## SlimLine ID32-ES

Stainless Resistive Panel PC

Intel® Dual Core Atom™ D2550 1.86 GHz
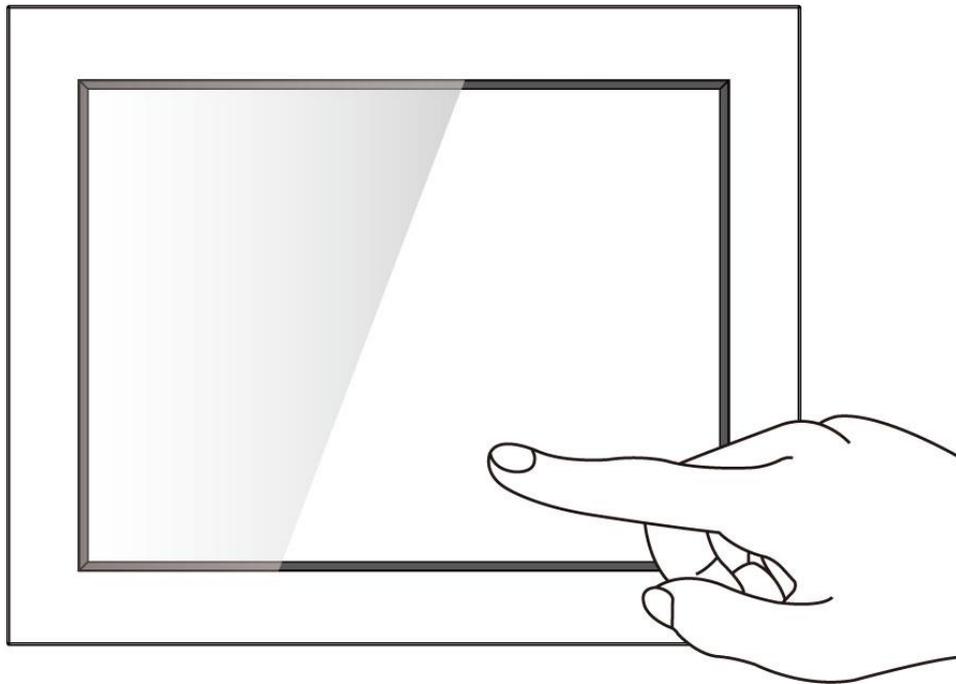
Full IP65

User Manual

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Perfect Industrial IT **TL** *electronic*

Advisory Conventions

Four types of advisories are used throughout the user manual to provide helpful information or to alert you to the potential for hardware damage or personal injury. These are Notes, Important, Cautions, and Warnings. The following is an example of each type of advisory.

NOTE:
A note is used to emphasize helpful information

IMPORTANT:
An important note indicates information that is important for you to know.

CAUTION/ ATTENTION
A Caution alert indicates potential damage to hardware and explains how to avoid the potential problem.
Une alerte d'attention indique un dommage possible à l'équipement et explique comment éviter le problème potentiel.

WARNING!/ AVERTISSEMENT!
An Electrical Shock Warning indicates the potential harm from electrical hazards and how to avoid the potential problem.
Un Avertissement de Choc Électrique indique le potentiel de chocs sur des emplacements électriques et comment éviter ces problèmes.

ALTERNATING CURRENT / MISE À LE TERRE!
The Protective Conductor Terminal (Earth Ground) symbol indicates the potential risk of serious electrical shock due to improper grounding.
Le symbole de Mise à Terre indique le risqué potentiel de choc électrique grave à la terre incorrecte.

Safety Information

WARNING! / AVERTISSEMENT!

Always completely 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.

Toujours débrancher le cordon d'alimentation du chassis lorsque vous travaillez sur celui-ci. Ne pas brancher de connections lorsque l'alimentation est présente. Des composantes électroniques sensibles peuvent être endommagées par des sauts d'alimentation. Seulement du personnel expérimenté devrait ouvrir ces chassis.

CAUTION/ATTENTION

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.

Toujours verifier votre mise à la terre afin d'éliminer toute charge statique avant de toucher la carte CPU. Les équipements électroniques moderns sont très sensibles aux décharges d'électricité statique. Toujours utiliser un bracelet de mise à la terre comme précaution. Placer toutes les composantes électroniques sur une surface conçue pour dissiper les charge, ou dans un sac anti-statique lorsqu'elles ne sont pas dans le chassis.

Safety Precautions

For your safety carefully read all the safety instructions before using the device. Keep this user manual for future reference.

- Always 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.

⚠️	**CAUTION/ATTENTION** Do not cover the openings! Ne pas couvrir les ouvertures!

- Before connecting the equipment to the power outlet make sure the voltage of the power source is correct.
- Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- 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.
- All cautions and warnings on the equipment should be noted.

*__Let service personnel to check the equipment in case any of the following problems appear:__

- o The power cord or plug is damaged.
- o Liquid has penetrated into the equipment.
- o The equipment has been exposed to moisture.
- o The equipment does not work well or you cannot get it to work according to the user manual.
- o The equipment has been dropped and damaged.
- o 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/ATTENTION
⚠️	Use the recommended mounting apparatus to avoid risk of injury. Utiliser l'appareil de fixation recommandé pour éliminer le risque de blessure.

	WARNING! / AVERTISSEMENT!
⚡	Only use the connection cords that come with the product. When in doubt, please contact the manufacturer. Utiliser seulement les cordons d'alimentation fournis avec le produit. Si vous doutez de leur provenance, contactez le manufacturier.

	WARNING!/ AVERTISSEMENT!
⚡	Always ground yourself against electrostatic damage to the device. Toujours vérifier votre mise à la terre afin que l'équipement ne se décharge pas sur vous.

- 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 put drivers and PCB's component side on anti-static foam.

Contents

Introduction

This chapter gives you product overview, describes features and hardware specification. You will find all accessories that come with the device in the packing list. Mechanical dimensions and drawings included in this chapter.

1

Chapter 1: Introduction

SlimLine ES IP65 Stainless Resistive Panel PC is rugged, industrial-grade panel PC series built to withstand challenging environments, undergoing rigorous testing to ensure safety and top performance. All of the models in the series are sealed to IP65 standard. Stainless housing features anti-corrosion properties making it suitable for food, chemical and pharmaceutical industries.

SlimLine ES IP65 Stainless Resistive Panel PC goes beyond that of the standard industrial panel computers with rugged construction, powerful performance, and flexible mounting options.

1.1 Product Features

SlimLine ID32-ES IP65 Stainless Resistive Panel PC features:

- Intel® Dual Core Atom™ D2550 1.86 GHz Processor
- Fanless Design
- Full IP65 dust and water resistant
- Stainless Housing with Anti-Corrosion Treatment
- Optical Bonding with Anti-moisture Treatment (Optional)
- 5 Wire Resistive Touch/ Anti-Reflection Protection Glass (Optional)
- Various mounting solutions, Yoke mount and VESA mount

1.2 Package Content

Carefully remove the box and unpack your Panel PC. Please check if all the items listed below are inside your package. If any of these items are missing or damaged contact us immediately.

Standard factory shipment list
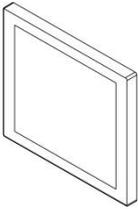
Panel PC	**IP65 Stainless Resistive Panel PC Quick Start Guide (Hardcopy)**	**Driver CD & SBC User Manual**
Varies by product specifications	9152111I101P	ID32: 9171111I101M
AC Adapter	**Power Cable**	**Serial Cable**
50W: 90PO12050002 80W: 90PO12080003	Varies by destination	94G0103090Q0
Ethernet Cable	**USB Cable**	**VESA Screws**
94I0080080KF	9480108080Q0	913511101101
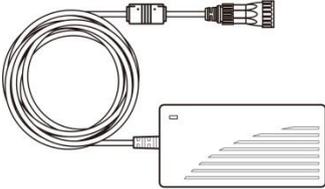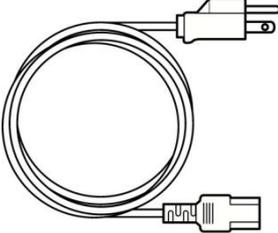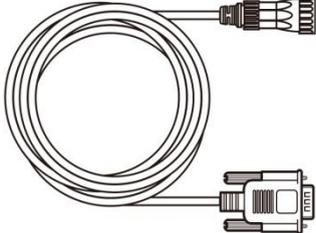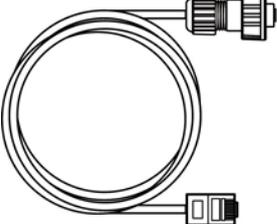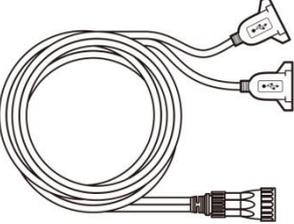
1.3 Connector Placement

The IP 65 Flat Stainless Resistive Panel PC has IP65 type connectors with protection cap.

For cable specifications refer to the Ch.2,"Cable Specifications" of this user manual.
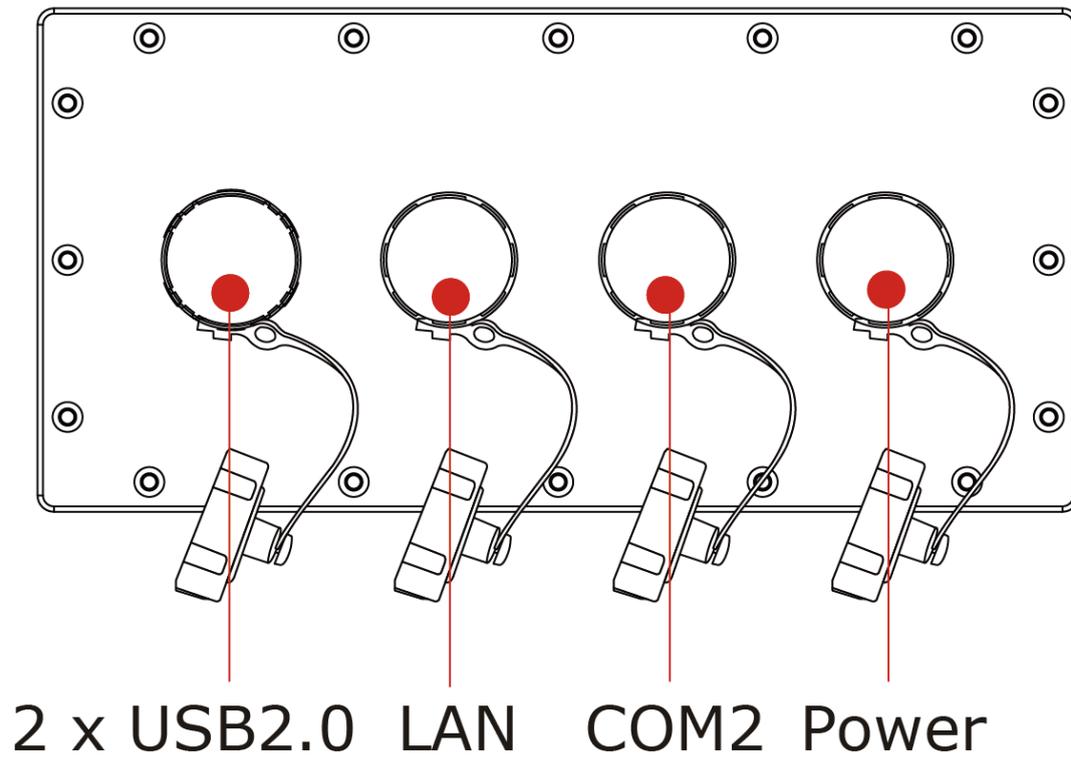
1.4 Physical Button and LED Indicators

Physical Button and LED Indicators located on the rear side of the Panel PC.
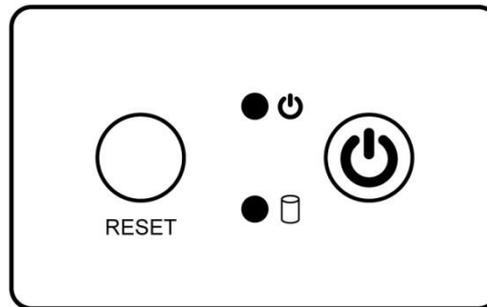
Physical Buttons

Icon	Button	Description
	Reset	Press to reset the system
	Power On/ Off	Press to power on or power off the device
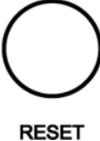
LED Indicators

LED Type	Status	Description
	On	Power is on
	Off	Power is off
	Blinking	Storage activity (Data is being read or written)
	Off	System is idle

1.5 Schematics and Dimensions

This section contains mechanical drawing of the panel PC. Notice that this is a simplified drawing and some components are not marked in detail.

