



®

***AXIOMTEK***

IFO2175-873 Series

**17" TFT Fanless Panel Computer  
with Intel® Core™ i7/i5/i3 Processor**

**User's Manual**



## **Disclaimers**

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## Safety Approvals

- ◆ CE Marking
- ◆ FCC Class B

### ◆ FCC Compliance

This equipment has been tested in compliance with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are meant to provide reasonable protection against harmful interference in a residential installation. If not installed and used in accordance with proper instructions, this equipment might generate or radiate radio frequency energy and cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following methods:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment to another outlet of a circuit that doesn't connect with the receiver.
4. Consult the dealer or an experienced radio/TV technician for help.

Shielded interface cables must be used in order to comply with the emission limits.

## Safety Precautions

Before getting started, read the following important safety precautions.

1. The **IFO2175-873 Series** does not come equipped with an operating system. An operating system must be loaded first before installing any software into the computer.
2. 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.
3. Disconnect the power cord from the **IFO2175-873 Series** before any installation. Be sure both the system and external devices are turned OFF. A sudden surge of power could ruin sensitive components that the **IFO2175-873 Series** must be properly grounded.
4. Make sure it is the correct voltage of the power source before connecting the equipment to the power outlet.
5. The brightness of the flat panel display will be getting weaker as a result of frequent usage. However, the operating period varies depending on the application environment.
6. Turn OFF the system power before cleaning. Clean the system using a cloth only. Do not spray any liquid cleaner directly onto the screen. The **IFO2175-873 Series** may come with or w/o a touchscreen. Although the touchscreen is chemical resistant, it is recommended that you spray the liquid cleaner on a cloth first before wiping the screen. In case your system comes without the touchscreen, you must follow the same procedure and not spray any cleaner on the flat panel directly.
7. Avoid using sharp objects to operate the touchscreen. Scratches on the touchscreen may cause malfunction or internal failure to the touchscreen.
8. The flat panel display is not susceptible to shock or vibration. When assembling the **IFO2175-873 Series**, make sure it is securely installed.
9. Do not leave this equipment in an uncontrolled environment where the storage temperature is below -20°C or above 60°C. It may damage the equipment.
10. External equipment intended for connection to signal input/out or other connectors shall comply with relevant UL/IEC standard.
11. Do not open the system's back 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.

## Classification

1. Degree of production against electric shock: not classified
2. Degree of protection against the ingress of water: IPX1
3. Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
4. Mode of operation: Continuous
5. Type of protection against electric shock: Class I equipment

## General Cleaning Tips

You may need the following precautions before you begin to clean the computer. When you clean any single part or component for the computer, please read and understand the details below fully.

1. When you need to clean the device, please rub it with a piece of dry cloth.
2. Be cautious of the tiny removable components when you use a vacuum cleaner to absorb the dirt on the floor.
3. Turn the system off before you start to clean up the component or computer.
4. Never drop the components inside the computer or get circuit board damp or wet.
5. Be cautious of all kinds of cleaning solvents or chemicals when you use it for the sake of cleaning. Some individuals may be allergic to the ingredients.
6. Try not to put any food, drink or cigarette around the computer.

### Cleaning Tools:

Although many companies have created products to help improve the process of cleaning your computer and peripherals users can also use household items to clean their computers and peripherals. Below is a listing of items you may need or want to use while cleaning your computer or computer peripherals.

Keep in mind that some components in your computer may only be able to be cleaned using a product designed for cleaning that component, if this is the case it will be mentioned in the cleaning.

- Cloth: A piece of cloth is the best tool to use when rubbing up a component. Although paper towels or tissues can be used on most hardware as well, we still recommend you to rub it with a piece of cloth.
- Water or rubbing alcohol: You may moisten a piece of cloth a bit with some water or rubbing alcohol and rub it on the computer. Unknown solvents may be harmful to the plastics parts.
- Vacuum cleaner: Absorb the dust, dirt, hair, cigarette particles, and other particles out of a computer can be one of the best methods of cleaning a computer. Over time these items can restrict the airflow in a computer and cause circuitry to corrode.
- Cotton swabs: Cotton swabs moistened with rubbing alcohol or water are excellent tools for wiping hard to reach areas in your keyboard, mouse, and other locations.
- Foam swabs: Whenever possible it is better to use lint free swabs such as foam swabs.



**Note** *We strongly recommended that you should shut down the system before you start to clean any single components.*

### Please follow the steps below:

1. Close all application programs
2. Close operating software
3. Turn off power switch
4. Remove all device
5. Pull out power cable

## **Scrap Computer Recycling**

If the computer equipments need the maintenance or are beyond repair, we strongly recommended that you should inform your Axiomtek distributor as soon as possible for the suitable solution. For the computers that are no longer useful or no longer work well, please contact your Axiomtek distributor for recycling and we will make the proper arrangement.

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# CHAPTER 1

## INTRODUCTION

This chapter contains general information and detailed specifications of the **IFO2175-873 Series**. Chapter 1 includes the following sections:

- **General Description**
- **Features**
- **System Specification**
- **Dimensions**
- **I/O Outlets**
- **Package List**

### 1.1 General Description

The IFO2175-873 is an ultra slim panel computer equipped with 17-inch 350nits brightness SXGA LCD display and supports superior 2<sup>nd</sup> and 3<sup>rd</sup> Generation Intel® Core™ i7/i5/i3/Pentium/Celeron processor up to 35W and up to 16GB of dual-channel DDR3 system memory. Powered by Intel® the mobile Intel QM77 express chipset, it offers excellent 3D graphics and dual-view capability. The fanless design and waterproof enclosure allow it to operate reliably and quietly, it applied in any infotainment environments.

The panel also supports Dual View and multiple I/O options. Furthermore, the IFO2175-873 supports a PCI or PCIe interface for flexibility and an internal antenna for wireless expansion. With a built-in 5 mega pixels camera and speakers, this durable panel computer is also the best solutions for VoIP and remote monitoring. This safe, reliable and user-friendly panel computer can ensure customer's project success and best suited for infotainment, advertising messaging, and other digital signage applications.

### 1.2 Features

- 17" ( 350nits) SXGA TFT LCD, resolution 1280 x 1024
- Fanless 2<sup>nd</sup> & 3<sup>rd</sup> Generation Intel® Core™ i7/i5/i3/Pentium/ Celeron® processor
- Spill and dust resistant design (front panel: IP65, whole enclosure: IPX1)
- Optional 1 PCI or PCIe x 4 expansion slot
- COM, USB, Ethernet ports
- Front 5 mega pixels camera
- Optional Wi-Fi/ Bluetooth / HSDPA / LTE communication module

## 1.3 System Specifications

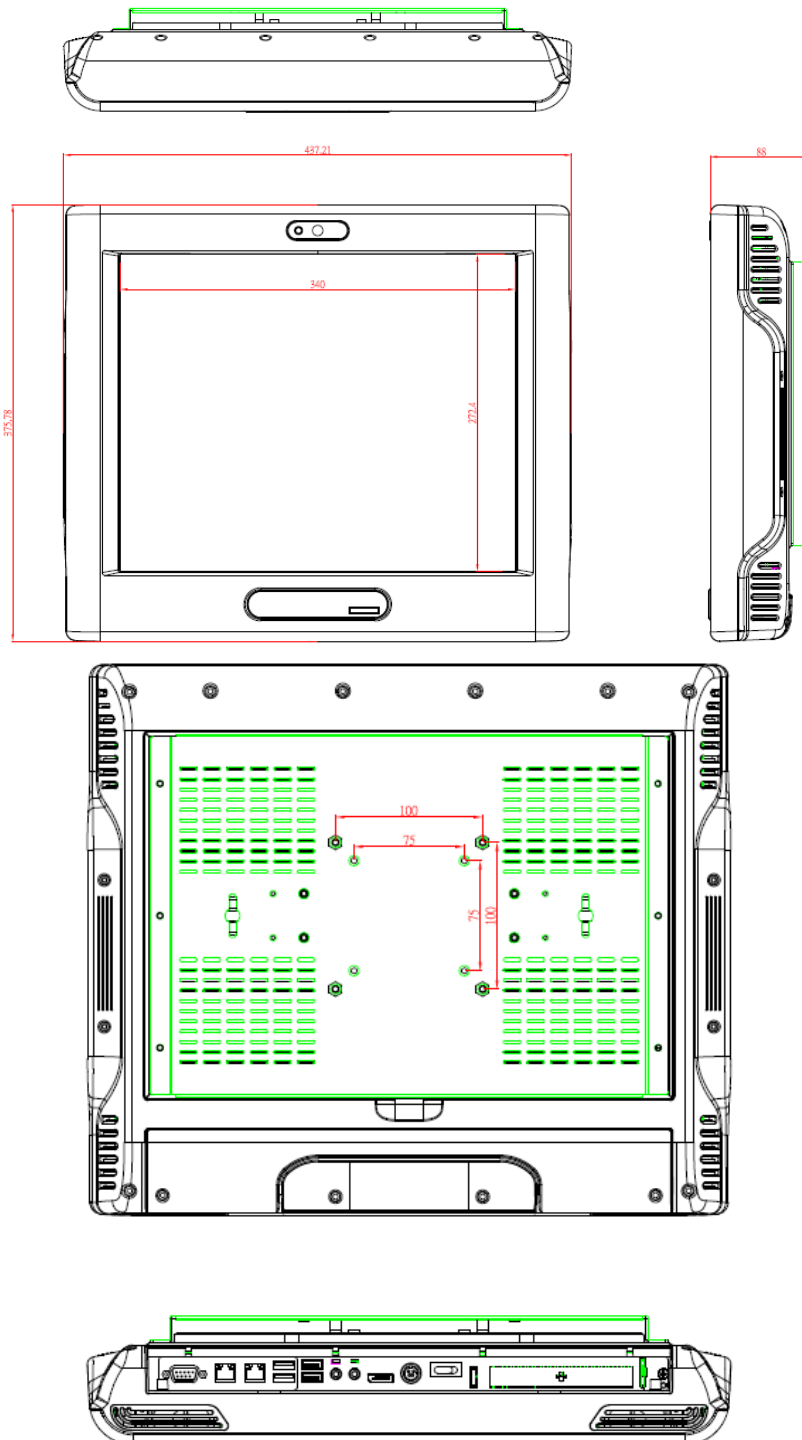
<b>Front Bezel</b>	Plastic ABS	
<b>LCD Panel</b>	Display Type	17" SXGA TFT
	Brightness (Cd/M <sup>2</sup> )	350 nits
	Resolution	1280 x 1024
	Viewing Angle (H/V)	80°/60°
<b>Main System</b>	CPU	Fanless socket rPGA988B 2 <sup>nd</sup> & 3 <sup>rd</sup> Generation Intel <sup>®</sup> Core <sup>™</sup> i7/i5/i3/Pentium/Celeron <sup>®</sup> processor, TDP is up to <b>35W</b>
	Chipset	Intel <sup>®</sup> QM77 PCH
	System Memory	Supports 2 DDR3 SODIMM memory up to 16 GB
	Storage	1 x 2.5" SATA HDD 1 x mSATA SSD
	Optical Drive	1 x Super Multi DVD (optional)
<b>I/O Connectors</b>	1 x RS-232/422/485 (COM 1)	
	2 x USB2.0 (isolated 4KV)	
	2 x USB3.0	
	1 x Audio (Mic-in), 1 x Audio (Line-out)	
	1 x Dual-mode DisplayPort	
	2 x 10/100/1000 Mbps Ethernet	
	1 x 24V DC-IN Power Connector	
<b>Expansion Interface</b>	1 x PCI or PCIe slot (optional)	
	1 x full-size PCIe Mini Card slot (support mSATA)	
	1 x half-size PCIe Mini Card slot with SIM socket	
<b>Speakers</b>	2 x 2W internal speakers	
<b>Camera</b>	1 X 5 Mega Pixels Camera	
<b>Touchscreen</b>	Five Wired Resistive Type	
	Light Transmission: 80%	
	Touch Lifetime: 35 Million Touches	
<b>OSD Function Key</b>	LCD brightness up/down, audio volume up/down, and touch on/off	
<b>Power Supply</b>	100~240V AC-DC Adapter	
<b>Dimensions</b>	437.21mm (17.21") (W) x 88mm (3.46") (D) x 375.78mm (14.79") (H)	
<b>Weight</b>	8.098 kg (17.85 lb)	
<b>Environmental</b>	Operation Temperature: 0°C~40°C (32°F~104°F)	
	Storage Temperature: -20°C~60°C (-4°F~140°F)	
	Relative Humidity: 10%~95%, Non-Condensing	
<b>Certification</b>	CE class B	



- Note**
- All specifications and images are subject to change without notice.
  - If choosing 45W Core i7 processor, the operation temperature of IFO2175-873 is 0°C~35°C.
  - Isolation two USB ports share 0.5A together.

## 1.4 Dimensions

The following diagrams show you dimensions and outlines of the **IFO2175-873 Series**.

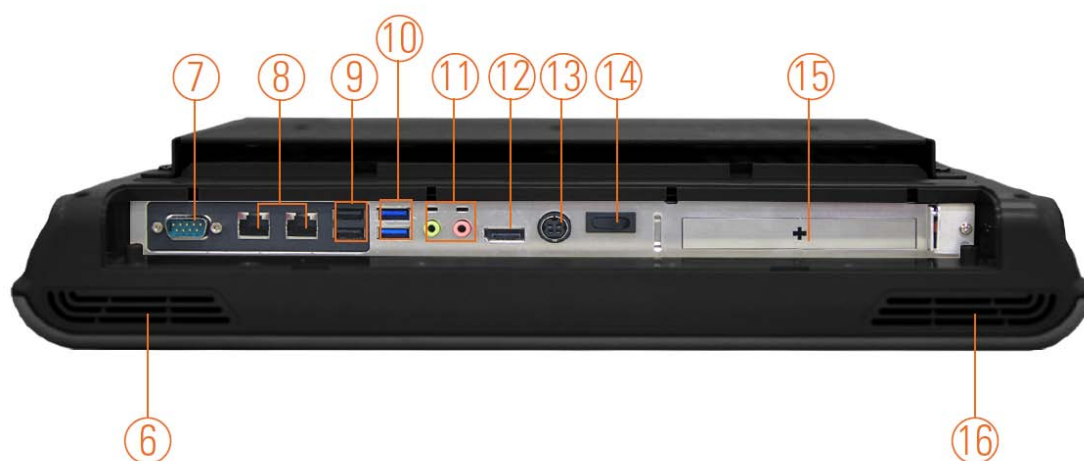


## 1.5 I/O Outlets

The following figures show you the locations of the **IFO2175-873 Series** I/O outlets.



