# Technical Manual Of Intel Bay Trail Series CPU Based SBC

NO.G03-NU93-F

Revision: 4.0

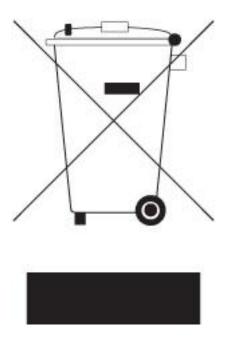
Release date: December 7, 2022

#### **Trademark:**

\* Specifications and Information contained in this documentation are furnished for information use only, and are subject to change at any time without notice, and should not be construed as a commitment by manufacturer.

#### **Environmental Protection Announcement**

Do not dispose this electronic device into the trash while discarding. To minimize pollution and ensure environment protection of mother earth, please recycle.



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# **Environmental Safety Instruction**

- Avoid the dusty, humidity and temperature extremes. Do not place the product in any area where it may become wet.
- 0 to 60 centigrade is the suitable temperature. (The figure comes from the request of the main chipset)
- Generally speaking, dramatic changes in temperature may lead to contact malfunction and crackles due to constant thermal expansion and contraction from the welding spots' that connect components and PCB. Computer should go through an adaptive phase before it boots when it is moved from a cold environment to a warmer one to avoid condensation phenomenon. These water drops attached on PCB or the surface of the components can bring about phenomena as minor as computer instability resulted from corrosion and oxidation from components and PCB or as major as short circuit that can burn the components. Suggest starting the computer until the temperature goes up.
- The increasing temperature of the capacitor may decrease the life of computer.
   Using the close case may decrease the life of other device because the higher temperature in the inner of the case.
- Attention to the heat sink when you over-clocking. The higher temperature may decrease the life of the device and burned the capacitor.

#### **USER'S NOTICE**

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#### **Manual Revision Information**

Reversion	Revision History	Date
4.0	Fourth Edition	December 7, 2022

#### **Item Checklist**

✓ Motherboard

✓ Cable(s)

# Chapter 1 Introduction of the Motherboard

#### 1-1 Feature of Motherboard

- Onboard Intel<sup>®</sup> Bay Trail Series Processor, with low power consumption never denies high performance
- Onboard 1\* mSATA slot
- Onboard 1\* half-size Mini-PCIE slot
- Onboard 2 \* RJ-45 gigabit Ethernet LAN port
- Support dual HDMI outputs
- Support USB 3.0 data transport demand
- Support CPU Smart FAN
- Compliance with ErP standard
- Support Watchdog function

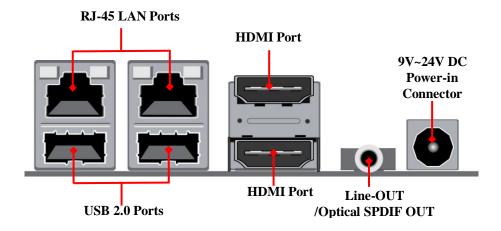
# 1-2 Specification

Spec	Description	
Design	8-layer SBC; PCB size: 10.1 cm x 10.1 cm	
Embedded CPU	<ul> <li>Integrated with Intel<sup>®</sup> Bay Trail-D/M/I series CPU</li> </ul>	
Memory Slot	<ul> <li>1 * DDR3L SODIMM Slot for un-buffered Single Channel DDRIIIL 1066~1333* MHz SDRAM, expandable to 8GB</li> <li>*DDR3L 1333 Mhz is optional for model with specific CPU. Please refer to the actual product you purchase and consult your dealer for more information.</li> </ul>	
Expansion Slot	1* Half-size Mini-PCIE slot	
Storage	<ul><li>1* SATAII 3Gb/s port</li><li>1* MSATA slot</li></ul>	
LAN Chip	<ul> <li>Integrated with Intel 82583V PCI-E Gigabit LAN chip</li> <li>Support Fast Ethernet LAN function of providing 10/100/1000Mbps Ethernet data transfer rate</li> </ul>	
Audio Chip 2-CH ALC887 HD audio chip		
BIOS	AMI 64MB Flash ROM	
Rear Panel I/O	<ul> <li>2* RJ-45 LAN port</li> <li>2* USB 2.0 port</li> <li>2* HDMI port</li> <li>1* Audio Line-Out / SPDIF-Out jack</li> <li>1* DC 9V~24V power-in connector</li> </ul>	
Front Panel I/O	<ul> <li>1* COM port</li> <li>1* USB 2.0 port</li> <li>1* USB 3.0 port</li> </ul>	
Internal I/O	<ul> <li>1* Internal DC 9V~24V power-in connector</li> <li>1* SATA Power connector</li> <li>1* SPEAK_CON header</li> <li>1* Front panel header</li> </ul>	