1.5.1 Dimensions 15"

Unit: mm
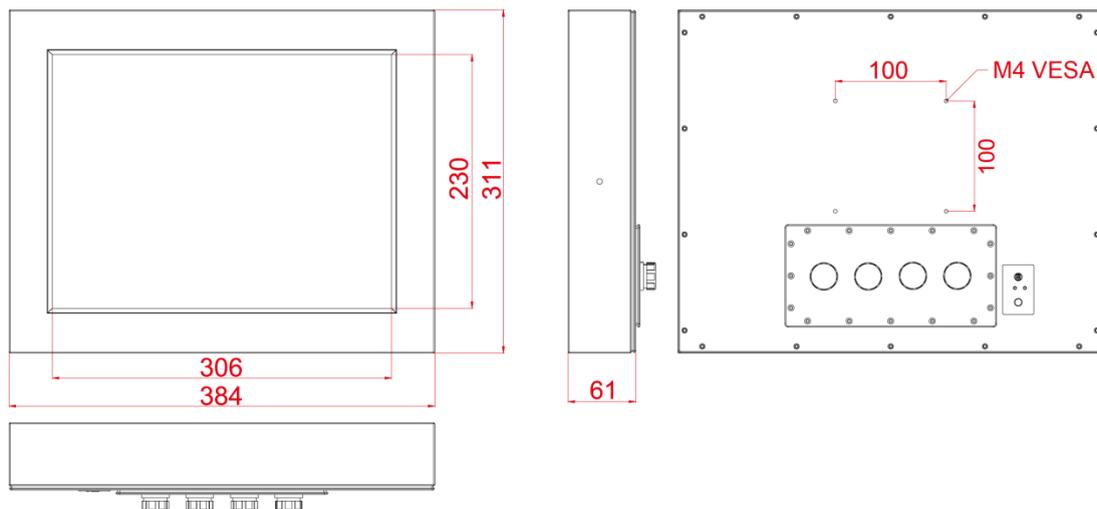
1.5.2 Dimensions 17"

Unit: mm
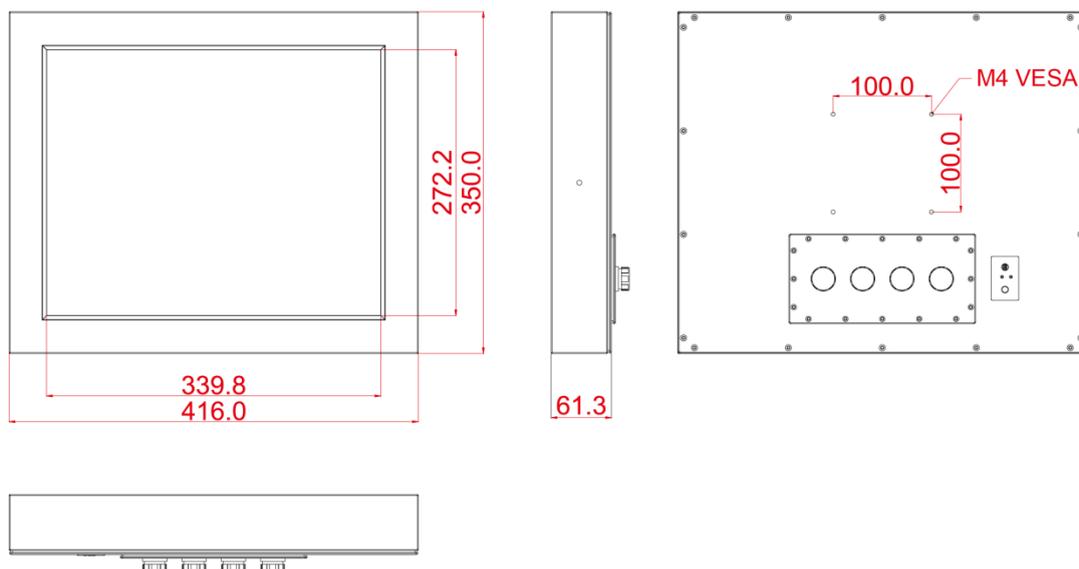
1.5.3 Dimensions 19"

Unit: mm
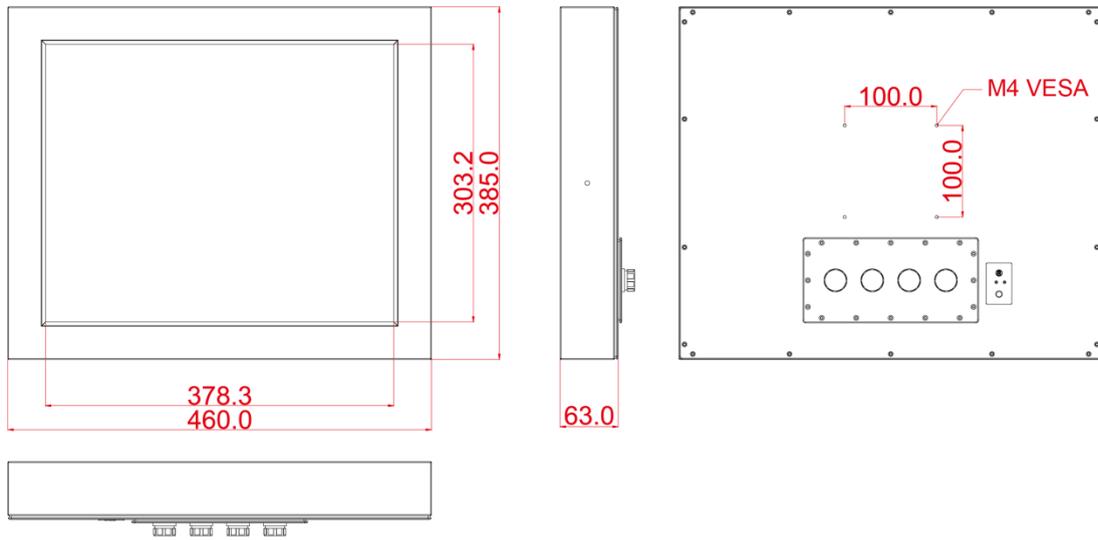
1.5.4 Dimensions 21.5"

Unit: mm
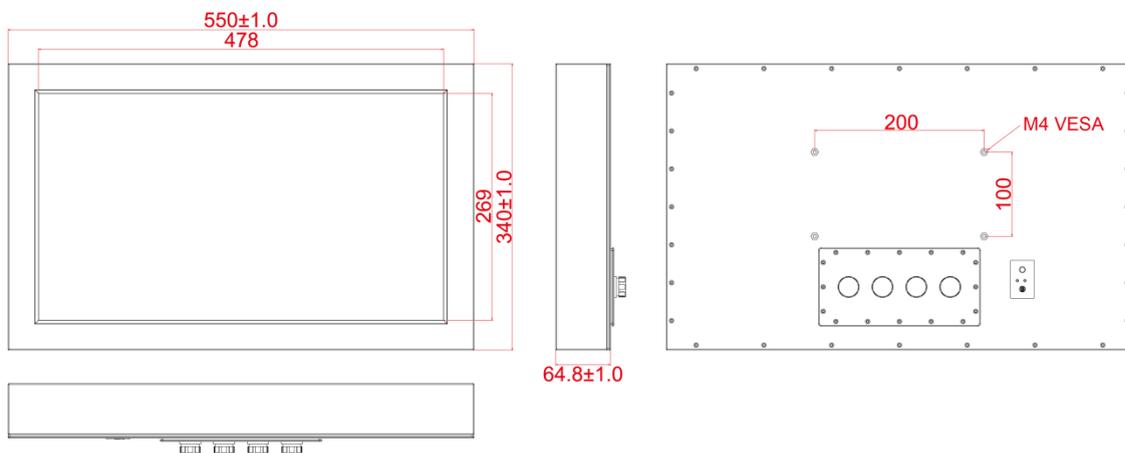
Getting Started

This chapter tells you important information on power supply, adapter and precautions tips. Pay attention to power considerations.

2

Chapter 2: Getting Started

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

2.1 Powering On

2.1.1 AC Adapter Components

AC Adapter supplied with the power cord.

AC Adapter	Power Cable
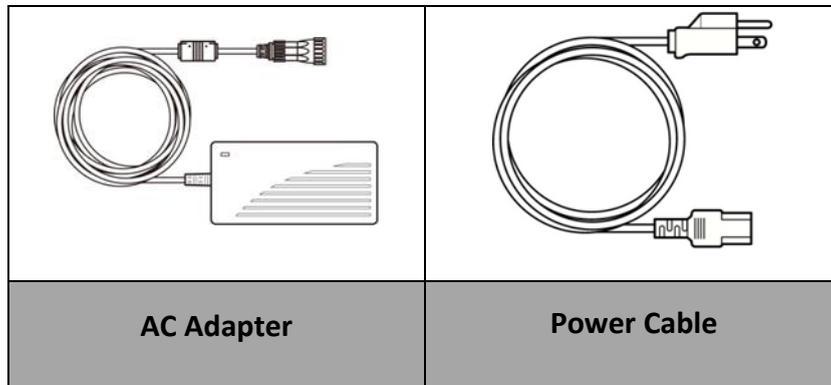
AC Adapter specifications vary by panel size.

Size	15"	17"	19"	21.5"
AC Adapter	12V/ 50W	12V/ 80W	12V/ 80W	12V/ 80W

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 / MISE À LE TERRE!

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.

Ce produit doit être mis à la terre. Utiliser seulement un cordon d'alimentation avec mise à la terre. Si les règlements locaux le requiert, installer des câbles de mise à la terre supplémentaires.

Si vous n'utiliser pas une prise d'alimentation avec mise à la terre, vous pourriez remarquer une sensation de picotement électrique quand la paume de vos mains touche à l'appareil.

2.1.2 Power Considerations

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

CAUTION/ATTENTION

Use only the AC adapter included in your package. Using other AC adapters may damage the device.

Utiliser seulement le convertisseur AC inclu avec votre appareil. Utiliser d'autres convertisseurs pourraient endommager l'appareil.

2.1.3 Power Consumption

The table below shows power consumption and AC adapter for the IP65 Stainless Resistive Panel PC.

Size	15"	17"	19"	21.5"
Power Consumption*	42W (typ.)	47W (typ.)	50W (typ.)	61W (typ.)

With maximum backlight and high CPU load.

2.1.4 Connecting the Power

Cable Mounting Instruction

1. Connect the AC adapter to the DC jack power connector located on the back side of the Panel PC.
2. Connect the power cord to AC adapter.
3. Plug the power cord to the AC outlet and the device will turn on automatically.
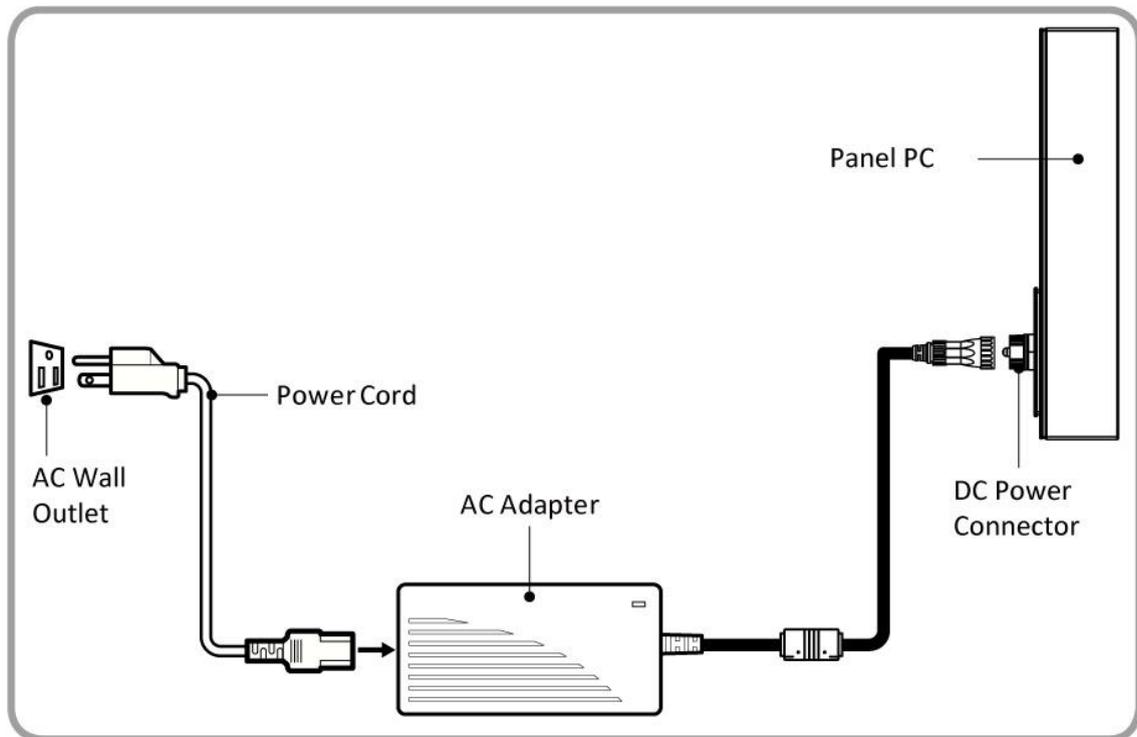
Note:
Power cords vary in appearance by region and country.

2.2 Connector Pin Assignments

This Panel PC is equipped with four connectors which are IP65 level and fool-proofing design. Use only the cables that are included in the package. The pin assignments of the cables are as follows.

2.2.1 Power Cable

The IP65 Stainless Resistive Panel PC has IP65 connector. Use power cable to connect Panel PC to the source of power.

