USER'S MANUAL

GOT3187WL-834

All-in-One
18.5" WXGA TFT Fanless
Multi-Touch PANEL PC

User's Manual

AXIOMTEK

www.axiomtek.com

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CAUTION

If you replace wrong batteries, it causes the danger of explosion. It is recommended by the manufacturer that you follow the manufacturer's instructions to only replace the same or equivalent type of battery and dispose of used ones.

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Printed in Taiwan

Safety Precautions

Before getting started, read the following important cautions.

1. Be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and place all electronic components in any static-shielded devices. Most electronic components are sensitive to static electrical charge.

2. Disconnect the power cords from the GOT3187WL-834 Series before making any installation. Be sure both the system and the external devices are turned OFF. Sudden surge of power could ruin sensitive components. Make sure the GOT3187WL-834 Series is properly grounded.

3. Do not open the system's rear cover. If opening the cover for maintenance is a must, only a trained technician is allowed to do so. Integrated circuits on computer boards are sensitive to static electricity. To avoid damaging chips from electrostatic discharge, observe the following precautions:

   - Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This will help to discharge any static electricity on your body.

   - When handling boards and components, wear a wrist-grounding strap, available from most electronic component stores.

Trademarks Acknowledgments

Table of Contents

Section 1
Introduction

This chapter contains general information and detailed specifications of the GOT3187WL-834. Chapter 1 include the following sections:

- General Description
- Specifications
- Dimensions and outlines
- I/O Outlets
- Package List

1.1 General Description

The GOT3187WL-834 adopts an 18.5-inch WXGA/FHD LCD and supports Intel® Bay Trail-D processor. The Lite rugged industrial panel PC supports low power Intel® Celeron® processor J1900. It also provides two PCI Express Mini card slots for 3G, wireless network connectivity. This 18.5" multi-touch panel computer is suitable for transportation, heavy-duty industry, smart factory automation, and oil pipe monitoring systems.

Extended Operating Temperature Range with Fanless & IP65 front design

GOT3187WL-834 features a technology of extended operating temperature range which allows it to work between -10°C to +50°C. It incorporates compact ID and fanless cooling system with a low power Intel® Celeron® Processor J1900 (2M Cache, up to 2.42 GHz), IP65 front bezel to prevent from liquid or dust, making the platform a power-efficient solution.

Reliable and Stable Design

The GOT3187WL-834 adopts a fan-less cooling system, which makes it especially suitable for vibration-heavy environments, best for the transportation, ship, and industrial machinery markets. For high capacity storage requirement, GOT3187WL-834 can work under 1.0G (10 ~ 500Hz) in operation mode with a patent of anti-vibration design. The patent improves the system reliability and sustainability. (Note: Sometimes heavy-vibration may cause the LCD screen flash with white color. It won't affect product function.)

WLAN Antenna Supported (optional)

GOT3187WL-834 has 2 PCI Express Mini Card slots for optional add-on such as wireless LAN card for 802.11 a/b/g/n connections, 3G/GPRS application, and more. These slots also provide 3 optional fixed rotational WLAN/3G antennas for wireless network connection.

More Features

GOT3187WL-834 utilizes one 204-pin DDR3L SODIMM system memory max. up to 8GB, one SATA HDD and one mSATA. It provides over-current protection-fuse and a full set of I/O including RS-232/422/485, USB 2.0, USB 3.0, audio (line-out), and Gigabit Ethernet. Additionally, this slim unit supports VESA mount, wall mount (optional) and desktop stand (optional).

1.2 Specifications

Main CPU Board

- **CPU**
  - Intel® Celeron® Processor J1900 (2M Cache, up to 2.42 GHz) onboard
- **System Memory**
  - 1 x 204-pin DDR3L SO-DIMM socket
  - Maximum memory up to 8GB
- **BIOS**
  - American Megatrends, Inc. (AMI) BIOS

I/O System

- **Standard I/O**
  - 2 x RS-232/422/485
  - 2 x USB 2.0
  - 2 x USB 3.0
- **Ethernet**
  - 2 x RJ45 for Giga Ethernet (Intel i210IT)
- **Audio**
  - 1x Line-out
- **Expansion**
  - 1 x Mini-card slot (w/SIM slot)
  - 1 x Mini-card slot (supports mSATA, optional)
- **Storage**
  - 1 x 2.5" SATA
  - 1 x mSATA
- **Power connector**
  - Screw power connector (AC Version)
  - Phoenix power connector (DC Version)

System Specification

- **18.5" WXGA (1366x768) LCD with LED backlight**
- **Resistive touch panel**
- **Fanless Heat Dispensing Design**
- **IP65 front bezel**
- **Disk drive housing:**
  - One 2.5" SATA drive
- **Net Weight**
  - 5.8 Kgs
- **Dimension (Main Body Size)**
  - 460.8x 58.5x 285 mm
- **Operation Temperature**
  - -10°C to 50°C
- **Relative Humidity**
  - 20% to 90% @ 40°C, Non-Condensing
- **System Power input**
  - DC Version: 9 to 36VDC or 12 to 36VDC (FHD Version) with phoenix power connector
  - AC Version: 12VDC, 60W power adapter

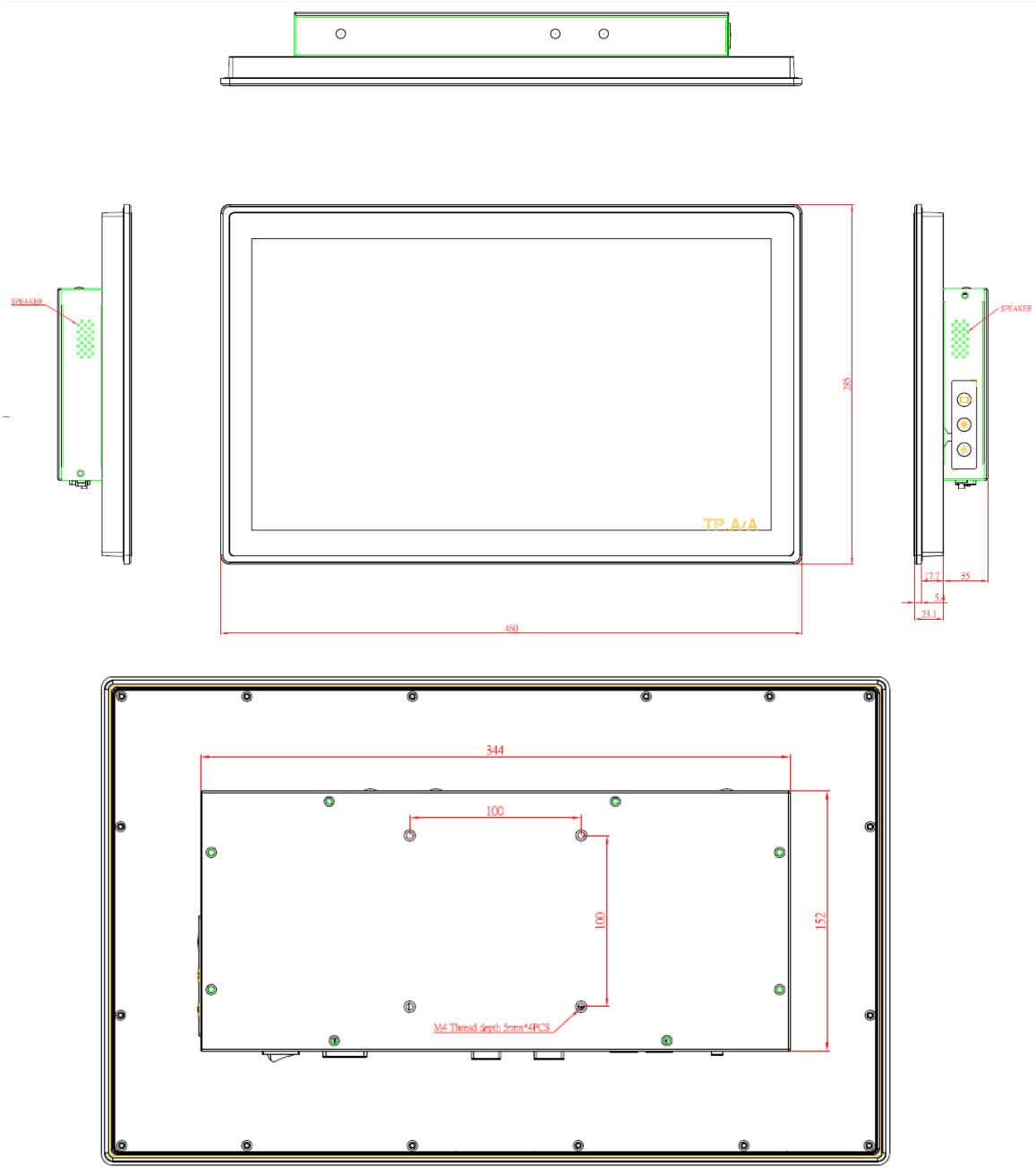
NOTE: All specifications and images are subject to change without notice.

If the operation temperature is higher than 40℃, the wide temperature HDD is recommended to be used on the device.

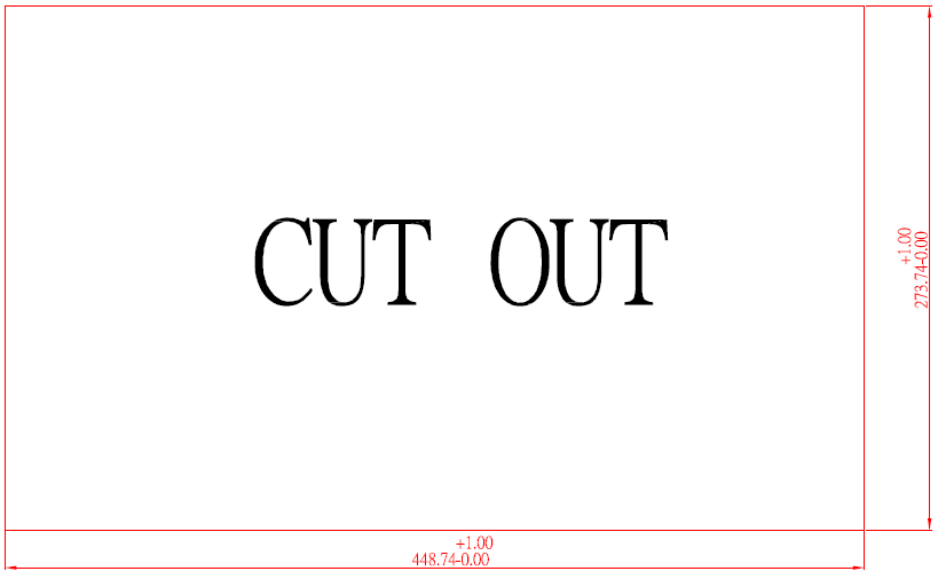
1.3 Dimensions and Outlines

The following diagrams show the dimensions and outlines of GOT3187WL-834

Outline dimension: 460.8x 58.5x 285 mm

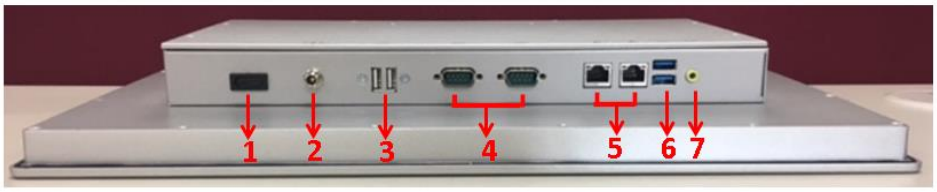


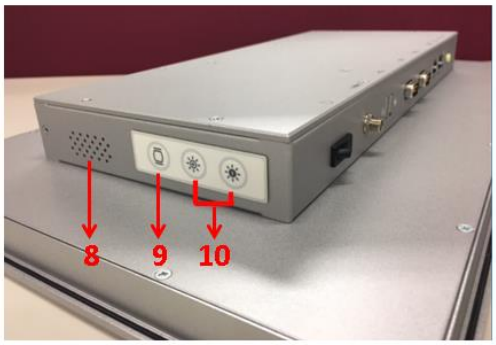
Cut Out dimensions: 448.74 x 273.74 mm



1.4 I/O Outlets

Please refer to the following illustration for I/O locations of the GOT3187WL-834.





No	Function
1	1 x Power Switch
2	1 x Screw conn. w/AC power adapter
3	2 x USB 2.0
4	2 x COM (RS-232/422/485)
5	2 x Ethernet
6	2 x USB 3.0
7	1 x Audio (Line-out)
8	2 x Speaker
9	1 x Backlight switch
10	2 x Brightness adjust (+/-)

1.5 Packing List

When you receive the GOT3187WL-834, the bundled package should contain the following items:

- **1 x GOT3187WL-834**
- **1 x AC adapter x 1 (AC Version)**
- **1 x Power cord x1 (AC Version)**
- **1 x Phoenix connector (DC Version)**
- **1 x Panel mount kit**

If you can not find the package or any items are missing, please contact Axiomtek distributors immediately.

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Section 2
Hardware and Installation

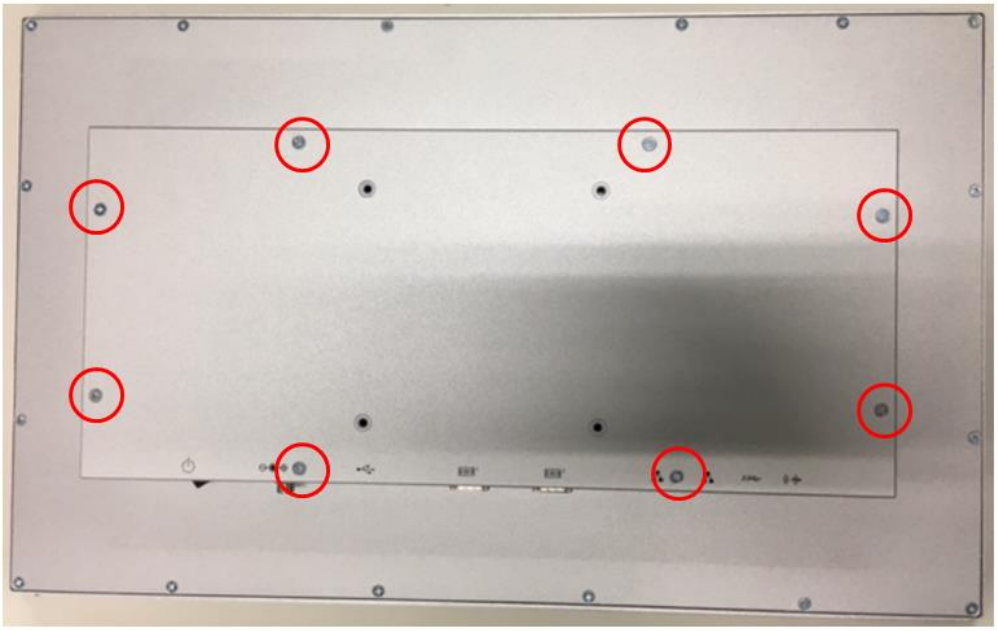
The GOT3187WL-834 provides rich I/O ports and flexible expansions for you to meet different demand. The chapter will show you how to install the hardware. It includes:

- **Open Back Cover**
- **Jumper and Switch Setting**
- **Ethernet**
- **VESA Mount**
- **Wireless LAN Card**
- **Power Input**

2.1 Open back cover

This section tells users how to open back cover. Please follow the steps below.

