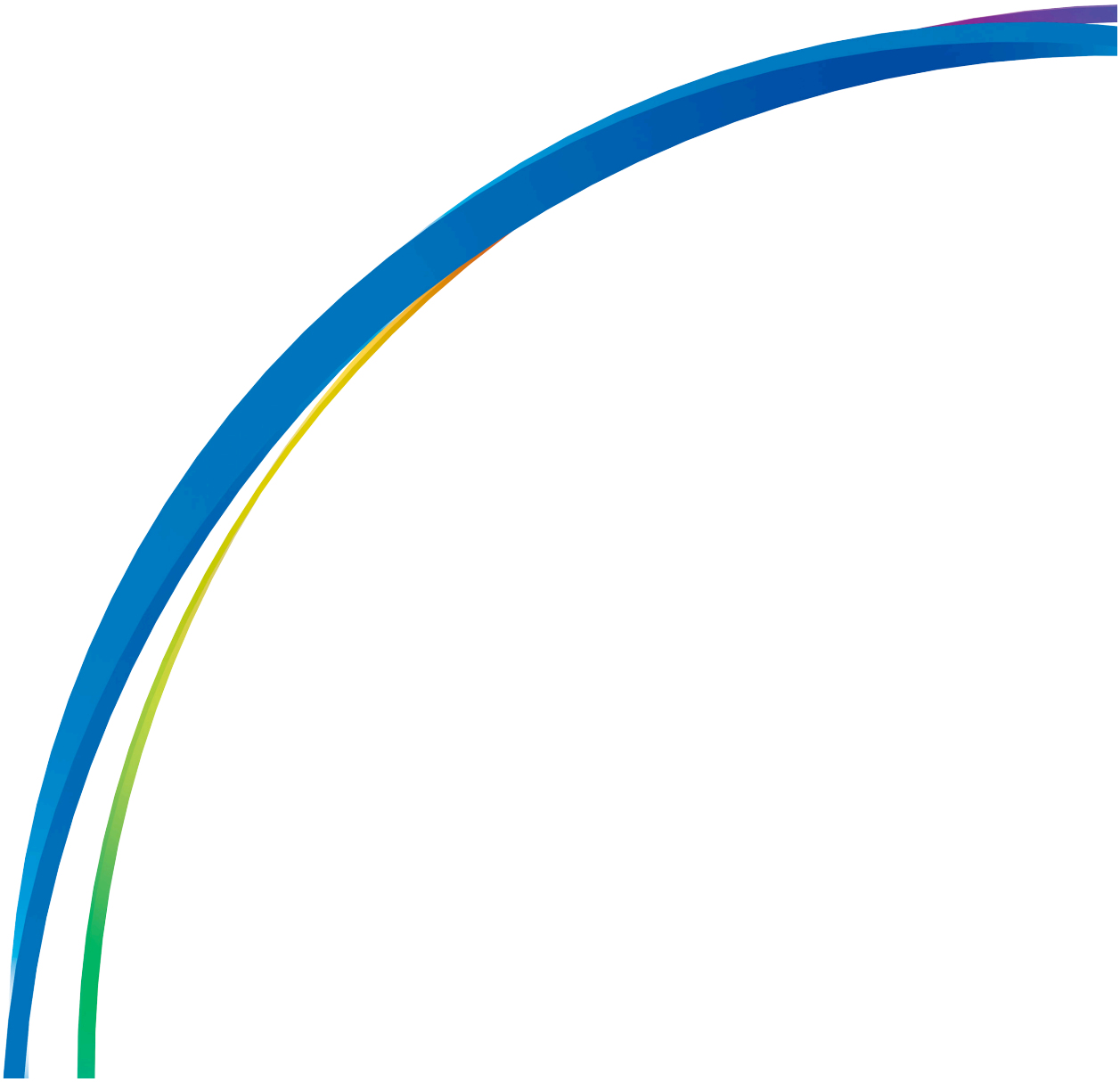
Pro-face

RC6600

12” Ruggedized Industrial PC

VMW12PFA03-48018-R11

Hardware Manual



The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Pro-face nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein. If you have any suggestions for improvements or amendments or have found errors in this publication, please notify us.

All pertinent state, regional, and local safety regulations must be observed when installing and using this product. For reasons of safety and to help ensure compliance with documented system data, only the manufacturer should perform repairs to components.

When devices are used for applications with technical safety requirements, the relevant instructions must be followed.

Failure to use Pro-face software or approved software with our hardware products may result in injury, harm, or improper operating results.

Failure to observe this information can result in injury or equipment damage.

PLEASE NOTE

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Pro-face for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

Table of Contents

Safety Information

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of this symbol to a Danger safety label indicates that an electrical hazard exists, which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, **will result in** death or serious injury.

⚠ WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, **can result in** death or serious injury.

⚠ CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, can result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

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

Caution! Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

Safety Precautions

- Please read these safety instructions carefully.
- Please keep this user's manual for later reference.
- Please disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
- For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
- Keep this equipment away from humidity.
- Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
- The openings on the enclosure are for air convection and to protect the equipment from overheating. DO NOT COVER THE OPENINGS.
- Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
- Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- All cautions and warnings on the equipment should be noted.
- If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
- Never pour any liquid into an opening. This could cause fire or electrical shock.
- Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.
- If any of the following situations arises, get the equipment checked by service personnel:
  - The power cord or plug is damaged.
  - Liquid has penetrated into the equipment.
  - The equipment has been exposed to moisture.
  - The equipment does not work well or you cannot get it to work according to the user's manual.
  - The equipment has been dropped and damaged.
  - The equipment has obvious signs of breakage.
- Do not leave this equipment in an uncontrolled environment where the storage temperature is below -20° C (-4°F) or above 60° C (140° F). It may damage the equipment.

- **CAUTION**: Use the recommended mounting apparatus to avoid risk of injury.
- **WARNING:** Only use the connection cords that come with the product. When in doubt, please contact the manufacturer.
- **WARNING**: Ground against electrostatic damage to the device by taking the following preventive steps:
    - Cover workstations with approved anti-static material. Use a wrist strap connected to a work surface and properly grounded tools and equipment.
    - Use anti-static mats, heel straps, or air ionizer for added protection.
    - Handle electrostatic-sensitive components, PCB's and assemblies by the case or the edge of the board.
    - Avoid contact with pins, leads, or circuitry.
    - Turn off power and input signals before inserting and removing connectors or test equipment.
    - Keep the work area free of non-conductive materials, such as ordinary plastic assembly aids and Styrofoam.
    - Use filed service tools, such as cutters, screwdrivers, and vacuum cleaners that are conductive.
    - Always lay drivers and PCB's with the component side down on anti-static foam.

EC Declaration of Conformity

CE

This equipment is in conformity with the requirement of the following EU legislations and harmonized standards. Product also complies with the Council directions.

Electromagnetic Compatibility Directive (2014/30/EU)

- EN55024: 2010 EN 55022: 2010 Class B
    - IEC61000-4-2: 2009
    - IEC61000-4-3: 2006+A1: 2007+A2: 2010
    - IEC61000-4-4: 2012
    - IEC61000-4-5: 2014
    - IEC61000-4-6: 2013
    - IEC61000-4-8: 2010
    - IEC61000-4-11: 2004
- EN55022: 2010/AC: 2011

- EN61000-3-2:2014
- EN61000-3-3:2013

Low Voltage Directive (2014/30/EU)

- EN 60950-1:2006/A11:2009/A1:2010/A12:2011/ A2:2013

Federal Communications Commission Radio Frequency Interface Statement

This device complies with part 15 FCC rules. Operation is subject to the following two conditions:

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

This equipment has been tested and found to comply with the limits for a class "B" digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at him own expense.

Countries/ Area	Symbol	This equipment complies with essential requirements of:
European Union	CE	Electromagnetic Compatibility Directive(2014/30/EU) Low Voltage Directive (2014/35/EU) Restrictions of the use of certain hazardous substances (RoHS) Directive (2011/65/EU)
USA	FC	FCC Part 1FCC Part 15 Subpart B Regulations Class B

Trademark Acknowledgement

Brand and product names are trademarks or registered trademarks of their respective owners.

Disclaimer

We reserves the right to make changes, without notice, to any product, including circuits and/or software described or contained in this manual in order to improve design and/or performance. We assume no responsibility or liability for the use of the described product(s), conveys no license or title under any patent, copyright, or masks work rights to these products, and makes no representations or warranties that these products are free from patent, copyright, or mask work right infringement, unless otherwise specified. Applications that are described in this manual are for illustration purposes only. We make no representation or guarantee that such application will be suitable for the specified use without further testing or modification.

Warranty

Our warranty guarantees that each of its products will be free from material and workmanship defects for a period of one year from the invoice date. If the customer discovers a defect, we will, at his/her option, repair or replace the defective product at no charge to the customer, provide it is returned during the warranty period of one year, with transportation charges prepaid. The returned product must be properly packaged in its original packaging to obtain warranty service. If the serial number and the product shipping data differ by over 30 days, the in-warranty service will be made according to the shipping date. In the serial numbers the third and fourth two digits give the year of manufacture, and the fifth digit means the month (e. g., with A for October, B for November and C for December). For example, the serial number 1W14Axxxxxxxx means October of year 2014

Customer Service

We provide a service guide for any problem by contacting with your distributor, sales representative, or our customer service center for technical support if you need additional assistance. You may need the following information ready before you call:

- Product serial number
- Peripheral attachments
- Software (OS, version, application software, etc.)
- Description of complete problem
- The exact wording of any error messages

In addition, free technical support is available from our engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products. Please do not hesitate to call (800-289-9266) or e-mail us (customercare@profaceamerica.com).

Device Introduction

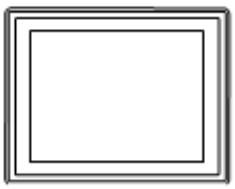
12” Rugged Panel PCs with fan-less, low power but high performance platform design, WLAN integration, great ability for anti-shock & vibration, IP65 protection and anti-corrosion coating with aluminum alloy housing. Both of great mobility and robust design are fitting the demands for every harsh environment applications such as logistics, transportation/ fleet management, heavy vehicles, utility and also outdoor usage.

12” Rugged Panel PCs offers the following features:

- IP65 proof enclosures (except I/O parts)
- Fan-less, streamlined enclosure for highly efficient heat dissipation
- Compliance with MIL-STD 810 & IEC 60068-2-27 for shock and vibration test
- Aluminum housing with anti-corrosion
- 5-Wire Resistive Touch / anti-reflective protection glass
- Wide range 9-36 V DC input
- Compliance with EN50155
- Optional GPS, 3G/WLAN (either one)

Package Contents

Before using this Panel PC, please make sure that all the items listed below are present in your package:

			
G-WIN Rugged Series Panel PC	User Guide (Panel PC)	User Manual (Motherboard)	CD-ROM with driver utility and user manuals

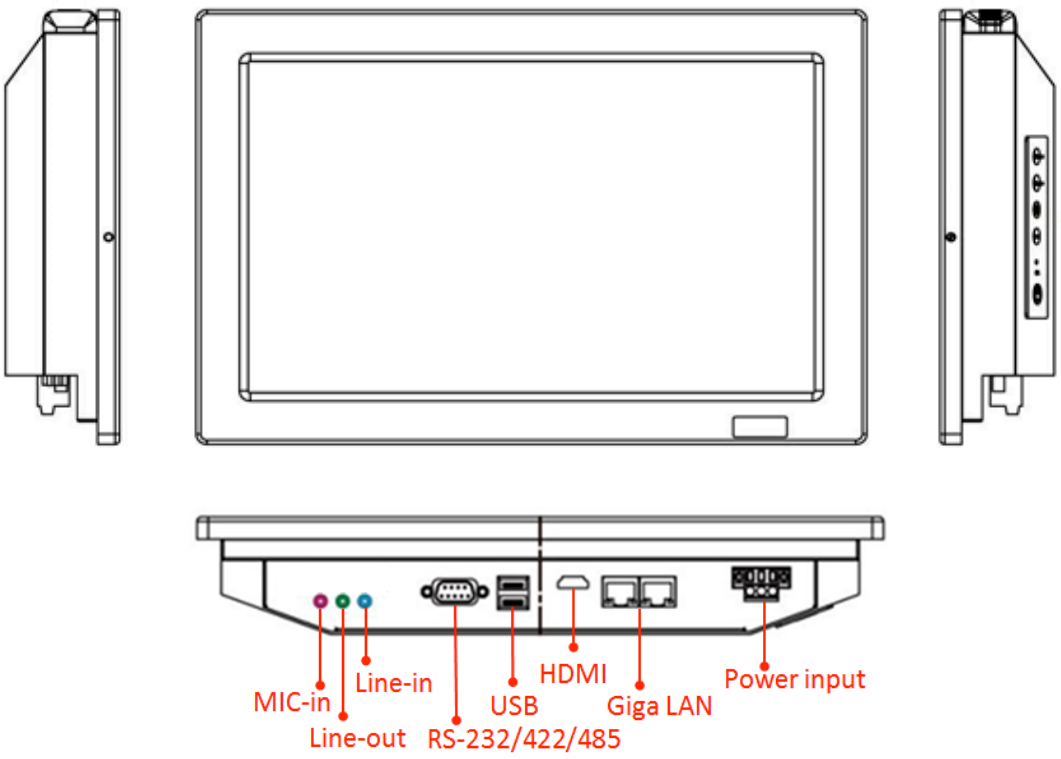
		
Touch Driver CD	Terminal Block (3-pin)	Screws for VESA Mounting

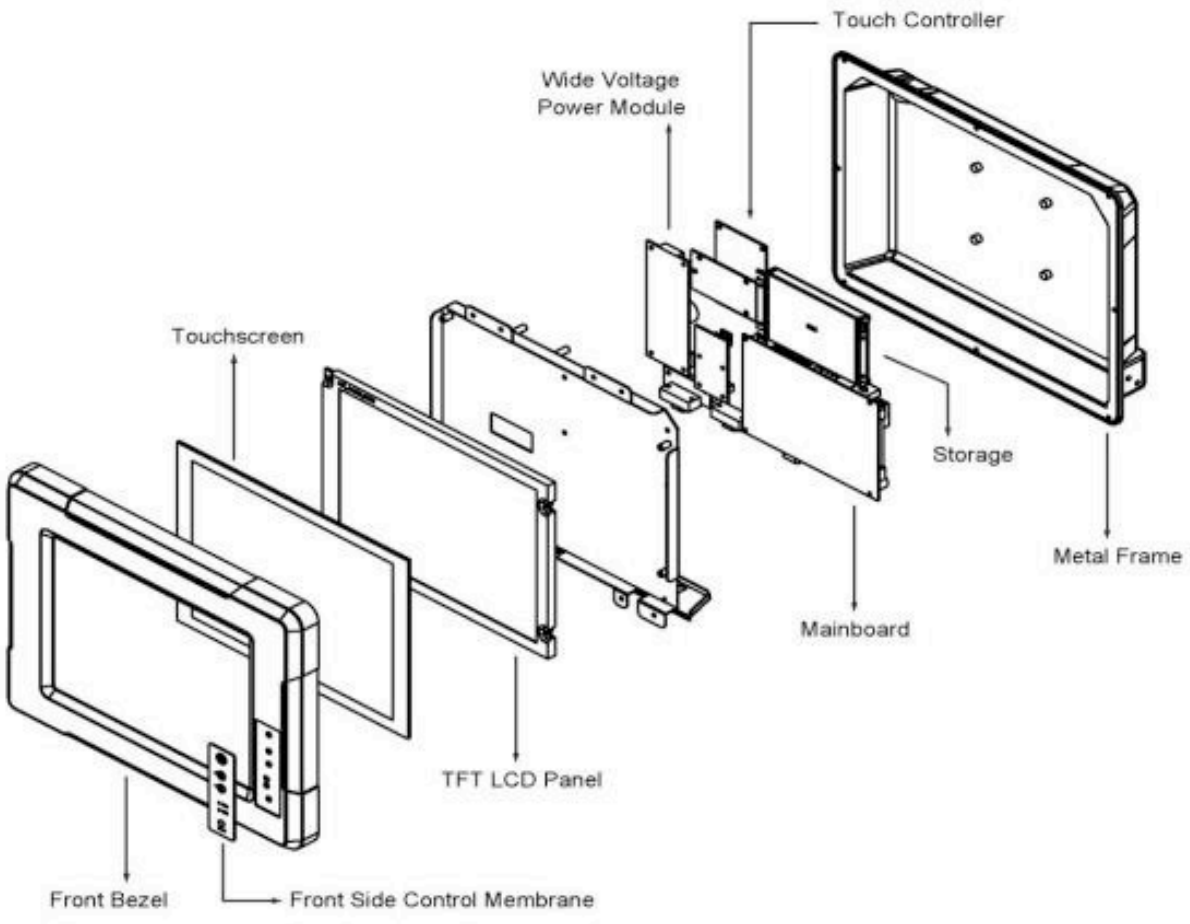
Package may include the following items based on your order (optional)

