

UPOS-211

**Intel® Celeron® J1900/Core™ i5
6300U/Core™ i3 6100U/Celeron®
3955U Processor-based
Ubiquitous POS with 15" TFT
LCD**

Copyright

The documentation and the software included with this product are copyrighted 2017 by Advantech Co., Ltd. All rights are reserved. Advantech Co., Ltd. reserves the right to improve the products described in this manual at any time without notice. No part of this manual may be reproduced, copied, translated, or transmitted in any form or by any means without the prior written permission of Advantech Co., Ltd. The information provided in this manual is intended to be accurate and reliable. However, Advantech Co., Ltd. assumes no responsibility for its use, nor for any infringements of the rights of third parties that may result from its use.

Acknowledgements

Intel and Pentium are trademarks of Intel Corporation.

Microsoft Windows is registered trademark of Microsoft Corp.

All other product names or trademarks are properties of their respective owners.

Product Warranty (2 years)

Advantech warrants the original purchaser that all 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 that have been repaired or altered by persons other than repair personnel authorized by Advantech, or products that have been subject to misuse, abuse, accident, or improper installation. Under the terms of this warranty, Advantech assumes no liability as a consequence of such events.

Because of Advantech's high quality-control standards and rigorous testing, most customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced free of charge during the warranty period. For out-of-warranty repairs, customers will be billed the cost of replacement materials, service time, and freight. Please consult your dealer for more details.

If you suspect your product is defective, follow the steps outlined below.

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 that are displayed when the problem occurs.
2. Call your dealer and describe the problem. Please have your manual, product, and any relevant information to hand.
3. If your product is diagnosed as defective, obtain a return merchandise authorization (RMA) number from your dealer. This allows us to process your return more quickly.
4. Carefully pack the defective product, a completed Repair and Replacement Order Card, and a proof of purchase date (such as a photocopy of your sales receipt) into a shippable container. Products returned without a proof of purchase date are not eligible for warranty service.
5. Write the RMA number clearly on the outside and ship the package prepaid to your dealer.

Warnings, Cautions, and Notes

Warning! Warnings indicate conditions that if not observed, can cause personal injury!



Caution! Cautions are included to help prevent hardware damage or data losses. For example,



“New batteries are at risk of exploding if 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.”

Note! Notes provide additional optional information.



Document Feedback

To assist us in improving this manual, we welcome any comments and constructive criticisms. Please send all feedback in writing to support@advantech.com

Technical Support and Assistance

1. Visit the Advantech website at <http://support.advantech.com> to obtain the latest product information.
2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before calling:
 - Product name and serial number
 - Description of your peripheral attachments
 - Description of your software (operating system, version, application software, etc.)
 - Comprehensive description of the problem
 - The exact wording of any error messages

Packing List

Before setting up the system, check that the items listed below are included in the shipment and in good condition.

- UPOS-211 Series
 - Warranty card
 - Adaptor
 - User manual
 - 2 x COM Cable
 - 1 x HDD Bracket

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

Safety Instructions

1. Read these safety instructions carefully.
2. Retain this user manual for future reference.
3. Disconnect this equipment from all AC outlets before cleaning. Use only a damp cloth to clean. Do not use liquid or spray detergents.
4. For pluggable equipment, the power outlet socket must be located near the equipment and easily accessible.
5. Protect this equipment from humidity.
6. Place this equipment on a reliable surface during installation. Dropping or letting the device fall may cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. Do not cover the openings.
8. Ensure the voltage is correct before connecting the equipment to a power outlet.
9. Position the power cord away from high-traffic areas. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If unused for a long time, disconnect the equipment from the power source to avoid damage from transient overvoltage.
12. Never pour liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If one of the following situations occurs, have the equipment checked by service personnel:
 - The power cord or plug is damaged.
 - Liquid has penetrated the equipment.
 - The equipment has been exposed to moisture.
 - The equipment is malfunctioning, or does not operate according to the user manual.
 - The equipment has been dropped and damaged.
 - The equipment has obvious signs of breakage.
15. Do not store this equipment in an environment where the temperature fluctuates below $-20\text{ }^{\circ}\text{C}$ ($-4\text{ }^{\circ}\text{F}$) or above $60\text{ }^{\circ}\text{C}$ ($140\text{ }^{\circ}\text{F}$) as this may cause damage. The equipment should be stored in a controlled environment.
16. Batteries are at risk of exploding if incorrectly installed. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

The sound pressure level at the operator position does not exceed 70 dB (A) in accordance with IEC 704-1:1982.

DISCLAIMER: These instructions are provided according to IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

Safety Precaution - Static Electricity

Follow these simple precautions to protect yourself from harm and the products from damage.

- To avoid electrical shock, always disconnect the power from your PC chassis before you work on it. Don't touch any components on the CPU card or other cards while the PC is on.
- Disconnect power before making any configuration changes. The sudden rush of power as you connect a jumper or install a card may damage sensitive electronic components.

Contents

Chapter 1	General Information	1
1.1	Introduction	2
1.2	Specifications	2
1.2.1	General Specifications	2
1.2.2	Environmental Specifications	2
1.2.3	Touch Screen	2
1.2.4	LCD Specifications	3
1.3	Dimensions	3
Chapter 2	System Setup	5
2.1	Quick Tour of the Device	6
	Figure 2.1 Front view of UPOS-211	6
	Figure 2.2 Rear view of UPOS-211	6
	Figure 2.3 IO Connectors of UPOS-211	7
2.2	Installation Procedures	7
2.2.1	Connecting the Power Cord	7
2.2.2	Connecting the Mouse and Keyboard	7
2.2.3	Activating the Power Source	7
2.3	Installing System Software	8
2.4	Installing the HDD	9
2.5	Peripheral Cable Connection & Arrangement	14
2.6	How to select Windows 7	18
2.7	Jumpers and Connectors	19
	Table 2.1: Jumpers	19
	Table 2.2: Connectors	20
2.8	PenMount 6000 Multiple-Monitors set sop	21
2.9	Capacitive touch extends display setup	23
2.10	Peripheral and base	25
2.10.1	MSR	25
2.10.2	VESA mount	26
2.10.3	10-inch screen	27
2.10.4	2nd display	28
2.10.5	VDF	31
2.10.6	Barcode scanner	33
2.10.7	Wall mount	35
Chapter 3	BIOS Setup (UPOS-211D)37	
3.1	Introduction	38
3.2	BIOS Setup	38
3.2.1	Main Menu	39
3.2.2	Advanced BIOS Features	40
3.2.3	Configuration Setting	53
3.2.4	Security Configuration Setting	58
3.2.5	Boot Configuration	59
3.2.6	Save & Exit Configuration Setting	60
Chapter 4	BIOS Setup	

(UPOS-211F)61

4.1	Introduction	62
4.2	BIOS Setup	62
4.2.1	Main Menu	62
4.2.2	Advanced BIOS Features	63
4.2.3	Chipset Configuration Setting	75
4.2.4	Security Configuration Setting	79
4.2.5	Boot Configuration	80
4.2.6	Save & Exit Configuration Setting.....	81

Chapter 1

General Information

This chapter provides basic information regarding UPOS-211.

- Introduction
- Specifications
- Dimensions

1.1 Introduction

UPOS-211 is an all-in-one point-of-sale (POS) system that features a small footprint and dual-hinge design, making it ideal for countertops and limited-space installations. Powered by Intel® Celeron®J1900/Core™ i5 6300U/Core™ i3 6100U/Celeron® 3955U processors, UPOS-211 ensures high-performance computing and reliable data processing, while supporting flexible customization for diverse applications. The IP65-rated front panel is water and dust resistance. UPOS-211 is a competitive cost, and energy effective platform built for retail and hospitality.

1.2 Specifications

1.2.1 General Specifications

- **Dimensions (W x H x D):** 354x327x237 mm, stand: 237 x 200 mm
- **Weight:** 5.2 kg (Net Weight) / 6.9 kg (Gross Weight)
- **Power supply:**
 - 60W (100-240Vac,50-60Hz,1.5A) power adapter
- **Storage:** 1 x 2.5" SATA HDD/SSD connector
- **CPU:** Intel® Celeron®J1900/Core™ i5 6300U/Core™ i3 6100U/Celeron® 3955U processors.
- **RAM:** Support 1 x 204-pin DDR3L 1333 Mhz SO-DIMM, up to 8 GB/ 1 x 260-pin DDR4 2333 Mhz SO-DIMM, up to 16GB
- **Serial ports:**
 - External: 2 x COM RS232 ports via RJ-48 connector,
 - Internal: 4 x COM port, COM3 for touch, COM6 no power, COM4, 5 support 5V & 12V by order via box header
- **USB:**
 - UPOS-211F: 2xUSB3.0,3xUSB2.0
 - UPOS-211D: 1xUSB3.0,4xUSB2.0
- **Front panel:** IP65 sealed front panel with true flat touch screen
- **Cash drawer:** 1 x RJ11
- **Ethernet:** 1 x RJ-45 Gigabit LAN
- **Display port:** 1 x VGA, 1 x DP
- **Expansion slot:** 1 x Mini PCIe (for Wifi or 3G), shared with mini SATA connector
- **Audio:** 1 x Speaker
- **LPT port:** 1 LPT port (optional)

1.2.2 Environmental Specifications

- **Operating Temperature:** 0 ~ 40 °C (32 ~ 104 °F)
- **Relative humidity:** 10 ~ 90% @ 40 °C (non-condensing)
- **Shock:** 10 G peak acceleration (11 ms duration)
- **Vibration:** 5 ~ 500 Hz 0.5 Grms, random
- **Certification:** CCC, CE, UL, FCC, CB, BSMI

1.2.3 Touch Screen

- **Type:** True Flat, 5-Wire Resistive Touch / Projected CAP Touch
- **Light Transmission:** 80% +/-5% / 80%+/-3%

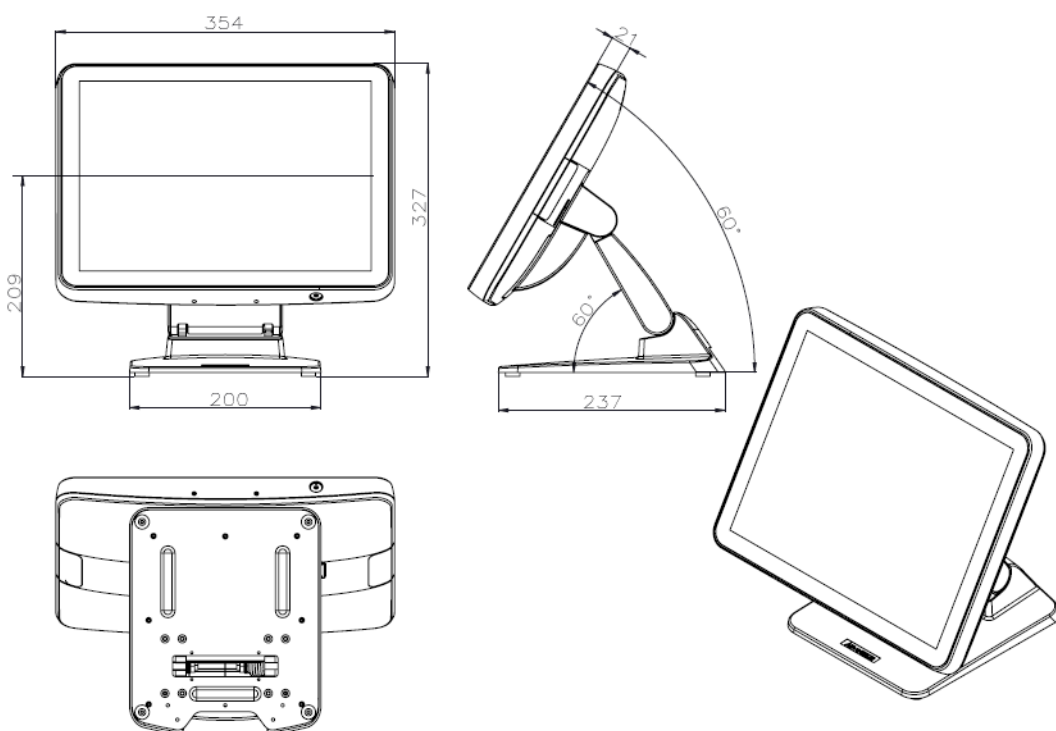
1.2.4 LCD Specifications.

- **Display Type:** 15" TFT LCD
- **Max.Resolution:** 1024 x 768
- **Colors:** 262 K
- **Pixel Pitch (um):** 297 (H) x 297 (W)
- **View Angle:** 80° (H) / 70° (V)
- **Luminance:** 250 cd/m2

Note! *The color LCD display installed in the UPOS-211 is high-quality and reliable. However, it may contain a few defective pixels which do not always illuminate. With current technology, it is impossible to completely eliminate defective pixels. Advantech is actively working to improve the technology.*



1.3 Dimensions



Chapter 2

System Setup

This chapter details the system setup process for UPOS-211.

- Quick Tour of the Device
- Installation Procedures
- Installing System Software
- Installing the HDD
- Peripheral Cable Connection & Arrangement
- How to select Windows 7
- Jumpers and Connectors
- PenMount 6000 Multiple-Monitors set sop
- Capacitive touch extend display set sop
- Peripheral and base

2.1 Quick Tour of the Device

Before setting up the device, take a moment to familiarize yourself with the functions of the controls, drivers, connectors, and ports located on the front panel, as illustrated in the figures below.



Figure 2.1 Front view of UPOS-211

Turn the computer to view the I/O, as shown in Figure 2.2 and 2.3. The I/O interfaces include serial ports, USB slots, VGA port, Ethernet port, RJ-11, DP, and power inlet.



Figure 2.2 Rear view of UPOS-211

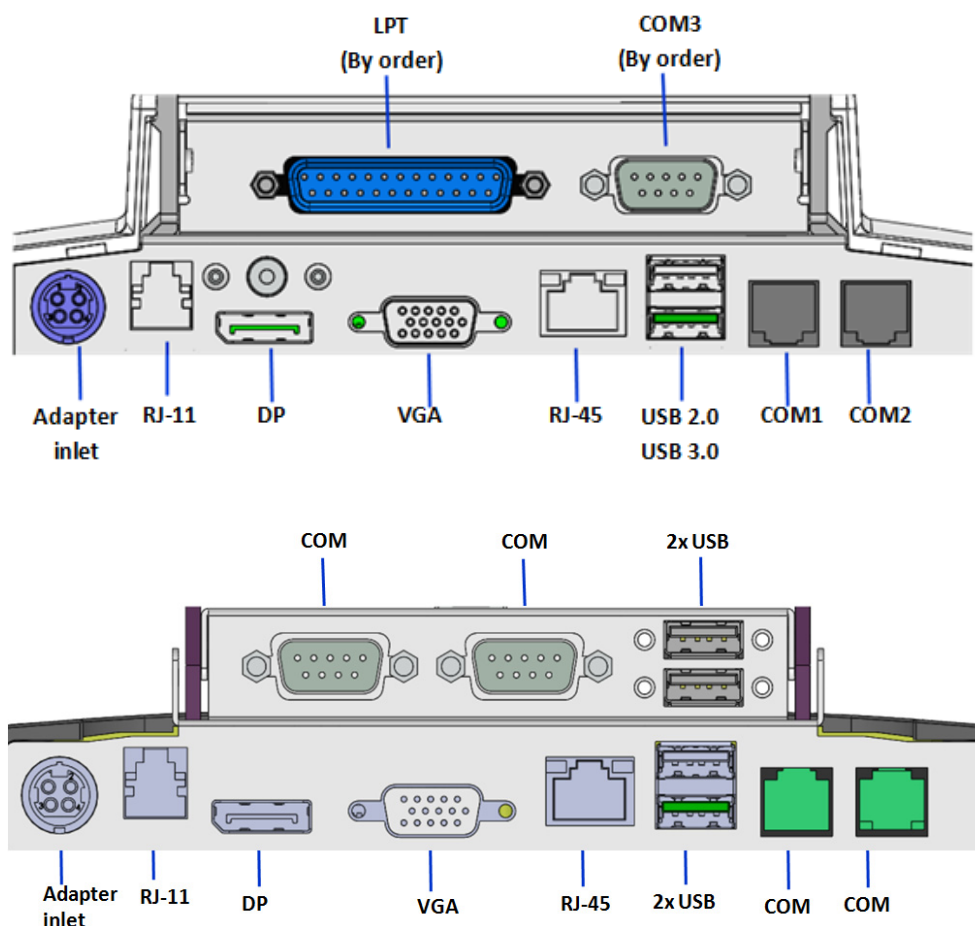


Figure 2.3 IO Connectors of UPOS-211

2.2 Installation Procedures

2.2.1 Connecting the Power Cord

This product only supports DC power (12 VDC, max. 60 W). Be sure to hold the plug end when plugging or unplugging the power cord.

2.2.2 Connecting the Mouse and Keyboard

Connect the mouse and keyboard via the USB ports located in the I/O section at the rear of the computer.

2.2.3 Activating the Power Source

Verify that the power cord is connected to the power input port of the device. Then connect the plug end of the power cord to the wall power outlet.

2.3 Installing System Software

Recent OS releases include setup programs that load automatically and guide users through the entire installation process. The steps necessary to install an operating system on the computer hard drive are explained below.

Note! *Some distributors and system integrators may have pre-installed system software before shipping the computer.*

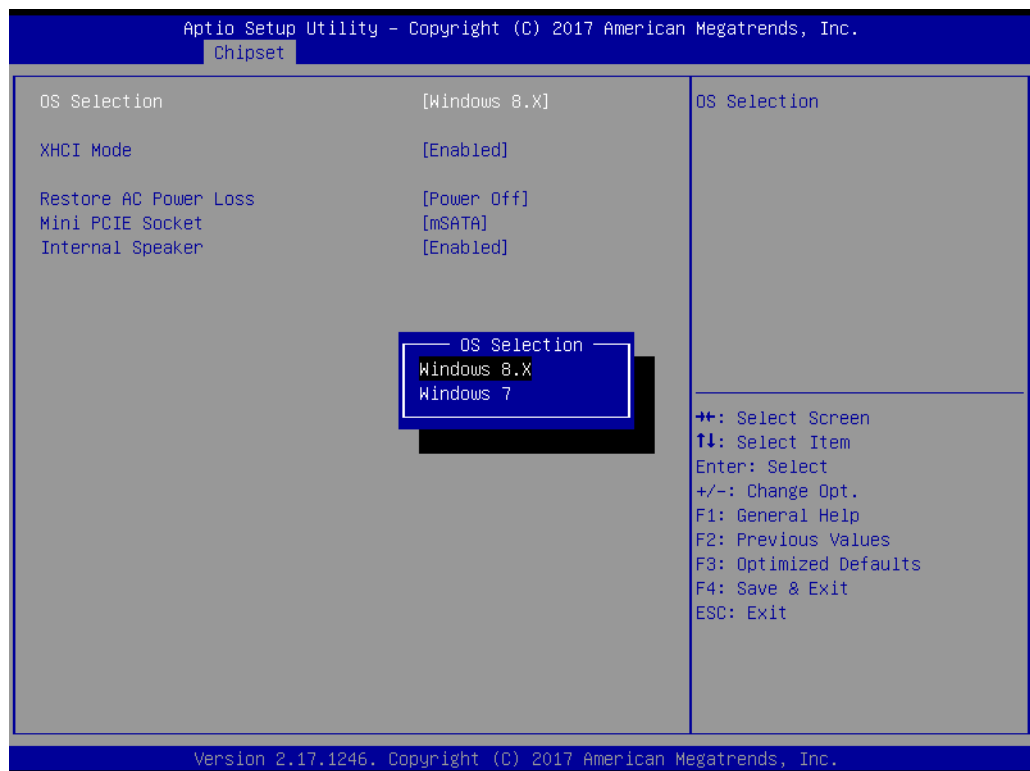


If necessary, insert the OS CD into the diskette until the release button pops up.

The system BIOS supports bootup directly from the USB-CDROM drive. Users can insert the OS CD directly into the USB-CDROM drive.

Power on the computer, or reset the system by pressing “Ctrl” + “Alt” + “Del” simultaneously.

Select Chipset->OS Selection to install the correct->Operation System Select to install the correct OS.



After clicking “Save & Exit”, the computer will automatically load the operating system from the diskette or USB-CDROM drive.

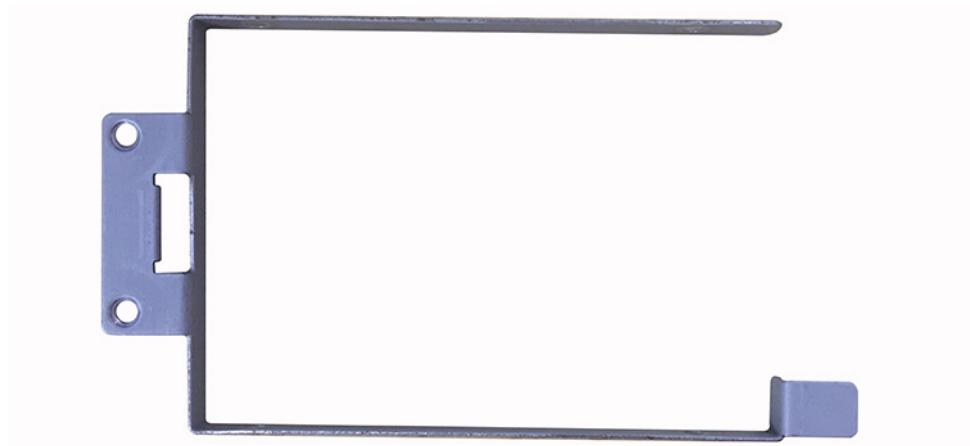
When presented with the opening screen of a setup/installation program, simply follow the onscreen instructions. The setup program guides users through configuring and installing the hard drive and operating system.

Note! *The drivers and utilities of UPOS-211 are subject to change without notice. If in doubt, check Advantech’s website or contact our application engineers for the latest information regarding drivers and utilities.*



2.4 Installing the HDD

1. Take the HDD bracket and screws out of the accessory box.



2. Assemble the HDD and fasten the screws.



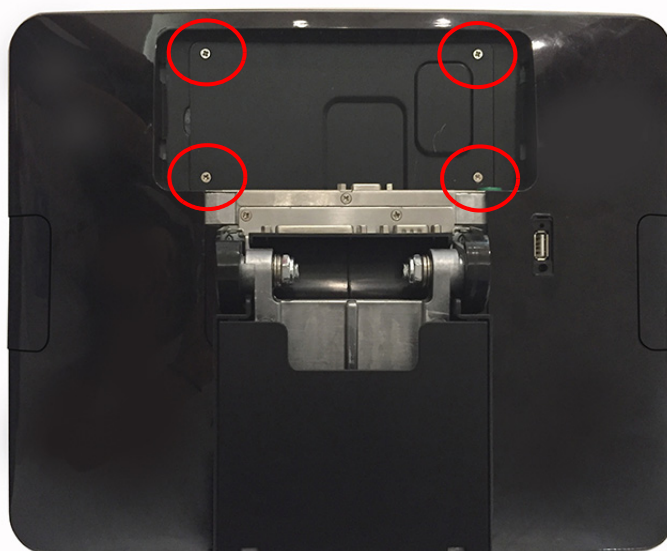
-
3. Take out the POS system and push the screen upward.



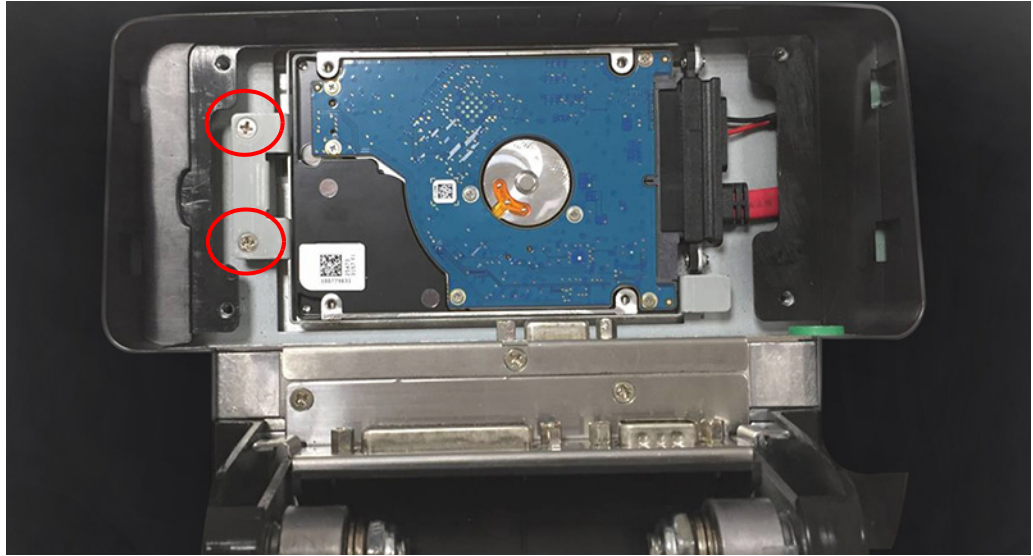
4. Remove the plastic cover.



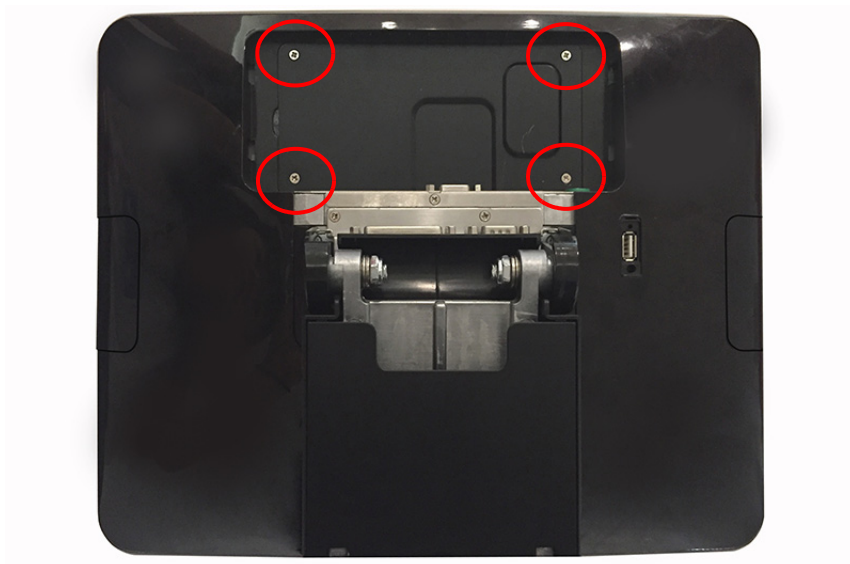
5. Remove the plates.



6. Install the HDD and fasten the screws.



7. Replace the plates and fasten the screws.



8. Replace the plastic cover.



9. Push the screen back to the original position.



2.5 Peripheral Cable Connection & Arrangement

1. Take out the POS system and push the screen upward.



2. Remove the plastic covers.



Note! Please remove the cover in the direction indicated by the red arrow in the above and use your finger to pull the semicircle opening.