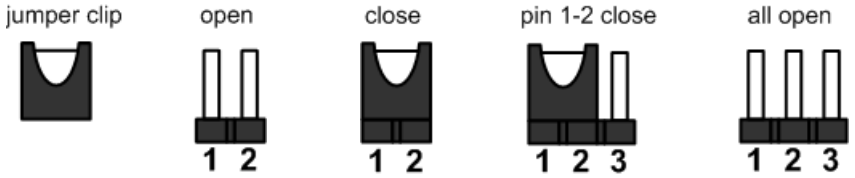
Step 1 Unscrew 8 screws on the back cover. Please refer the photo below.



Step 2 Remove the back cover.

2.2 Jumper and Switch Setting

Jumper is a small component consisting of jumper clip and jumper pins. Install jumper clip on 2 jumper pins to close. And remove jumper clip from 2 jumper pins to open. The following illustration shows how to set up jumper.



Before applying power to GOT3187WL-834, please make sure all of the jumpers and switch are in factory default position. Below you can find a summary table and onboard default settings.

Jumper	Description	Setting
JP6	PCIe / mSATA setting Default: PCIe	1-2 close
JP7	Auto Power On Default: Disable	2-3 close
JP8	Restore BIOS Optimal Defaults (Clear CMOS) Default: Normal Operation	1-2 close

2.2.1 PCIe / mSATA setting (JP6)

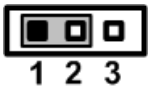
For CN8, switches mSATA or PCIe setting.

Function	Setting
PCIe (Default)	1-2 close
mSATA	2-3 close

2.2.2 Auto Power On (JP7)

If JP7 is enabled for power input, the system will be automatically power on without pressing soft power button. If JP7 is disabled for power input, it is necessary to manually press soft power button to power on the system.

Function	Setting
Enable auto power on (Default)	1-2 close
Disable auto power on	2-3 close



2.2.3 Restore BIOS Optimal Defaults (JP8)

Put jumper clip to pin 2-3 for a few seconds then move it back to pin 1-2. Doing this procedure can restore BIOS optimal defaults.

Function	Setting
Normal operation (Default)	1-2 close
Restore BIOS optimal defaults	2-3 close

2.2.4 COM port Connector

The pin assignment of RS-232/RS-422/RS-485 is listed on the following table.

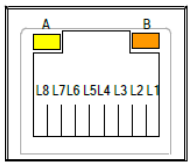
Pin	RS-232	RS-422	RS-485
1	DCD	TX-	Data-
2	RXD	TX+	Data+
3	TXD	RX+	No use
4	DTR	RX-	No use
5	GND	GND	GND
6	DSR	No use	No use
7	RTS	No use	No use
8	CTS	No use	No use
9	RI	No use	No use

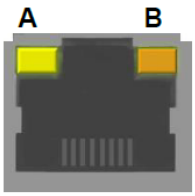
2.3 Ethernet

The GOT3187WL-834 has two RJ-45 connectors: LAN1 and LAN2. Ethernet connection can be established by plugging one end of the Ethernet cable into this RJ-45 connector and the other end (phone jack) to a 1000/100/10-Base-T hub.

Please refer to detailed pin assignment list below:

Pin	Signal	Pin	Signal
L1	MDI0+	L5	MDI2+
L2	MDI0-	L6	MDI2-
L3	MDI1+	L7	MDI3+
L4	MDI1-	L8	MDI3-
A	Active LED (Yellow)		
B	100 LAN LED (Green) / 1000 LAN LED (Orange)		

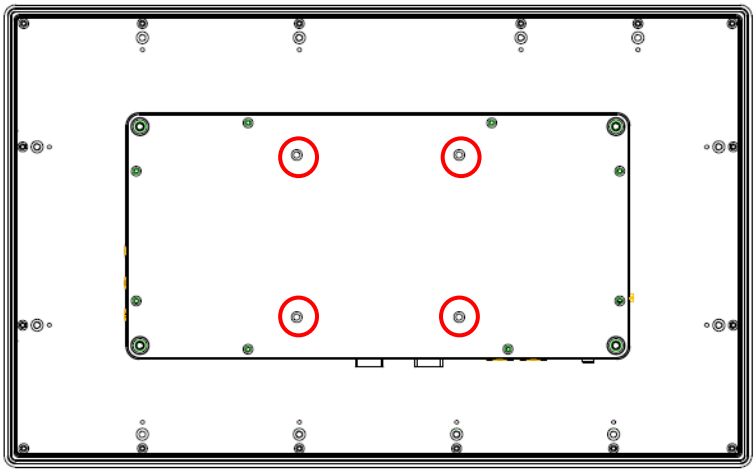




2.4 Mountings: VESA

The GOT3187WL-834 provides VESA mount: 100x100 mm. Screw four screws to fix the kit in the back chassis.

VESA mount:

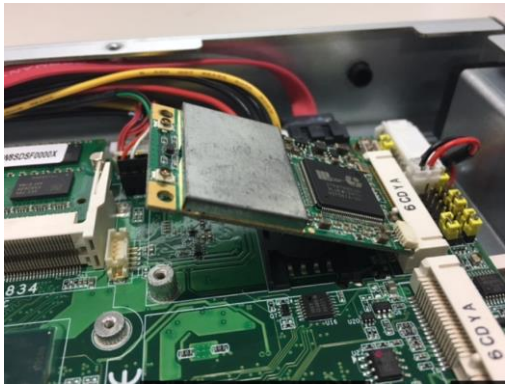


2.5 Wireless LAN Card Installation

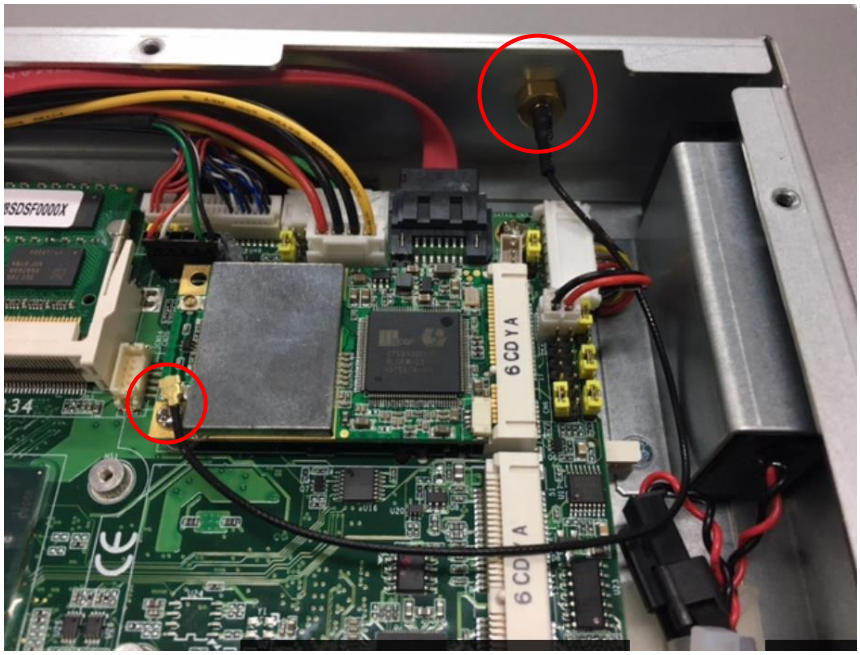
The GOT3187WL-834 provides one Mini card slot for user to install one wireless LAN card. When installing the wireless LAN card, refer to the following instructions and illustration:

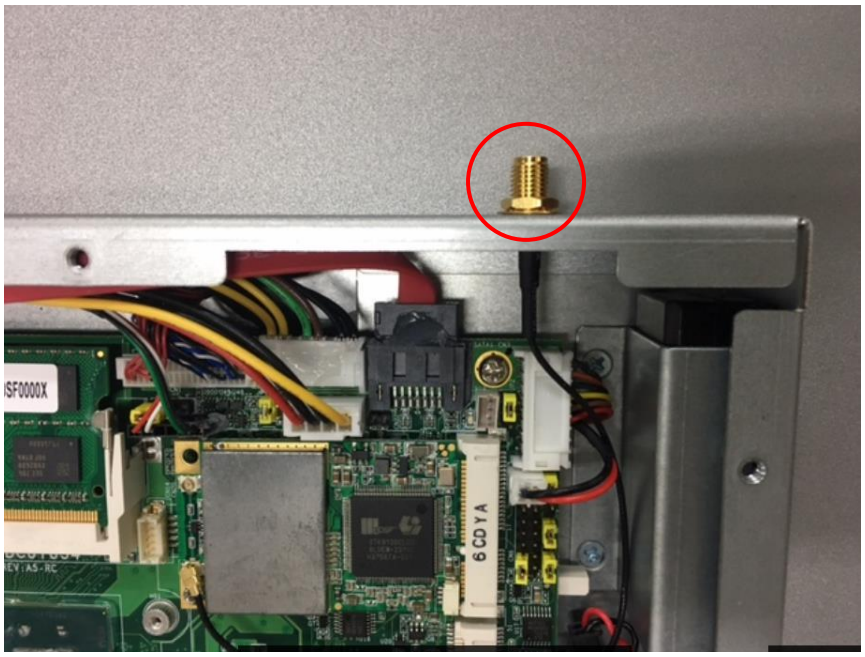
Step 1 **Refer to section 2.2 to open the back cover and find out mini-card slot on mainboard.**

Step 2 **Insert the wireless LAN card to the slot. Push it down firmly until it is fixing with screw by the slot.**



Step 3 **Find the Antenna cable and connect it on wireless LAN card**





Step 4 **Remove the antenna plug from the top of back cover, and then install the antenna on the antenna connector**

NOTE: Please have the extended bracket when using half-size mini card.

2.6 Power Input

GOT3187WL-834 equips with a screw type power connector. It adopts AC to DC power adapter 12V/5A. Please follow the signs on power connector to connect power source.

GOT3187WL-834 equips with a phoenix type power connector. It adopts 9VDC to 36VDC or 12VDC to 36VDC(FHD Version). Please follow the signs on power connector to connect DC power source

+: Power positive G: Safety ground －:Power negative

NOTE: The safety ground must be connected to ensure the unit working appropriately.

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Section 3
AMI BIOS Setup Utility

This chapter provides users with detailed description how to set up basic system configuration through the AMIBIOS8 BIOS setup utility.

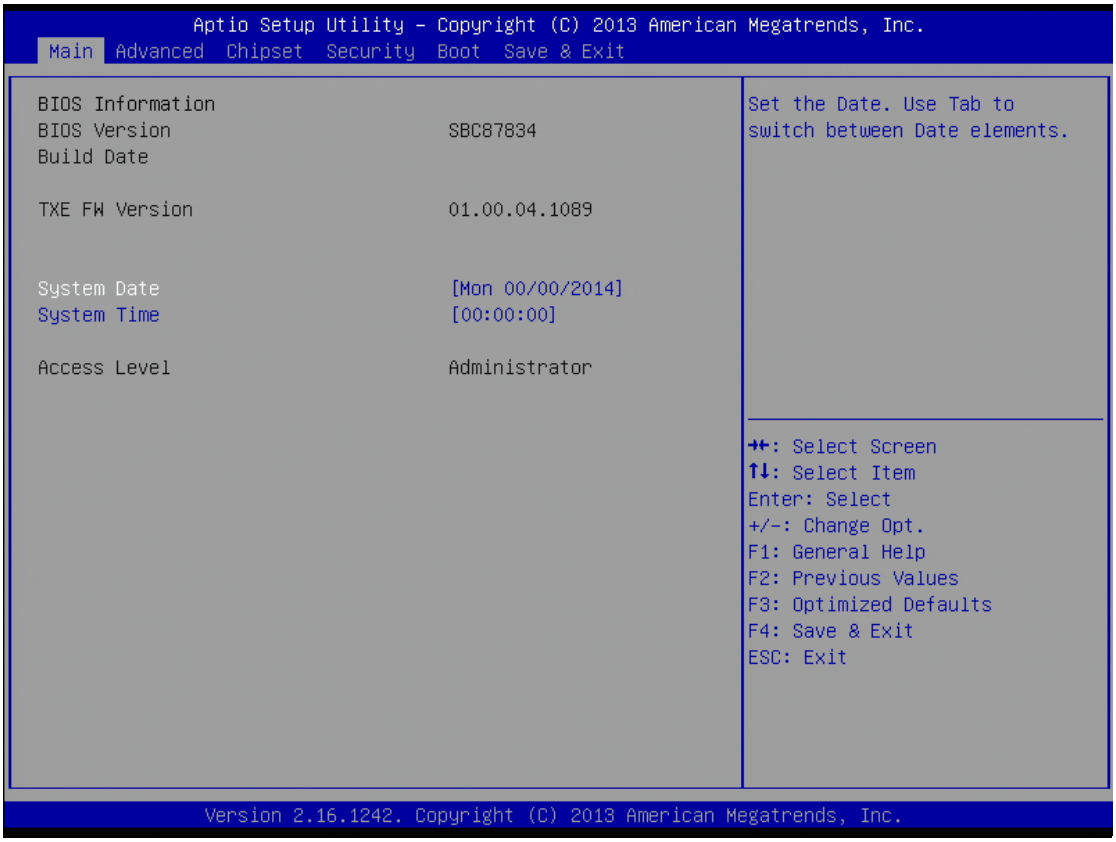
3.1 Navigation Keys

The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process.
These keys include <F1>, <F2>, <F3>, <F4>, <Enter>, <ESC>, <Arrow> keys, and so on.