		
AC to DC adapter	Power Cord	WLAN Antenna

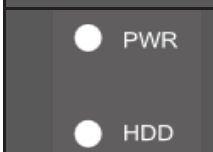
Physical Overview

Front, Side & Bottom View





LED Indicators

OSD	Description
	Power
	Brightness Up
	Brightness Down
	Power LED & HDD LED
	Reset

Hardware Specification

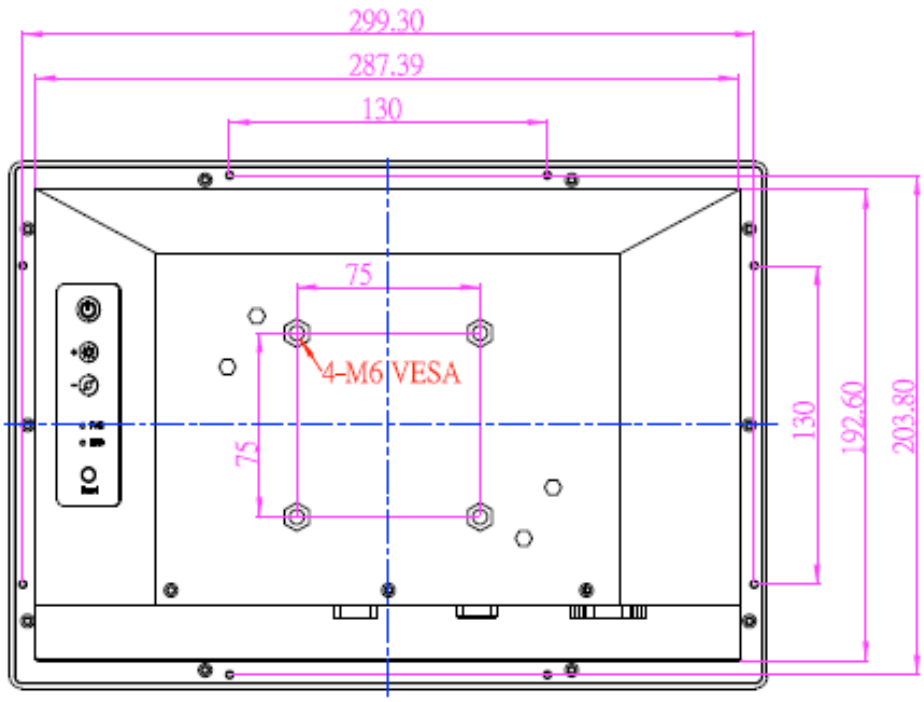
Item	Specifications
Computer	
CPU	Intel® Atom N2830 1.83 GHz Processor
OS	Windows Embedded Standard 7, Windows Embedded 8 standard, Windows Embedded8.1 Industry Pro
System Chipset	Intel® SoC Integrated
Bios	AMI 16Mbit Flash
System Memory	4 GB capacity, 4 GB pre-installed
USB	1 x USB 3.0, 1 x USB 2.0
Storage	
Storage Support	64 GB mSATA Solid State Drive

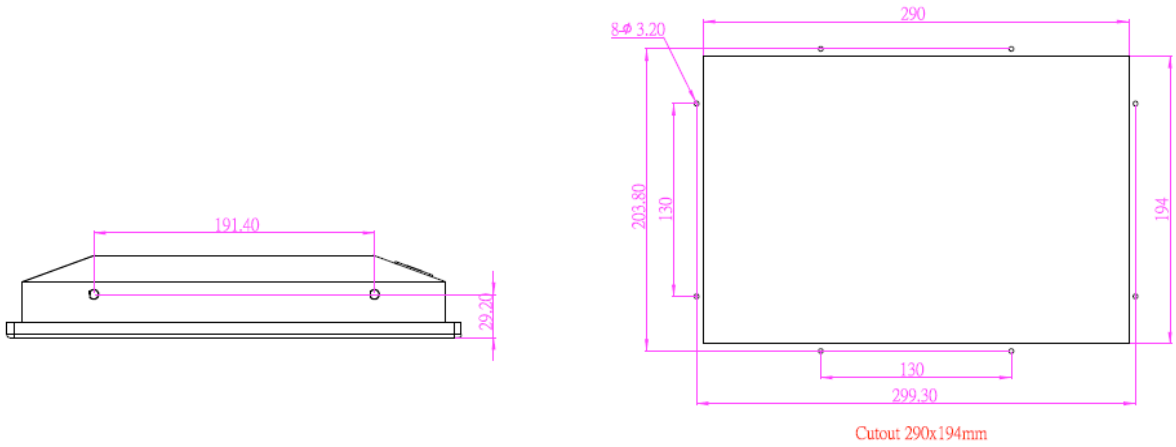
Hardware Specification

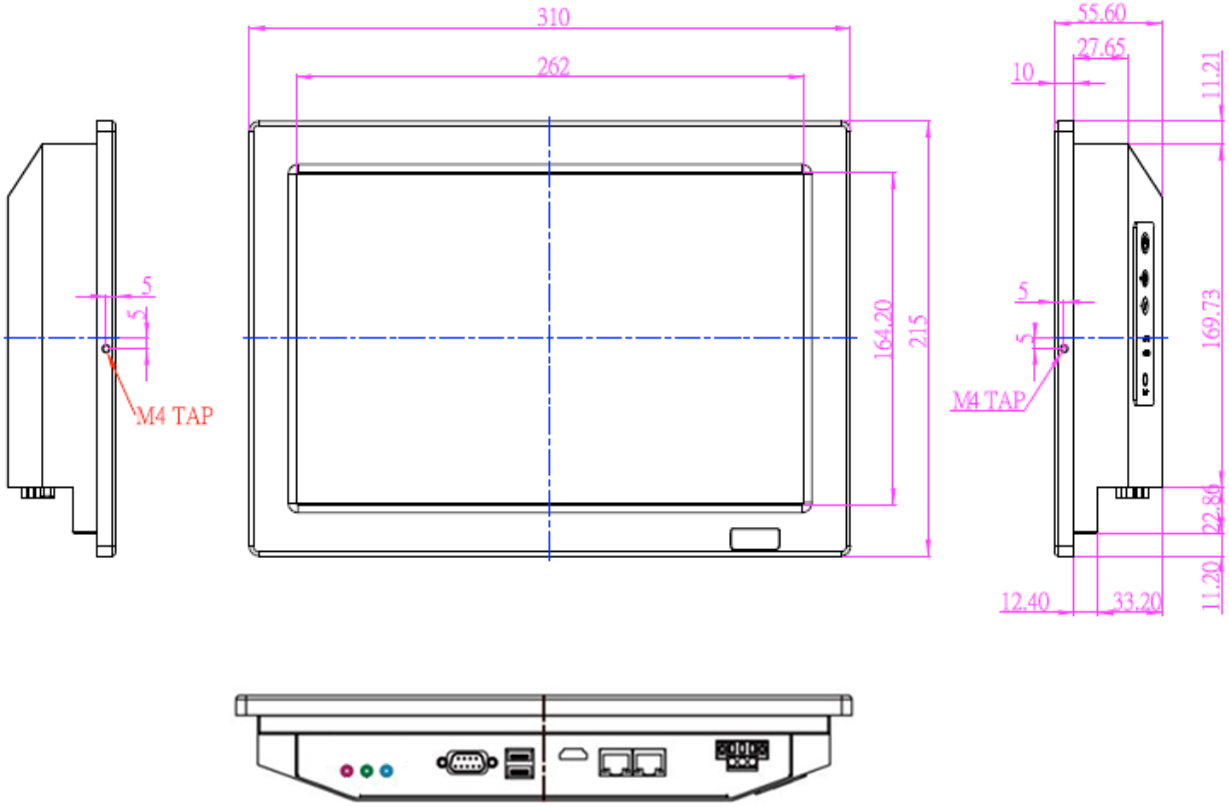
Item	Specifications
Display	
Panel Size	12-inch 1080 x 800, 400 nits LED backlight LCD
Contrast Ratio	1000:1
Response Time	8ms
View Angles	-88~88 (Horizontal); -88~88 (Vertical)
Max Colors	262.144 (6 bits/color)
Video Output	HDMI
Touch	ELO Flat Resistive single point touch, suitable for use outdoors around heavy equipment
Ethernet Interface	
Hardware Interface	RJ45 connectors
LAN	2 x 10/100/1000 Mbps ports
Serial Interface	
Serial Standard	1 x RS232(Default)/RS422/RS485 port (Jumper select)
Connector Type	D-sub 15 pins
Power Requirements	
Input Voltage	9~36 DC in with Isolation (Phoenix type) Optional 6~60V DC in, with Ignition
Connector	Terminal Block
Power Consumption	Typical 30 W (Maximum backlight and high CPU load)

Item	Specifications
Environment Consideration	
Operating Temperature	-10 to 55°C (-14 to 131°F)
Storage Temperature	-30 to 70°C (-22 to 158°F)
Ambient Relative Humidity	10 to 95% (non-condensing)
Anti-Vibration	Compliance with MIL-STD-810G Method 514.6
Anti-Shock	Compliance with MIL-STD-810G Method 516.6
Physical Characteristics	
Housing	Aluminum
Weight	2.8 kg (6.17 lbs.)
Dimensions	310 x 215 x 52.7 mm (12.2 x 8.46 x 2.07 in)
Mounting	Panel mount and mounting holes for VESA 75 x 75

Mechanical Specification Dimensions




290
8-ϕ 3.20
203.80
130
194
191.40
29.20
130
299.30
Cutout 290x194mm


310
262
55.60
27.65
10
11.21
5
5
M4 TAP
164.20
215
5
5
M4 TAP
169.73
22.86
11.20
12.40
33.20

System Mounting Solutions

This chapter provides mounting guide for all available mounting options. Pay attention to cautions and warning to avoid any damages.

CAUTION/ ATTENTION

Follow mounting instructions and use recommended mounting hardware to avoid the risk of injury.

Cable Mounting Considerations

For a nice look and safe installation, make sure cables are neatly hidden behind the Panel PC.

CAUTION/ ATTENTION

Observe all local installation requirements for connection cable type and protection level.

ALTERNATING CURRENT

To prevent electrical shock, the Safety Ground location on the rear must be bonded to the local earth ground through a minimum 12 AWG wire as short as possible

Safety Precautions

Observe the following common safety precautions before installing the equipment:

- Use separate, non-intersecting paths to route power and networking wires. If power wiring and device wiring paths must be crossed make sure the wires are perpendicular at the intersection point.
- Keep the wires separated according to the interface. Wires that share similar electrical characteristics must be bundled together.
- Do not bundle input wiring with output wiring. Keep them separate.
- When necessary, it is strongly advised that you label wiring to all devices in the system.

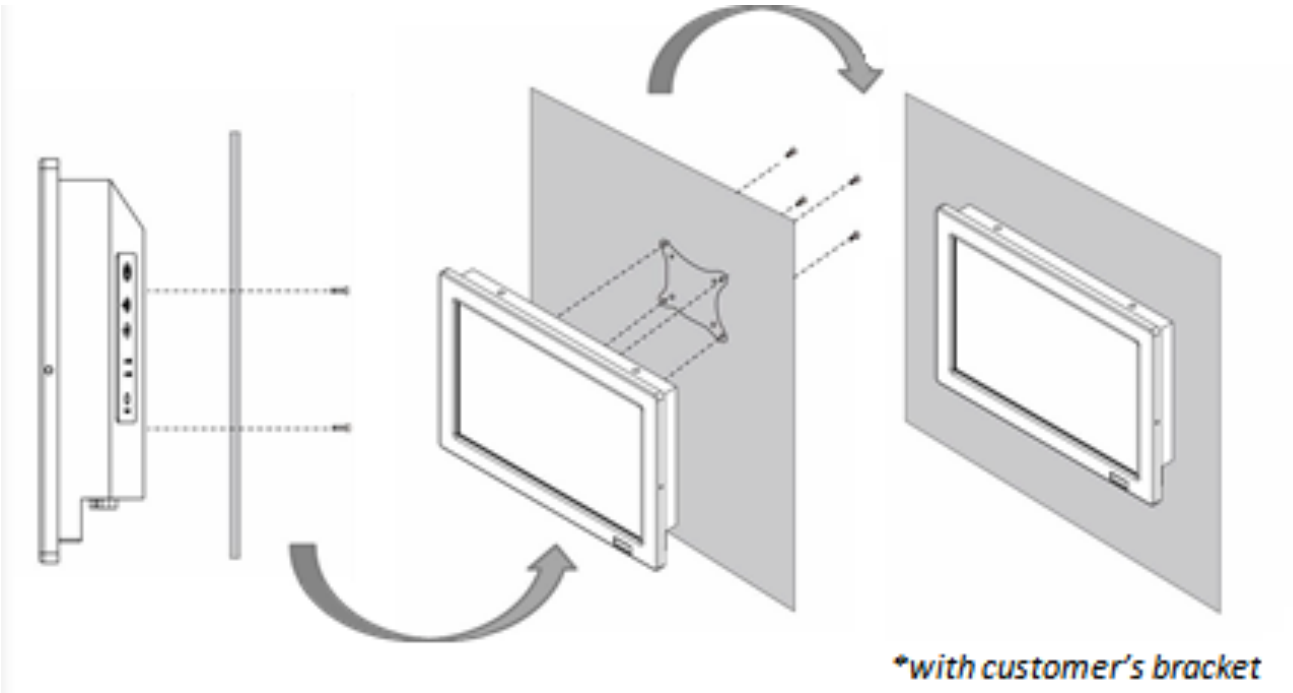
Mounting Guide

The device comes with different mounting options suitable for most of the industrial and commercial applications. The device is compatible with VESA Mounting approaches. The main mounting approach is VESA Wall Mounting that is very easy for user to set up the Panel PC.