NO	CONNECTOR
1	Brightness Adjust Buttons
2	Volume Adjust Buttons
3	LED indicator
4	MIC
5	Power on/off button



NO	CONNECTOR
6	Speaker (R)
7	COM 2 (RS-232)
8	Giga LAN x 2
9	Isolated USB x 2
10	USB3.0 x 2
11	Audio (Line-Out / Mic-In)
12	Display Port
13	Power Connector
14	Power Switch
15	PCI or PCIe Slot
16	Speaker (L)

## 1.6 Packing List

The package bundled with your **IFO2175-873 Series** should contain the following items:

- IFO2175-873 Series Unit x 1
- 100~240V AC-DC Adapter
- Driver/Utility Disc x 1 (For Driver and User's Manual)
- Super Multi DVD Cover x 2 (For within Super-multi type)
- Wall-Mount Bracket x 1

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

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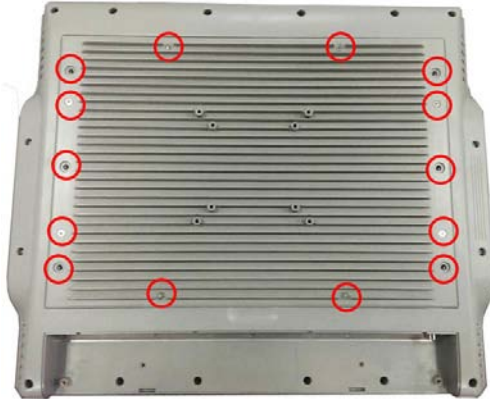
## CHAPTER 2 HARDWARE INSTALLATION

The **IFO2175-873 Series** are convenient for your various hardware configurations, such as CPU (Central Processing Unit) and HDD (Hard Disk Drive). The chapter 2 will show you how to install the hardware. It includes:

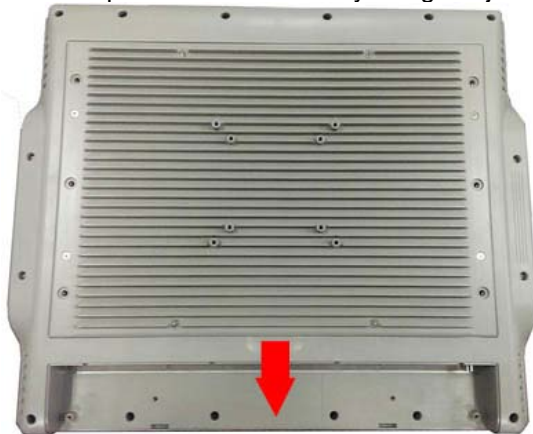
### 2.1 CPU and DRAM Installation

The IFO2175-873 provides socket rPGA988B for processor and two 204-pin DDR3 SO-DIMM sockets that support system memory up to 16GB. Please follow steps below to install the memory modules:

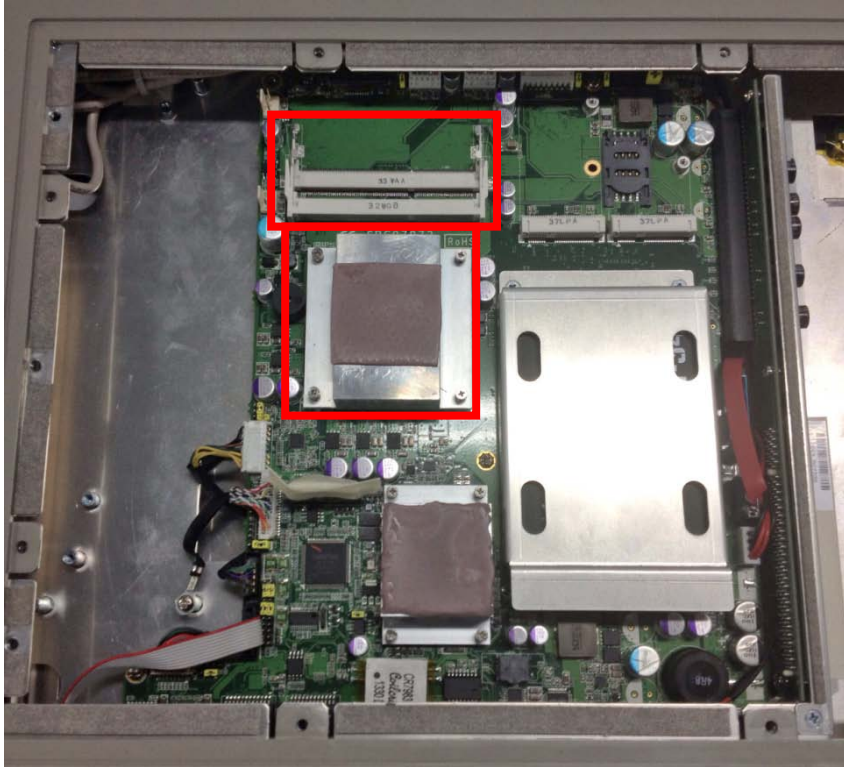
- Step 1** Turn off the system, and unplug the Power cord.
- Step 2** Locate and release these screws to open the back cover.



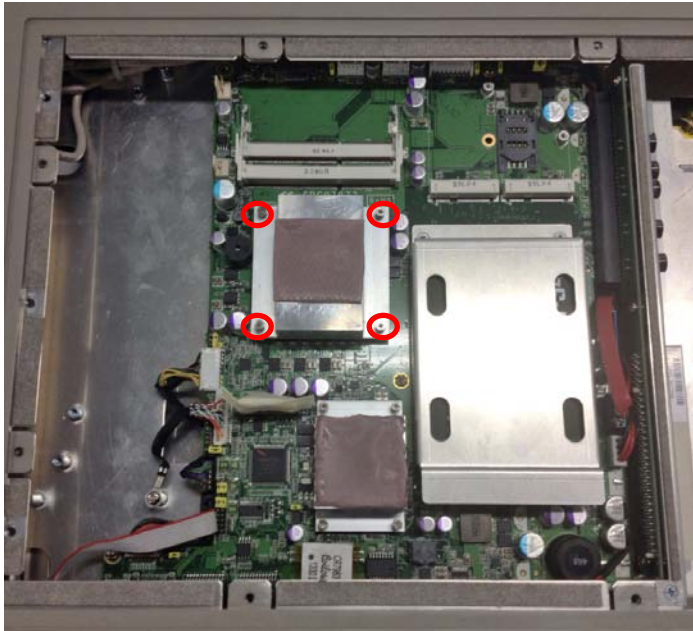
- Step 3** Please open the back cover by lifting the joint part as marked.



**Step 4** Open the back cover and find main board and locate the SO-DIMM socket and CPU cooler.

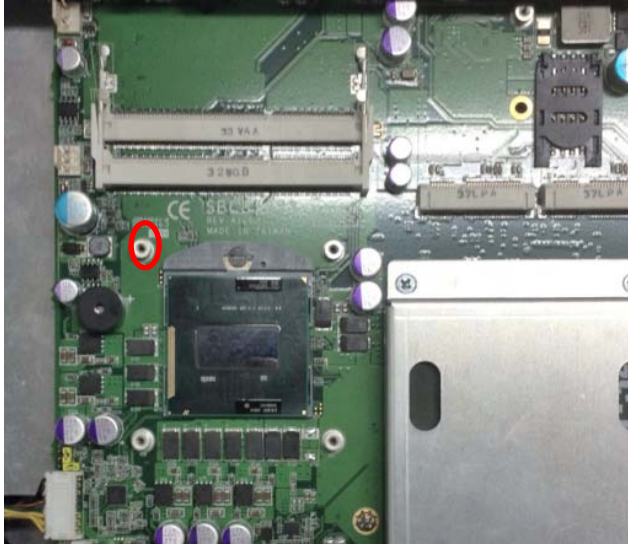


**Step 5** Release these screws as marked.

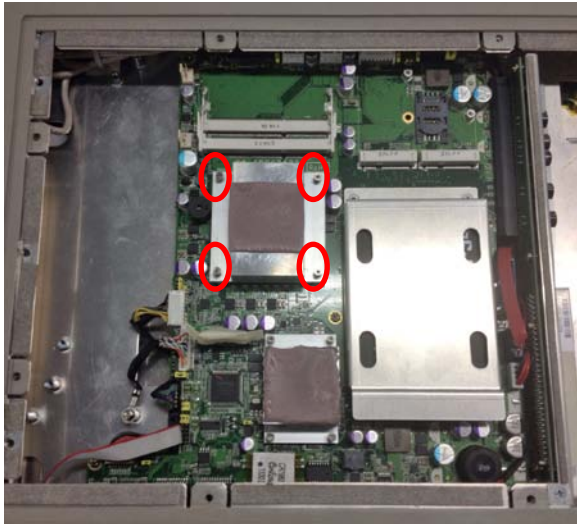




- Step 6** Align pins of the CPU with pin holes of the socket. Be careful of the CPU's orientation that you need to align the arrow mark on the CPU with the arrow key on the socket. Place the CPU into the socket, and use a screwdriver to lock it onto the socket as marked.



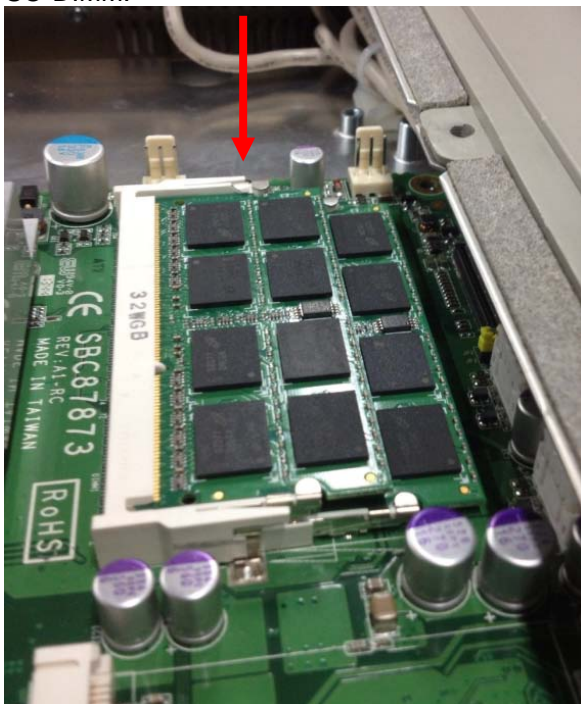
- Step 7** Place the heat sink on the CPU, and lock it down as marked.



**Step 8** Push down latches on each side of the SO-DIMM socket.



**Step 9** Install the memory module into the socket and push it firmly down until it is fully seated. The socket latches are levered upwards and clipped on to the edges of the SO-DIMM.

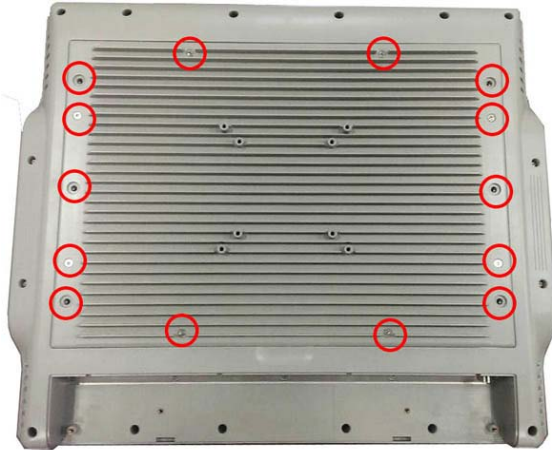


## 2.2 Hard Disk Drive Installation

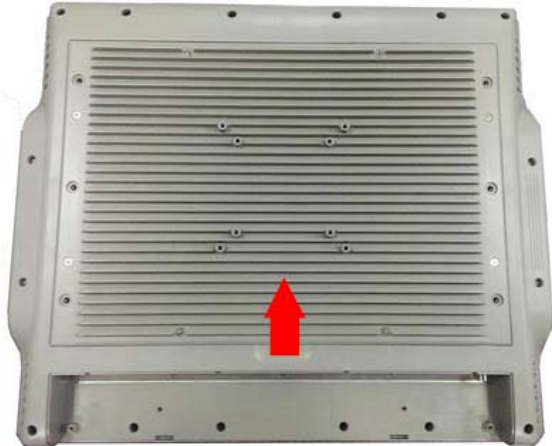
The **IF02175-873 Series** offers a convenient drive bay module for users to install HDD. The system offers users one 2.5" Hard Disk Drive for installation. Please follow the steps:

**Step 1** Turn off the system, and unplug the Power cord.

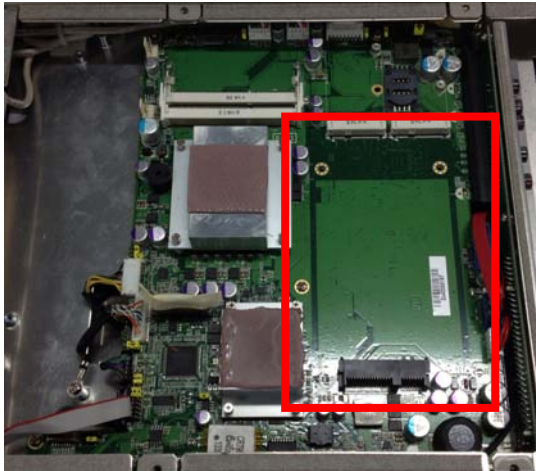
**Step 2** Locate and release these screws to open the back cover.



**Step 3** Please open the back cover by lifting the joint part as marked.



**Step 4** Find the HDD bracket on accessory package and find HDD socket on main board as marked.



**Step 5** Use assembly parts to fix HDD with the bracket.

1. HDD Bracket x1
2. 2.5 inch Hard-disk
3. Screw x 4
4. Fix four screw holes on the bracket, and assembly the HDD with the bracket.

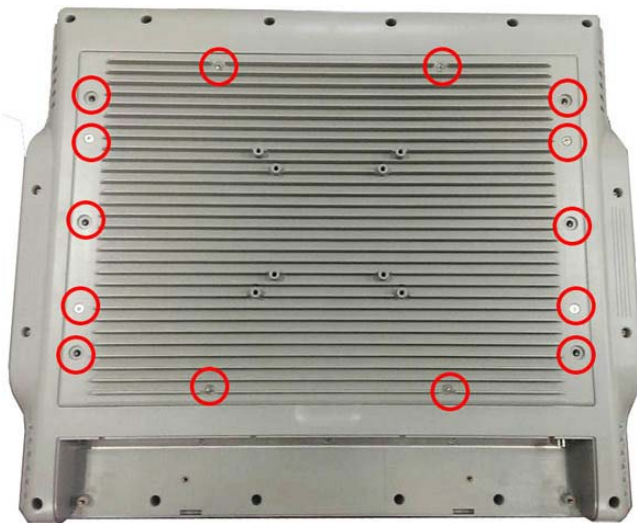


**Note** Please follow the direction of Hard-disk installation. "Hard-disk PCB faceup".

**Step 6** Install the HDD bracket inside the system. Plug the HDD in the SATA connector on main board. Fix two screw holes on main board as marked



**Step 7** Close the back cover to the chassis, and fasten all screws.

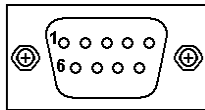


## 2.3 Serial Ports Interface

The **IFO2175-873 series** has three serial ports, COM1 (RS-232/ 422/ 485) with isolated 4KV.

The following table shows you the pin assignments of this connector:

Pin	Signal	Pin	Signal
1	Data Carrier Detect (DCD)	6	Data Set Ready (DSR)
2	Receive Data (RXD)	7	Request To Send (RTS)
3	Transmit Data (TXD)	8	Clear To Send (CTS)
4	Data Terminal Ready (DTR)	9	Ring Indicator (RI)
5	Ground (GND)		



In addition, COM1 can be set for RS-232/422/485 via BIOS.

In BIOS, user can change transmission mode in following menu.

Advanced → NCT6106D Super IO Configuration → Serial Port 0 Configuration → Transmission Mode

Please refer to Chapter 3 for BIOS setting.

When COM1 is set to RS-422 or RS-485, the pin assignments are listed below:

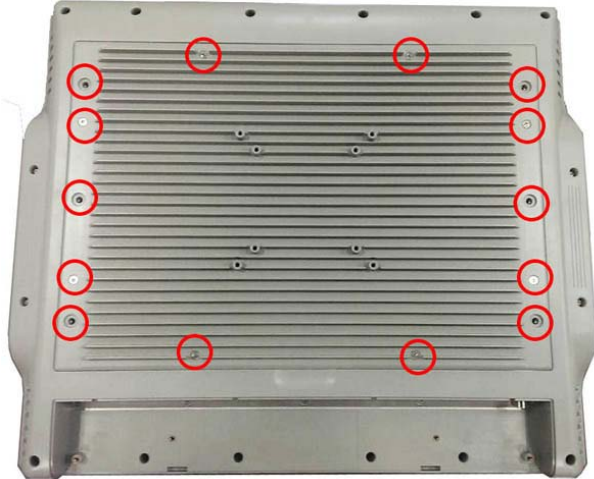
Pin	Signal Name	
	RS-422	RS-485
1	TX-	DATA-
2	TX+	DATA+
3	RX+	No connector
4	RX-	No connector
5	No connector	No connector
6	No connector	No connector
7	No connector	No connector
8	No connector	No connector
9	No connector	No connector

## 2.4 PCIe Mini Card Module Installation

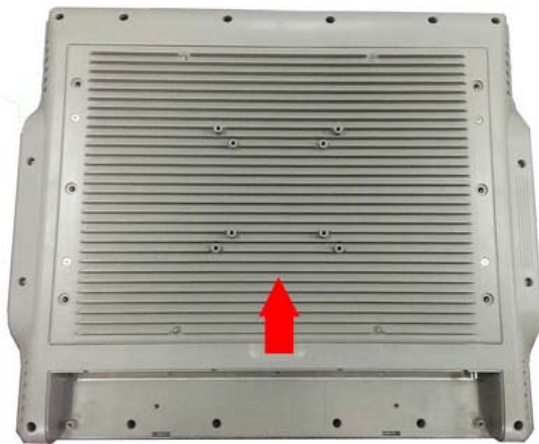
You can follow the steps below to install PCIe mini card modules.

**Step 1** Turn off the system, and unplug the Power cord.

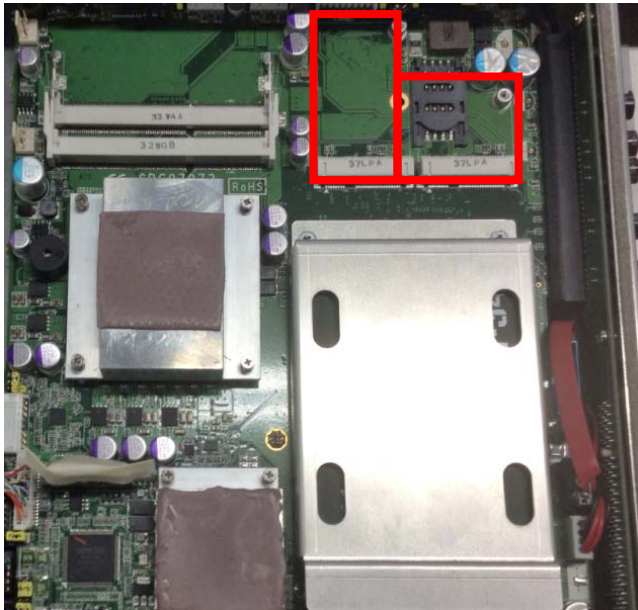
**Step 2** Locate and release these screws to open the back cover.