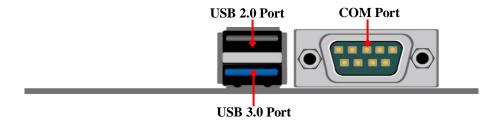
1\* CPU FAN header

# 1-3 Layout Diagram

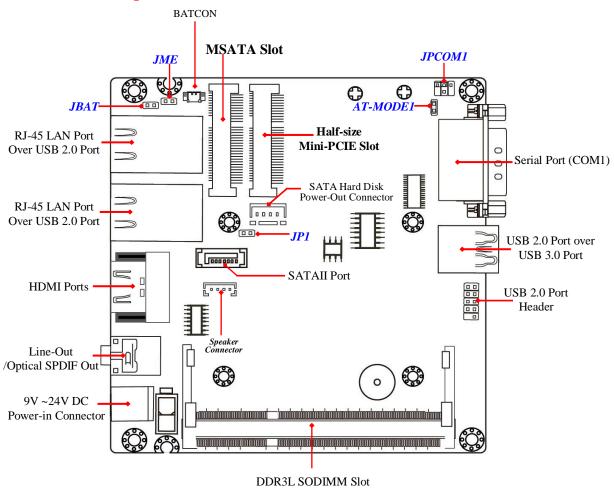
#### Rear IO Panel Diagram:



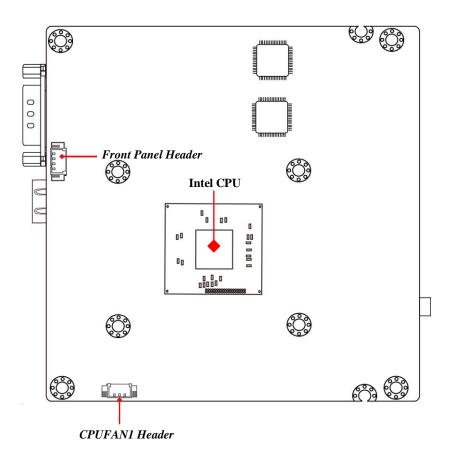
Front IO Panel Diagram:



#### Internal Diagram-Front Side:



#### Internal Diagram-Back Side:



# Jumper

Jumper	Name	Description
JBAT	CMOS RAM Clear Function Setting	2-Pin Block
JME	Clear ME RTC Function Setting	2-Pin Block
JP1	Security Measure Function Select	2-Pin Block
AT-MODE1	AT Mode Function Select	2-Pin Block
JPCOM1	COM1 Port Pin9 Function Select	4-Pin Block

# **Connectors**

Connector	Name
UL1(Top)/ UL2(Top)	RJ-45 LAN Port Connector x2
UL1(Bottom)/ UL2(Bottom)	USB 2.0 Port Connector x2
HDMI1	HDMI Connector x2
HP_SPDIF1	Line Out Connector
	/SPDIF Out Connector
USB1(Top)	USB 2.0 Port Connector
USB1(Bottom)	USB 3.0 Port Connector
COM1	Serial Port Connector
DCIN	DC 9V~24V Power–in Connector
ATX2P	Internal 9V~24V Power–in Connector
SATA1	SATA Port Connector
PWOUT1	SATA Power out Connector

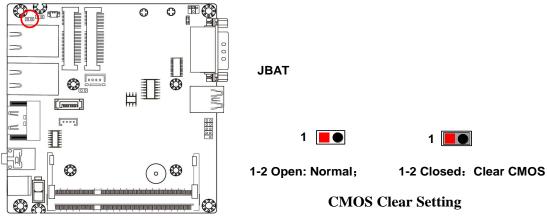
# Headers

Header	Name	Description
F_USB1	USB 2.0 Port Header	9-pin Block
SPEAK_CON	Speaker Header	4-pin Block
FP_CON1	Front Panel Header	4-pin Block
CPUFAN1	CPUFAN Header	3-pin Block

