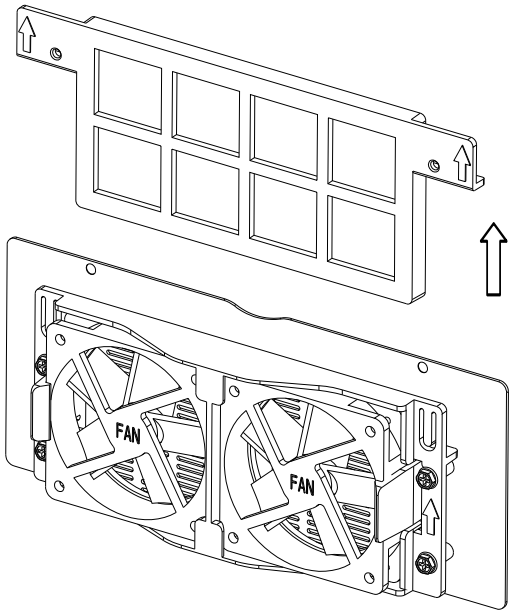


Figure 2.10 Replacing Filter

2.7 The Bottom Side

2.7.1 Removing the Bottom Cover

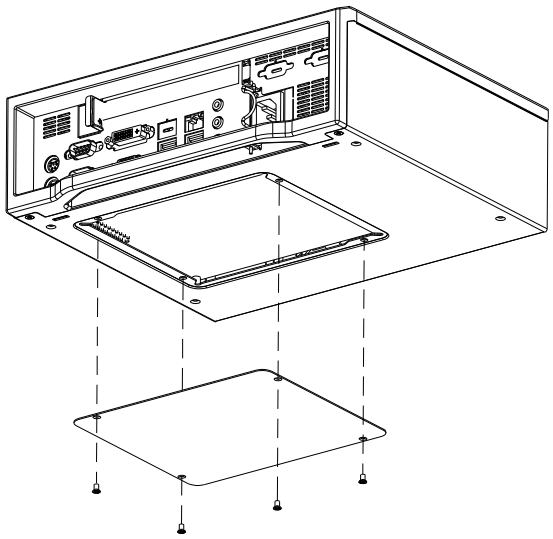


Figure 2.11 Removing the Bottom Cover

2.8 Changing/Replacing the Power Supply

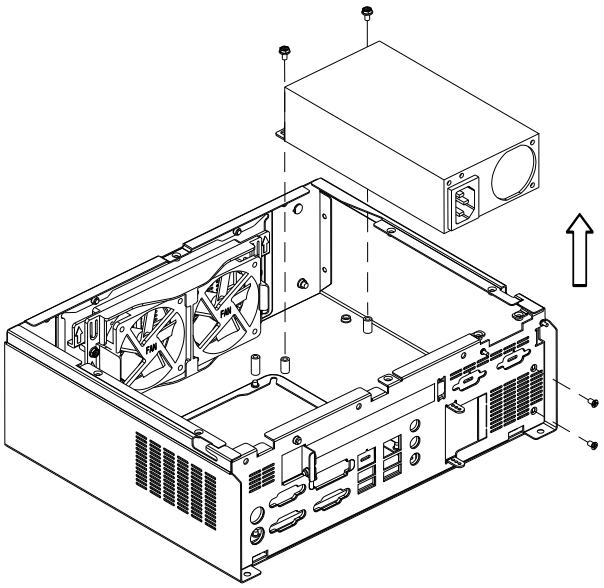


Figure 2.12 Replacing the power supply

Chapter 3

BIOS Operation

3.1 Introduction

AMI BIOS has been integrated into many motherboards, and has been very popular for over a decade. People sometimes refer to the AMI BIOS setup menu as BIOS, BIOS setup or CMOS setup.

With the AMI BIOS Setup program, you can modify BIOS settings and control the special features of your computer. The Setup program uses a number of menus for making changes and turning special features on or off. This chapter describes the basic navigation of the AIMC-2100 setup screens.

3.2 BIOS Setup

The AIMC-2100 Series system has AMI BIOS built in, with a CMOS SETUP utility that allows users to configure required settings or to activate certain system features.

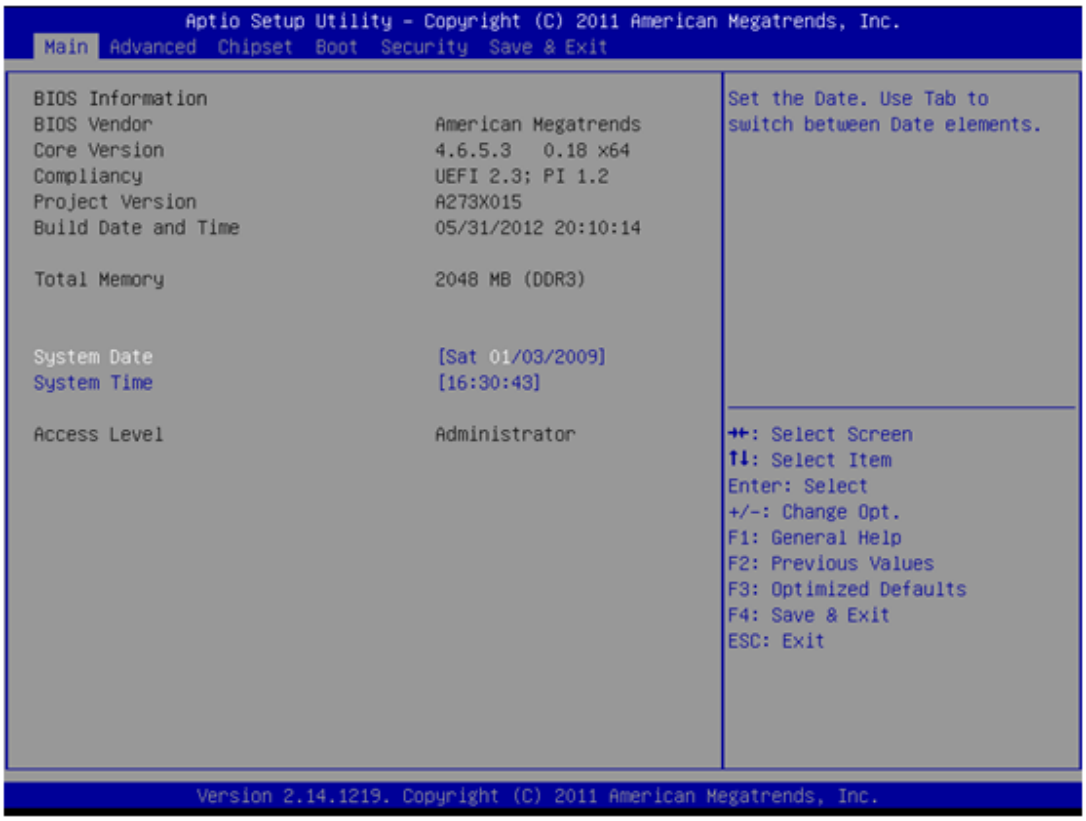
The CMOS SETUP saves the configuration in the CMOS RAM of the motherboard. When the power is turned off, the battery on the board supplies the necessary power to preserve the CMOS RAM.

When the power is turned on, press the <Del> button during the BIOS POST (Power-On Self Test) to access the CMOS SETUP screen.

Control Keys	
< ↑ >< ↓ >< ← >< → >	Move to select item
<Enter>	Select Item
<Esc>	Main Menu - Quit and not save changes into CMOS Sub Menu - Exit current page and return to Main Menu
<Page Up/+>	Increase the numeric value or make changes
<Page Down/->	Decrease the numeric value or make changes
<F1>	General help, for Setup Sub Menu
<F2>	Item Help
<F5>	Load Previous Values
<F7>	Load Setup Defaults
<F10>	Save all CMOS changes

3.2.1 Main Menu

Press <Del> to enter AMI BIOS CMOS Setup Utility, the Main Menu will appear on the screen. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.



The Main BIOS setup screen has two main frames. The left frame displays all the options that can be configured. Grayed-out options cannot be configured; options in blue can. The right frame displays the key legend.

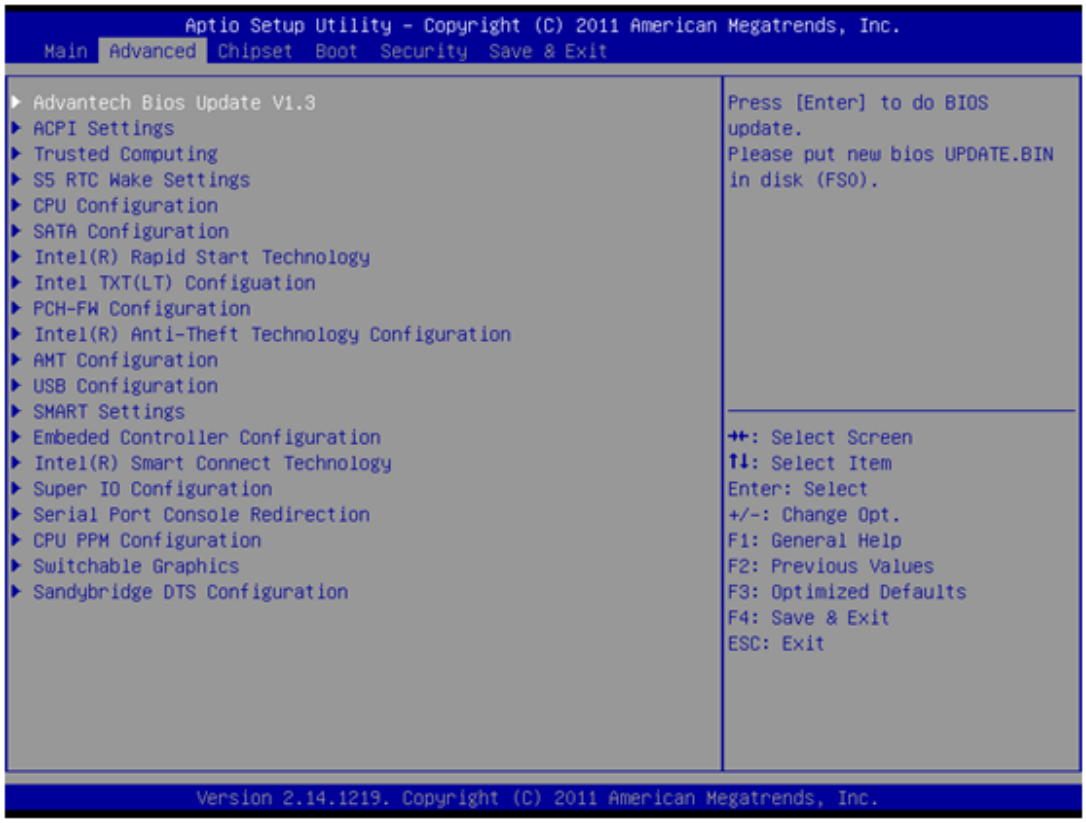
Above the key legend is an area reserved for a text message. When an option is selected in the left frame, it is highlighted in white. Often a text message will accompany it.

3.2.1.1 System time / System date

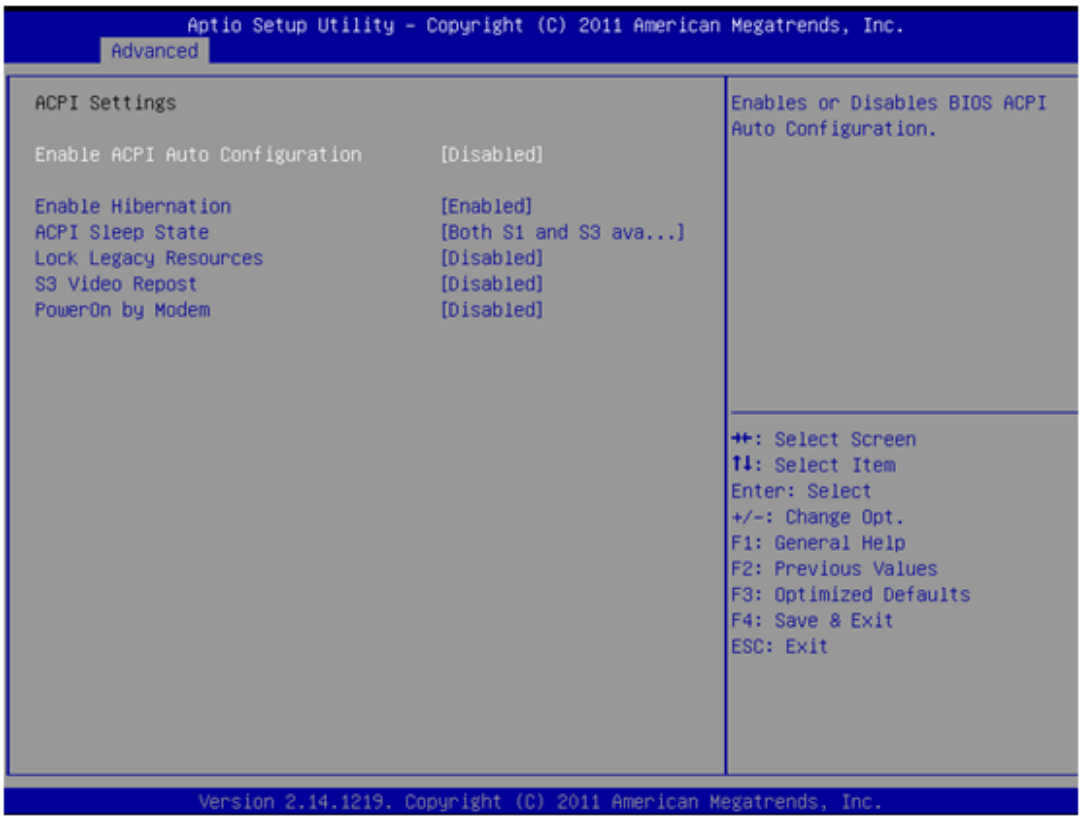
Use this option to change the system time and date. Highlight System Time or System Date using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time must be entered in HH:MM:SS format.

3.2.2 Advanced BIOS Features

Select the Advanced tab from the AIMC-2100 setup screen to enter the Advanced BIOS Setup screen. You can select any of the items in the left frame of the screen, such as CPU Configuration, to go to the sub menu for that item. You can display an Advanced BIOS Setup option by highlighting it using the <Arrow> keys. All Advanced BIOS Setup options are described in this section. The Advanced BIOS Setup screen is shown below. The sub menus are described on the following pages.