VESA Wall Mount

12” Rugged panel PC compatible with VESA Mount solution. Follow the instruction below to complete mounting.

VESA Plate Dimensions	Screw hole diameter
75 x 75 mm	M4x6



Mounting Steps:

- Screw VESA Bracket to the fixture (ex. wall) with four M4x6 flathead screws.
- Place the device on VESA bracket

NOTE:
Notice that both hooks on bracket should lock the notches on the back cover of the device.

- Carefully mount the device to the fixture (for ex. wall).
- When the installation is complete, plug the power cord into a grounded AC outlet.
- Turn on the power

Panel Mount

Note that customer needs to provide their own opening enclosure. To mount the device to the enclosure, do the following:

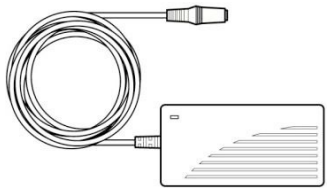
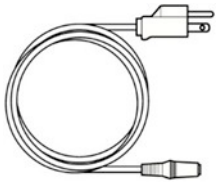
Screw from the back through the opening and mount the unit

Getting Started

This chapter provides information on how to connect the device to the source of power, connector pinouts and the guideline to turn on/off the Panel PC.

Power On

1. AC Adapter Components

		
AC Adapter	**Power Cord**	**Terminal Block**

Safety Precautions:

- Do not use the adapter in a high moisture environment
- Never touch the adapter with wet hands or foot
- Allow adequate ventilation around adapter while using
- Do not cover the adapter with paper or other objects that will reduce cooling
- Do not use the adapter while it is inside a carrying case
- Do not use the adapter if the cord is damaged
- There are NO serviceable parts inside
- Replace the unit if it is damaged or exposed to excess moisture

While using the AC Adapter always:

- Plug-in the power cord to easy accessible AC outlet
- Plug-in the AC adapter to a grounded outlet

ALTERNATING CURRENT
This product must be grounded. Use only a grounded AC outlet. Install the additional PE ground wire if the local installation regulations require it.

**If you do not use a grounded outlet while using the device, you may notice an electrical tingling sensation when the palms of your hands touch the device.*

Power Consideration

The device operates on external DC power. Use the AC adapter included in the package.

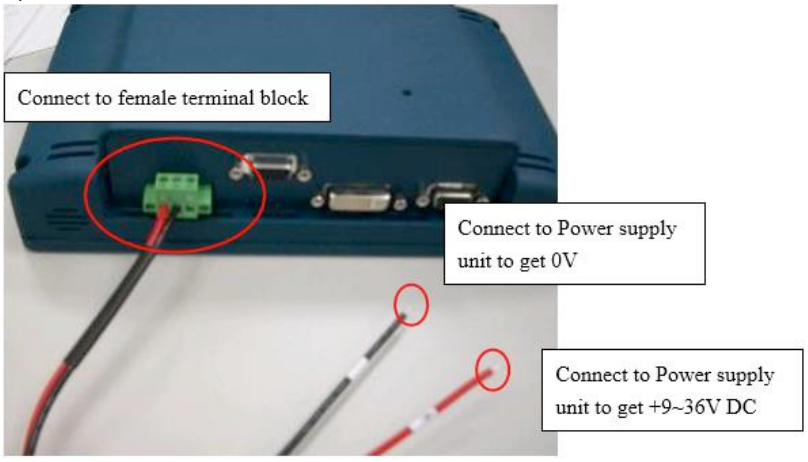
CAUTION/ATTENTION
Use only the AC adapter included in your package
(Rating: Output 12V/6.6 A). Using other AC adapters may damage the device.

Connect to the Power Source.

1) Connect the 3-pin terminal block.

2) Screw the Terminal block to fix the cable.

3) Connect terminal block to the Panel PC.

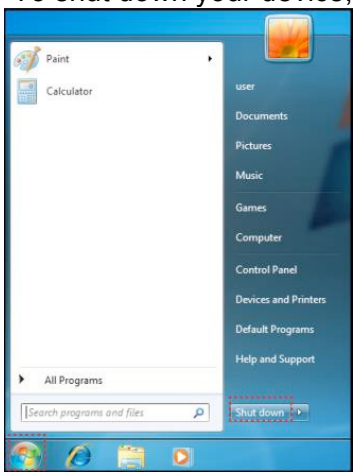


4) Once the device is connected to the source of power it is ready to work.

Turning on/off the Device

To turn on the Panel PC:

1) Press the power on switch to turn the Panel PC on.
2) Press “DEL” to enter the CMOS setting and check the BIOS setup.
3) To shut down your device, do the following: Tap Start ( ) > Shut down.



4) Wait for your Panel PC to completely turn off before disconnecting the power cord (if necessary).

NOTE:
This instruction is applicable for Windows 7 OS. If your system is not Windows 7, the method to turn off the device may slightly vary.

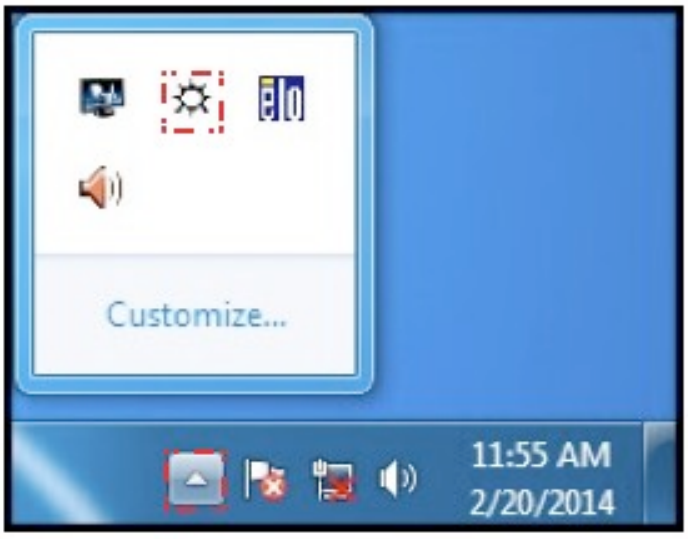
Installing the Operating System

You may install your own OS if it is not installed. When installing OS to this Panel PC, please follow the steps and use external equipment such as Keyboard and Mouse.

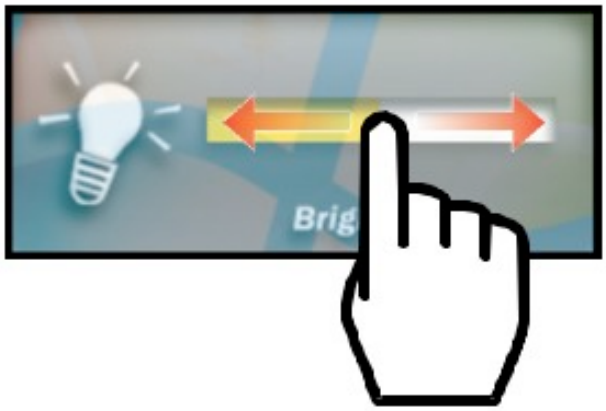
1) Use external USB DVD-ROM to run OS and Driver settings (as shown on the picture below)

Adjusting the LCD Display Brightness

1) Tap the arrow on the system tray to display the hidden icons.



2) Double-tap the icon ( ) to display the brightness menu.
3) Drag the brightness bar to adjust the brightness level according to your preference
4) Tap the arrow on the system tray to display the hidden icons.

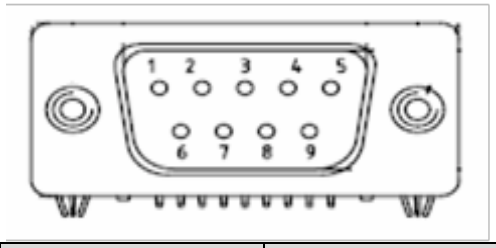


I/O Description & Pin Define

The table below shows each of I/O side connectors and its functions.

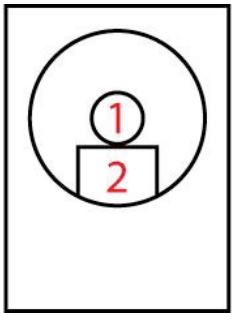
Label	Function	Note
COM1	Serial port (RS232/422/485)	D-sub9 Male
DCJACK1	DC JACK	2.5Ø DC Jack
HDMI	HDMI Signal	HDMI Type A
LAN	Gigabit Ethernet	RJ45+L
LAN	Gigabit Ethernet	RJ45+L
USB	USB 2.0 / USB 3.0	USB Type A

COM1: D-Sub 9



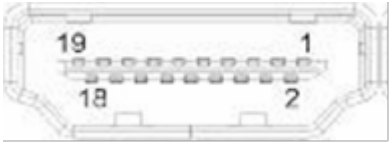
Pin №	RS232	RS422	RS485
1	DCD	TxD-	D-
2	RXD	TxD+	D+
3	TXD	RxD+	NC
4	DTR	RxD-	NC
5	GND	GND	GND
6	DSR	NC	NC
7	RTS	NC	NC
8	CTS	NC	NC
9	RI	NC	NC

DCJACK1: DC Jack1 (optional)



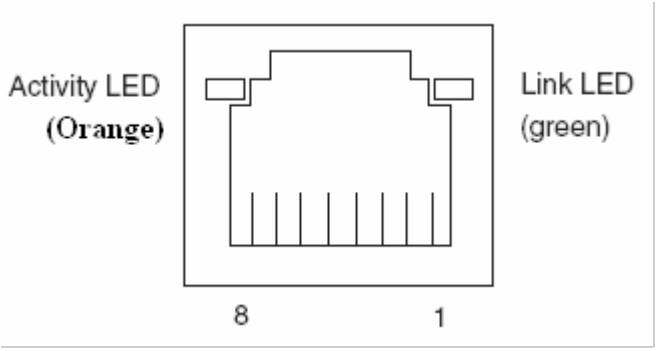
Pin	Name	Pin	Name
1	DC_IN	2	GND

HDMI: HDMI Type A



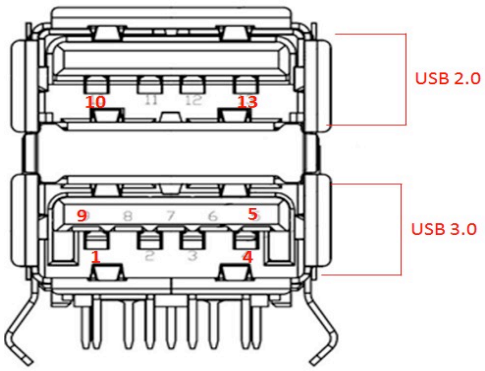
Pin №	Nam	Pin №	Nam
1	TMDS_DATA2+	2	GN
3	TMDS_DATA2-	4	TMDS_DATA1+
5	GN	6	TMDS_DATA1-
7	TMDS_DATA0+	8	GN
9	TMDS_DATA0-	10	TMDS_CLOCK+
11	GN	12	TMDS_CLOCK-
13	CEC	14	N
15	DDC_CLOCK	16	DDC_DATA
17	GN	18	5V
19	Hot Plug Detect		

LAN1, LAN2: Gigabit Ethernet



Pin №	Nam	Pin №	Nam
1	TX1	2	TX1
3	TX2	4	TX2
5	TX3	6	TX3
7	TX4	8	TX4

2 USB: USB 2.0 / USB 3.0



Pin №	Name	Pin	Name
1	+5V	2	USB_D-
3	USB_D+	4	GND
5	STDA_SSRX-	6	STDA_SSRX+
7	GND_DRAIN	8	STDA_SSTX-
9	STDA_SSTX+	1	+5V
11	USB_D-	1	USB_D+
13	GND		

BIOS Setup Utility

When to Use

You need to run BIOS Setup utility when:

- You see an error message on the screen requesting that you run BIOS Setup utility.
- You want to restore the factory default BIOS settings.
- You want to modify some specific hardware settings.
- You want to modify some specific settings to optimize the system performance.

Starting BIOS Setup Utility

A USB keyboard is required to access, move around, and make selections in BIOS Setup Utility.

- Before turning on the Tablet Computer, connect the USB keyboard to the USB port of the Tablet Computer.
- Power on the Tablet Computer.
- When the system starts up and the post screen logo appears, quickly press F2 or the Delete key to enter the BIOS Setup Utility.

How to Use

- The BIOS Setup Utility screens shown in this chapter are for reference only. The actual items or settings on your Tablet Computer may differ.
- The settings you select in your operating system might override similar settings in BIOS Setup Utility

BIOS Navigation Keys

The following keys are enabled **during**

Key	Function
Del	Enters the BIOS setup menu.
F7	Display the boot menu. Lists all bootable devices that are connected to the system. With cursor ↑and cursor ↓and by pressing <ENTER>, select the device used for the boot.
Pause	Pressing the [Pause] key stops the POST. Press any other key to resume the POST.

The following Keys can be used **after entering the BIOS Setup**.

Key	Function
F1	General Help
F2	Previous Values
F3	Optimized Defaults

F4	Save & Exit
Esc	Exit
+/-	Change Opt.
Enter	Select or execute command
Cursor ↑	Moves to the previous item
Cursor ↓	Goes to the next item
Cursor ←	Moves to the previous item
Cursor →	Goes to the next item.

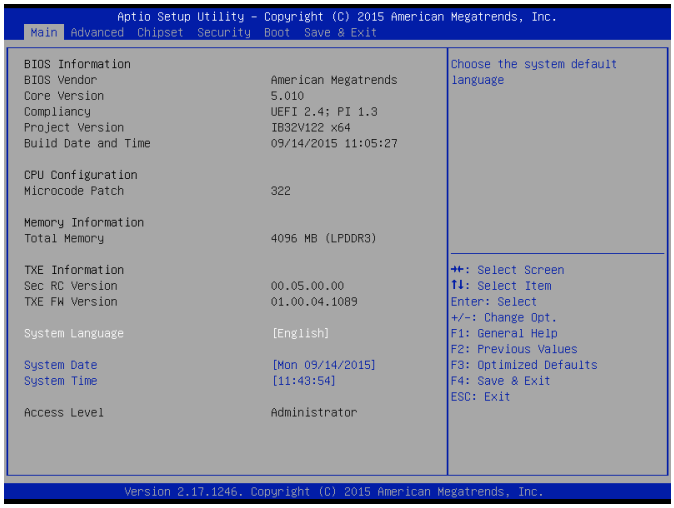
 Note

You can press the F1, F2, F3, F4, –/+, and Esc keys by connecting a USB keyboard to your tablet PC.