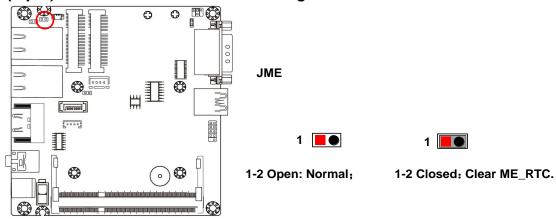
# **Chapter 2 Hardware Installation**

# 2-1 Jumper Setting

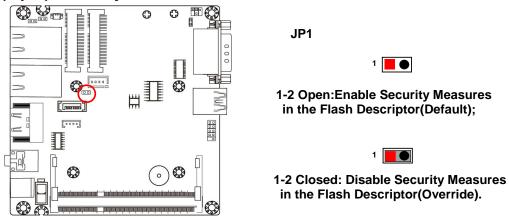
JBAT (2-pin): Clear CMOS Setting



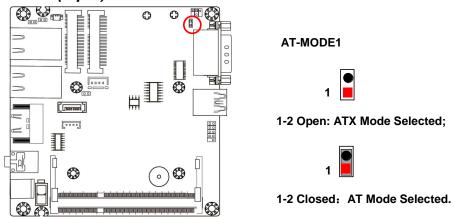
JME (2-pin): Clear ME\_RTC Function Setting



#### JP1 (2-pin): Security Measure Function Select

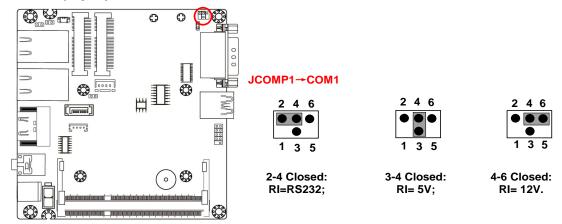


#### AT-MODE1 (2-pin): AT Mode Function Select



\*Pin 1-2 closed: AT\_MODE function is enabled. User needs to restart the system for the settings to take effect. In this case your computer will automatically turns on when power supply resumes.

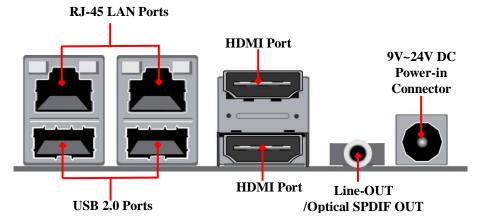
#### JCOMP1 (4-pin): COM1 Port Pin9 Function Select



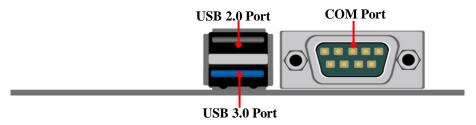
#### 2-2 Connectors and Headers

#### 2-2-1 Connectors

Rear IO Panel Diagram:



# Front IO Panel Diagram:



lcon	Name	Function
	RJ-45 LAN Port	This connector is standard RJ-45 LAN jack for Network connection.
	HDMI Port	To connect display device that support HDMI specification.
	USB 2.0 Port	To connect USB keyboard, mouse or other devices compatible with USB specification.
0	Line-Out Connector /Optical SPDIF-Out Connector	For user to connect external speaker, earphones, etc to transfer system audio output.  This connector can function as optical SPDIF-Out jack with compatible cables & devices.
	*COM1 Port	Mainly for user to connect external MODEM or other devices that supports Serial Communications Interface.
	USB 3.0 Port	To connect USB keyboard, mouse or other devices compatible with USB specification. USB 3.0 ports supports up to 5Gbps data transfer rate.



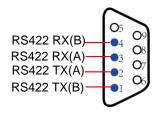
DC-in Power Connector

For user to connect compatible power adapter to provide power supply for the system.

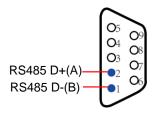
#### COM1 (9-pin Block): RS232/422/485 Port

COM1 port can function as RS232/422/485 port. In normal settings COM1 functions as RS232 port. With compatible COM cable COM1 can function as RS422 or RS 485 port.

User also needs to go to BIOS to set 'Transmission Mode Select' for COM1 (refer to Page 21) at first, before using specialized cable to connect different pins of this port.

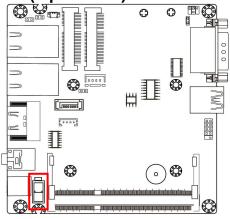


For RS422 Mode



For RS485 Mode

#### ATX2P (2-pin Block): DC 9V~24V Power-in Connector

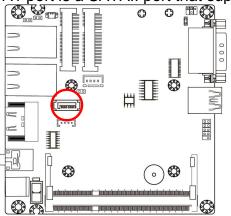




Pin.	Definition
1	GND
2	+9V~+24V DC_IN

#### SATA1 (7-pin Block): SATAII Port connector

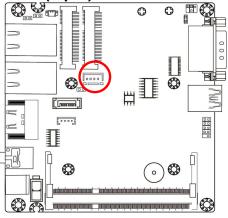
SATA1 port is a SATAII port that supports 3GB/s transfer rate.