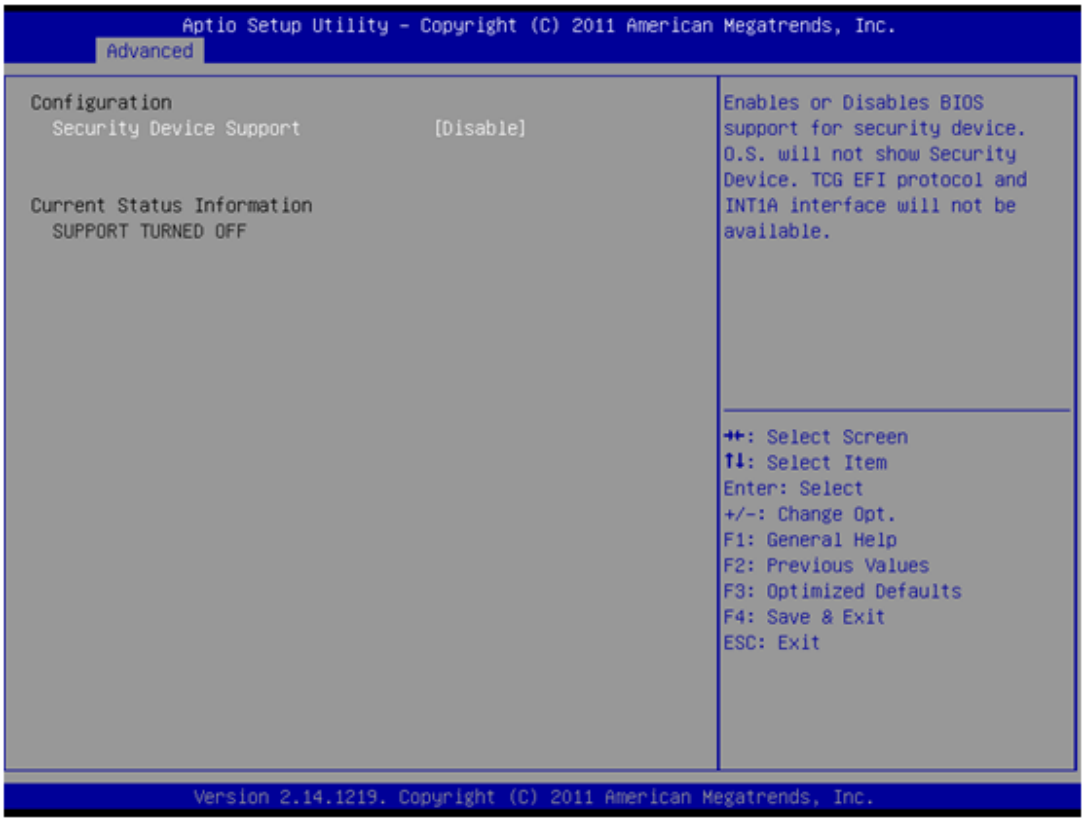


3.2.2.1 ACPI settings



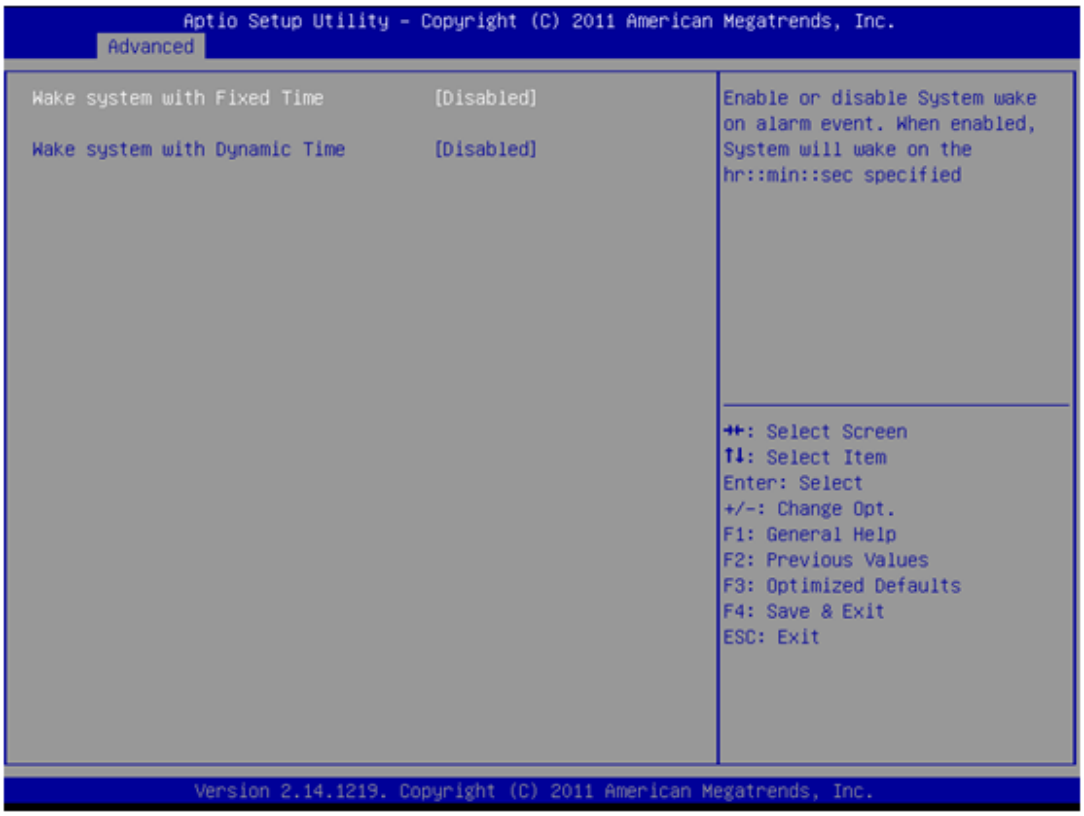
- Enable ACPI Auto Configuration
  Enable or disable BIOS ACPI Auto Configuration
- Enable Hibernation
  This item allows users to enable or disable hibernation
- ACPI Sleep state
  This item allows users to set the ACPI sleep state
- Lock Legacy Resources
  This item allows users to lock legacy devices' resources.
- S3 Video Repost
  Enable or disable video repost
- Power on by Modem
  Disable/Enable power on modem function

3.2.2.2 Trusted Computing



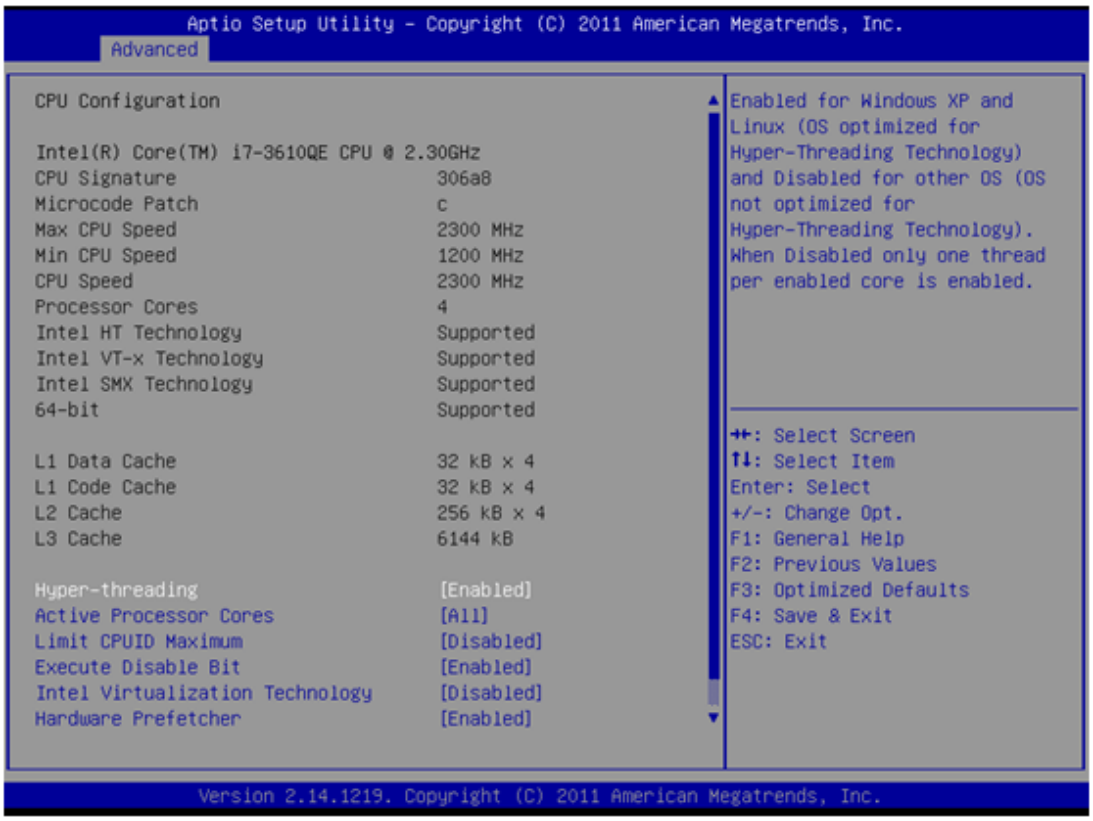
- Security Device Support
  Enable or disable BIOS support for security device.

3.2.2.3 S5 RTC wake Settings



- Wake system with fixed time
  Enable or disable system wake on alarm event
- Wake system with Dynamic Time
  This item allows you to enable or disable system wake on dynamic time

3.2.2.4 CPU Configuration

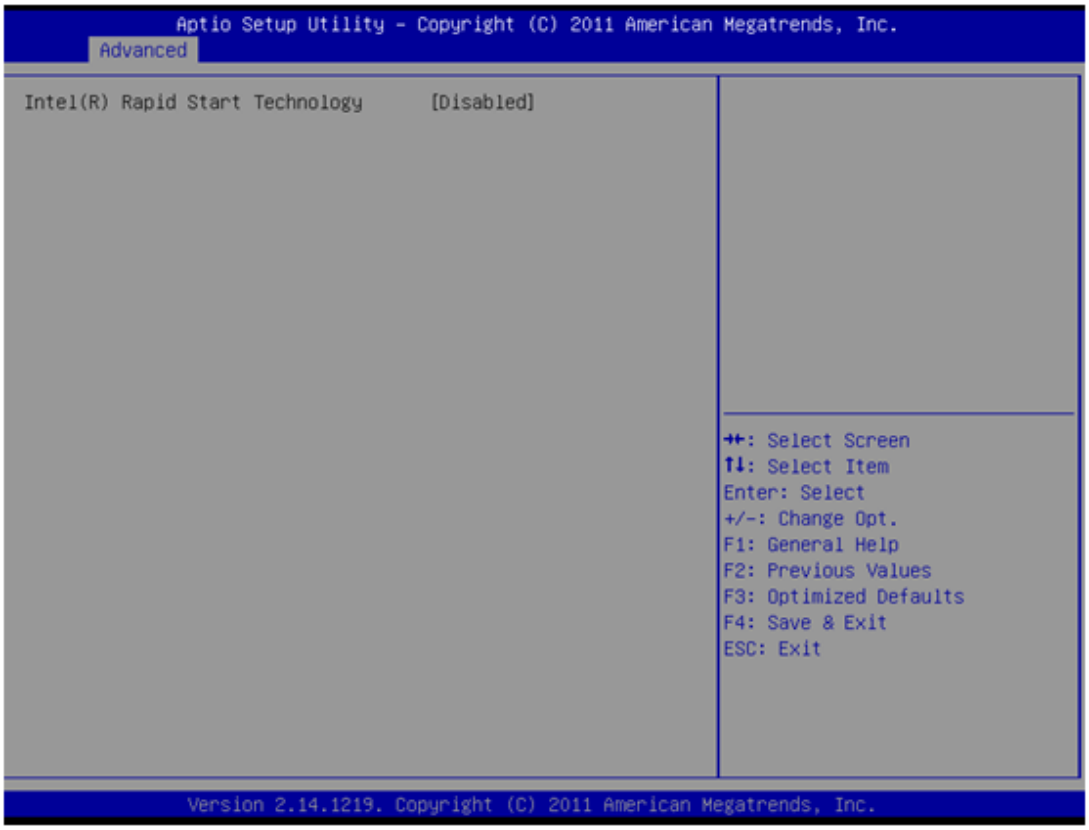


- Hyper Threading
  This item allows users to enable or disable Intel® Hyper Threading technology.
- Active Processor Cores
  This item allows users to set how many processor cores should be active.
- Limit CPUID Maximum
  This item allows users to limit the maximum value of CPUID.
- Execute Disable Bit
  This item allows users to enable or disable the No-Execution page protection technology.
- Intel Virtualization Technology
  This item allows users to enable or disable the Intel virtualization technology
- Hardware Prefetcher
  This item allows users to enable or disable the hardware prefetcher feature.

3.2.2.5 SATA configuration

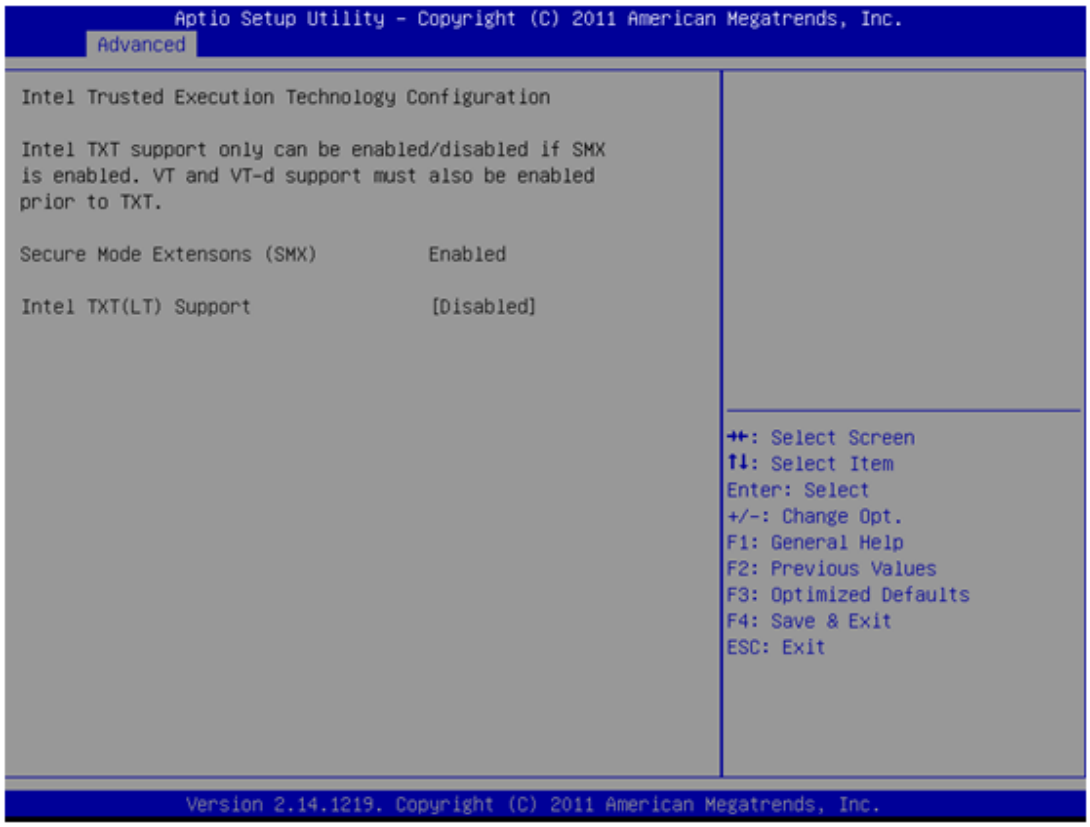
- SATA Controller(s)
  This item allows users to enable or disable the SATA controller(s).
- SATA Mode Selection
  This item allows users to select mode of SATA controller(s).

3.2.2.6 INTEL Rapid Star Technology



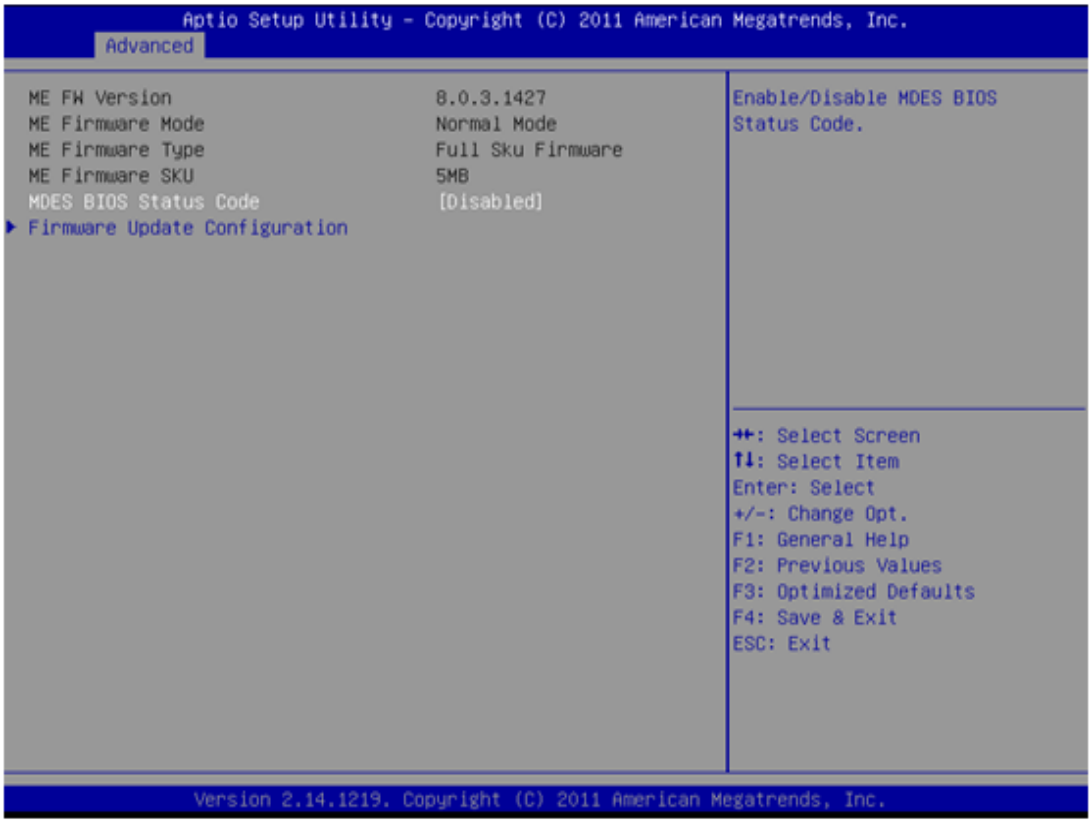
- Intel® Rapid start technology
  This item allows users to enable or disable Intel rapid start technology.