3. First, make the I/O cables traverse the base as shown below, then connect the cables to the I/O board of the screen.



4. Replace the plastic covers.





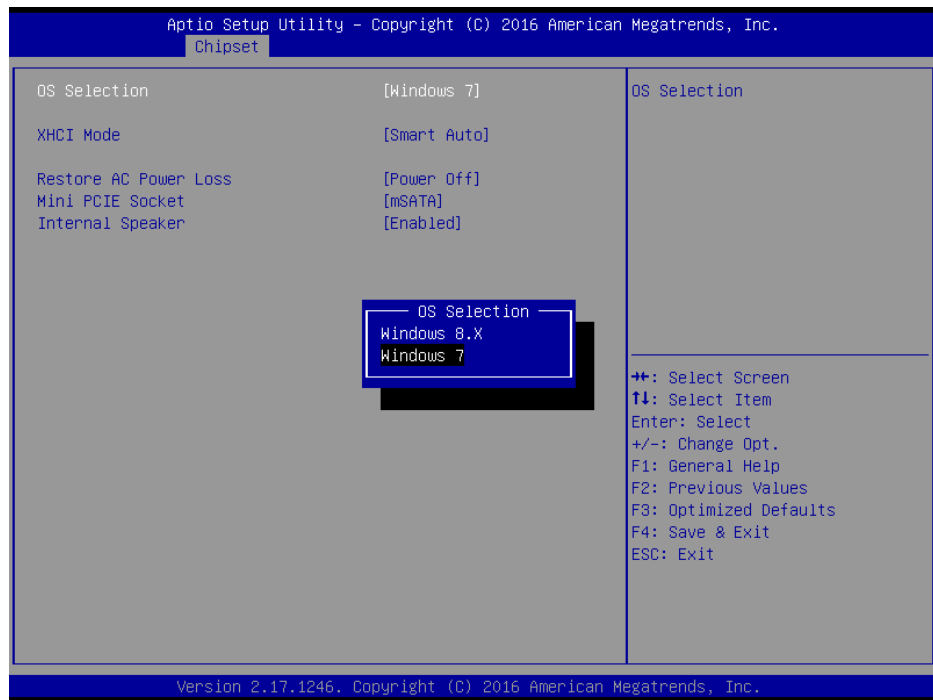
5. Push the screen back to the original position and straighten the cables.



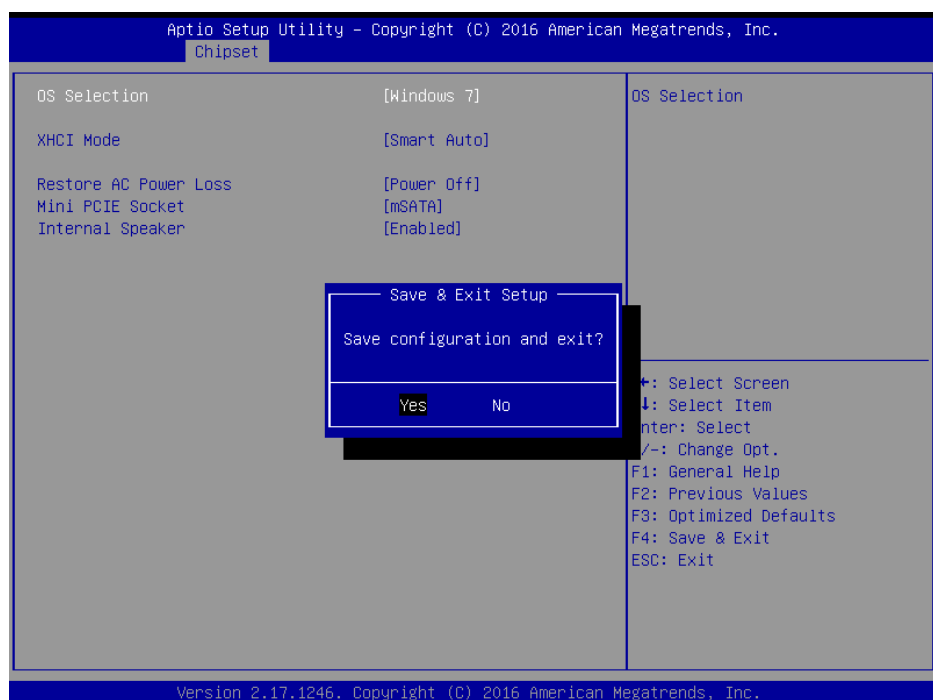
2.6 How to select Windows 7

UPOS-211 supports Win 7 Pro, Win 8.1 Industry Pro & Win10 IoT. The default OS in BIOS is Win 8.1 & Win10. So, if a user wants to install Windows 7, just go to the BIOS Setup screen and select Windows 7, same with the other OS.

1. Connect a Keyboard to the USB port on UPOS-211 backside cover.
2. Power on UPOS-211, when you see the windows logo, press DEL to enter the BIOS setup window. Please click Chipset "South Bridge" OS Selection, then select Windows 7.



3. Press "F4" on the Keyboard to save the configuration. Then click YES. The device will be restarted and users can install Windows 7.



2.7 Jumpers and Connectors

Connectors on the PCM-8518 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 functions of each of the board jumpers and connectors.

Table 2.1: Jumpers

Label	Function
JP1	Clear CMOS
JCOM1	RI/+5V/+12V select
JCOM2	RI/+5V/+12V select
JCOM4	RI/+5V/+12V select
JCOM5	RI/+5V/+12V select
CN34	LCD +3V/+5V select

Later sections in this chapter give instructions on setting jumpers and gives instructions for connecting external devices to your motherboard.

JP1

This jumper allows you to clear the Real Time Clock (RTC) RAM in CMOS

CN34

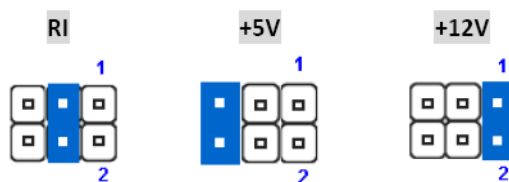
PIN1 5v

PIN2 LCD POWER

PIN3 3.3V

COM RI/+5V/+12V Select (COM_RI)

This jumper allows you to select the power mode of COM PORT, default RI.



JP_CASHV1

PIN1 12V

PIN2 cash drawer power

Pin3 24V

Note: PCB silkscreen “ ▽ ”mark pin1.

Table 2.2: Connectors

Label	Function
PCN1	Power in connector
CN1	Audio line out & Mic in
CN2	Power button & Power LED
CN8	Internal VGA connector
CN12	BIOS socket
CN34	LCD power choose
CN38	VGA connector
CN39 CN40 CN41 CN42	Internal USB connector
CN43	Real USB3.0+USB2.0
CN44	SATA power connector
CN45	LAN connector
CN46	Speaker connector
CN49	SATA data connector
CN50	Mini PCIE or Msata
CN52	LCD backlight
CN53	LVDS connector
CN55	DISPLAYPORT
CN58	12V power for 2nd display
CN59	12V power for power USB
CN60	R Touch connector
KBMS1	KBMS connector
LPT1	LPT connector
RJ11	Cash drawer connector
COM1,COM2	Real COM
COM4,COM5,COM6	Internal COM connector
DIMM1	Memory socket

2.8 PenMount 6000 Multiple-Monitors set sop

Before using multiple monitors you must have two or more monitors that are in extension mode.

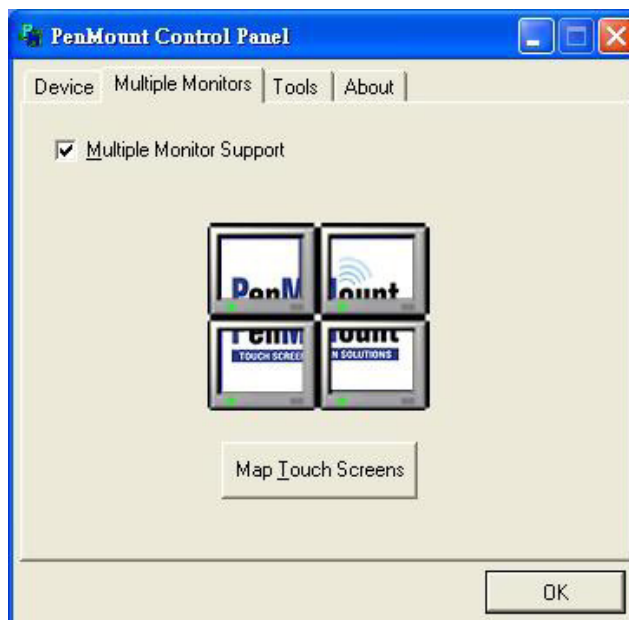
Note! Before you can use multiple monitors you need to map each monitor.



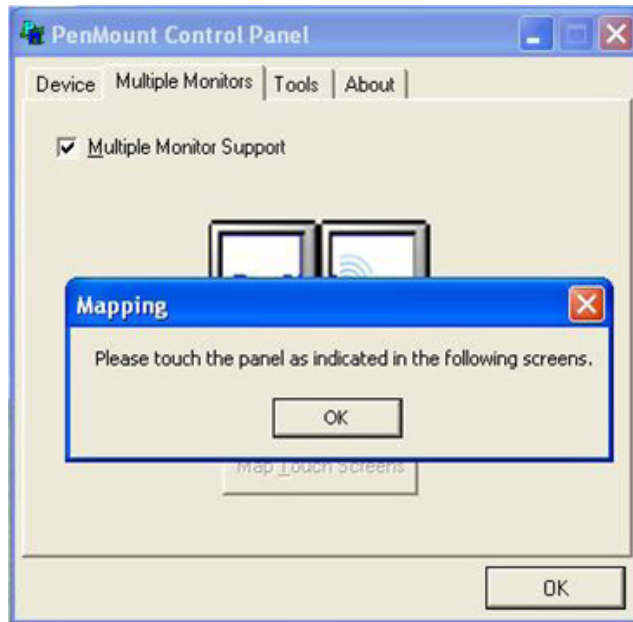
Enabling Multiple Monitors

Enable the multiple display function as follows:

1. In the PenMount Control Panel, under Multiple Monitors tag, check the “Multiple Monitor Support” box. Then click “Map Touchscreens” to assign touch controllers to displays.



2. When the mapping screen message appears, click “OK”.



3. Touch each screen as it displays “Please touch this monitor. Press ‘S’ to skip”. Follow this sequence and touch each screen to map the touchscreens.



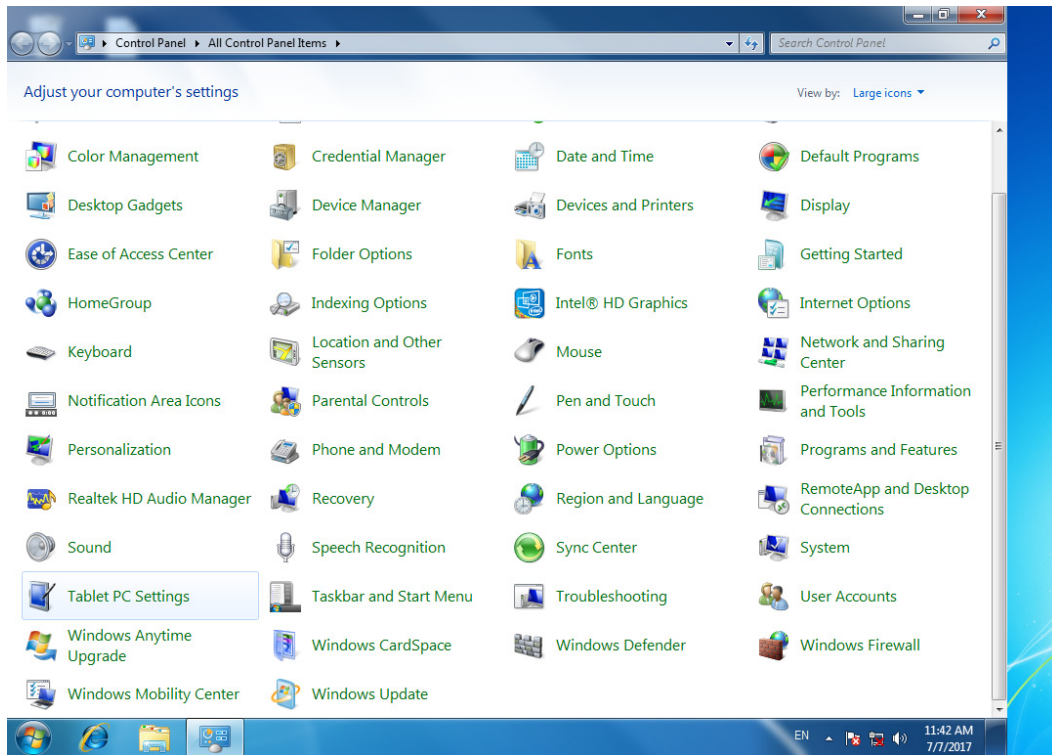
4. After the setting procedure is finished, maybe you need to calibrate for each panel and controller

- Note!**
1. The **Rotating** function is disabled if you use the **Multiple Monitors** function.
 2. If you change the resolution of display or screen address, you have to redo **Map Touchscreens** so the system understands where the displays are.
 3. If you have multiple monitors but only one touchscreen, press ‘S’ to skip the mapping step.

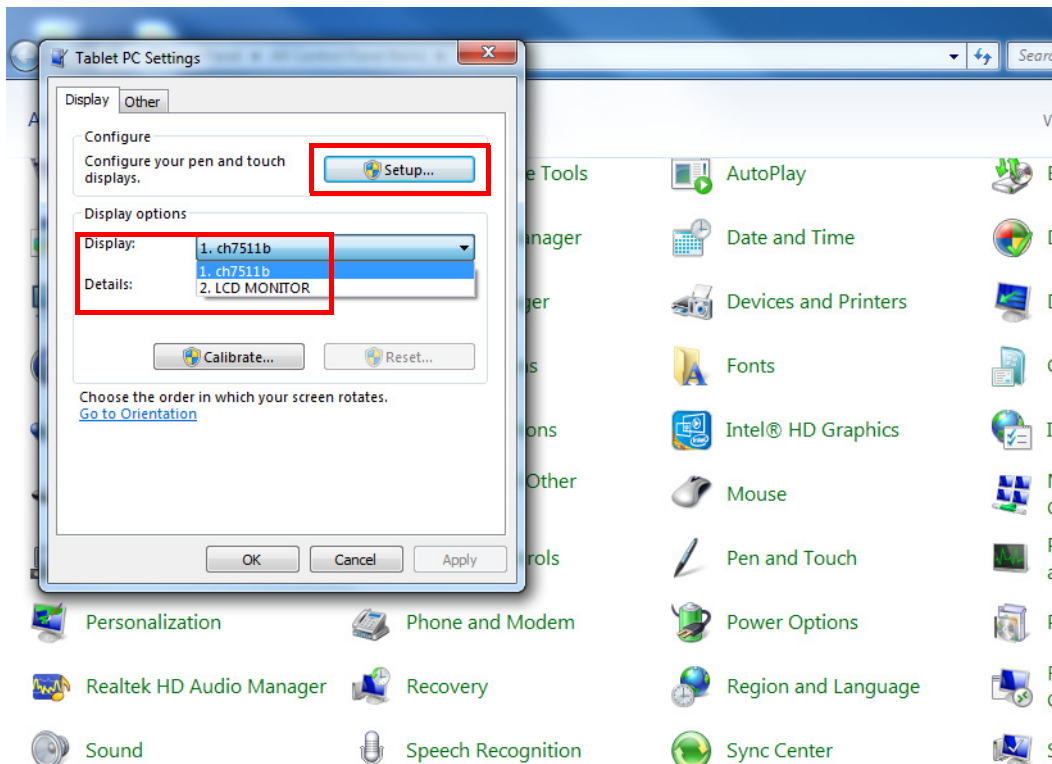
2.9 Capacitive touch extends display setup

If you use Dual display, refer to the instructions below.

1. Open Control Panel, choose Tablet PC as below.



2. Double click "Tablet PC setup", choose Touch screen, then click setup.

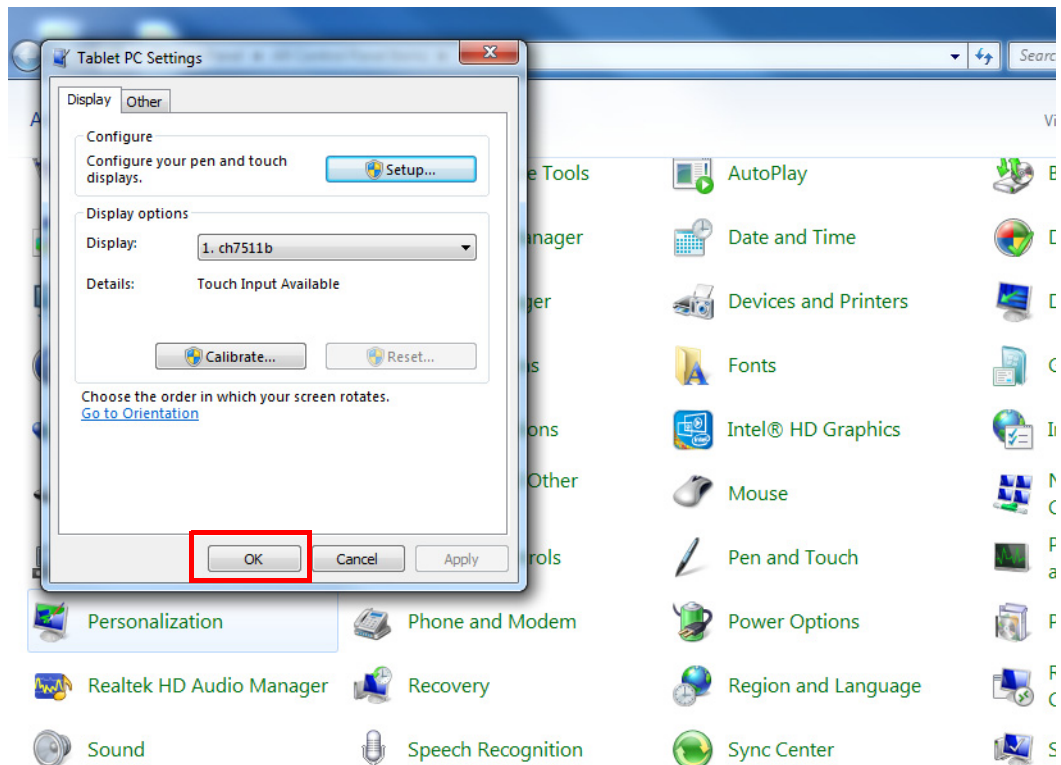


- UPOS-211D main screen will show the below picture. Please touch the main touch screen, then press "Enter" on the keyboard. On the second display (see same picture), if the second display has a touch function, touch it; if the second display no touch function, then just press "Enter".

Touch this screen to identify it as the touchscreen.

If this is not the Tablet PC screen, press Enter to move to the next screen. To close the tool, press Esc.

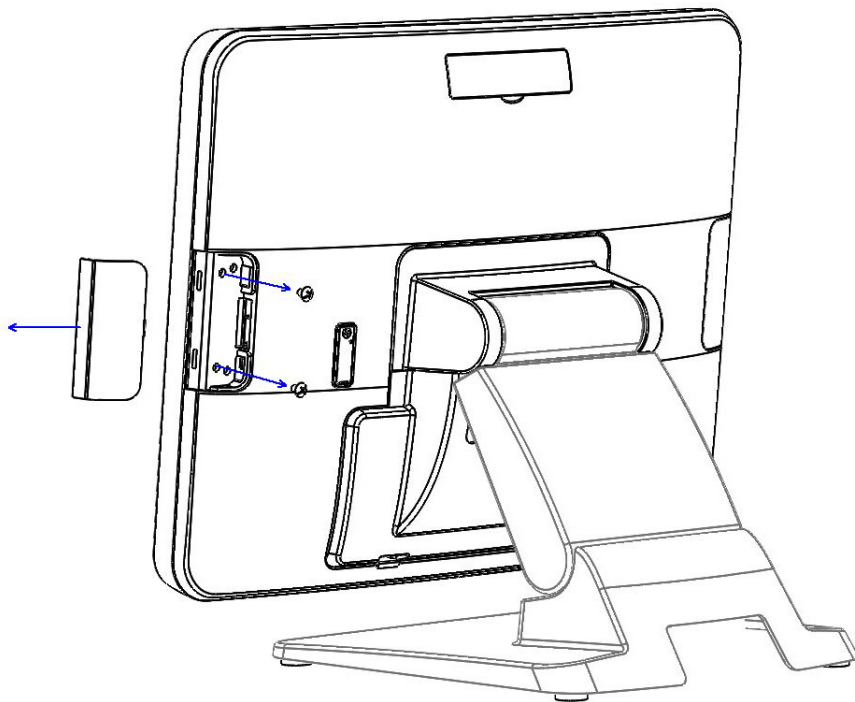
- Then click "ok" to finish.



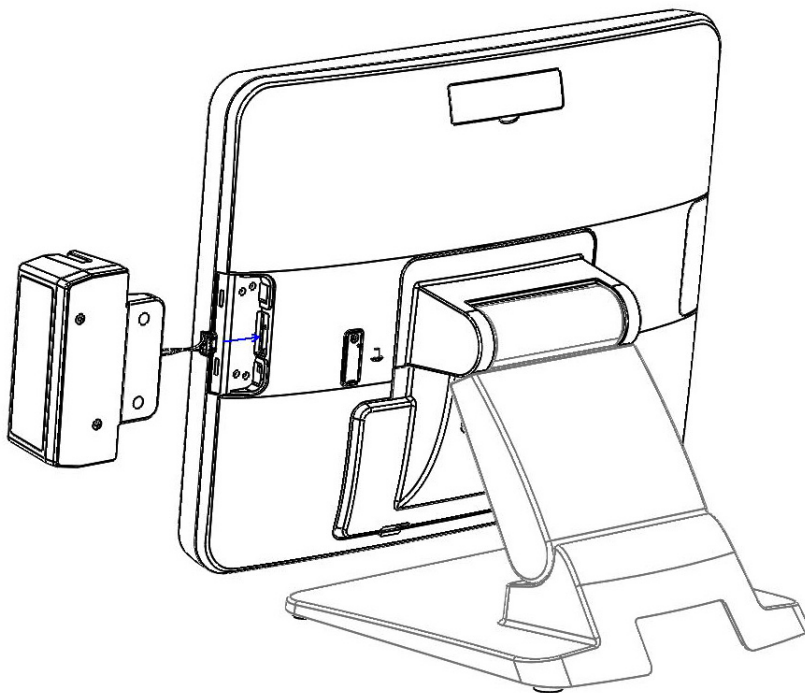
2.10 Peripheral and base

2.10.1 MSR

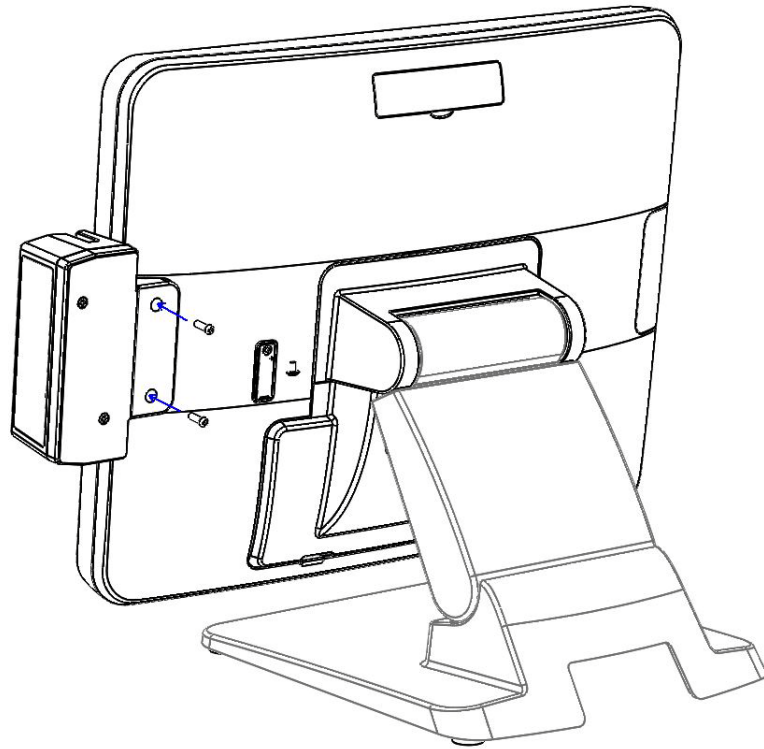
1. Remove the plastic cover.