Pin No.	Definition	
1	GND	
2	TXP	]
3	TXN	
4	GND	4
5	RXN	
6	RXP	
7	GND	



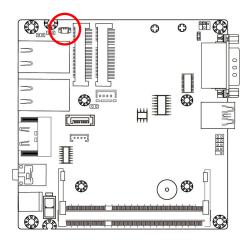
# PWOUT1 (4-pin): SATA Power Connector

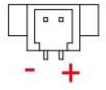




Pin No.	Definition
1	+5V
2	GND
3	GND
4	+12V

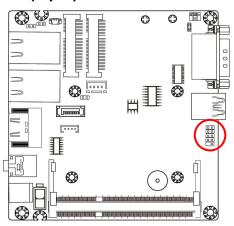
#### **BATCON (2-pin): Battery Connector**

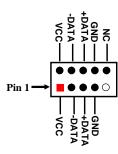


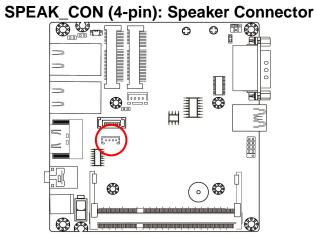


# **2-2-2 Header**

# F\_USB1 (9-pin): USB 2.0 Port Header



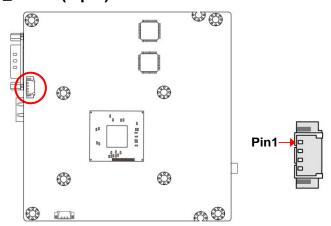




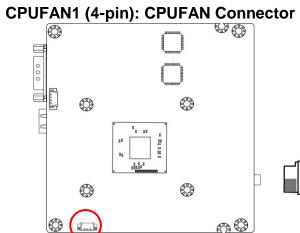


Pin No.	Definition
1	L-
2	L+
3	R+
4	R-

#### FP\_CON1 (4-pin): Front Panel Connector



Pin No.	Definition
1	Power_SW
2	GND
3	PWRLED -
4	PWRLED+





Pin No.	Definition
1	VCC
2	GND
3	Fan Detect

# Chapter 3 Introducing BIOS

#### Notice!

The BIOS options in this manual are for reference only. Different configurations may lead to difference in BIOS screen and BIOS screens in manuals are usually the first BIOS version when the board is released and may be different from your purchased motherboard. Users are welcome to download the latest BIOS version form our official website.

The BIOS is a program located on a Flash Memory on the motherboard. This program is a bridge between motherboard and operating system. When you start the computer, the BIOS program will gain control. The BIOS first operates an auto-diagnostic test called POST (power on self test) for all the necessary hardware, it detects the entire hardware device and configures the parameters of the hardware synchronization. Only when these tasks are completed done it gives up control of the computer to operating system (OS). Since the BIOS is the only channel for hardware and software to communicate, it is the key factor for system stability, and in ensuring that your system performance as its best.

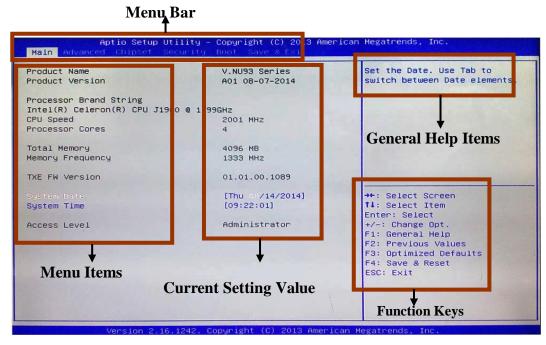
# 3-1 Entering Setup

Power on the computer and by pressing <Del> immediately allows you to enter Setup. If the message disappears before your respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt> and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to

Press < Del> to enter Setup

#### 3-2 BIOS Menu Screen

The following diagram show a general BIOS menu screen:



**BIOS Menu Screen** 

### 3-3 Function Keys

In the above BIOS Setup main menu of, you can see several options. We will explain these options step by step in the following pages of this chapter, but let us first see a short description of the function keys you may use here:

- Press←→ (left, right) to select screen;
- Press ↑↓ (up, down) to choose, in the main menu, the option you want to confirm or to modify.
- Press <Enter> to select.
- Press <+>/<-> keys when you want to modify the BIOS parameters for the active option.
- **[F1]:** General help.
- **[F2]:** Previous value.
- [F3]: Optimized defaults.
- [F4]: Save & Reset.
- Press < Esc> to quit the BIOS Setup.