The IP65 Stainless Resistive Panel PC supports 12V DC power input.
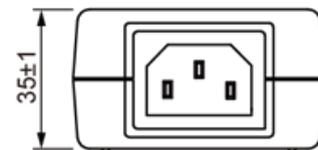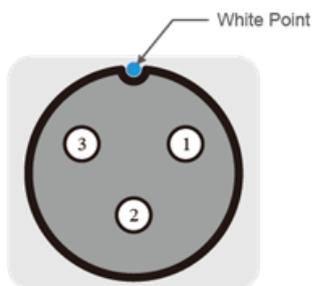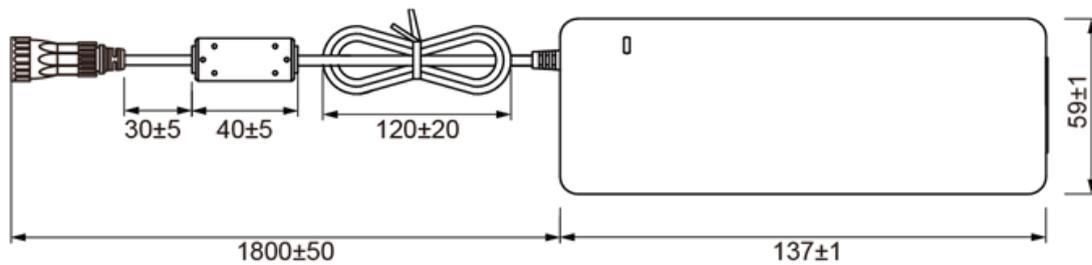
Pin No.	Symbols	Color
CN1-3	GND	Black
CN1-2	shield	
CN1-1	VCC	White

2.2.2 Serial Cable

The IP65 Stainless Resistive Panel PC has IP65 serial port connector. Use serial cable to connect serial interfaces.
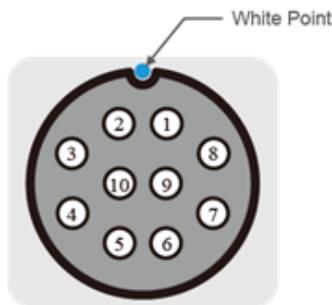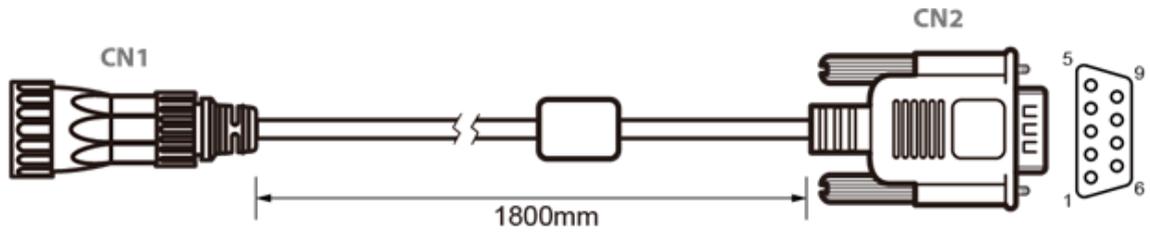
Pin No.	Symbols	Color		Pin No.	Symbols	Color
CN1-1	DCD-CON2	Green	⟷	CN2-1	DCD-CON2	Green
CN1-2	DSR-CON2	Brown	⟷	CN2-6	DSR-CON2	Brown
CN1-3	RXD-CON2	Red	⟷	CN2-2	RXD-CON2	Red
CN1-4	RTS-CON2	Orange	⟷	CN2-7	RTS-CON2	Orange
CN1-5	TXD-CON2	Blue	⟷	CN2-3	TXD-CON2	Blue
CN1-6	CTS-CON2	White	⟷	CN2-8	CTS-CON2	White
CN1-7	DTR-CON2	Purple	⟷	CN2-4	DTR-CON2	Purple
CN1-8	RI-CON2	Yellow	⟷	CN2-9	RI-CON2	Yellow
CN1-9	GND-CON2	Black	⟷	CN2-5	GND-CON2	Black
CN1-10	NC		⟷	CN2-10	NC	

2.2.3 Ethernet Cable

The IP65 Stainless Resistive Panel PC has IP65 Ethernet connector. Use Ethernet cable to connect the Panel PC to the Internet.
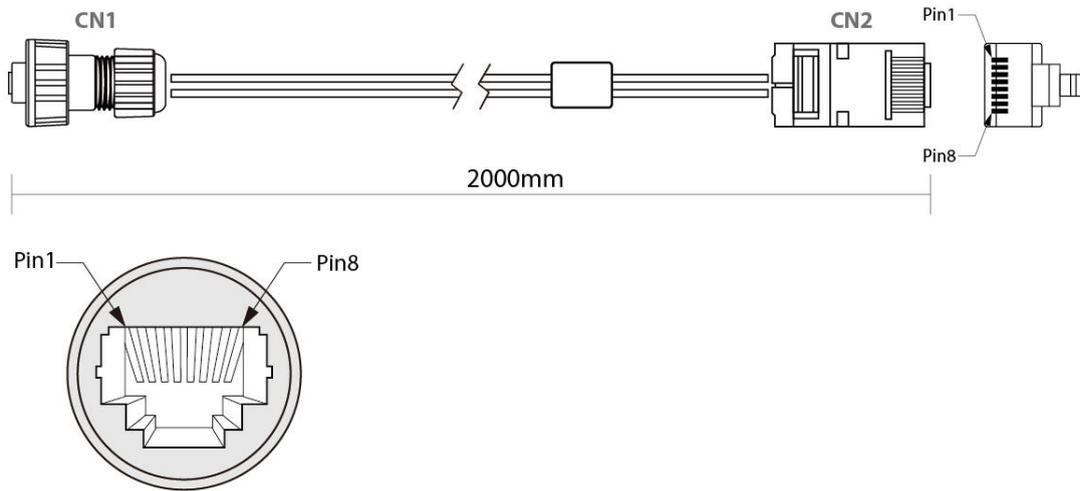
Plug	Wire Color	Conn.	
1	Orange / White	1	Twist
2	Orange	2	
3	Green / White	3	Twist Twist
4	Blue	4	
5	Blue / White	5	
6	Green	6	
7	Brown / White	7	Twist
8	Brown	8	

2.2.4 USB 2.0 Cable

Flat IP65 Stainless Resistive Panel PC has one Full IP65 USB2.0 connector. Use USB2.0 cable to connect external devices such as mouse or keyboard to the Panel PC.

Pin No.	Symbols	Color		Pin No.	Symbols	Color
CN1-1	VCC	RED	⟷	CN2-1	VCC	RED
CN1-2	VCC	RED	⟷	CN3-1	VCC	RED
CN1-3	D-	WHITE	⟷	CN2-2	D-	WHITE
CN1-4	D-	WHITE	⟷	CN3-2	D-	WHITE
CN1-5	D+	GREEN	⟷	CN2-3	D+	GREEN
CN1-6	D+	GREEN	⟷	CN3-3	D+	GREEN
CN1-7	GND	BLACK	⟷	CN2-4	GND	BLACK
CN1-8	GND	BLACK	⟷	CN3-4	GND	BLACK
CN1-9	Braid		⟷	Braid connect to the housing		

twisted pair   twisted pair
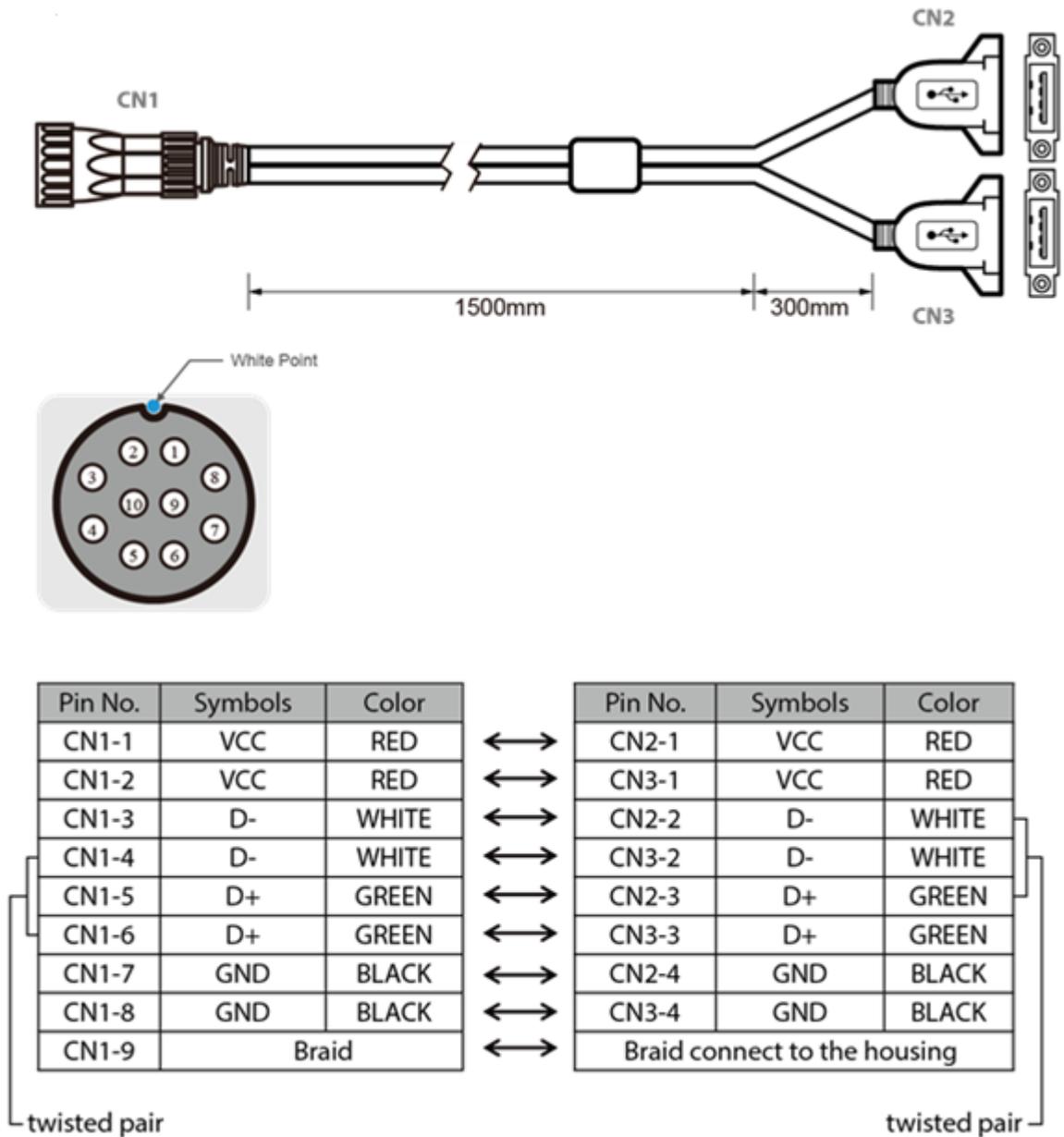
2.3 Turning On and Off

The unit is configured to **Power ON** when is connected to the power source (refer to Ch.2, "Powering On" section of this user manual for more details on how to power on the HMI device).

You can **Turn OFF** the Panel PC with the Windows power settings.
To shut down the device:

1. Tap **Start**   >**Shut down**.

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

Operating the Device

This chapter provides detailed information on how to operate the device. If you have been using touch-screen Panel PCs before, the interface may look familiar. Sections include system settings parameters.

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Chapter 3: Operating the Device

In this chapter you will find instructions on how to operate the Panel PC with Hot Tab.

3.1 Operating System

The IP65 Stainless Resistive Panel PC supports several versions of Windows OS: Windows 10 IoT Enterprise, Windows Embedded 8.1 Industry Pro, Windows Embedded 8 Standard, Windows 7 Pro for Embedded Systems, and Windows Embedded Standard 7 – WS7P.

> **IMPORTANT:**
> The device is shipped with the OS System according to your order. Contact us if you have any questions regarding OS settings.

3.2 How to Enable Watchdog

To enable the Watchdog function, you need to install the Watchdog utility.