2. Install the MSR.

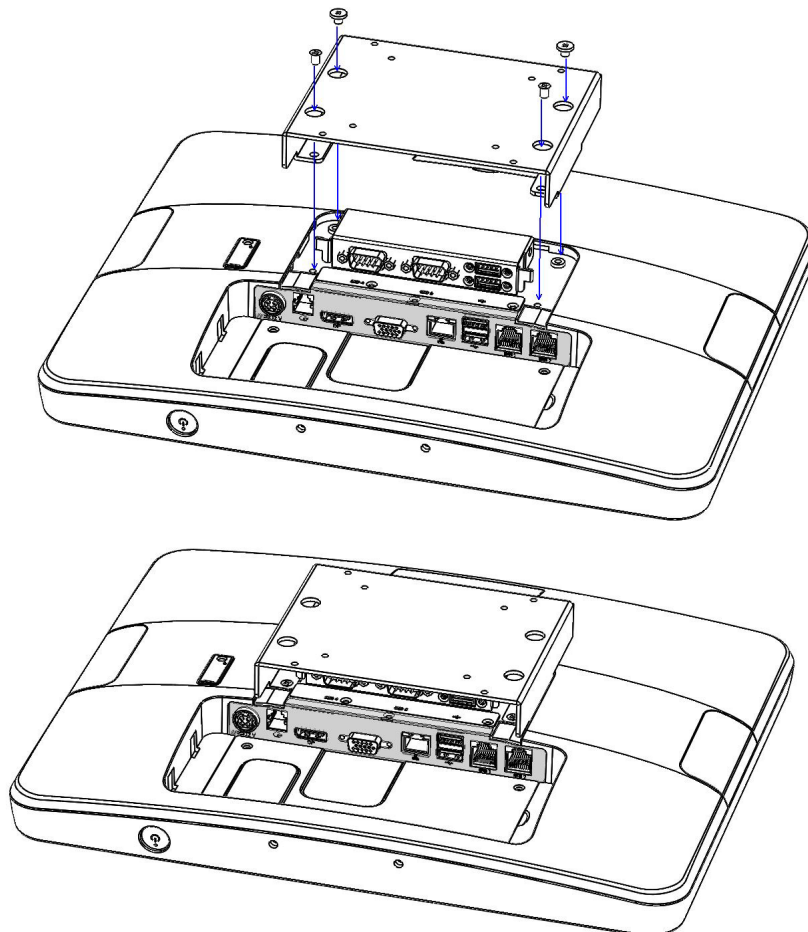


3. Replace the plastic cover and fasten the screws.



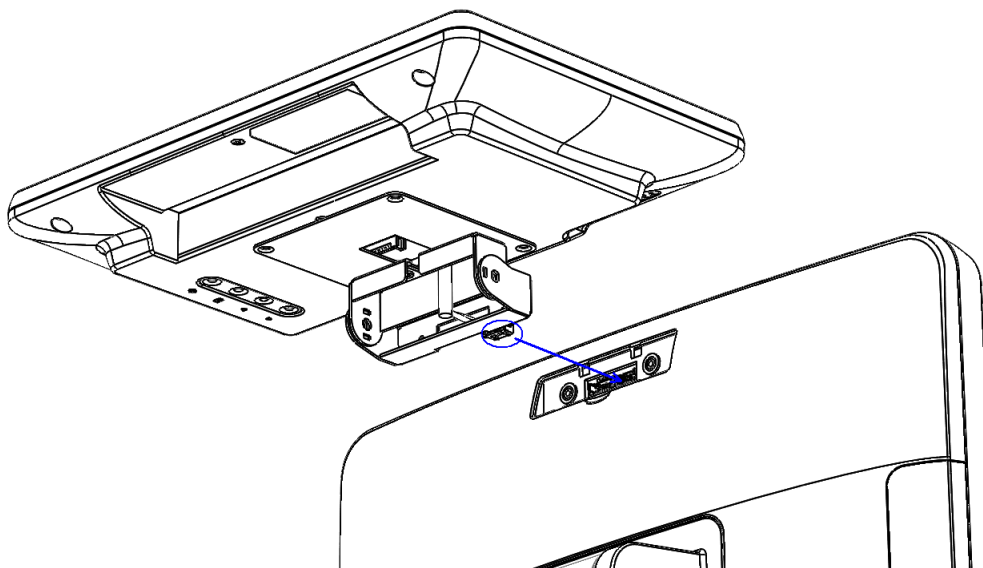
2.10.2 VESA mount

1. Assemble the VESA mount and fasten the screws.

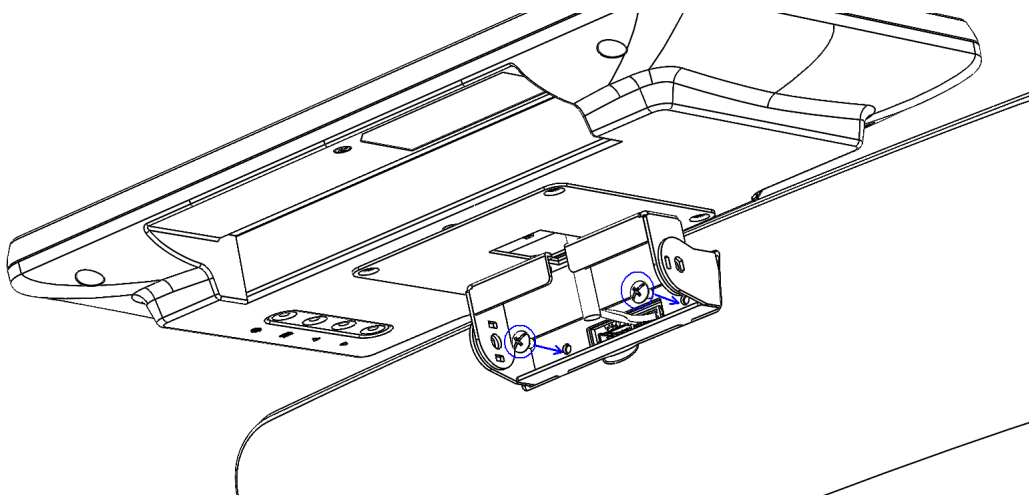


2.10.3 10-inch screen

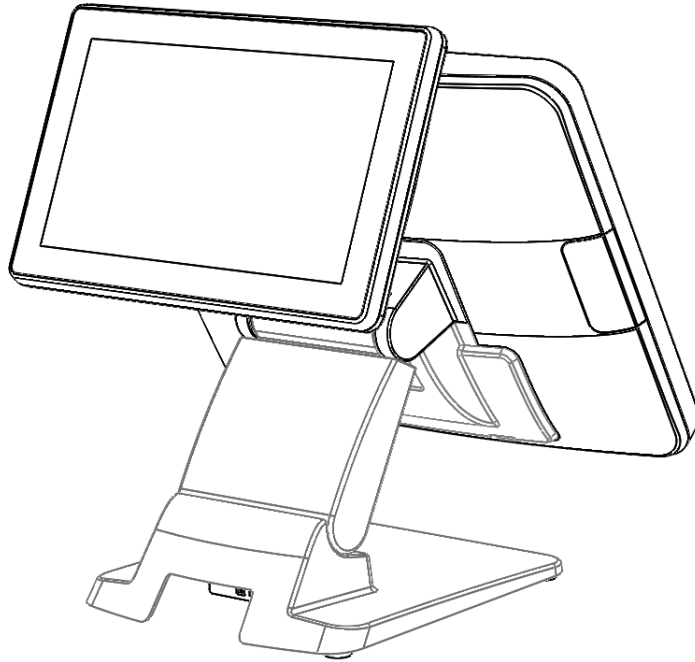
1. Assemble the 10-inch screen.



2. Fasten the screws.

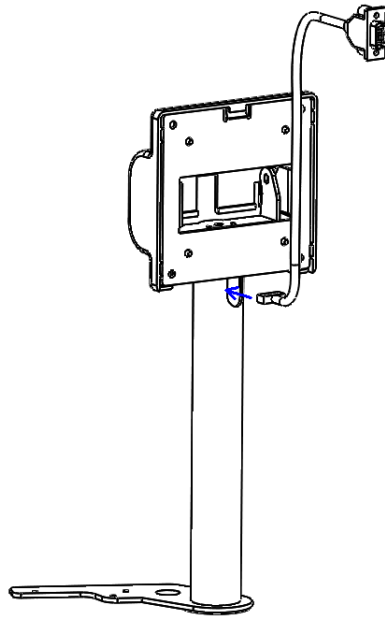


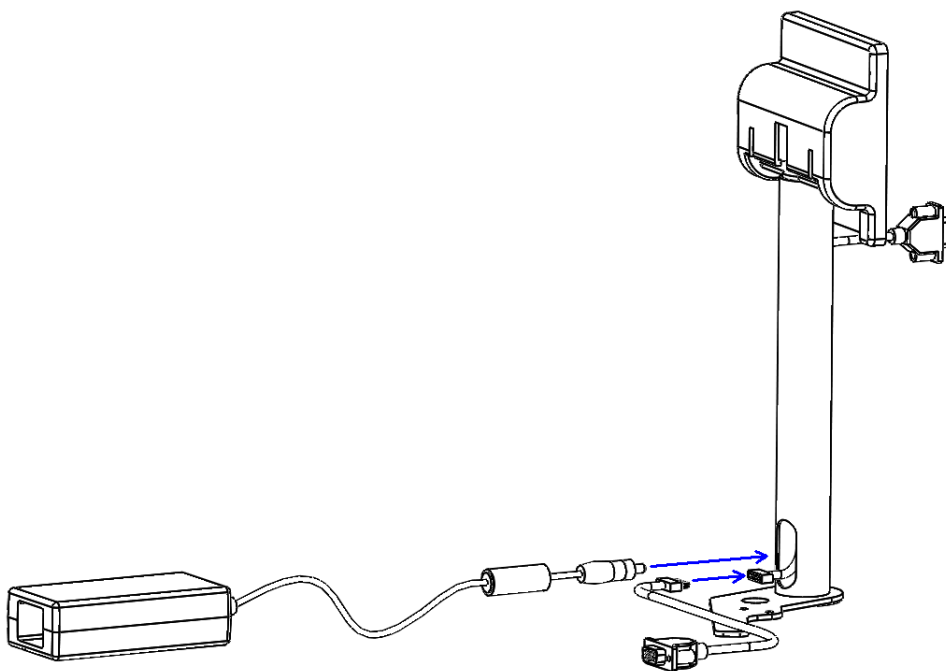
3. Adjust the angle of the 10-inch screen.



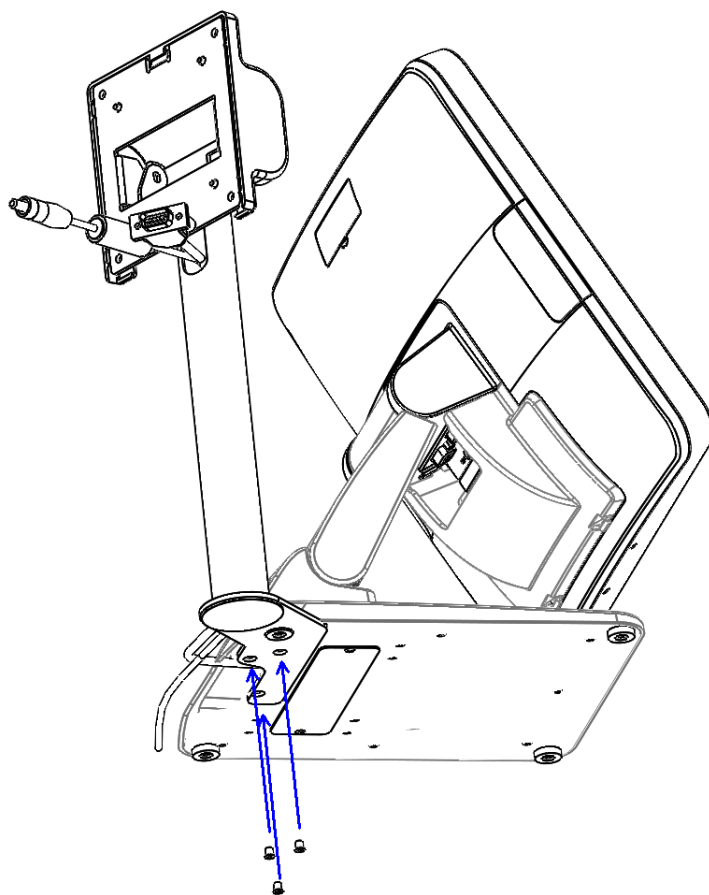
2.10.4 2nd display

1. Connect the cables to the I/O board.

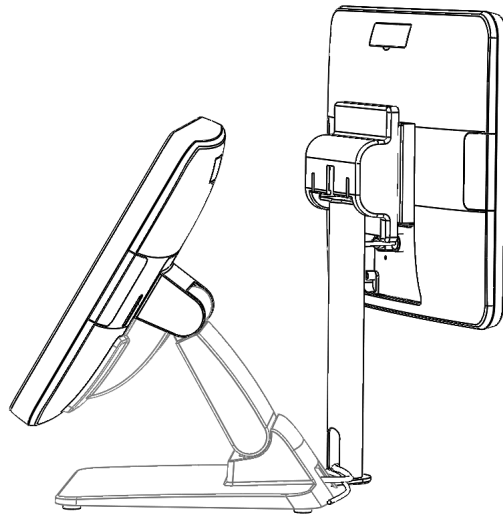
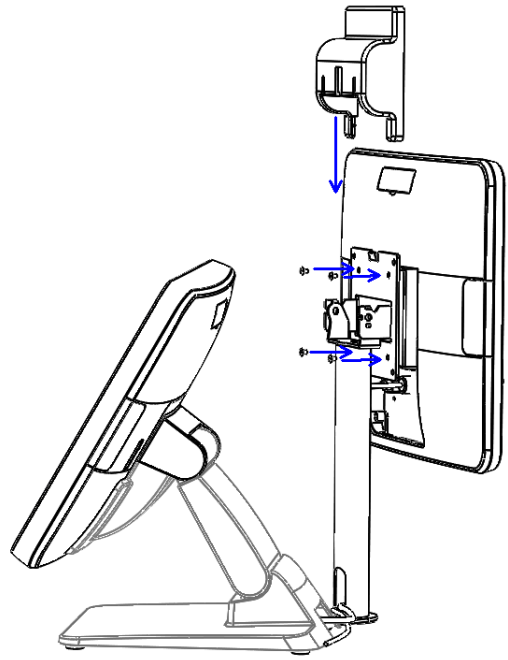




2. Fasten the screws.

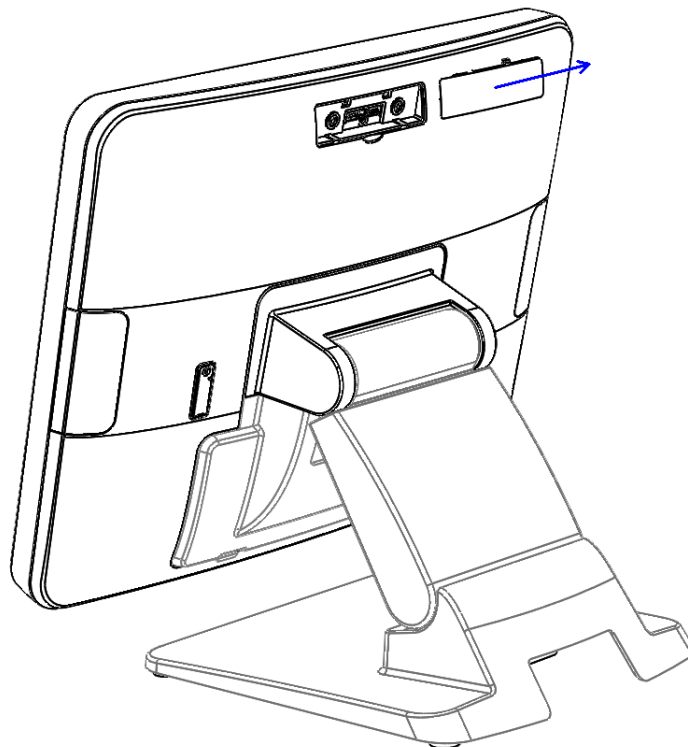


3. Assemble the plastic cover and fasten the screws.

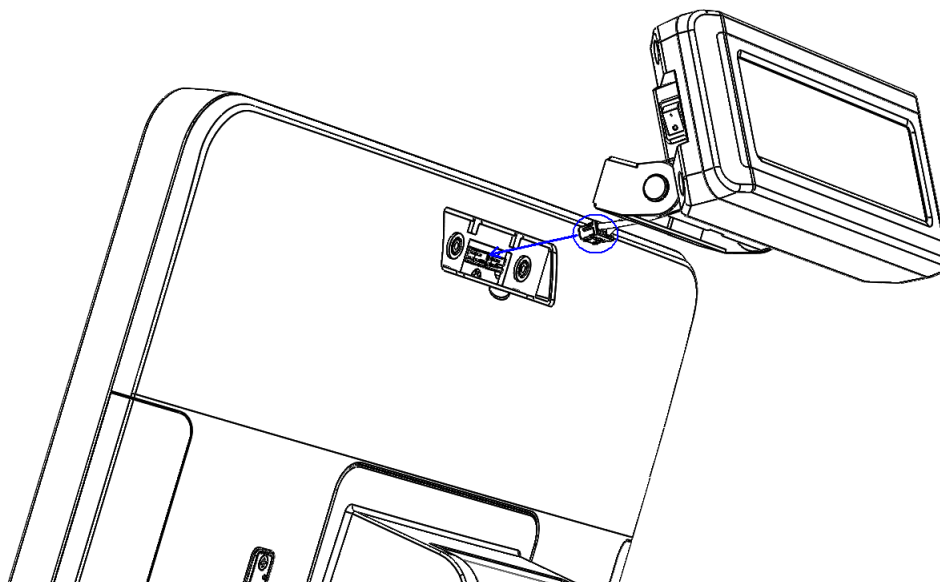


2.10.5 VDF

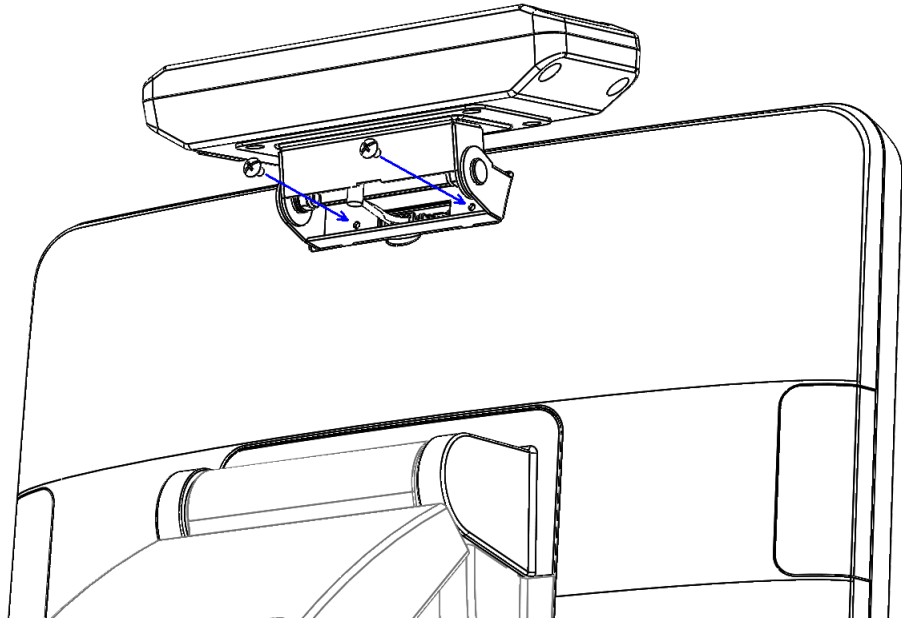
1. Remove the plastic cover.



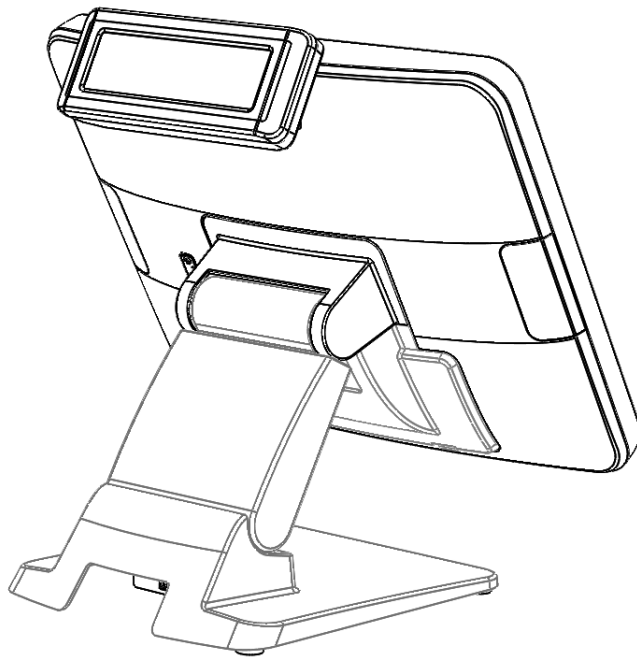
2. Connect the cables to the I/O board.



3. Fasten the screws.

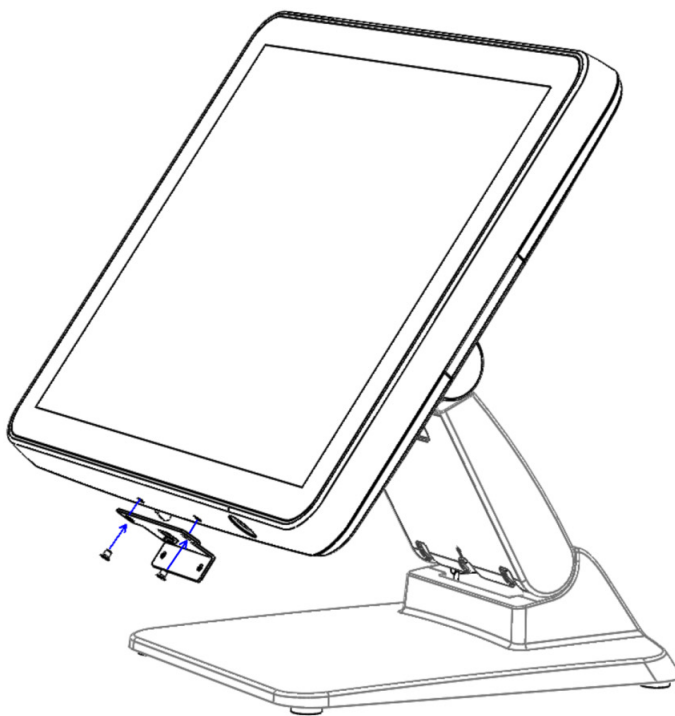


4. Adjust the angle of the VDF.

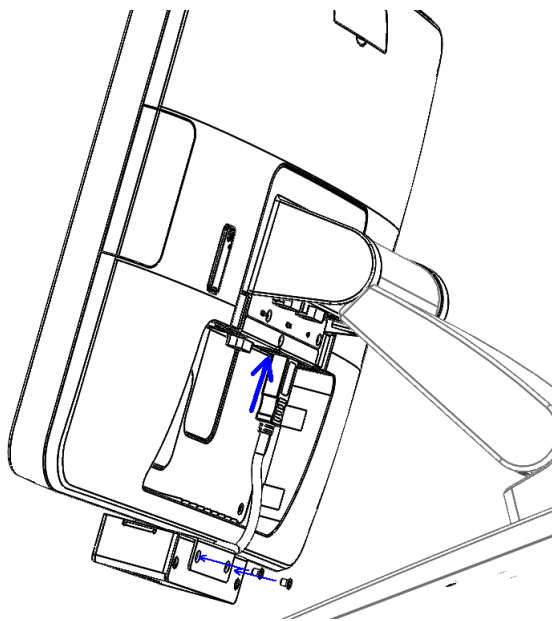


2.10.6 Barcode scanner

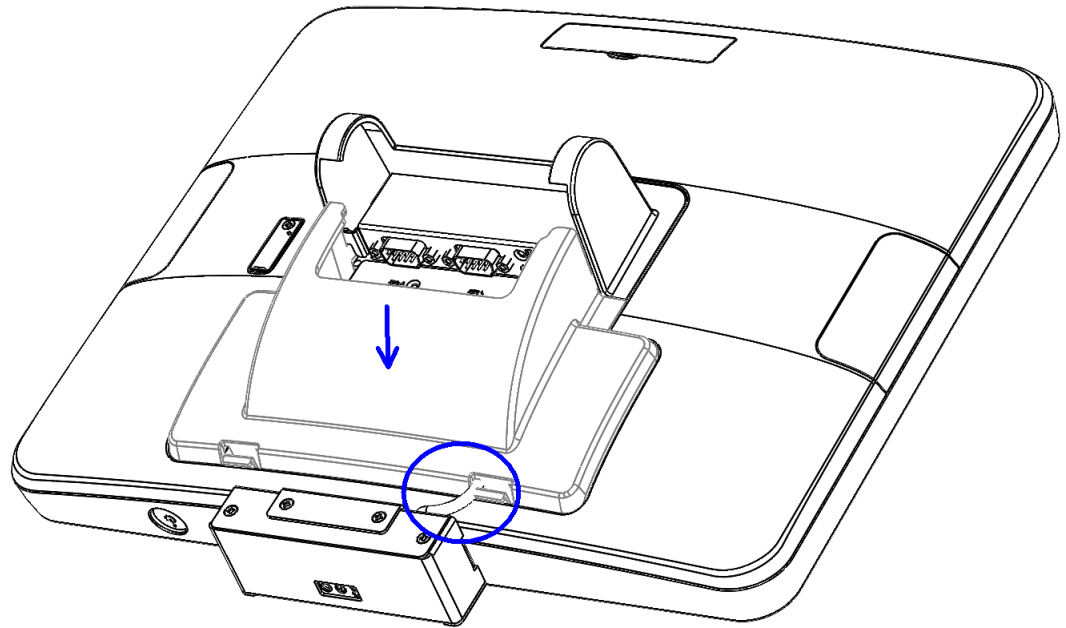
1. Fasten the screws.



2. Connect the cables to the I/O board and fasten the screws.



3. Replace the plastic cover.

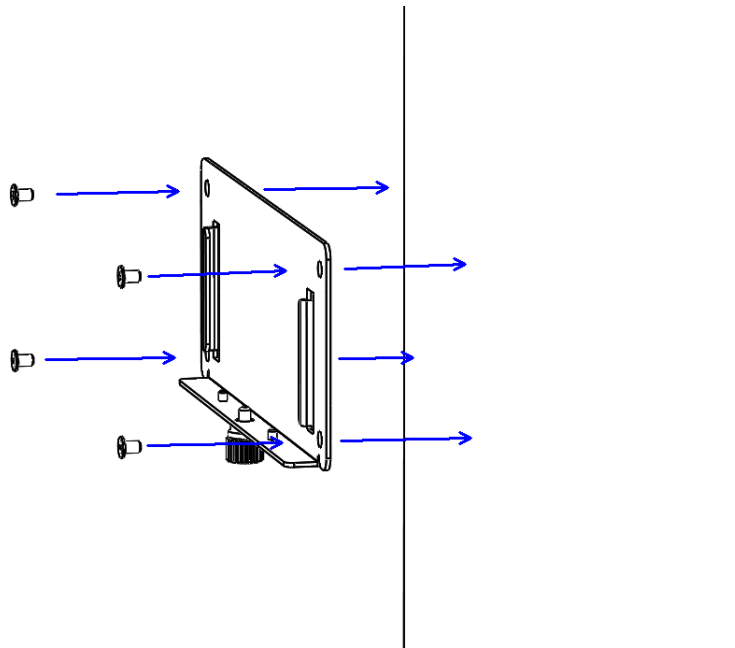
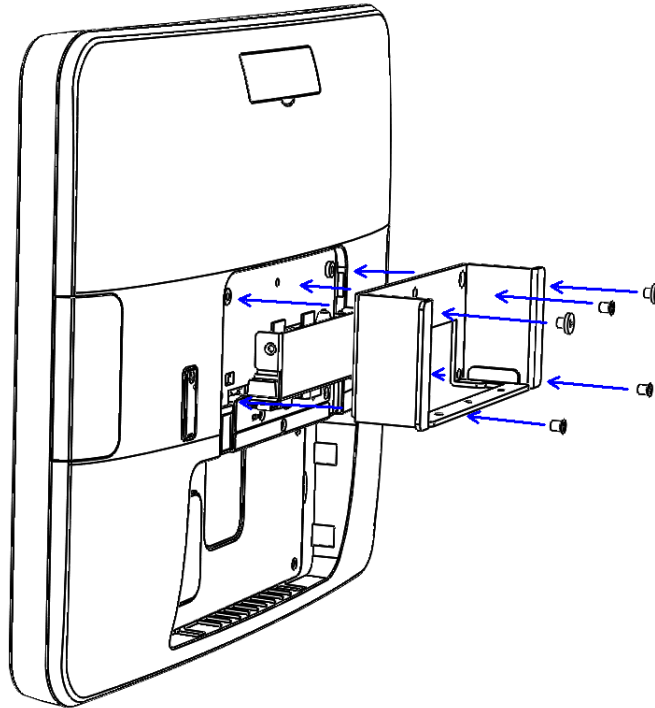


4. Push the screen back to the original position.

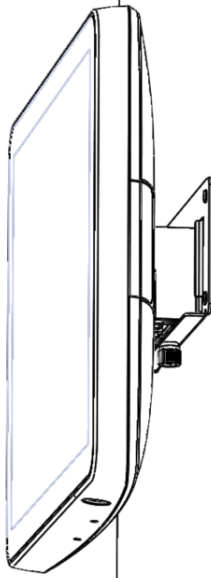
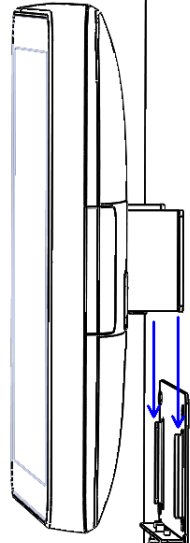


2.10.7 Wall mount

1. Assemble the wall mount and fasten the screws.



2. Clasp the UPOS-211 to the wall.



Chapter 3

BIOS Setup
(UPOS-211D)

In most cases, the computer will have been setup and configured by the dealer or SI prior to delivery. However, some of the computer's BIOS (Basic Input-Output System) setup programs may need adjustment to set the system configuration data, such as the current date and time, or type of hard drive installed. The setup program is stored in read-only memory (ROM) and can be accessed when activating or resetting the computer, or by pressing "Delete" immediately after powering up the computer.