BIOS Functions Manu

Main Menu

When you enter BIOS setup, the first menu that appears on the screen is the main menu. The Main menu displays the basic information about your system including BIOS version, processor RC version, system language, time, and date. It contains the system information including BIOS version, processor RC version, system language, time, and date.



BIOS Setting	Description	Setting Option	Effect
System Language	Displays the system language. [English] is set up by default.	Adjustment of the language	Set the language in other language. The language in this device is English.
System Date/Time	This is current date setting. The time is maintained by the battery when the device is turned off.	Date and time changes.	Set the date in the format [mm/dd/yyyy]; The time in the format: [hh/mm/ss]
Access Level	The current user access settings	Change to the level of access	Administrator is set up by the default

Advanced Menu

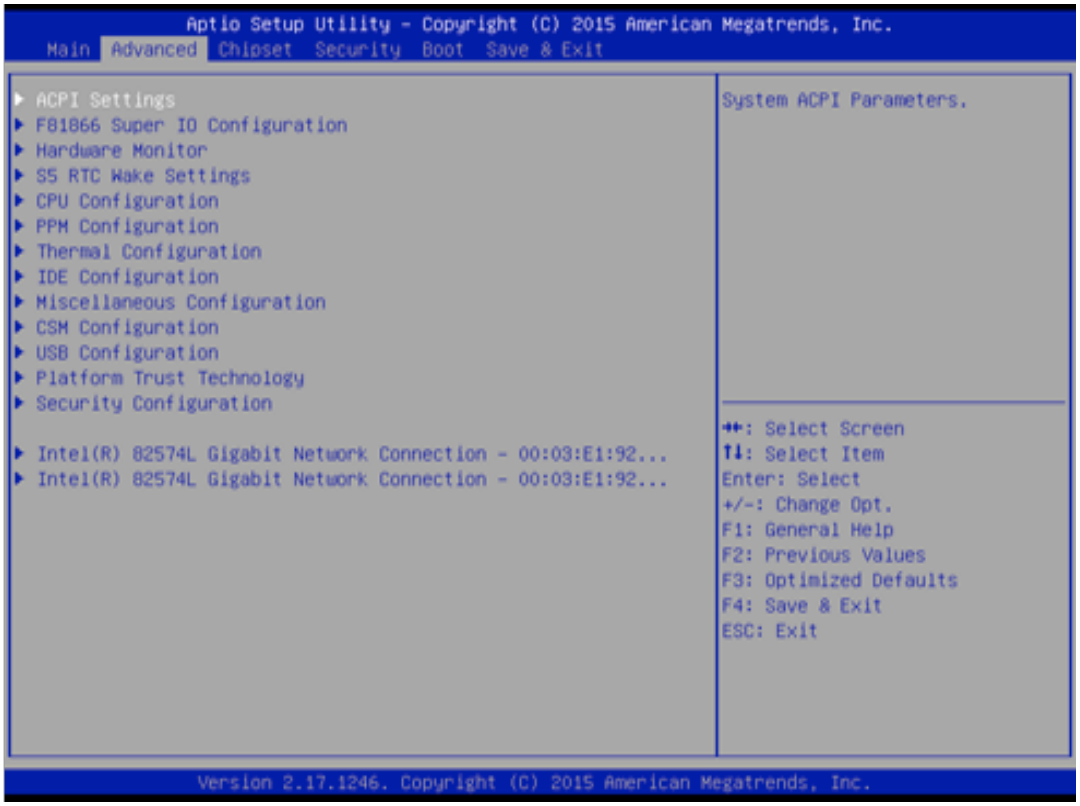
The advanced menu also uses to set configuration of the CPU and other system devices. There are sub menus on the left frame of the screen.

Note

Handle advanced BIOS settings page with caution. Any changes can affect the operation of your computer.

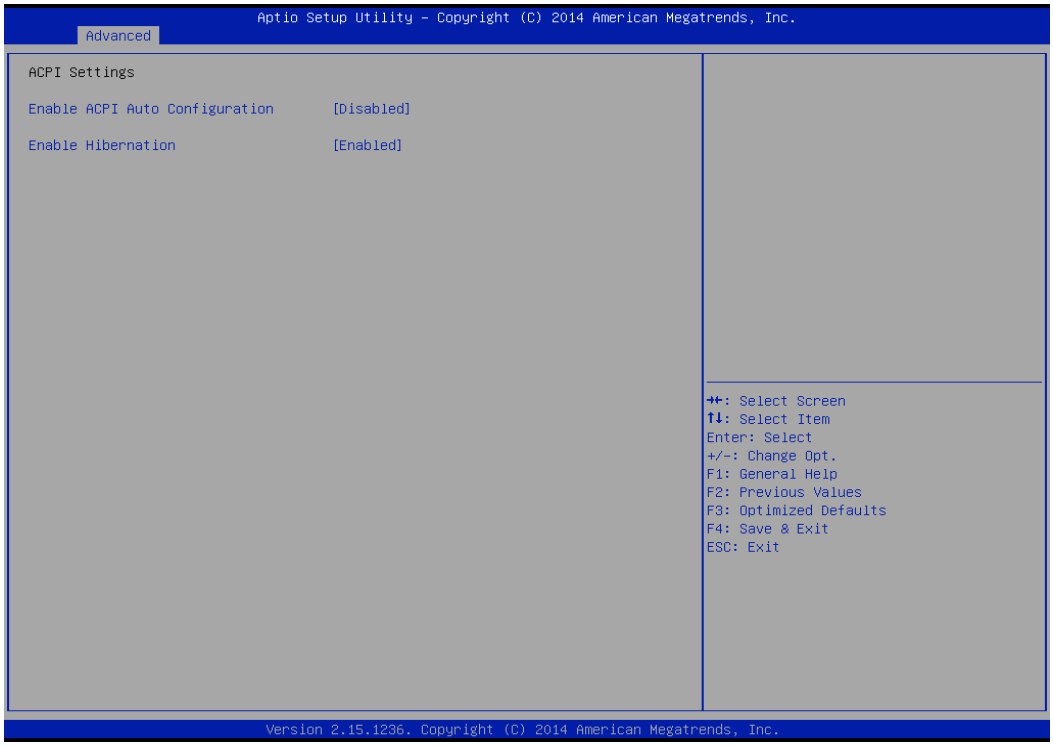
For items marked ► press **<Enter>** for more options.

Advanced Configuration and Power Interface (ACPI) settings allow to control how the power switch operates. The power supply can be adjusted for power requirements. You can use the screen to select options of ACPI configuration. A description of the selected items will appear on the right side of the screen.



BIOS Setting	Description	Setting Option	Effect
ACPI Settings	Configures ACPI settings	Enter	Opens submenu
F81866 Super IO Configuration	Configures IO settings	Enter	Opens submenu
Hardware Monitor	Configures Hardware Monitor settings	Enter	Opens submenu
S5 RTC Wake Settings	Configures RTC Wake parameters	Enter	Opens submenu
CPU Configuration	Configures CPU settings	Enter	Opens submenu
PPM Configuration	Configures PPM settings	Enter	Opens submenu
Thermal Configuration	Configures Thermal Parameters	Enter	Opens submenu
IDE Configuration	Configures IDE Parameters	Enter	Opens submenu
Miscellaneous Configuration	Configures Miscellaneous Parameters	Enter	Opens submenu
CSM Configuration	Configures CSM Parameters	Enter	Opens submenu
USB Configuration	Configures USB Settings	Enter	Opens submenu
Platform Trust Technology	Configures Platform Trust Technology parameters	Enter	Opens submenu
Security Configuration	Configures Security parameters	Enter	Opens submenu

ACPI Settings



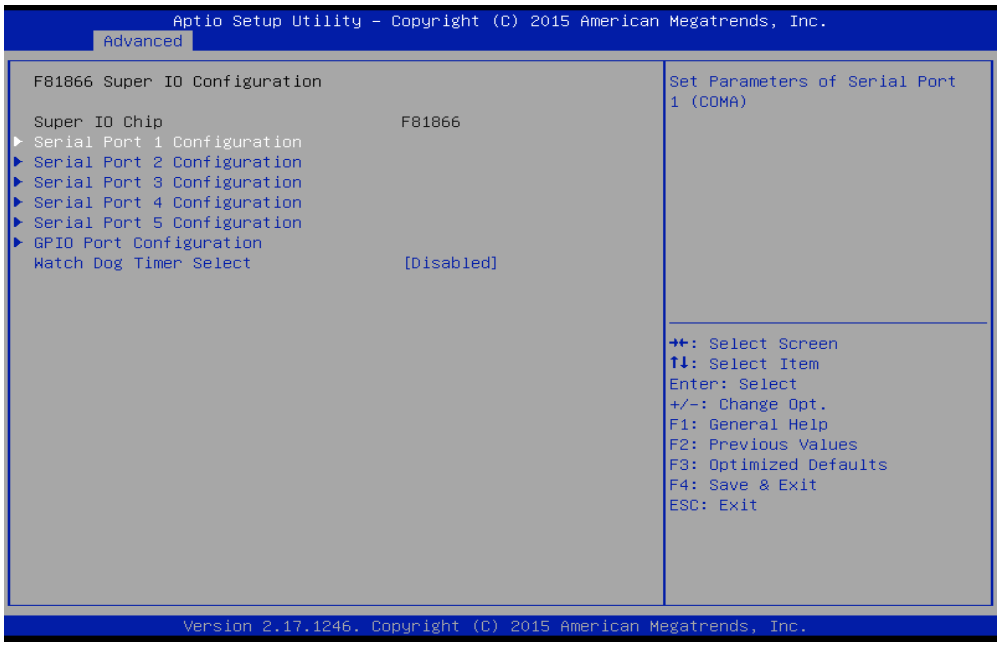
BIOS Setting	Description	Setting Option	Effect
Enable ACPI Auto Configuration	BIOS ACPI Auto Configuration	Enable/ Disable	Enables or Disables this function
Enable Hibernation	Control hibernation	Enable/ Disable	Enables or Disables this function

F81866 Super IO Configuration

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

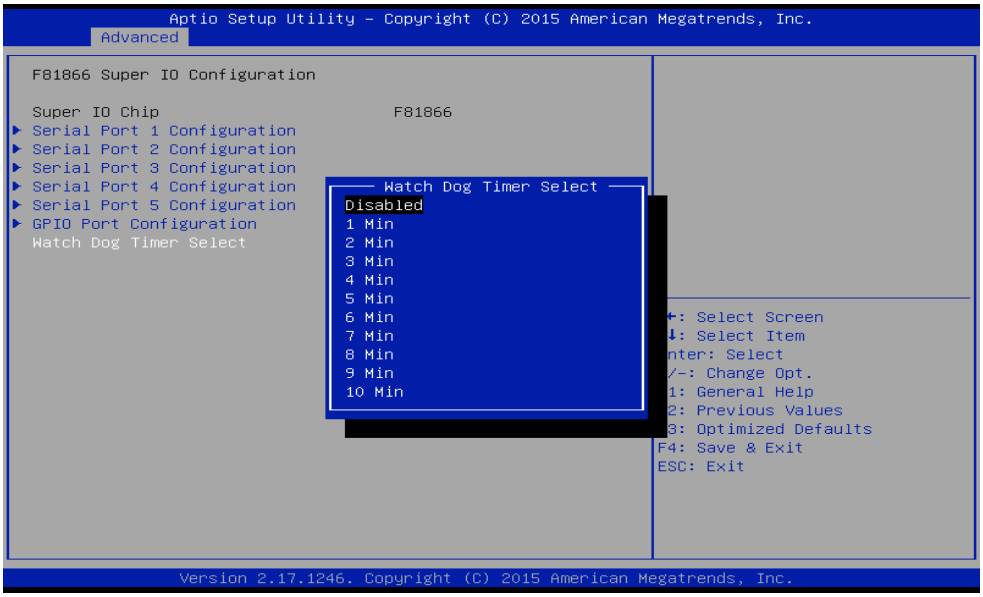
Serial Port 1~5

Use these items to set parameters related to serial port 1~5.

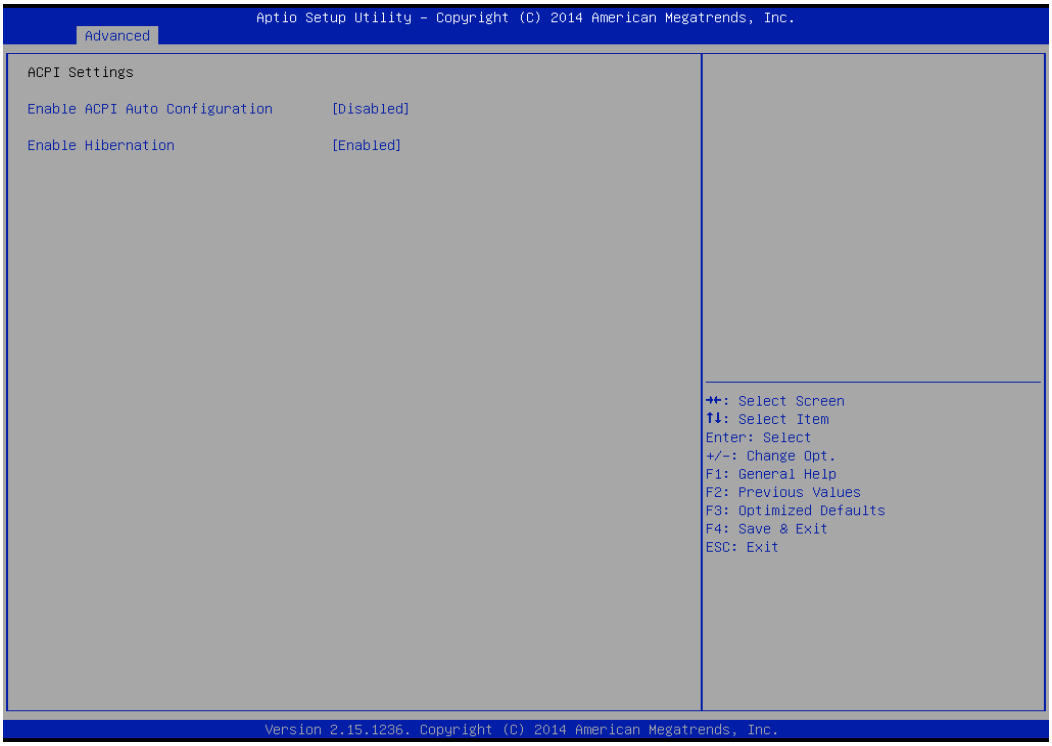


Watch Dog Time Select

You can either disable **Watch Dog Time Select**, or set up the time.Use **<Arrow>** keys to navigate and please press **<Enter>** to select the item.