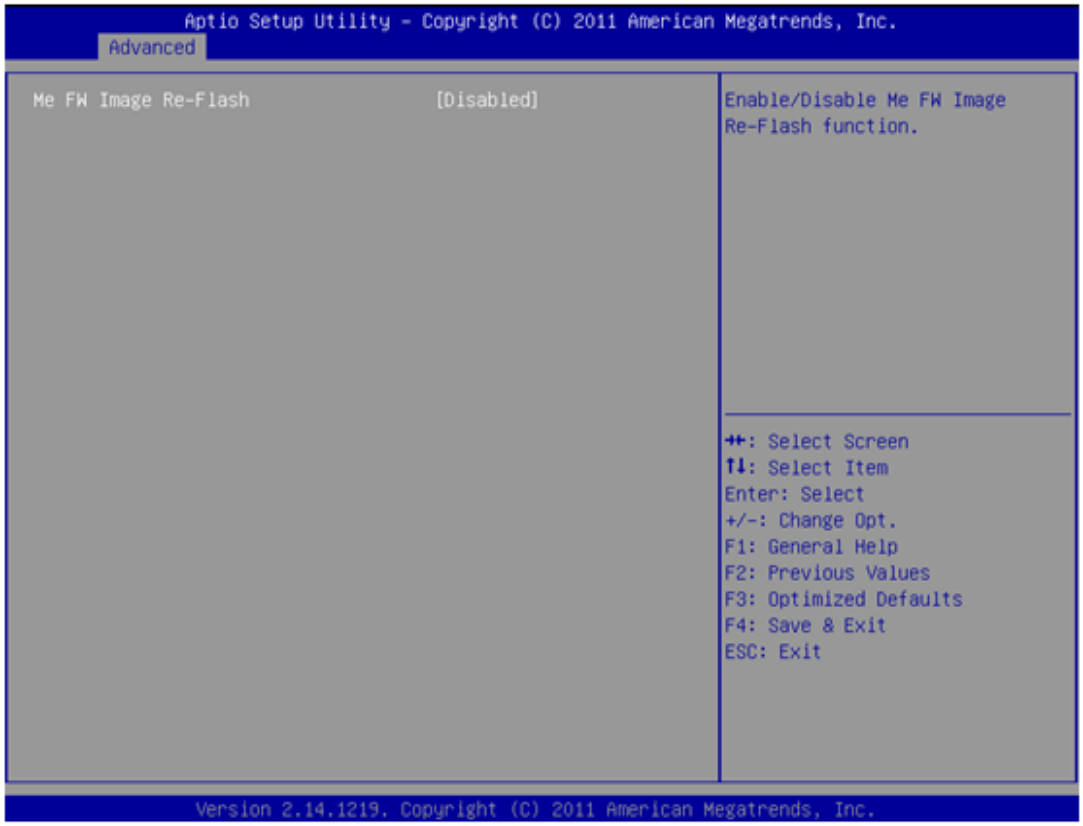
3.2.2.7 INTEL TXT(LT) Configuration



- Secure Mode Extensions (SMX)
  This item allows users to enable or disable SMX.
- Intel TXT(LT) Support
  This item allows users to enable or disable Intel TXT.

3.2.2.8 PCH(FW) Configuration



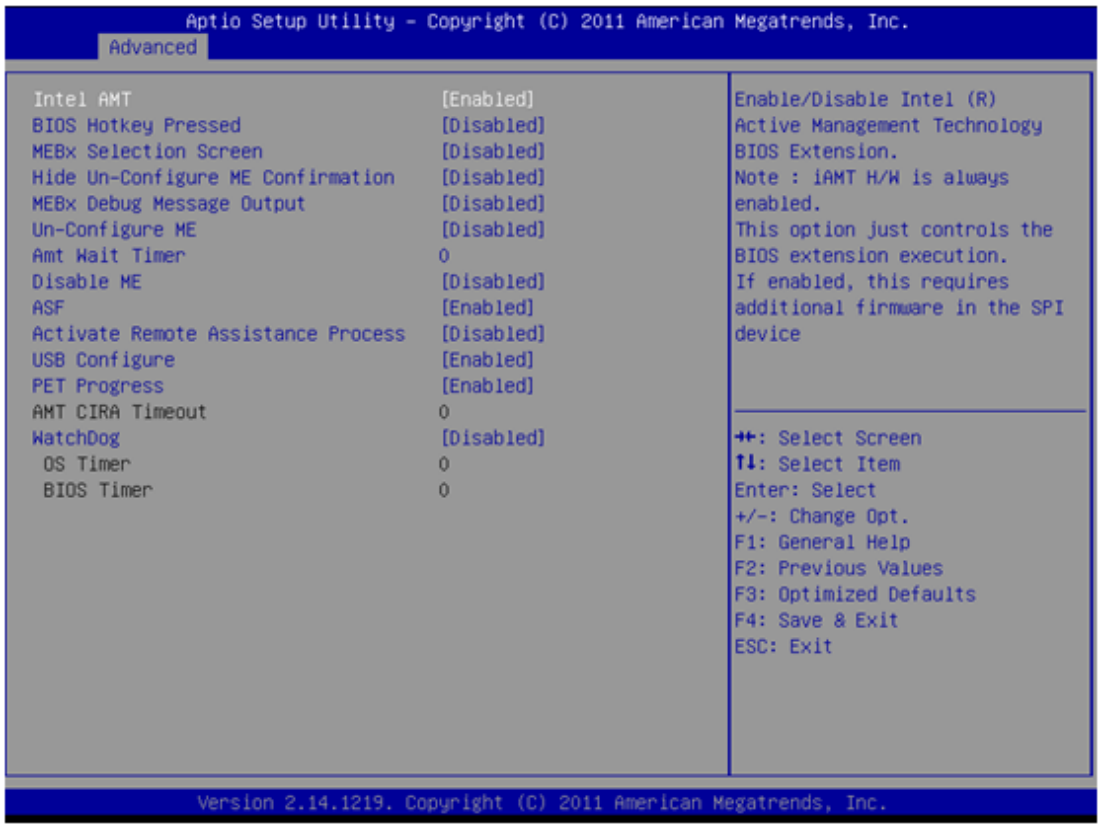


- Me FW Image Re-Flash
  This item allows users to enable or disable Me FW image re-flash function.

3.2.2.9 Intel® Anti-Theft Technology Configuration

- Intel® Anti-theft Technology
  This item allows users to enable or disable Intel AT in BIOS for testing only.
- Enter Intel® AT Suspend Mode
  This item allows users to enable or disable enter Intel AT suspend mode function.

3.2.2.10 Intel AMT Configuration



- Intel AMT
  This item allows users to enable or disable Intel AMT BIOS extension.
- BIOS Hotkey Pressed
  This item allows users to enable or disable BIOS hotkey press.
- MEBx Selection Screen
  This item allows users to enable or disable MEBx selection screen.
- Hide Un-Configuration ME Confirmation
  This item allows users to hide un-configure ME without password confirmation prompt.
- MEBx Debug Message Output
  This item allows users to enable or disable MEBx debug message.
- Un-Configure ME
  This item allows users to un-configure ME without password.
- Amt Wait Timer
  Set timer to wait before sending ASF_GET_BOOT_OPTIONS.
- Disable ME
  This item allows users to enable or disable ME function.
- ASF
  This item allows users to enable or disable Alert Specification Format.
- Activate Remote Assistance Process
  This item allows users to enable or disable trigger CIRA boot.
- USB Configure
  This item allows users to enable or disable USB configure function.

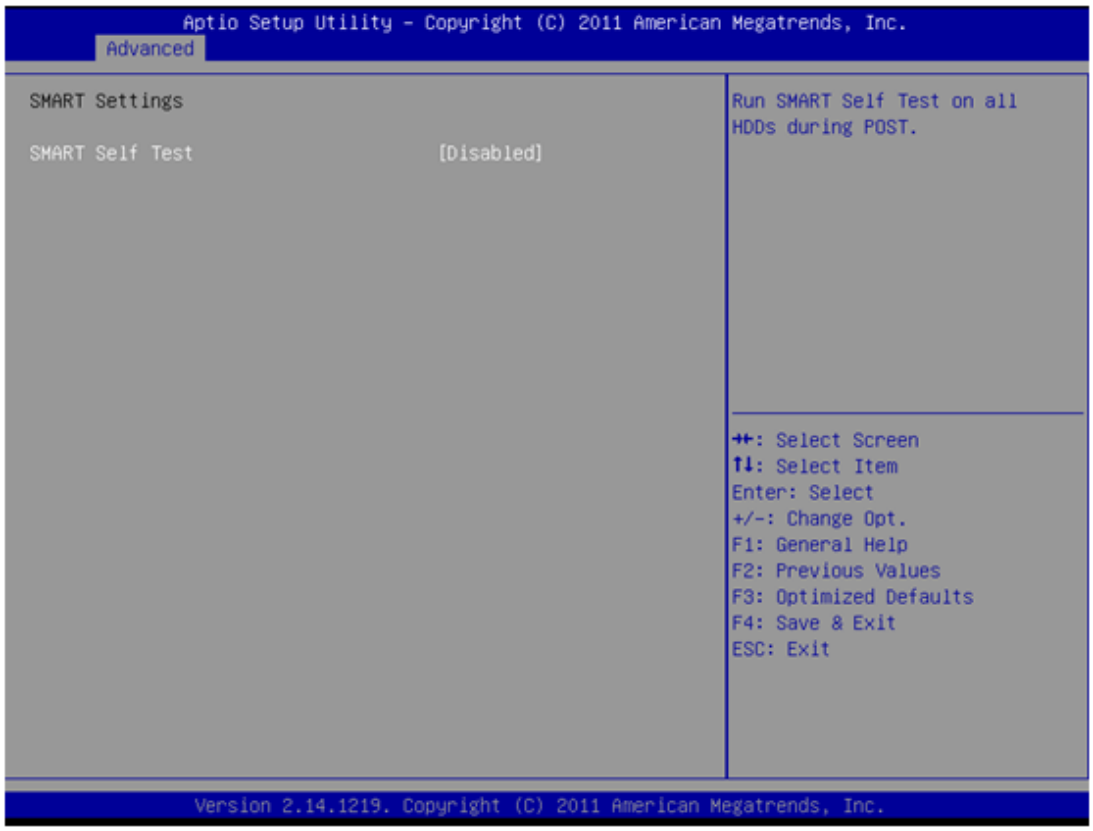
- PET Progress
  This item allows users to enable or disable PET events progress to receive PET events or not.
- AMT CIRA Timeout
  OEM defined timeout for MPS connection to be established.
- WatchDog
  This item allows users to enable or disable WatchDog Timer.
- OS Timer
  Sets OS watchdog timer.
- BIOS Timer
  Sets BIOS watchdog timer.

3.2.2.11 USB configuration

- Legacy USB support
  Enables support for legacy USB. Auto option disables legacy support if no USB devices are connected.
- USB3.0 support
  This item allows users to enable or disable USB3.0 function.
- XHCI Hand-off
  This is a workaround for OS without XHCI hand-off support. The XHCI ownership change should claim by XHCI driver.
- EHCI Hand-off
  This is a workaround for OS without EHCI hand-off support. The EHCI ownership change should claim by EHCI driver.
- USB transfer time-out
  Time-out value for control, bulk, and interrupt transfers.

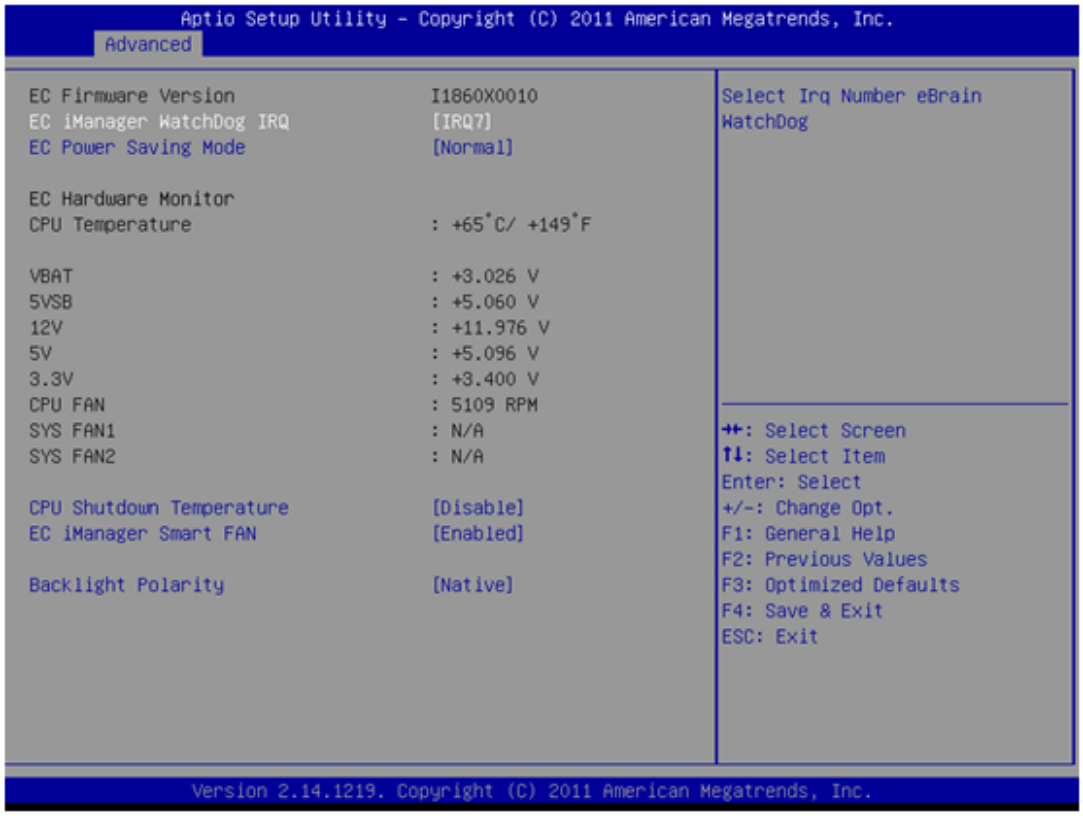
- Device reset time-out
  USB mass storage device starts unit command time-out.
- Device power-up delay
  Maximum time the device will take before it properly report itself to the host controller.