3.1 Introduction

With the AMI BIOS Setup program, you can modify BIOS settings to control the special features of your computer. The Setup program uses a number of menus for making changes. This chapter describes the basic navigation of the UPOS-211 setup screens.

3.2 BIOS Setup

UPOS-211D has AMI BIOS built in, with a SETUP utility that allows users to configure required settings or to activate certain system features. The SETUP saves the configuration in the FLASH of the motherboard. When the Power is turned off, the battery on the board supplies the necessary power to preserve the FLASH. When the power is turned on, press the or <Esc> button during the BIOS POST (Power-On Self Test) to access the CMOS SETUP screen.

Control Keys

← > < → >	Select Screen
-----------	---------------

< ↑ > < ↓ >	Select Item
-------------	-------------

<Enter>	Select
---------	--------

<+/->	Change Opt
-------	------------

<F1>	General help
------	--------------

<F2>	Previous Values
------	-----------------

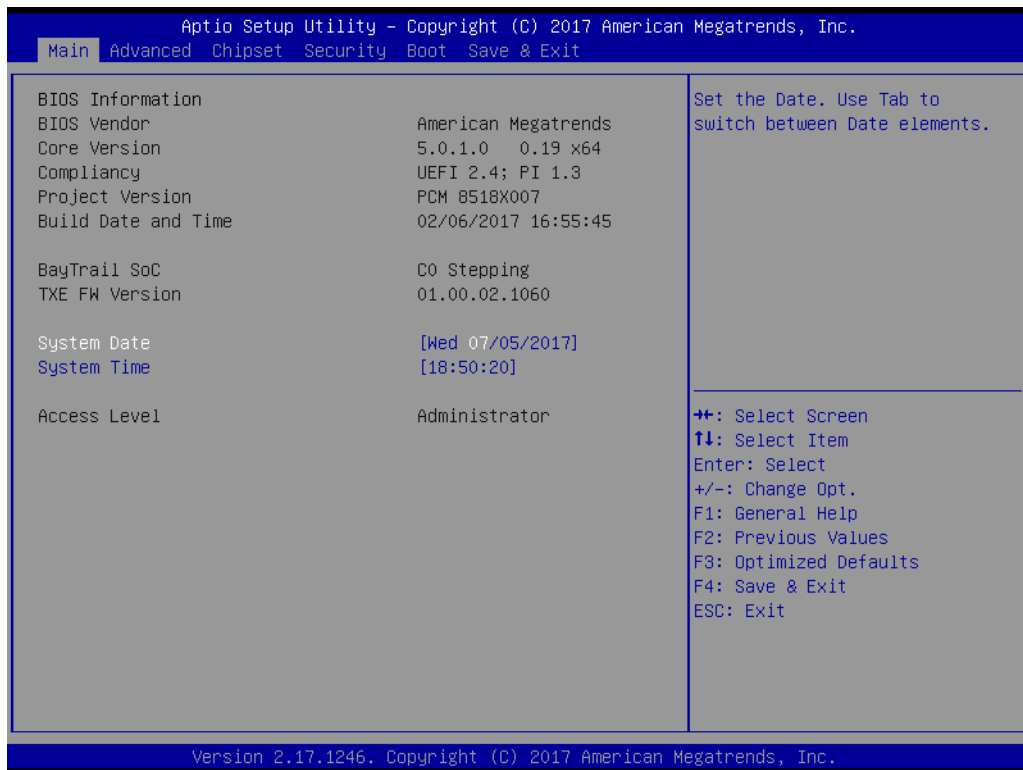
<F3>	Optimized Defaults
------	--------------------

<F4>	Save & Exit
------	-------------

<Esc>	Exit
-------	------

3.2.1 Main Menu

Press or <Esc> 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.

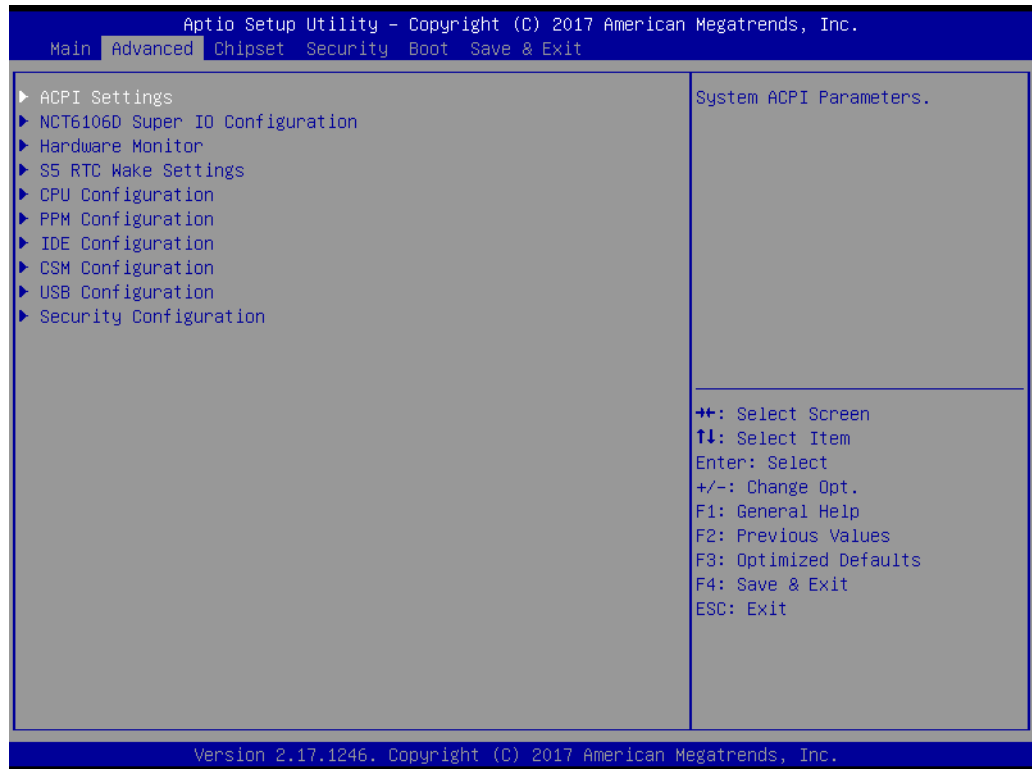
Above the key legend is an area reserved for a text message. When an option is selected in the left frame, it is highlighted in white. Often a text message will accompany it.

■ System time / System date

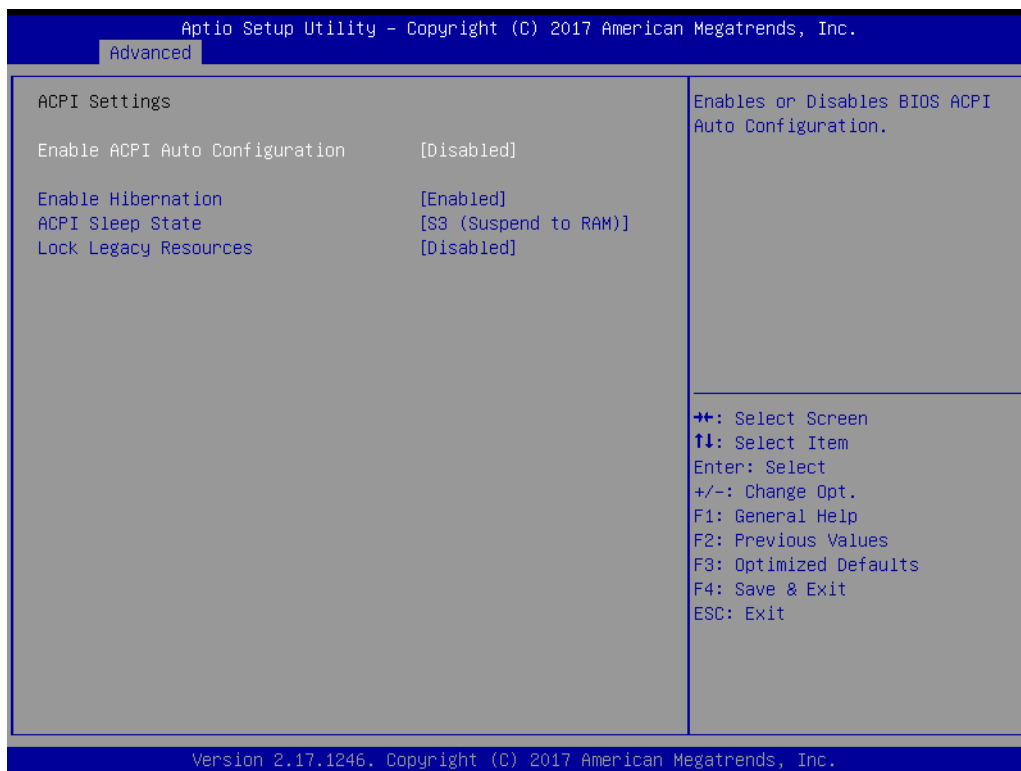
Use this option to change the system time and date. Highlight System Time or System Date using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time must be entered in HH:MM:SS format.

3.2.2 Advanced BIOS Features

Select the Advanced tab from the 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.

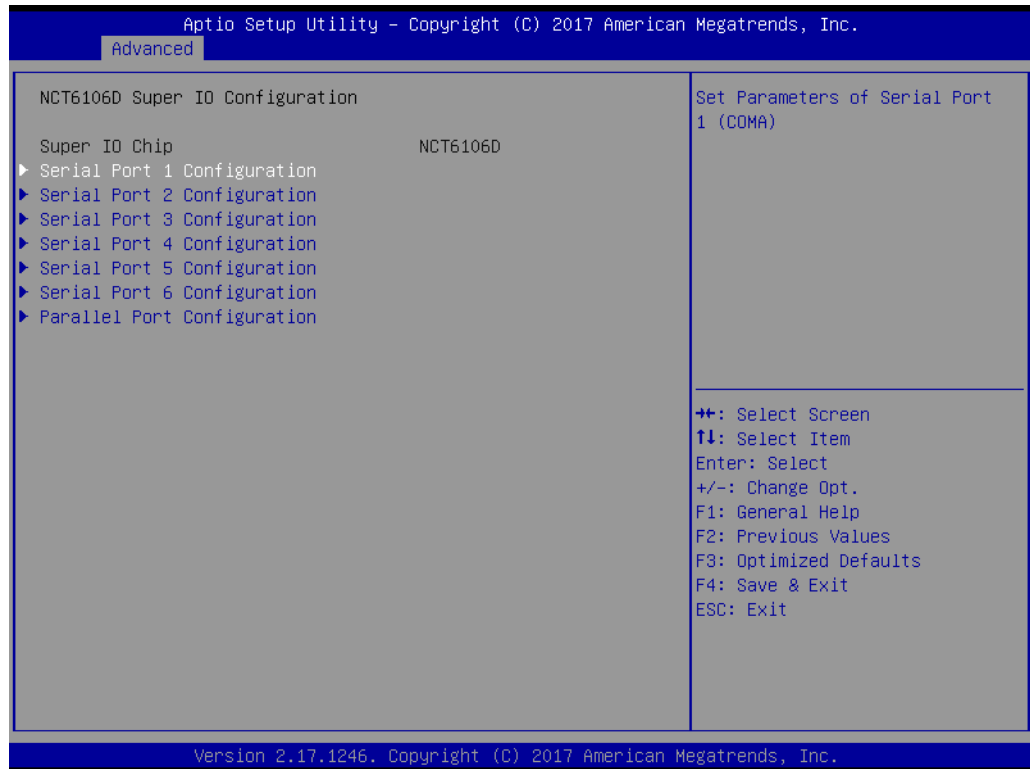


3.2.2.1 ACPI Settings



- **Enable ACPI Auto Configuration [Disabled]**
Enable or disable BIOS ACPI auto configuration.
- **Enable Hibernation [Enabled]**
Enables or Disables System ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some OS.
- **ACPI Sleep State [S3(Suspend to RAM)]**
Select ACPI sleep state the system will enter when the SUSPEND button is pressed.
- **Lock Legacy Resources [Disabled]**
Enables or Disables Lock of Legacy Resources.

3.2.2.2 NCT6106D Super IO Configuration

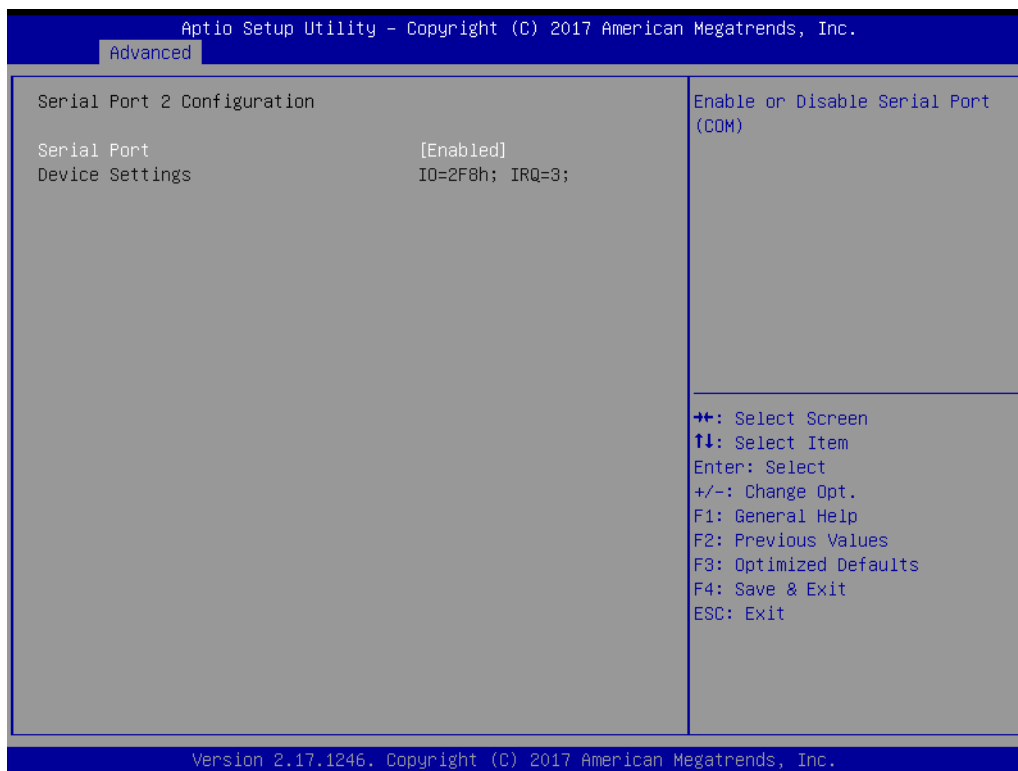


- **Super IO Chip [NCT6106D]**
- **Serial Port 1 Configuration**



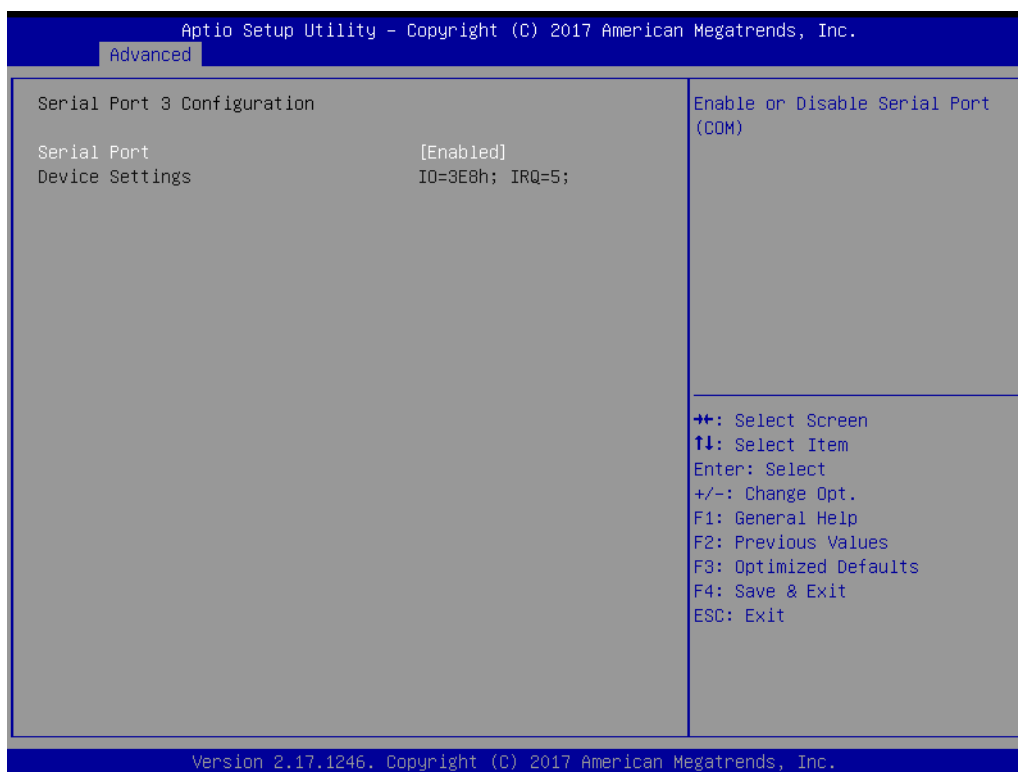
- Serial Port [Enabled]
- Device Settings: IO=3F8h; IRQ =4

■ Serial Port 2 Configuration



- Serial Port [Enabled]
- Device Settings: IO=2F8h; IRQ =3

■ Serial Port 3 Configuration



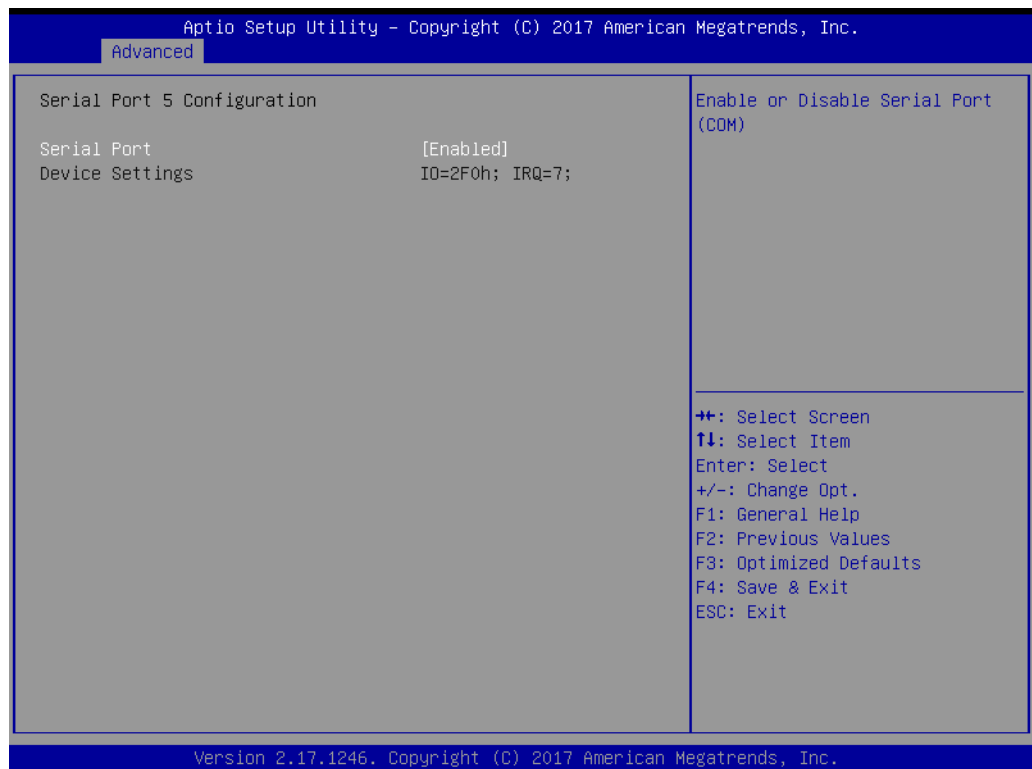
- Serial Port [Enabled]
- Device Settings: IO=3E8h; IRQ =5

■ Serial Port 4 Configuration



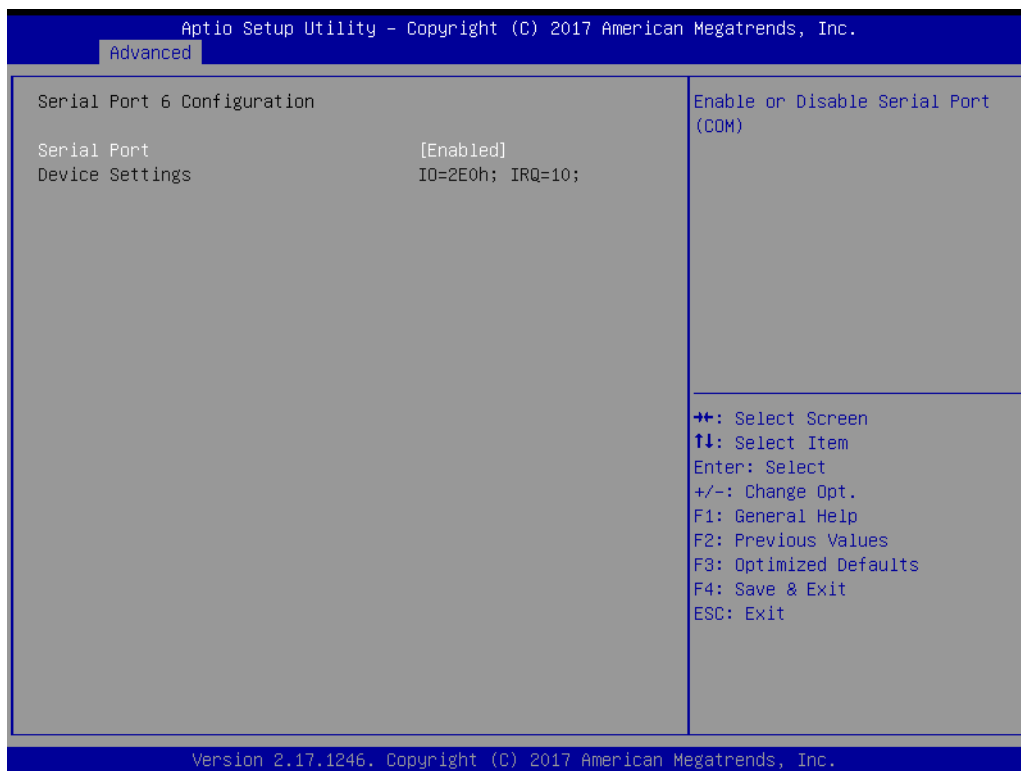
- Serial Port [Enabled]
- Device Settings: IO=2E8h; IRQ =7

■ Serial Port 5 Configuration



- Serial Port [Enabled]
- Device Settings: IO=2F0h; IRQ =7

■ Serial Port 6 Configuration



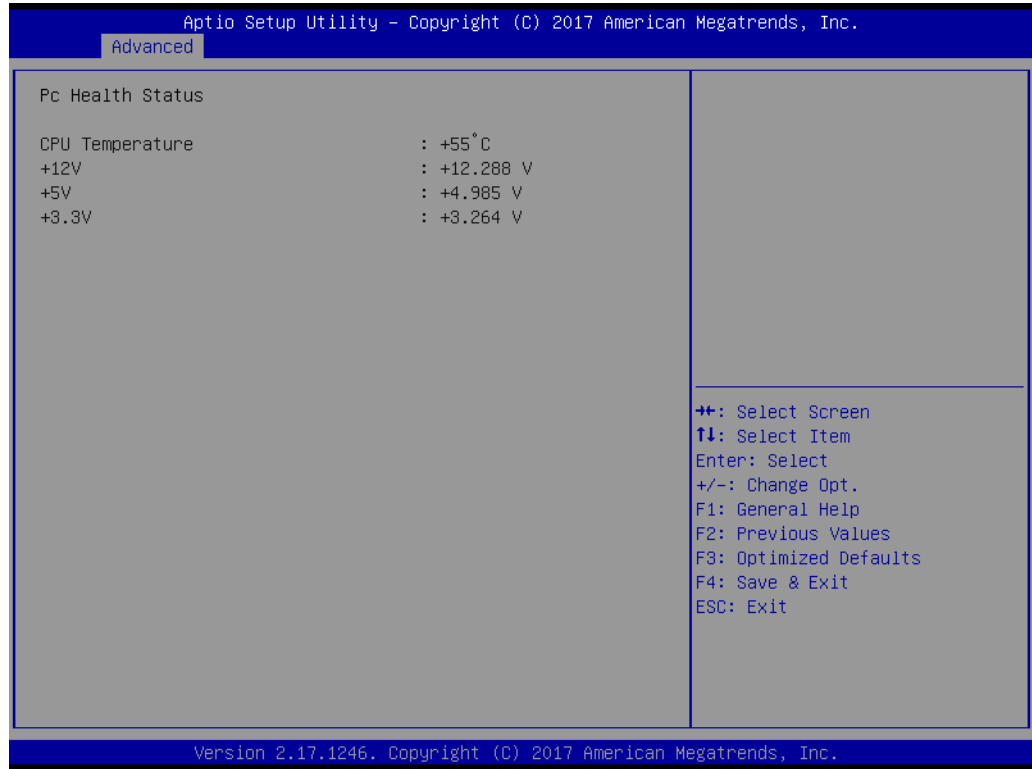
- Serial Port [Enabled]
- Device Settings: IO=2E0h; IRQ =10