ACPI Settings



BIOS Setting	Description	Setting	n Effect
Enable ACPI Auto Configuration	BIOS ACPI Auto	Enable/ Disable	Enables or Disables
Enable Hibernation	Control hibernation	Enable/ Disable	Enables or Disables

F81866 Super IO Configuration

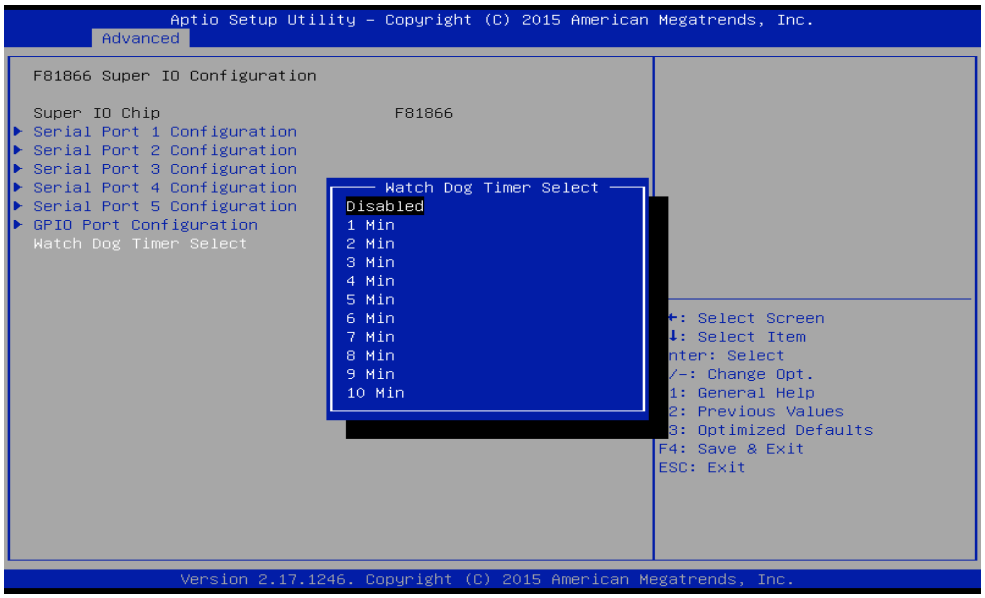
You can use the screen to select options for Super IO Configuration, and change the value of the option selected. A description of the selected item appears on the right side of the screen. For items marked with ►, please press **<Enter>** for more options.

Serial Port 1~5

Use these items to set parameters related to serial port 1~5.

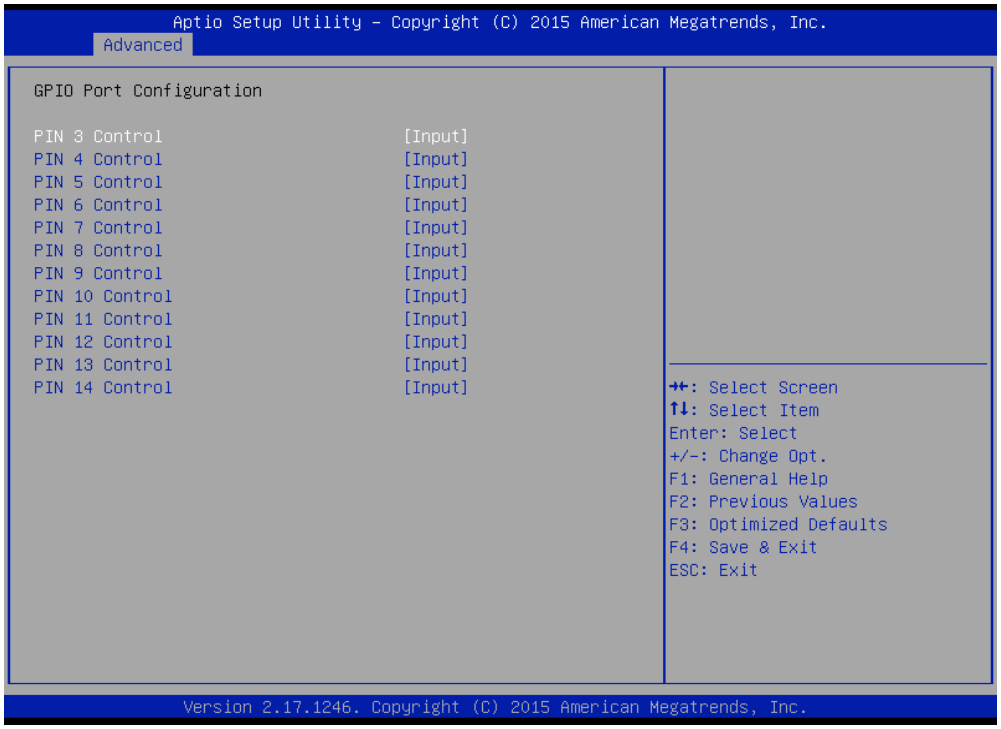
Watch Dog Time Select

You can either disable **Watch Dog Time Select**, or set up the time.Use **<Arrow>** keys to navigate and please press **<Enter>** to select the item.



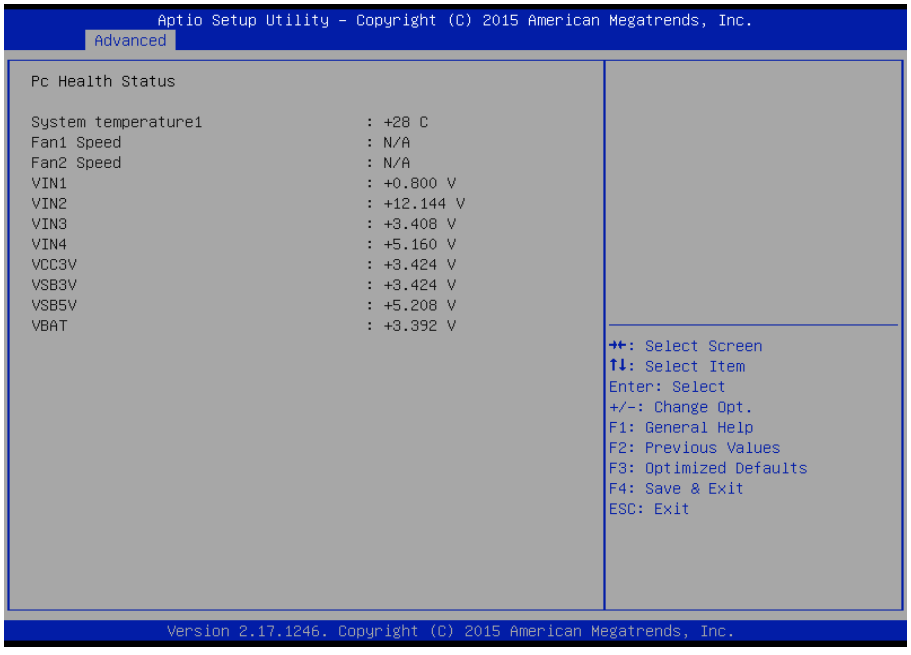
GPI0 Port Configuration

You can use the screen to change GPI0 Port setting. Use these items to set parameters related to **PIN3-PIN14 Control**.



Hardware Monitor

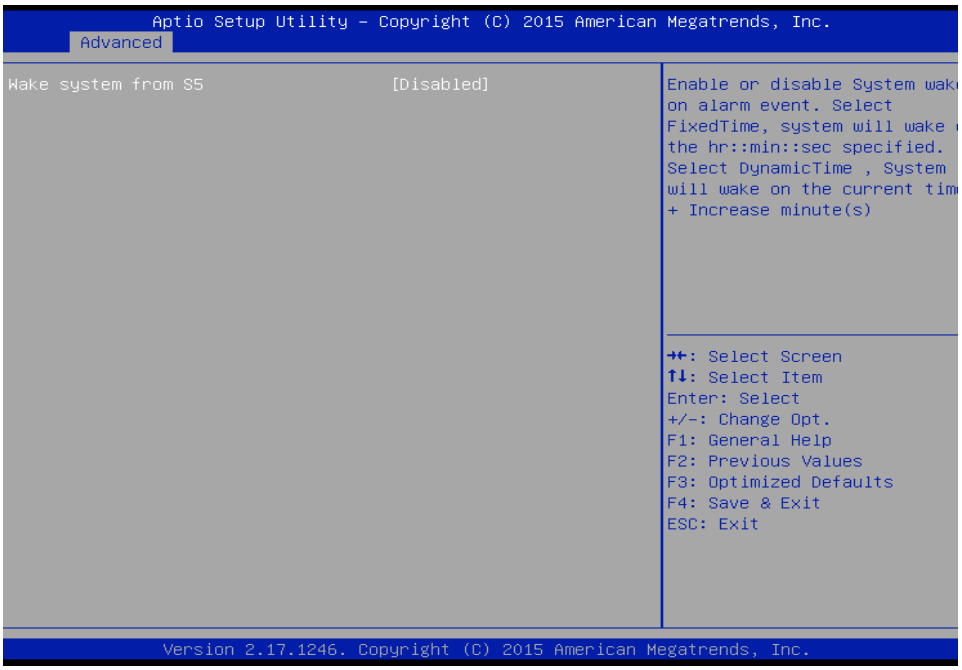
You can check PC Health Status parameters such as system temperature, fan speed etc.



S5 RTC Wake Settings

Wake System from S5 with fixed time setting

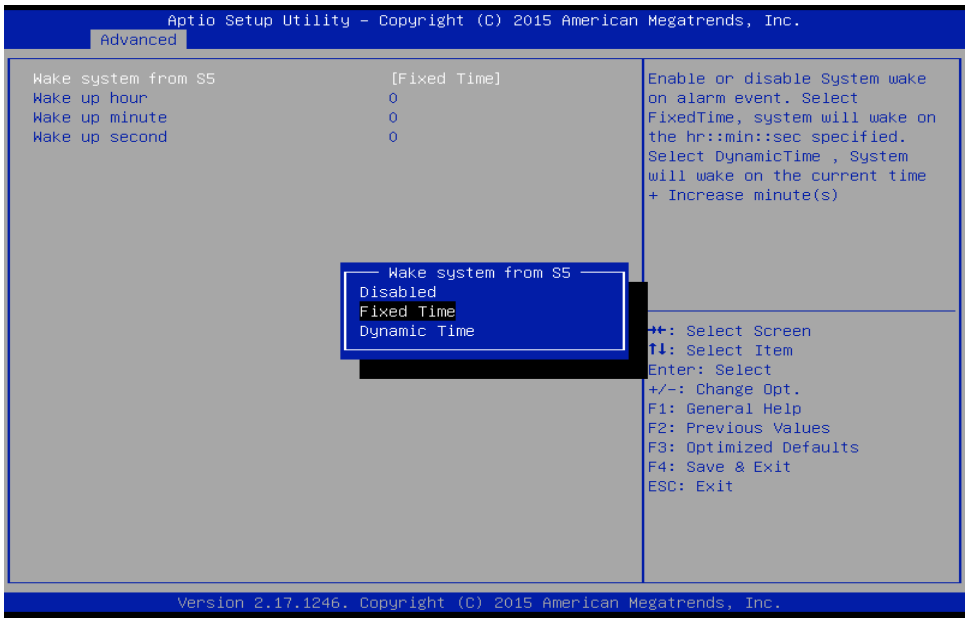
Wake system from S5 enables or disables system wake on alarm event. It allows you to wake up the system in a certain time.



Select **Fixed Time** to set the system to wake on the specified time.

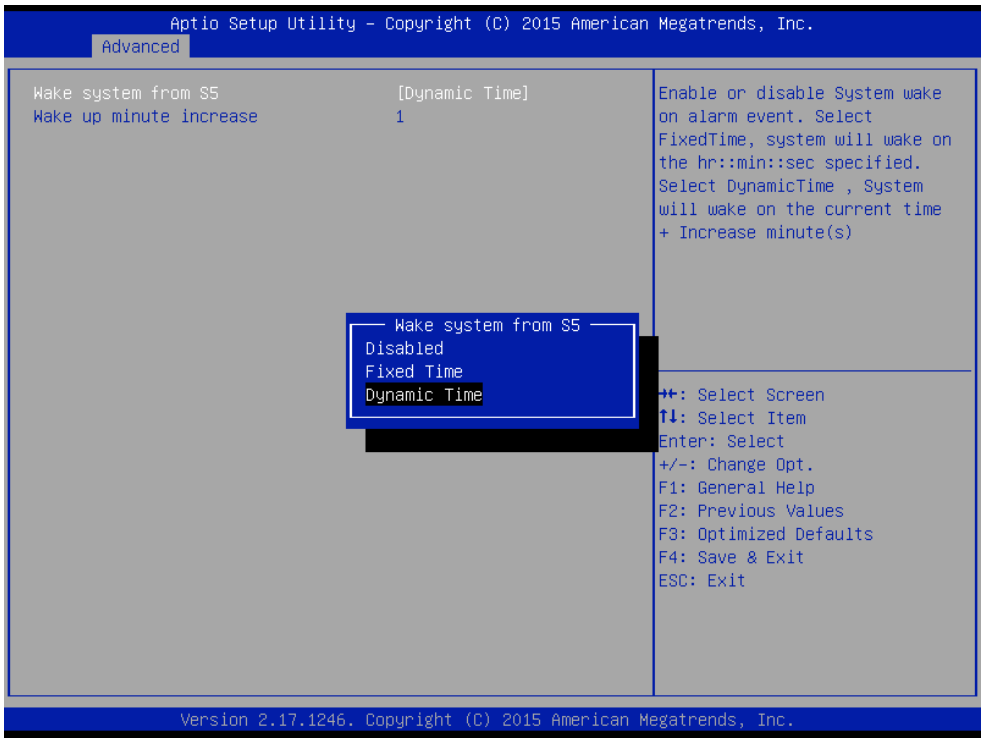
Use Navigation Keys  to switch among the items: Day, Hour, Minute and Second. Type the desired value in the selected item.

For example, if you want the system to start up automatically at 15:30:30, the 10th day of each month, then you should enter 10, 15, 30, and 30 from top to bottom.



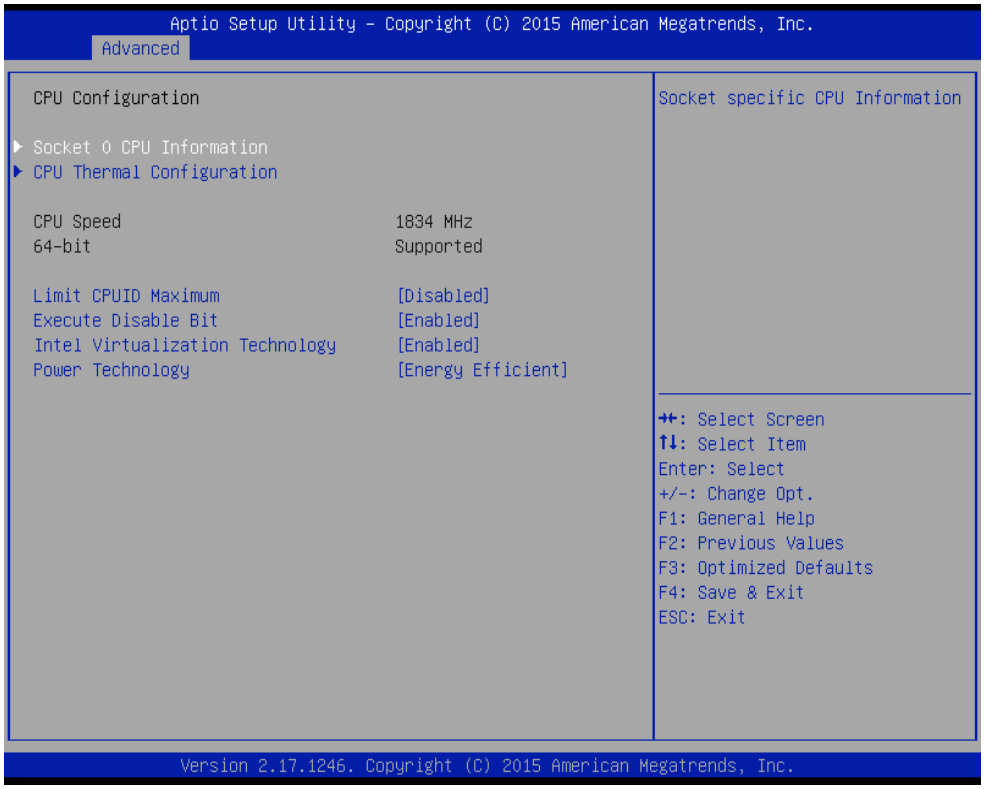
Wake system from S5 after dynamic time setting

Select **Dynamic Time** to set the system to wake on the current time + increase minute (s).