#### 3-4 Getting Help

#### Main Menu

The on-line description of the highlighted setup function is displayed at the top right corner the screen.

#### Status Page Setup Menu/Option Page Setup Menu

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window, press <**Esc**>.

#### 3-5 Menu Bars

#### There are six menu bars on top of BIOS screen:

MainTo change system basic configurationAdvancedTo change system advanced configuration

**Chipset** To change chipset configuration

**Security** Password settings

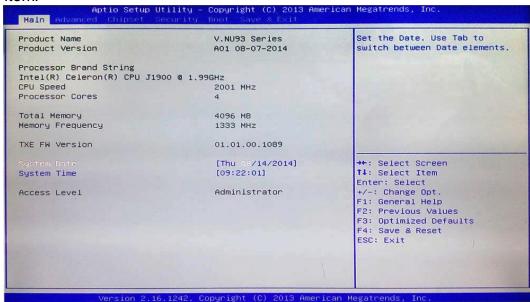
**Boot** To change boot settings

Save & Exit Save setting, loading and exit options.

User can press the right or left arrow key on the keyboard to switch from menu bar. The selected one is highlighted.

#### 3-6 Main Menu

Main menu screen includes some basic system information. Highlight the item and then use the <+> or <-> and numerical keyboard keys to select the value you want in each item.



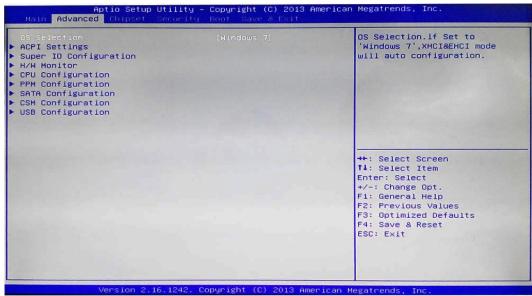
#### **System Date**

Set the date. Please use [Tab] to switch between data elements.

#### **System Time**

Set the time. Please use [Tab] to switch between time elements.

#### 3-7 Advanced Menu



#### **OS Selection**

The optional settings: [Windows 8.X]; [Android]; [Windows 7].

\* **Note:** User need to go to this item to select the OS mode before installing corresponding OS driver, otherwise problems will occur when installing the driver.

#### ACPI Settings

Press [Enter] to make settings for the following sub-item:

#### **ACPI Settings**

#### **Enable Hibernation**

Use this item to enable or disable system ability to hibernate (OS S4 Sleep State).

This option may be not effective with some OS.

The optional settings: [Disabled]; [Enabled].

#### **ACPI Sleep State**

Use this item to select the highest ACPI sleep state the system will enter when the

suspend button is pressed.

The optional settings are: [Suspend Disabled]; [S3 (Suspend to RAM)].

#### **EUP Function**

The optional settings: [Disabled]; [Enabled].

This item should be set as [Disabled], if you wish to have all active wake-up functions.

#### Wake-Up by PCIE/LAN from S5

The optional settings: [Disabled]; [Enabled].

#### **PWRON After PWR-Fail**

The optional settings are: [Former-Sts]; [Always on]; [Always off].

#### RTC WakeUp

The optional settings: [Disabled]; [Fixed Time]; [Dynamic Time]. Use this item to enable or disable system wake on alarm event.

When set as [Fixed Time], system will wake on the hour/min/sec specified.

When set as [Dynamic Time], system will wake on the current time + increased minute(s).

#### Super I/O Configuration

Press [Enter] to make settings for the following sub-items:

#### **Super IO Configuration**

#### Serial Port 1 Configuration

Press [Enter] to make settings for the following items:

#### Serial Port 1 Configuration

#### **Serial Port**

Use this item to enable or disable serial port (COM).

#### **Change Settings**

Use this item to select an optimal setting for super IO device.

#### **Transmission Mode Select**

The optional settings are: [RS422]; [RS232]; [RS485].

#### **Mode Speed Select**

The optional settings are: [RS232/RS422/RS485=250kbps]; [RS232=1Mbps,

RS422/RS485=10Mbps].

#### **WatchDog Timer**

The optional settings: [Disabled]; [Enabled].