3.2.2.12 Smart Settings



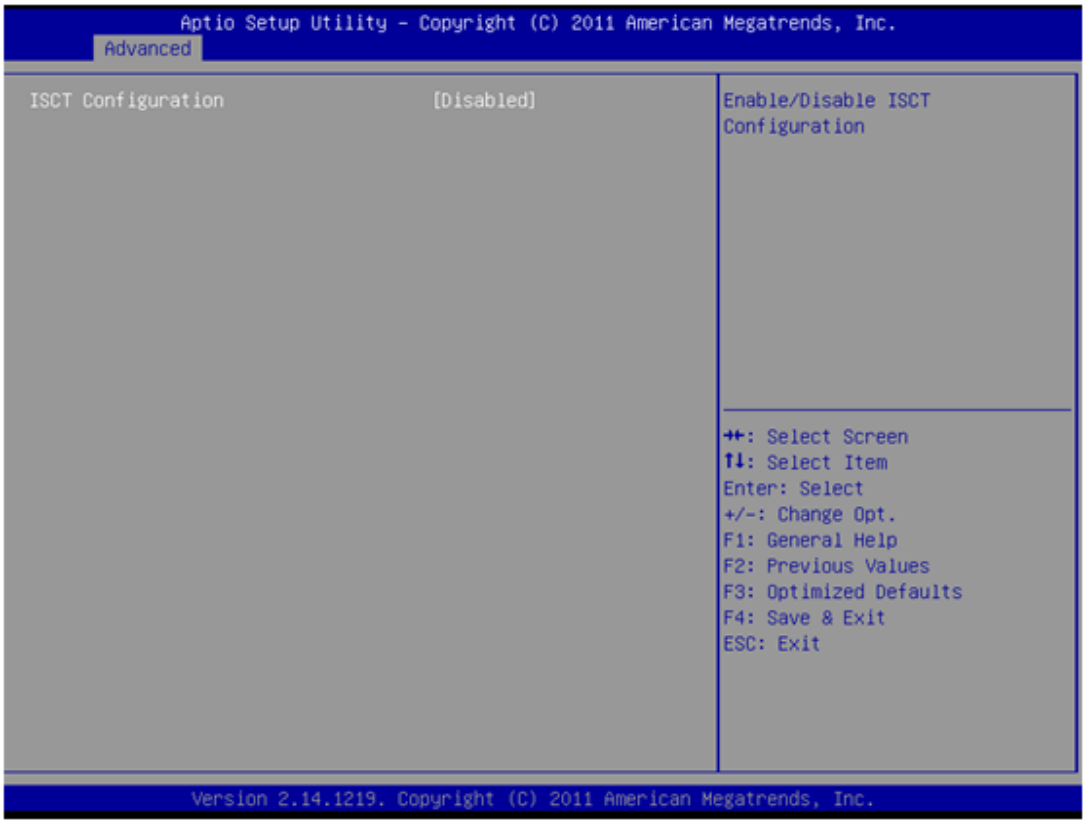
- Smart Self Test
  Enable or disable Run SMART Self test on all HDDs during Post.

3.2.2.13 Embedded Controller configuration



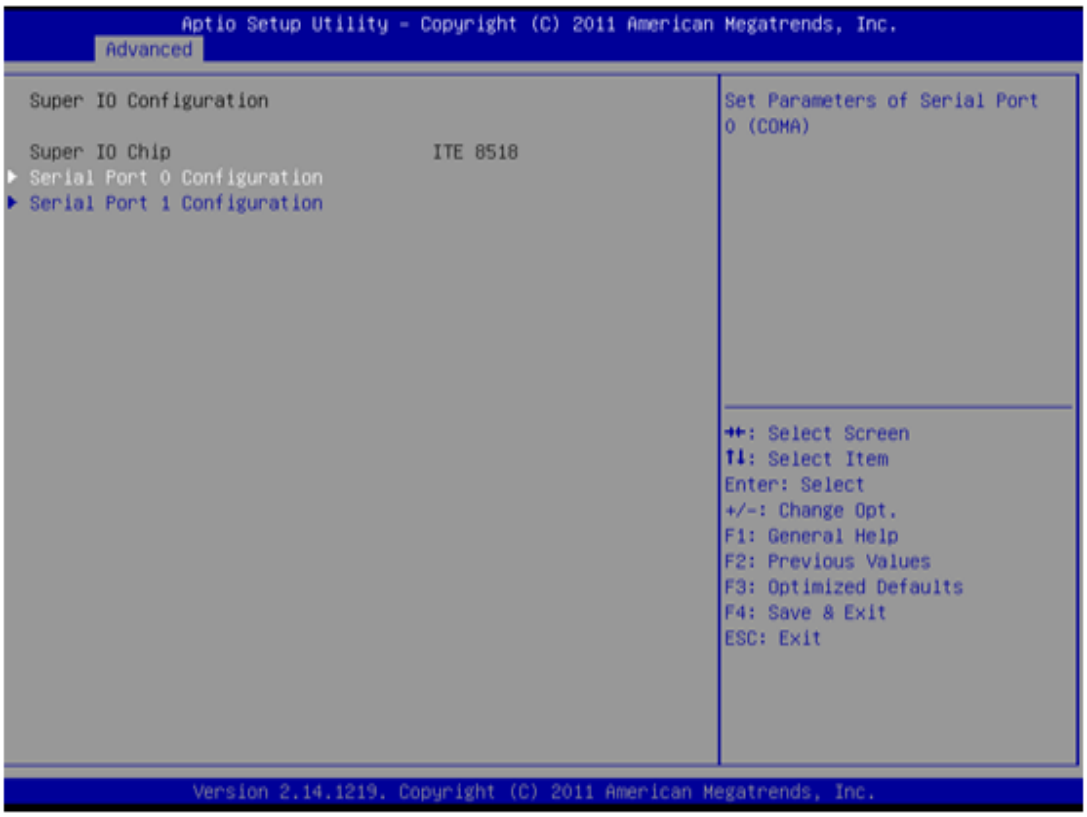
- EC iManager WatchDog IRQ
  This item allows users to set the irq number of EC watchdog.
- EC Power Saving Mode
  This item allows users to set the boards power saving mode when off.
- CPU Shutdown Temperature
  This item allows users to set the value of CPU shutdown temperature.
- EC iManager Smart FAN
  This item allows users to enable or disable smart FAN feature.
- Backlight Enable Polarity
  This item allows users to set backlight enable polarity.

3.2.2.14 Intel Smart Connect Technology



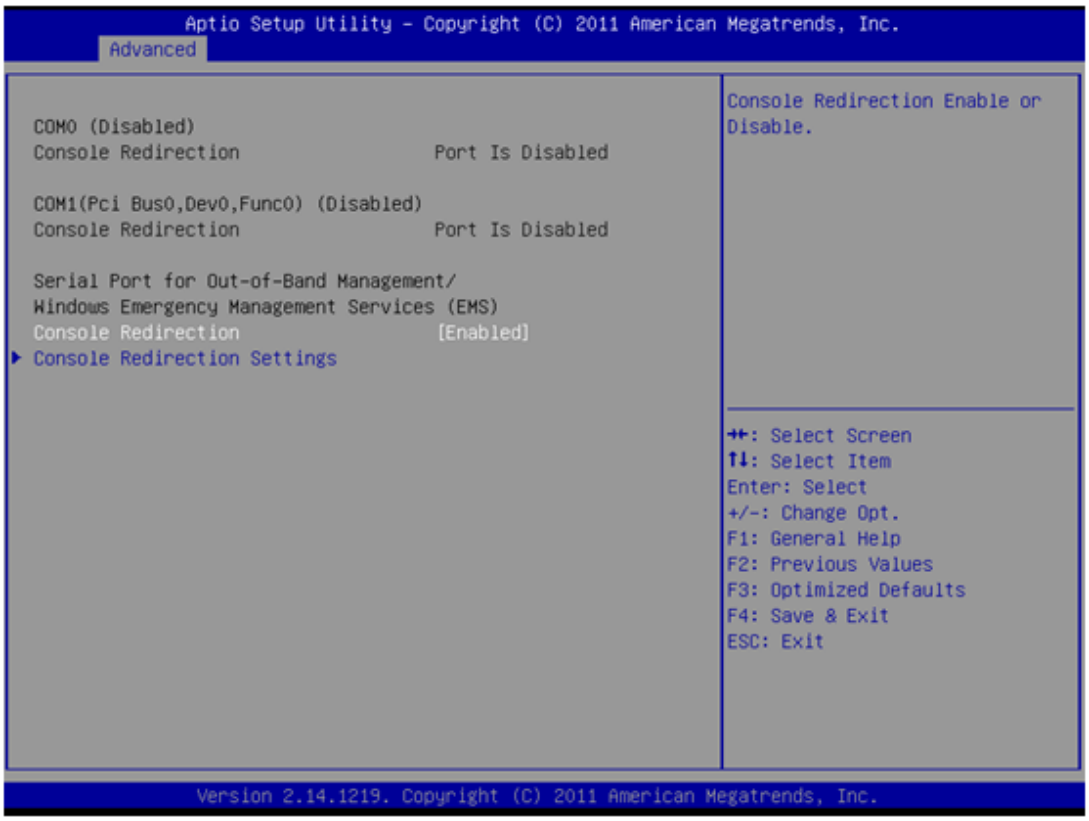
- ISCT Configuration
  Enable or disable ISCT configuration.

3.2.2.15 Super IO configuration



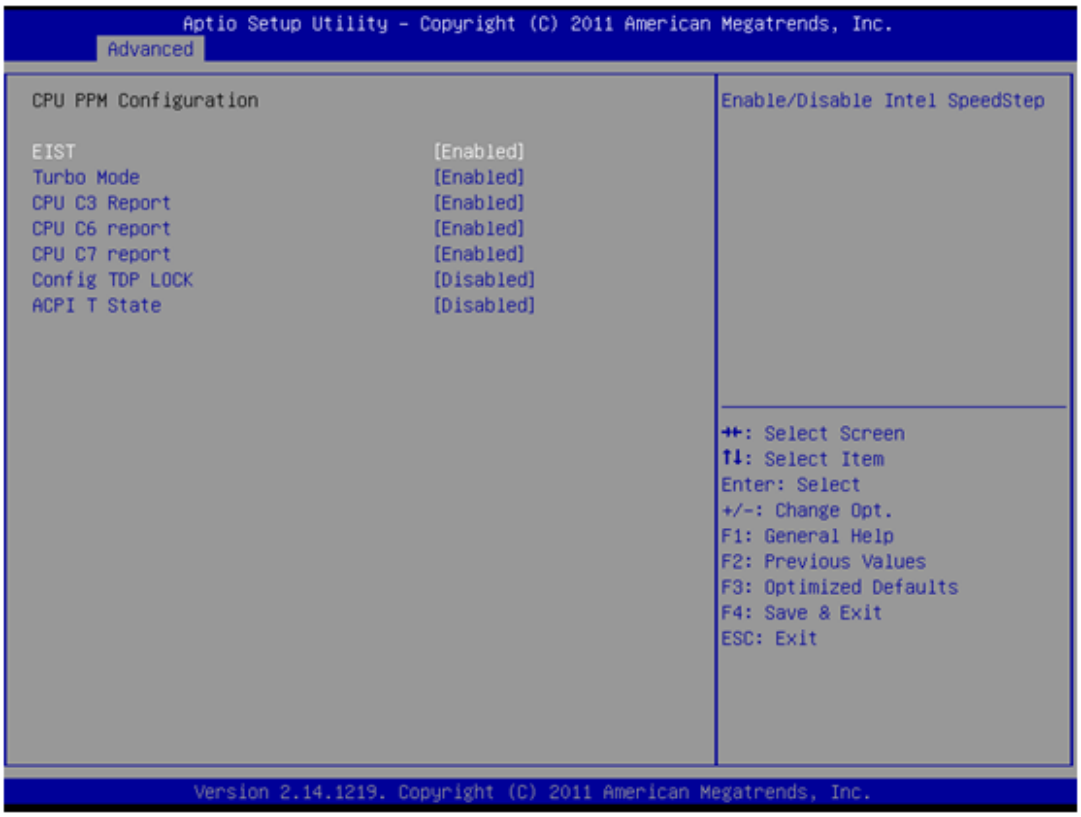
- Serial Port
  This item will allow users to enable or disable serial port.
- Change Settings
  This item allows users to change the serial port setting.
- Device Mode
  This item allows users to change the device mode.

3.2.2.16 Serial Port Console Redirection



- Console Redirection
  This item allows users to enable or disable console redirection for Microsoft Windows Emergency Management Services (EMS).
- Out-of-Band Mgmt Port
  Select the port for Microsoft Windows Emergency Management Services (EMS) to allow for remote management of a Windows Server OS.
- Terminal Type
  VT-UTF8 is the preferred terminal type for out-of-band management. The next best choice is VT100+ and then VT100. See above, in Console Redirection Settings page, for more Help with Terminal Type/Emulation.

3.2.2.17 CPU PPM Configuration



- EIST
  CPU runs at its default speed if disabled; CPU speed is controlled by the operating system if enabled.
- Turbo Mode
  This item allows users to enable or disable turbo mode.
- CPU C3/C6/C7 Report
  This item allows users to enable or disable CPU C-state support.
- Config TDP LOCK
  This item allows users to enable or disable CPU TDP lock function.
- ACPI T state
  This item allows users to enable or disable ACPI T state function.

3.2.2.18 Switchable Graphic

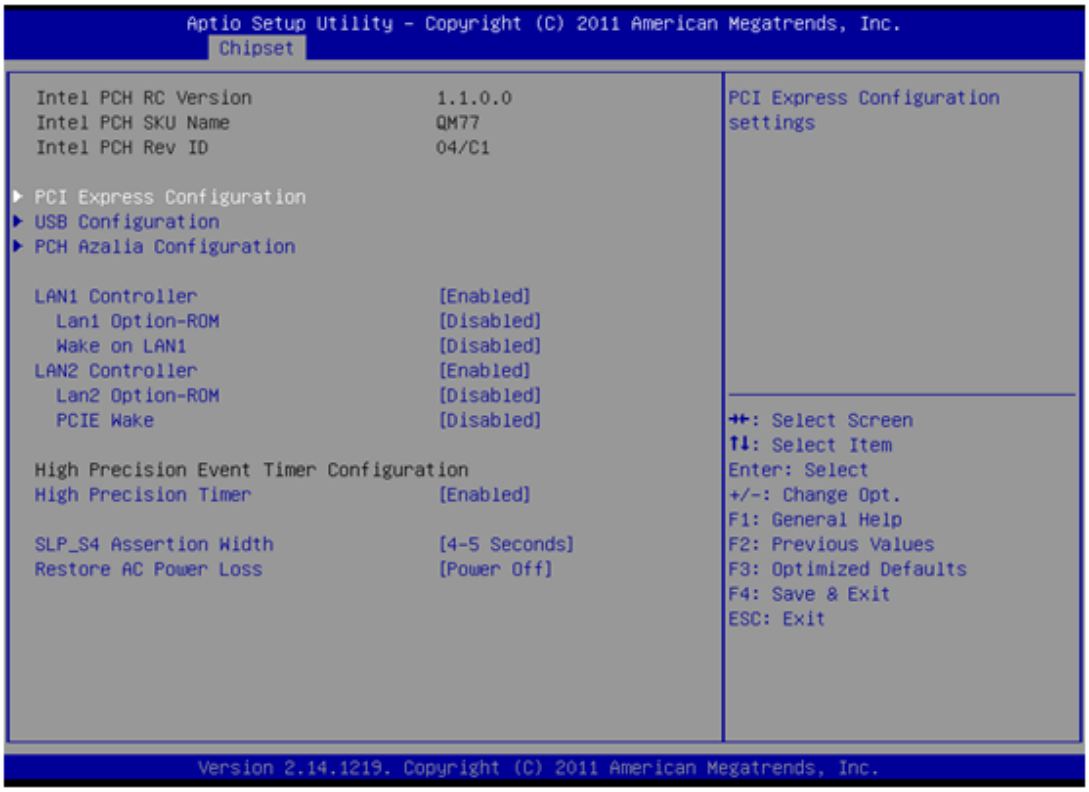
- SG Mode Select
  This item allows users to select switchable graphics mode.