 ***NOTE: Some of navigation keys differ from one screen to another.***

← Left/Right	The Left and Right <Arrow> keys allow you to select a setup screen.
↑↓ Up/Down	The Up and Down <Arrow> keys allow you to select a setup screen or sub-screen.
+– Plus/Minus	The Plus and Minus <Arrow> keys allow you to change the field value of a particular setup item.
Tab	The <Tab> key allows you to select setup fields.
F1	The <F1> key allows you to display the General Help screen.
F2	The <F2> key allows you to load previous value
F3	The <F3> key allows you to Load Optimized Defaults.
F4	The <F4> key allows you to save any changes you have made and exit Setup. Press the <F4> key to save your changes.
Esc	The <Esc> key allows you to discard any changes you have made and exit the Setup. Press the <Esc> key to exit the setup without saving your changes.
Enter	The <Enter> key allows you to display or change the setup option listed for a particular setup item. The <Enter> key can also allow you to display the setup sub-screens.

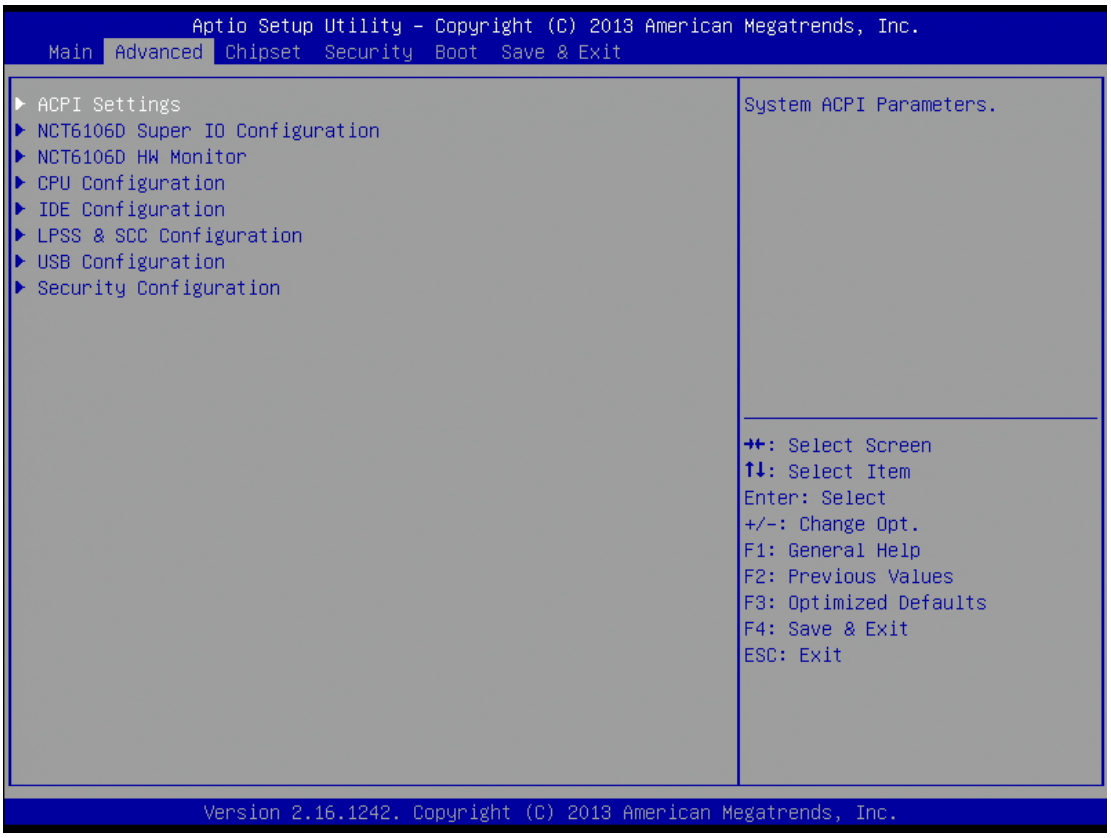
3.2 Main Menu



System Date / Time

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 is entered in HH:MM:SS format.

3.3 Advanced Menu



The Advanced menu allows users to set configuration of the CPU and other system devices. You can select any of the items in the left frame of the screen to go to the sub menus:

- ACPI Settings
- NCT6106D Super IO Configuration
- NCT6106D H/W Monitor
- CPU Configuration
- IDE Configuration
- LPSS & SCC Configuration
- USB Configuration
- Security Configuration

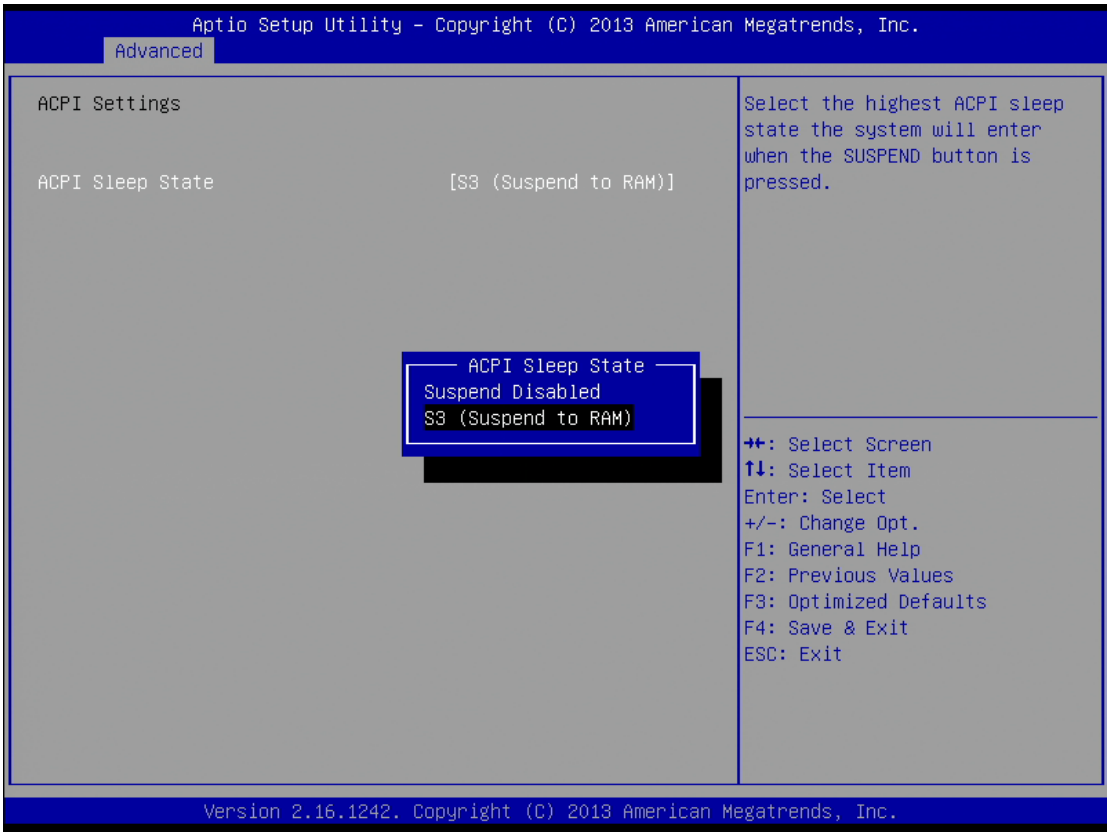
For items marked with "►", please press <Enter> for more options.'

ACPI Settings

You can use this screen to select options for the ACPI Configuration, and change the value of the selected option. A description of the selected item appears on the right side of the screen.

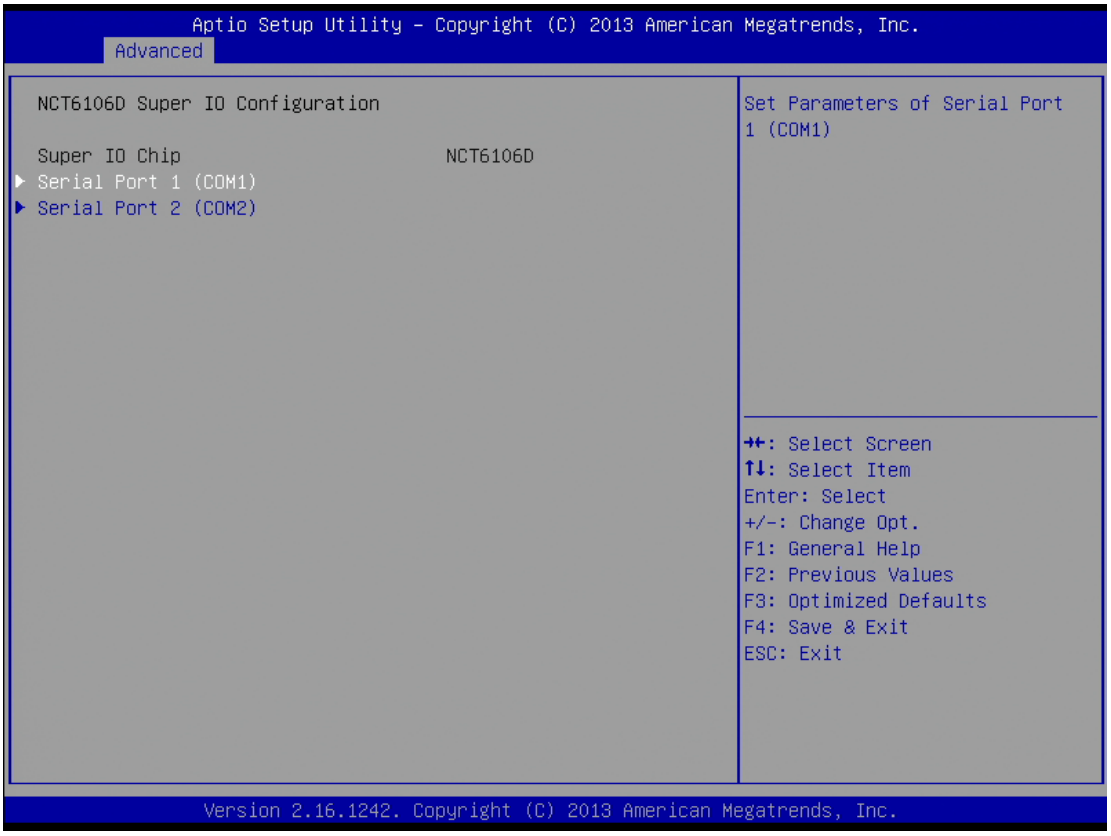
ACPI Sleep State

Allow you to select the Advanced Configuration and Power Interface (ACPI) state to be used for system suspend. Here are the options for your selection, Suspend disable and S3 (Suspend to RAM).



NCT6106D Super IO Configuration

Use this screen to select options for the Super IO Configuration, and change the value of the selected option



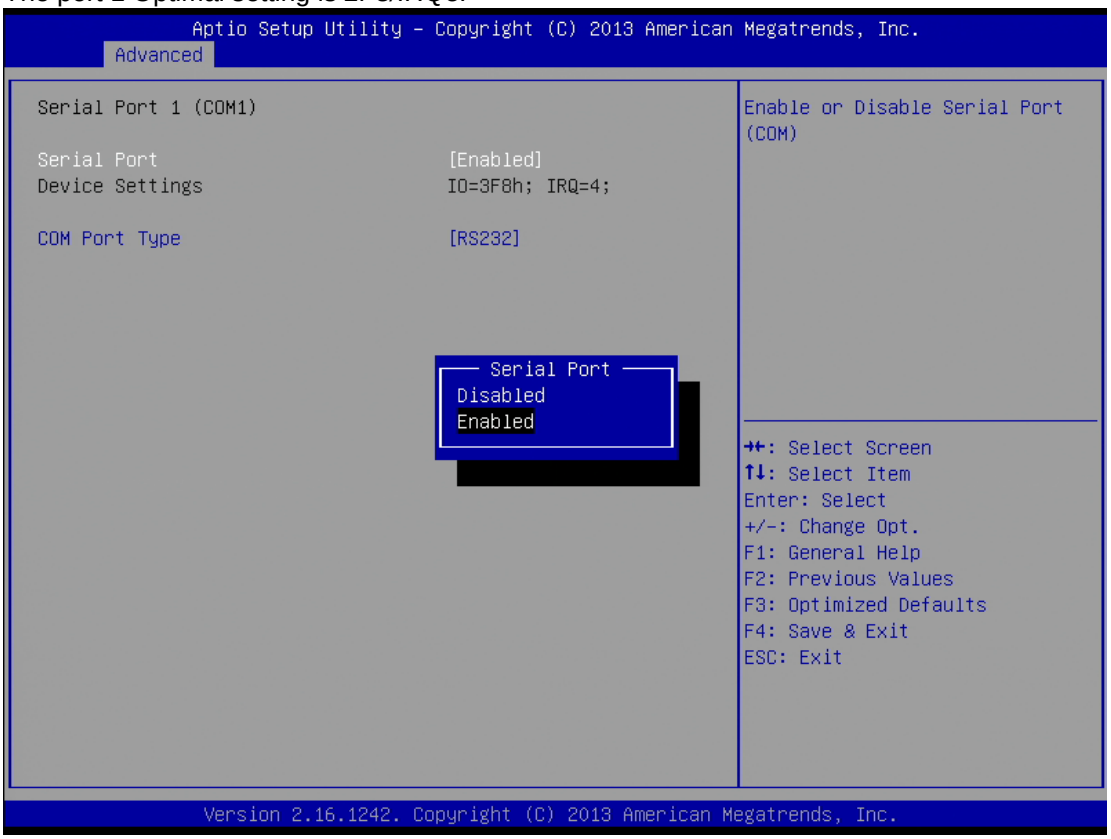
Serial Port 1-2 configuration

Serial port:

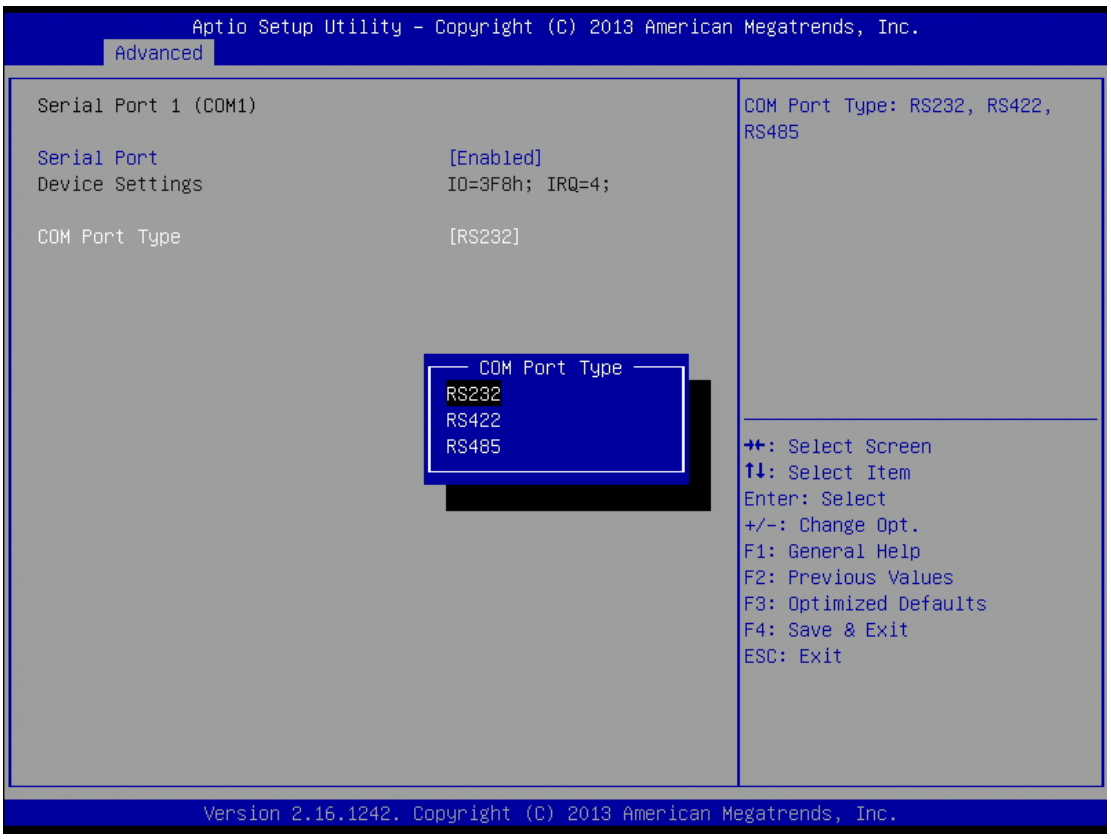
This option used to enable or disable the serial port.

Device Setting:

This item specifies the base I/O port address and Interrupt Request address of serial port.
The port 0 Optimal setting is *3F8/IRQ4*.
The port 1 Optimal setting is *2F8/IRQ3.*

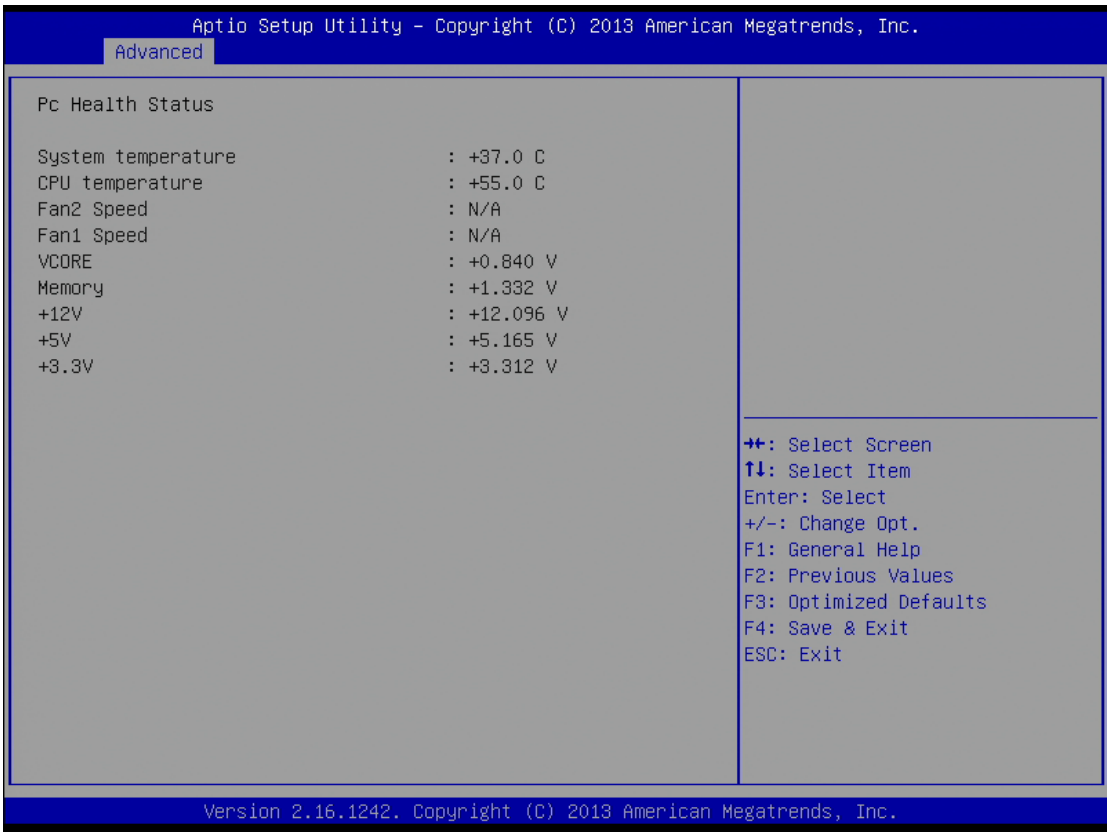


Serial type:
This option used to select RS232/422/485 function.



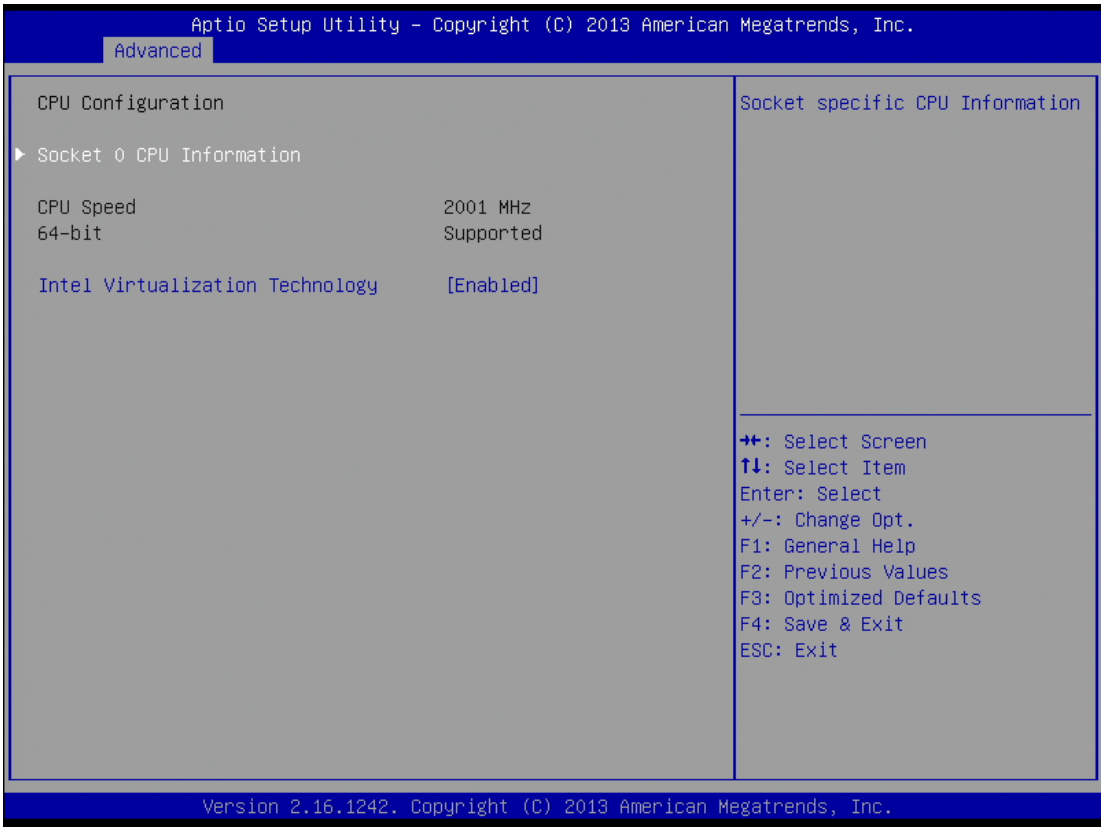
NCT6106D H/W Monitor

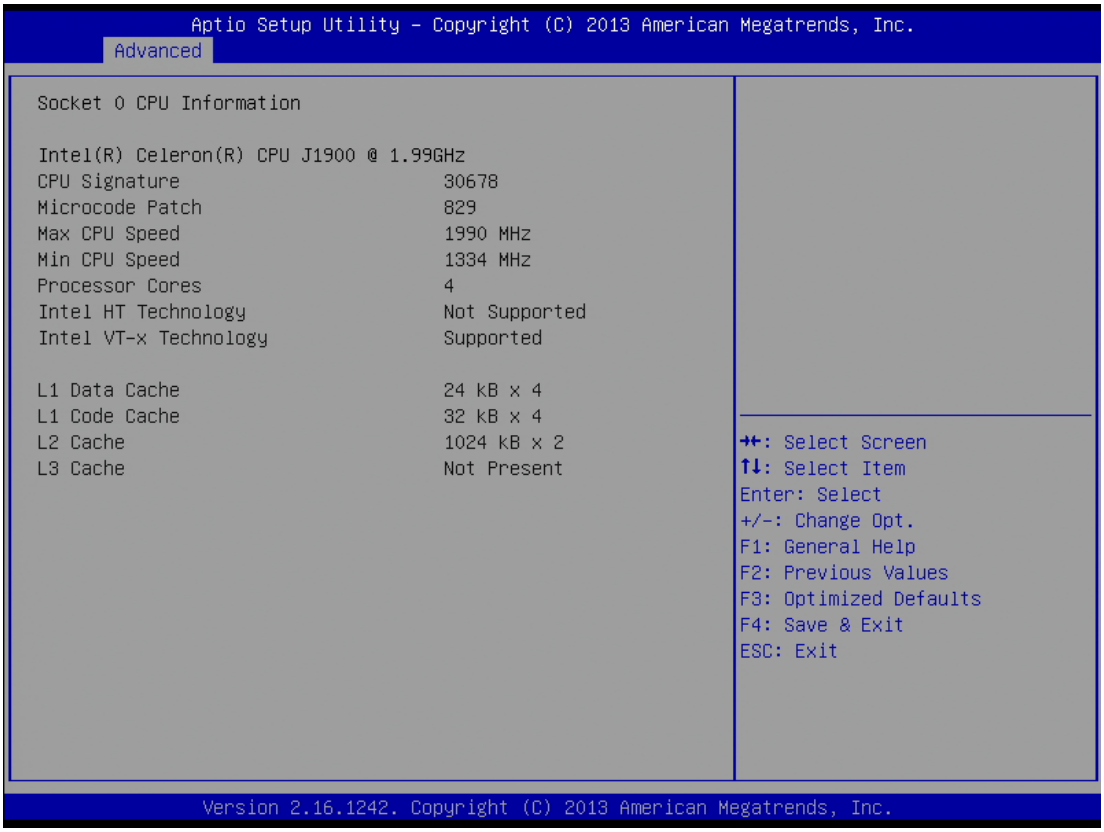
This screen shows the Hardware Health Configuration.

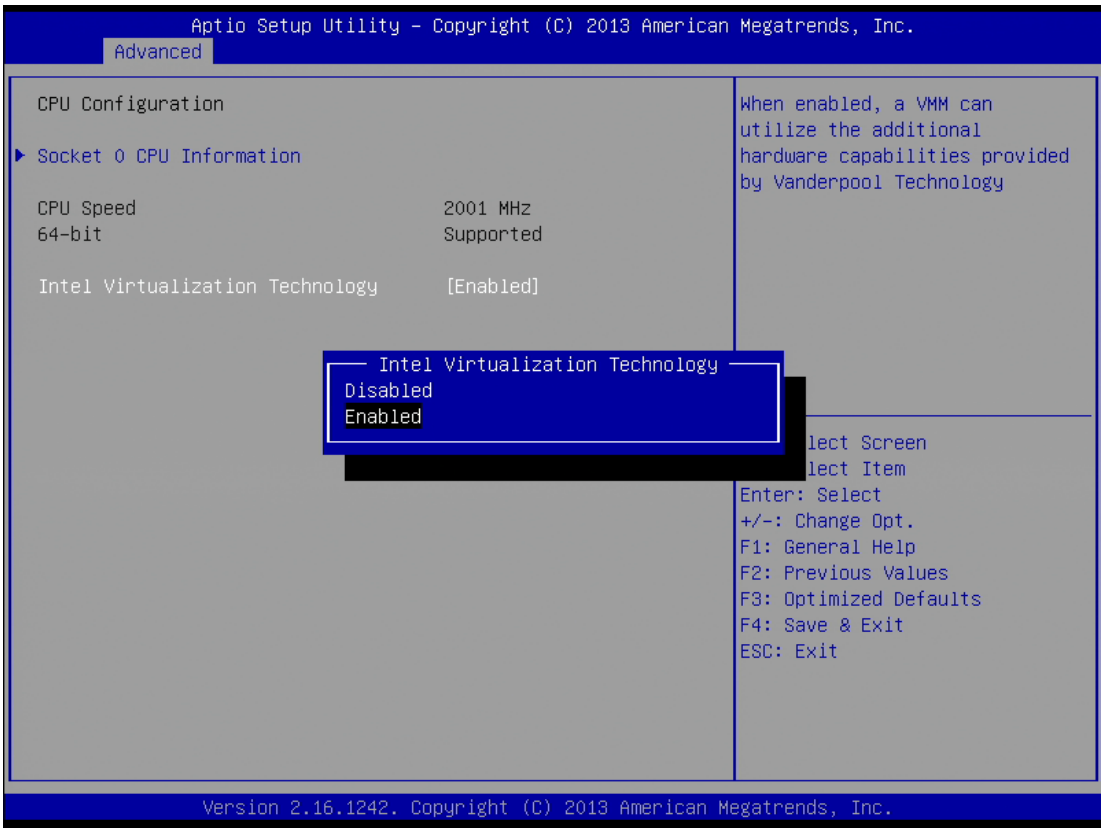


CPU Configuration

These screens show the CPU Configuration, CPU information and Intel virtualization technology enable/disable selected