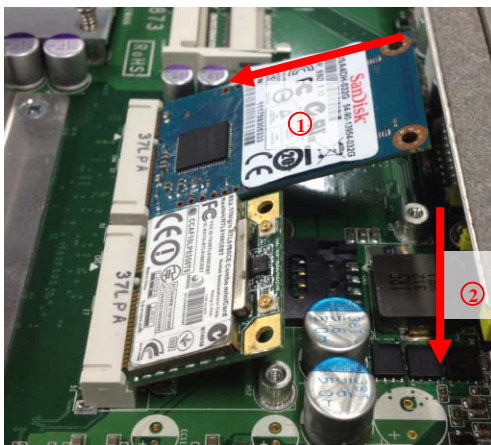
**Step 3** Please open the back cover by lifting the joint part as marked.



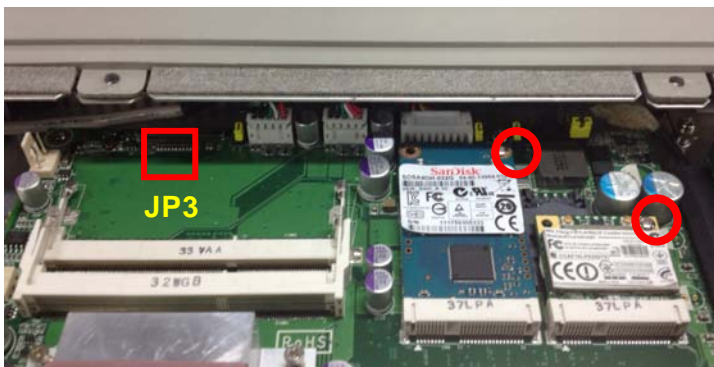
**Step 4** There are two slots. One is full-size mini card slot which supports mSATA. The other is half-size mini card slot with a SIM card socket.



**Step 5** The socket latches are clipped on to the edges of the mini card. Install mini card to the socket.



**Step 6** Install mini card to the socket and fasten screws.





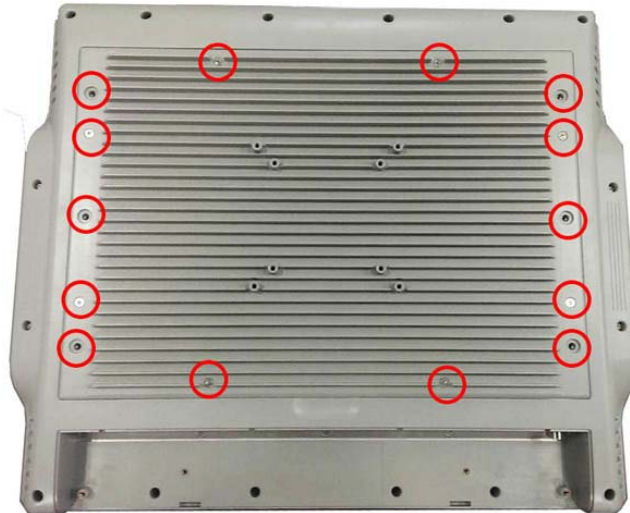
**Step 7** If installing mSATA, please adjust JP3 jumper.

Jumper	Default Setting	Jumper Setting
JP3	PCIe device (default setting) mSATA device	Short 1-2 Short 2-3

**Step 8** If installing wireless or 3G module, find the built-in antenna cable and connect it to the connector on wireless or 3G module.



**Step 9** Close the back cover to the chassis, and fasten all screws.

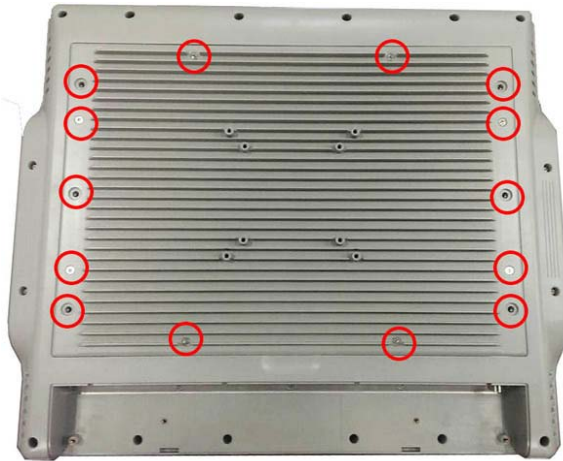


## 2.5 Add-on card Installation (Optional)

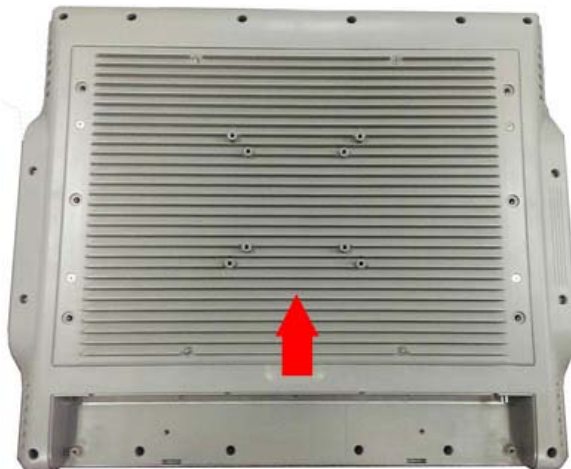
You can follow the steps below to install an optional add-on card.

**Step 1** Turn off the system, and unplug the Power cord.

**Step 2** Locate and release these screws to open the back cover.



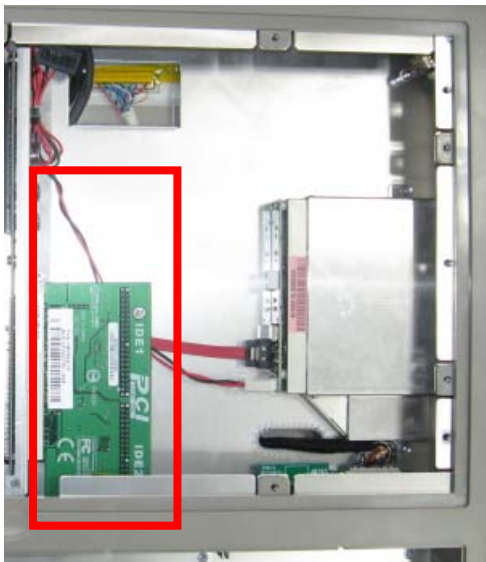
**Step 3** Please open the back cover by lifting the joint part as marked.



**Step 4** Release the screw as marked. And remove plates.



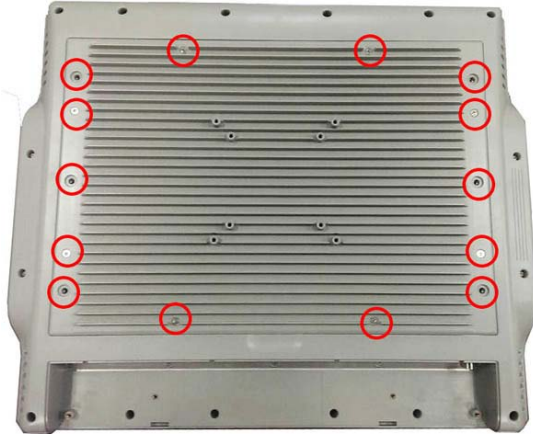
**Step 5** Insert the add-on card in the socket firmly until it is completely seated.



**Step 6** Fasten the screw as marked



**Step 7** Close the back cover to the chassis, and fasten all screws.



Please note that users only can install either expansion card or optical drive.

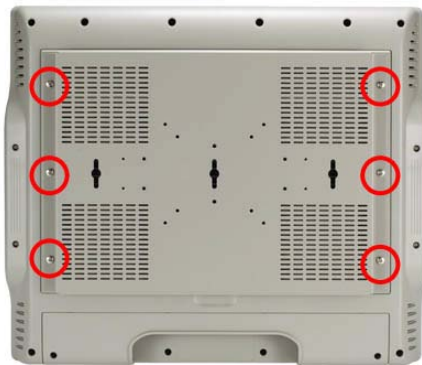
## 2.6 Mount

There are several mounting ways for the **IFO2175-873 Series**, Wall mount, VESA and Desktop mountings as below:

### 2.6.1 Wall mount

The mounting for IFO2175-873 Series is Wall mount as below:

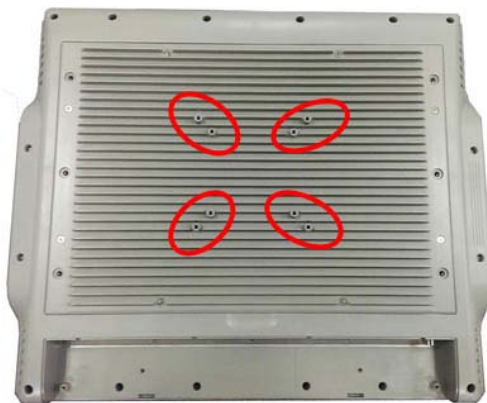
**Step 1** Prepare all parts for installing the wall mount kit and assemble the wall mount kit by using screws to fix the backplane.



### 2.6.2 VESA Mount

The mounting for IFO2175-873 Series is VESA-Arm as below:




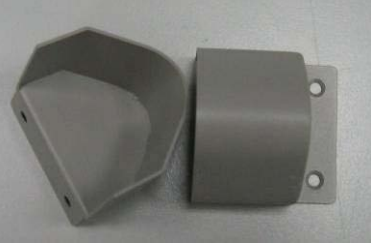
Assemble VESA-Arm by using screws to fix the backplane.



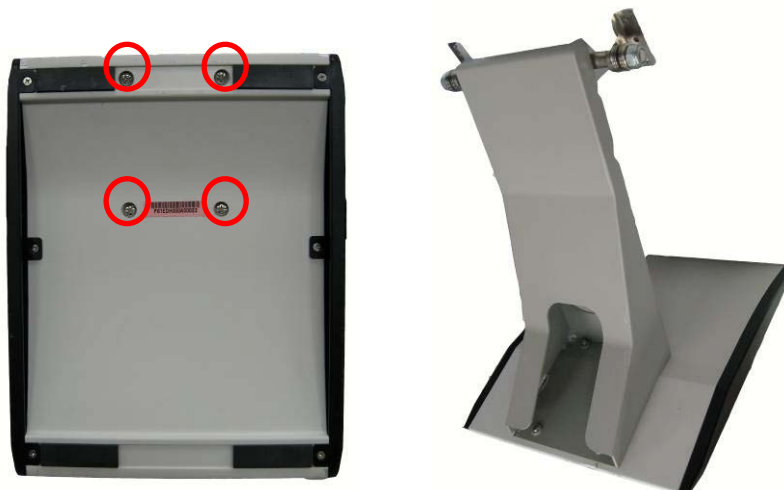
### 2.6.3 Desktop Stand (Optional)

The IFO2175-873 Series provides you with an optional Desktop Stand that you can follow the steps below:

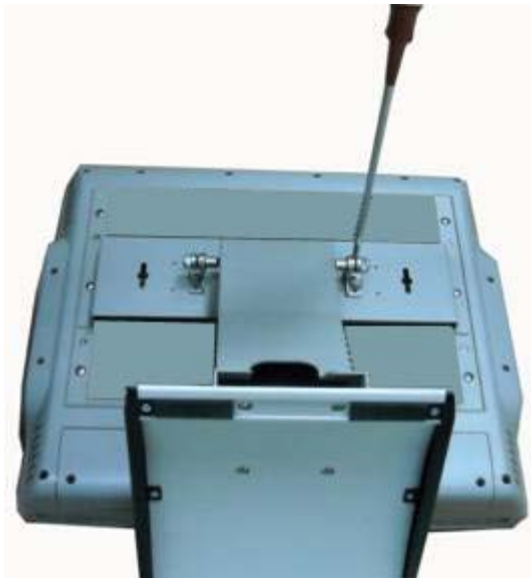
**Step 1** Prepare the parts of desktop stand.

Screw A	Screw B
	
Screw C	Hinge Cover
	

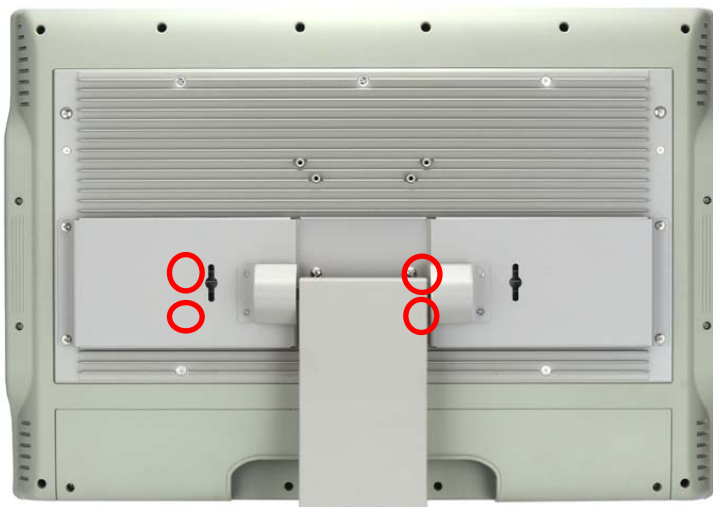
**Step 2** Assemble the desktop stand. Fix the screws as marked on the bottom side of chassis. (Use Screw A)



**Step 3** Assemble the desktop stand by fixing it onto the system. (Use Screw B).



**Step 4** Assembly the hinge cover and fix the screws as marked on the back side of chassis (Use Screw C).



**Step 4** Fix the desktop stand finish.



Rear View



Front View



## CHAPTER 3

# 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 Starting

To enter the setup screens, follow the steps below:

1. Turn on the computer and press the <Del> key immediately.
2. After you press the <Delete> key, the main BIOS setup menu displays. You can access the other setup screens from the main BIOS setup menu, such as the Chipset and Power menus.

### 3.2 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.

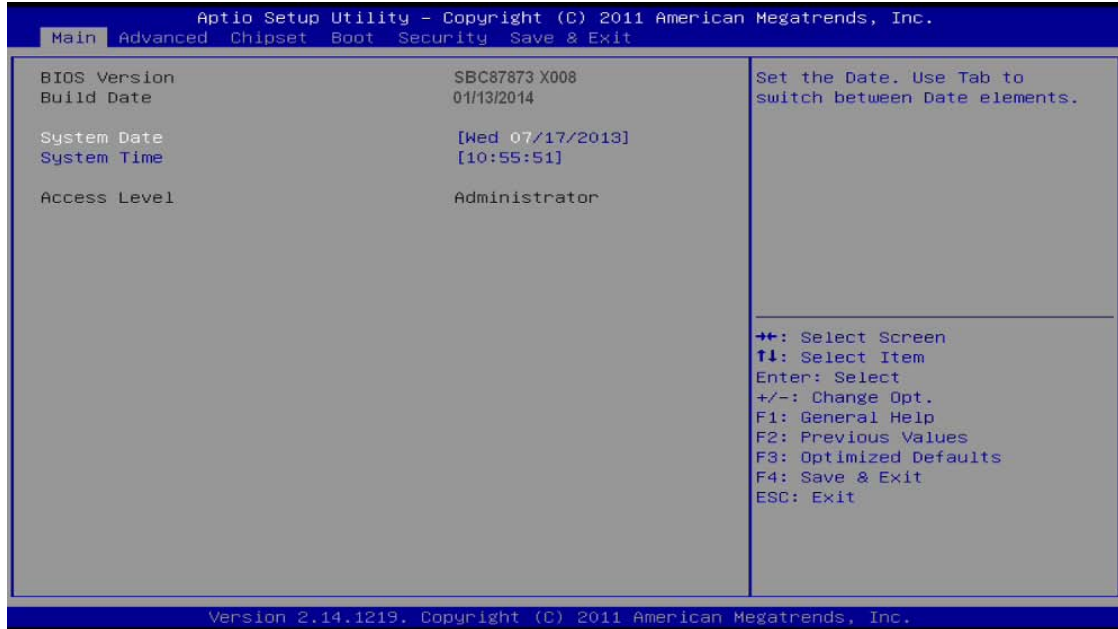


**Note** Some of navigation keys differ from one screen to another.

<b>← Left/Right</b>	The Left and Right <Arrow> keys allow you to select a setup screen.
<b>↑↓ Up/Down</b>	The Up and Down <Arrow> keys allow you to select a setup screen or sub-screen.
<b>+– Plus/Minus</b>	The Plus and Minus <Arrow> keys allow you to change the field value of a particular setup item.
<b>Tab</b>	The <Tab> key allows you to select setup fields.
<b>F1</b>	The <F1> key allows you to display the General Help screen.
<b>F2</b>	The <F2> key allows you to load previous value
<b>F3</b>	The <F3> key allows you to Load Optimized Defaults.
<b>F4</b>	The <F4> key allows you to save any changes you have made and exit Setup. Press the <F4> key to save your changes.
<b>Esc</b>	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.
<b>Enter</b>	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.