3.2.2.19 Sandybridge DTS Configuration

- CPU DTS

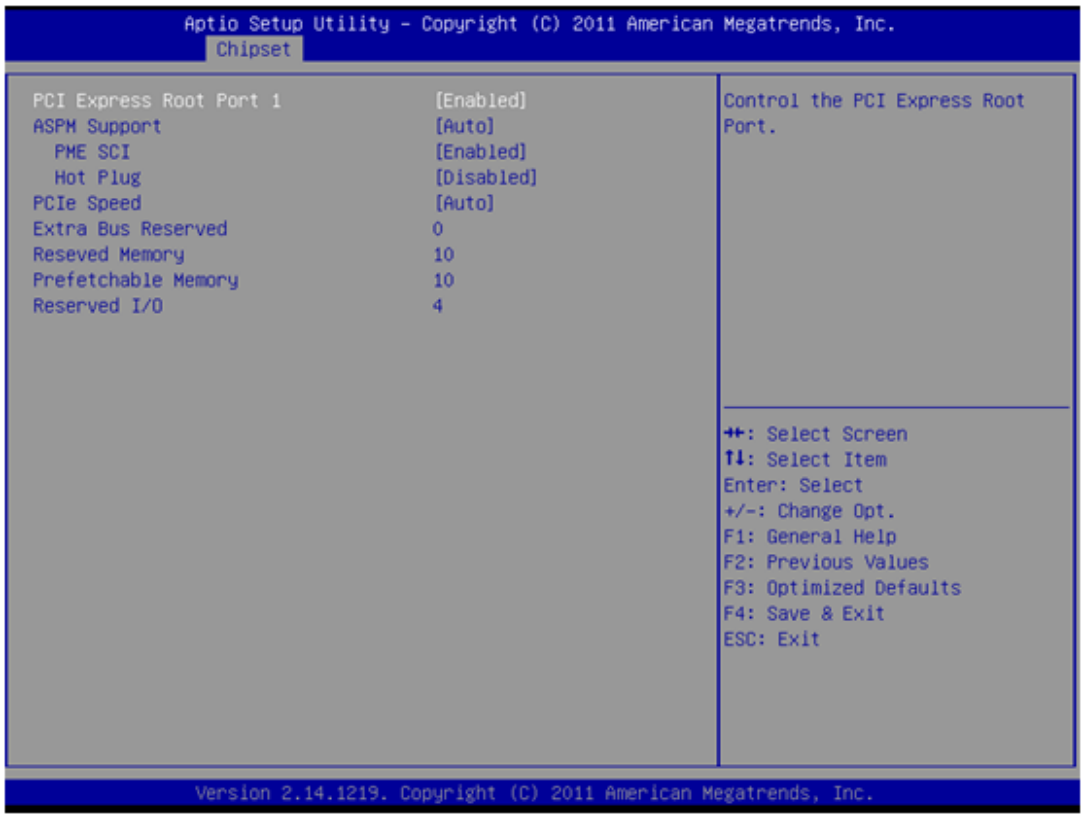
  This item allows users to select ACPI thermal management. Enabled uses DTS SMM mechanism. Disabled uses EC reported temperature values.

3.2.3 Chipset



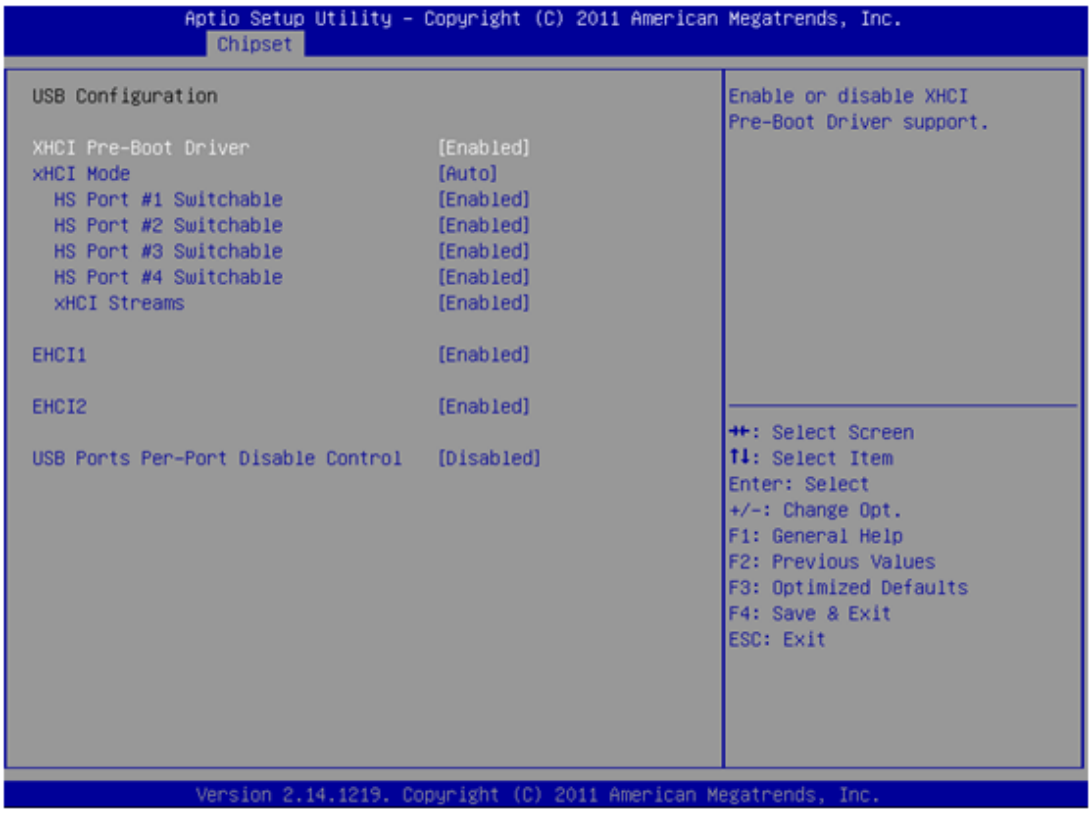
- PCI Express Configuration
  Detail of PCI Express items.
- USB Configuration
  Details of USB items.
- PCH Azalia Configuration
  Details of PCH azalia items.
- LAN controller
  Enables or disables the LAN1/2 controller.
- LAN option-ROM
  Enables or disables the LAN1/2 option-ROM.
- Wake on LAN
  Enables or disables LAN1/2 wake up from sleep state.
- High Precision Timer
  Enables or disables the high precision timer.
- SLP_S4 Assertion Width
  This item allows users to set a delay of sorts.
- Restore AC Power Loss
  This item allows users to select off, on and last state.

3.2.3.1 PCI Express Configuration



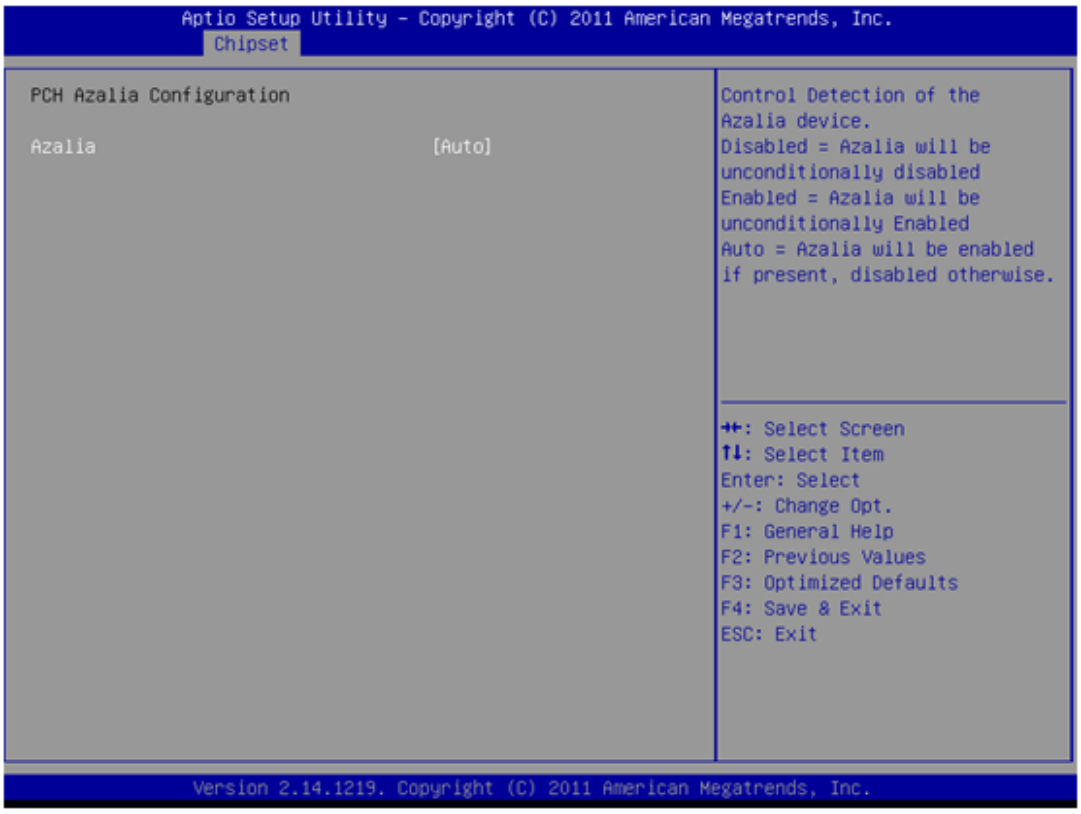
- PCI Express Root Port 1
  This item allows users to enable or disable the PCI Express Root Port.
- ASPM Support
  This item allows users to enable or disable PEG ASPM.
- PME SCI
  This item allows users to enable or disable the PME SCI function.
- Hot Plug
  This item allows users to enable or disable the PCI Express hot plug function.
- PCIe Speed
  This item allow users to select PCIe speed.

3.2.3.2 USB Configuration



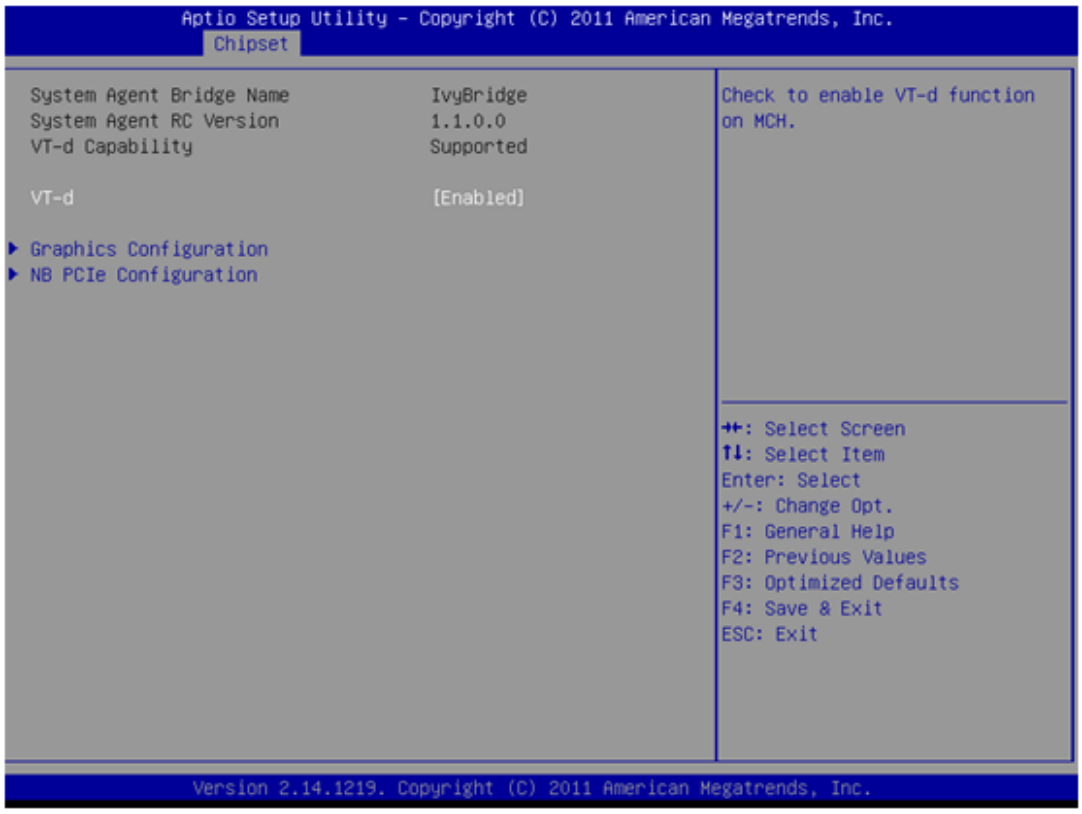
- XHCI Pre-Boot Driver
  This item allows user to enable or disable XHCI Pre-boot driver.
- XHCI Mode
  This item allows user to enable or disable XHCI Mode.
- EHCI 1/2
  Enables or disables the EHCI controller.
- USB Ports pre-port Disable Control
  This item allows users to enable or disable each USB port individually.

3.2.3.3 PCH Azalia Configuration



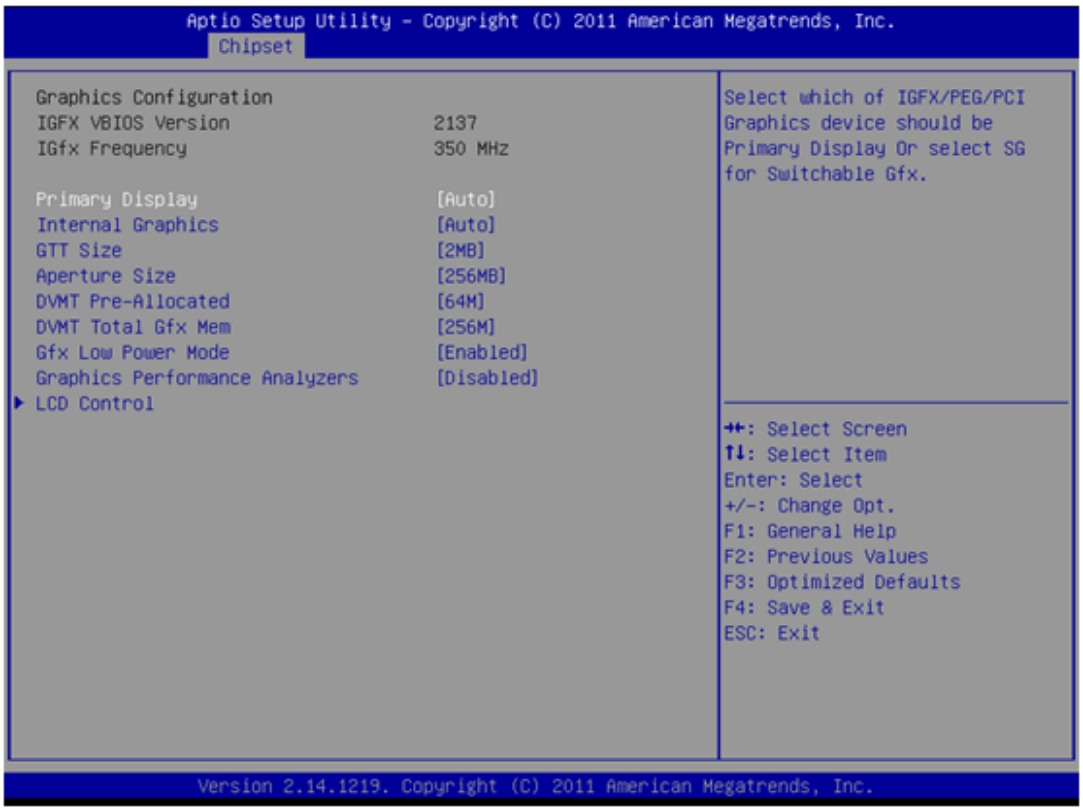
- Azalia
  This item allows user to enable or disable azalea device.