Use this item to enable or disable WatchDog Timer Control. When set as [Enabled], the following sub-items shall appear:

#### **WatchDog Timer Value**

User can set a value in the range of [4] to [255].

#### **WatchDog Timer Unit**

The optional settings are: [Sec.]; [Min.].

#### ▶ H/W Monitor

Press [Enter] to view current PC health status & system working status and make settings for the following sub-items:

#### **CPUFAN Smart Mode**

The optional settings are: [Disabled]; [Enabled].

When set as [Enabled], the following sub-items shall appear:

#### **CPUFAN Full-Speed Temperature**

Use this item to set CPUFAN full speed temperature. Fan will run at full speed when above the pre-set temperature.

#### **CPUFAN Idle-Speed Temperature**

Use this item to set CPUFAN idle speed temperature. Fan will run at idle speed when below the pre-set temperature.

#### **CPUFAN Full-Speed Duty**

Use this item to set CPUFAN full speed duty. Fan will run at full speed when above the pre-set duty.

#### **CPUFAN Idle-Speed Duty**

Use this item to set CPUFAN idle speed duty. Fan will run at idle speed when below the pre-set duty.

#### CPU Configuration

Press [Enter] to view current CPU configuration and make settings for the following sub-items:

#### **Active Processor Cores**

Use this item to set the number of cores to enable in each processor packages.

#### **Limit CPUID Maximum**

The optional settings: [Disabled]; [Enabled].

This item should be set as [Disabled] for Windows XP.

#### **Execute Disable Bit**

The optional settings: [Disabled]; [Enabled].

#### **Hardware Prefetcher**

The optional settings are: [Disabled]; [Enabled].

Use this item to turn on/off the Mid Level Cache (L2) streamer prefetcher.

#### **Adjacent Cache Line Prefetch**

The optional settings are: [Disabled]; [Enabled].

Use this item to turn on/off prefetching of adjacent cache lines.

#### **Intel Virtualization Technology**

The optional settings: [Enabled]; [Disabled].

When set as [Enabled], a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.

#### **Power Technology**

The optional settings: [Disabled]; [Energy Efficient]; [Custom].

\*When set as [Custom], user can make further settings in the following sub-items:

#### **EIST**

The optional settings: [Disabled]; [Enabled].

Use this item to enable or disable Intel SpeedStep.

#### **Turbo Mode**

The optional settings: [Disabled]; [Enabled].

#### **P-STATE Coordination**

Use this item to change P-STATE coordination type.

The optional settings: [HW\_ALL]; [SW\_ALL]; [SW\_ANY].

#### **CPU C6 report**

The optional settings: [Disabled]; [Enabled].

Use this item to enable or disable CPU C6 (ACPI C3) report to OS.

#### **CPU C7 report**

The optional settings: [Disabled]; [Enabled].

Use this item to enable or disable CPU C7 (ACPI C3) report to OS.

#### Package C State Limit

The optional items are: [C0]; [C1]; [C3]; [C6]; [C7]; [No Limit].

#### > PPM Configuration

Press [Enter] to make settings for PPM Configuration:

#### PPM Configuration:

#### **EIST**

The optional settings: [Enabled]; [Disabled].

Use this item to enable or disable Intel SpeedStep.

#### **CPU C Status Report**

The optional settings: [Disabled]; [Enabled].

Use this item to enable or disable CPU C status report to OS.

\*When set as [Enabled], the following sub-items shall appear:

#### Max CPU C-state

This option controls Max C state that the processor will support.

The optional settings: [C7]; [C6]; [C1].

#### SATA Configuration

Press [Enter] to make settings for the following sub-items:

#### SATA Configuration

#### SATA Port

The optional settings: [Disabled]; [Enabled].

Use this item to enable or disable Serial ATA port.

#### **SATA Speed Support**

The item is for user to set the maximum speed the SATA controller can support.

The optional settings are: [Gen1]; [Gen2].

#### SATA ODD Port

The optional settings are: [Port0 ODD]; [Port1 ODD]; [No ODD].

#### **SATA Mode**

The optional settings are: [IDE Mode]; [AHCI Mode].

#### MSATA1

The optional settings are: [Enabled]; [Disabled].

#### **MSATA1 HotPlug**

The optional settings are: [Enabled]; [Disabled].

Use this item to enable or disable support for MSATA HotPlug function.

#### SATA1

The optional settings are: [Enabled]; [Disabled].

#### **SATA1 HotPlug**

The optional settings are: [Enabled]; [Disabled].