### 3.3 Main Menu

When you first enter the setup utility, you will enter the Main setup screen. You can always return to the Main setup screen by selecting the Main tab. System Time/Date can be set up as described below. The Main BIOS setup screen is shown below.



#### System Time/Date

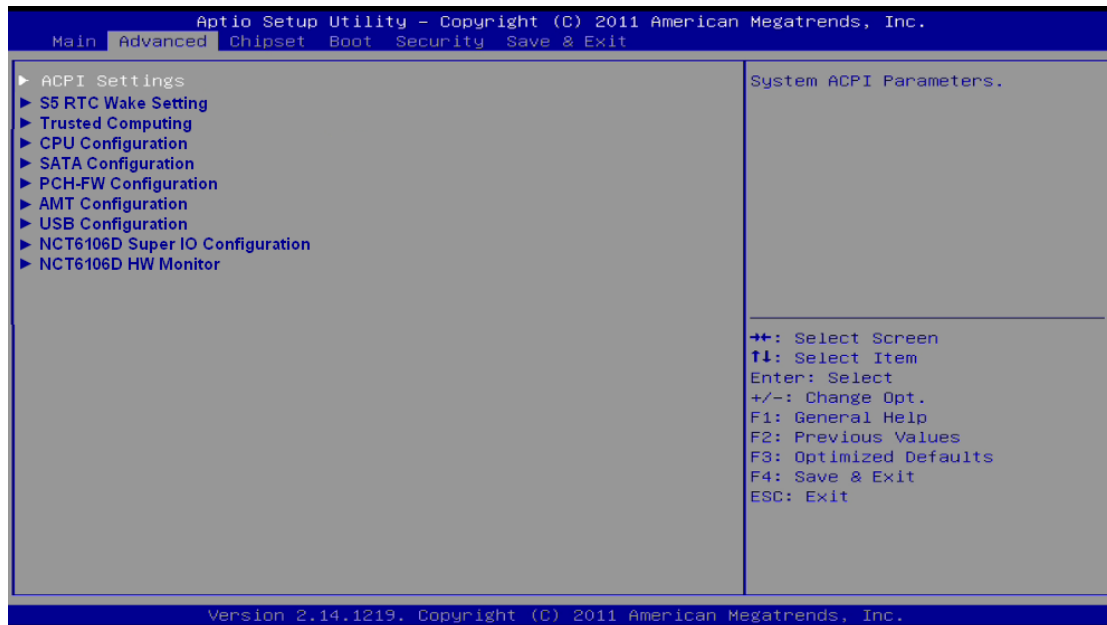
Use this option to change the system time and date. Highlight *System Time* or *System Date* using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time is entered in HH:MM:SS format.

### 3.4 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:

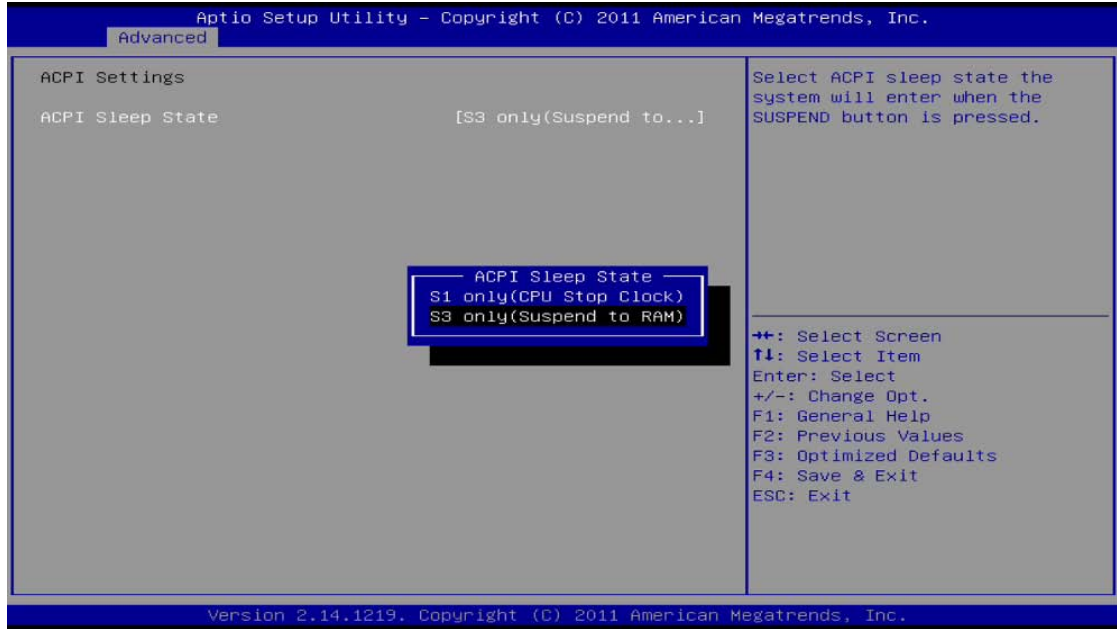
- ACPI Settings
- S5 RTC Wake Settings
- CPU Configuration
- SATA Configuration
- PCH-FW Configuration
- USB Configuration
- NCT6106D Super IO Configuration
- NCT6106D H/W Monitor

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.

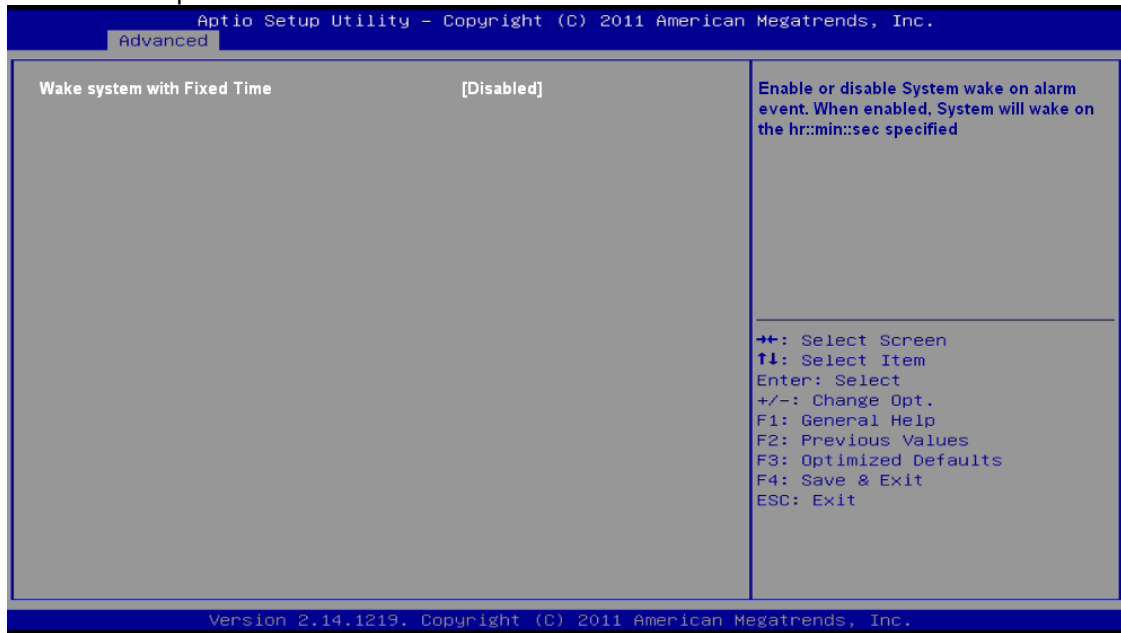


### **ACPI Sleep State**

Allow you to select the Advanced Configuration and Power Interface (ACPI) sleep state. Here are the options for your selection: S1 (CPU Stop Clock) and S3 (Suspend to RAM). The S3 (Suspend to RAM) option selects the highest ACPI sleep state the system will enter when SUSPEND button is pressed.

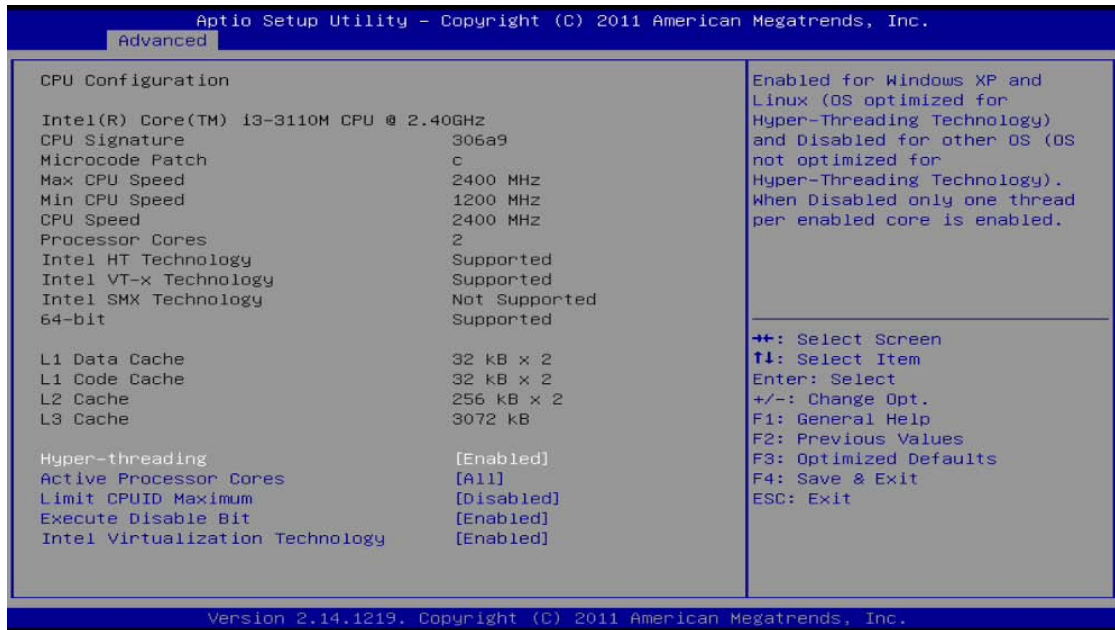
- **S5 RTC Wake Setting**

Use this option to wake on the system on the setting time. When enabled System will wake on the time specified



- **CPU Configuration**

This screen shows the CPU Configuration, and you can change the value of the selected option.



### Hyper-threading

Enabled for Windows XP and Linux and disabled for other OS which do not optimized for Hyper-threading technology.

### Active Processor Cores

Number of cores to enable in each processor package.

### Limit CPUID Maximum

Set limit CPUID Maximum value. Should be set as “disabled” for Windows XP.

### Execute Disable Bit

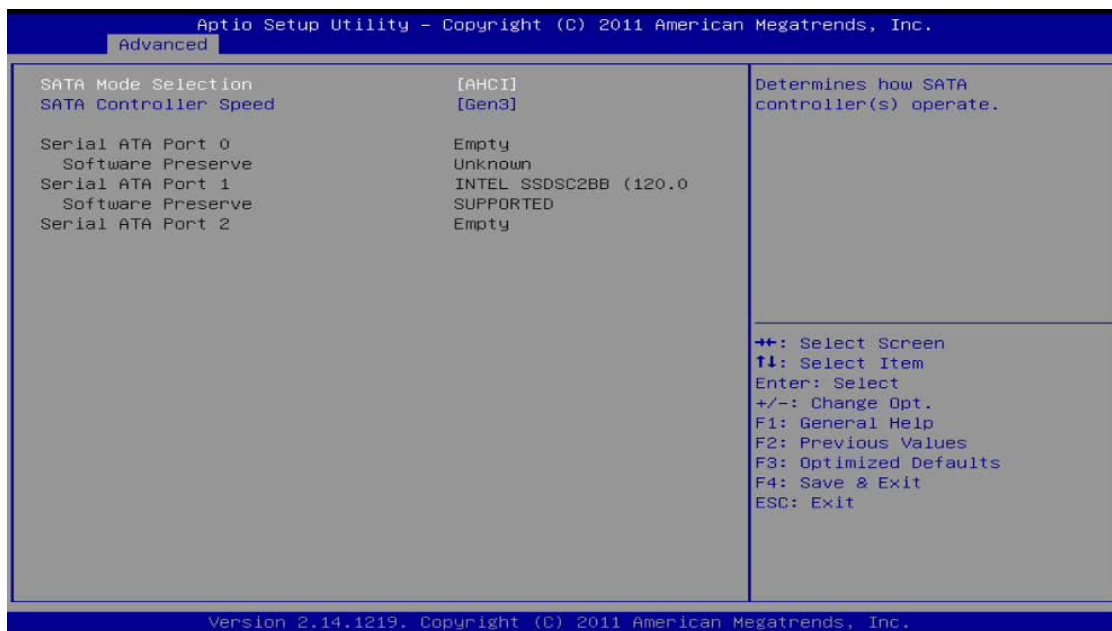
No-Execution page protection technology is able to force the XD feature flag to always return 0.

### Intel Virtualization Technology

Allow you to enable or disable Intel Virtualization Technology. When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology .

● **SATA Configuration**

In the SATA Configuration menu, you can see the currently installed hardware in the SATA ports. During system boot up, the BIOS automatically detects the presence of SATA devices.



**SATA Mode Selection**

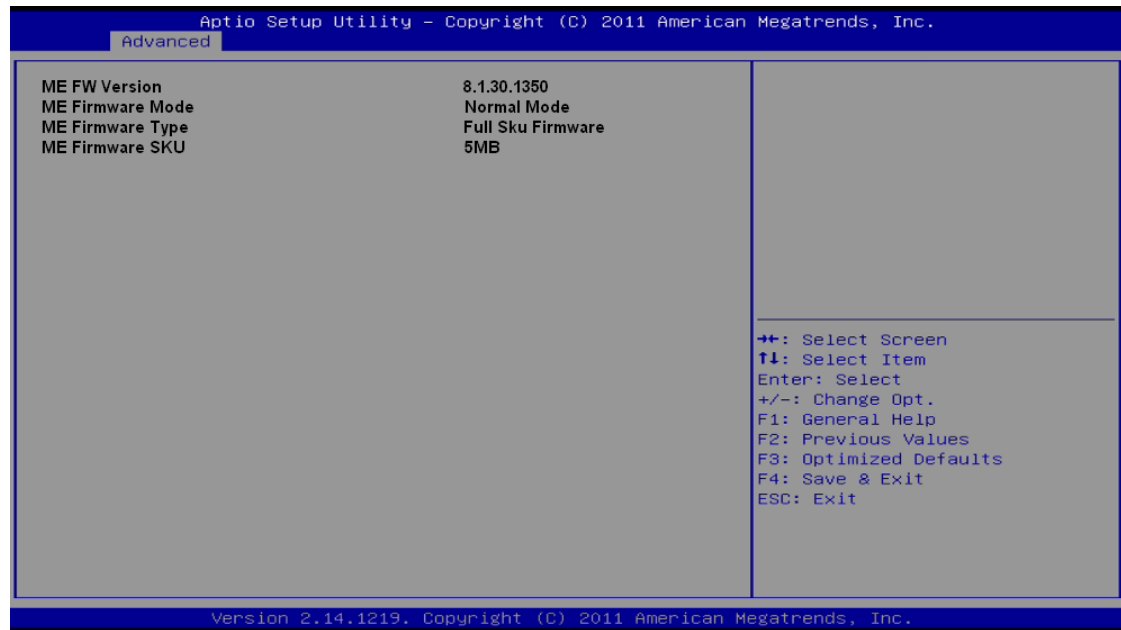
Use this item to choose the SATA operation mode. Here are the options for your selection: IDE Mode and AHCI Mode.

**SATA Controller Speed**

Use this item to choose the SATA speed. Here are the options for your selection: Gen1, Gen2, Gen3

- **PCH-FW Configuration**

You can use this screen to confirm ME Firmware version.