■ Parallel Port Configuration



- Parallel Port [Enabled]
To enable or disable Parallel Port
- Device Settings: IO=278h; IRQ =6
- Change Settings [Auto]
To select an optimal setting for parallel port.
- Device Mode [STD Printer Mode]

3.2.2.3 Hardware Monitor



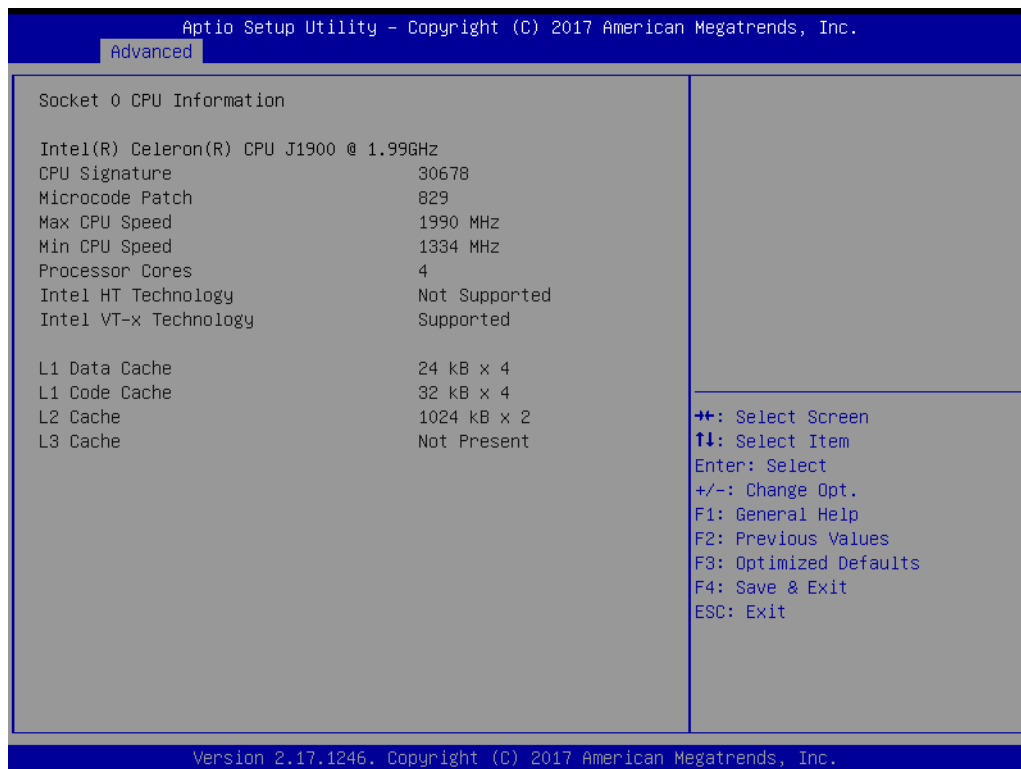
3.2.2.4 S5 RTC Wake Settings



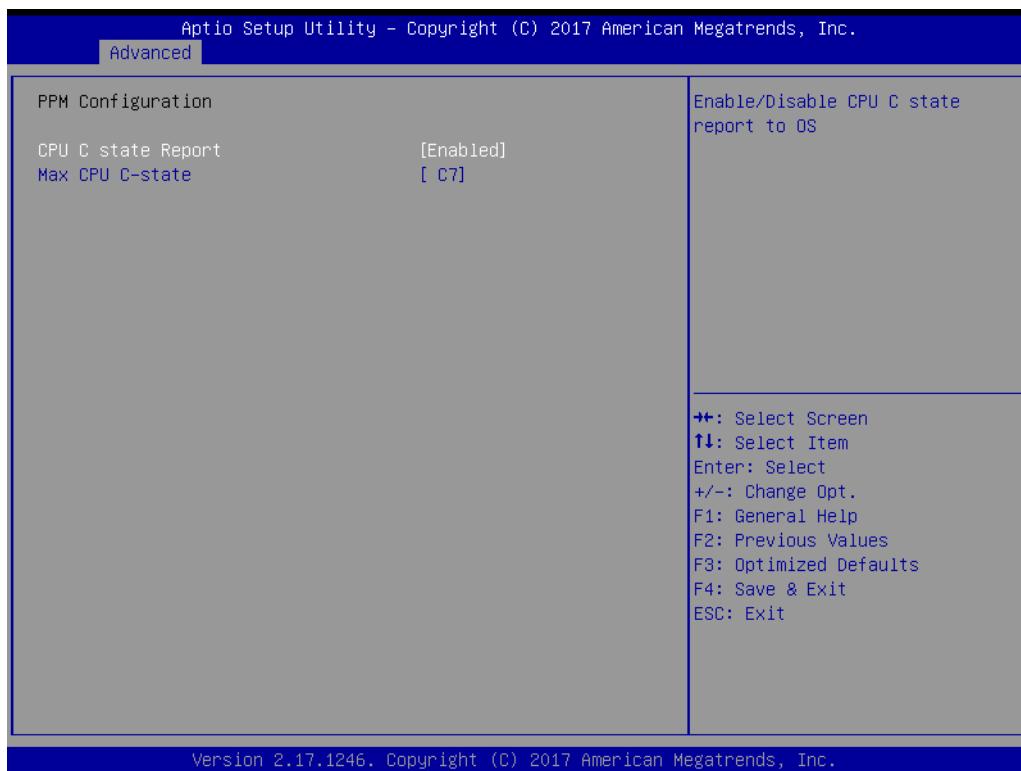
3.2.2.5 CPU Configuration



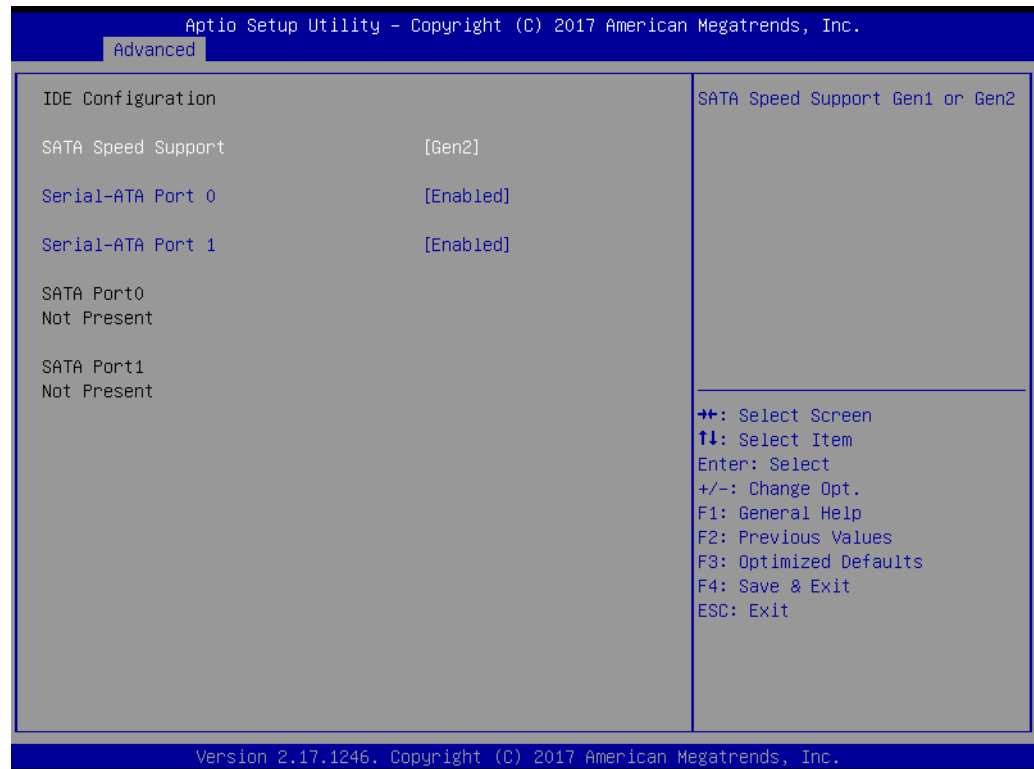
- **Intel Virtualization Technology [Enabled]**
Enabled or Disable Intel Virtualization Technology.



3.2.2.6 PPM Configuration

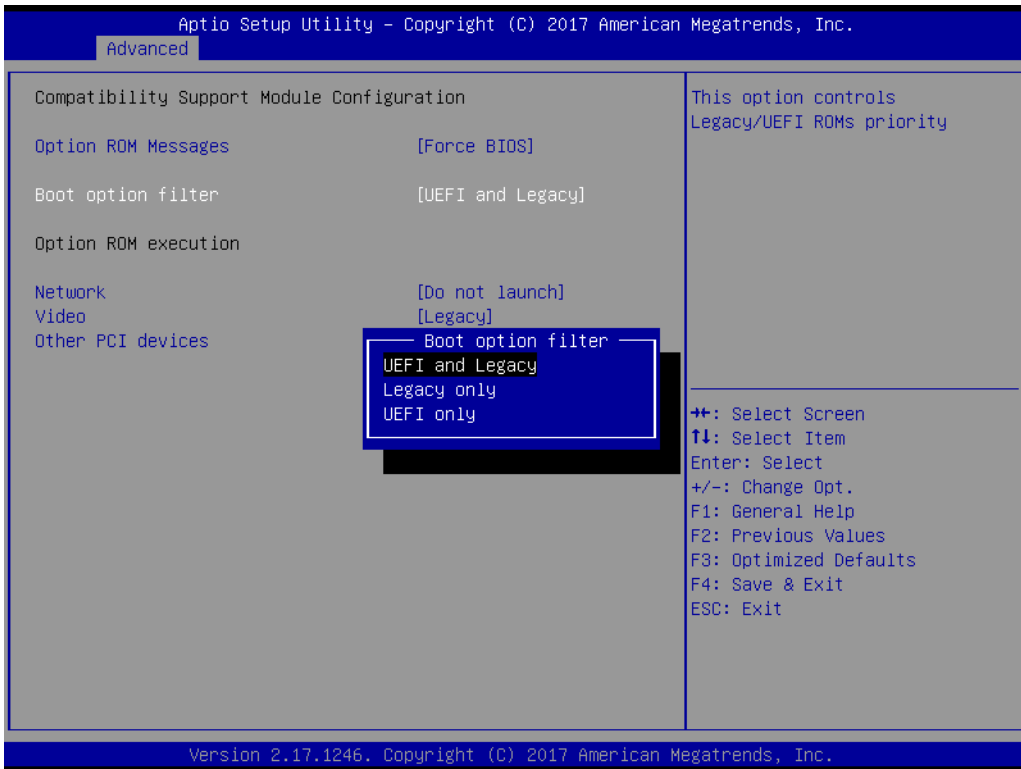
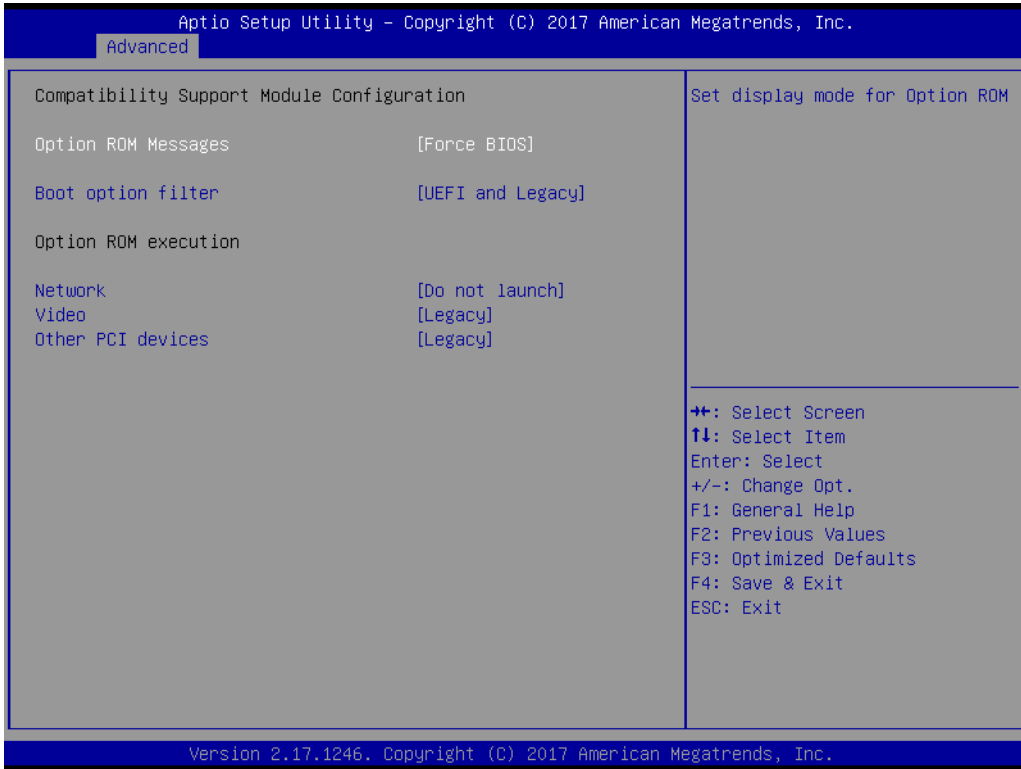


3.2.2.7 IDE Configuration

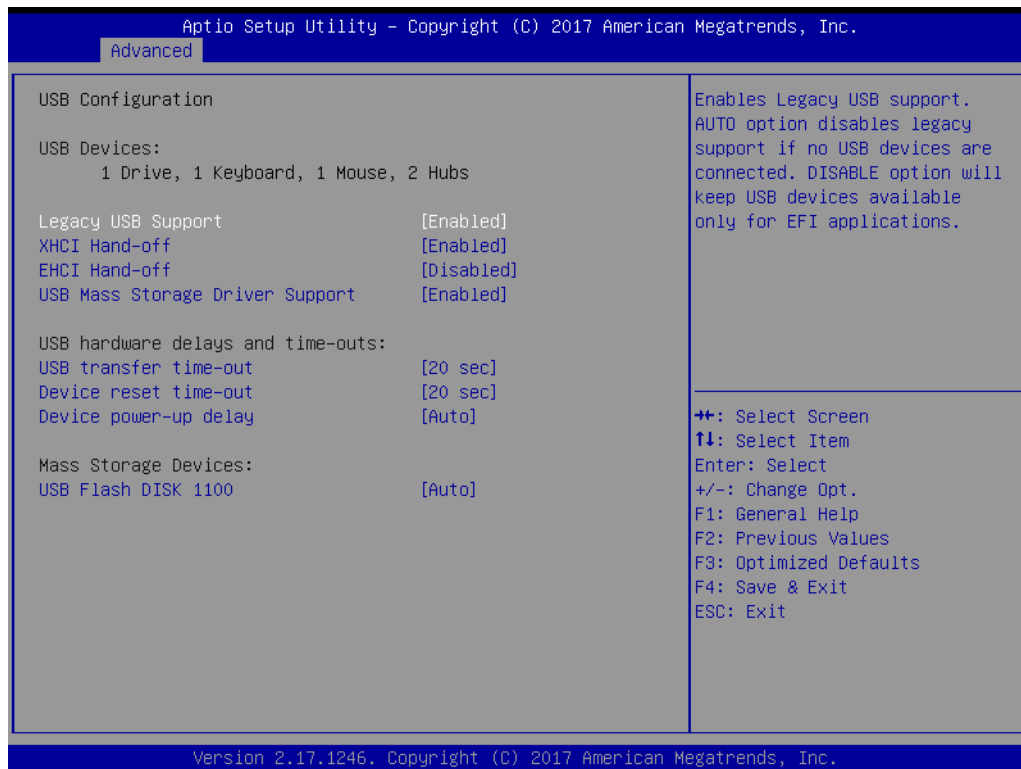


- **SATA Speed Support [Gen2]**
SATA Speed Support Gen1/Gen2.
- **Serial-ATA Port 0 [Enable]**
Enable or disable SATA Function.
- **Serial-ATA Port 1 [Enable]**
Enable or disable SATA Function.

3.2.2.8 CSM Configuration

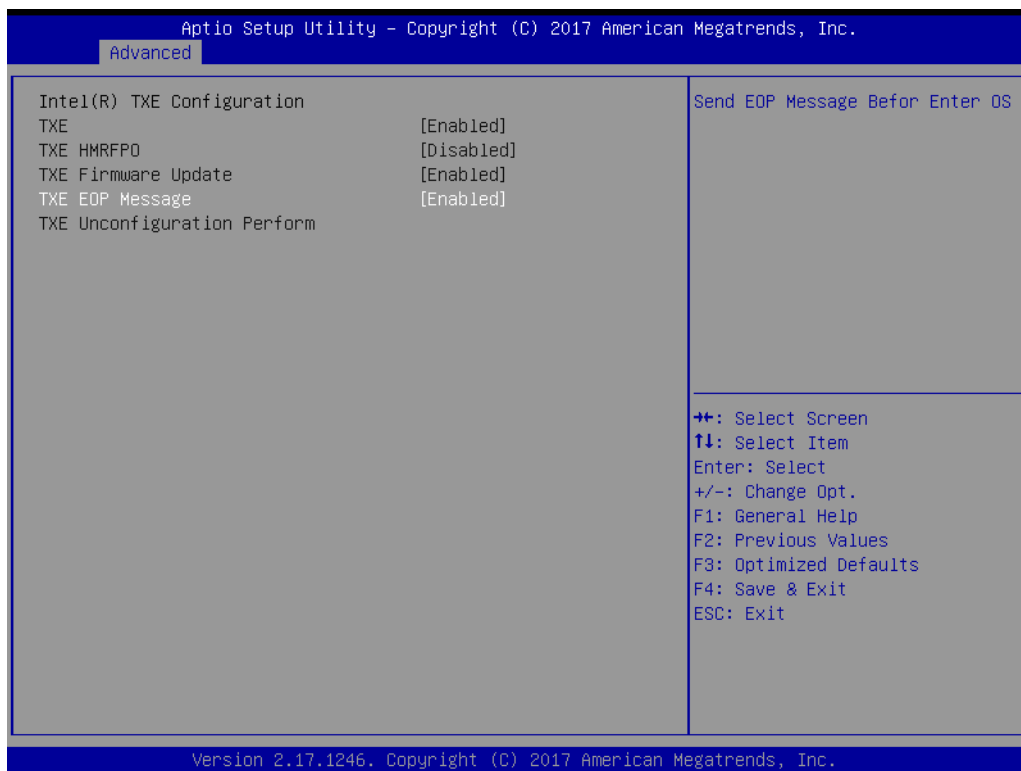


3.2.2.9 USB Configuration



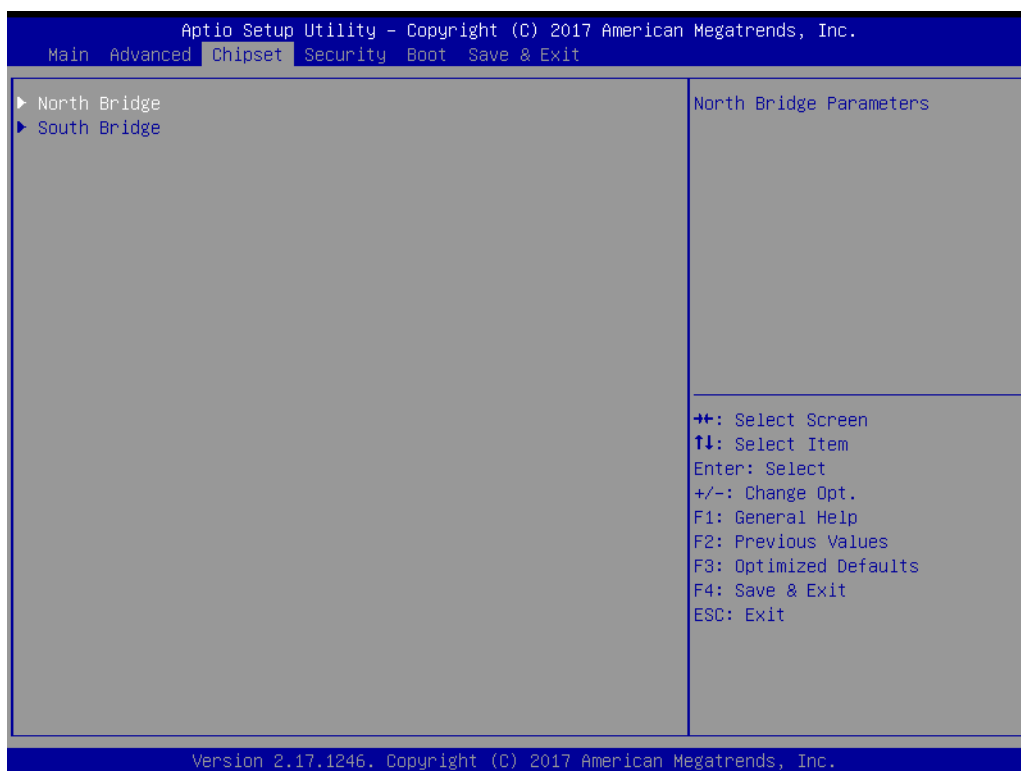
- **Legacy USB Support [Enabled]**
Enables support for legacy USB. Auto option disables legacy support if no USB devices are connected.
- **XHCI Hand-off [Enabled]**
- **EHCI Hand-off [Enabled]**
This is just a workaround item under OS without EHCI hand-off support.
- **USB Mass Storage Driver Support [Enabled]**
- **USB hardware delays and time-outs**
USB Device transfer & reset time-out and delay setting.
- **Mass Storage Devices [Auto]**
Shows USB mass storage device information.

3.2.2.10 Security Configuration

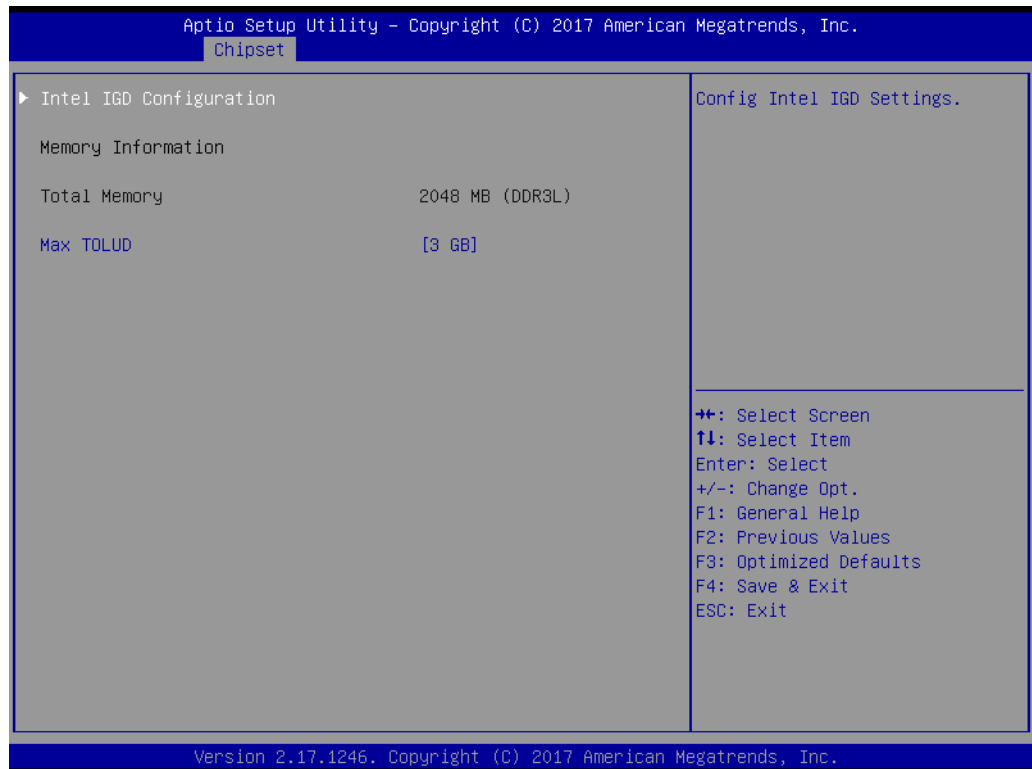


3.2.3 Configuration Setting

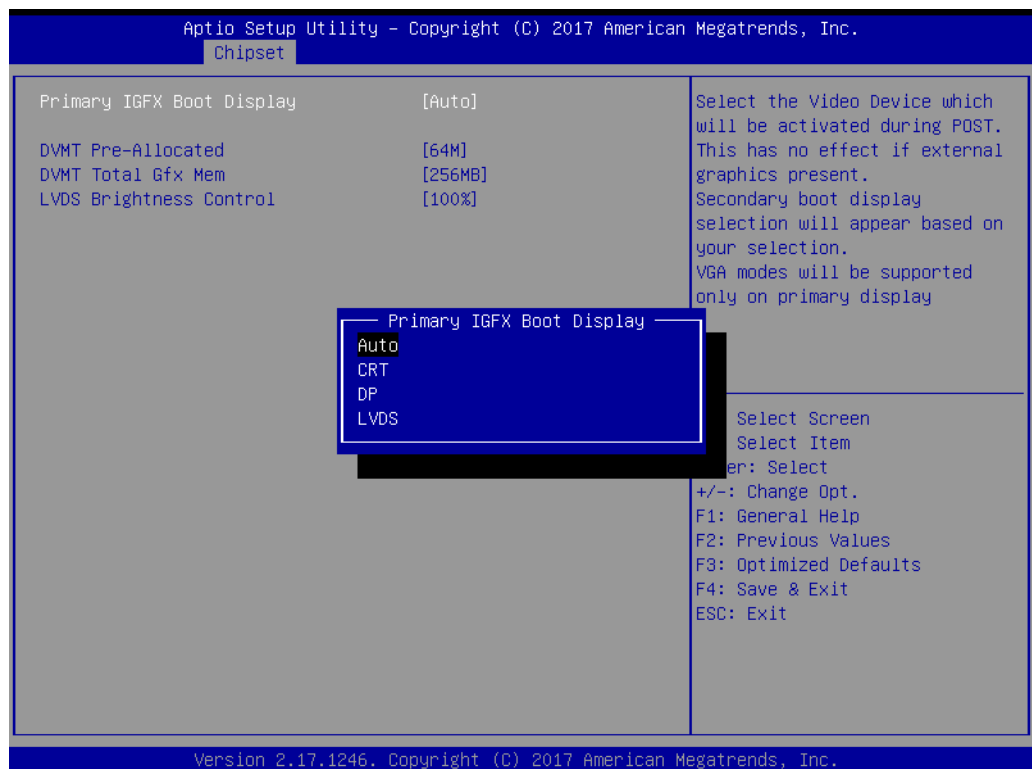
Select the chipset tab from the BIOS setup screen to enter the Chipset Setup screen. Users can select any item in the left frame of the screen, such as North Bridge Configuration to go to the sub menu for that item. The Chipset Setup screens are shown below. The submenus are described on the following pages.