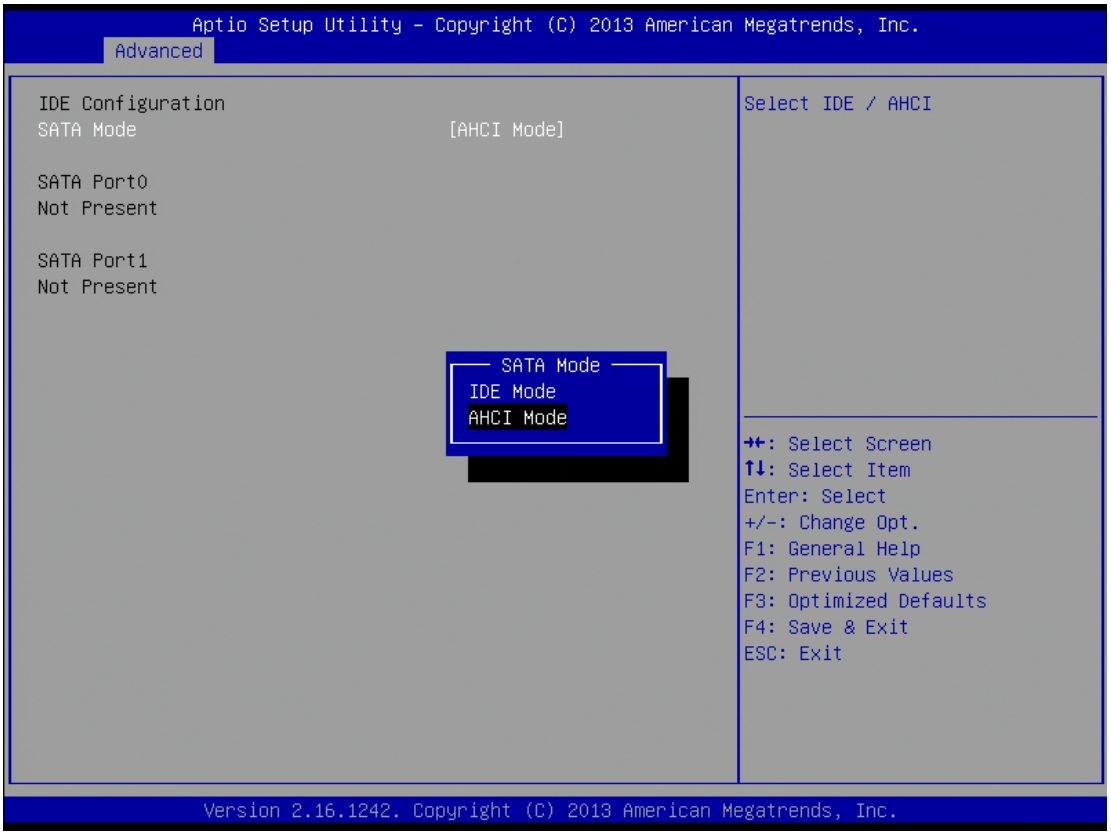

Aptio Setup Utility – Copyright (C) 2013 American Megatrends, Inc.
Advanced
CPU Configuration
Socket 0 CPU Information
CPU Speed 2001 MHz
64-bit Supported
Intel Virtualization Technology [Enabled]
When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology
Intel Virtualization Technology
Disabled
Enabled
lect Screen
lect Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.

IDE Configuration

You can use this screen to select options for the SATA Configuration, and change the value of the selected option.

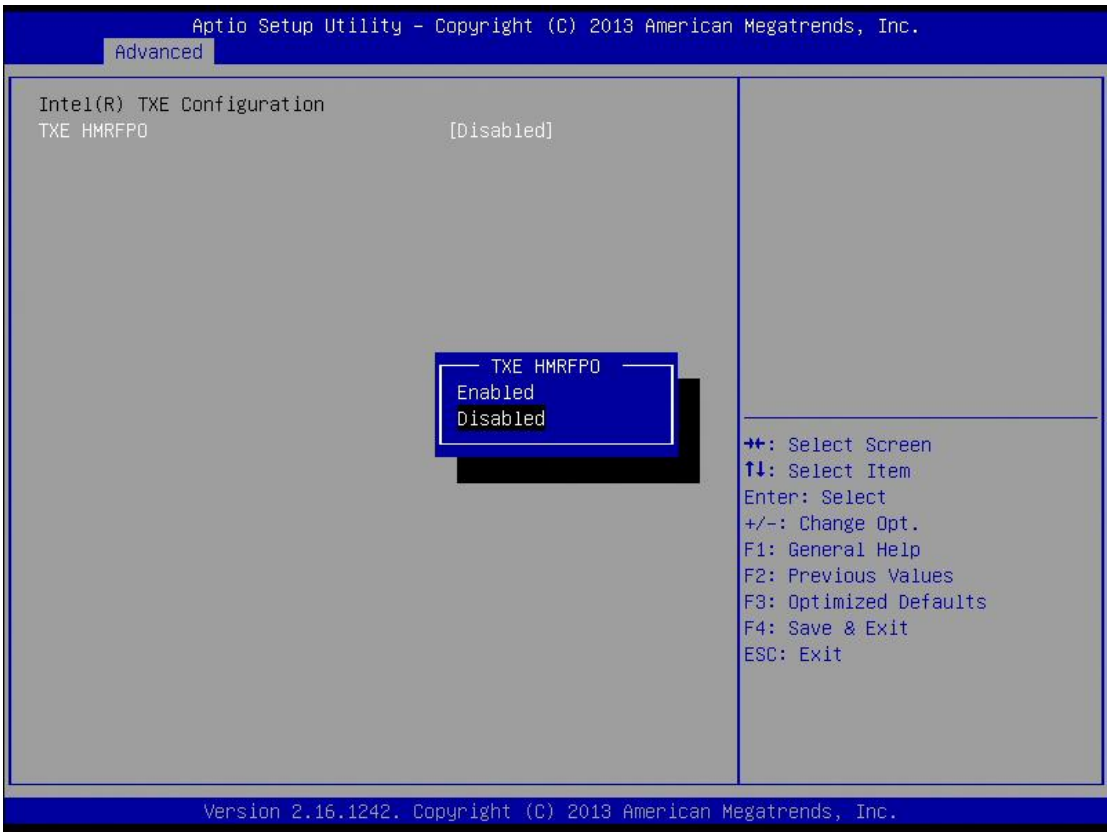
SATA Mode

Use this item to choose the SATA operation mode. Here are the options for your selection, IDE Mode, AHCI Mode.



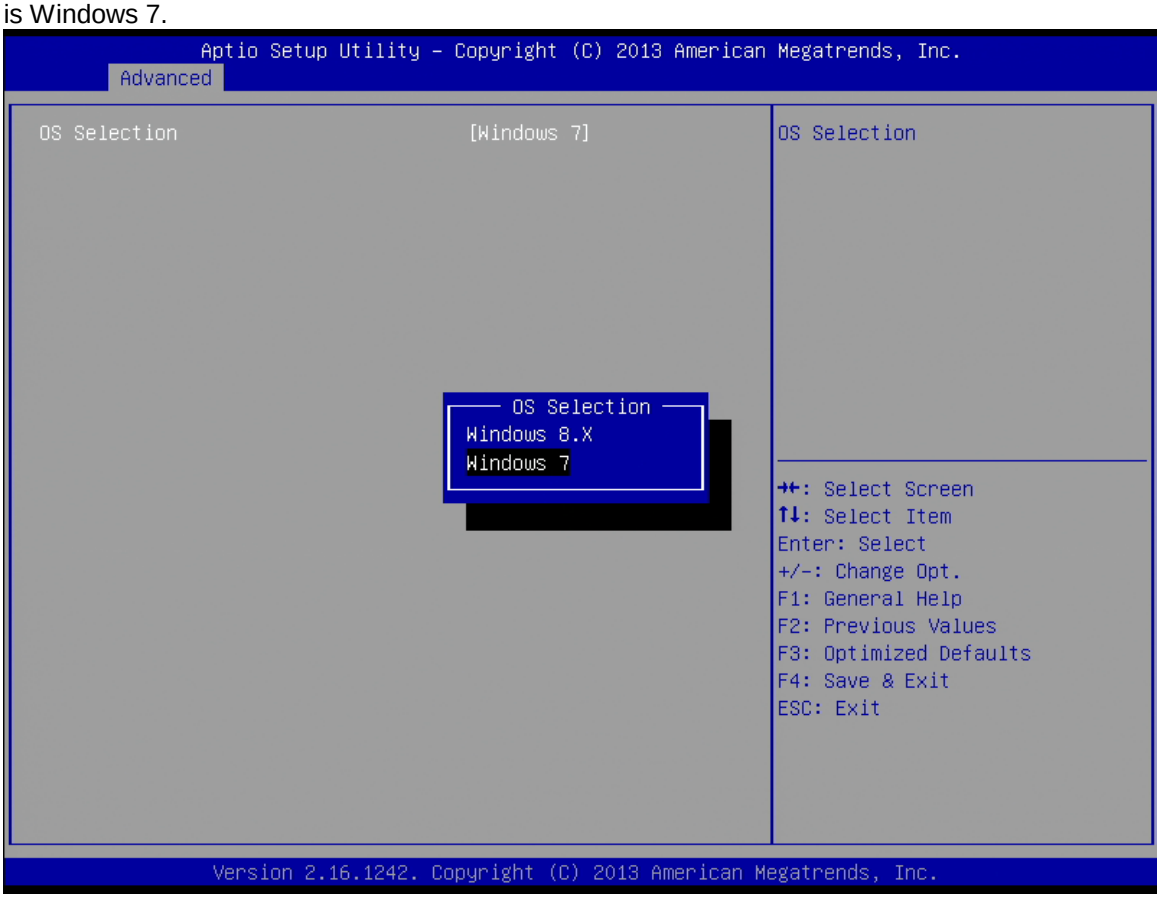
Intel TXE Configuration

The Advanced menu allows users to update the TXE firmware.



LPSS & SCC Configuration

You can select any of the items in the frame of the screen to change the OS, the default setting is Windows 7.

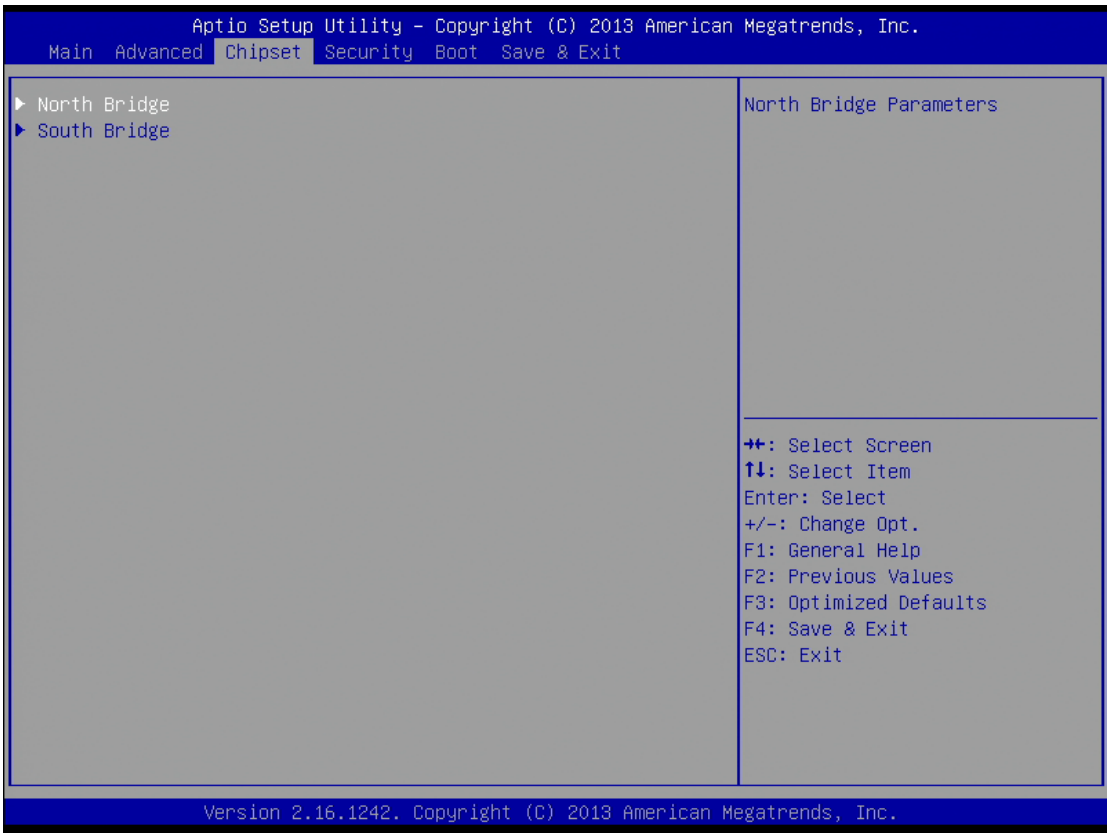


Please be informed to select the Windows 8.x when installing Win 8 or Win 8.1.