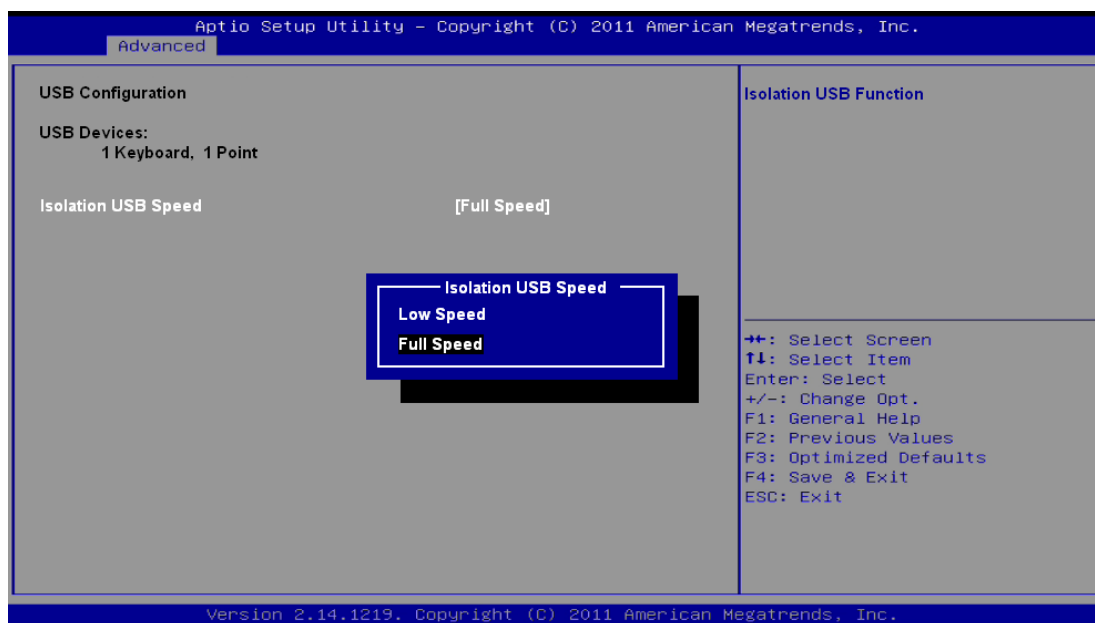





● **USB Configuration**

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

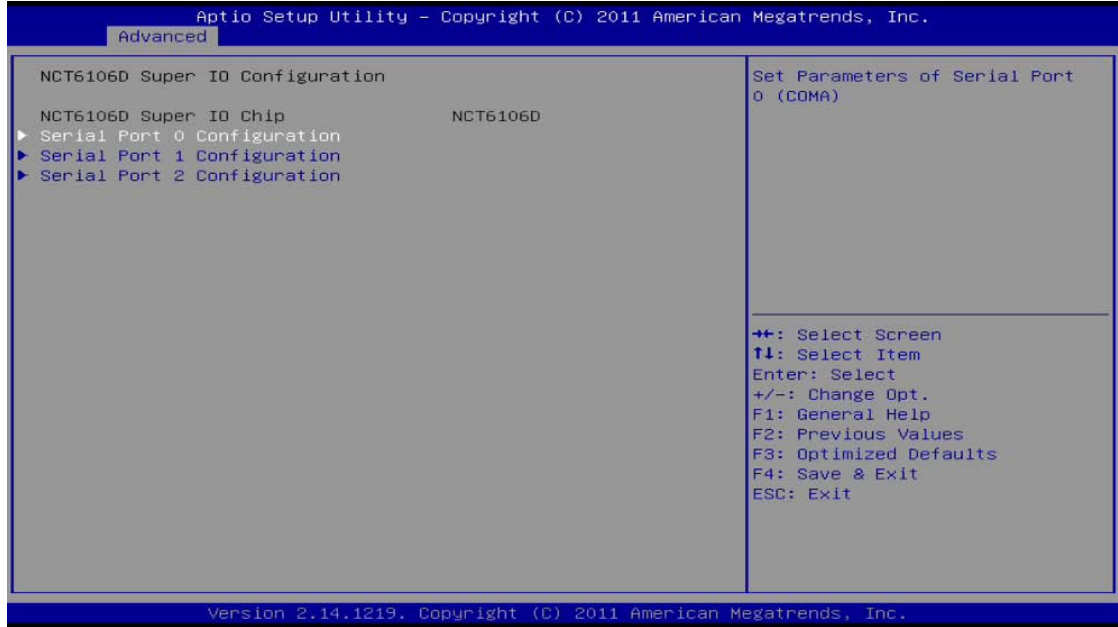
Isolation USB ports can support two kind of speed: Low Speed / Full Speed. Depending on your speed of USB device, user must select relative USB speed. Otherwise, the USB device may not work properly. Please remove the USB devices and reboot if you want to change the speed of USB.



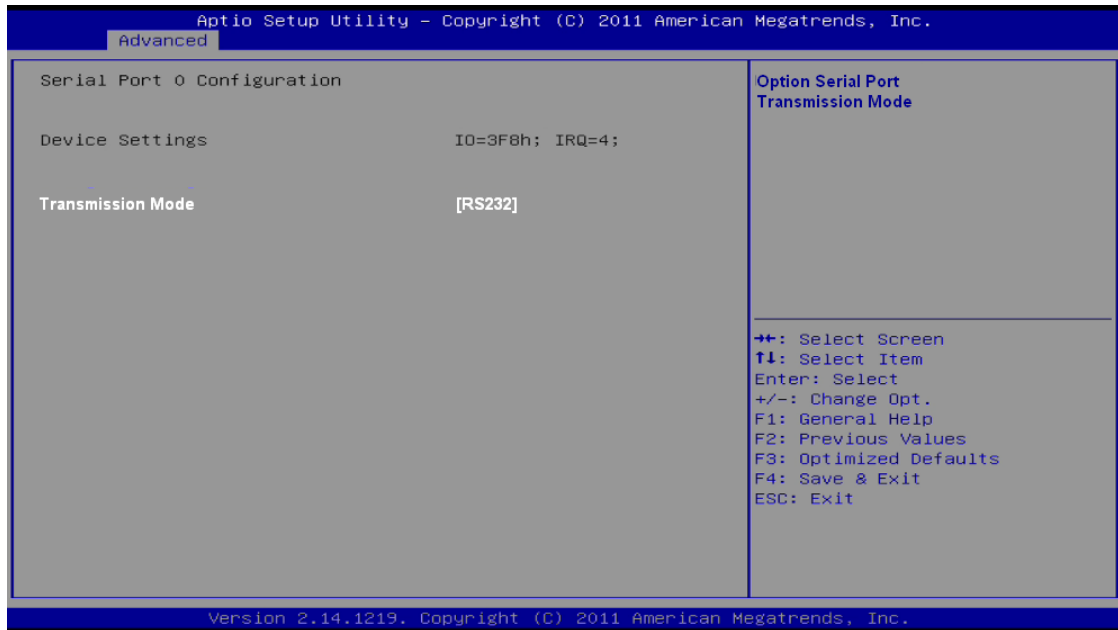
 **Note** *If the USB device is high speed, please make sure it can support full or low speed, and select relative speed in BIOS when user would like to connect it to isolated USB port.*

- **NCT6106D Super IO Configuration**

You can use this screen to select options for the Super IO Configuration, and change the value of the selected option. A description of the selected item appears on the right side of the screen. For items marked with “▶”, please press <Enter> for more options.



● **Serial Port 0 Configuration**



**Serial Port**

Use this item to enable or disable serial port 0. The optimal setting for base I/O address is 3F8h and for interrupt request line is IRQ4.

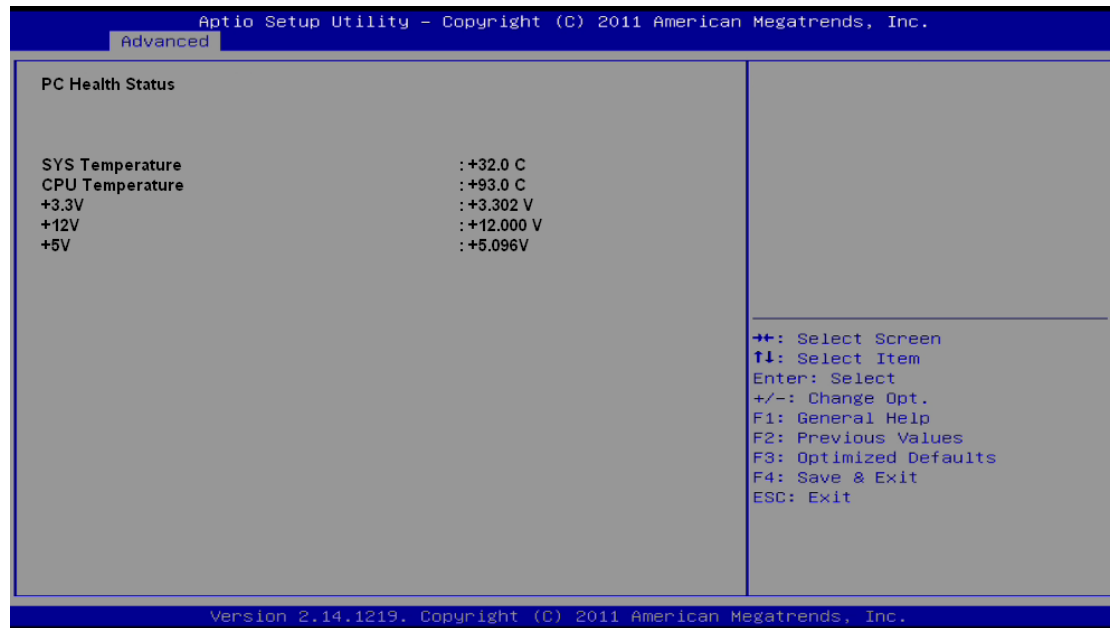
**Transmission Mode**

Use this item to configure serial port 0. Here are the options for your selection:

- RS232
- RS422
- RS485

- **NCT6106D HW Monitor**

This screen shows the Hardware Health Configuration.

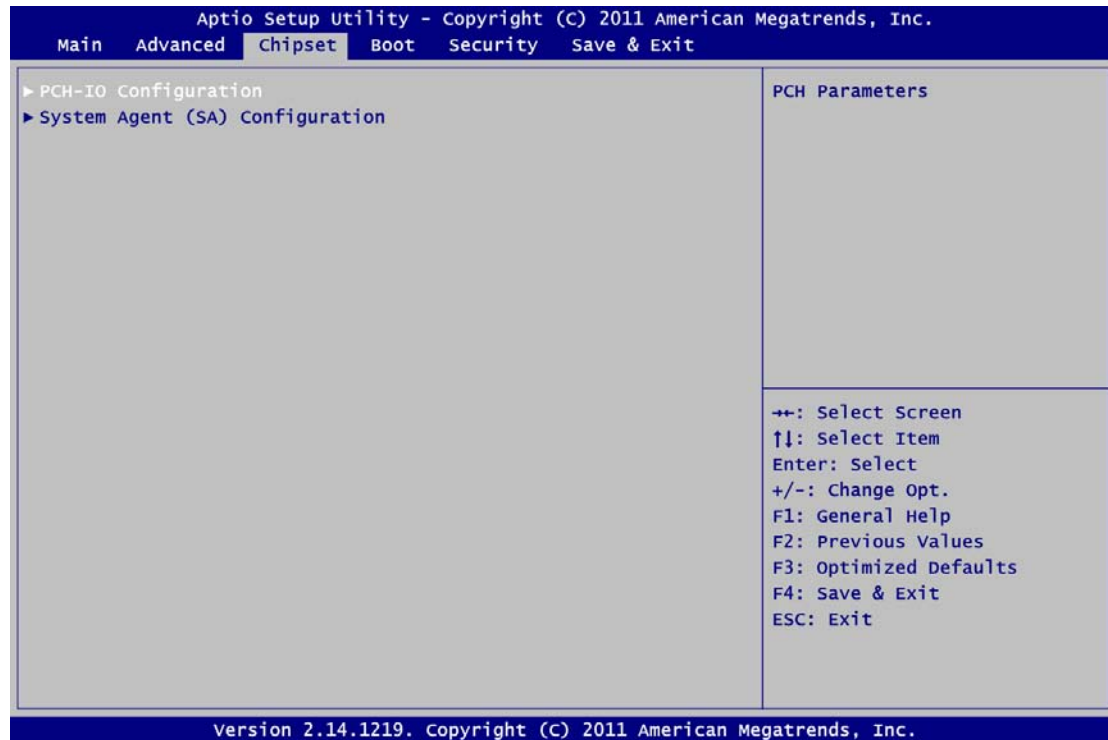


### 3.5 Chipset Menu

The Chipset menu allows users to change the advanced chipset settings. You can select any of the items in the left frame of the screen to go to the sub menus:

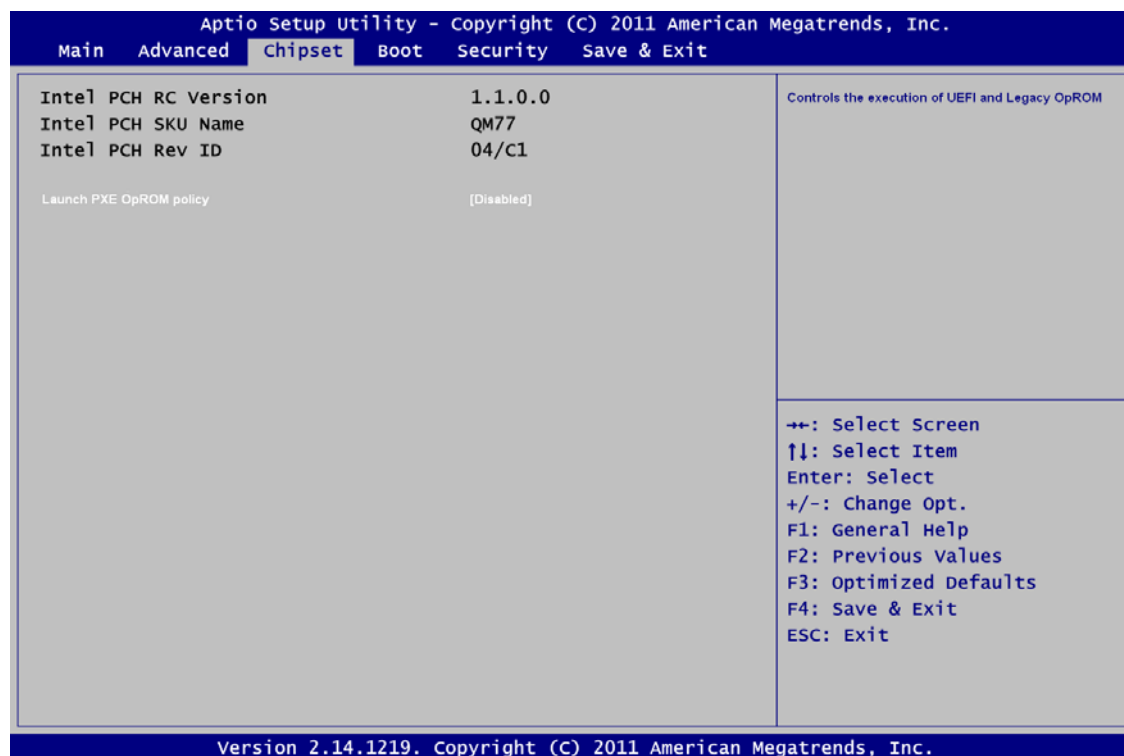
- ▶ PCH-IO Configuration
- ▶ System Agent (SA) Configuration

For items marked with “▶”, please press <Enter> for more options.



- **PCH-IO Configuration**

This screen allows users to set PCH parameters.

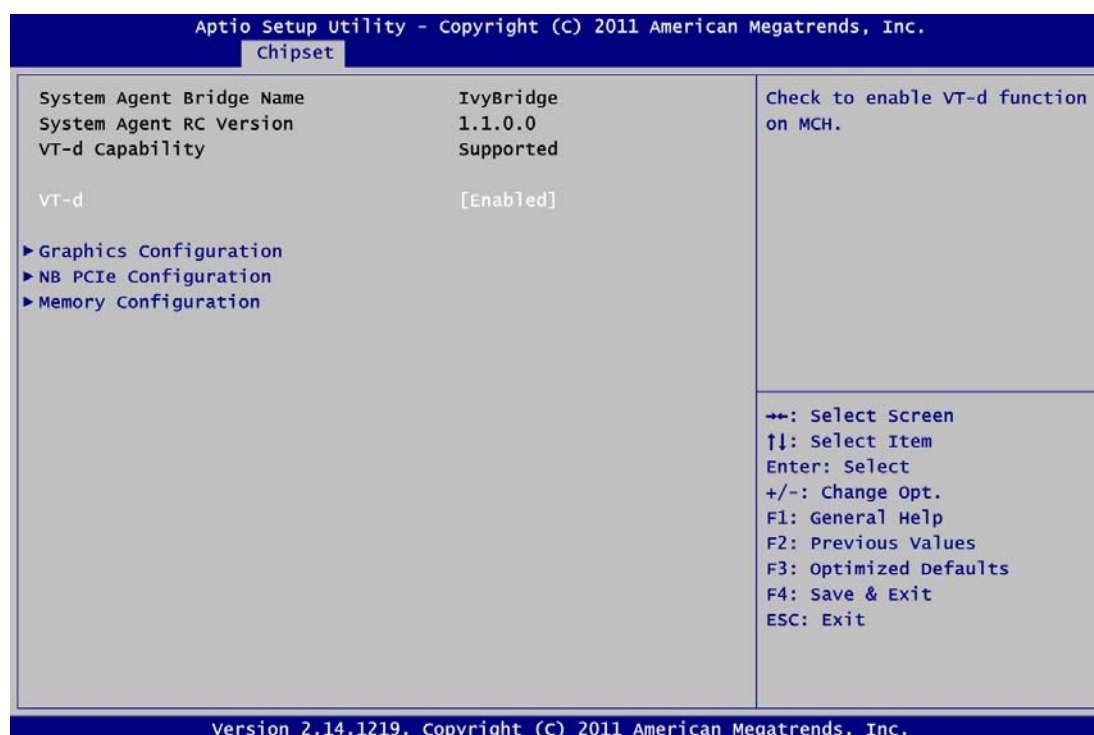


**Launch PXE OpROM policy**

Controls the execution of UEFI and Legacy OpROM

● **System Agent (SA) Configuration**

This screen shows System Agent information and provides function for specifying related parameters. For items marked with “▶”, please press <Enter> for more options.