3.2.3.4 System Agent (SA) Configuration



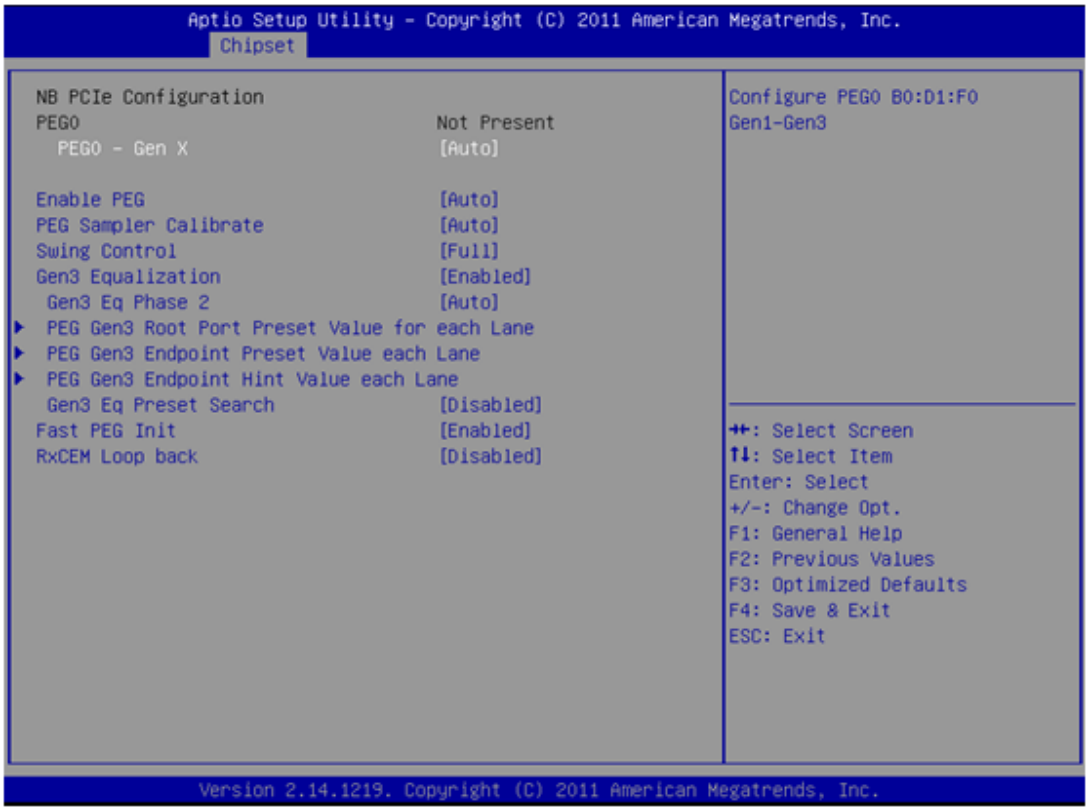
- VT-d
  This item allows users to enable or disable VT-d.

3.2.3.5 Graphic Configuration



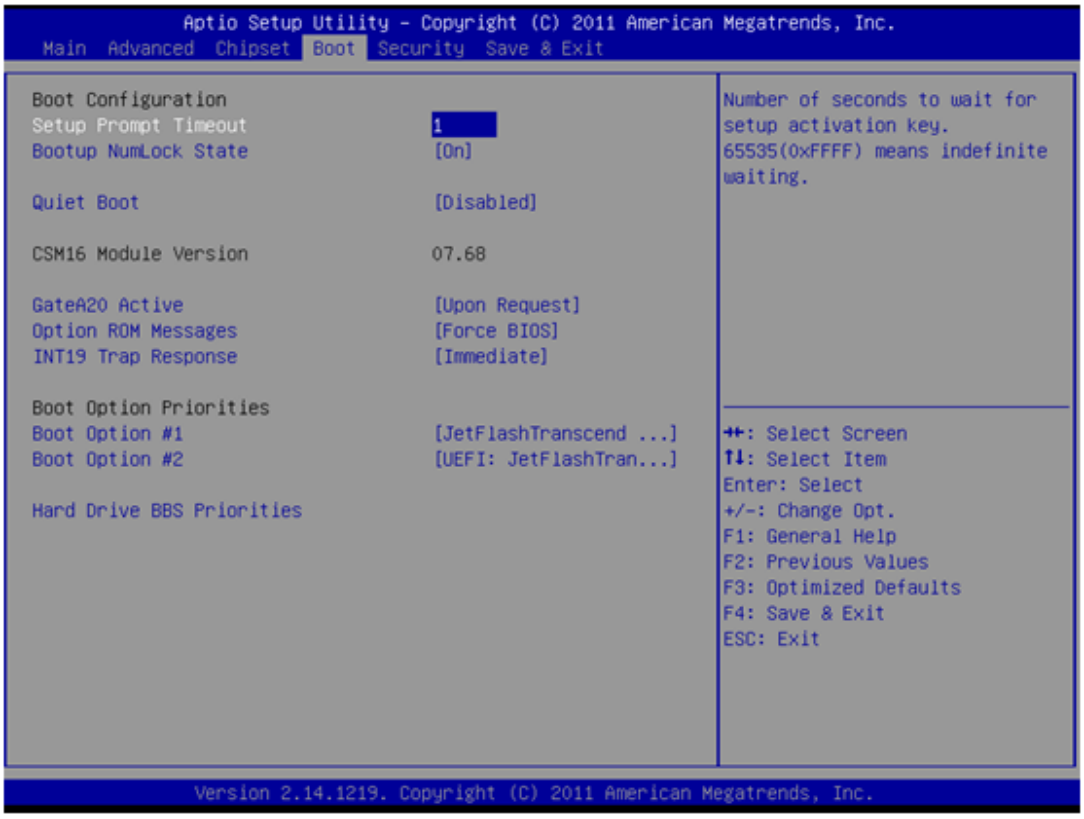
- Primary Display
  This item allows users to select which graphics controller to use as the primary boot device.
- Internal Graphics
  This item allows users to enable or disable IGD.
- GTT Size
  This item allows users to select GTT size.
- Aperture Size
  This item allows users to select aperture size.
- DVMT Pre-Allocated
  This item allows users to select DVMT pre-allocated memory size.
- DVMT Total Gfx Mem
  This item allows users to select DVMT total memory size.
- Gfx Low Power Mode
  This item allows users to enable or disable IGD low power mode.
- Graphic Performance Analyzers
  This item allows users to enable or disable graphic performance analyzer function.

3.2.3.6 NB PCIe Configuration



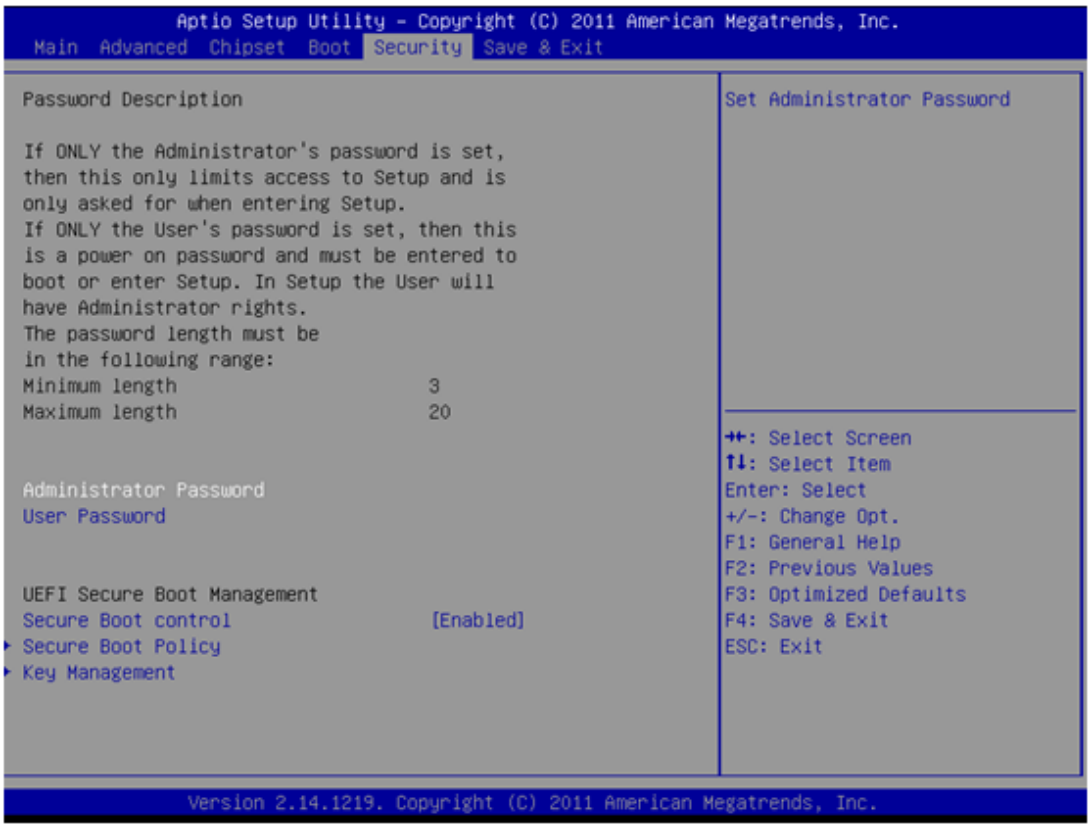
- PEG0 - Gen x
  Select PEG0 speed.
- Enable PEG
  This item allows users to enable or disable PEG always.
- PEG Sampler Calibrate
  This item allows users to enable or disable PEG sampler calibrate function

3.2.4 Boot



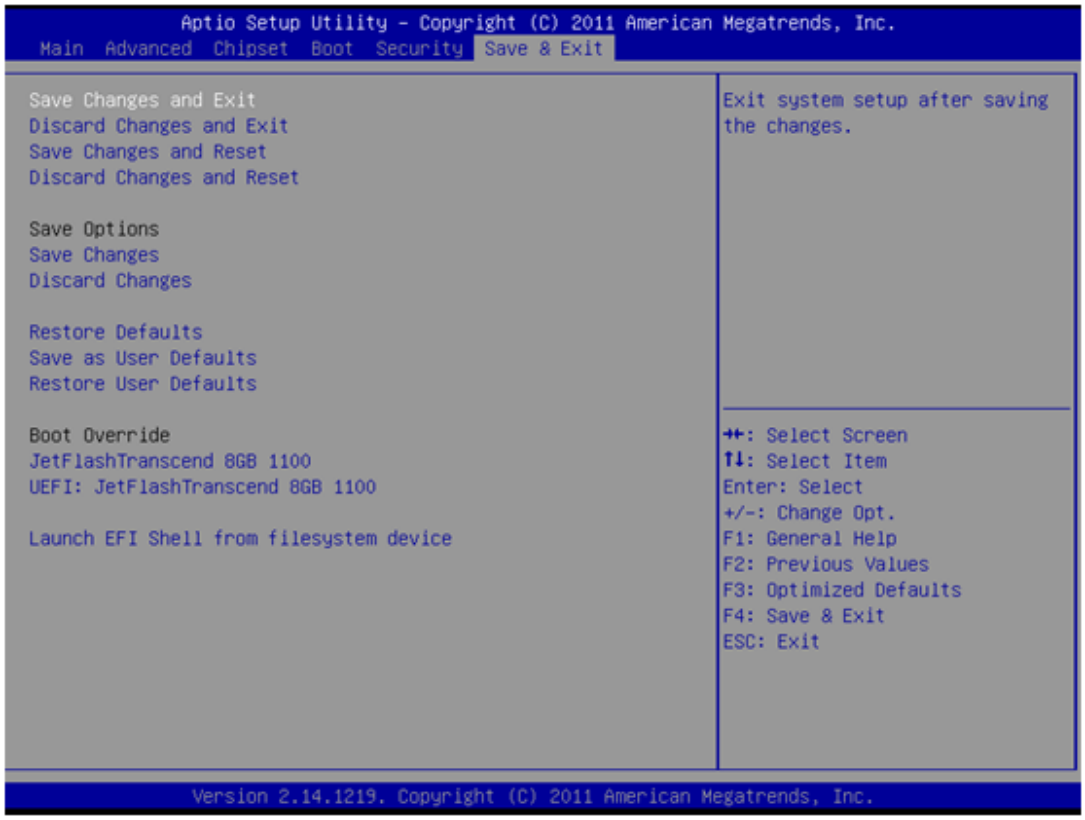
- Setup Prompt Timeout
  This item allows you to change number of seconds to wait for setup activation key.
- Bootup NumLock State
  Select the Power-on state for Numlock.
- Quiet Boot
  If this option is set to Disabled, the BIOS display normal POST messages. If Enabled, an OEM Logo is shown instead of POST messages.
- GateA20 Active
  This item allows you to select upon request or Always.
- Option ROM Messages
  Sets display mode for option ROM.
- INT19 Trap Response
  This item allows option ROMs to trap interrupt 19.
- Boot Option Priorities
  Set the system boot order.

3.2.5 Security



Select Security Setup from the AIMC-2100 Setup main BIOS setup menu. All Security Setup options, such as password protection and virus protection are described in this section. To access the sub menu for the following items, select the item and press<Enter>: Change Administrator / User Password.

3.2.6 Save & Exit



- Save Changes and Exit
  This item allows you to exit system setup after saving changes.
- Discard Changes and Exit
  This item allows you to exit system setup without saving any changes.
- Save Changes and Reset
  This item allows you to reset the system after saving the changes.
- Discard Changes and Reset
  This item allows you to rest system setup without saving any changes.
- Save Changes
  This item allows you to save changes done so far to any of the options.
- Discard Changes
  This item allows you to discard changes done so far to any of the options.
- Restore Defaults
  This item allows you to restore/load default values for all the options.
- Save as User Defaults
  This item allows you to save the changes done so far as user defaults.
- Restore User Defaults
  This item allows you to restore the user defaults to all the options.
- Boot Override
  Boot device selection can override your boot priority.

Chapter 4

Software Introduction & Service

4.1 Introduction

The mission of Advantech Embedded Software Services is to "Enhance quality of life with Advantech platforms and Microsoft® Windows® embedded technology." We enable Windows® Embedded software products on Advantech platforms to more effectively support the embedded computing community. Customers are freed from the hassle of dealing with multiple vendors (hardware suppliers, system integrators, embedded OS distributors) for projects. Our goal is to make Windows® Embedded Software solutions easily and widely available to the embedded computing community.

4.2 Value-Added Software Services

Software API: An interface that defines the ways by which an application program may request services from libraries and/or operating systems. Provides not only the underlying drivers required but also a rich set of user-friendly, intelligent and integrated interfaces, which speeds development, enhances security and offers add-on value for Advantech platforms. It plays the role of catalyst between developer and solution, and makes Advantech embedded platforms easier and simpler to adopt and operate with customer applications.

4.2.1 Software API

4.2.1.1 Control

GPIO

General Purpose Input/Output is a flexible parallel interface that allows a variety of custom connections. It allows users to monitor the level of signal input or set the output status to switch on/off the device. Our API also provide Programmable GPIO, which allows developers to dynamically set the GPIO input or output status.

SMBus

SMBus is the System Management Bus defined by Intel Corporation in 1995. It is used in personal computers and servers for low-speed system management communications. The SMBus API allows a developer to interface a embedded system environment and transfer serial messages using the SMBus protocols, allowing multiple simultaneous device control.

4.2.1.2 Display

Brightness Control

The Brightness Control API allows a developer to access embedded devices and easily control brightness.

Backlight

The Backlight API allows a developer to control the backlight (screen) on/off in embedded devices.

4.2.1.3 Monitor

Watchdog

A watchdog timer (WDT) is a device that performs a specific operation after a certain period of time if something goes wrong and the system does not recover on its own. A watchdog timer can be programmed to perform a warm boot (restarting the system) after a certain number of seconds.

Hardware Monitor

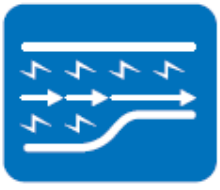
The Hardware Monitor (HWM) API is a system health supervision API that inspects certain condition indexes, such as fan speed, temperature and voltage.

4.2.1.4 Power Saving

CPU Speed

Makes use of Intel SpeedStep technology to save power consumption. The system will automatically adjust the CPU speed depending on the system loading.

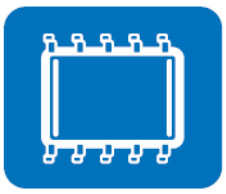
System Throttling



Refers to a series of methods for reducing power consumption in computers by lowering the clock frequency. This API allows the user to adjust the clock from 87.5% to 12.5%.

4.2.2 Software Utility

BIOS Flash



The BIOS Flash utility allows customers to update the flash ROM BIOS version, or use it to back up current BIOS by copying it from the flash chip to a file on customers' disk. The BIOS Flash utility also provides a command line version and an API for fast implementation into customized applications.