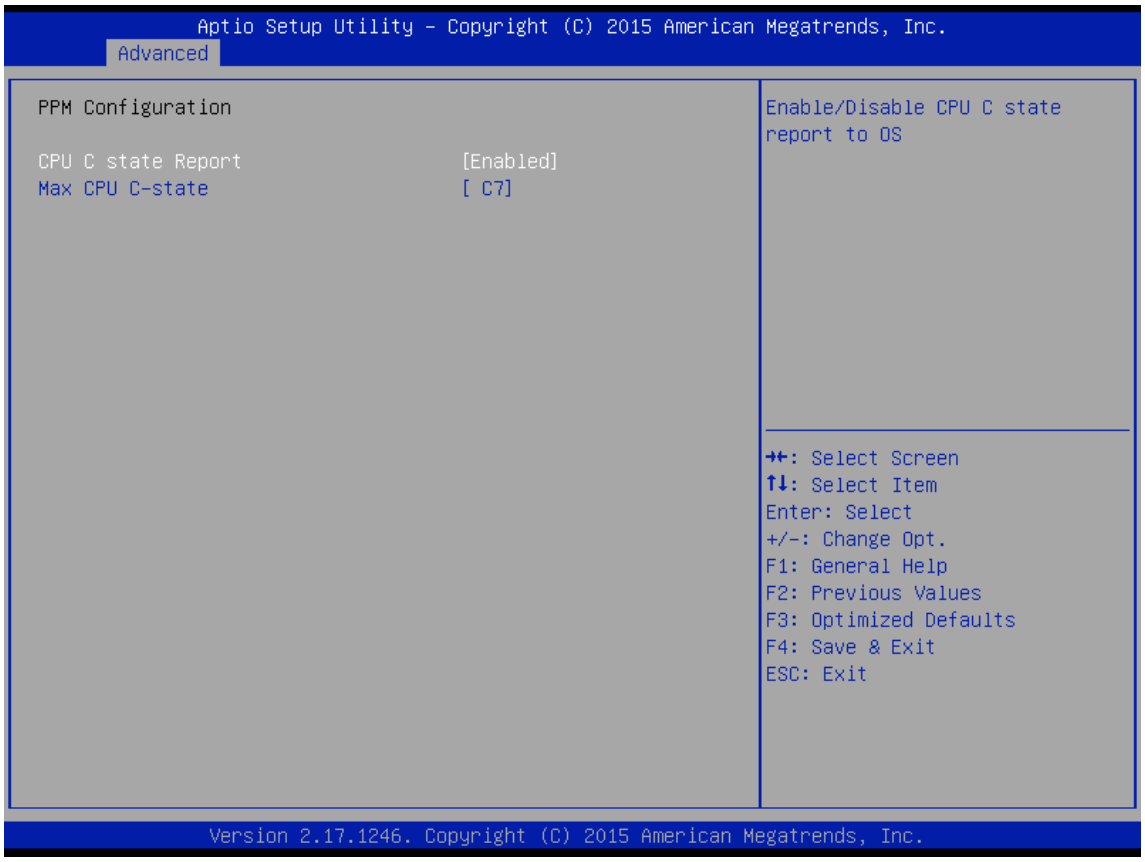
CPU Configuration

Press **<Enter>** to view current CPU configuration and make settings for the following sub-items.



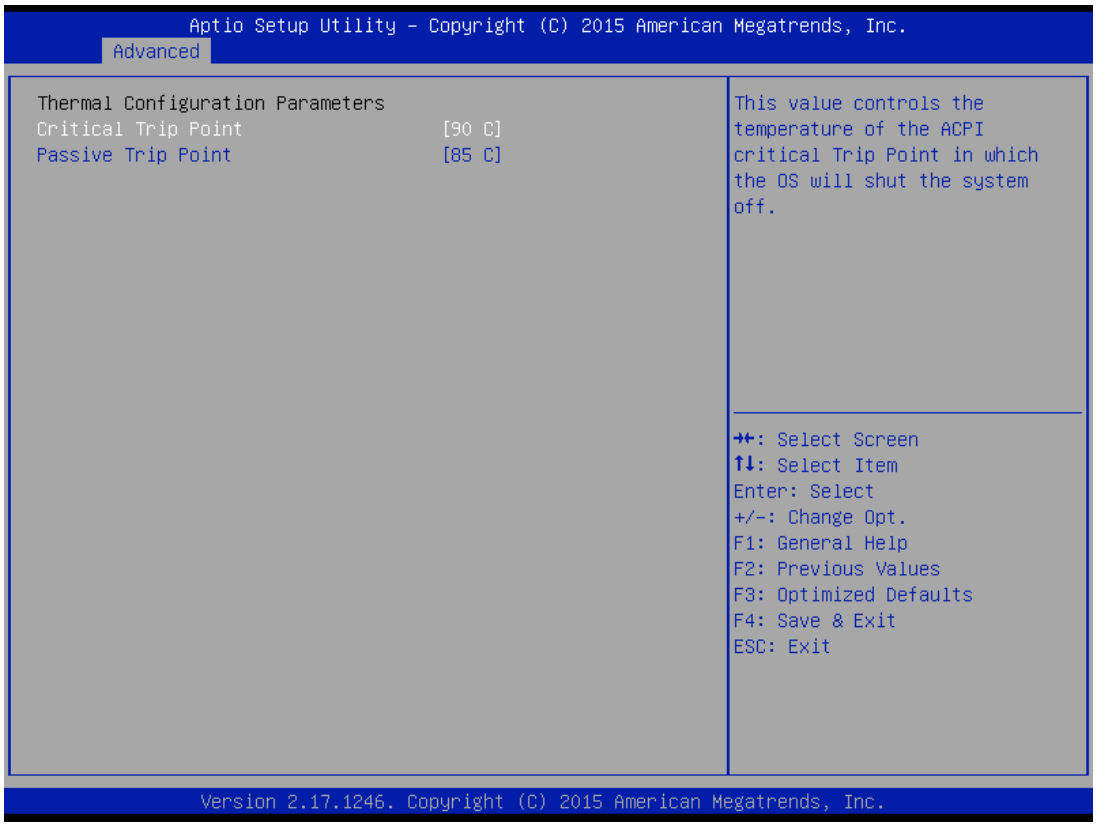
BIOS Setting	Description	Setting Option	Effect
Socket CPU Information	This item contains socket specific CPU information.	Enter	Open sub-menu
CPU Thermal Configuration	Thermal control	Enter	Open sub-menu
Limit CPUID Maximum	Limits CPIID Maximum	Disabled/ Enabled	Enable/Disable this function
Execute Disable Bit	Execute Disable Bit	Disabled/ Enabled	Enable/Disable this function
Intel Virtualization Technology	Allows to run recent OS and applications	Enabled/ Disabled	Enable/Disable this function
Power Technology	Control performance and power management functions of the processors	Disabled	Disable this function
		Energy Efficient	Work on energy efficient mode

PPM Configuration



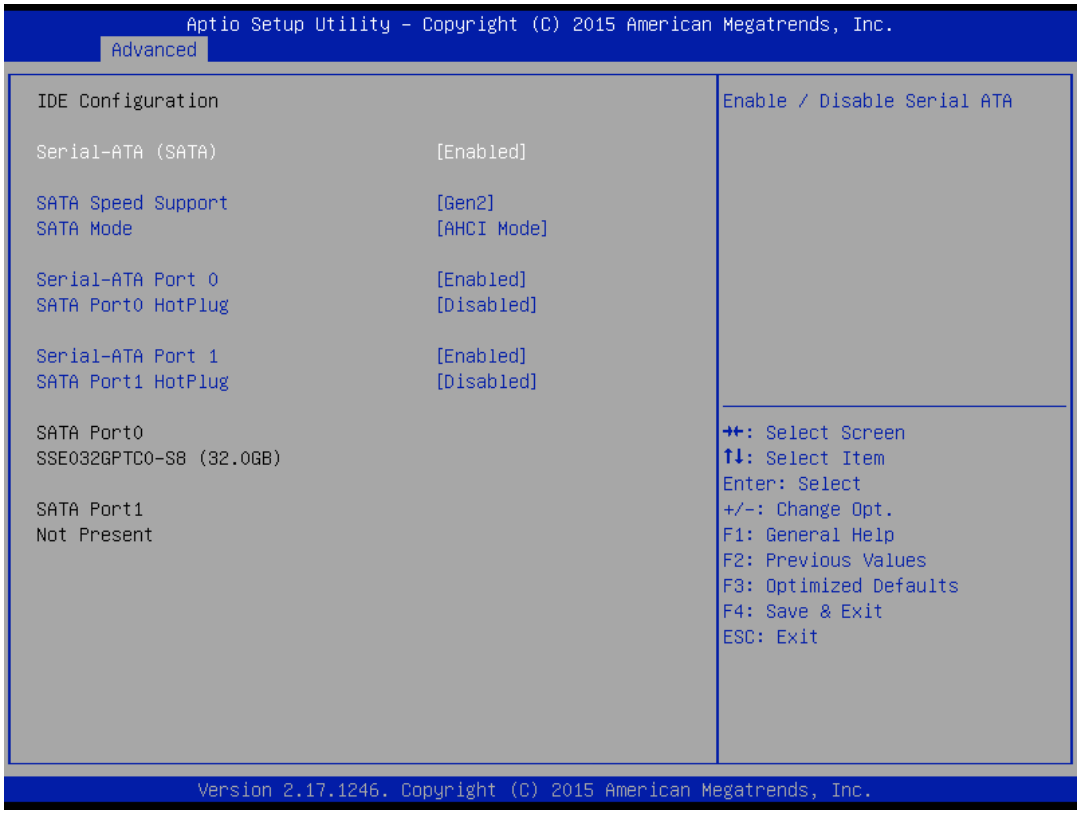
BIOS Setting	Description	Setting Option	Effect
CPU C State Report	Shows CPU C State Report	Enabled/ Disabled	Enable or Disable CP C state report to OS
Max CPU C-State	Allows to enter power-saving mode in order to save energy	C1E, C3, C6, C7, Auto	Enable or Disable CPU C Max CPU S-Sate

Thermal Configuration



BIOS Setting	Description	Setting Option	Effect
Critical Trip Point	Specifies the temperature at which the OS will shut down the system	90C, 87C, 85C, 79C, 71C, 63C,55C,47C, 39C, 31C, 23C, 15C	Select the disable temperature for the system to shut down
Passive Trip Point	Specifies the temperature at which the OS will begin adjusting the processor	90C, 87C, 85C, 79C, 71C, 63C,55C,47C, 39C, 31C, 23C, 15C	Select the disable temperature for the system to start adjusting the processor

IDE Configuration



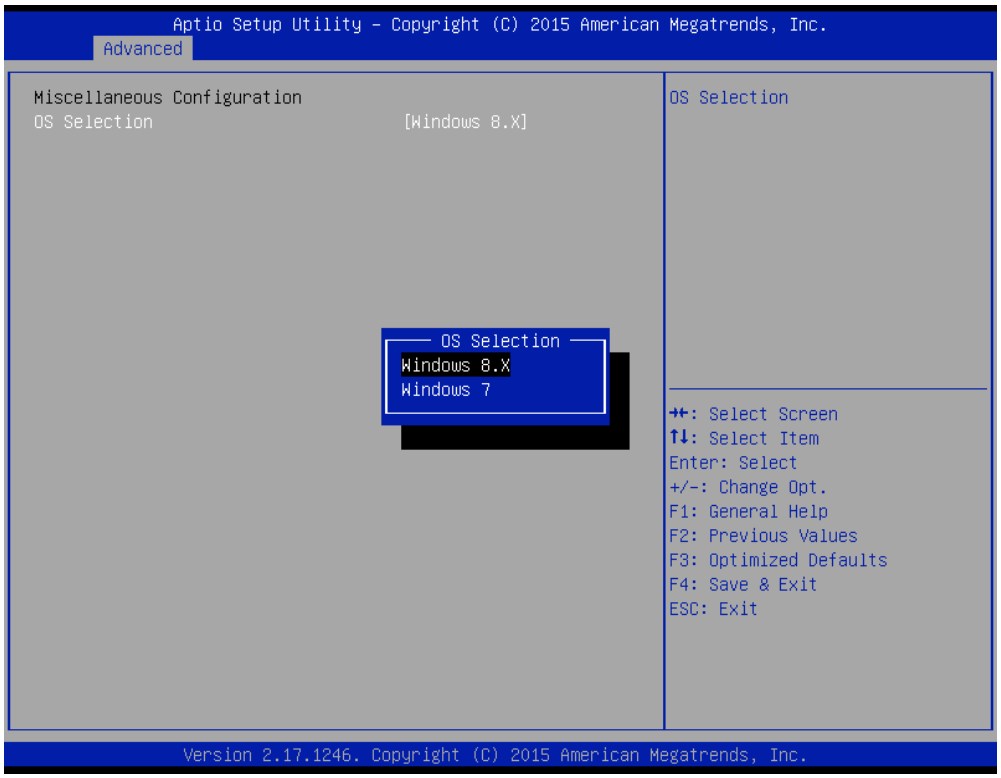
BIOS Setting	Description	Setting Option	Effect
Serial- ATA (SATA)	Responsible for supporting chipset drives with SATA interface.	Enabled/ Disabled	Enable or disable this function
SATA Speed Support	Allows forcing the speed limit SATA II ports standard IDE / SATA- controller chipset.	Gen1	Maximum speed will be limited to 150 MB/s
		Gen2	Maximum speed will be limited to 300 MB/s
		Disabled	Disables manual configuration of SATA II ports (mode will be selected based on the specifications of connected drives)
SATA Mode	This option specifies the operation mode of modern IDE / SATA- controller chipset	[AHCI]	Selecting this option allows you to take full advantage of the extended host controller