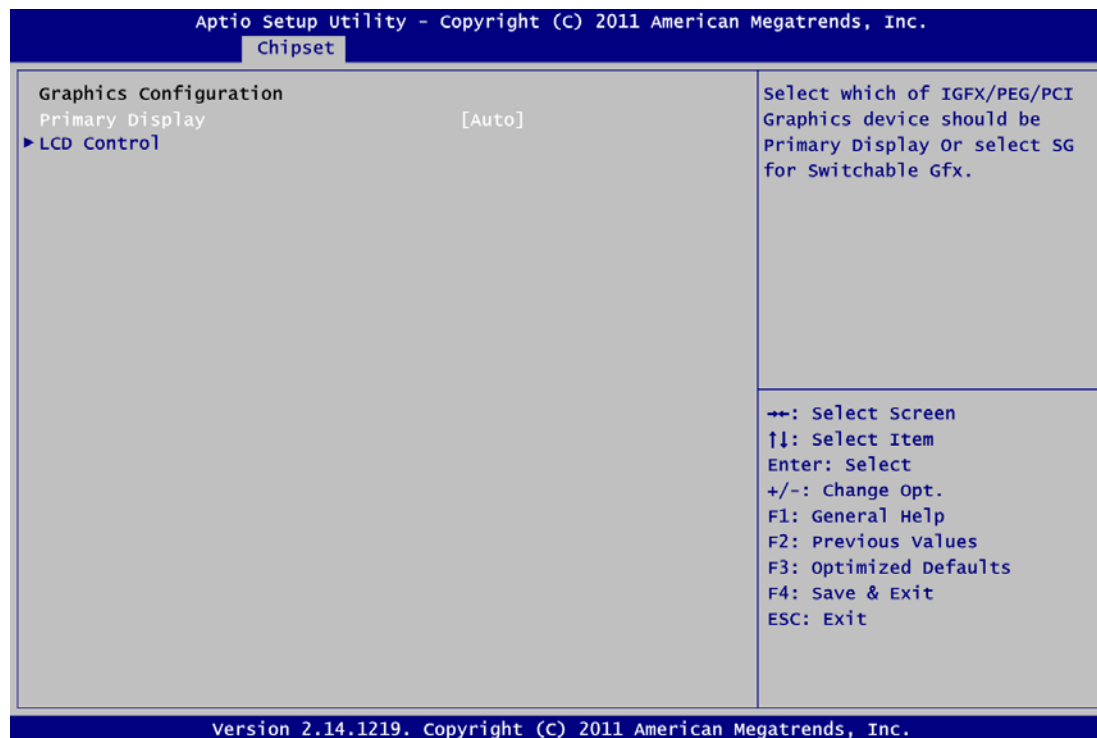


**VT-d**

Enable or disable Intel® chipset virtualization technology for directed I/O. VT-d can help end users improve security and reliability of the systems and also improve performance of I/O devices in virtualized environment.

- **Graphics Configuration**

This option allows users to change the integrated graphic device settings.



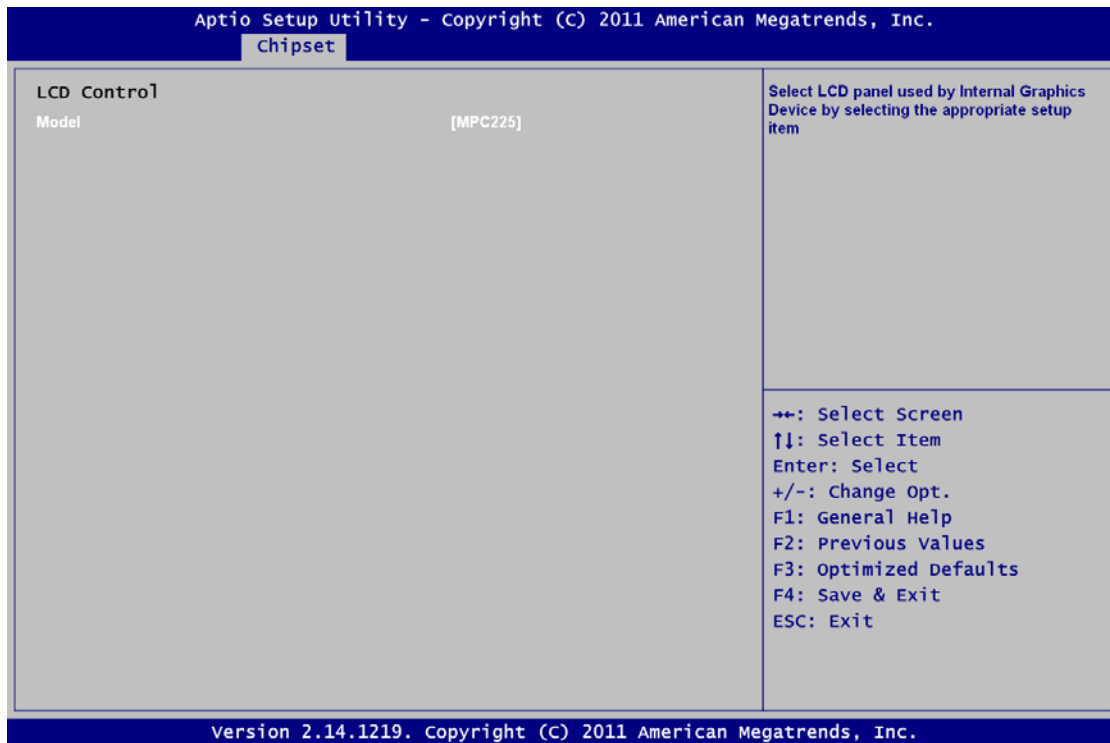
### **Primary Display**

Allow you to select which graphics controller to use as the primary boot device.



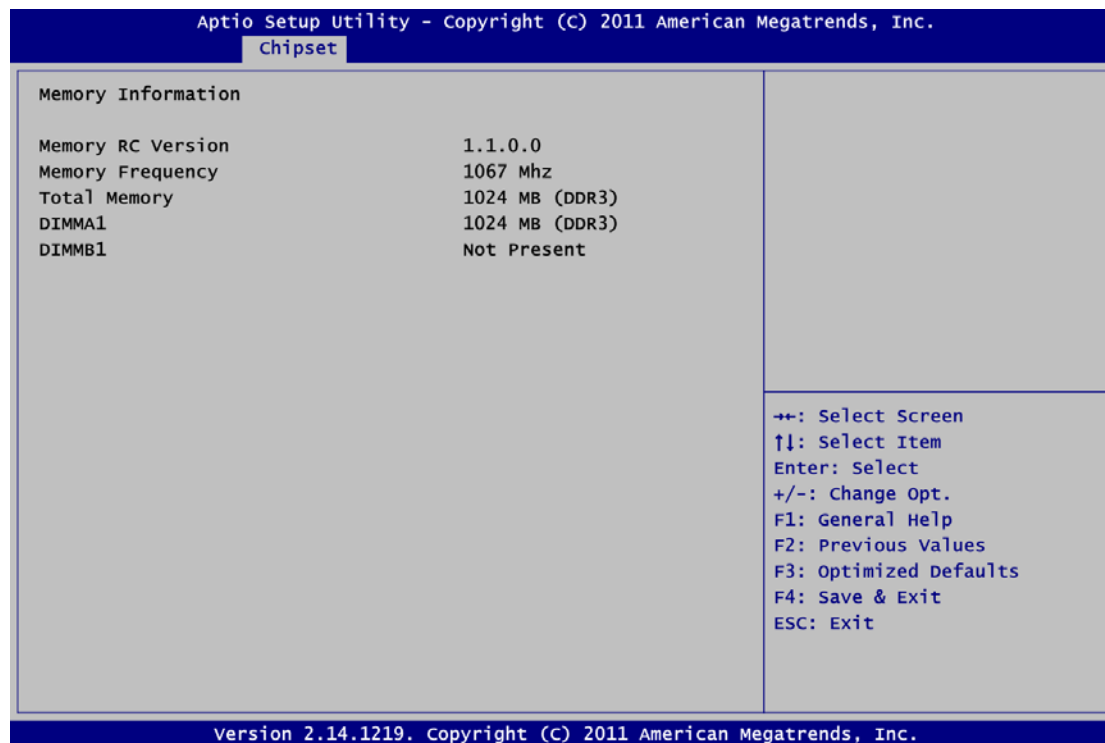
- **LCD Control**

Select LCD panel used by Internal Graphics Device by selecting the appropriate setup item.



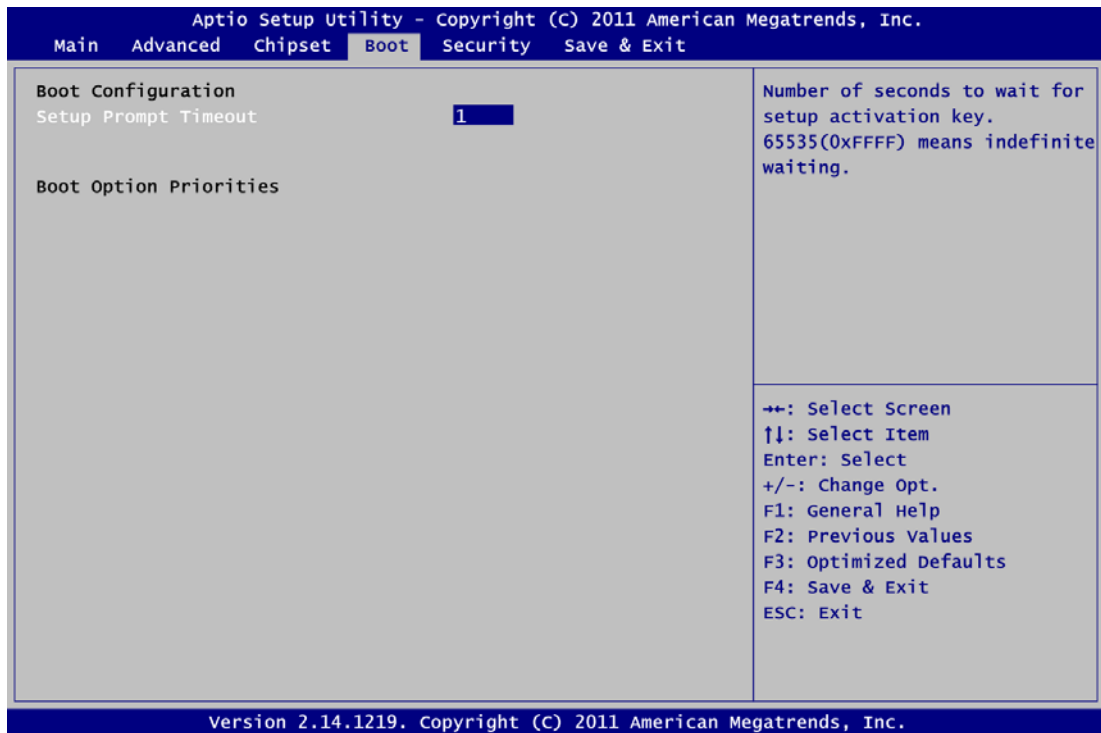
- **Memory Configuration**

This screen displays system memory information.



### 3.6 Boot Menu

The Boot menu allows users to change boot options of the system.



#### Setup Prompt Timeout

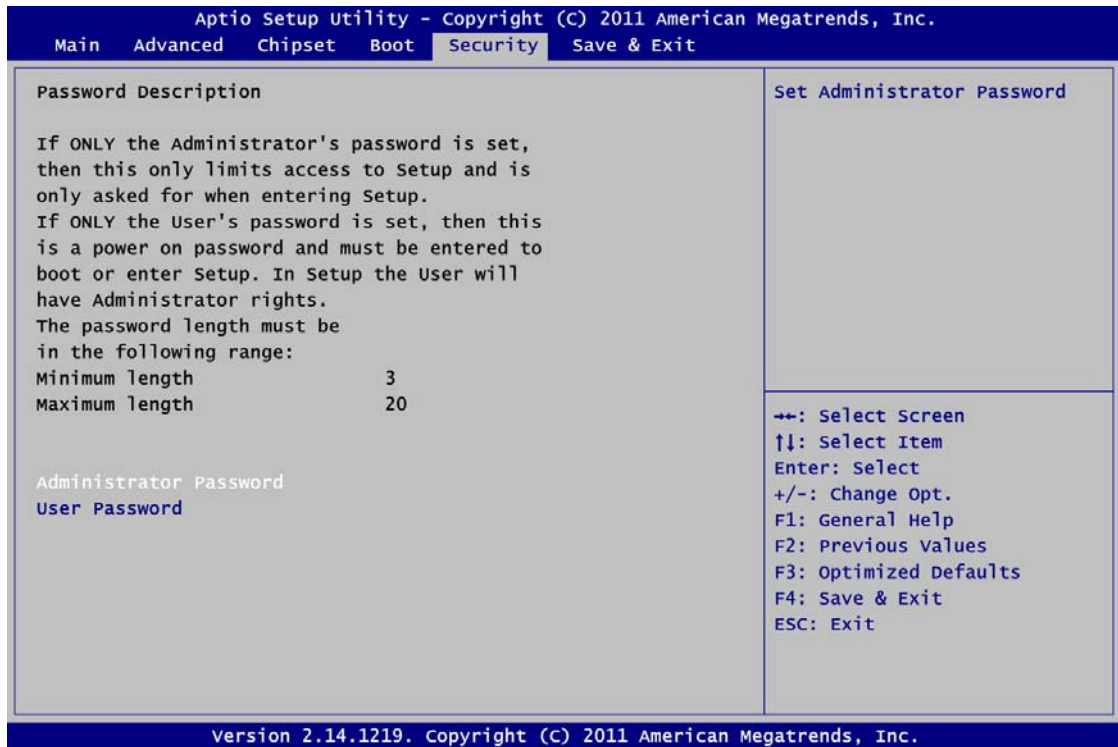
Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.

#### Boot Option Priorities

These are settings for boot priority. Specify the boot device priority sequence from the available devices.

### 3.7 Security Menu

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



#### Administrator Password

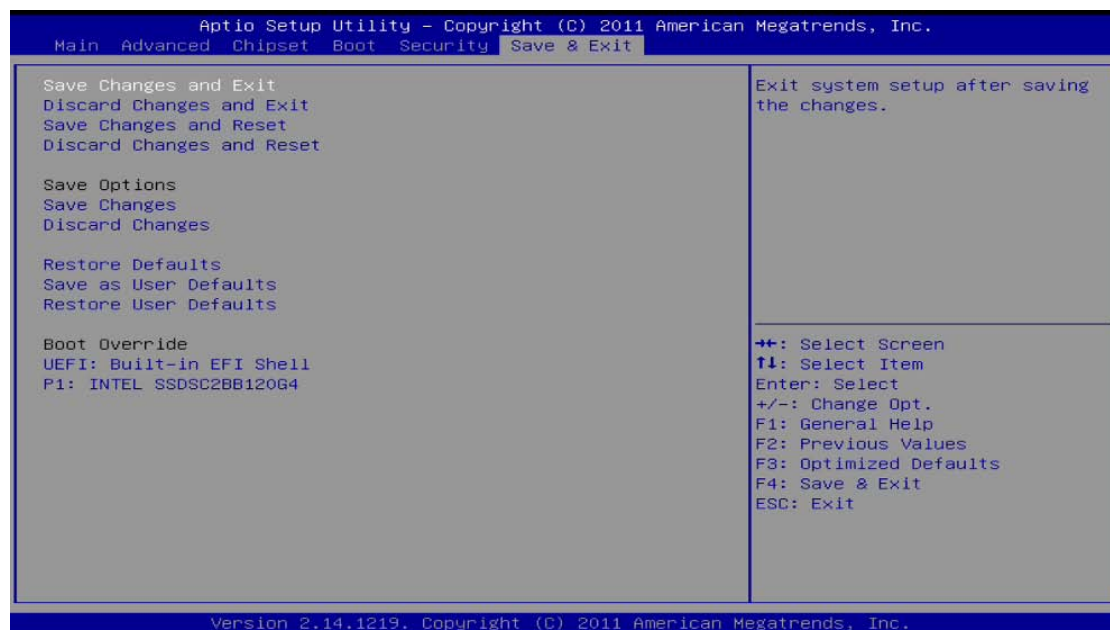
This item indicates whether an administrator password has been set (installed or uninstalled).

#### User Password

This item indicates whether an user password has been set (installed or uninstalled).

### 3.8 Save & Exit Menu

The Save & Exit menu allows users to load your system configuration with optimal or fail-safe default values.



#### Save Changes and Exit

When you have completed the system configuration changes, select this option to leave Setup and return to Main Menu. Select Save Changes and Exit from the Save & Exit menu and press <Enter>. Select Yes to save changes and exit.