3.2.3.1 North Bridge Configuration Setting

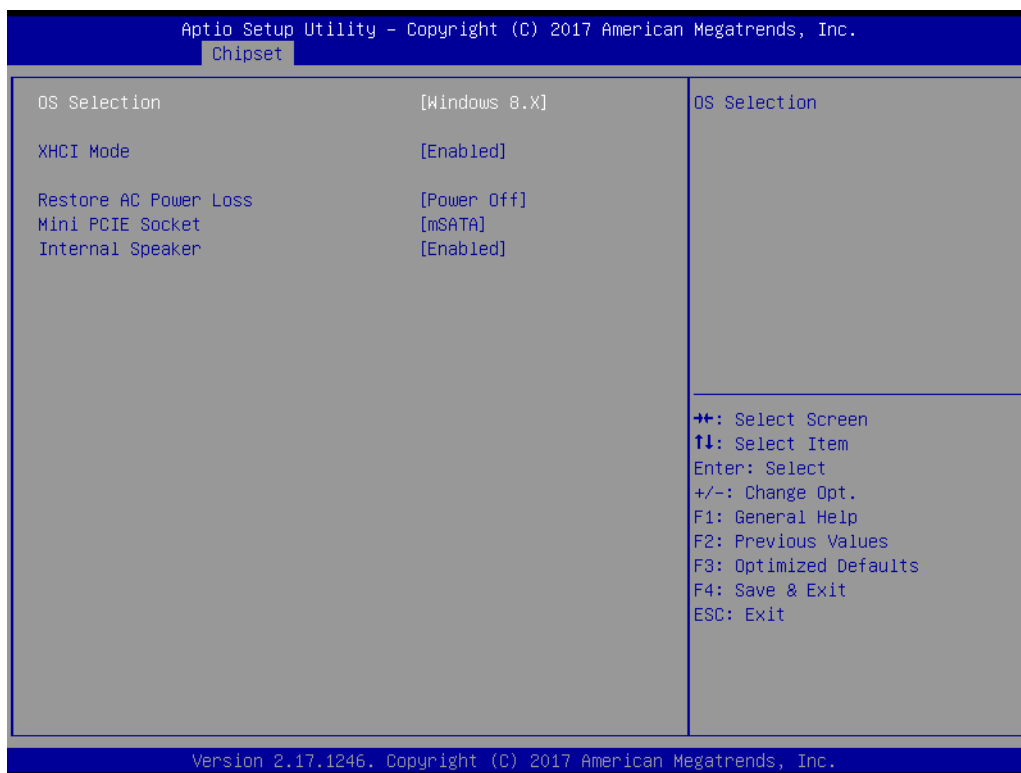


Choose Intel IGD Configuration



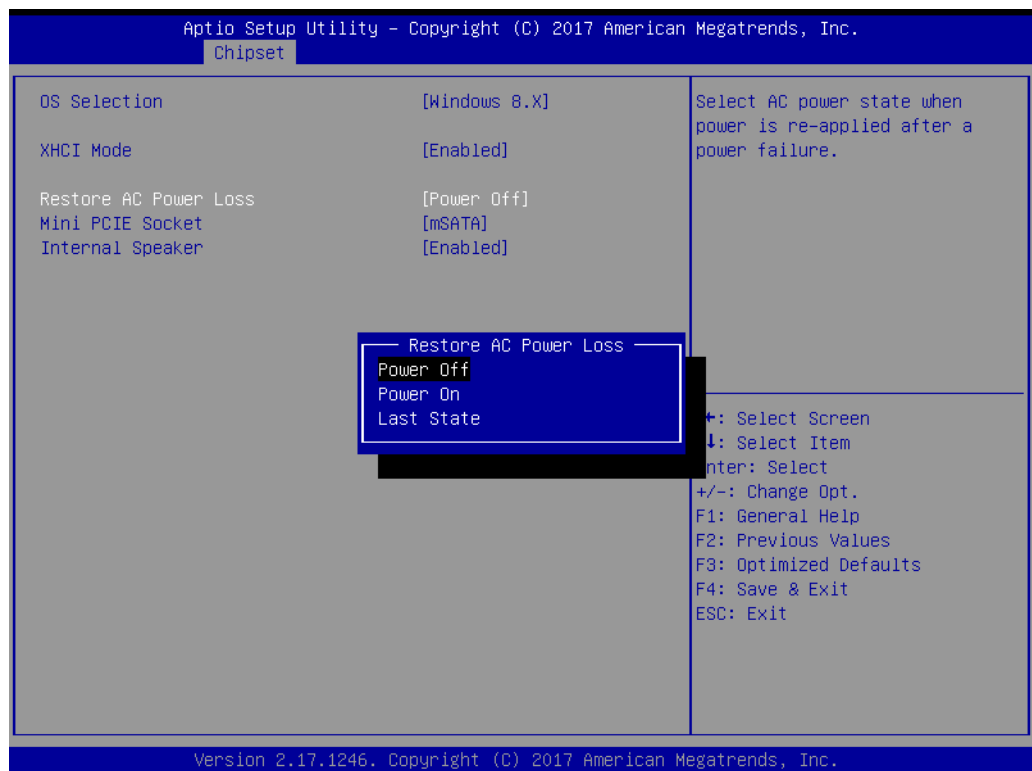
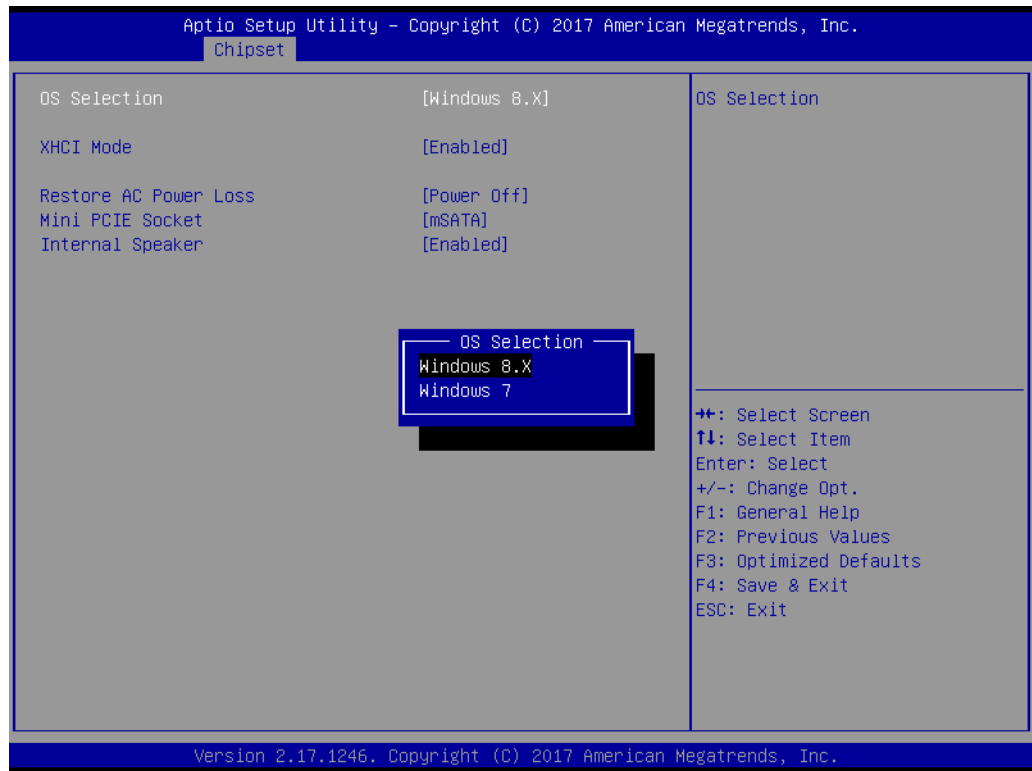
- **Primary IGFX Boot Display [Auto]**
Boot display Auto/CRT/DP/LVDS.

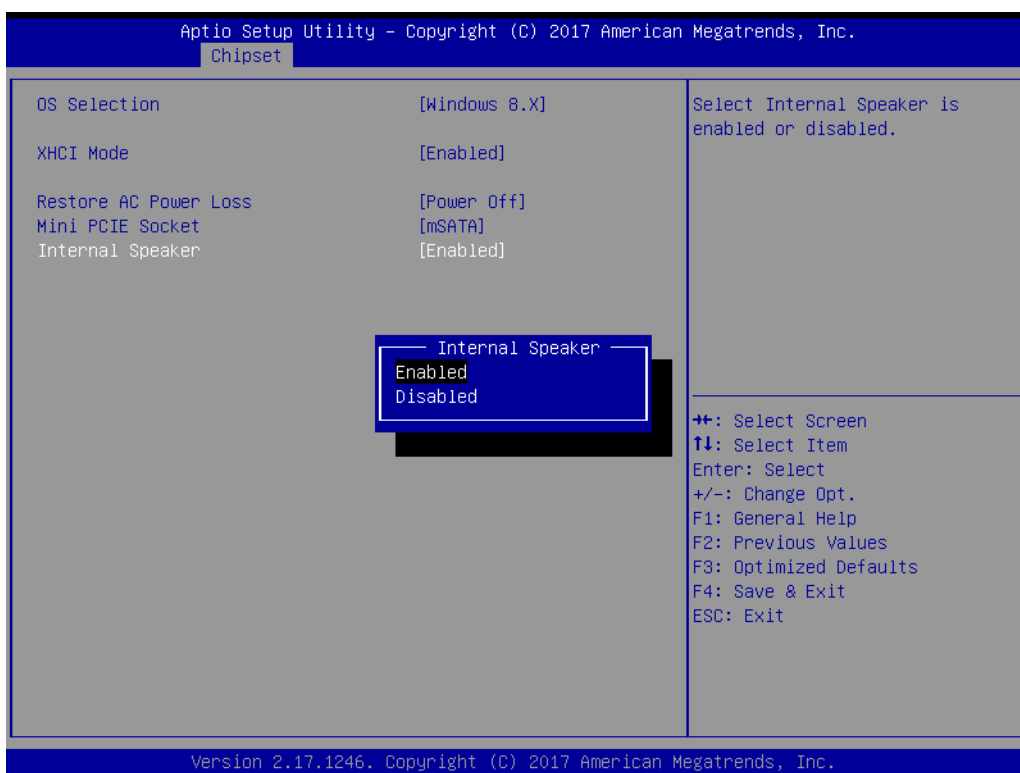
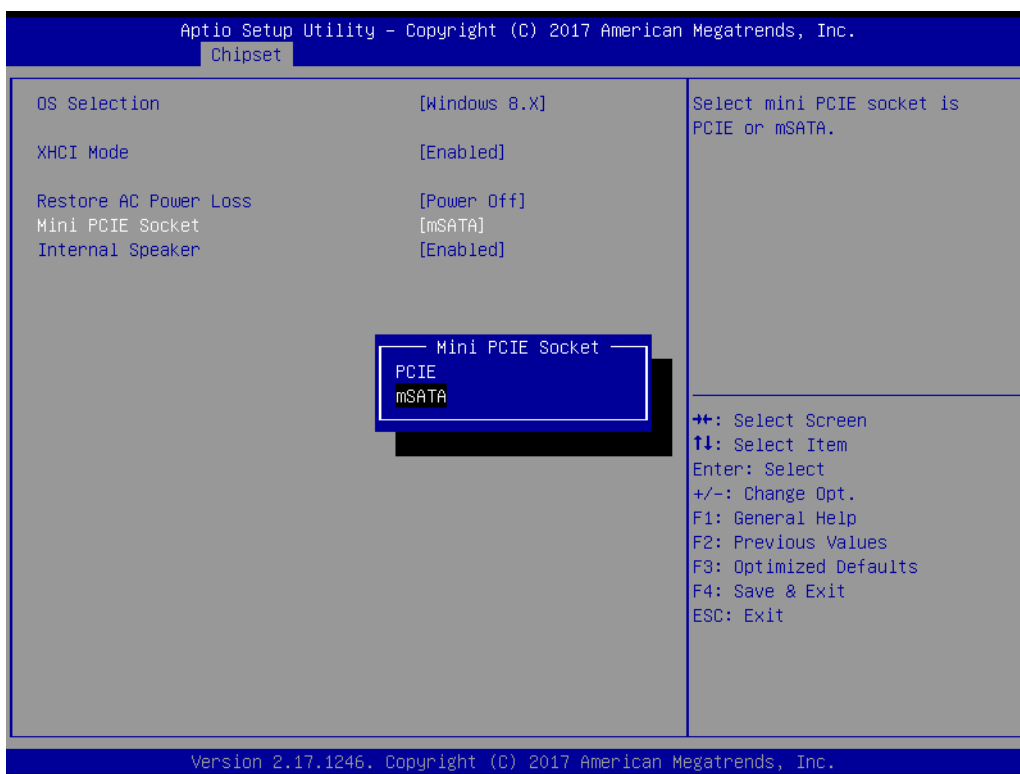
3.2.3.2 South Bridge Configuration Setting



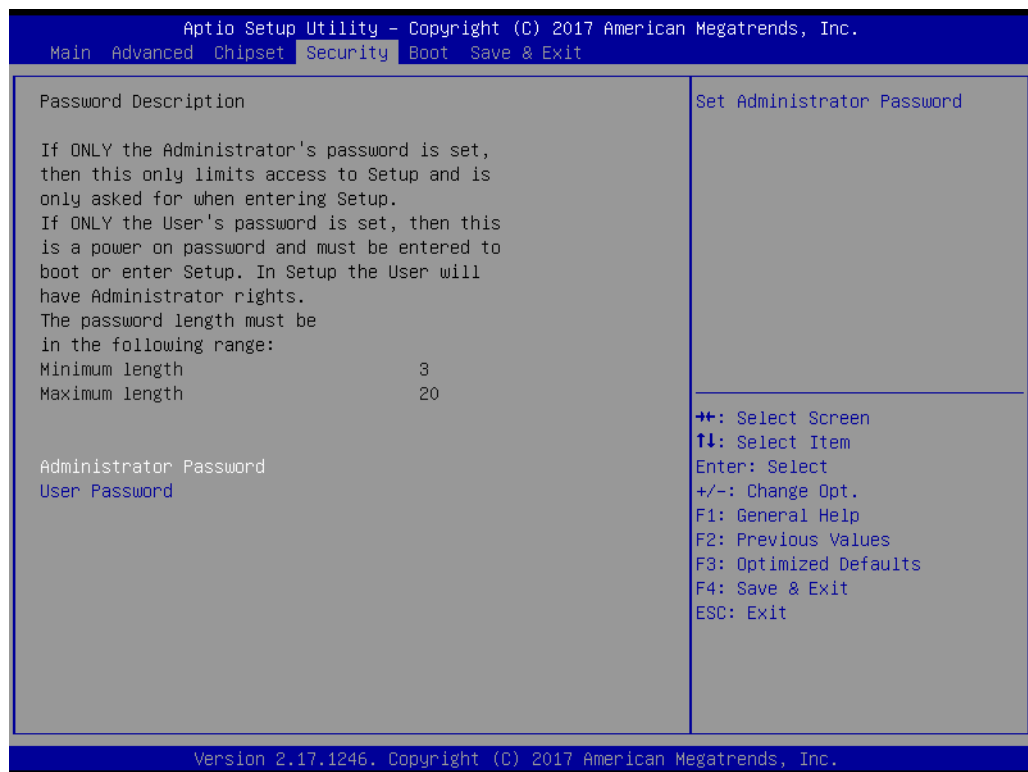
- **OS Selection [Windows 8.x]**
OS selection Windows 8.x/Windows 7.
- **XHCI Mode [Enabled]**
Enable or Disable XHCI mode.
- **Restore AC Power Loss [Power off]**
AC power loss power off/Power on/Last State.
- **Mini PCIE Socket [mSATA]**
- **The Socket Function choose mSATA/PCIE.**

- **Internal Speaker [Enabled]**
Enable or disable speaker function.



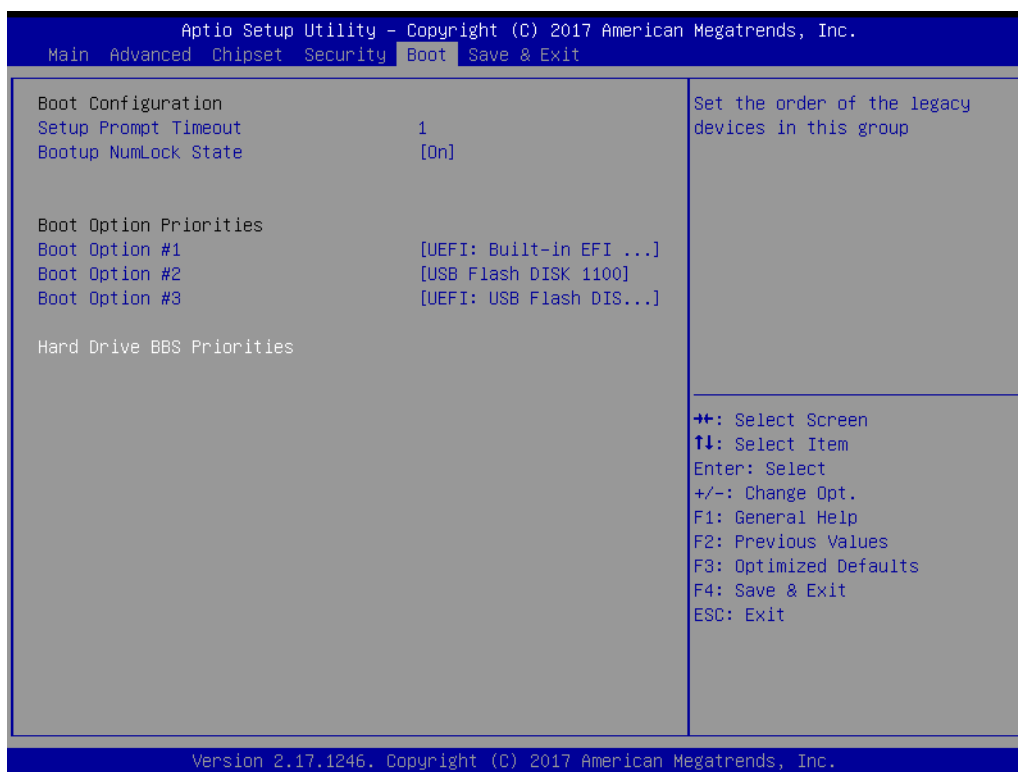


3.2.4 Security Configuration Setting



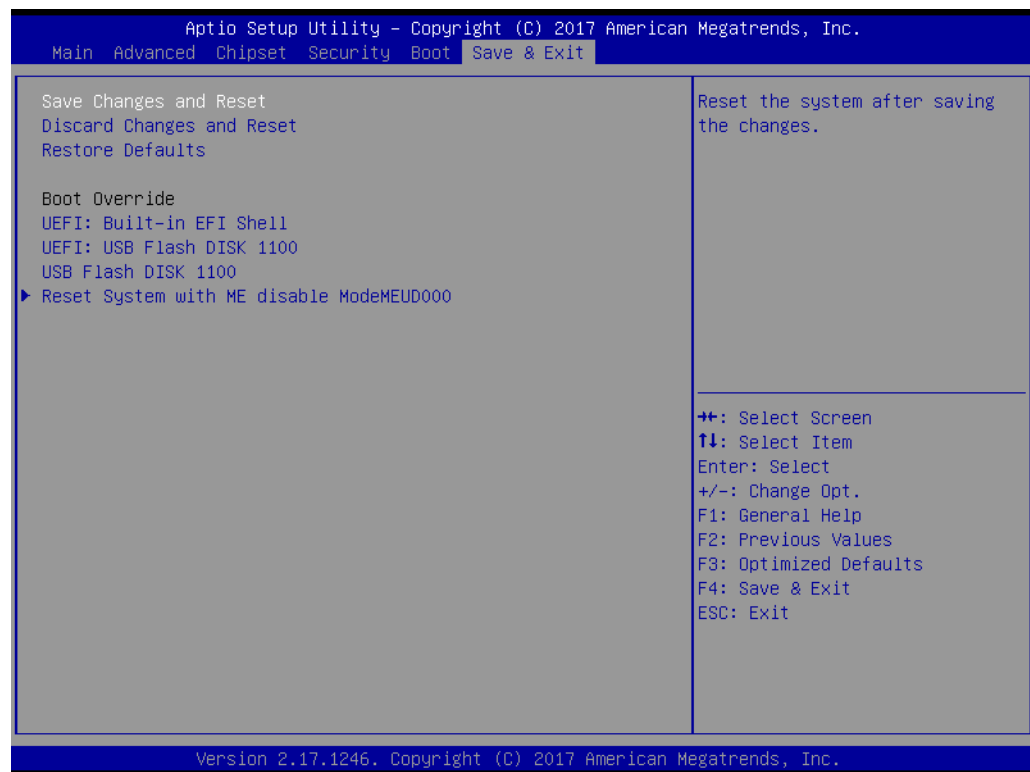
- **Administrator Password**
Select this option and press <ENTER> to access the sub menu, and then type in the password. Set the Administrator password.
- **User Password**
Select this option and press <ENTER> to access the sub menu, and then type in the password. Set the User Password.

3.2.5 Boot Configuration



- **Setup Prompt Timeout**
User the <+> and <-> keys to adjust the number of seconds to wait for setup activation key.
- **Bootup NumLock State [On]**
On or Off power on state for the NumLock.
- **Boot Option #1/#2/#3**
Choose boot priority from boot device.

3.2.6 Save & Exit Configuration Setting



■ Save Changes and Reset

When users have completed system configuration, select this option to save changes, exit BIOS setup menu and reboot the computer to take effect all system configuration parameters.

1. Select Exit Saving Changes from the Exit menu and press <Enter>. The following message appears: Save Configuration Changes and Exit Now?
[Ok] [Cancel]
2. Select Ok or cancel.

■ Discard Changes and Reset

Select this option to quit Setup without making any permanent changes to the system configuration¹. Select Reset Discarding Changes from the Exit menu and press <Enter>.

1. The following message appears: Discard Changes and Exit Setup Now?
[Ok] [Cancel]
2. Select Ok to discard changes and reset. Discard Changes.
Select Discard Changes from the Exit menu and press <Enter>.

■ Restore Default

The BIOS automatically configures all setup items to optimal settings when users select this option. Defaults are designed for maximum system performance, but may not work best for all computer applications. In particular, do not use the defaults if the user's computer is experiencing system configuration problems. Select Restore Defaults from the Exit menu and press <Enter>.

■ Boot Override

Shows the boot device types on the system.

Chapter 4

BIOS Setup
(UPOS-211F)

4.1 Introduction

With the AMI BIOS Setup program, you can modify BIOS settings to control the special features of your computer. The Setup program uses a number of menus for making changes. This chapter describes the basic navigation of the UPOS-211 setup screens.

4.2 BIOS Setup

The UPOS-211F Series system has AMI BIOS built in, with a SETUP utility that allows Users to configure required settings or to activate certain system features.

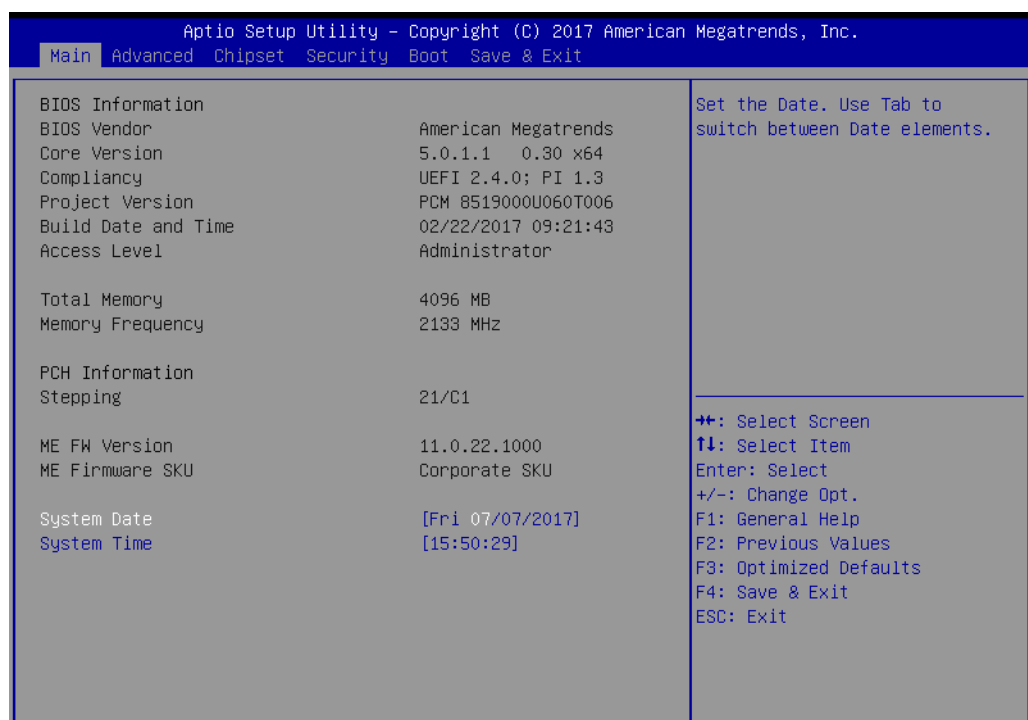
The SETUP saves the configuration in the FLASH of the motherboard. When the Power is turned off, the battery on the board supplies the necessary power to preserve the FLASH. When the power is turned on, press the or <Esc> button during the BIOS POST (Power-On Self Test) to access the CMOS SETUP screen.

Control Keys

← > < → >	Select Screen
< ↑ > < ↓ >	Select Item
<Enter>	Select
<+/->	Change Opt
<F1>	General help
<F2>	Previous Values
<F3>	Optimized Defaults
<F4>	Save & Exit
<Esc>	Exit

4.2.1 Main Menu

Press or <Esc> 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.