If using the Android OS, please refer to https://01.org/android-ia**.**

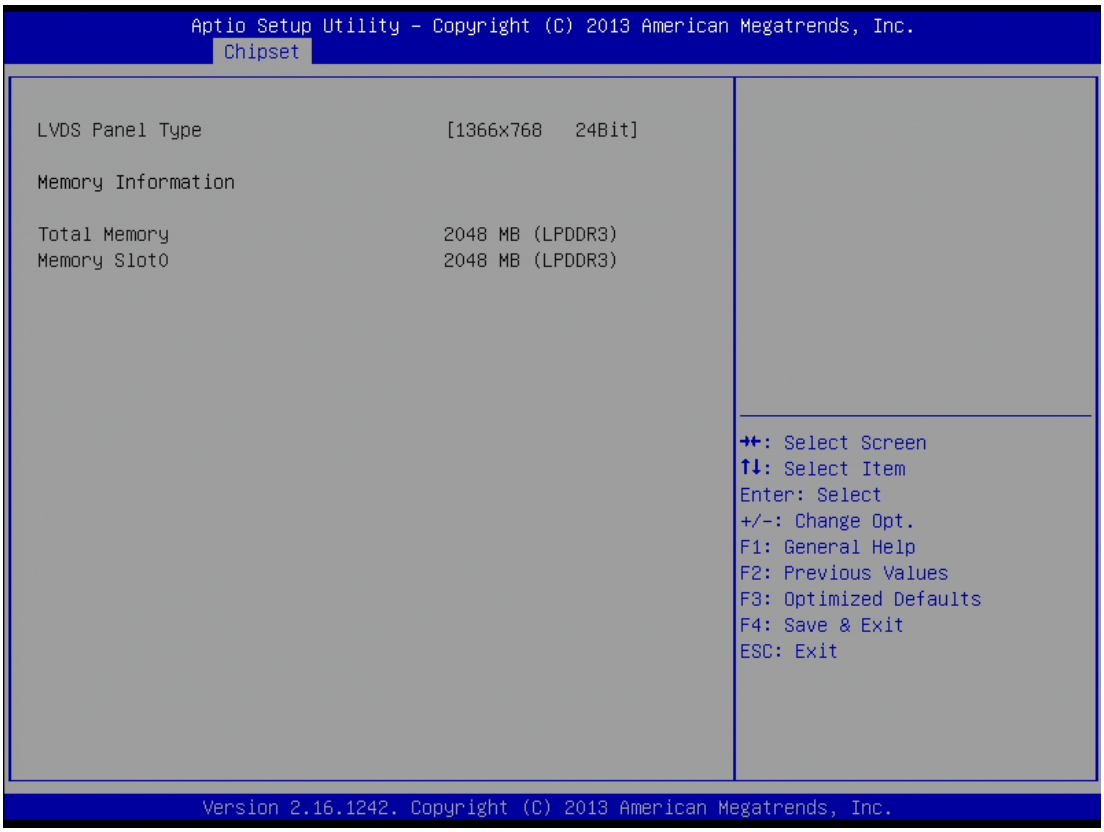
3.4 Chipset Menu

The Chipset menu allows users to change the advanced chipset settings.

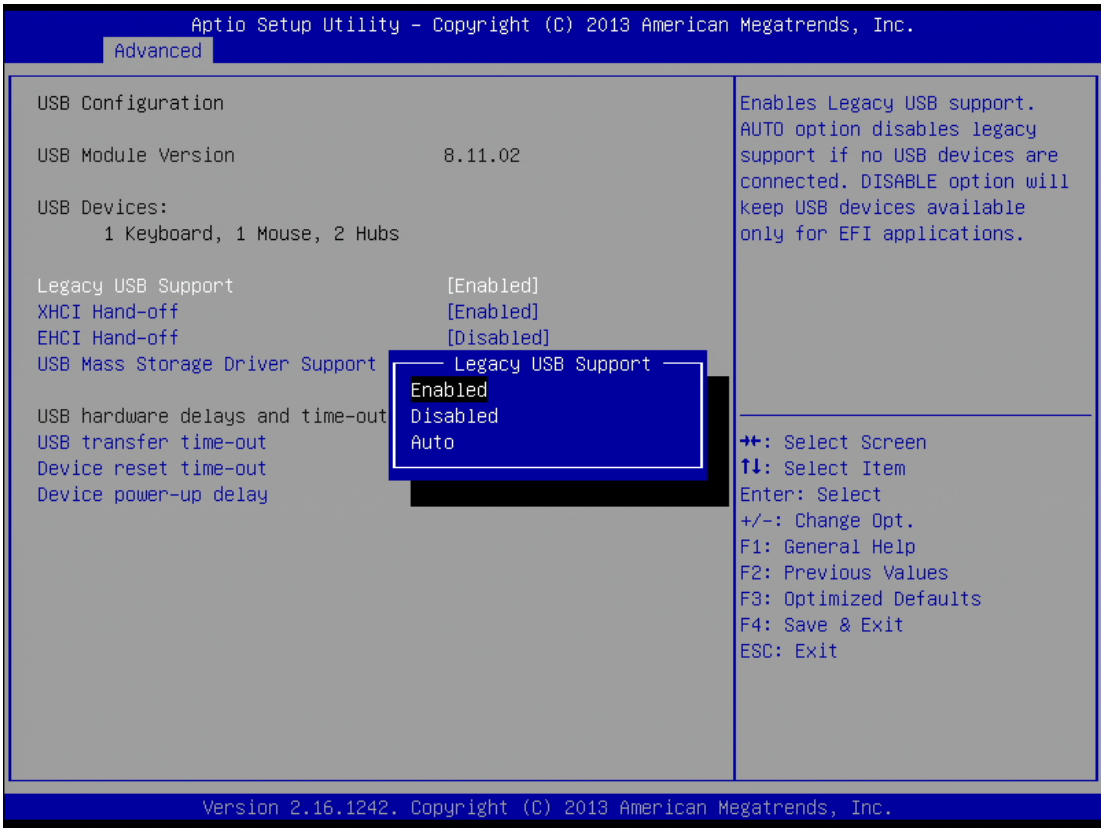


- **North Bridge**

This screen shows the North Bridge memory information.