#### Discard Changes and Exit

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

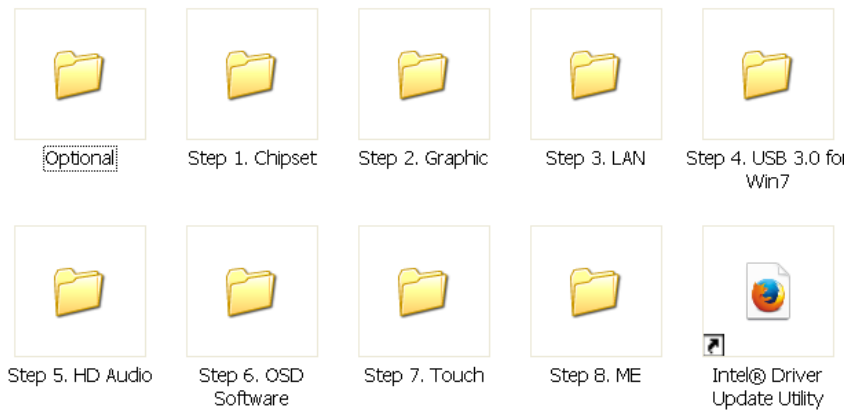
Select a drive to immediately boot that device regardless of the current boot order.

## CHAPTER 4 DRIVER INSTALLATION

### 4.1 System

IFO2175-873 supports Windows XP/ Windows 7/8 to facilitate the installation of system driver, please carefully read the instructions in this chapter before start installing.

1. Insert Driver Disc in the disk, and select the \IFO2175-873\Driver\..



2. Please follow folder Step 1 to Step 8 for IFO2175-873 driver installation.

## 4.2 Touch Screen

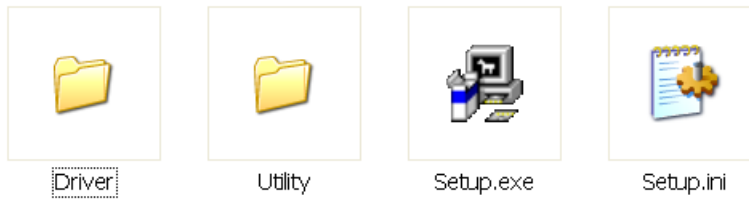
### 4.2.1 Specification

<b>Touch Screen</b>	For 5-wire analog resistive type
<b>Touch Screen Controller</b>	PenMount 6000 microcontroller
<b>Communications</b>	USB
<b>Resolution</b>	1024 x 1024
<b>Power Input</b>	5V
<b>Power Consumption</b>	Standby Mode : 13.4mA; Active Mode: 24.6mA (VCC=5V, Top sheet Panel Resistance: 274 ohm, Bottom sheet Panel Resistance: 770 ohm)

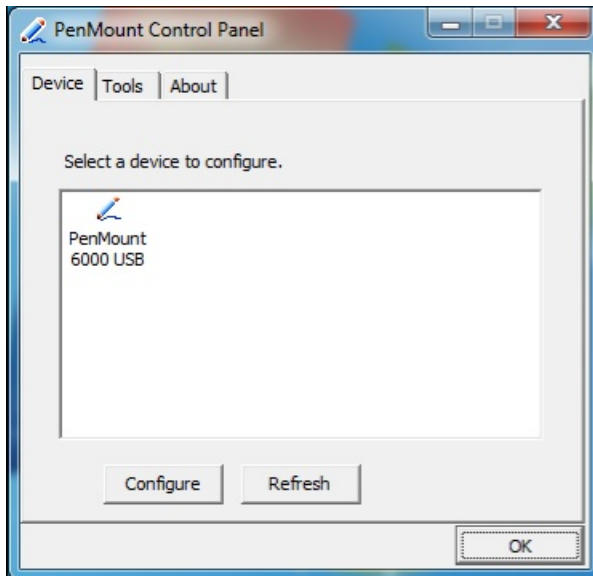
### 4.2.2 Driver Installation

The **IFO2175-873 Series** provides a driver of the touch screen that users can install it under operating system Windows XP/7/8. To facilitate this touch screen driver installation, users should read the instructions in this chapter carefully before start the installation.

1. Insert Driver CD and select the D:\IFO2175-873\Driver\Step7 - Touch

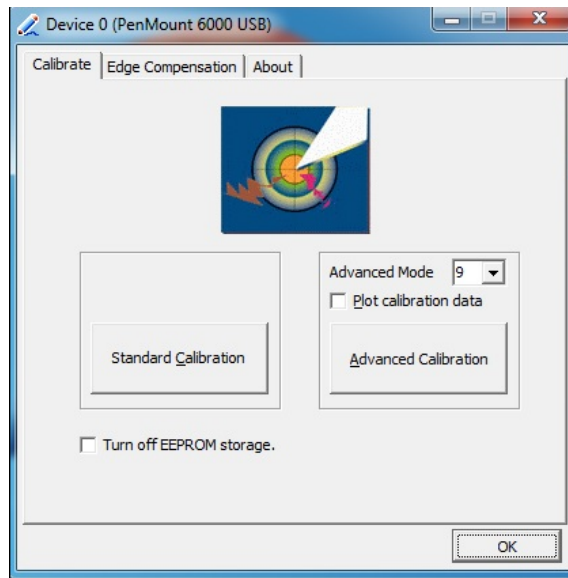


2. Follow the installing procedure and press OK.
3. Click Start menu and select "PenMount Control Panel", and then double click PenMount 6000 USB.

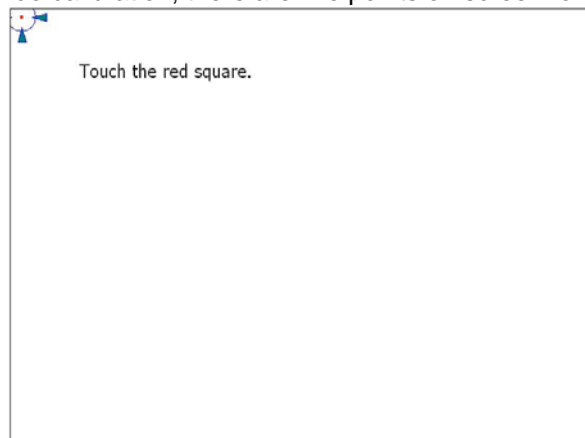




- Click the "Standard Calibration" button.



- Calibration:**  
To adjust the display with touch panel, click "Calibration" and follow the calibrate point to do calibration; there are five points on screen for calibration.

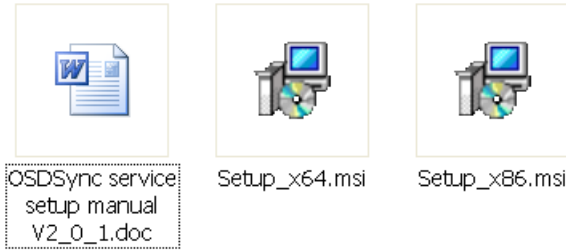


- Press OK.

### 4.3 OSD sync service install/uninstall

This OSD sync service can let front OSD key synchronize brightness and volume adjustment with Windows OS and also show OSD notification bar on the screen.

1. Insert Driver CD and select the D:\IFO2175-873\Driver\Step7 - Touch



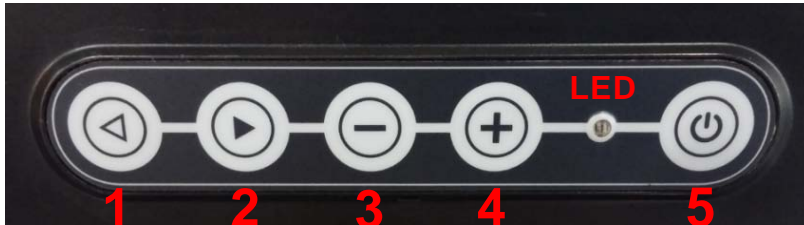
2. For 64bit OS, run Setup\_x64.msi. For 32bit OS, run Setup\_x86.msi.

3. Follow the installing procedure and press OK.



**Note** In Windows XP and Windows 8, it requires .NET Framework 3.5 to install OSD Sync Service. User needs to connect to Internet to get .NET Framework 3.5 from Microsoft. If user doesn't install this service, the brightness front OSD keys still can work. But it cannot synchronize with OS and cannot show OSD notification bar on the screen. The volume front OSD keys don't work without OSD sync service

### 4.4 Front OSD function keys



Key	OSD Function
Key 1	Brightness-
Key 2	Brightness+
Key 3	Volume-
Key 4	Volume+
Key 5	Power on/off
Key 1+2 (Press 2 second)	LCD on/off
Key 3+4	Mute enable/disable

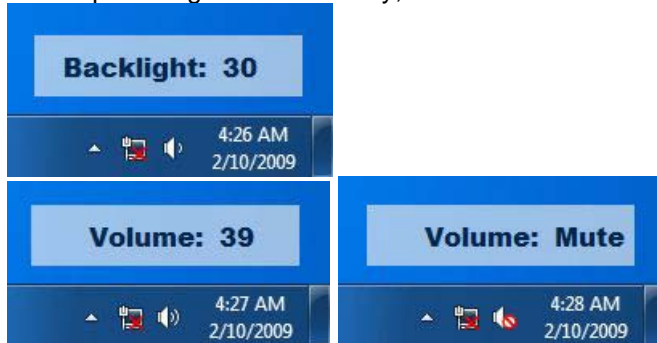
Key 1, 2, 3, 4 will be triggered repeatedly after long pressing one second.

## 4.5 LED indicator status

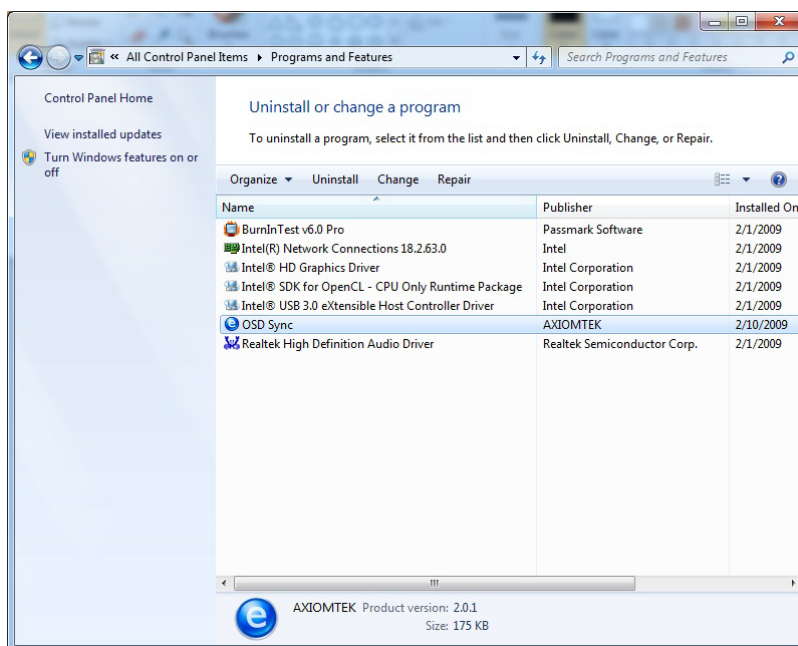
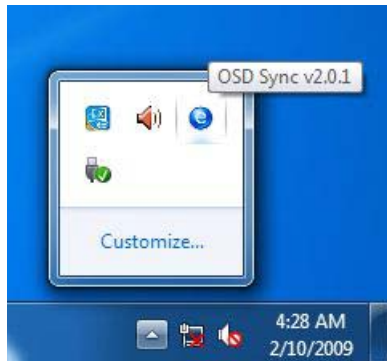
- Power on(S0): Green
- Power off(S5): Black
- LCD off: Orange
- Touch off: Orange flash

OSD & notification bar & setup information

When pressing front OSD key, OS will show OSD notification status as following.

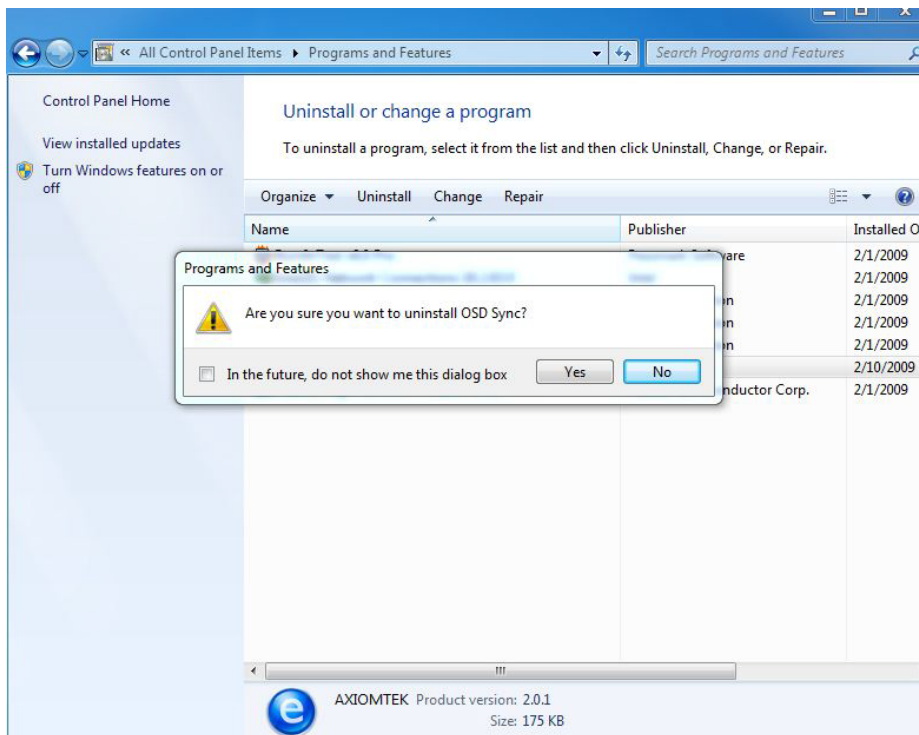


User can find service as following.

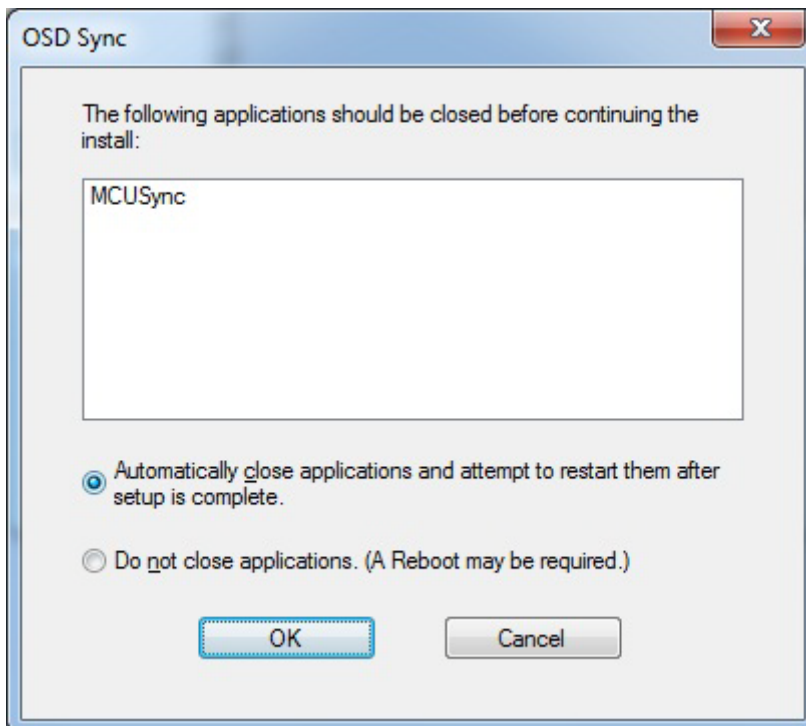


## 4.6 Uninstall this service

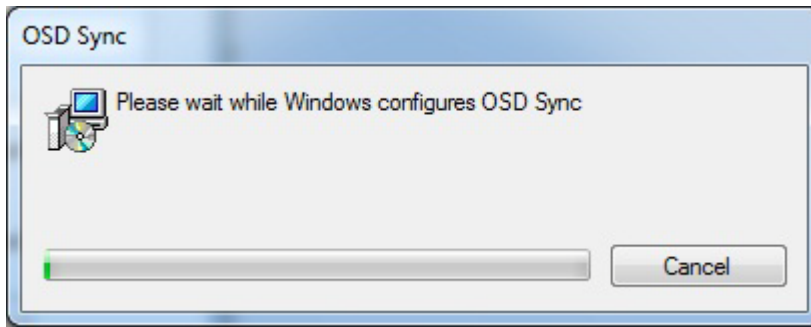
1. double click OSD Sync from programs and features of control panel



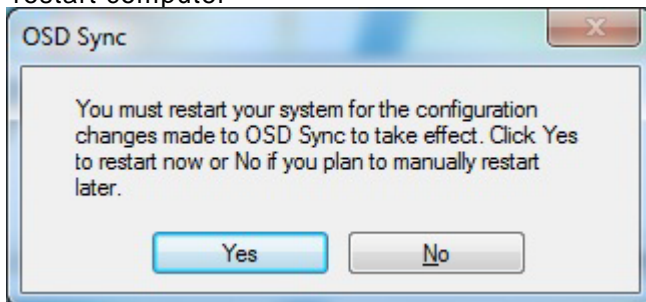
2. Choose “Automatically close applications” and click ok



3. uninstalling



4. restart computer



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## APPENDIX A

# WATCHDOG TIMER

### About Watchdog Timer

Software stability is major issue in most application. Some embedded systems are not watched by human for 24 hours. It is usually too slow to wait for someone to reboot when computer hangs. The systems need to be able to reset automatically when things go wrong. The watchdog timer gives us solution.