Use this item to enable or disable support for SATA1 HotPlug function.

#### CSM Configuration

Press [Enter] to make settings for the following sub-items:

#### Compatibly Support Module Configuration

#### **Option ROM Message**

Use this item to set display mode for option ROM.

The optional settings are: [Force BIOS]; [Keep Current].

#### **INT19 Trap Response**

This item is for BIOS reaction on INT19 trapping by Option ROM.

The optional settings are: [Immediate]; [Postponed].

[Immediate]: To execute the trap right away;

[Postponed]: To execute the trap during legacy boot.

#### Option ROM execution order

#### **Storage**

This item controls the execution of UEFI and Legacy Storage OpROM.

The optional settings are: [Do not launch]; [UEFI only]; [Legacy only]; [Legacy first]; [UEFI first].

#### Video

This item controls the execution of UEFI and Legacy Video OpROM.

The optional settings are: [Do not launch]; [UEFI only]; [Legacy only]; [Legacy first]; [UEFI first].

#### Other PCI devices

This item determines OpROM execution policy for devices other than Network, storage or video.

The optional settings are: [UEFI first]; [Legacy Only].

#### USB Configuration

Press [Enter] to make settings for the following sub-items:

#### **USB Configuration**

#### **Legacy USB Support**

The optional settings are: [Enabled]; [Disabled]; [Auto].

[Enabled]: To enable legacy USB support.

[Disabled]: To keep USB devices available only for EFI specification, [Auto]: To disable legacy support if no USB devices are connected.

#### **XHCI Hand-off**

This is a workaround for OSes without XHCI hand-off support. The XHCI ownership change should be claimed by XHCI driver.

The optional settings are: [Enabled]; [Disabled].

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

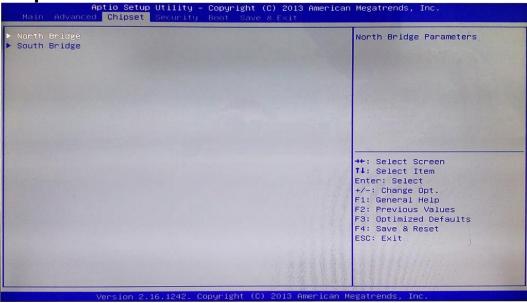
This is a workaround for OSes without EHCI hand-off support. The EHCI ownership change should be claimed by EHCI driver.

The optional settings are: [Disabled]; [Enabled].

#### **USB Mass Storage Driver Support**

The optional settings are: [Disabled]; [Enabled].

3-8 Chipset Menu



#### North Bridge

Press [Enter] to view current using memory information and make settings for the following sub-items:

#### **IGD Turbo Enable**

The optional settings are: [Enabled]; [Disabled].

#### **DVMT Pre-Allocated**

Use this item to select DVMT 5.0 pre-allocated (fixed) graphics memory size used by the internal graphics device.

The optional settings are: [64M]; [128M]; [256M]; [512M].

#### **DVMT Total Gfx Mem**

Use this item to select DVMT 5.0 total graphics memory size used by the internal graphics device.

The optional settings are: [128M]; [256M]; [MAX].

#### **Spread Spectrum Clock**

The optional settings are: [Enabled]; [Disabled].

#### RC6(Render Standby)

Use this item to enable or disable render standby support.

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

Use this item to select the video device which will be activated during POST. This has no effect if external graphics present.

The optional settings are: [VBIOS Default]; [HDMI1]; [HDMI2].

#### South Bridge

Press [Enter] to make settings for the following sub-items:

#### Mini PCIE

Use this item to enable or disable Mini-PCIE.

The optional settings are: [Disabled]; [Enabled].

When set as [Enabled], user can make settings in 'Speed' that appears:

#### **Speed**

Use this item to select PCIE speed for Mini-PCIE slot.

The optional settings are: [Auto]; [Gen2]; [Gen1].

#### Onboard PCIE Lan1 Device

Use this item to control the Onboard PCIE Lan1 device.

The optional settings are: [Disabled]; [Enabled].

#### **Onboard PCIE Lan2 Device**

Use this item to control the Onboard PCIE Lan2 device.

The optional settings are: [Disabled]; [Enabled].

#### **Onboard Lan BootROM**

Use this item to enable or disable boot option ROM for onboard network devices.

#### **XHCI Mode**

The system will show whether current XHCI support is enabled or disabled.

#### **USB 2.0 (EHCI) Support**

The system will show whether current USB 2.0 (EHCI) support is enabled or disabled.