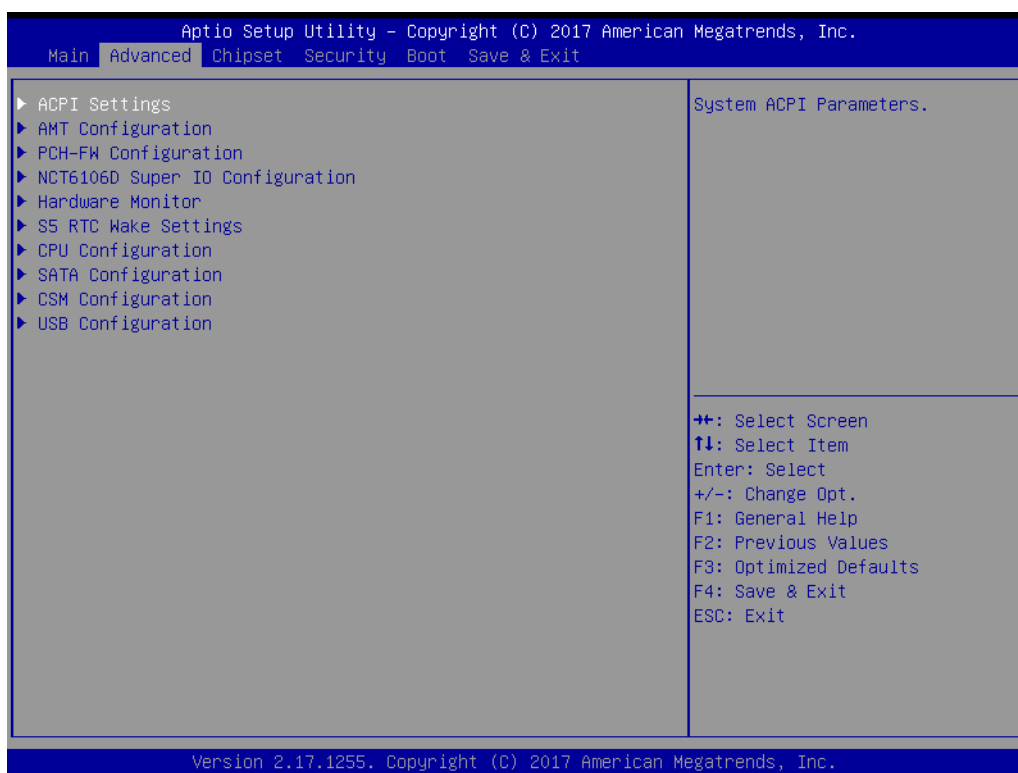
Above the key legend is an area reserved for a text message. When an option is selected in the left frame, it is highlighted in white. Often a text message will accompany it.

■ System time / System date

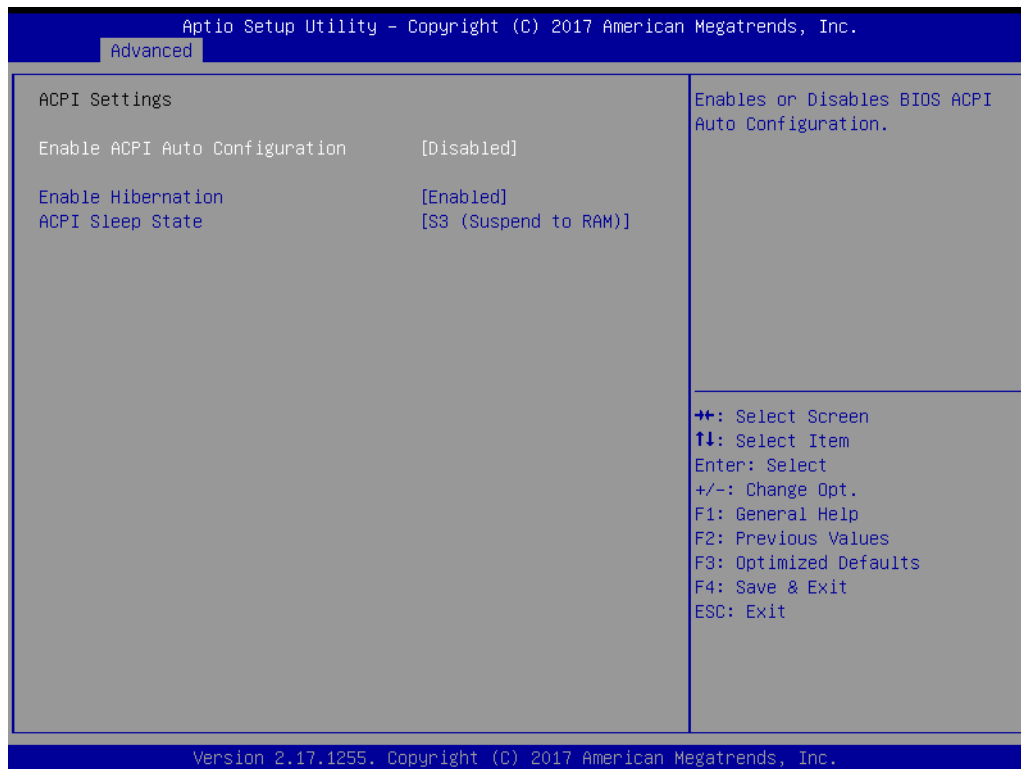
Use this option to change the system time and date. Highlight System Time or System Date using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time must be entered in HH:MM:SS format.

4.2.2 Advanced BIOS Features

Select the Advanced tab from the 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.

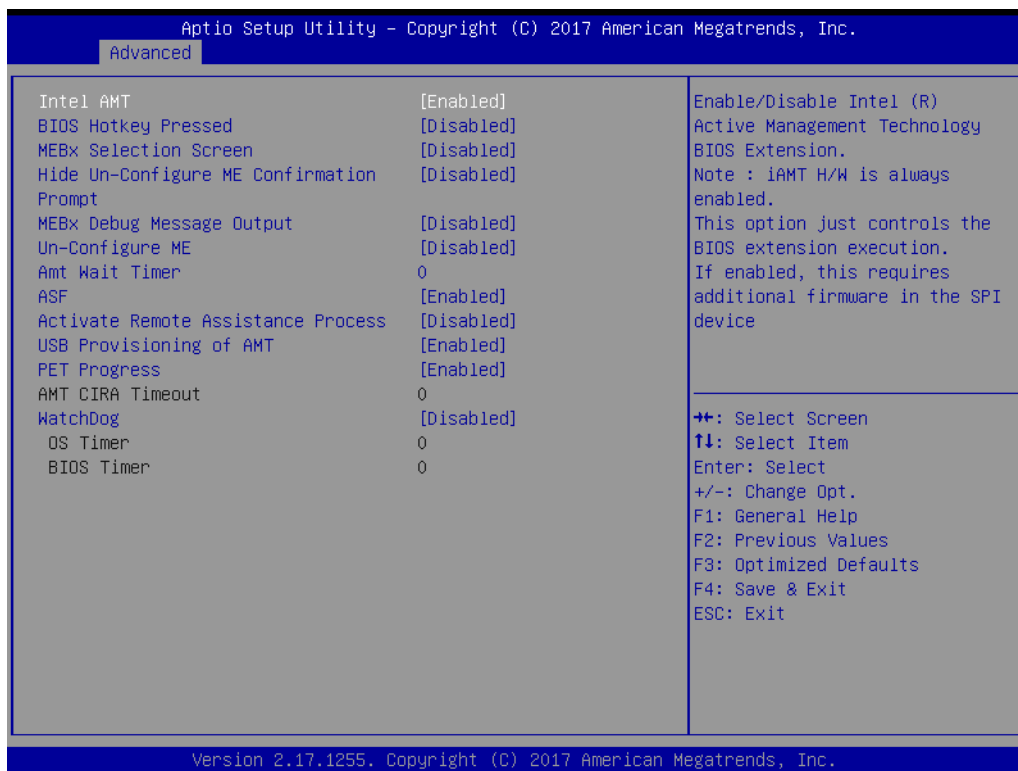


4.2.2.1 ACPI Settings



- **Enable ACPI Auto Configuration [Disabled]**
Enable or disable BIOS ACPI auto configuration.
- **Enable Hibernation [Enabled]**
Enables or Disables System ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some OS.
- **ACPI Sleep State [S3(Suspend to RAM)]**
Select ACPI sleep state the system will enter when the SUSPEND button is pressed.

4.2.2.2 AMT Configuration

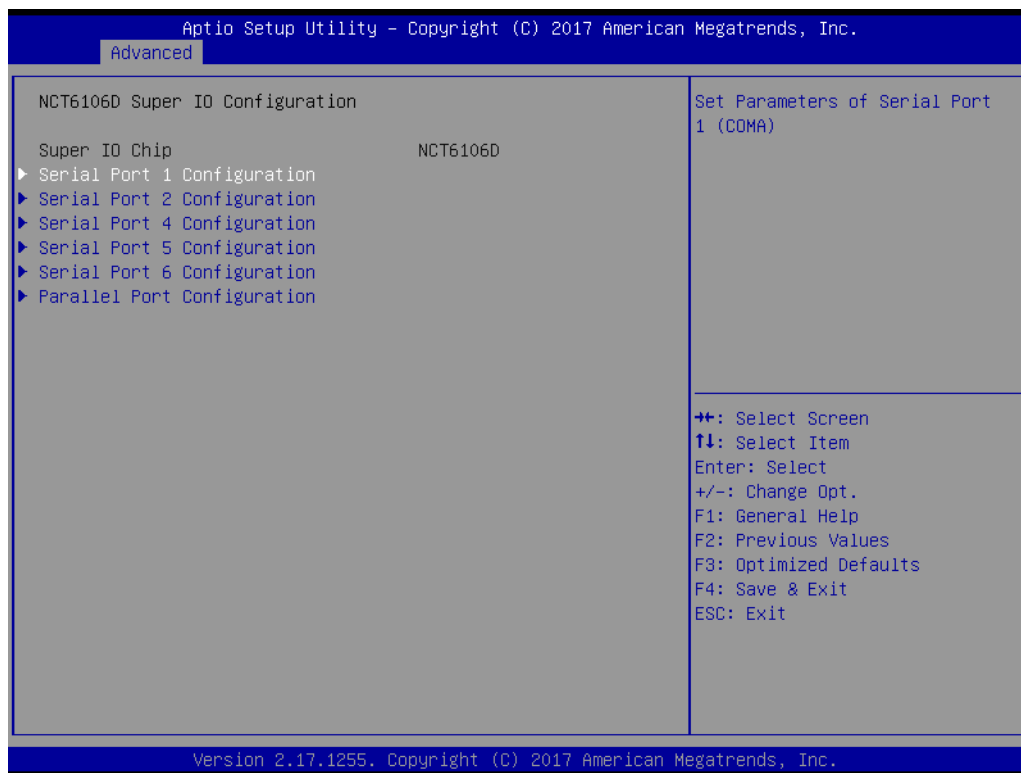


4.2.2.3 PCH-FW Configuration

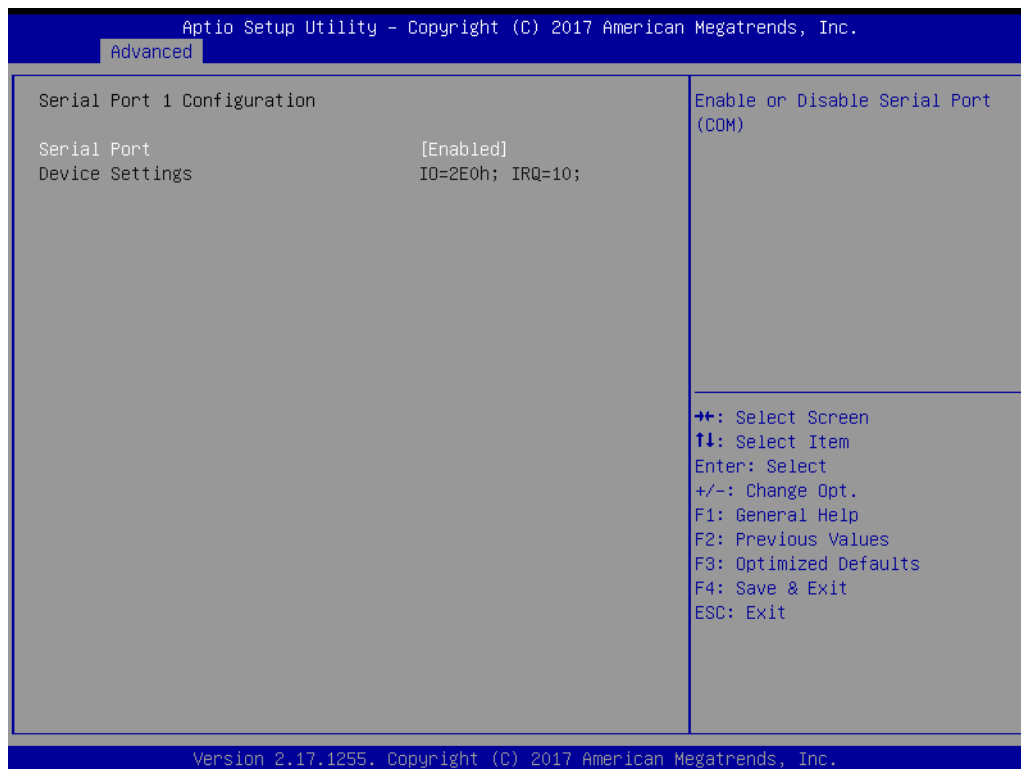


4.2.2.4 NCT6106D Super IO Configuration

■ Super IO Chip [NCT6106D]

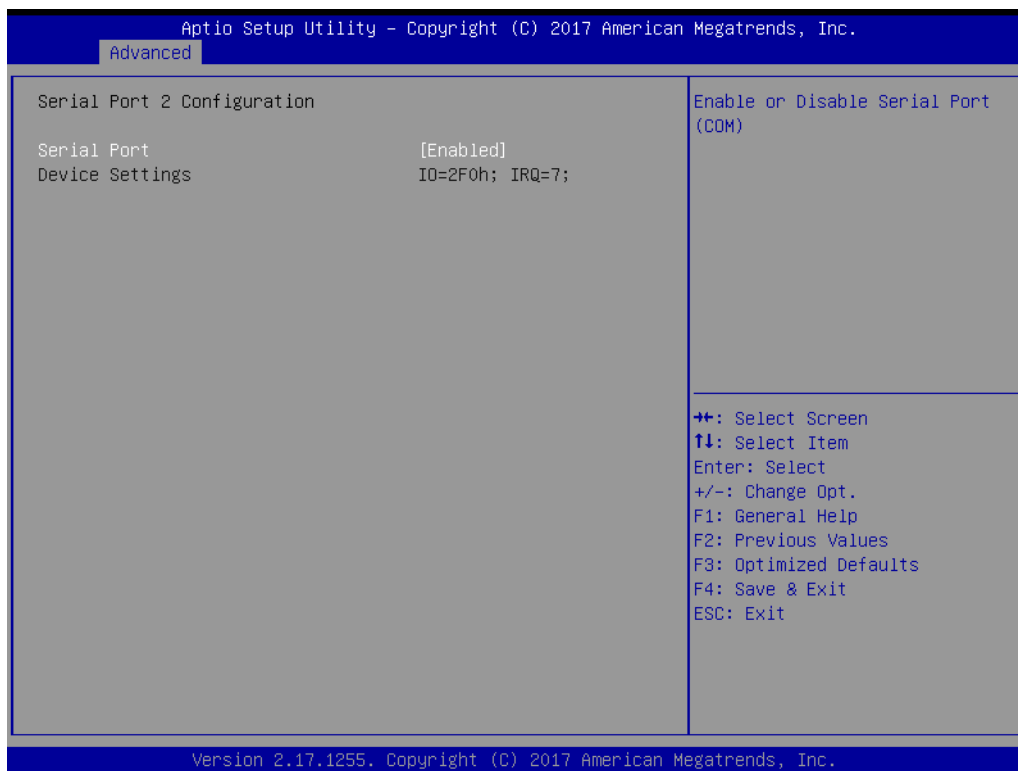


■ Serial Port 1 Configuration



- Serial Port [Enabled]
- Device Settings: IO=2E0h; IRQ =10

■ Serial Port 2 Configuration



- Serial Port [Enabled]
- Device Settings: IO=2F0h; IRQ =7

■ Serial Port 4 Configuration



- Serial Port [Enabled]
- Device Settings: IO=3E8h; IRQ =6

■ Serial Port 5 Configuration



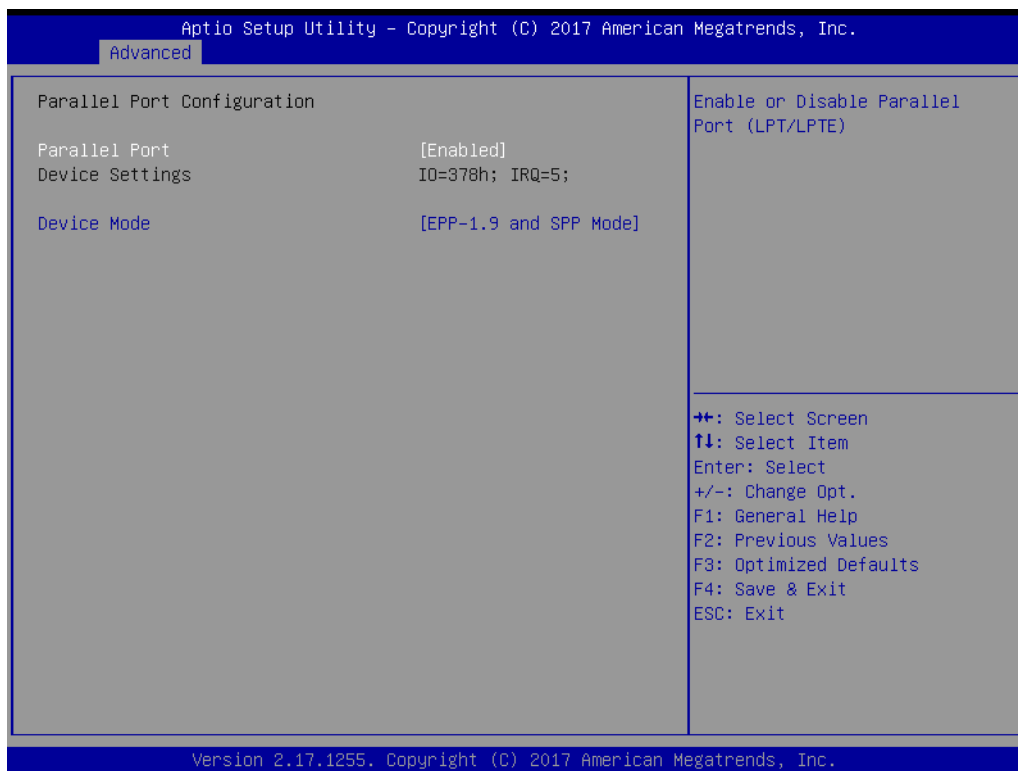
- Serial Port [Enabled]
- Device Settings: IO=2F8h; IRQ =3

■ Serial Port 6 Configuration



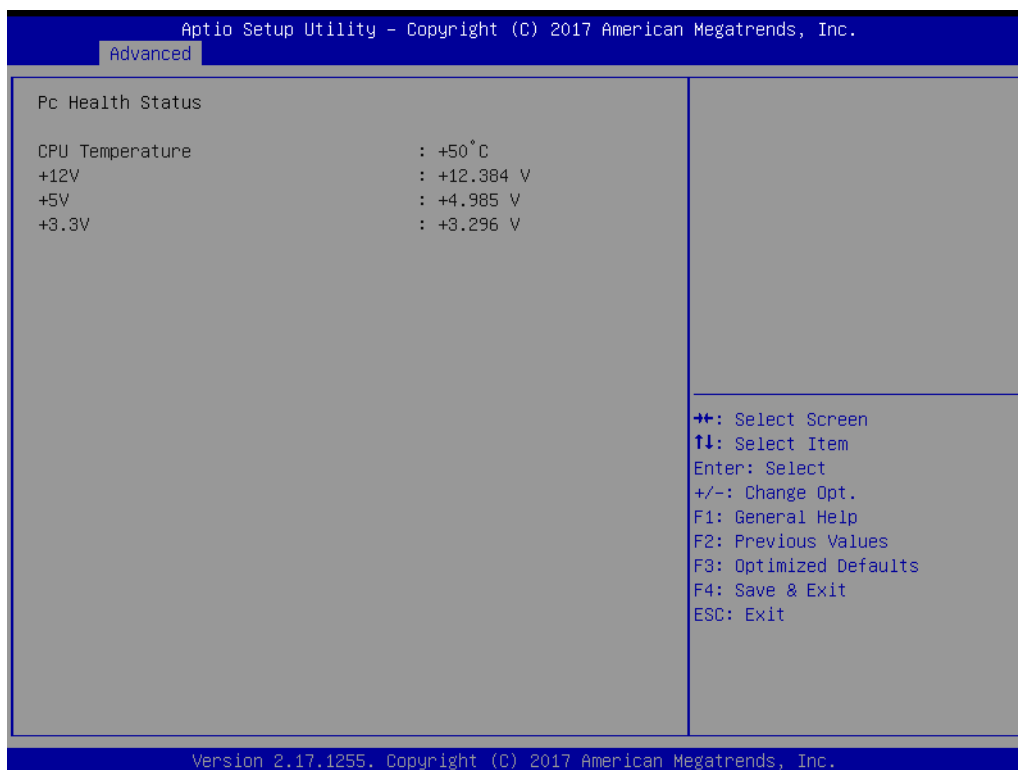
- Serial Port [Enabled]
- Device Settings: IO=3F8h; IRQ =4

■ Parallel Port Configuration



- Parallel Port [Enabled]
To enable or disable Parallel Port
- Device Settings: IO=378h; IRQ =5
- Device Mode [EPP-1.9 and SPP Mode]

4.2.2.5 Hardware Monitor



4.2.2.6 S5 RTC Wake Settings



4.2.2.7 CPU Configuration

Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.

Advanced

CPU Configuration		
Intel(R) Core(TM) i5-6300U CPU @ 2.40GHz		
Max CPU Speed	2400 MHz	Enabled for Windows XP and Linux (OS optimized for Hyper-Threading Technology) and Disabled for other OS (OS not optimized for Hyper-Threading Technology). When Disabled only one thread per enabled core is enabled.
Min CPU Speed	400 MHz	
CPU Speed	2300 MHz	
Processor Cores	2	
Hyper Threading Technology	Supported	
Intel VT-x Technology	Supported	
Intel SMX Technology	Supported	
64-bit	Supported	
EIST Technology	Supported	
CPU C3 state	Supported	
CPU C6 state	Supported	
CPU C7 state	Supported	
CPU C8 state	Supported	
CPU C9 state	Supported	
CPU C10 state	Supported	
L1 Data Cache	32 KB x 2	++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
L1 Code Cache	32 KB x 2	
L2 Cache	256 KB x 2	
L3 Cache	3 MB	
L4 Cache	Not Present	

Version 2.17.1255. Copyright (C) 2017 American Megatrends, Inc.

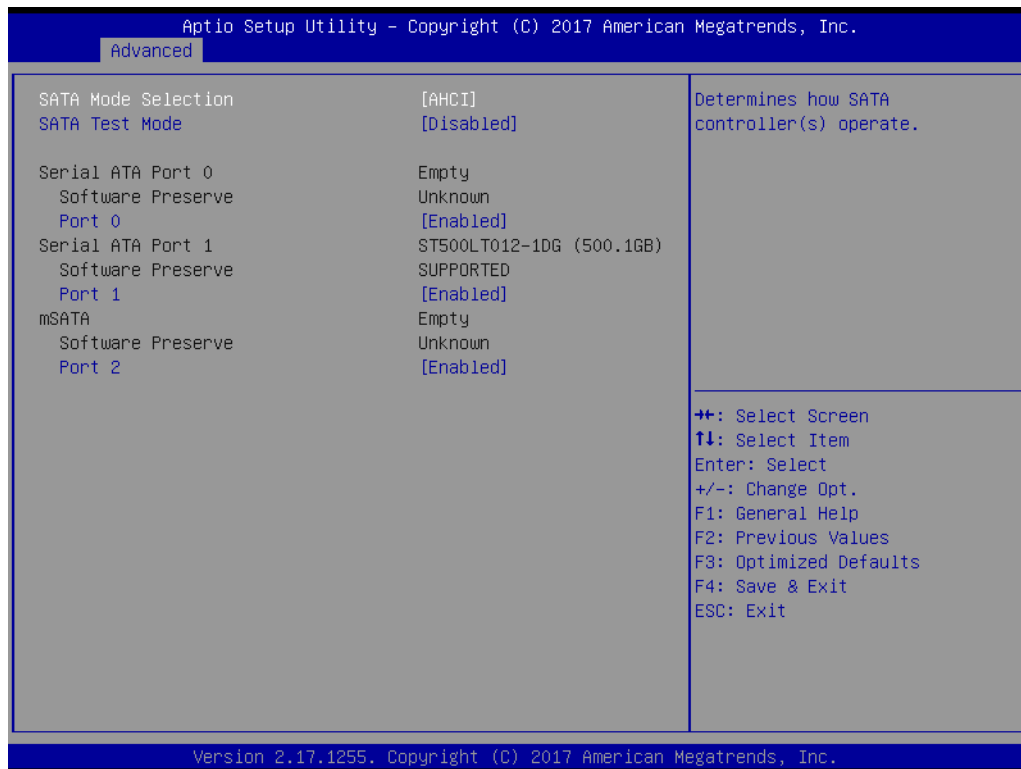
Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.

Advanced

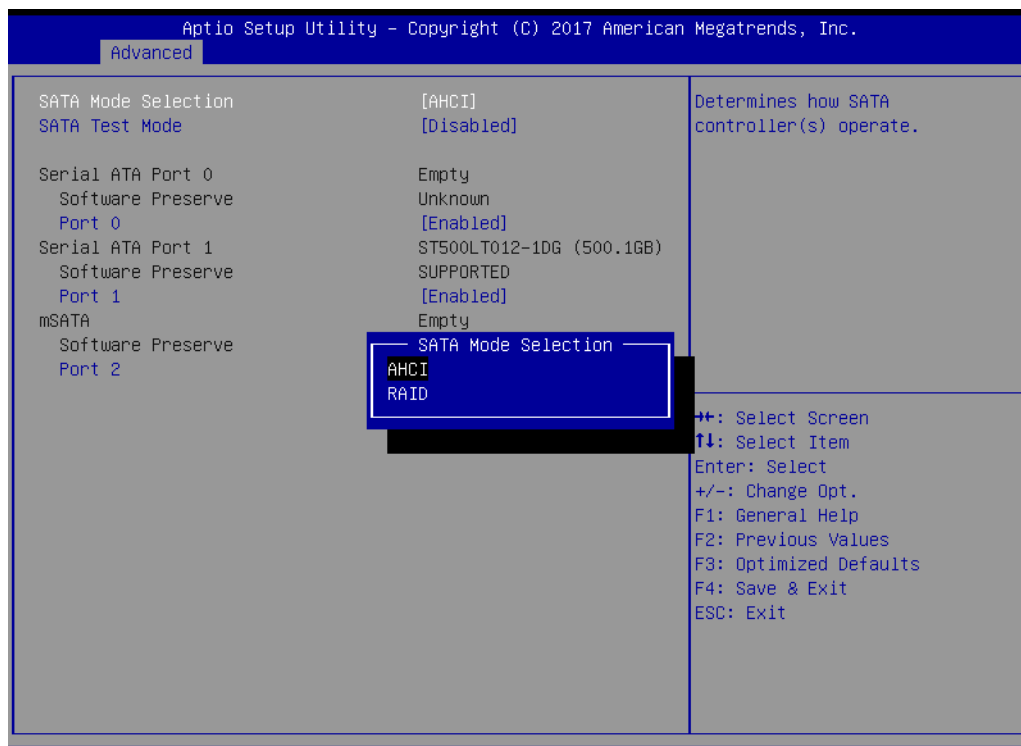
Intel SMX Technology	Supported	Enables or Disables Intel(R) TXT(LT) support.	
64-bit	Supported		
EIST Technology	Supported		
CPU C3 state	Supported		
CPU C6 state	Supported		
CPU C7 state	Supported		
CPU C8 state	Supported		
CPU C9 state	Supported		
CPU C10 state	Supported		
L1 Data Cache	32 KB x 2		++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
L1 Code Cache	32 KB x 2		
L2 Cache	256 KB x 2		
L3 Cache	3 MB		
L4 Cache	Not Present		
Hyper-threading	[Enabled]		
Active Processor Cores	[All]		
Intel Virtualization Technology	[Enabled]		
Intel(R) Speed Shift Technology	[Enabled]		
Intel(R) SpeedStep(tm)	[Enabled]		
Turbo Mode	[Enabled]		
CPU C states	[Enabled]		
Enhanced C-states	[Enabled]		
Intel TXT(LT) Support	[Disabled]		

Version 2.17.1255. Copyright (C) 2017 American Megatrends, Inc.