The watchdog timer is a counter that triggers a system reset when it counts down to zero from a preset value. The software starts counter with an initial value and must reset it periodically. If the counter ever reaches zero which means the software has crashed, the system will reboot.

#### How to Use the Watchdog Timer

(Following is example to enable configuration by using debug tool)

##### Enable WDT

###### 1.Enable SIO configuration

-O 2E 87

-O 2E 87

###### 2. Select Logic device:

-O 2E 07

-O 2F 08

###### 3. WDT Device Enable

-O 2E 30

-O 2F 01

###### 5. Set timer unit

-O 2E F0

-O 2F 00 → (00: Sec; 08: Minute)

###### 4. Set base timer:

-O 2E F1

-O 2F 0A → Set Reset Time (Ex.0A:10 Sec)

##### Disable WDT

###### 1.Enable configuration

-O 2E 87

-O 2E 87

###### 2. Select Logic device:

-O 2E 07

-O 2F 08

###### 3. WDT Device Disable

-O 2E 30

-O 2F 00

### Digital I/O Software Programming

(Following is example to enable configuration by using debug tool)

**1.Enable SIO configuration**

- O 2E 87
- O 2E 87

**2. Select Logic device:**

- O 2E 07
- O 2F 07

**3. GPIO2 Enable**

- O 2E 30
- O 2F DC
- O 2E 1C
- O 2F 1D

**4. Set IO register (set GP20-23: input, GP24-27: output)**

- O 2E E8
- O 2F 0F → (1: input port, 0: output port)

**5. Data register**

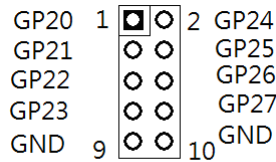
- O 2E E9
- O 2F 00 → GP24-27 output ports = low  
GP20-23 input ports is read only
- I 2F → GP20-23 input ports read (default is high)



**Note**

- GP20 =Bit0
- GP21 =Bit1
- GP22 =Bit2
- GP23 =Bit3
- GP24 =Bit4
- GP25 =Bit5
- GP26 =Bit6
- GP27 =Bit7

**Pin Assignment**





## APPENDIX B

# INTEL iAMT SETTINGS

The Intel® Active Management Technology (Intel® iAMT) has decreased a major barrier to IT efficiency that uses built-in platform capabilities and popular third-party management and security applications to allow IT a better discovering, healing, and protection their networked computing assets.

In order to utilize Intel® iAMT you must enter the ME BIOS (<Ctrl + P> during system startup), change the ME BIOS password, and then select “Intel® iAMT” as the manageability feature.

### Entering MEBx

1. You must go to BIOS to enable Intel® iAMT function.
2. Exit from BIOS after starting Intel® iAMT, and press <Ctrl + P> to enter MEBx Setting.

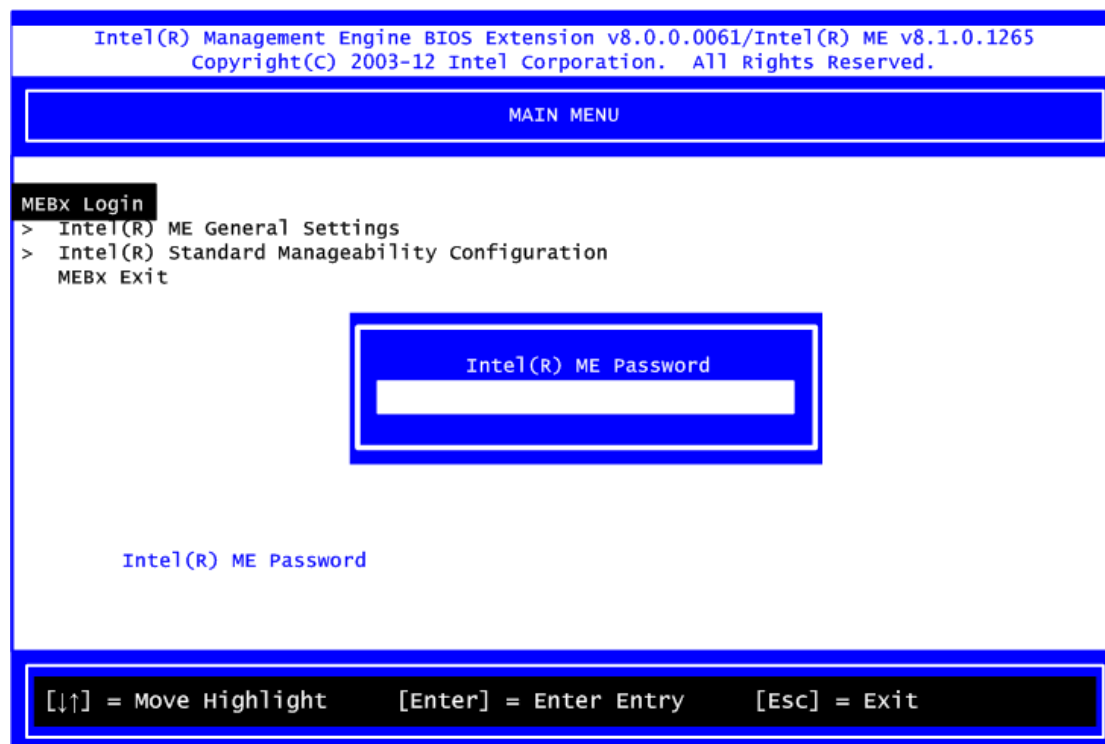


**Note:** It is better to press <Ctrl + P> before the screen popping out.

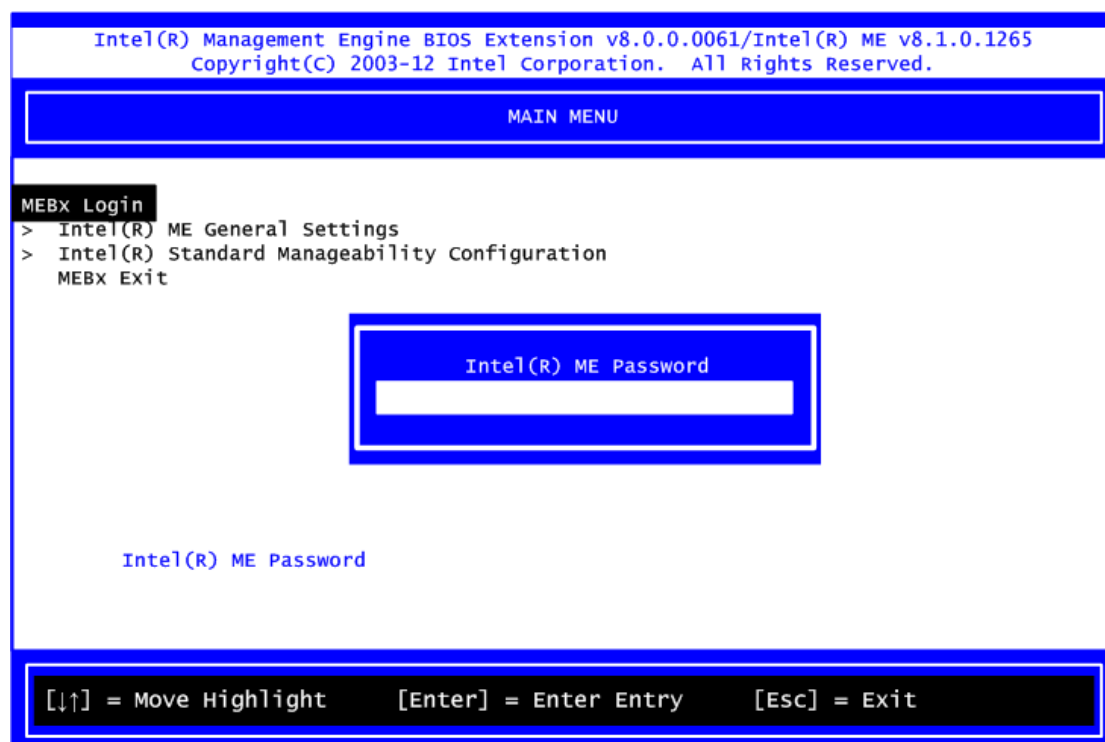


## Set and Change Password

1. You will be asked to set a password when first log in. The default password is "admin".



2. You will be asked to change the password before setting ME.



3. You must confirm your new password while revising. The new password must contain: (example: **!!11qqQQ**) (default value).
- Eight characters
  - One upper case
  - One lower case
  - One number
  - One special symbol, such as ! , ` \$ or ; , ` " , excepted)

Underline ( \_ ) and space are valid characters for password, but they won't make higher complexity.

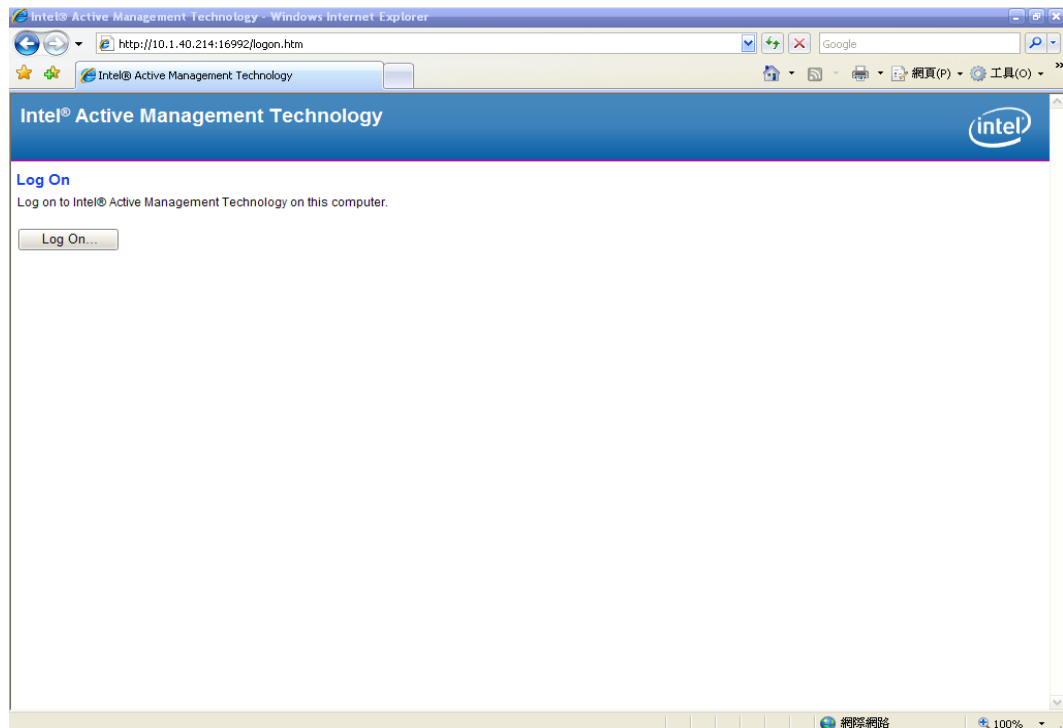
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## APPENDIX C

### INTEL iAMT WEB CONSOLE

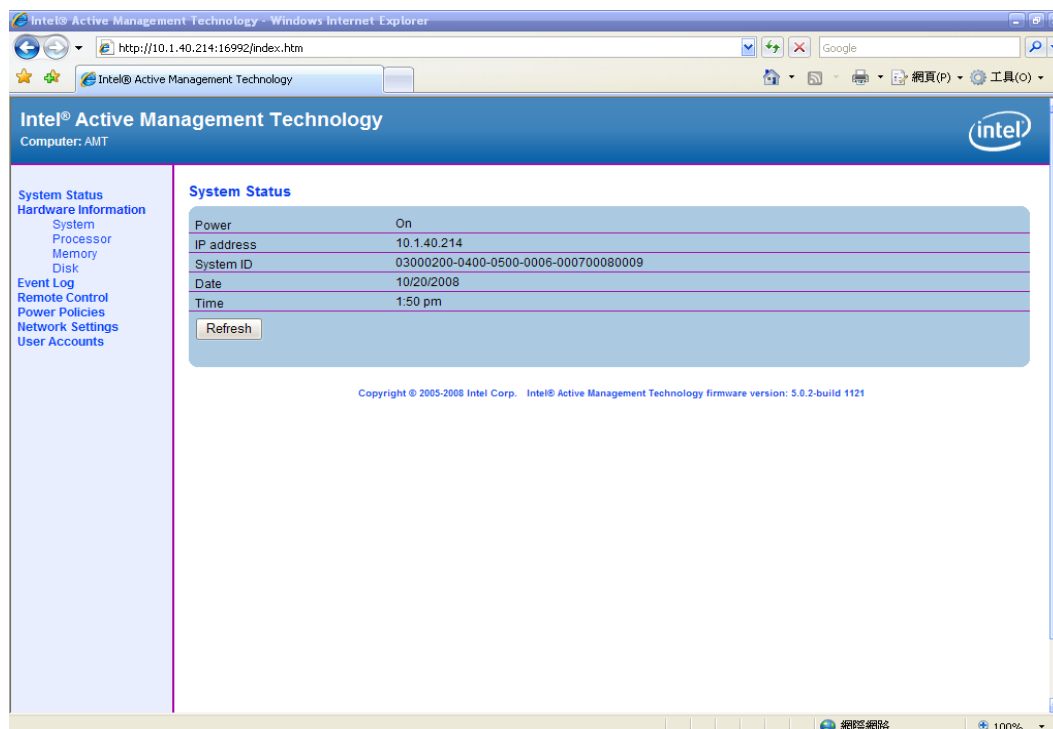
1. From a web browser, please type `http://(IP ADDRESS):16992`, which connects to Intel® iAMT Web.

Example: <http://10.1.40.214:16992>

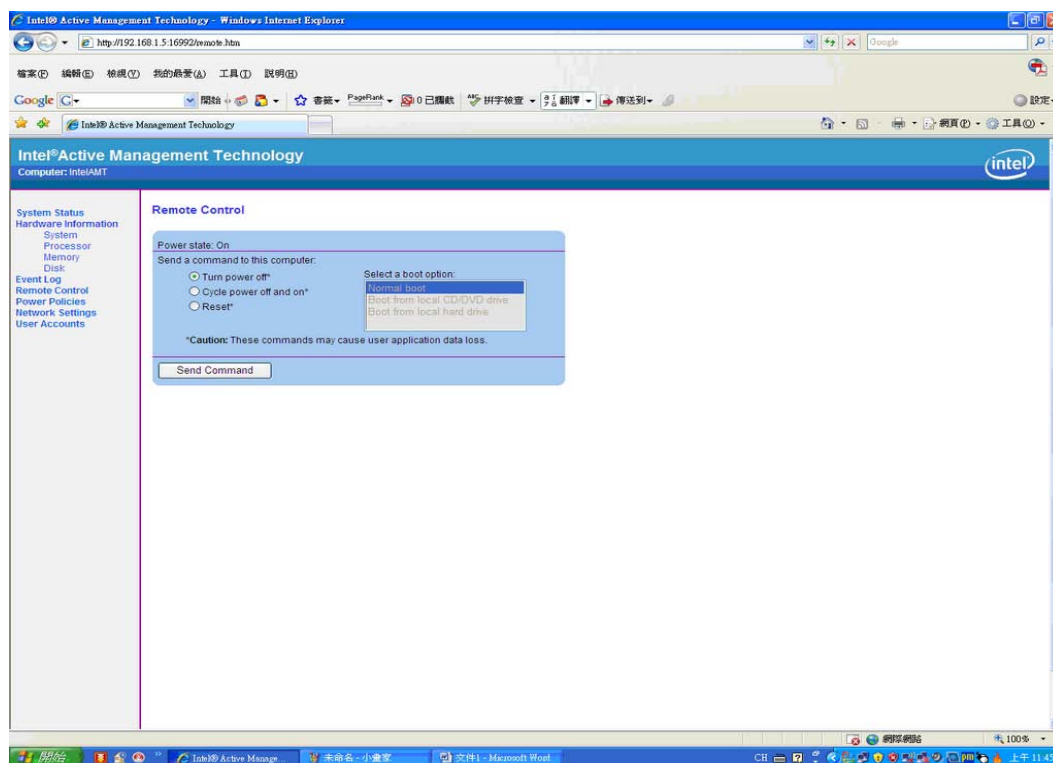


2. To log on, you will be required to type in username and password for access to the Web.  
USER: admin (default value)  
PASS: (MEBx password)

3. Enter the iAMT Web.



4. Click Remote Control, and select commands on the right side.



5. When you have finished using the iAMT Web console, close the Web browser.