#### **Audio Controller**

Use this item to control the detection of the Azalia HD Audio device.

The optional settings are: [Disabled]; [Enabled].

[Disabled]: Azalia will be unconditionally disabled;

[Enabled]: Azalia will be unconditionally enabled;

When set as [Enabled], user can make settings in 'Azalia HDMI Codec ' that appears:

#### **Azalia HDMI Codec**

Use this item to enable or disable internal HDMI codec for Azalia.

The optional settings are: [Enabled]; [Disabled].

#### **High Precision Timer**

Use this item to enable or disable the high precision event timer.

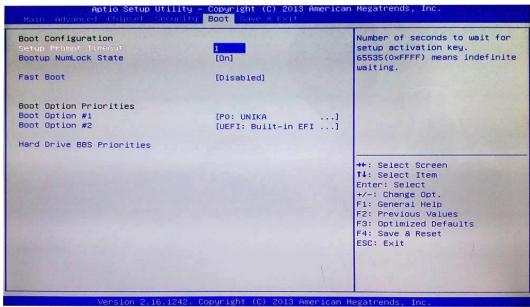
The optional settings are: [Enabled]; [Disabled].

## 3-9 Security Menu



Security menu allow users to change administrator password and user password settings.

#### 3-10 Boot Menu



#### **Boot Configuration**

#### **Setup Prompt Timeout**

Use this item to set number of seconds to wait for setup activation key.

#### **Bootup Numlock State**

Use this item to select keyboard numlock state.

The optional settings are: [On]; [Off].

#### **Fast Boot**

The optional settings are: [Enabled]; [Disabled].

When set as [Enabled], user can make settings in the following items that appear:

#### **VGA Support**

The optional settings are: [Auto]; [EFI Driver].

\*When set as [Auto], it will only install Legacy OpROM with Legacy OS and logo will not be shown during POST. EFI driver will still be installed with EFI OS.

#### **USB Support**

The optional settings are: [Disabled]; [Full Initial]; [Partial Initial].

[Disabled]: All USB devices will NOT be available until after OS boot;

[Partial Initial]: USB mass storage and specific USB port/device will NOT be available before OS boot;

[Full Initial]: All USB devices will NOT be available in OS and POST.

#### **PS2 Device Support**

The optional settings are: [Disabled]; [Enabled].

The PS2 devices will be skipped if this is set as [Disabled].

#### **Network Stack Driver Support**

The optional settings are: [Disabled]; [Enabled].

Network Stack Driver will be skipped if this is set as [Disabled].

#### **Boot Option Priorities**

#### Boot Option # 1/#2...

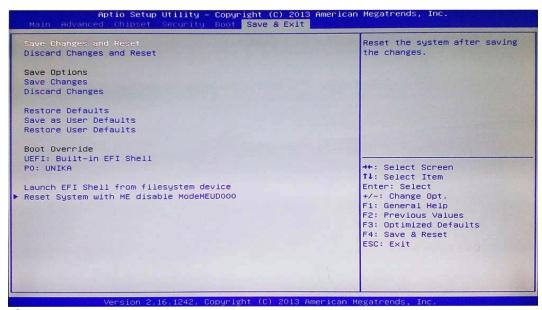
Use this item to set system boot order.

The optional settings are: [UEFI: Built-in EFI Shell]; [Disabled].

#### **Hard Drive BBS Priorities**

Press [Enter] to set hard driver BBS boot order.

#### 3-11 Save & Exit Menu



#### **Save Changes and Reset**

This item allows user to reset the system after saving the changes.

#### **Discard Changes and Reset**

This item allows user to reset the system without saving any changes.

#### Save Options

#### **Save Changes**

This item allows user to save changes done so far to any of the setup options.

#### **Discard Changes**

This item allows user to discard changes done so far to any of the setup options.

#### **Restore Defaults**

Use this item to restore /load default values for all the setup options.

#### Save as User Defaults

Use this item to save the changes done so far as user defaults.

#### **Restore User Defaults**

Use this item to restore defaults to all the setup options.

#### **Boot Override**

#### **UEFI: Built-in EFI Shell**

Press this item and a dialogue box shall appear to ask if user wish to save configuration and reset.

#### Lauch EFI Shell from filesystem device

Use this item to launch EFI shell application (shell.efi) from one of the available filesystem device.

#### Reset System with ME disable Mode MEUD000

Press [Enter] for ME to run into the temporary disable mode. Ignore if ME Ignition FWMEUD001.