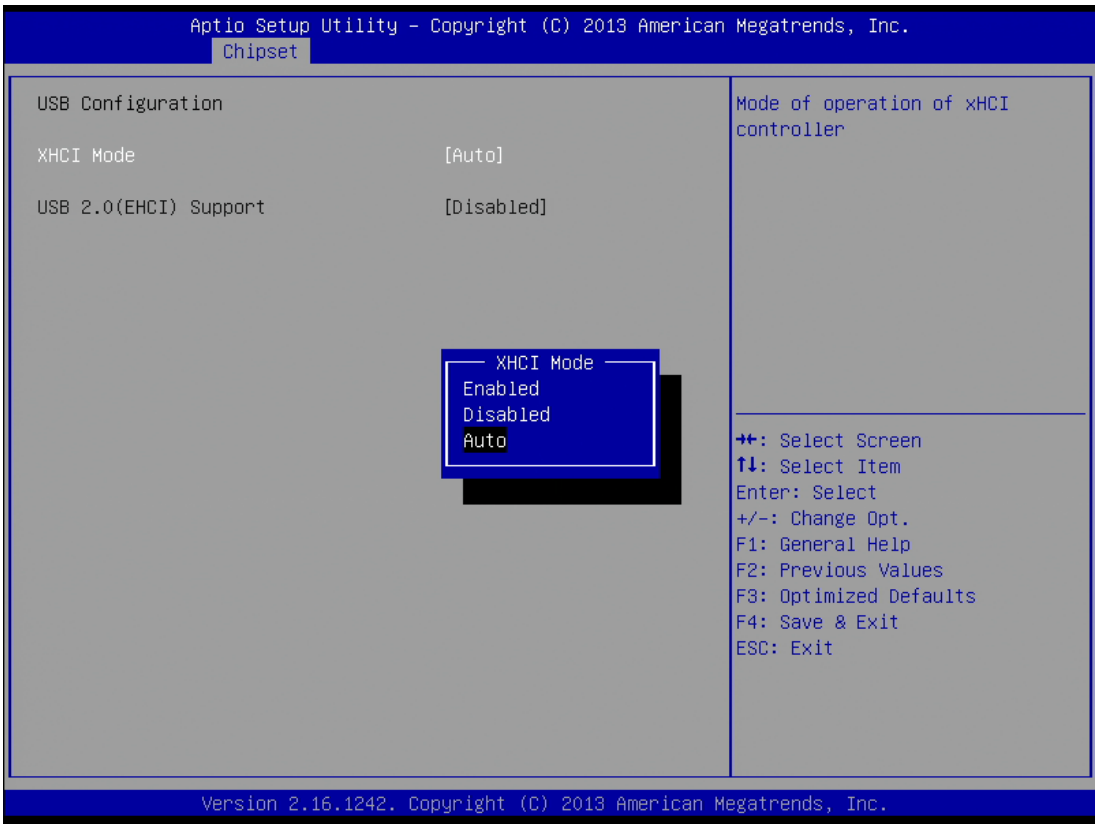


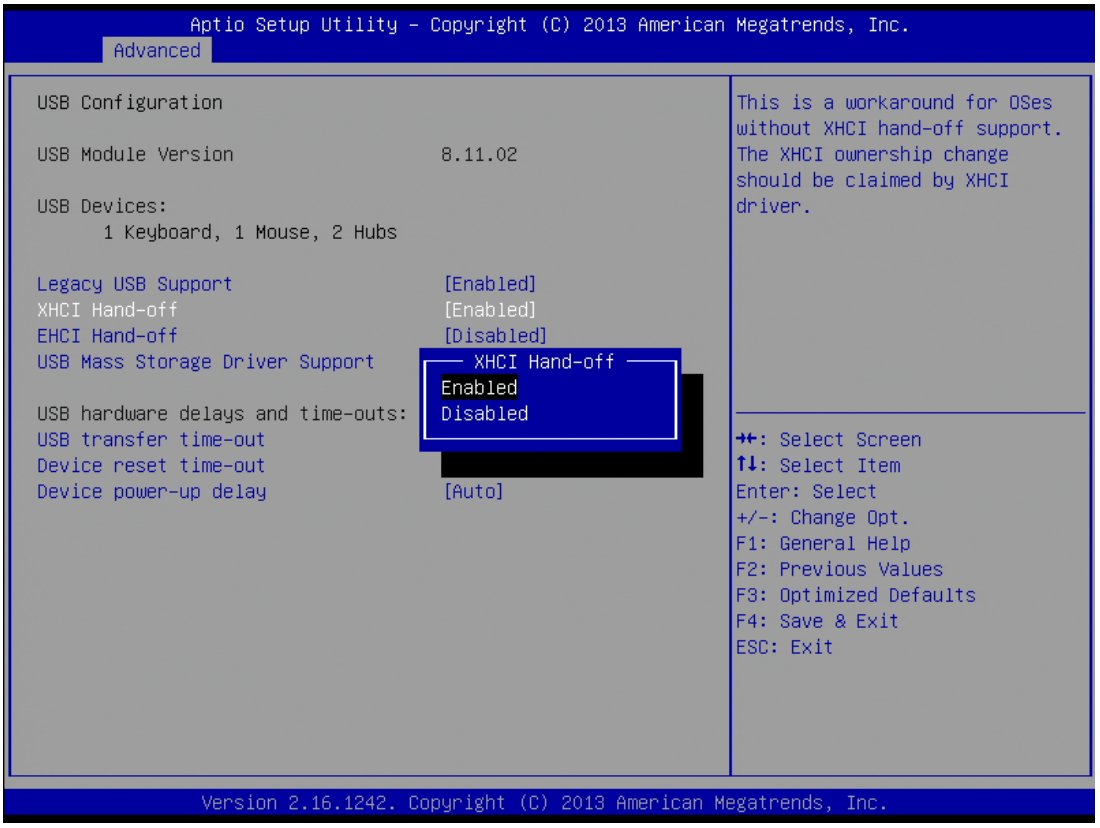
- **South Bridge**

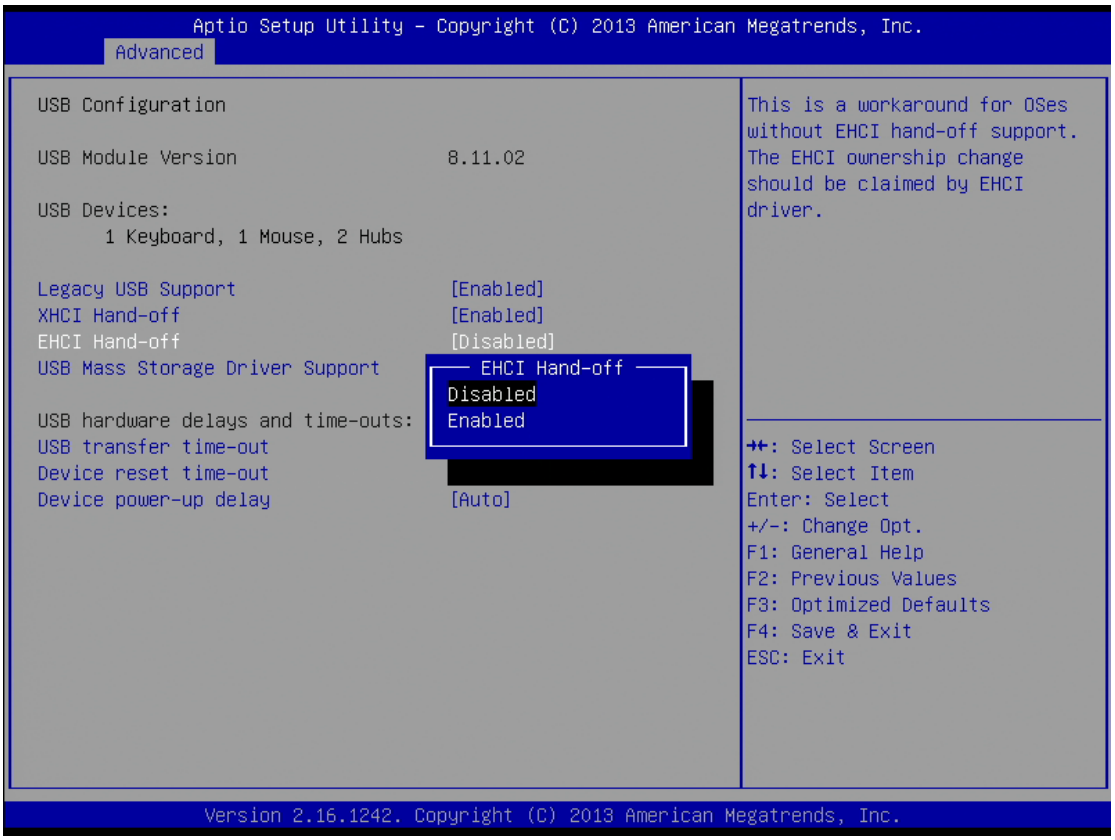


- **USB Configuration**

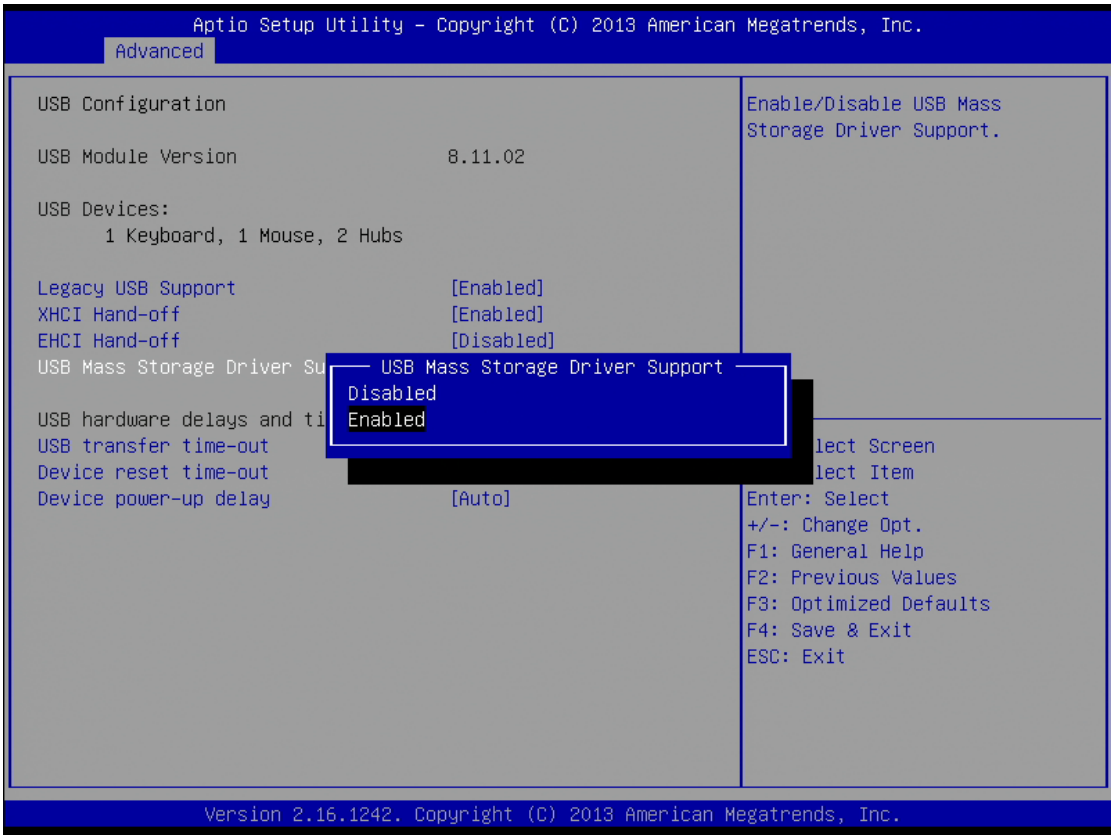
You can use this screen to select options for the USB Configuration,
If USB3.0 function used, XHCI Mode must enable and EHCI must disable.
**XHCI default is Auto.



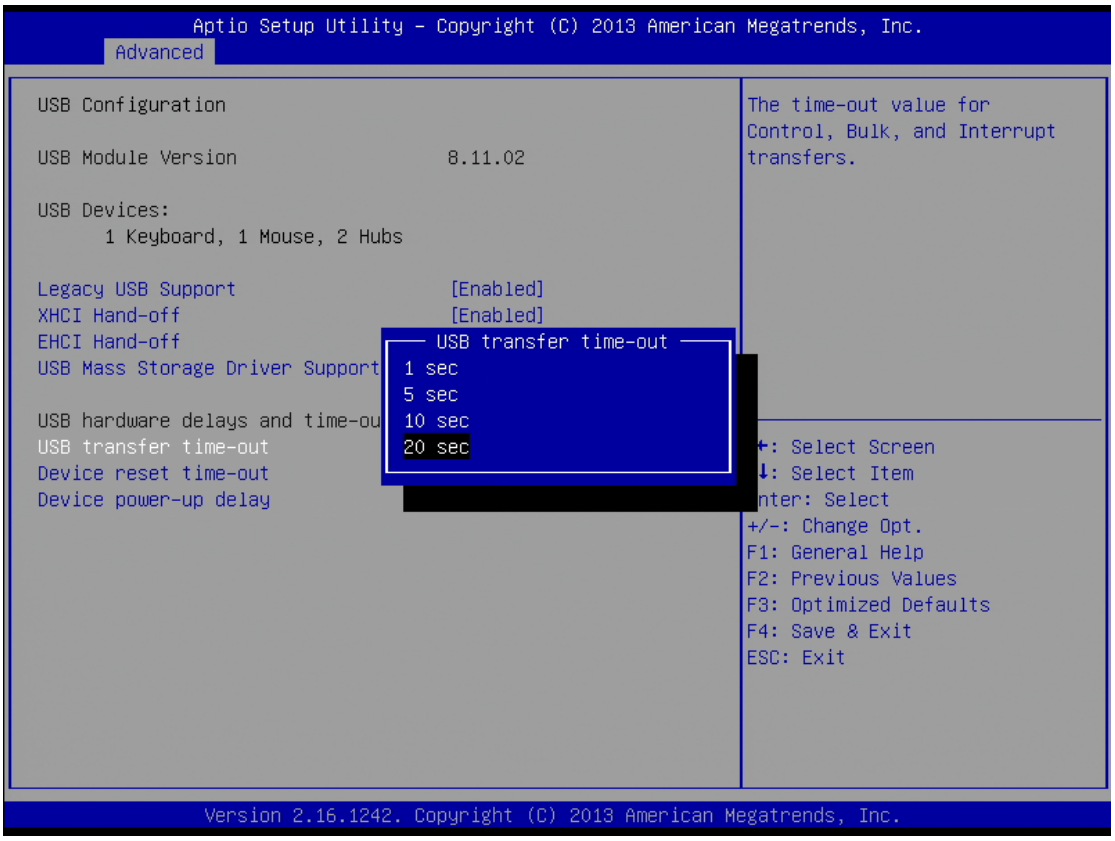


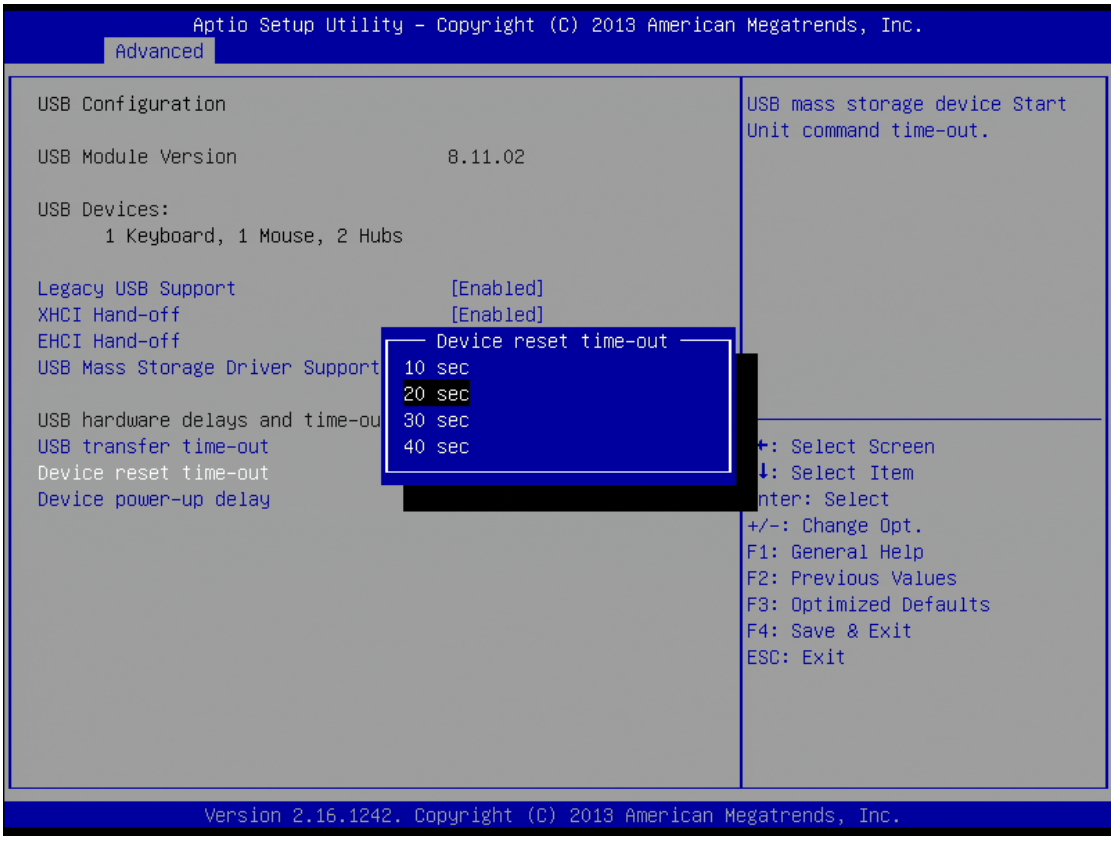


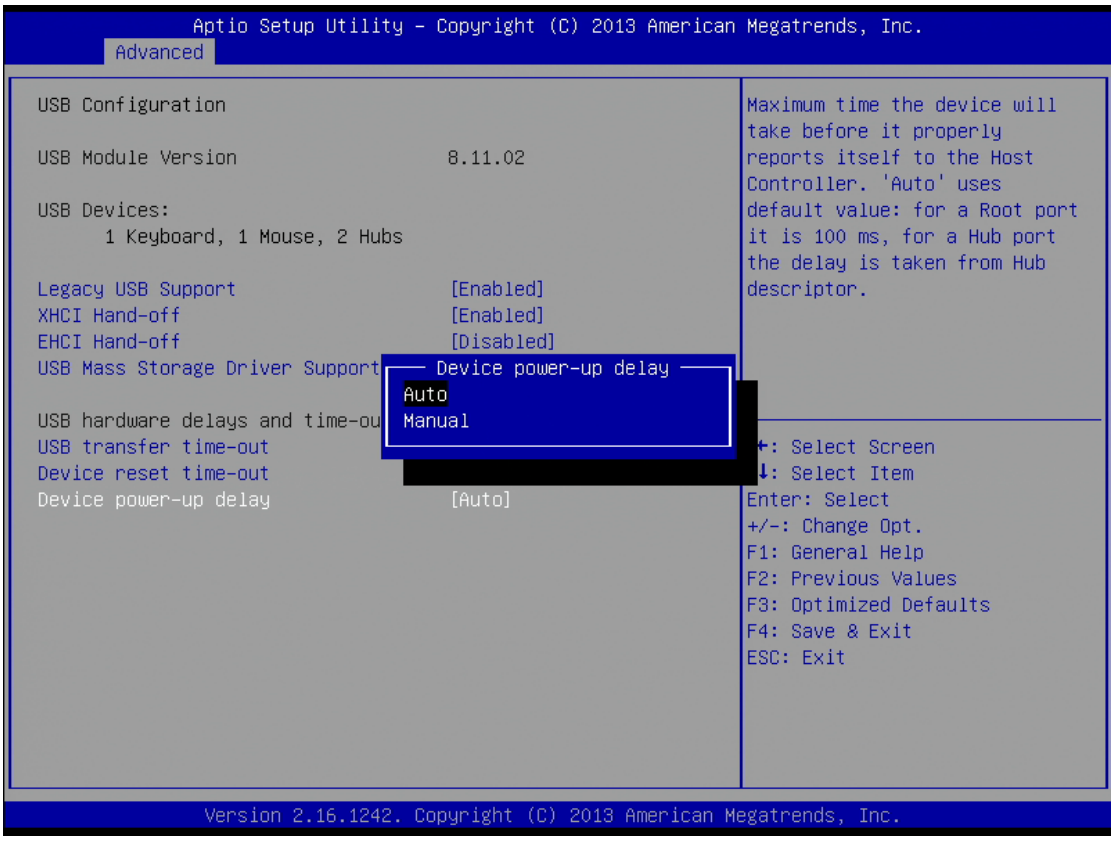
To "Enabled" or "Disabled" USB Mass Storage Driver Support

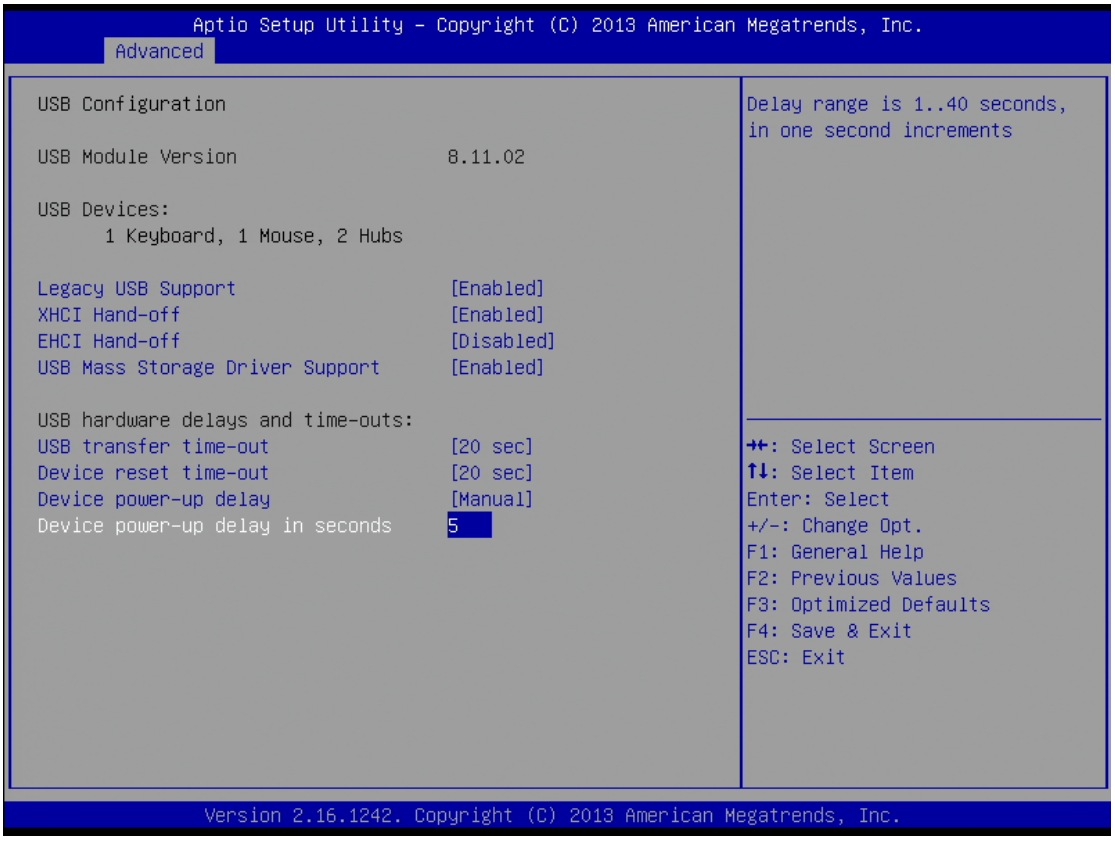


USB hardware delays and time-outs:



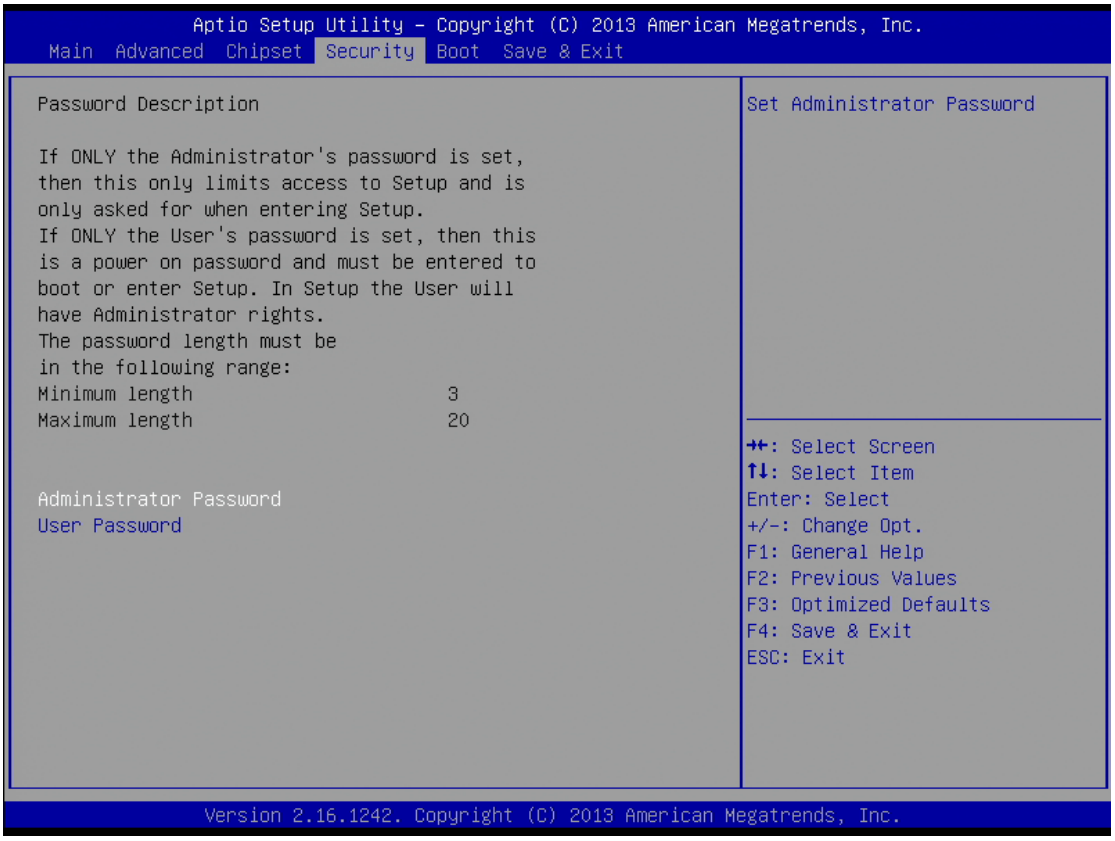



Aptio Setup Utility – Copyright (C) 2013 American Megatrends, Inc.
Advanced
USB Configuration
USB Module Version 8.11.02
USB Devices:
1 Keyboard, 1 Mouse, 2 Hubs
Legacy USB Support [Enabled]
XHCI Hand-off [Enabled]
EHCI Hand-off [Disabled]
USB Mass Storage Driver Support
Device power-up delay
Auto
Manual
USB hardware delays and time-ou
USB transfer time-out
Device reset time-out
Device power-up delay [Auto]
Maximum time the device will take before it properly reports itself to the Host Controller. 'Auto' uses default value: for a Root port it is 100 ms, for a Hub port the delay is taken from Hub descriptor.
+: Select Screen
↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.


Aptio Setup Utility – Copyright (C) 2013 American Megatrends, Inc.
Advanced
USB Configuration
USB Module Version 8.11.02
USB Devices:
1 Keyboard, 1 Mouse, 2 Hubs
Legacy USB Support [Enabled]
XHCI Hand-off [Enabled]
EHCI Hand-off [Disabled]
USB Mass Storage Driver Support [Enabled]
USB hardware delays and time-outs:
USB transfer time-out [20 sec]
Device reset time-out [20 sec]
Device power-up delay [Manual]
Device power-up delay in seconds 5
Delay range is 1..40 seconds, in one second increments
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.

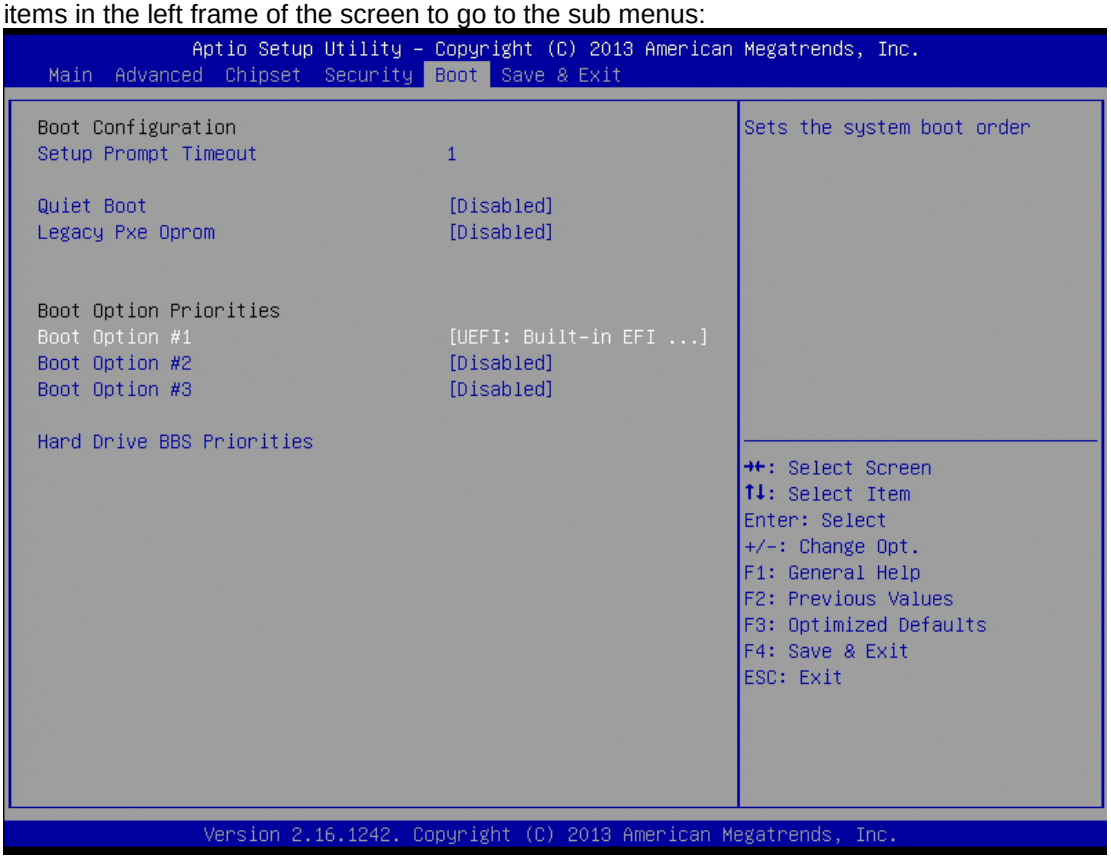
3.5 Security

The Security menu allows users to change the security settings for the system.



3.6 Boot Menu

The Boot menu allows users to change boot options of the system. You can select any of the items in the left frame of the screen to go to the sub menus:



Setup Prompt Timeout

Set the Timeout for wait press key to enter Setup Menu.

Quiet Boot

Use this item to enable or disable the Quite Boot state. The default setting is disable.

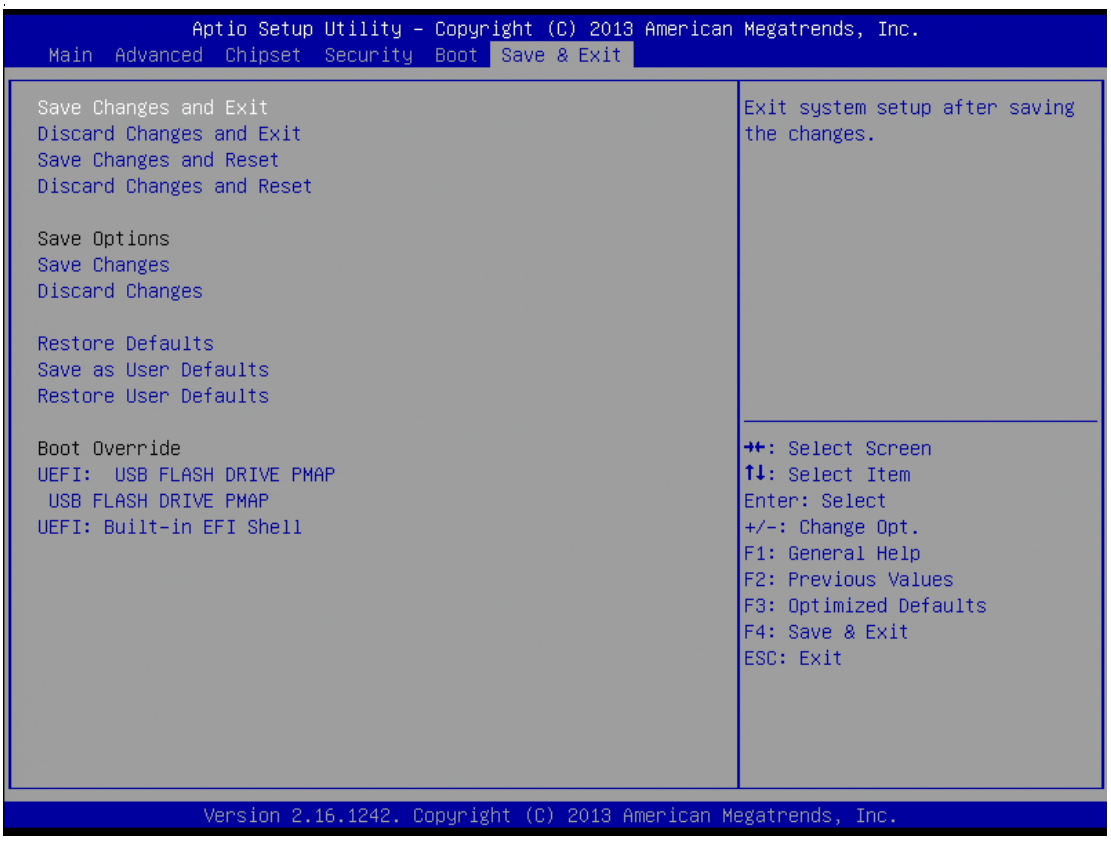
Legacy Pxe OPROM

Use this item to enable or disable the Preboot Execution Environment. The default setting is disable.

Boot Option Priorities

Specifies the overall boot order from the available devices.

3.7 Save&Exit



Save Changes and Exit
When you have completed the system configuration changes, select this option to leave Setup and reboot the computer so the new system configuration parameters can take effect. Select Save Changes and Exit from the Exit menu and press <Enter>. Select Ok to save changes and exit.

Discard Changes and Exit
Select this option to quit Setup without making any permanent changes to the system configuration. Select Discard Changes and Exit from the Exit menu and press <Enter>. Select Ok to discard changes and exit.

Save Changes and Reset
When you have completed the system configuration changes, select this option to leave Setup and reboot the computer so the new system configuration parameters can take effect. Select Save Changes and Reset from the Save & Exit menu and press <Enter>. Select Yes to save changes and reset.

Discard Changes and Reset
Select this option to quit Setup without making any permanent changes to the system configuration and reboot the computer. Select Discard Changes and Reset from the Save & Exit menu and press <Enter>. Select Yes to discard changes and reset.

Save Changes
When you have completed the system configuration changes, select this option to save changes. Select Save Changes from the Save & Exit menu and press <Enter>. Select yes to save changes.

Discard Changes
Select this option to quit Setup without making any permanent changes to the system configuration. Select Discard Changes from the Save & Exit menu and press <Enter>. Select Yes to discard changes.

Restore Defaults
It automatically sets all Setup options to a complete set of default settings when you select this option. Select Restore Defaults from the Save & Exit menu and press <Enter>.

Save as User Defaults
Select this option to save system configuration changes done so far as User Defaults. Select Save as User Defaults from the Save & Exit menu and press <Enter>.

Restore User Defaults
It automatically sets all Setup options to a complete set of User Defaults when you select this option. Select Restore User Defaults from the Save & Exit menu and press <Enter>.

Boot Override
Select a drive to immediately boot that device regardless of the current boot order.

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Section 4
Drivers Installation

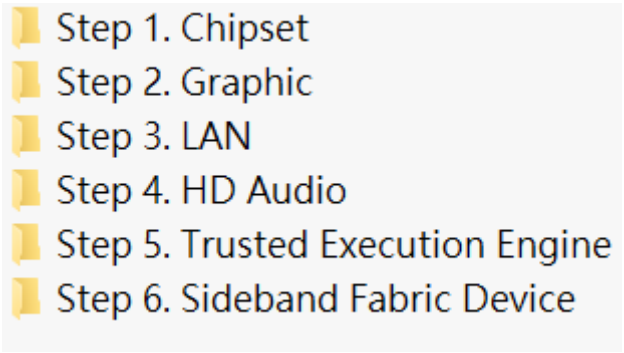
4.1 System

The GOT3187WL-834 is compatible with operating systems Windows 10 IoT Enterprise. To facilitate the installation of system drivers, please carefully read the instructions in this Section before any of such installation.

4.1.1 Driver Content

Please download the following GOT3187WL-834 driver from Axiomtek official website

http://www.axiomtek.com.tw/Default.aspx?MenuId=Products&FunctionId=DownloadSearch



NOTE: When Windows 10 IoT return to default setting, it may have to reinstall these system drivers.

NOTE: Touch scream driver (by model)

a. ***The projected capacitive multi-touch, Windows default setting is already enabled, don't need to installation the driver.***

b. ***The resistive touch needs to installation the driver, please download from Axiomtek official website***

4.1.2 WIN 10 IoT

Here are supported onboard devices:

- Onboard Multi I/O
- SATA HDD
- USB
- LCD display
- 10/100/1000 base-T Ethernet
- mSATA
- Onboard Audio