Embedded Security ID

The embedded application is the most important property of a system integrator. It contains valuable intellectual property, design knowledge and innovation, but it is easy to copy! Embedded Security ID utility provides reliable security functions for customers to secure their application data within the embedded BIOS.

Monitoring

The Monitoring is a utility for customer to monitor the system health, like voltage, CPU and system temperature and fan speed. These items are important to a device, if the critical errors occur and are not solved immediately, permanent damage may be caused.

eSOS

The eSOS is a small OS stored in BIOS ROM. It will boot up in case of a main OS crash. It will diagnose the hardware status, and then send an e-mail to the designated administrator. The eSOS also provide for remote connection via Telnet server and FTP server so the administrator can attempt to rescue the system. Note: This function requires BIOS customization.

Chapter 5

Chipset Software Installation Utility

5.1 Before You Begin

To facilitate the installation of the enhanced display drivers and utility software, read the instructions in this chapter carefully. The drivers for the AIMC-2100 are located on the software installation CD. The driver in the folder of the driver CD will guide and link you to the utilities and drivers under a Windows system. Updates are provided via Service Packs from Microsoft*.

Note! *The files on the software installation CD are compressed. Do not attempt to install the drivers by copying the files manually. You must use the supplied SETUP program to install the drivers.*

Before you begin, it is important to note that most display drivers need to have the relevant software application already installed in the system prior to installing the enhanced display drivers. In addition, many of the installation procedures assume that you are familiar with both the relevant software applications and operating system commands. Review the relevant operating system commands and the pertinent sections of your application software's user manual before performing the installation.

5.2 Introduction

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

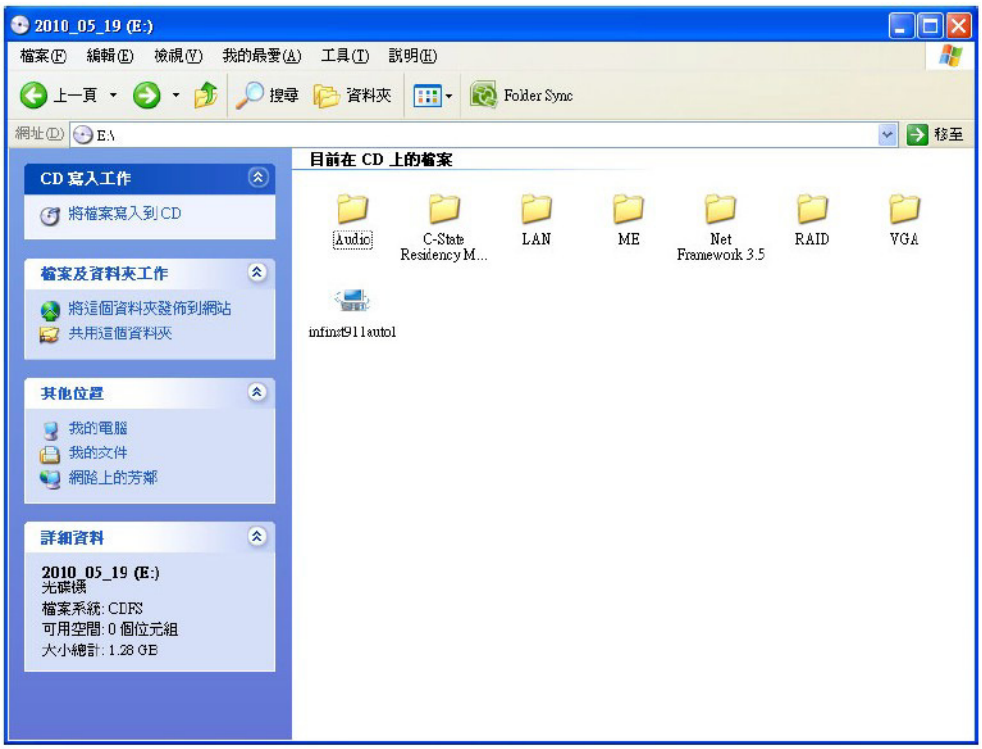
- Core PCI PnP services
- IDE Ultra ATA 100/66/33 and Serial ATA interface support
- USB 1.1/2.0 support (USB 2.0 driver needs to be installed separately for Win98)
- Identification of Intel® chipset components in the Device Manager

Note! *This utility is used for the following versions of Windows, and it has to be installed **before** installing all the other drivers:*

- *Windows 7 (32-bit)*
- *Windows 7 (64-bit)*
- *Windows XP professional edition (32-bit)*
- *Windows XP professional edition (64-bit)*

5.3 Windows XP/Windows 7 Driver Setup

1. Insert the driver CD into your system's CD-ROM drive. You can see the driver folder items. Navigate to the "Chipset" folder and click "infinst_autol.exe" to complete the installation of the driver.



Chapter 6

VGA Setup

6.1 Introduction

The Intel mobile Core i7-3610QE, Core i5-3610ME, Core i3-3120ME, Celeron B810 processors with dual cores are embedded with an integrated graphics controller.

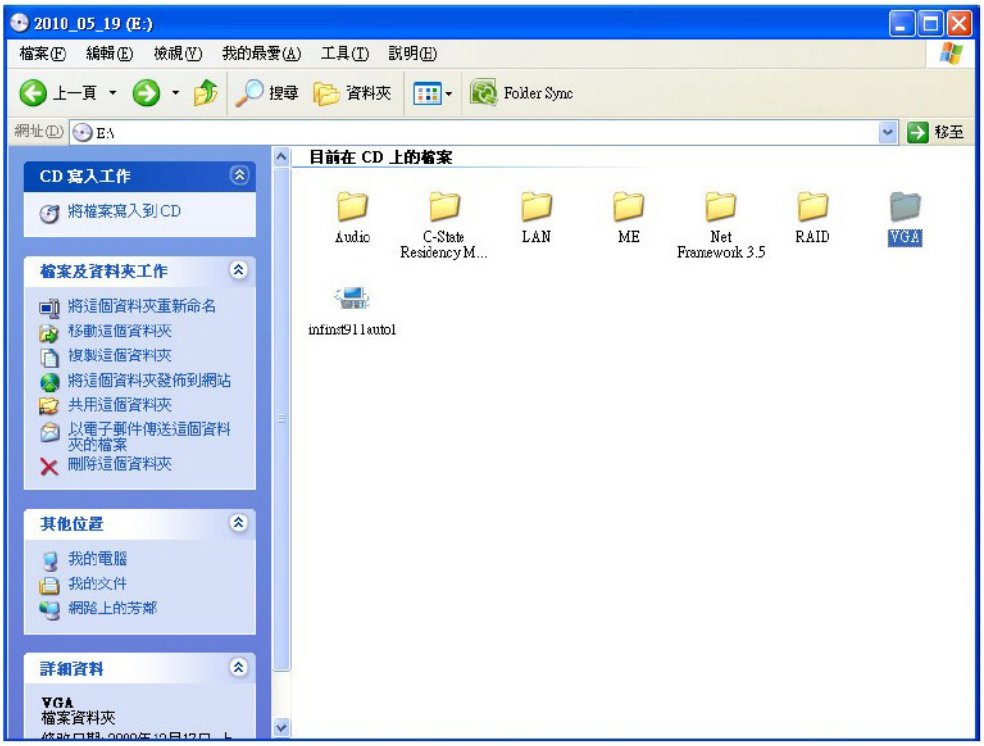
Intel's FDI, or Flexible Display Interface provides an optimized integrated graphic solution with versatile display options and 32-bit 3D graphics engine, dual independent display support, enhanced display modes for widescreen flat panels for extended, twin, and clone dual display modes, and optimized 3D support deliver an intensive and realistic visual experience.

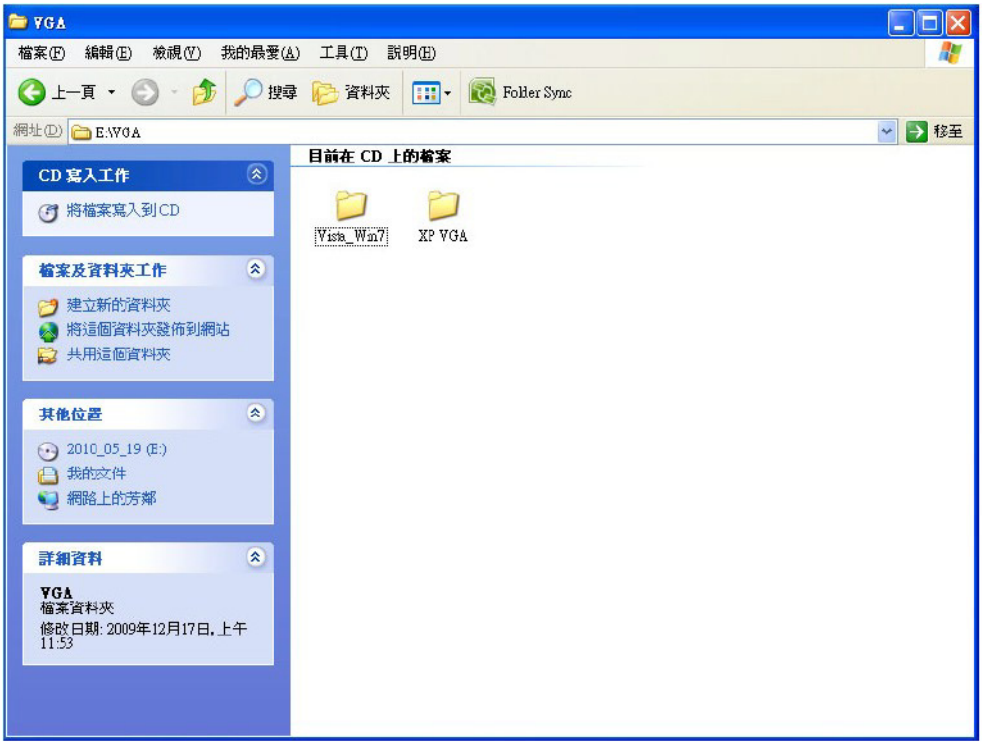
6.2 Windows 7/XP

Note! *Before installing this driver, make sure the CSI utility has been installed in your system.*

See Chapter 5 for information on installing the CSI utility.

Insert the driver CD into your system's CD-ROM drive. You can see the driver folders items. Navigate to the "VGA" folder and click "setup.exe" to complete the installation of the drivers for Windows 7 and Windows XP.




VGA
檔案(F) 編輯(E) 檢視(V) 我的最愛(A) 工具(T) 說明(H)
上一頁 搜尋 資料夾 Folder Sync
網址(D) E:\VGA
移至
CD 寫入工作
將檔案寫入到 CD
檔案及資料夾工作
建立新的資料夾
將這個資料夾發佈到網站
共用這個資料夾
其他位置
2010_05_19 (E:)
我的文件
網路上的芳鄰
詳細資料
VGA
檔案資料夾
修改日期: 2009年12月17日, 上午 11:53
目前在 CD 上的檔案
Vista_Win7
XP VGA

Chapter 7

LAN Configuration

7.1 Introduction

The AIMC-2100 has dual Gigabit Ethernet LANs via dedicated PCI Express x1 lanes (Intel 82579LM (LAN1) and 82583V (LAN2)) that offer bandwidth of up to 500 MB/sec, eliminating the bottleneck of network data flow and incorporating Gigabit Ethernet at 1000 Mbps.

7.2 Features

- Integrated 10/100/1000 Mbps transceiver
- 10/100/1000 Mbps triple-speed MAC
- High-speed RISC core with 24-KB cache
- On-chip voltage regulation
- Wake-on-LAN (WOL) support
- PCI Express X1 host interface

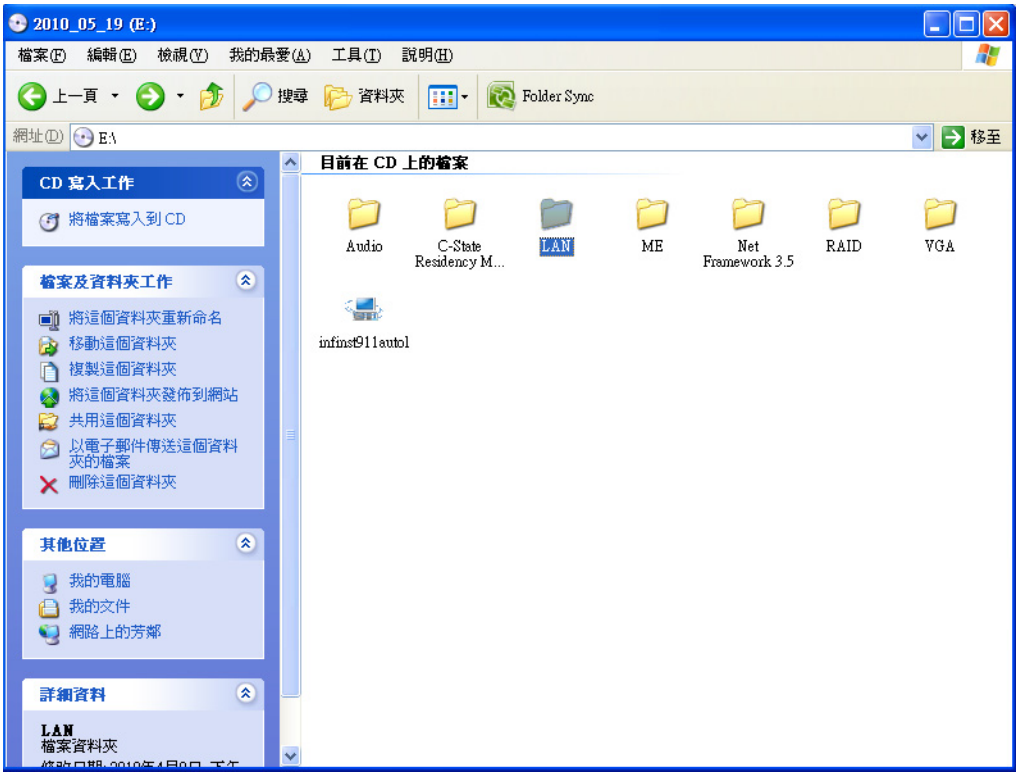
7.3 Installation

Note! *Before installing the LAN drivers, make sure the CSI utility has been installed on your system. See Chapter 5 for information on installing the CSI utility.*

The AIMC-2100's Intel 82579LM (LAN1) and 82583V (LAN2) Gigabit integrated controllers support all major network operating systems. However, the installation procedure varies from system to system. Please find and use the section that provides the driver setup procedure for the operating system you are using.

7.4 Windows® 7/XP Driver Setup (Intel 82579LM/ 82583V)

Insert the driver CD into your system's CD-ROM drive. Select the LAN folder then navigate to the directory for your OS.