To enable watchdog in Watchdog AP follow the instructions below:

1. On the right bottom side of the desktop screen, click [icon] **triangle button** to show hidden icons.

2. Click [icon] icon to open Watchdog utility.
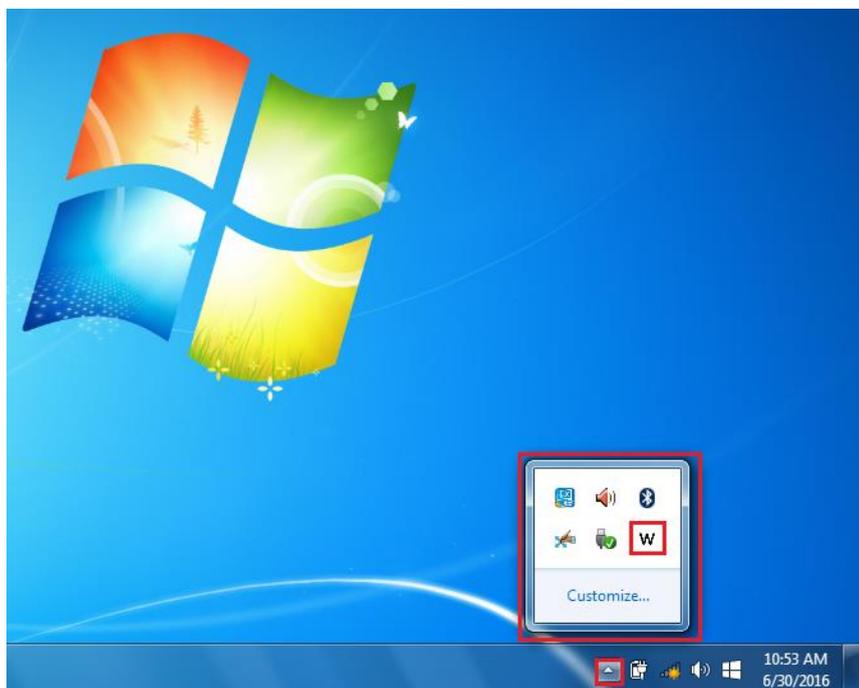
3. In Watchdog utility window you can set watchdog countdown time and periodically feed time.
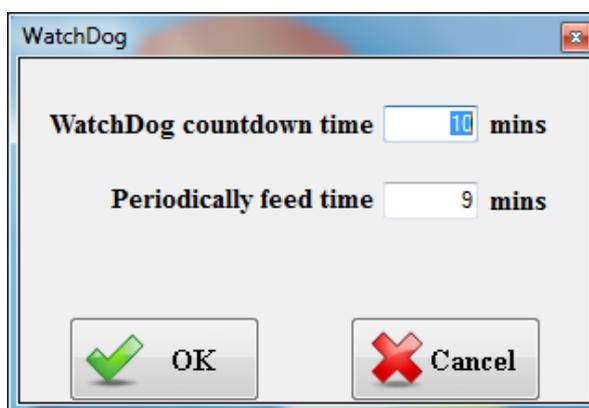
Example:

Every 10 min watchdog will monitor the system, in case any error occurs the system will restart automatically when the countdown time reaches 0.

Every 9 min watchdog timer will be reset to 10 min.

Settings	Description
Watchdog Countdown Time	The system automaticity restarts when this countdown time reaches zero. *Default: 10 min*
Periodically Feed Time	To set a cycle time to automatically reset watchdog timer. *Default: 9 min*

AMI UEFI BIOS Setup

BIOS Setup Utility is a program for configuration basic Input / Output system settings of the computer for optimum use. This chapter provides information on how to use BIOS setup, its functions and menu.

Chapter 4: AMI UEFI BIOS Setup

BIOS Setup Utility is a program for configuration basic Input / Output system settings of the computer for optimum use. This chapter provides information on how to use BIOS setup, its functions and menu.

4.1 When and How to Use BIOS Setup

To enter the BIOS setup, you need to connect an external USB keyboard, press **<Del>** key when the prompt appears on the screen during start up. The prompt screen shows only few seconds, you need to press **<Del>** key quickly. If the message disappears before your respond, restart the system by turning it OFF and ON, and enter the BIOS again.

> **IMPORTANT:**
> Updated BIOS version may be published after the manual released.
> Check the latest version of BIOS on the website.

Run BIOS setup utility for:

1.   Error message on screen indicates to check BIOS setup
2.   Restoring the factory default settings.
3.   Modifying the specific hardware specifications
4.   Necessity to optimize specifications

4.2 BIOS Functions

BIOS Navigation Keys

BIOS navigation keys for keyboard control are listed below.

The following keys are enabled during POST:

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 device.

4.2.1 Main Menu

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

Immediately after the **[DEL]** key is pressed during startup, the main BIOS setup menu appears:

```
                    Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
       Main  Advanced  Chipset  Boot  Security  Save & Exit

       BIOS Information                                                   Intel Reference Code version
       BIOS Vendor                    American Megatrends
       Core Version                   4.6.5.1
       Compliancy                     UEFI 2.3; PI 1.2
       Project Version                ID31V206
       VBIOS Type                     800x600 18bit SC
       Build Date and Time            11/13/2013 10:56:02
    ▶ Intel RC Version

       System Language                [English]

       System Date                    [Fri 01/22/2016]
       System Time                    [02:16:38]                          →←: Select Screen
                                                                          ↑↓: Select Item
       Access Level                   Administrator                       Enter: Select
                                                                          +/-: Change Opt.
                                                                          F1: General Help
                                                                          F2: Previous Values
                                                                          F3: Optimized Defaults
                                                                          F4: Save & Exit
                                                                          ESC: Exit



                    Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.
```

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	Changes to the level of access	Administrator is set up by the default

4.2.2 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.

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

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.

```
          Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
      Main  Advanced  Chipset  Boot  Security  Save & Exit

                                                        Enable or Disable Boot Options
                                                        for Legacy Network Devices.
      Legacy OpROM Support
      Launch PXE OpROM               [Enabled]

    ▶ PCI Subsystem Settings
    ▶ ACPI Settings
    ▶ S5 RTC Wake Settings
    ▶ CPU Configuration
    ▶ IDE Configuration
    ▶ Intel Fast Flash Standy
    ▶ USB Configuration
    ▶ F81866 Super IO Configuration
    ▶ F81866 H/W Monitor
    ▶ PPM Configuration
                                                        ──────────────────────────
                                                        →←: Select Screen
                                                        ↑↓: Select Item
                                                        Enter: Select
                                                        +/-: Change Opt.
                                                        F1: General Help
                                                        F2: Previous Values
                                                        F3: Optimized Defaults
                                                        F4: Save & Exit
                                                        ESC: Exit




          Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.
```
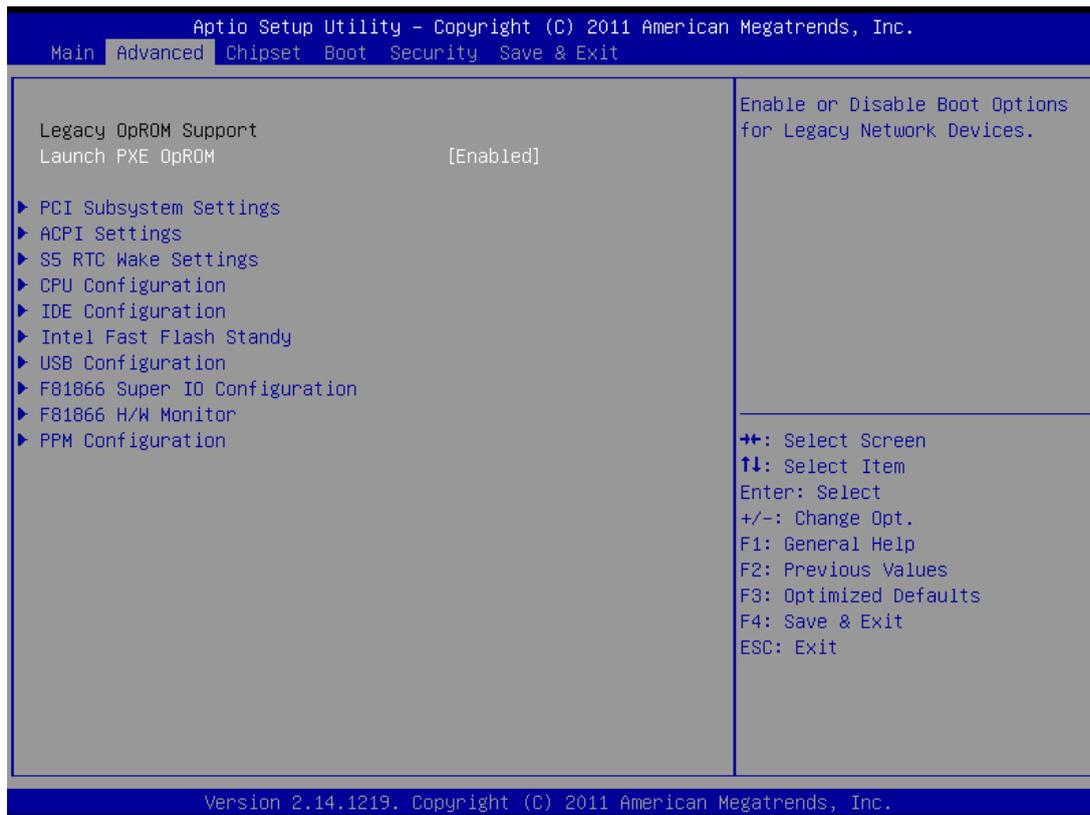
BIOS Setting	Description	Setting Option	Effect
Launch PXE OpROM	Control Launch PXE OpROM parameters. To limit the PXE support to particular devices, use the function Use device for PXE.	Enabled	Load PXE Option ROMs.
		*Disabled	Ignore all PXE Option ROMs.
PCI Subsystem Settings	Configures PCI Subsystem settings	Enter	Opens submenu
ACPI Settings	Configures ACPI settings	Enter	Opens submenu
S5 RTC Wake Settings	Configures RTC Wake parameters	Enter	Opens submenu
CPU Configuration	Configures CPU settings	Enter	Opens submenu
IDE Configuration	Configures IDE Parameters	Enter	Opens submenu
Intel Fast Flash Standy	Configures Intel Fast Flash Standy Parameters	Enter	Opens submenu
USB Configuration	Configures USB Settings	Enter	Opens submenu
F81865 Super IO Configuration	Configures IO settings	Enter	Opens submenu
F81865 H/W Monitor	Configures Hardware Monitor settings	Enter	Opens submenu
PPM Configuration	Configures PPM settings	Enter	Opens submenu

*Default

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

4.2.2.1 PCI Subsystem Settings
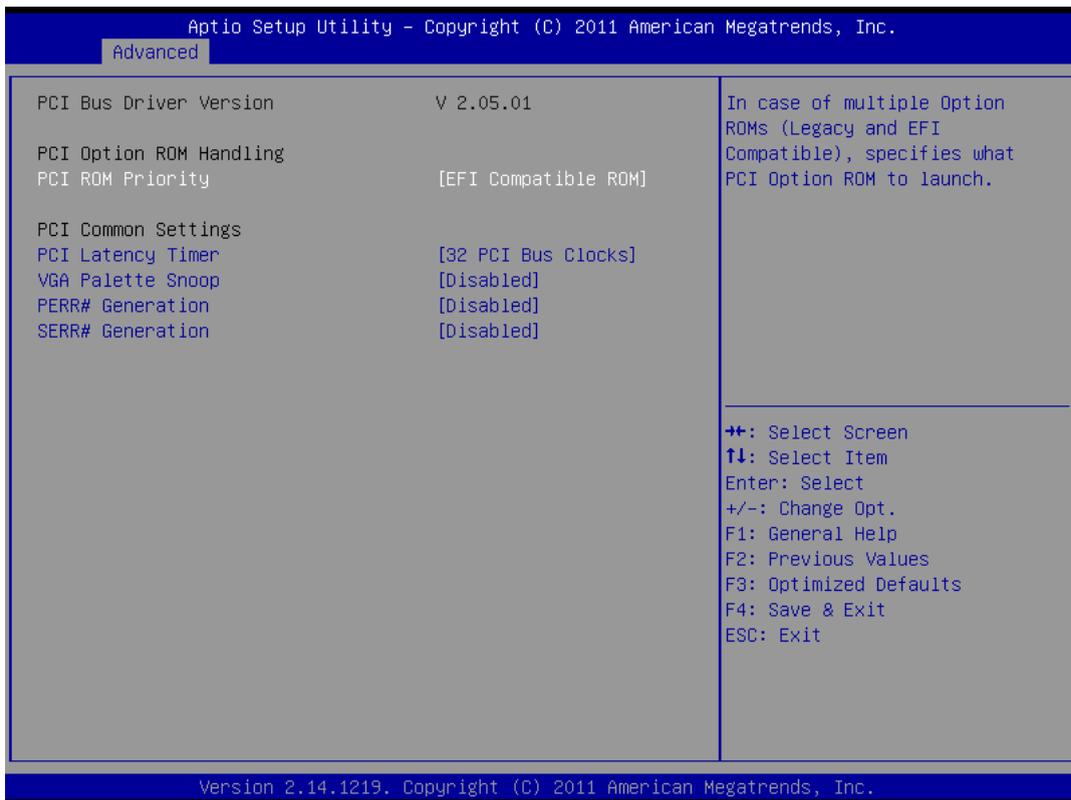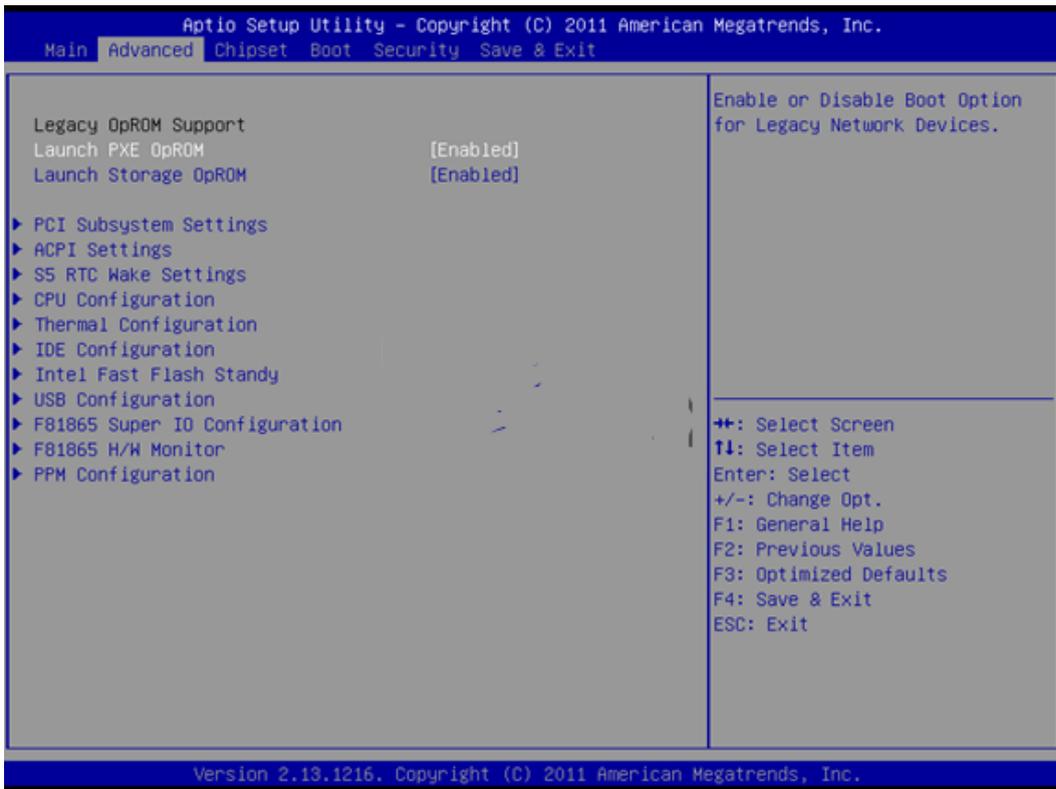
BIOS Setting	Description	Setting Option	Effect
PCI ROM Priority	Selects the PCI Option ROM to launch in case Multiple Option ROMs	Legacy ROM	Launches Legacy ROM
		EFI Compatible ROM	Launches EFI Compatible ROM
PCI Latency Timer	Use this function to select the number of PCI bus clocks to be used for the PCI latency timer.	*32/64/96/128/160/ 192/224/248	Program the PCI latency timer to X PCI bus clocks.
VGA Palette Snoop	Controls the ability of a primary PCI VGA controller to share a common palette (when a snoop writes cycles) with an ISA video card.	Enabled *Disabled	Enables or Disables this function
PERR# Generation	Configure PERR# Generation Settings	Enabled *Disabled	Enables or Disables this function
SERR# Generation	Configure SERR# Generation Settings	Enabled *Disabled	Enables or Disables this function