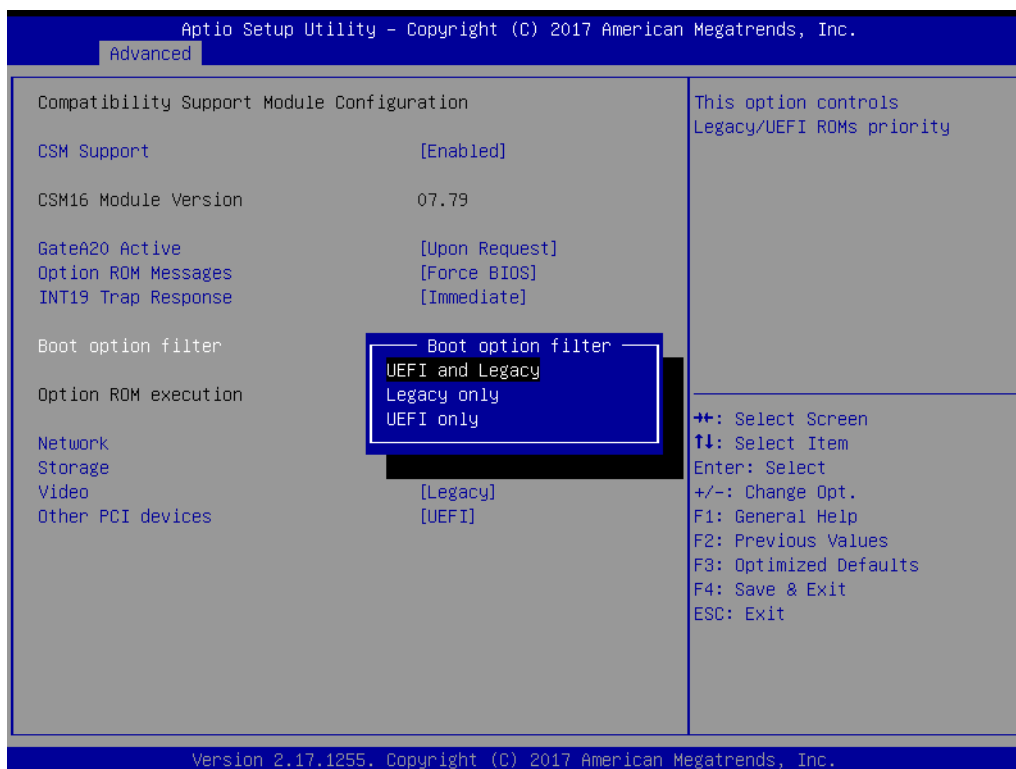
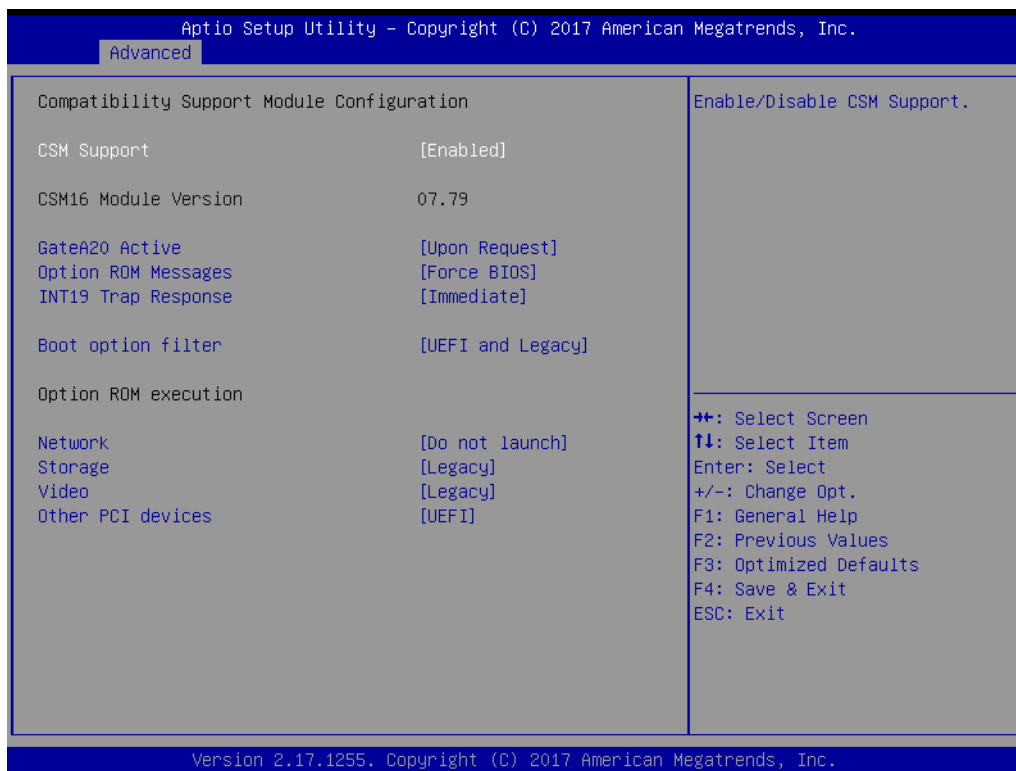
4.2.2.8 SATA Configuration



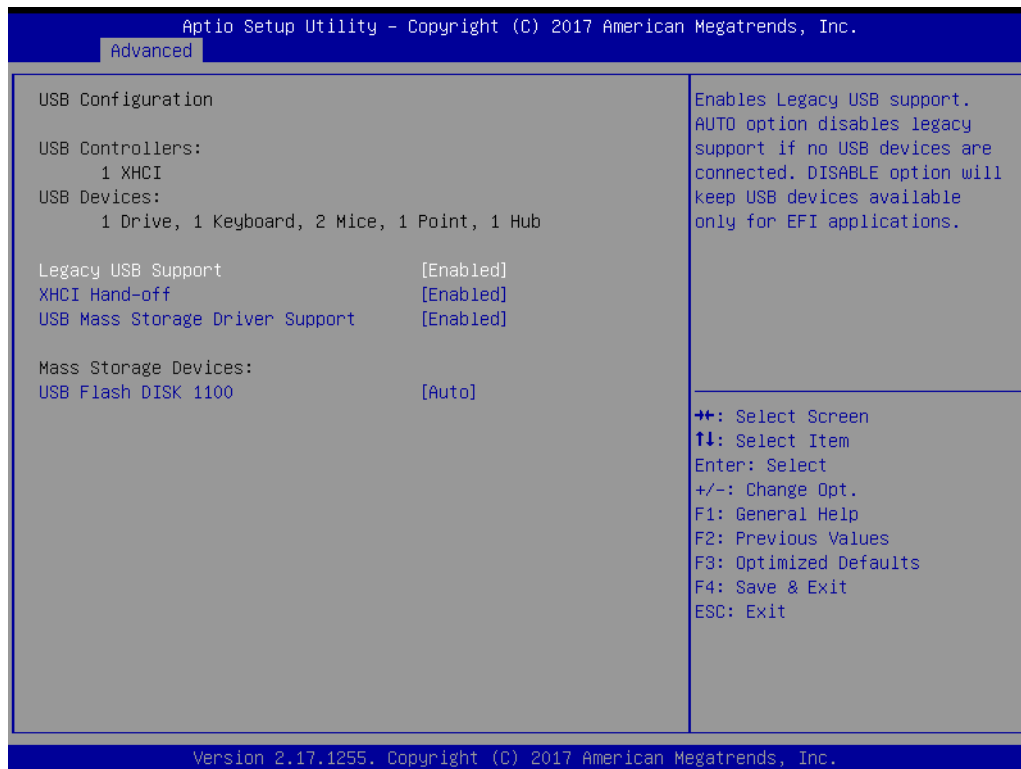
- **SATA Mode Selection [AHCI]**
SATA Speed Support Gen1/Gen2.
- **Serial-ATA Port 0 [Enable]**
Enable or disable SATA Function.
- **Serial-ATA Port 1 [Enable]**
Enable or disable SATA Function.
- **mSATA Port2 [Enable]**
Enable or disable mSATA Function.



4.2.2.9 CSM Configuration



4.2.2.10 USB Configuration



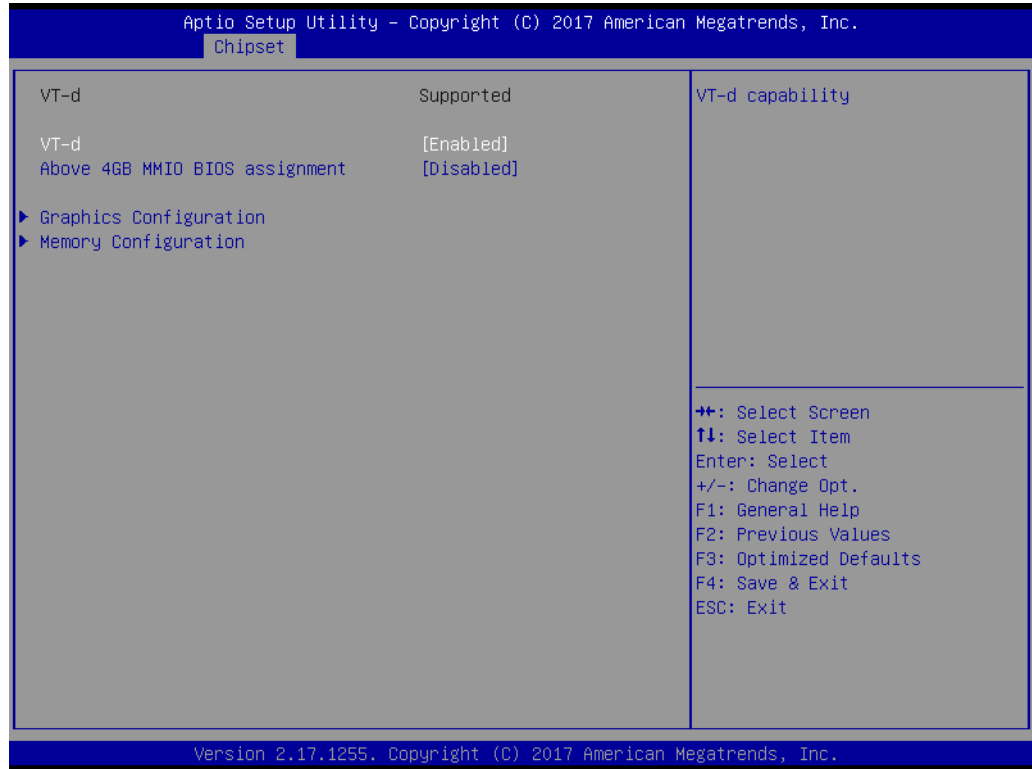
- **Legacy USB Support [Enabled]**
Enables support for legacy USB. Auto option disables legacy support if no USB devices are connected.
- **XHCI Hand-off [Enabled]**
- **USB Mass Storage Driver Support [Enabled]**
- **Mass Storage Devices [Auto]**
Shows USB mass storage device information.

4.2.3 Chipset Configuration Setting

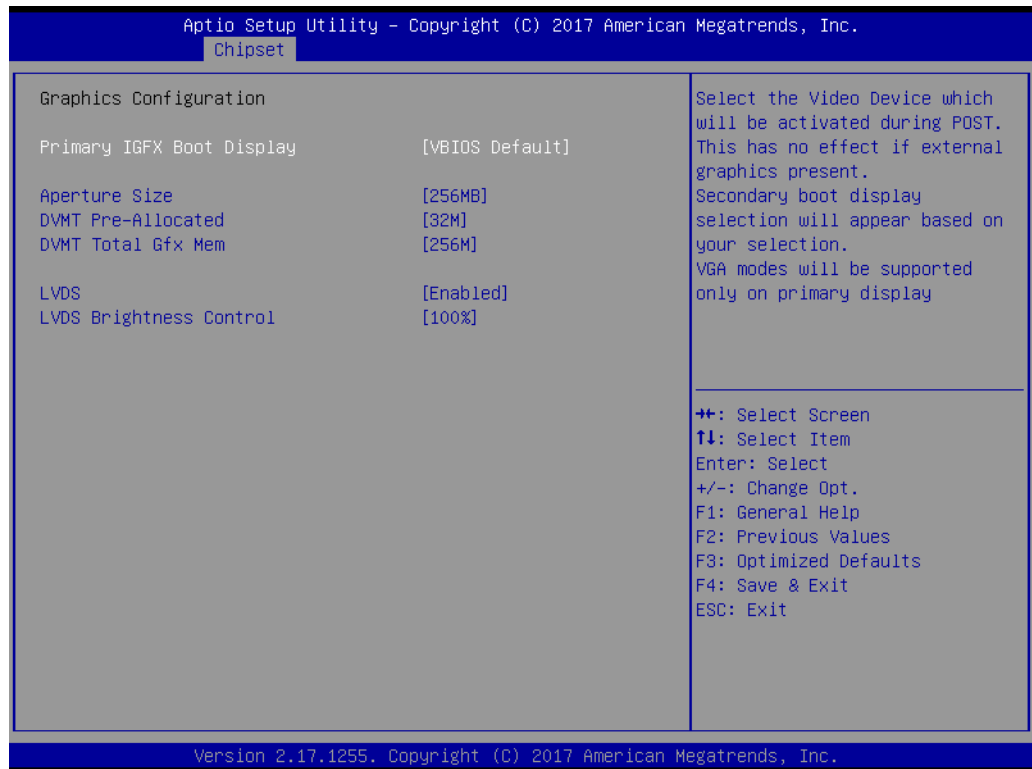
Select the chipset tab from the BIOS setup screen to enter the Chipset Setup screen. Users can select any item in the left frame of the screen, such as North Bridge Configuration to go to the sub menu for that item. The Chipset Setup screens are shown below. The submenus are described on the following pages.



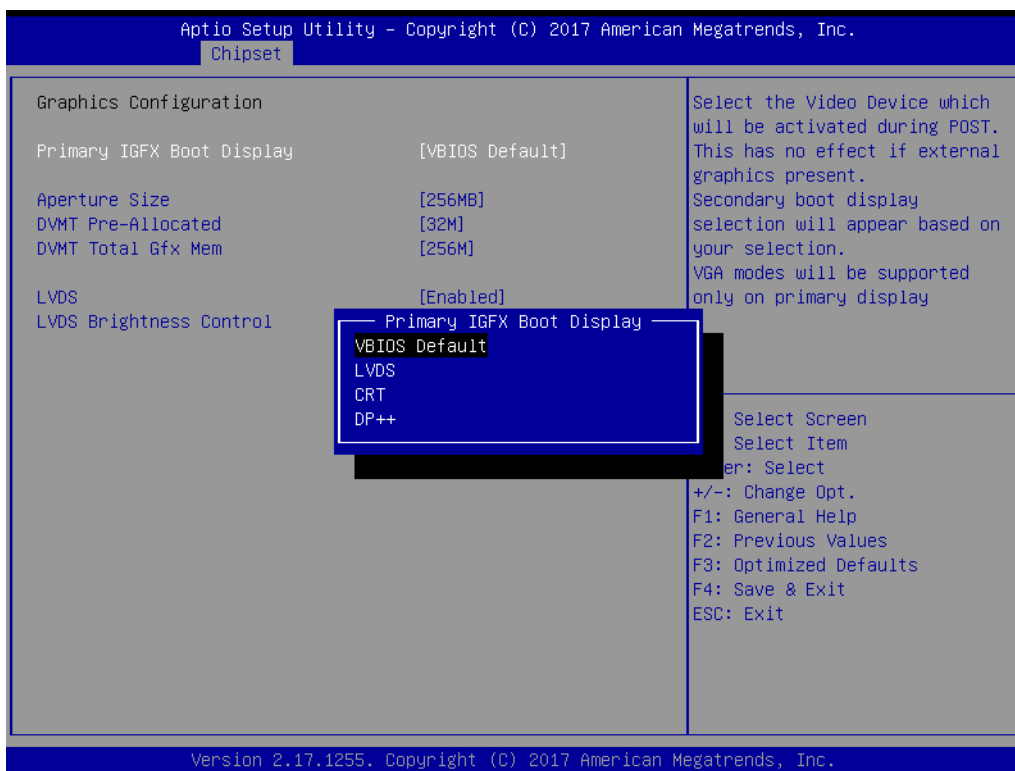
4.2.3.1 North Bridge Configuration Setting



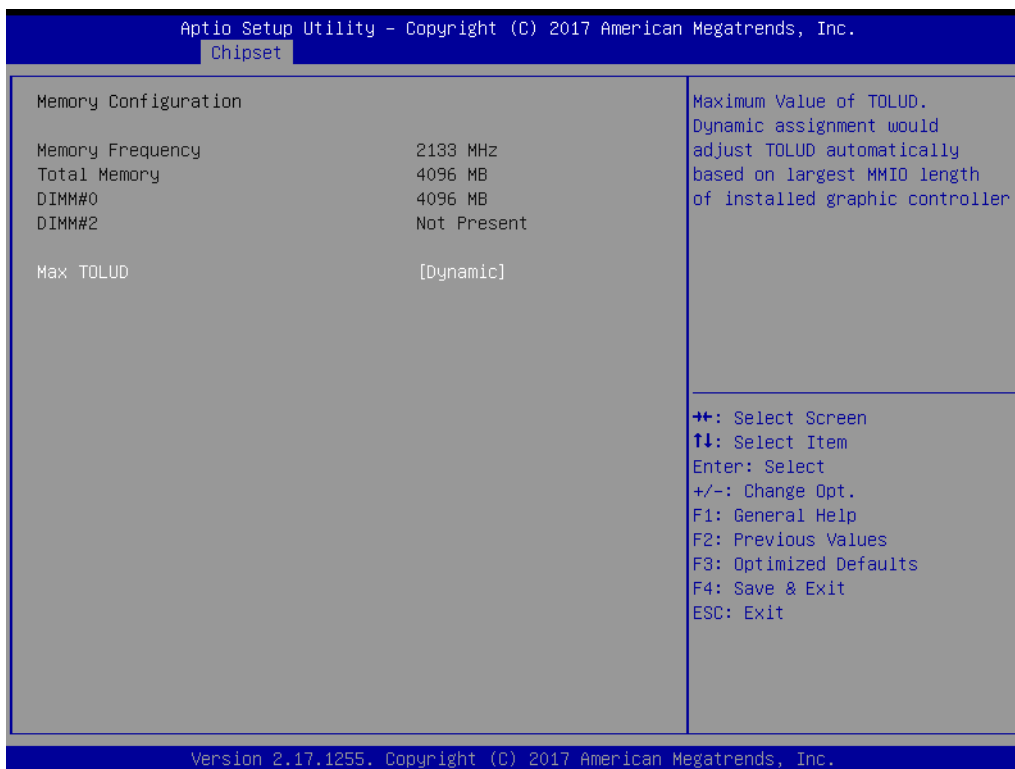
Graphics Configuration



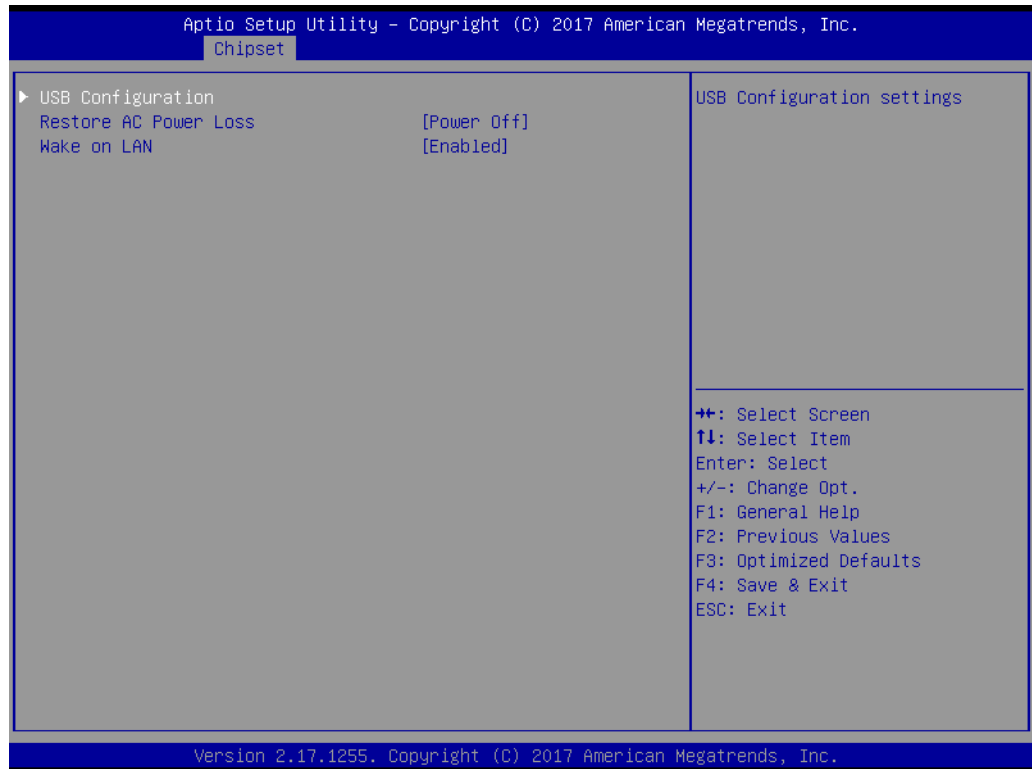
- **Primary IGFX Boot Display [VBIOS Default]**
Boot display VBIOS Default /LVDS/CRT/DP++.



Memory Configuration



4.2.3.2 PCH-IO Configuration Setting



- **Restore AC Power Loss [Power off]**
AC power loss power off/Power on.
- **Wake on LAN [Enable]**
Enable or disable Wake on LAN function.



4.2.4 Security Configuration Setting



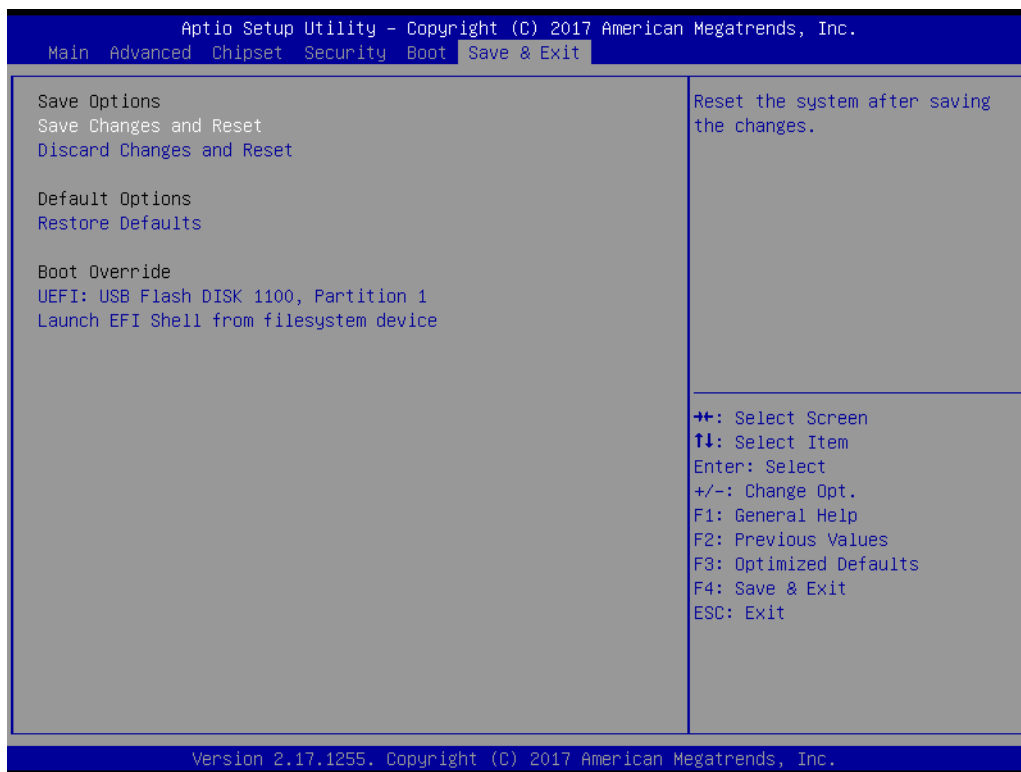
- **Administrator Password**
Select this option and press <ENTER> to access the sub menu, and then type in the password. Set the Administrator password.
- **User Password**
Select this option and press <ENTER> to access the sub menu, and then type in the password. Set the User Password.

4.2.5 Boot Configuration



- **Setup Prompt Timeout**
Use the <+> and <-> keys to adjust the number of seconds to wait for setup activation key.
- **Bootup NumLock State [On]**
On or Off power on state for the NumLock.
- **Boot Option #1/#2/#3**
Choose boot priority from boot device.

4.2.6 Save & Exit Configuration Setting



- **Save Changes and Reset**

When users have completed system configuration, select this option to save changes, exit BIOS setup menu and reboot the computer to take effect of all system configuration parameters.

1. Select Exit Saving Changes from the Exit menu and press <Enter>. The following message appears: Save Configuration Changes and Exit Now? [Ok] [Cancel]
2. Select Ok or cancel.

- **Discard Changes and Reset**

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

1. The following message appears: Discard Changes and Exit Setup Now? [Ok] [Cancel]
2. Select Ok to discard changes and reset. Discard Changes. Select Discard Changes from the Exit menu and press <Enter>.

- **Restore Default**

The BIOS automatically configures all setup items to optimal settings when users select this option. Defaults are designed for maximum system performance, but may not work best for all computer applications. In particular, do not use the Defaults if the user's computer is experiencing system configuration problems. Select Restore Defaults from the Exit menu and press <Enter>.

- **Boot Override**

Shows the boot device types on the system.

ADVANTECH

Enabling an Intelligent Planet

www.advantech.com

Please verify specifications before quoting. This guide is intended for reference purposes only.

All product specifications are subject to change without notice.

No part of this publication may be reproduced in any form or by any means, such as electronically, by photocopying, recording, or otherwise, without prior written permission from the publisher.

All brand and product names are trademarks or registered trademarks of their respective companies.

© Advantech Co., Ltd. 2017

AUTRADE