Appendix A

I/O Pin Assignments

A.1 USB Header (USB56, USB78)

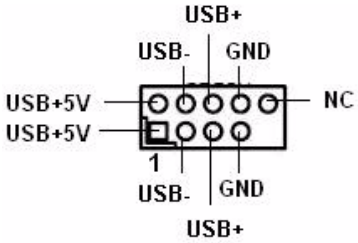


Table A.1: USB Header (USB56)			
Pin	**Signal**	**Pin**	**Signal**
1	USB0_VCC5	2	USB1_VCC5
3	USB0_D-	4	USB1_D-
5	USB0_D+	6	USB1_D+
7	GND	8	GND
9	Key	10	N/C

A.2 VGA Connector (VGA1)

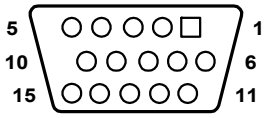


Table A.2: VGA Connector (VGA1)			
Pin	**Signal**	**Pin**	**Signal**
1	RED	9	CRT_VCCIN
2	VGA_G	10	GND
3	VGA_B	11	N/C
4	N/C	12	V_SDAT
5	GND	13	H-SYNC
6	GND	14	V-SYNC
7	GND	15	V_SCLK

A.3 HDMI1: HDMI Connector

Table A.3: HDMI1:HDMI Connector			
Pin	**Signal**	**Pin**	**Signal**
1	TMDS Data2+	2	TMDS Data2 Shield
3	TMDS Data2-	4	TMDS Data1+
5	TMDS Data1 Shield	6	TMDS Data1-
7	TMDS Data0+	8	TMDS Data0 Shield
9	TMDS Data0-	10	TMDS Clock+
11	TMDS Clock Shield	12	TMDS Clock-
13	CEC	14	Reserved
15	SCL	16	SDA
17	DDC/CEC/HEC Ground	18	+5 V Power (max 50 mA)
19	Hot Plug Detect		

A.4 SPI_CN1: SPI Fresh Card Pin Connector

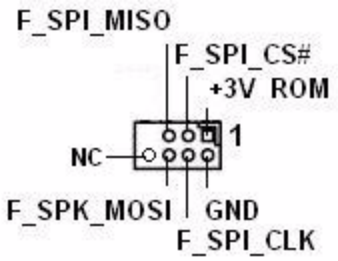


Table A.4: SPI_CN1:SPI Fresh Card Pin Connector			
Pin	**Signal**	**Pin**	**Signal**
1	+F1_3V	2	GND
3	F1_SPI_CS#_Q	4	F1_SPI_CLK_Q
5	F1_SPI_MISO_Q	6	F1_SPI_MOSI_Q
7	KEY	8	NC

A.5 PS/2 Keyboard and Mouse Connector (KBMS1)

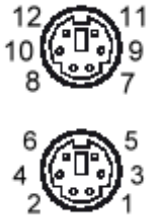


Table A.5: PS/2 Keyboard and Mouse Connector (KBMS1)	
Pin	**Signal**
1	KB DATA
2	N/C
3	GND
4	KB VCC
5	KB CLK
6	N/C
7	M_DATA
8	N/C
9	GND
10	M_VCC
11	M_CLK
12	N/C

A.6 CPU Fan Power Connector (CPU_FAN1)

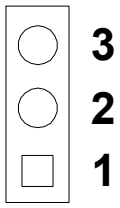


Table A.6: CPU Fan Power Connector (CPU_FAN1)	
Pin	**Signal**
1	GND
2	+12V PWM
3	DETECT

A.7 System Fan Power Connector (SYS_FAN1/2)

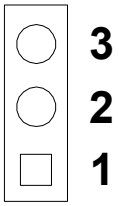


Table A.7: System Fan Power Connector (SYSFAN1/SYSFAN2)	
Pin	**Signal**
1	GND
2	+12V PWM
3	DETECT

A.8 Power LED & Keyboard Lock Connector (JFP2)

You can use an LED to indicate when the single board computer is on. Pin 1 of JFP3 supplies the LED's power, and Pin 3 is the ground.

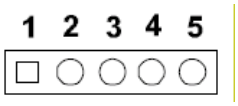


Table A.8: Power LED & Keyboard Lock Connector (JFP2)	
Pin	**Function**
1	LED power
2	NC
3	GND
4	KEYLOCK#
5	GND

A.9 Power switch/HDD LED/SMBus/Speaker (JFP1)

The single board computer has its own buzzer. You can also connect it to the external speaker on your computer chassis.

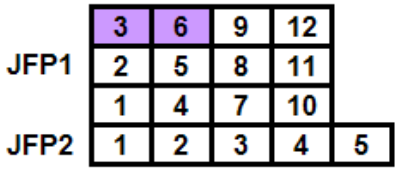


Table A.9: Power Switch/HDD LED/SMBus/Speaker (JFP1)			
Pin	**Signal**	**Pin**	**Signal**
1	SPK_P1	2	HDDLED+
3	PWR	4	NC
5	HDDLED-	6	GND
7	SPK_P3	8	SMB_DAT
9	SYS_RST(+)	10	SPK_P4
11	SMB_CLK	12	SYS_RST(-)

A.10 USB/LAN ports (LAN1_USB12/LAN2_USB34)

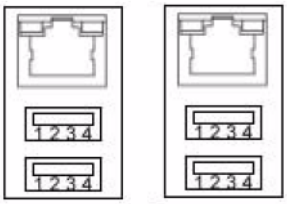
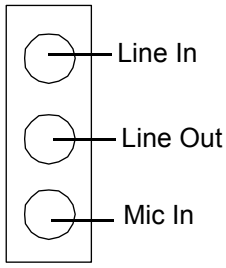


Table A.10: USB Port			
Pin	**Signal**	**Pin**	**Signal**
1	VCC	3	Data0+
2	Data0-	4	GND

Table A.11: Ethernet 10/100 Mbps RJ-45 Port			
Pin	**Signal**	**Pin**	**Signal**
1	XMT+	5	N/C
2	XMT-	6	RCV-
3	RCV+	7	N/C
4	N/C	8	N/C

A.11 Line In, Line Out, Mic In Connector (AUDIO1)



A.12 Serial ATA0/1 (SATA1 ~ 4)

Table A.12: Serial ATA 0/1 (SATA1/SATA2)

Pin	Signal	Pin	Signal
1	GND	2	SATA_0TX+
3	SATA_0TX-	4	GND
5	SATA_0RX-	6	SATA_0RX+
7	GND	8	

A.13 AT/ATX Mode (PSON1)

Table A.13: AT/ATX Mode (PSON1)

Pin	Signal	Pin	Signal
1	#PSON_SIO (to super IO)	2	#PSON (to power supply)
3	GND		

A.14 HD Audio Interface (FPAUD1)

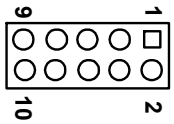


Table A.14: AC-97 Audio Interface (FPAUD1)

Pin	Signal	Pin	Signal
1	MIC2_L	2	GND
3	MIC2_R	4	FP_AUD_DET
5	LOUT2_R	6	SRTN1
7	LOUT2_DET	8	KEY
9	LOUT2_L	10	SRTN2

A.15 GPIO Pin Header (GPIO1)

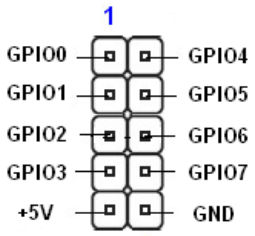


Table A.15: GPIO Pin Header (GPIO1)

Pin	Signal	Pin	Signal
1	GPIO0	2	GPIO4
3	GPIO1	4	GPIO5
5	GPIO2	6	GPIO6
7	GPIO3	8	GPIO7
9	+5V	10	GND

A.16 LVDS Connector: LVDS1

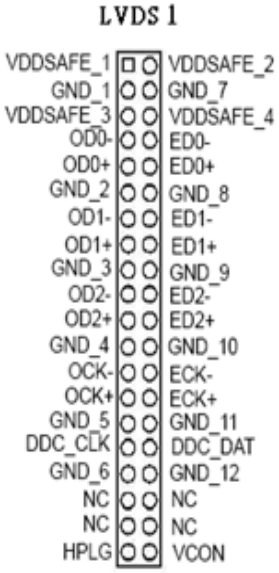
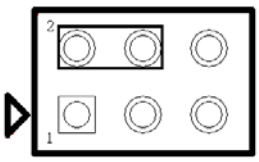


Table A.16: LVDS1 Connector

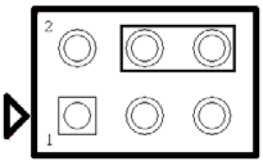
Pin	Signal	Pin	Signal
1	VDDSAFE_1	2	VDDSAFE_2
3	GND_1	4	GND_7
5	VDDSAFE_3	6	VDDSAFE_4
7	OD0-	8	ED0-
9	OD0+	10	ED0+
11	GND_2	12	GND_8
13	OD1-	14	ED1-
15	OD1+	16	ED1+

Table A.16: LVDS1 Connector			
17	GND_3	18	GND_9
19	OD2-	20	ED2-
21	OD2+	22	ED2+
23	GND_4	24	GND_10
25	OCK-	26	ECK-
27	OCK+	28	ECK+
29	GND_3	30	GND_11
31	DDC_CLK	32	DDC_DAT
33	GND_6	34	GND_12
35	NC	36	NC
37	NC	38	NC
39	HPLG	40	VCON

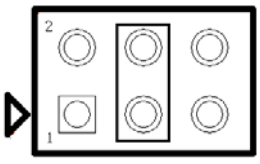
A.17 LVDS Power Jumper (JLVDS1)



2 and 4



4 and 6



3 and 4

Table A.17: LVDS Power Jumper (JLVDS1)			
Pin	**Signal**	**Pin**	**Signal**
1	N/C	2	5V
3	12V	4	VCC_LCD
5	N/C	6	3.3V

A.18 LVDS Inverter (INV1)

Table A.18: LVDS Power Jumper	
Pin	**Signal**
1	+12V
2	GND
3	BL_EN
4	BL_CLT
5	+5V

A.19 ATX Power Connector (ATXPWR1)

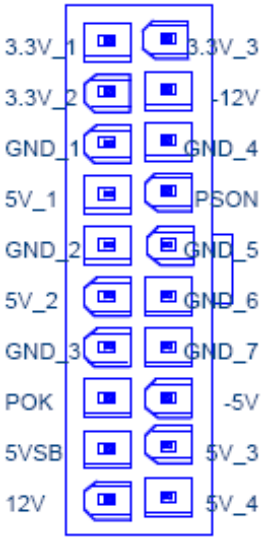


Table A.19: ATX Power Connector (ATXPWR1)

Pin	Signal	Pin	Signal
1	+3.3 V	11	3.3 V
2	+3.3 V	12	-12 V
3	GND	13	GND
4	+5 V	14	PSON
5	GND	15	GND
6	+5 V	16	GND
7	GND	17	GND
8	POK	18	-5 V
9	5 VSB	19	+5 V
10	12 V	20	+5 V

A.20 ATX 12 V connector (ATX12V1)

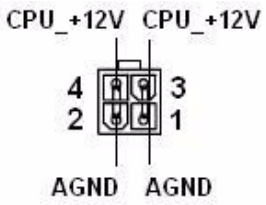


Table A.20: ATX 12 V connector (ATX12V1)

Pin	Signal	Pin	Signal
1	aGND	2	aGND
3	CPU_+12V	4	CPU_+12V

A.21 HD Digital Audio Interface (SPDIF_OUT1)

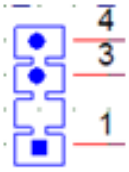


Table A.21: HD Digital Audio Interface (SPDIF_OUT1)	
Pin	**Signal**
1	+5V
3	SPDIF Out
4	GND

A.22 Display Port Connector (Top of DP+HDMI1, DP1)

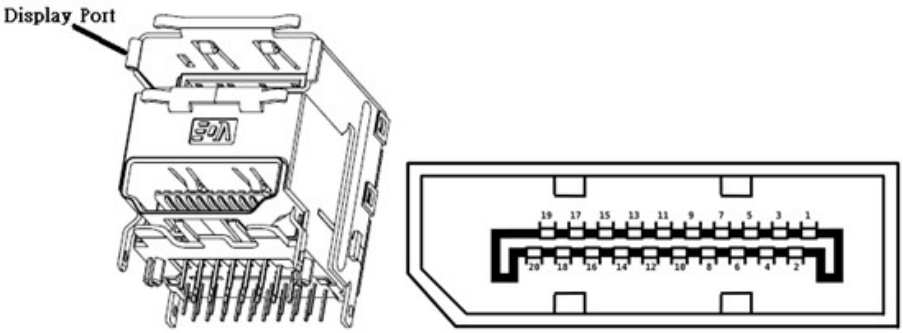
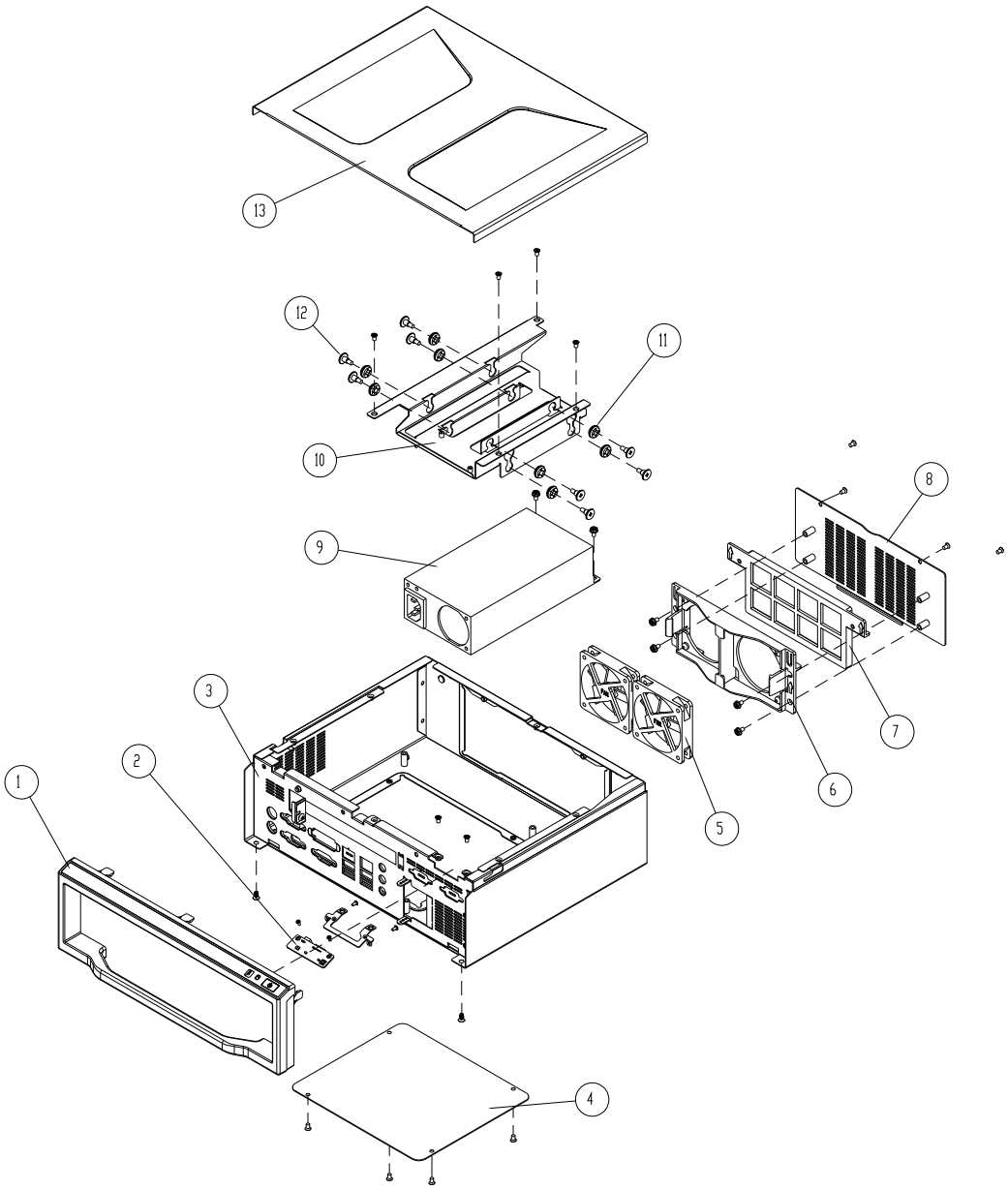


Table A.22: Display Port Connector (Top of DP+HDMI1, DP1)			
Pin	**Signal**	**Pin**	**Signal**
1	Lane 0+	2	GND
3	Lane 0-	4	Lane 1+
5	GND	6	Lane 1-
7	Lane 2+	8	GND
9	Lane 2-	10	Lane 3+
11	GND	12	Lane 3-
13	Config 1	14	Config 2
15	Auxiliary Chanel+	16	GND
17	Auxiliary Chanel-	18	Hot Plug
19	Return	20	+3.3V

Appendix B

Exploded Diagram

B.1 Exploded Diagram of AIMC-2100



1	Front bezel	8	Rear Cover
2	LED board	9	Power Supply
3	Front cover	10	HDD Bracket
4	Bottom cover	11	Rubber Pads for HDDs
5	System Fans	12	M3 Screws for HDDa
6	Fan Bracket	13	Top Cover
7	Air Filter		

Figure B.1 AIMC-2100 Exploded Diagram & Parts List

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