*Default

4.2.2.2 ACPI Settings

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.

```
                  Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
         Advanced

 ACPI Settings                                              Enables or Disables BIOS ACPI
                                                            Auto Configuration.
 Enable ACPI Auto Configuration        [Disabled]

 Enable Hibernation                    [Enabled]
 ACPI Sleep State                      [S3 (Suspend to RAM)]
 Lock Legacy Resources                 [Disabled]
 S3 Video Repost                       [Disabled]



                                                            →←: Select Screen
                                                            ↑↓: Select Item
                                                            Enter: Select
                                                            +/-: Change Opt.
                                                            F1: General Help
                                                            F2: Previous Values
                                                            F3: Optimized Defaults
                                                            F4: Save & Exit
                                                            ESC: Exit




                  Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.
```
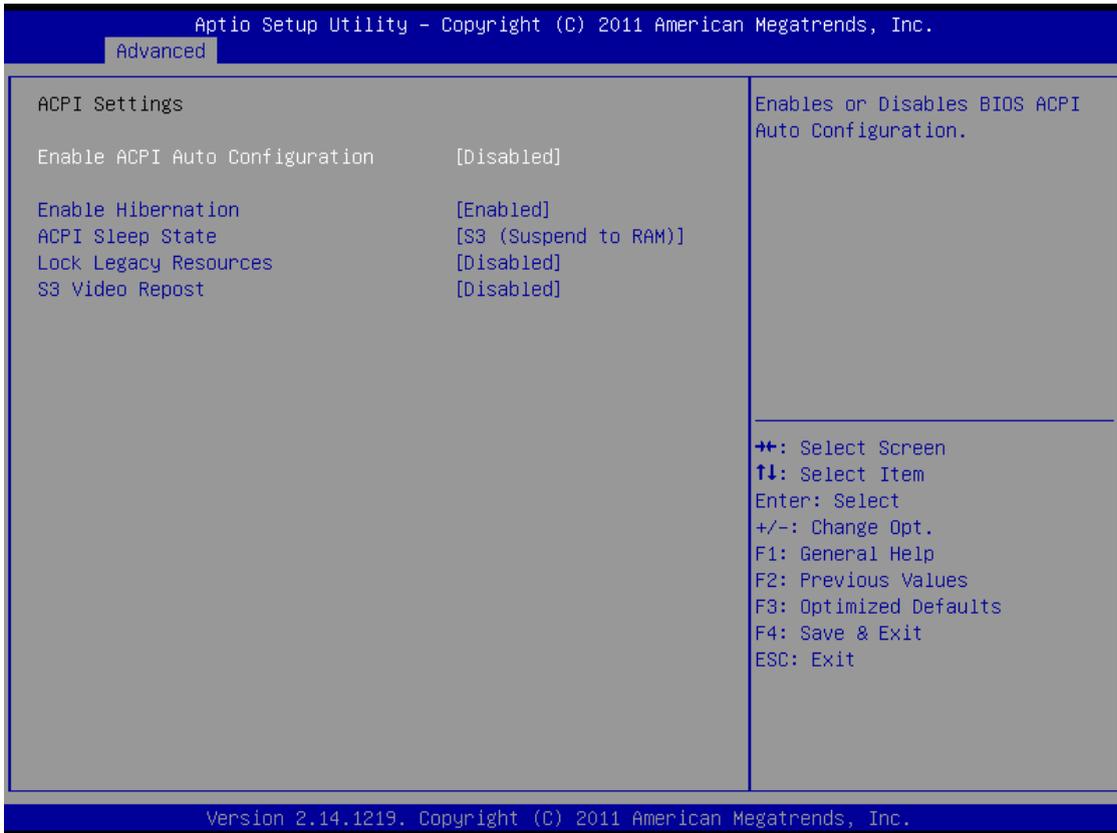
BIOS Setting	Description	Setting Option	Effect
Enable ACPI Auto Configuration	BIOS ACPI Auto Configuration	Enable/ *Disable	Enables or Disables this function
Enable Hibernation	Control hibernation. *This option may be not effective with some OS.*	Enable/ Disable	Enables or Disables this function
ACPI Sleep State	Control ACPI Sleep State parameters	Suspend Disable	System ability to Hibernate (OS/S3 Sleep State)
		S1	CPU Stop Clock
		*S3	Suspend to RAM
Lock Legacy Resources	Control Lock Legacy Resources parameters	Enable/ *Disable	Enables or Disable Lock of Legacy Resource.

| S3 Video Repost | Control S3 Video Repost parameters | Enable/ *Disable | Enables or Disable S3 Video Repost |

Default

4.2.2.3 S5 RTC Wake Settings

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.
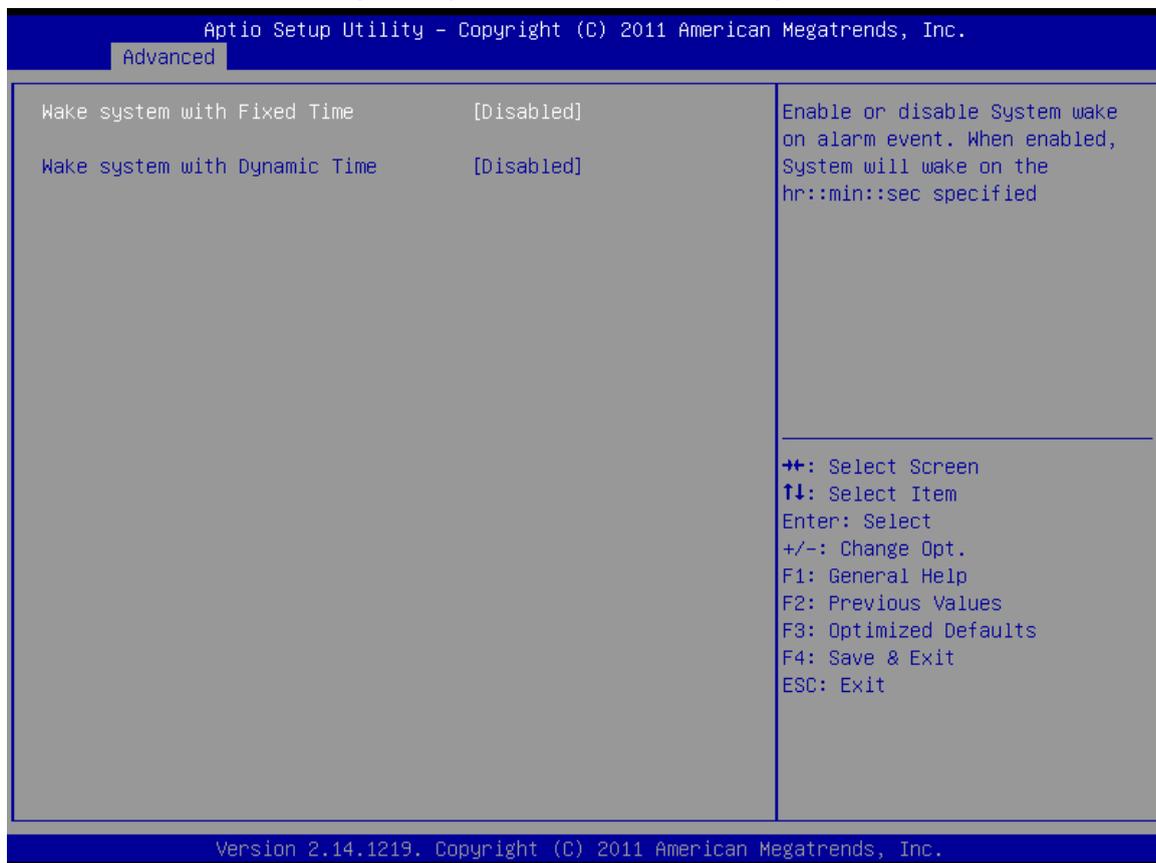
*Default

BIOS Setting	Description	Setting Option	Effect
Wake system with Fixed Time	Control System wake on alarm event settings	Enable/ *Disable	System wake on alarm event. When enabled, System will wake on the HR:MIN:SEC specified
Wake system with Dynamic Time	Set the system to wake on the current time + increase minute (s)	Enabled/	Set the system to wake on the current time + increase minute (s).

4.2.2.4 CPU Configuration

```
Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
 Advanced

CPU Configuration                                         Enabled for Windows XP and
                                                          Linux (OS optimized for
Processor Type         Intel(R) Atom(TM) CPU              Hyper-Threading Technology)
EMT64                  Supported                          and Disabled for other OS (OS
Processor Speed        1600 MHz                           not optimized for
System Bus Speed       400 MHz                            Hyper-Threading Technology).
Ratio Status           16
Actual Ratio           16
System Bus Speed       400 MHz
Processor Stepping     30661
Microcode Revision     268
L1 Cache RAM           2x56 k
L2 Cache RAM           2x512 k
Processor Core         Dual                               ────────────────────────────
Hyper-Threading        Supported
                                                          ↔: Select Screen
Hyper-Threading        [Enabled]                          ↑↓: Select Item
Execute Disable Bit    [Enabled]                          Enter: Select
Limit CPUID Maximum    [Disabled]                         +/-: Change Opt.
                                                          F1: General Help
                                                          F2: Previous Values
                                                          F3: Optimized Defaults
                                                          F4: Save & Exit
                                                          ESC: Exit




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```

BIOS Setting	Description	Setting Option	Effect
Hyper-Threading	Enables for Windows XP and Linux (optimized for Hyper-Threading Technology) and Disabled for other OS (not optimized for Hyper-Threading Technology)	Enable/ Disable	Enables or disables Hyper-Threading Technology
Execute Disable Bit	Configure Execute Disable Bit Settings	Enable/ Disable	Enables or disables Disable Bit Execution
Limit CPUID Maximum	Configure Limit CPUID Maximum Settings	Enable/ Disable	Enables or disables Limit CPUID Maximum

4.2.2.5 SATA Configuration

```
           Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
        Advanced

   SATA Port0                        Not Present          SATA Ports (0-3) Device Names
   SATA Port1                        Not Present          if Present and Enabled.