			SATA II
		[IDE]	SATA controller will operate in a mechanism similar to a conventional IDE-controller
		[RAID]	Allows combining hard drives in RAID-arrays in order to improve the reliability of data storage, or to increase the speed.
Serial- ATA Port0	The option turns on or off Port 0 of SATA channels of standard IDE / SATA-controller chipset.	Enabled/ Disabled	Turn on (Enabled) or turn off (Disabled) Port 0
SATA Port0 HotPlug	This feature that allows you to attach and remove a SATA Port0	Enabled/ Disabled	Enable or disable this function
Serial- ATA Port1	The option turns on or off Port 1 of SATA channels of standard IDE / SATA-controller chipset.	Enabled/ Disabled	Turn on (Enabled) or turn off (Disabled) Port1
SATA Port1 HotPlug	This feature that allows you to attach and remove a SATA Port1	Enabled/ Disabled	Enable or disable this function

Miscellaneous Configuration

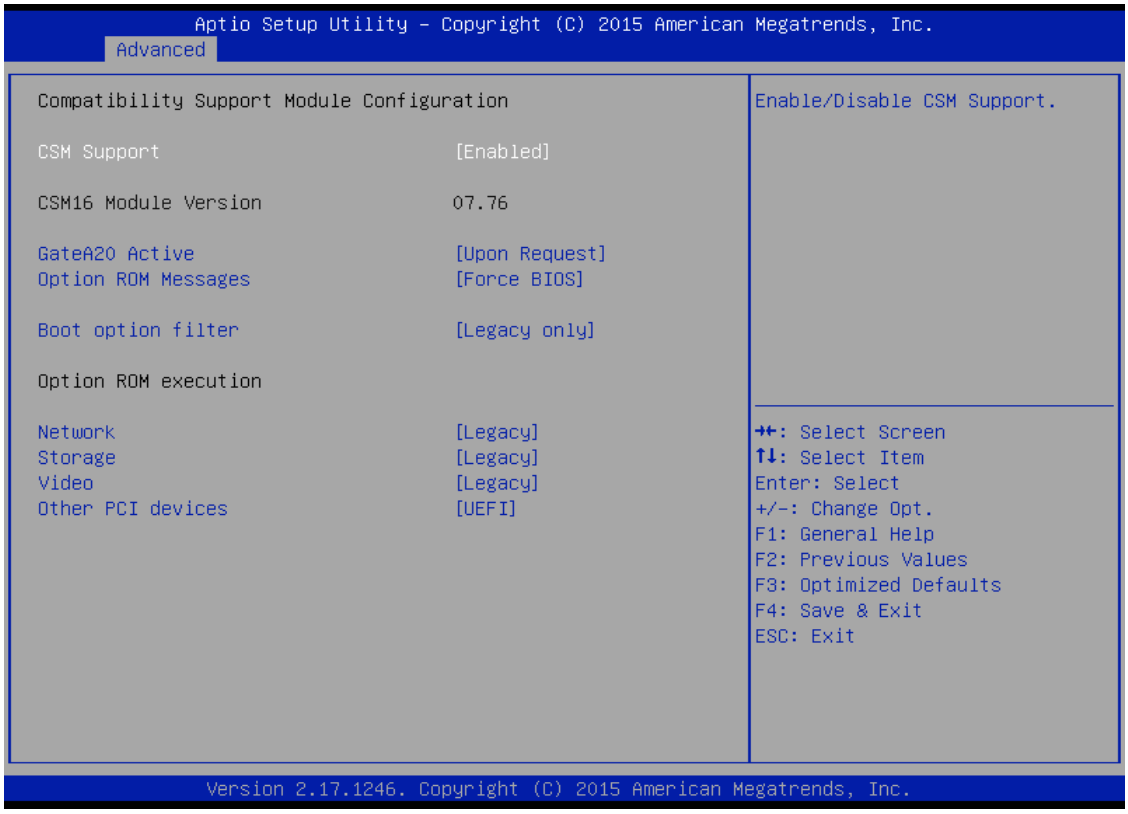
OS Selection

This item allows users to select the proper Operating



BIOS Setting	Description	Setting Option	Effect
Windows 8.X	Allows user to choose the proper OS.	Enter	Use Windows 8.X
Windows 7	Choose the proper OS.	Enter	Use Windows 7

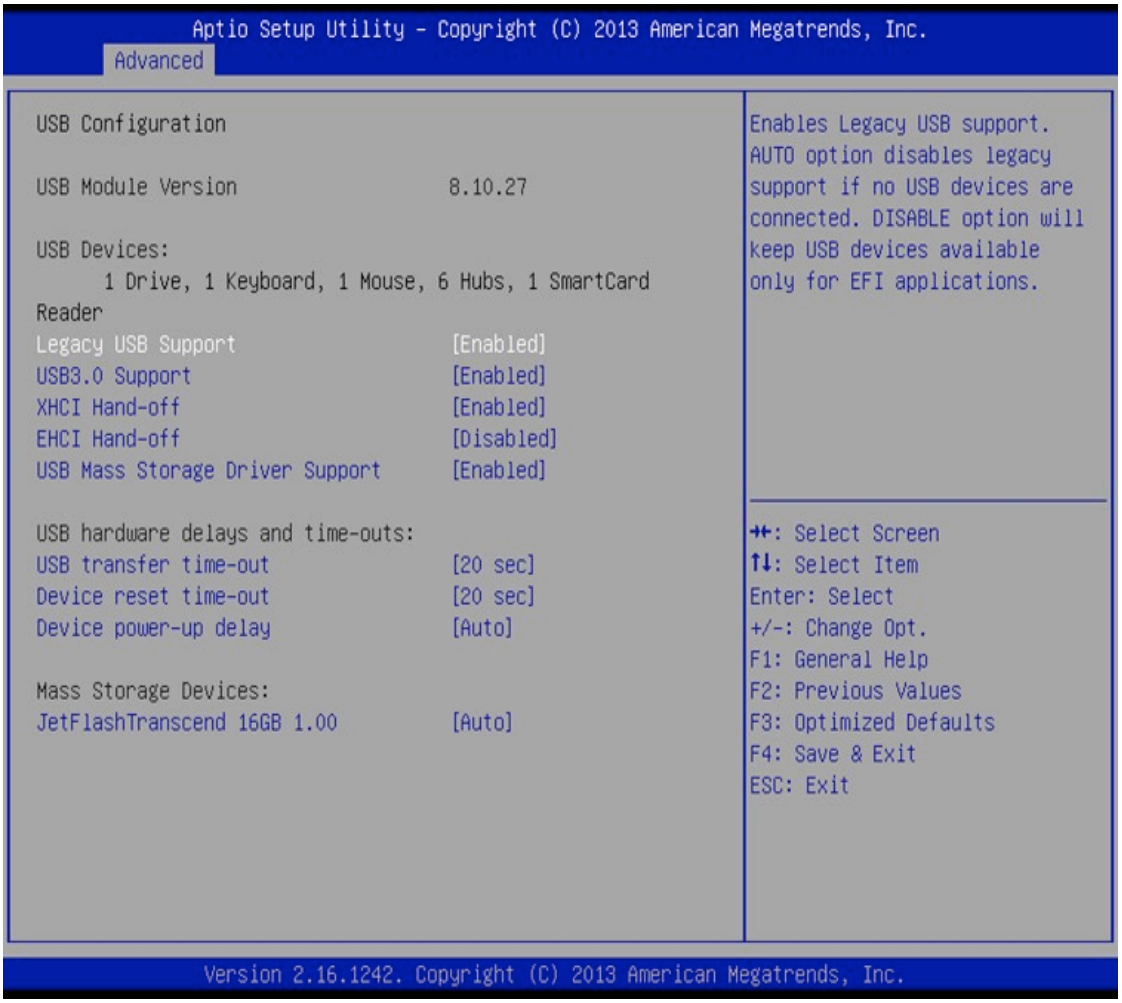
CSM Configuration



BIOS Setting	Description	Setting Option	Effect
CSM Support	The CSM is a component of the UEFI firmware that provides legacy BIOS compatibility by emulating BIOS environment, allowing legacy operating systems and some option ROMs that do not support UEFI to still be used.	Enabled/ Disabled	Enable or disable the Compatibility Support Module
GetaA20 Active	Activate GetaA20	Upon Request	Enable or disable this function
Option ROM Messages	Receiving ROM Messages Settings	Force BIOS	Set ROM messages parameters
Network	Specifies which Network option ROM is booted	UEFI	Only UEFI option ROMs

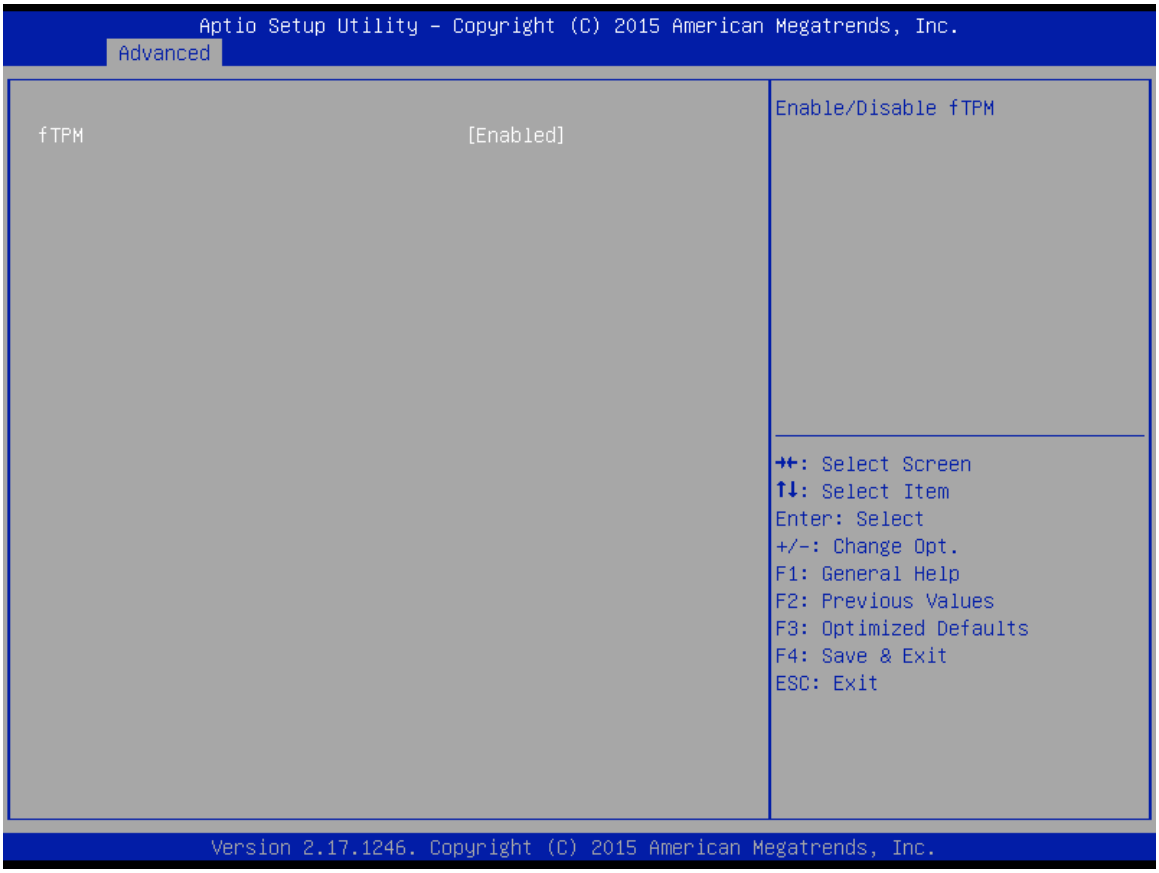
			are booted
		Legacy	
Storage	Specifies which Storage option ROM is booted	UEFI	Only UEFI option ROMs are booted
		Legacy	Only Legacy option ROMs are booted
Video	Specifies which Video option ROM is booted	UEFI	Only UEFI option ROMs are booted
		Legacy	Only Legacy option ROMs are booted
Other PCI Devices	Specifies which option ROM is booted for devices other than the network, storage or video	UEFI	Only UEFI option ROMs are booted
		Legacy	Only Legacy option ROMs are booted

USB Configuration



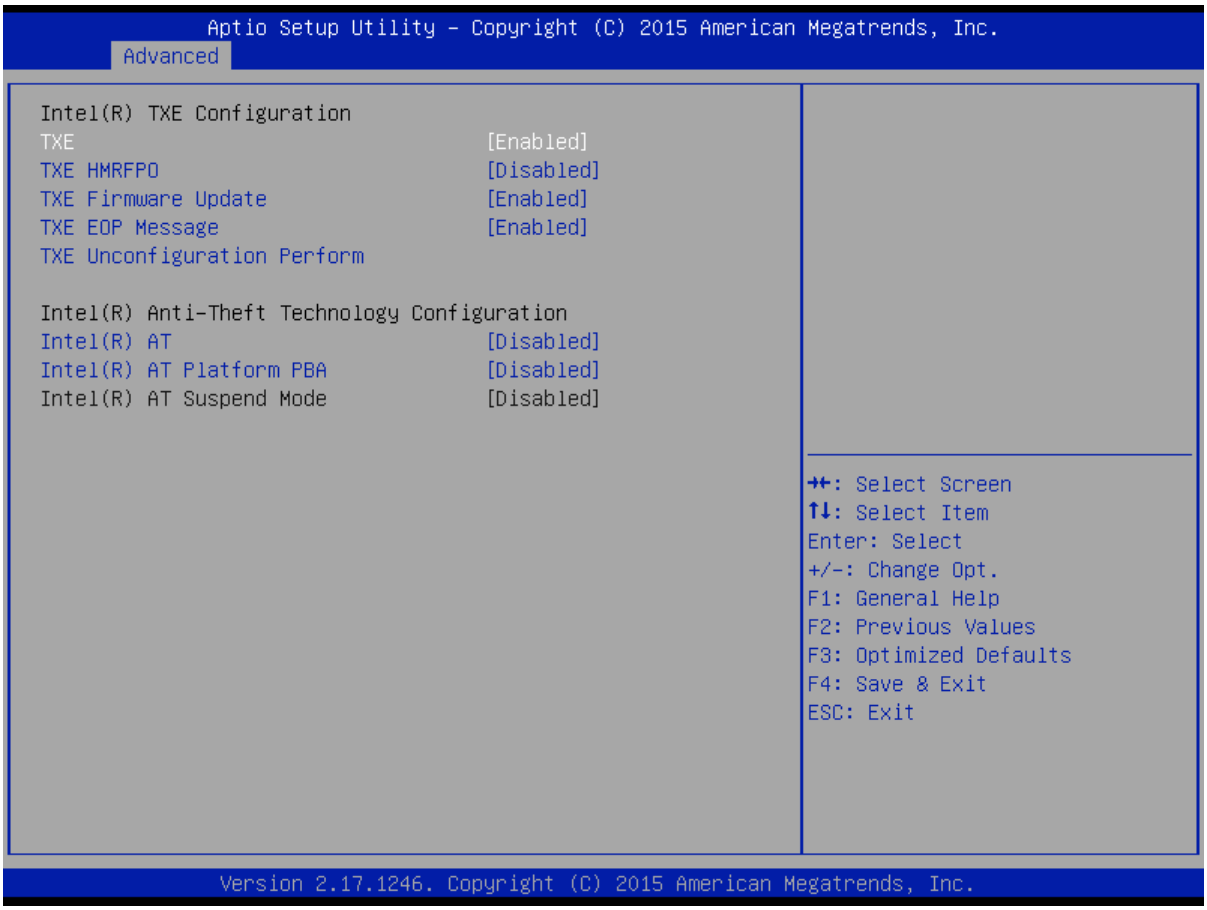
BIOS Setting	Description	Setting Option	Effect
Legacy USB Support	User can enable or disable USB port.	Disable	Will keep USB devices available only for EFI applications.
		Enable	Enable all the USB devices
USB 3.0 Support	User can enable or disable USB 3.0 (XHCI) controller support.	Enable	Enable USB 3.0 is enable
		Disable	USB 3.0 is disable
XHCI Hand-off	This is a workaround for OSs without XHCI hand- off support.	Disable	Disables this function
		Enable	Enables this function
EHCI Hand-off	This is a workaround for OSs without ECHI hand-off support.	Disable	Disables this function
		Enable	Enables this function
USB mass storage driver support	User can Enable or disable USB mass storage driver support.	Disable	Disables this function
		Enable	Enables this function
USB Transfer time- out	The time-out value for control, bulk, and interrupt transfers.	1 Sec 5 Sec 10 Sec 20 Sec	Depends on the time-out value
Device Reset time- out	USB mass storage device start unit command time- out.	10 Sec 20 Sec 30 Sec 40 Sec	Depends on the time-out value
Device power-up delay	Maximum time the device will take before it properly reports itself to the host controller.	Auto	Uses default value: for a root port it is 100 ms, for a Hub port the delay is taken from Hub descriptor