      SATA Controller(s)             [Enabled]

   Configure SATA as                 [AHCI]
     Port0 Speed Limit               [No Limit]
     Port1 Speed Limit               [No Limit]

     SATA Port 0                     [Enabled]
     SATA Port 0 Hot Plug            [Enabled]
     SATA Port 1                     [Enabled]
     SATA Port 1 Hot Plug            [Enabled]

   Misc Configuration for hard disk
                                                          ↔: Select Screen
                                                          ↑↓: Select Item
                                                          Enter: Select
                                                          +/-: Change Opt.
                                                          F1: General Help
                                                          F2: Previous Values
                                                          F3: Optimized Defaults
                                                          F4: Save & Exit
                                                          ESC: Exit

           Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.
```

BIOS Setting	Description	Setting Option	Effect
SATA Controller (s)	SATA Ports (0-3) Device Names if Present and Enabled	Enable/ Disable	Enables or Disables SATA Ports (0-3)
Configure SATA as	Allows users to select mode of SATA controller(s).	ACHI	Work in AHCI mode of SATA controller(s)
Port0 Speed Limit	Allow users to set Port0 Speed Limit	No Limit	No speed limit
Port1 Speed Limit	Allow users to set Port1 Speed Limit	No Limit	No speed limit
SATA Port 0	Allows users to enable or disable the SATA Port 0.	Enabled/ Disabled	Enable or disable this function
SATA Port 0 Hot Plug	Allows users to enable or disable the Port 0 Hot Plug.	Enabled/ Disabled	Enable or disable this function
SATA Port 1	Allows users to enable or disable the SATA Port 1.	Enabled/ Disabled	Enable or disable this function
SATA Port 1 Hot Plug	Allows users to enable or disable Port 0 Hot Plug	Enabled/ Disabled	Enable or disable this function

6.2.2.6 iFFS Support
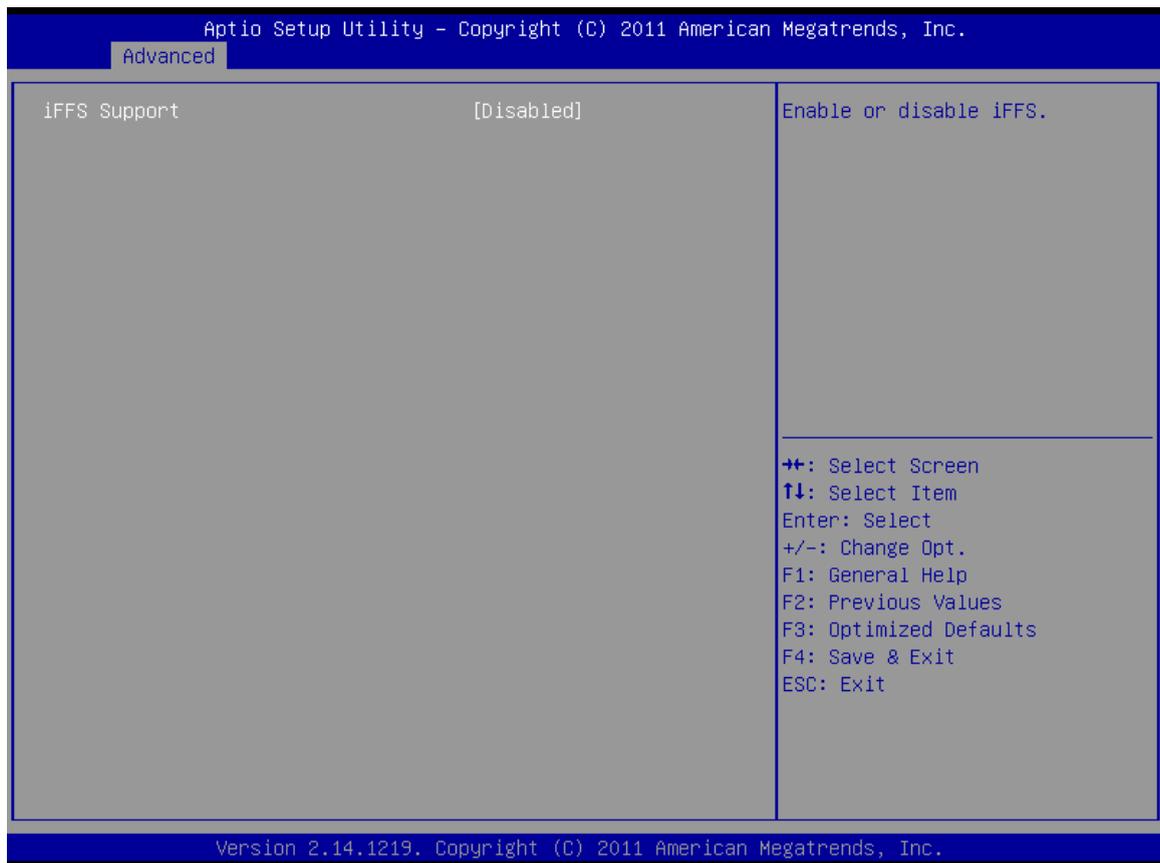
BIOS Setting	Description	Setting Option	Effect
iFFS Support	Control iFFS Support parameters	Enable/ Disable	Enables or Disables this function

4.2.2.7 USB Configuration

```
              Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
     Advanced

   USB Configuration                                        Enables Legacy USB support.
                                                            AUTO option disables legacy
   USB Devices:                                             support if no USB devices are
         1 Drive, 1 Keyboard, 1 Mouse, 1 Hub               connected. DISABLE option will
                                                            keep USB devices available
   Legacy USB Support                 [Enabled]            only for EFI applications.
   EHCI Hand-off                      [Disabled]
   USB Mass Storage Driver Support    [Enabled]

   USB hardware delays and time-outs:
   USB transfer time-out              [20 sec]
   Device reset time-out              [20 sec]
   Device power-up delay              [Auto]                ─────────────────────────────
                                                            ↔: Select Screen
   Mass Storage Devices:                                    ↑↓: Select Item
   ADATA USB Flash Drive 1.00         [Auto]                Enter: Select
                                                            +/-: Change Opt.
                                                            F1: General Help
                                                            F2: Previous Values
                                                            F3: Optimized Defaults
                                                            F4: Save & Exit
                                                            ESC: Exit



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```

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
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 |

4.2.2.8 F81865 Super IO Configuration

IP65 Stainless Resistive Panel PC

BIOS Setting	Description	Setting Option	Effect
Serial Port 1,2,3 ,4,5 Configuration	Set Parameters of Serial Ports. User can Enable/Disable the serial port and select optimal settings for the super IO Device.	Enabled/ Disabled	Enable or disable Serial Port (COM)
IO GPI0 Configuration	You can use the screen to select options for IO GPI0 (0~7) Configuration.	A description of the selected item appears on the right side of the screen. For items marked with ►, please press <Enter> for more options. Options: Input/ Output	Change the value of the option selected.
Watch Dog Time Select	This watchdog timer can be used to monitor system software operation and take corrective action if the software fails to function after the programmed period.	1~10 min/ Disabled	Set the time 1~10 min or disable this function

4.2.2.9 PC Health Status

You can check System temperature, fan speed and other PC Health Status parameters.

```
            Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
       Advanced

       Pc Health Status

       System temperature1              : +35 C
       System temperature2              : +35 C
       VIN1                             : +0.984 V
       VIN2                             : +12.496 V
       VIN3                             : +3.424 V
       VIN4                             : +5.129 V
       VSB5V                            : +5.208 V
       VCC3V                            : +3.392 V
       VSB3V                            : +3.408 V
       VBAT                             : +3.280 V

                                                        →←: Select Screen
                                                        ↑↓: Select Item
                                                        Enter: Select
                                                        +/-: Change Opt.
                                                        F1: General Help
                                                        F2: Previous Values
                                                        F3: Optimized Defaults
                                                        F4: Save & Exit
                                                        ESC: Exit

            Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.
```

4.2.2.10 PPM Configuration
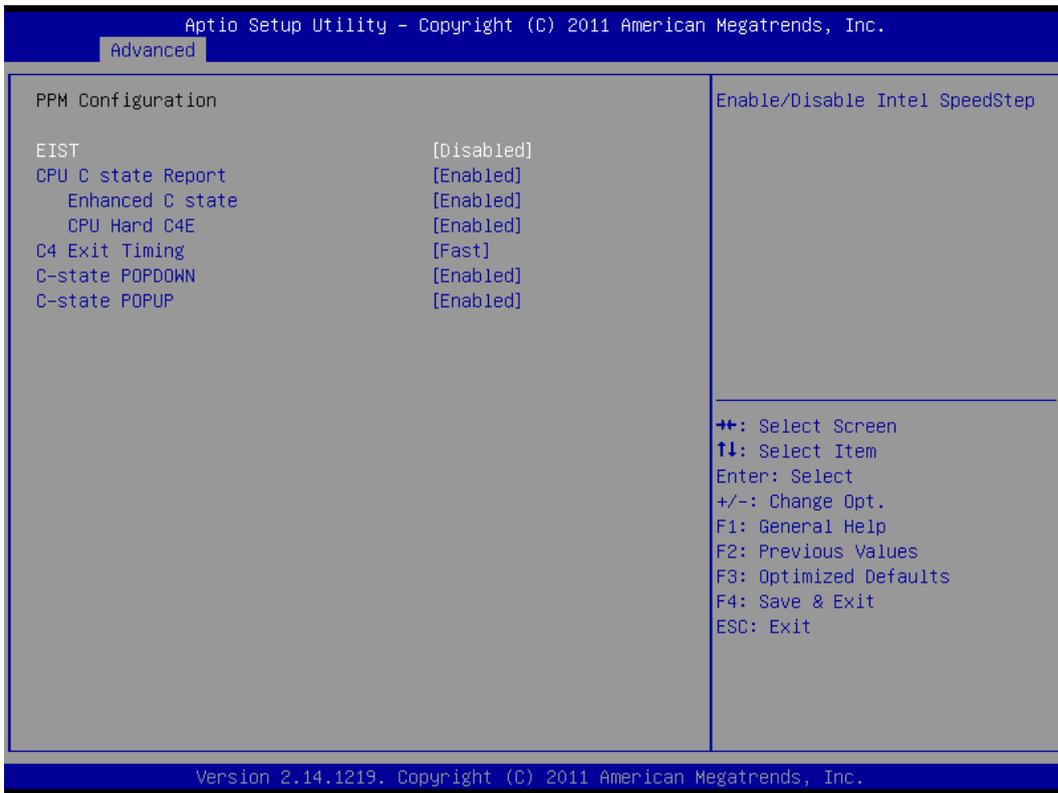
BIOS Setting	Description	Setting Option	Effect
EIST	Configure Intel Speed Step (EIST) parameters	Enabled/ Disabled	Enable or disable Intel Speed Step (EIST)
CPU C state Report	Configure CPU C state Report parameters	Enabled/ Disabled	Enable or disablethis function
• Enhanced C state	Configure Enhanced C state parameters	Enabled/ Disabled	Enable or disablethis function
• CPU Hard C4E	Configure CPU Hard C4E parameters	Enabled/ Disabled	Enable or disablethis function
• C4 Exit Timing	Configure C4 Exit Timing parameters	Enabled/ Disabled	Enable or disablethis function
C-state POPDOWN	Configure C-state POPDOWN parameters	Enabled/ Disabled	Enable or disablethis function
C-state POPUP	Configure C-state POPUP parameters	Enabled/ Disabled	Enable or disablethis function

4.2.3 Chipset

```
           Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
     Main   Advanced   Chipset   Boot   Security   Save & Exit

  ▶ Host Bridge                                       Host Bridge Parameters
  ▶ South Bridge




                                                      ➜←: Select Screen
                                                      ↑↓: Select Item
                                                      Enter: Select
                                                      +/-: Change Opt.
                                                      F1: General Help
                                                      F2: Previous Values
                                                      F3: Optimized Defaults
                                                      F4: Save & Exit
                                                      ESC: Exit



           Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.
```
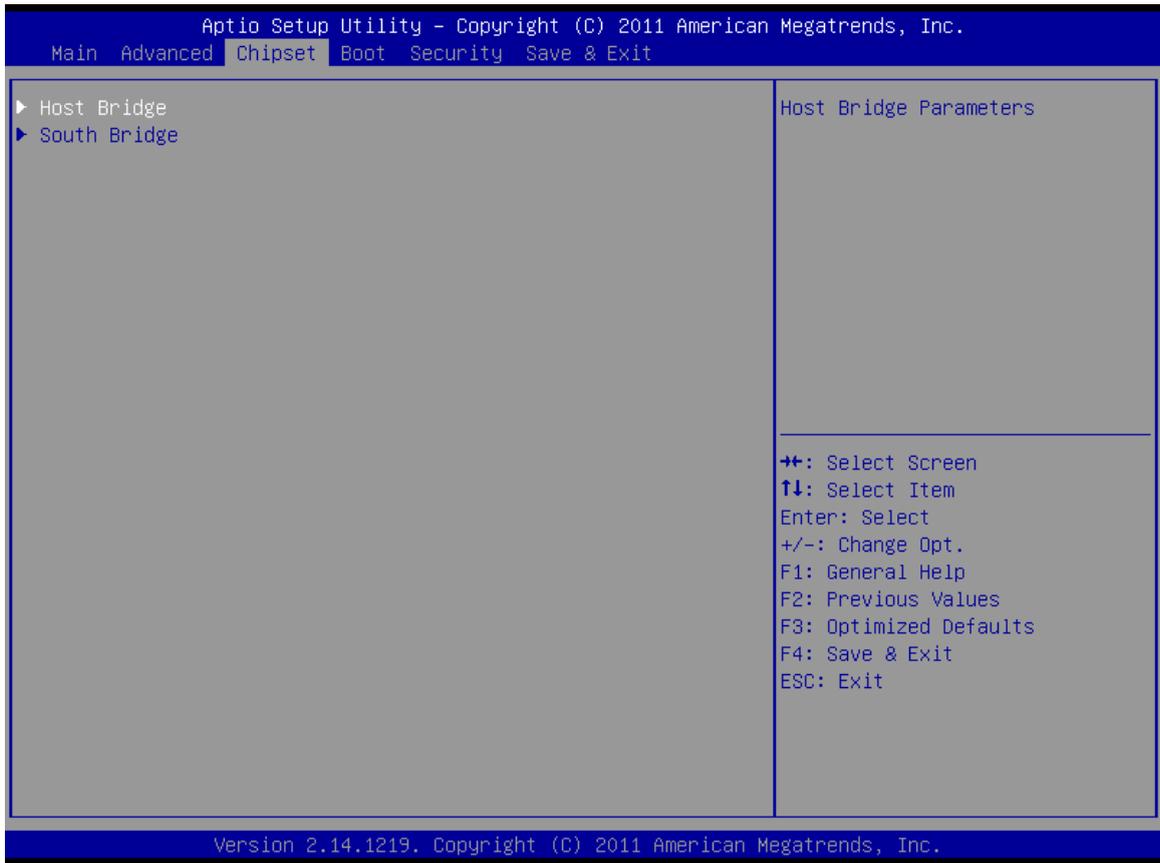
BIOS Setting	Description	Setting Option	Effect
Host Bridge	Configure Host Bridge parameters	Enter	Opens sub-menu
South Bridge	Configure South Bridge parameters	Enter	Opens sub-menu

4.2.3.1 Host Bridge

You can check memory information: memory frequency, total memory and DIMM#0.

```
         Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
          Chipset

 ▶ Memory Frequency and Timing                          Config Memory Frequency and
 ▶ Intel IGD Configuration                              Timing Settings.

   ****** Memory Information ******
   Memory Frequency                    800 MHz(DDR3)
   Total Memory                        1024 MB
   DIMM#0                              1024 MB


                                                        →←: Select Screen
                                                        ↑↓: Select Item
                                                        Enter: Select
                                                        +/-: Change Opt.
                                                        F1: General Help
                                                        F2: Previous Values
                                                        F3: Optimized Defaults
                                                        F4: Save & Exit
                                                        ESC: Exit




         Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.
```

BIOS Setting	Description	Setting Option	Effect
Memory Frequency Timing	Configures Memory Frequency and Timing Settings	Enter	Opens submenu
Intel IGD Configuratgion	Configures Intel IGO Settings	Enter	Opens submenu

4.2.3.2 South Bridge

```
            Aptio Setup Utility – Copyright (C) 2011 American Megatrends, Inc.
              Chipset

  ▶ TPT Devices                                      Enable/Disable Intel(R) IO
  ▶ PCI Express Root Port 0                          Controller Hub (TPT) devices
  ▶ PCI Express Root Port 1
  ▶ PCI Express Root Port 2
  ▶ PCI Express Root Port 3

    DMI Link ASPM Control              [Enabled]
    PCI-Exp. High Priority Port        [Disabled]

    High Precision Event Timer Configuration
    High Precision Timer               [Enabled]

    SLP_S4 Assertion Width             [1-2 Seconds]
    Restore AC Power Loss              [Power Off]
                                                     →←: Select Screen
                                                     ↑↓: Select Item
                                                     Enter: Select
                                                     +/-: Change Opt.
                                                     F1: General Help
                                                     F2: Previous Values
                                                     F3: Optimized Defaults
                                                     F4: Save & Exit
                                                     ESC: Exit




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```

| BIOS Setting	Description	Setting Option	Effect
TPT Devices	Enable/Disable Intel ® IO Controller Hub (TPT) devices	Enter	Opens submenu
PCI Express Root Port 0~3	Configure PCI Express Root Port 0~3 settings	Enter	Opens submenu
DMI Link ASPM Control	Configure DMI Link ASPM Control settings	Enable/ Disable	Enables or disables this function
PCI-Exp. High Priority Port	Configures PCI-Exp. High Priority Port settings	Enable/ Disable	Enables or disables this function
High Precision Timer	Configures High Precision Timer settings	Enable/ Disable	Enables or disables this function
SLP S4 Assertion Width	Configures SLP S4 Assertion Width settings	1-2 sec.	Sets up SLP S4 Assertion Width
Restore AC Power Loss	Configures Restore AC Power Loss settings	Power Off/ Power On	

TPT device

```
                    Aptio Setup Utility – Copyright (C) 2011 American Megatrends, Inc.
                    Chipset

   Azalia Controller                   [HD Audio]               Azalia Controller
     Azalia PME Enable                 [Disabled]
     Azalia Vci Enable                 [Enabled]

   UHCI #1 (ports 0 and 1)             [Enabled]
   UHCI #2 (ports 2 and 3)             [Enabled]
   UHCI #3 (ports 4 and 5)             [Enabled]
   UHCI #4 (ports 6 and 7)             [Enabled]
   USB 2.0(EHCI) Support               [Enabled]

   SMBus Controller                    [Enabled]


                                                               →←: Select Screen
                                                               ↑↓: Select Item
                                                               Enter: Select
                                                               +/-: Change Opt.
                                                               F1: General Help
                                                               F2: Previous Values
                                                               F3: Optimized Defaults
                                                               F4: Save & Exit
                                                               ESC: Exit



                    Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.
```

| BIOS Setting	Description	Setting Option	Effect
TPT Devices	Enable/Disable Intel ® IO Controller Hub (TPT) devices	Enter	Opens submenu
PCI Express Root Port 0~3	Configure PCI Express Root Port 0~3 settings	Enter	Opens submenu
DMI Link ASPM Control		Enable/ Disable	Enables or disables this function
PCI-Exp. High Priority Port		Enable/ Disable	Enables or disables this function

PCI Express Settings

```
              Aptio Setup Utility – Copyright (C) 2011 American Megatrends, Inc.
                Chipset

  PCI Express Port 0                  [Enabled]              Enable / Disable PCI Express
    Port 0 IOxAPIC                    [Disabled]             Root Port 0.
  Automatic ASPM                      [Auto]
    URR                               [Disabled]
    FER                               [Disabled]
    NFER                              [Disabled]
    CER                               [Disabled]
    CTO                               [Disabled]
    SEFE                              [Disabled]
    SENFE                             [Disabled]
    SECE                              [Disabled]
    PME SCI                           [Enabled]
    Hot Plug                          [Disabled]
                                                             ──────────────────────────
                                                             ↔: Select Screen
  Extra Bus Reserved                  0                      ↑↓: Select Item
  Reseved Memory                      10                     Enter: Select
  Reserved I/O                        4                      +/–: Change Opt.
                                                             F1: General Help
                                                             F2: Previous Values
                                                             F3: Optimized Defaults
                                                             F4: Save & Exit
                                                             ESC: Exit




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```

BIOS Setting	Description	Setting Option	Effect
TPT Devices	Enable/Disable Intel ® IO Controller Hub (TPT) devices	Enter	Opens submenu
PCI Express Root Port 0~3	Configure PCI Express Root Port 0~3 settings	Enter	Opens submenu
DMI Link ASPM Control		Enable/ Disable	Enables or disables this function

4.2.4 Boot

```
          Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
    Main  Advanced  Chipset  Boot  Security  Save & Exit

  Boot Configuration                                          Number of seconds to wait for
  Setup Prompt Timeout              1                         setup activation key.
  Bootup NumLock State              [On]                      65535(0xFFFF) means indefinite
                                                              waiting.
  Quiet Boot                        [Disabled]
  Fast Boot                         [Enabled]
   VGA Support                      [EFI Driver]
   USB Support                      [Partial Initial]
   PS2 Devices Support              [Enabled]
   NetWork Stack Driver Support     [Disabled]

  CSM16 Module Version              07.65
                                                              _____
  GateA20 Active                    [Upon Request]           ↔: Select Screen
  Option ROM Messages               [Force BIOS]             ↑↓: Select Item
  Interrupt 19 Capture              [Disabled]               Enter: Select
                                                             +/-: Change Opt.
  Boot Option Priorities                                     F1: General Help
  Boot Option #1                    [ADATA USB Flash Dr...]  F2: Previous Values
  Boot Option #2                    [MBA v12.4.6  Slot ...]  F3: Optimized Defaults
  Boot Option #3                    [UEFI: ADATA USB Fl...]  F4: Save & Exit
  Boot Option #4                    [UEFI: Built-in EFI...]  ESC: Exit

  Network Device BBS Priorities
  Hard Drive BBS Priorities


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```

BIOS Setting	Description	Setting Option	Effect
Setup Prompt Timeout	Number of seconds to wait for setup activation key	1~X	Set the number of seconds
Bootup Numlock State	Select the keyboard NumLock state	On/ Off	Set the keyboard NumLock state parameters
Quiet Boot	Configure Quiet Boot Settings	Enabled/ Disabled	Enables or disables Quiet Boot option
Fast Boot	Enables or disables boot with initialization of a minimal set of devices required to launch active boot option. Has no effect for BBS boot options	Enabled/ Disabled	Enables or disables Fast Boot option

		Auto	Only install Legacy OpRom with Legacy OS and logo would NOT be shown during post. Efi driver will still be installed with EFi OS.
• VGA Support	Configures VGA Support settings	EFI Driver	
• USB Support	Configures USB Support settings	Disabled	All USB devices will NOT be available until after OS boot
		Full Initial	All USB devices will be available in OS and POST
		Partial Initial	Specific USB port/device will not be available before OS boot
• PS2 Device Support	Configures PS2 Device Support settings	Enable/ Disable	If Disabled, PS2 devices will be skipped
• Network Stack Driver Support	Configures Network Stack Driver Support settings	Enable/ Disable	If Disabled, NetWork Stack Driver will be skipped
Gate A20 Active	Configures Gate A20 Active settings	Upon Request	GA20 can be disabled using BIOS services
		Always Active	Do not allow disabling GA20; this option is useful when any RT code is executed above 1MB
Option ROM Messages	Set display mode for Option ROM	Force BIOS/ Keep Current	Set display mode for Option ROM
Interrupt 19 Capture	Configures Interrupt 19 Capture settings	Disable	Disable this function
		Enable	Allows Option ROMs to trap Int 19
Boot Option 1~4	Set the system Boot order	UEFI: Built-in EFI Shell	Set the parameter for each Boot Option 1~3

		SATA SM: ADATA XM15 32Gb	Set the parameter for each Boot Option 1~3
		UEFI: ADATA USB Flash Drive 1.00	Set the parameter for each Boot Option 1~3
		Disabled	Disable this function
Network Device BBS Priorities	Network Device BBS Parameters	Enter	Opens sub-menu
Hard Drive BBS Priorities	Hard Drive BBS Parameters	Enter	Opens sub-menu

4.2.5 Security

This section allows you to configure and improve your system and allows you to set up some system features according to your preference.

```
         Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
          Main  Advanced  Chipset  Boot  Security  Save & Exit

         Password Description                         Set Administrator Password

         If ONLY the Administrator's password is set,
         then this only limits access to Setup and is
         only asked for when entering Setup.
         If ONLY the User's password is set, then this
         is a power on password and must be entered to
         boot or enter Setup. In Setup the User will
         have Administrator rights.
         The password length must be
         in the following range:
         Minimum length                  3
         Maximum length                  20

                                                     →←: Select Screen
                                                     ↑↓: Select Item
         Administrator Password                      Enter: Select
         User Password                               +/-: Change Opt.
                                                     F1: General Help
                                                     F2: Previous Values
                                                     F3: Optimized Defaults
                                                     F4: Save & Exit
                                                     ESC: Exit



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```

BIOS Setting	Description	Setting Option	Effect
Adminisrator Password	Displays whether or not an administrator password has been set.	Enter password. Length 3~20	If only Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup/
User Password	Display whether or not a user password has been set.	Enter password. Length 3~20	If only User's password is set. Then this is a power on password and must be entered to boot or enter setup. In Setup the User will have Administrator rights