Platform Trust Technology



BIOS Setting	Description	Setting Option	Effect
fTPM	Trusted Platform Module parameters	Enabled /Disabled	Enables or disables this function

Security Configuration



BIOS Setting	Description	Setting Option	Effect
TXE	Trusted Execution Technology parameters	Enabled /Disabled	Enables or disable this function
TXE HMRFPO	TXE HMRFPO parameters	Enabled/ Disabled	Enables or disable this function
TXE Firmware Update	TXE Firmware Update parameters	Enabled/ Disabled	Enables or disable this function
TXE EOP Message	TXE EOP Message parameters	Enabled/ Disabled	Enables or disable this function
Intel ® AT	Intel ® AT parameters	Enabled/ Disabled	Enables or disable this function
Intel ® AT Platform PBA	Intel ® AT Platform PBA parameters	Enabled/ Disabled	Enables or disable this function

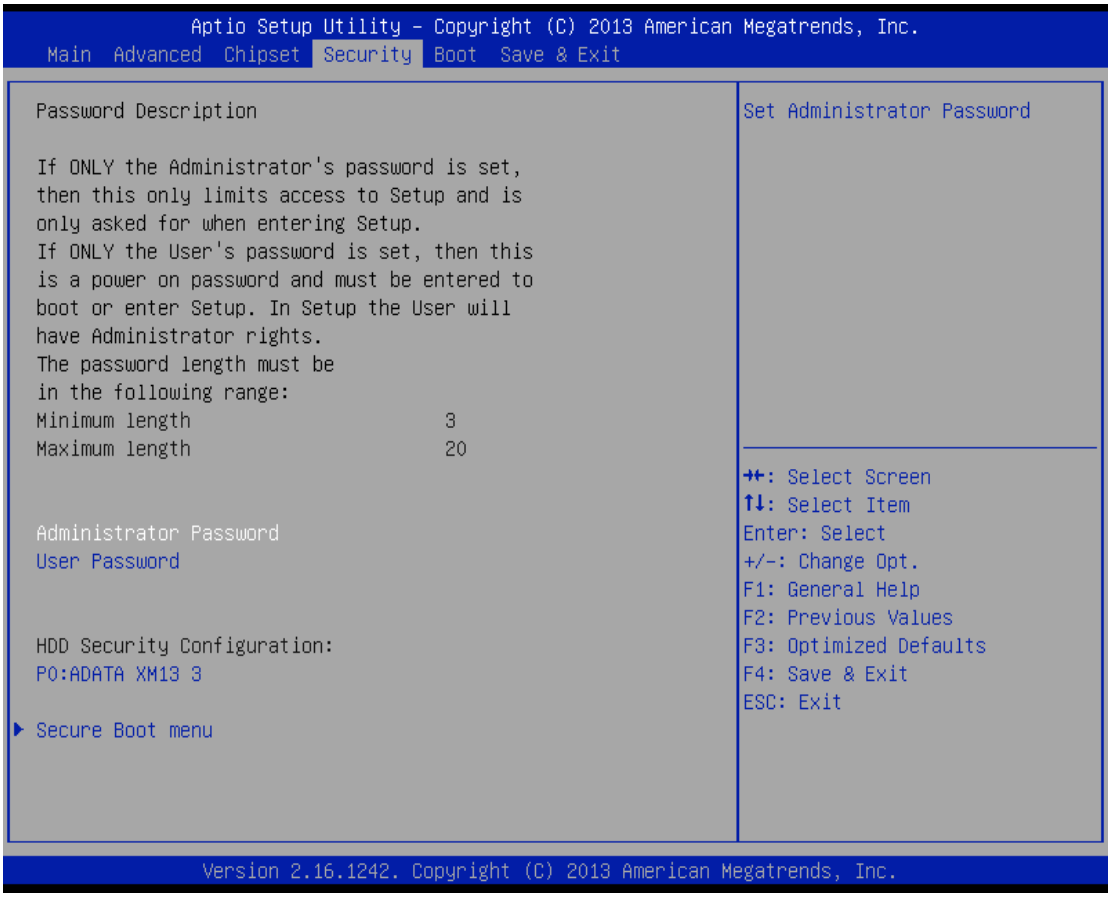
Chipset Menu

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

BIOS Setting	Description	Setting Option	Effect
High Precious Timer	Allow to set up High Precious Timer settings	Enabled/ Disabled	Enables/Disables this function
Restore AC Power Loss	This function allows to set up booting options after a power failure	Power on/ Power off	Boot automatically after a power failure
Serial IRQ Mode	When work with personal computer hardware, installing and removing devices, the system relies on interrupt requests. Interrupt request	Continuous	Allow user to set up desired IRQ Mode

Security Menu

In the Security menu, users can set administrator password, user password, and HDD security configuration.



BIOS Setting	Description	Setting Option	Effect
Administrator Password	Displays whether or not an administrator password has been se	Enter t.	Enter password
User Password	Display whether or not a user Password has been set.	Enter	Enter password

Boot Configuration

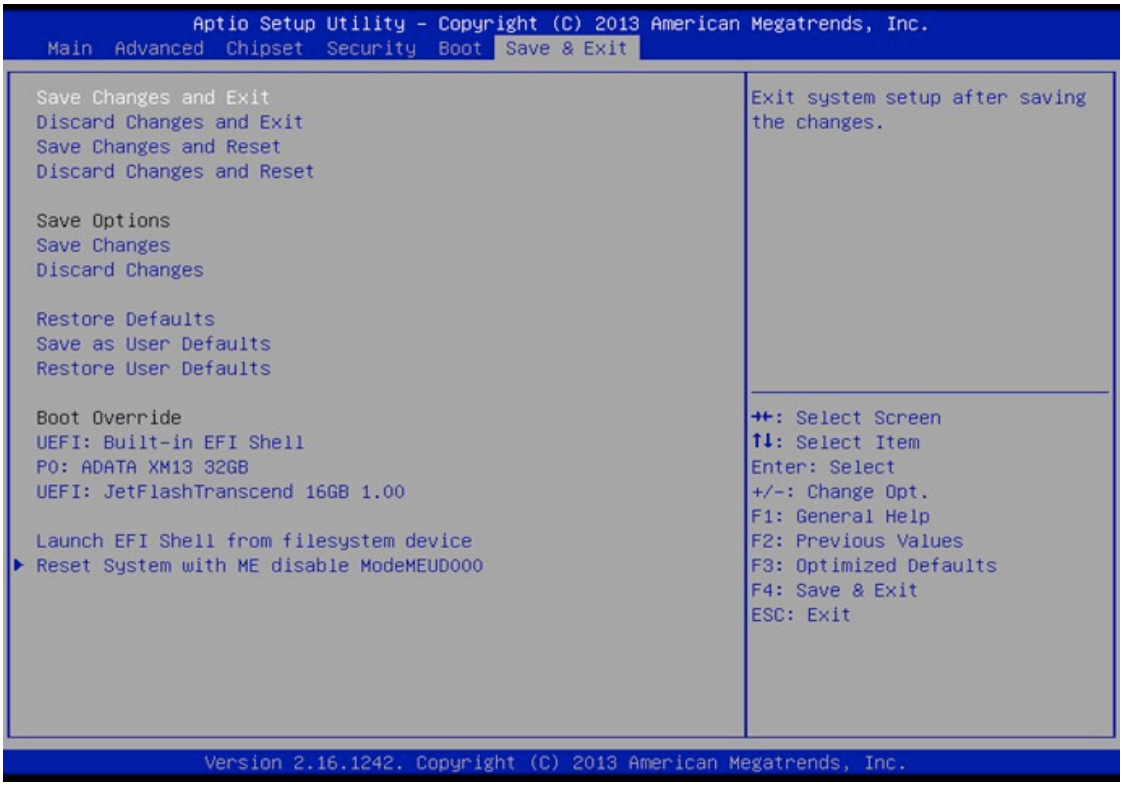
The Boot menu sets the sequence of the devices to be searched for the operating system. The bootable devices will be automatically detected during POST and shown here, allowing you to set the sequence that the BIOS use to look for a boot device from which to load the operating system.

BIOS Setting	Description	Setting Option	Effect
Setup Prompt Timeout	Allows user to configure the number of seconds to stay in BIOS setup prompt screen.	Enter	Set the prompt timeout
Boot NumLock State	Enables or disables NumLock feature on the numeric keypad of the keyboard after the POST (Default: On).	On	Remains On
		Off	Remains OFF
Quite Boot	Determines if POST message	Disabled	Disables this

	OEM logo (default = Black background) is displayed.		function
		Enabled	Enables this function
Fast Boot	Enables or disables Fast Boot to shorten the OS boot process. (Default: Disabled).	Disabled	Disables this function
		Enabled	Enables this function
Boot Mode Select	Specifies which mode will be used for booting	Legacy	Only Legacy option is booted
		UEFI	Only UEFI option is booted
Boot Option #1~#6	Specifies the overall boot order from the available devices	Ex: Boot Option#1 (hard drive)	Hard drive as the first priority
USB Key Driv BBS Priorities	e USB Key Drive BBS Priorities	Enter	Open sub-menu
Hard Disk Drive BBS Priorities	Hard Disk Drive BBS Priorities	Enter	Open sub-menu
Network Drive BBS Priorities	Network Drive BBS Priorities	Enter	Open sub-menu

Save & Exit

The Exit menu displays a way how to exit BIOS Setup utility. After finishing your settings, you must save and exit for changes to be applied.



BIOS Setting	Description	Setting Option	Effect
Save Change / Exit	This saves the changes to the CMOS and exits the BIOS Setup program.	<YES>	Save changes
Discard Changes and Exit	This exits the BIOS Setup without saving the changes made in BIOS Setup to the CMOS.	<YES>	Saves the changes
		<NO>	Return to the BIOS Setup Main Menu
Save Changes and Reset	Reset the system after saving the changes.	<YES>	Saves the changes
		<NO>	Return to the BIOS Setup Main Menu

Discard Changes and Reset	Reset system setup without saving any changes	<YES>	Saves the changes
		<NO>	Return to the BIOS Setup Main Menu
Save Changes	Save changes done so far to any of the setup options.	<YES>	Saves the changes
		<NO>	Return to the BIOS Setup Main Menu
Discard Changes	Discard changes done so far to any of the setup options.	<YES>	Saves the changes
		<NO>	Return to the BIOS Setup Main Menu
Restore Default	Restore/load default values for all the setup options.	<YES>	Saves the changes
		<NO>	Return to the BIOS Setup Main Menu
Save as User Defaults	Save the changes done so far as User defaults.	<YES>	Saves the changes
		<NO>	Return to the BIOS Setup Main Menu
Restore User Defaults	Restore the User Defaults to all the setup options.	<YES>	Saves the changes
		<NO>	Return to the BIOS Setup Main Menu

Maintenance

This chapter includes regular cleaning and maintenance procedures. Follow all the recommendations in this chapter in order to ensure long product lifecycle.

This equipment is extremely rugged and does not require a lot of maintenance. Remember that electrical equipment should be handled with care and used accordingly to its specifications.

Cleaning the Display Screen

- Wipe the screen with a clean, soft, lint-free cloth. This removes dust and other particles. Do not use acetone, ethyl alcohol, toluene, ethyl acid or methyl chloride to clear the panel. It may permanently damage the display screen.
- You can apply a small amount of non-ammonia; non-alcohol based glass cleaner onto a clean, soft, lint-free cloth and wipe the screen.
- Never spray or pour any liquid directly on the screen or case.
- **Do Not** use water or oil directly on the display screen. If droplets are allowed to drop on the screen, permanent staining or discoloration may occur.

Clean the Casing

Use the following procedure to clean the equipment.

CAUTION/ ATTENTION

Always turn off the device and disconnect other peripherals before cleaning and maintenance procedures.

Before Cleaning

- Make sure the device is turned off.
- Disconnect the power cable from any AC outlet.

When Cleaning

- Wipe dust off the outside casing with a cloth slightly moistened with water or mild ammonia-based cleaning solution.
- Do not use this cloth on a display screen!
- Do not use an abrasive cleaner or high pressure washer on the screen.

WARNING!

POTENTIAL ELECTROSTATIC CHARGE HAZARD – SEE INSTRUCTIONS

- Do not rub the unit with a dry cloth. This action can result in a static charge being built up and cause a spark. Always use damp cloth while cleaning the unit

Perform the following to start System Recovery:

1. Make sure the device is turned off.
2. Connect a USB hub to the USB port of the panel pc.
3. Connect the DVD-ROM and the keyboard.
4. Connect the panel pc to an electrical outlet and insert Windows 7 Recovery DVD to the DVD-ROM drive.
5. Restart the device.
6. On the startup screen, press the DEL key on the keyboard to enter BIOS Setup Utility.
7. Go to Boot Menu.
8. On Boot option priorities, set the Boot Option #1 to DVD-ROM drive.
9. Go to Save & Exit menu and select Save changes and Exit.
10. The system restarts and boots from the recovery disc.
11. Follow the onscreen instruction to complete system recovery.

Perform the following to start system recovery:

Pro-face Support
Pro-face is committed to delivering excellent technical support whether you are local or abroad. Free, real time solutions. 800-289-9266 support@profaceamerica.com

Pro-face Repair Service
Pro-face is committed to ensuring that our products are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned for repair, you can submit your request at http://www.profaceamerica.com/repair

Pro-face America
1050 Highland Dr., Ann Arbor, MI 48108 | 800-289-9266 | profaceamerica.com