4.2.6 Save & Exit

```
            Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
     Main  Advanced  Chipset  Boot  Security  Save & Exit

   Save Changes and Exit                              Reset the system after saving
   Discard Changes and Exit                           the changes.
   Save Changes and Reset
   Discard Changes and Reset

   Save Options
   Save Changes
   Discard Changes

   Restore Defaults
   Save as User Defaults
   Restore User Defaults

   Boot Override
   UEFI: Built-in EFI Shell                           →←: Select Screen
   MBA v12.4.6  Slot 0100                             ↑↓: Select Item
   MBA v12.4.6  Slot 0200                             Enter: Select
   ADATA USB Flash Drive 1.00                         +/-: Change Opt.
   UEFI: ADATA USB Flash Drive 1.00                   F1: General Help
                                                      F2: Previous Values
                                                      F3: Optimized Defaults
                                                      F4: Save & Exit
                                                      ESC: Exit



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```

BIOS Setting	Description	Setting Option	Effect
Save Changes and 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	<YES>	Saves the changes

	setup options.	<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 Defaults	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

4.3 Using Recovery Wizard to Restore Computer

Note:
Before starting the recovery process, make sure to backup all user data.
The data will be lost after the recovery process.

To enable quick one-key recovery procedure:

- Plug-in the AC adapter to Bay Trail series computer. Make sure the computer stays plugged in to power source during the recovery process.
- Turn on the computer, and when the boot screen shows up, press the **F6** to initiate the Recovery Wizard.
- The following screen shows the Recovery Wizard. Click **Recovery** button to continue.

A warning message about data loss will show up. Make sure the data is backed up before recovery, and click **Yes** to continue.

Wait the recovery process to complete. During the recovery process, a command prompt will show up to indicate the percent of recovery process complete. The system will restart automatically after recovery completed.
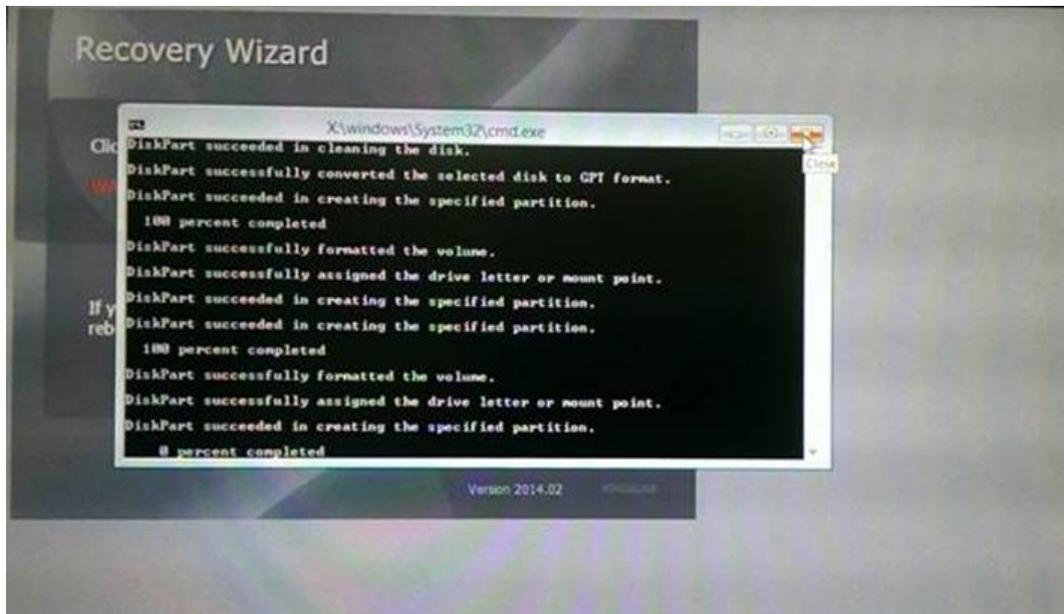
Driver Installation

This chapter describes how to install all necessary drivers.

5

Chapter 5: Driver Installation

This chapter provides guideline to driver installations.

5.1 Chipset Driver

Step 1 Insert the CD that comes with the motherboard. Open the file document "Chipset Driver".

Step 2 In the opened folder double-click **infinst_autol** to execute the setup.
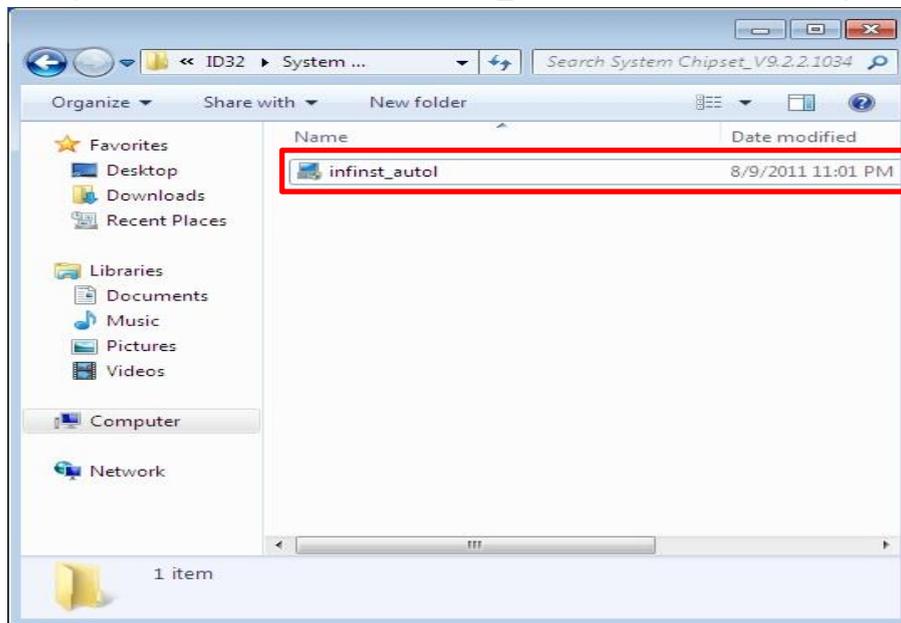
Step 3 Welcome to the Setup Program window appears**.** Click **Next** to start installation.

Step 4 Read License Agreement and click **Yes** to agree the license terms.

Step 5 Refer to the Readme file to view the system requirements and installation information. Click **Next** to continue.
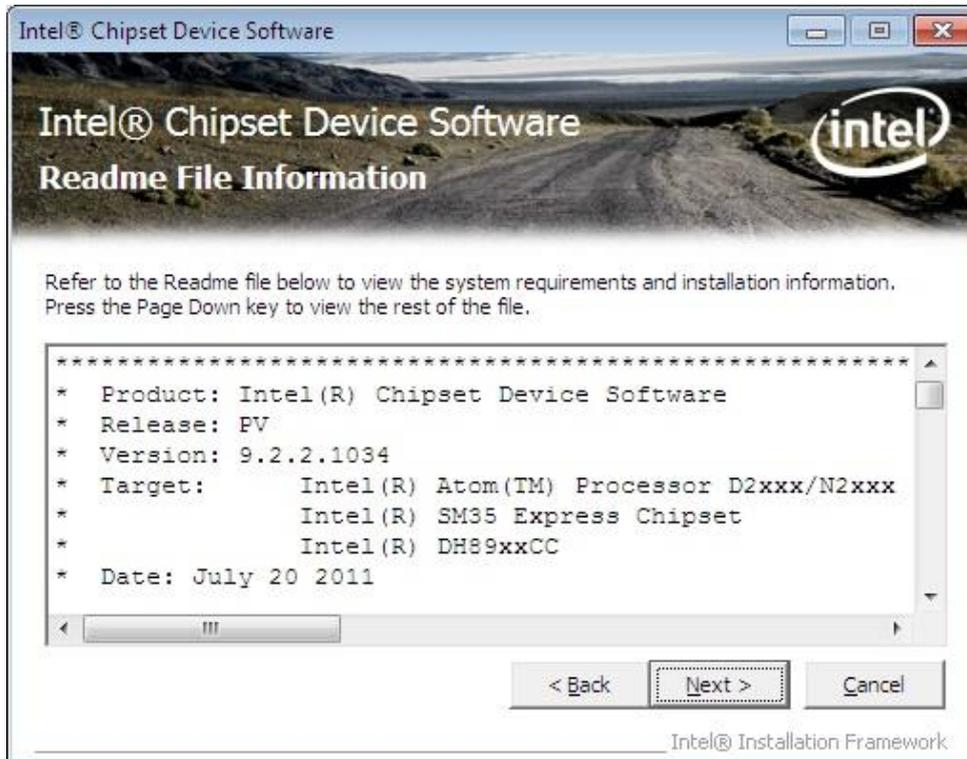
Step 6 Software setup progress window will appear, click **Next** to continue.

Step 7 Click **"Yes, I want to restart this computer now"** to finish the installation

5.2 Graphics Driver

Step 1 Insert the CD that comes with the motherboard. Open the file document "Graphics Driver" and click **Setup** to execute the setup.
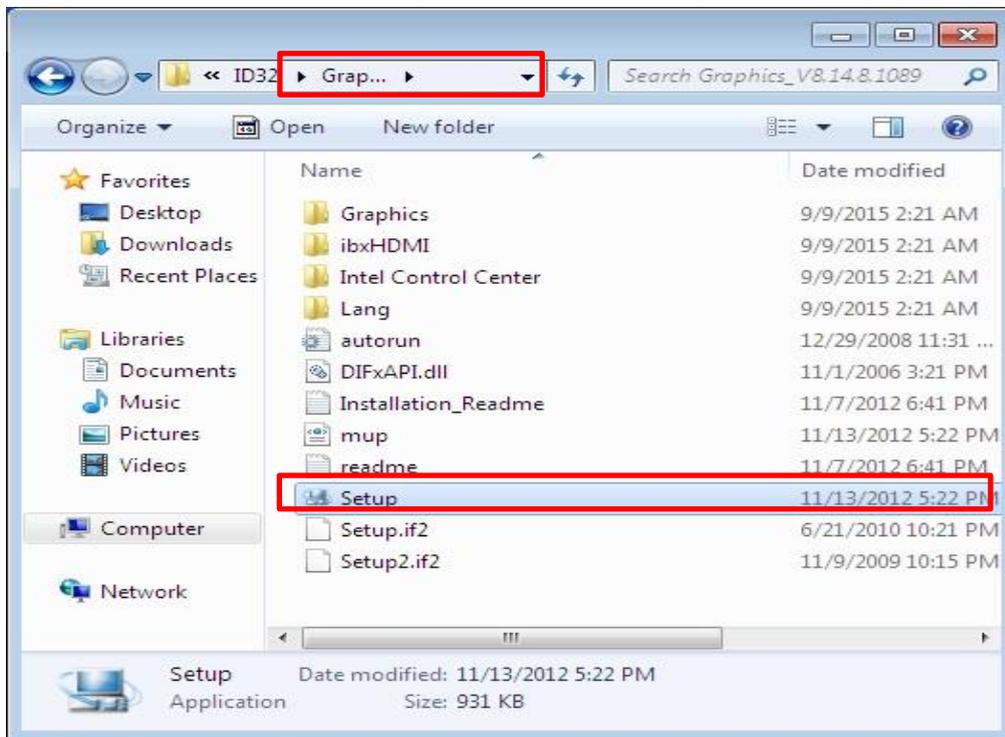
Step 2 Setup Welcome Window will appear, click **Next** to continue the process.
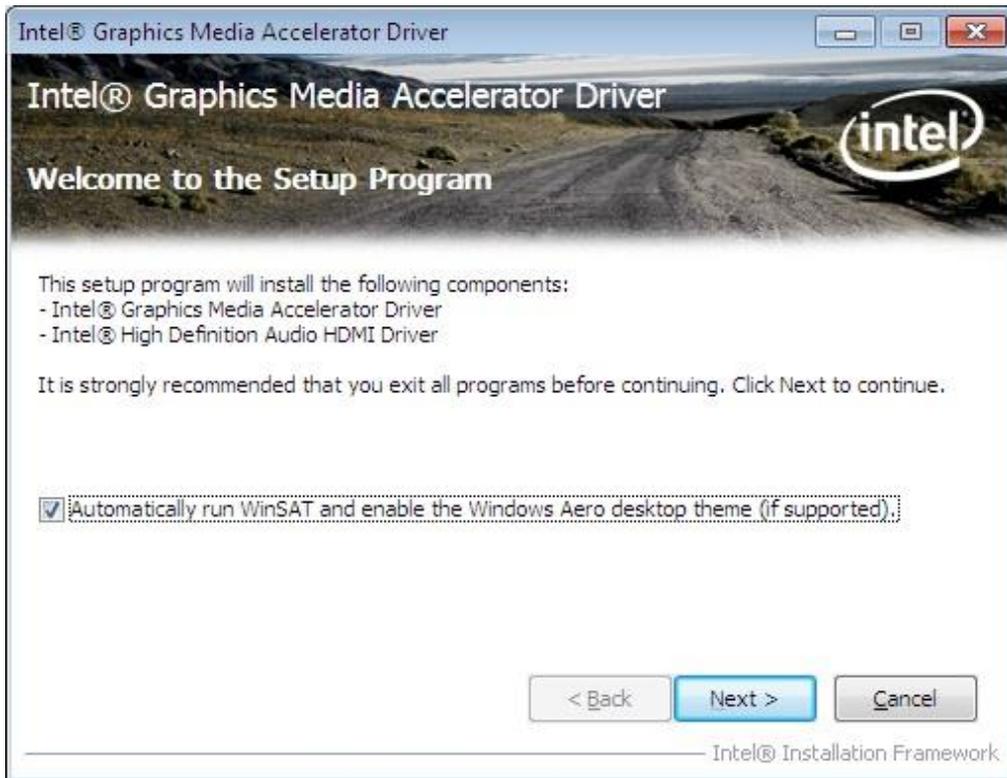
Step 3 Carefully read the license terms and click **Yes** to agree.

Step 4 Check Readme file information, and click **Next** to install driver.
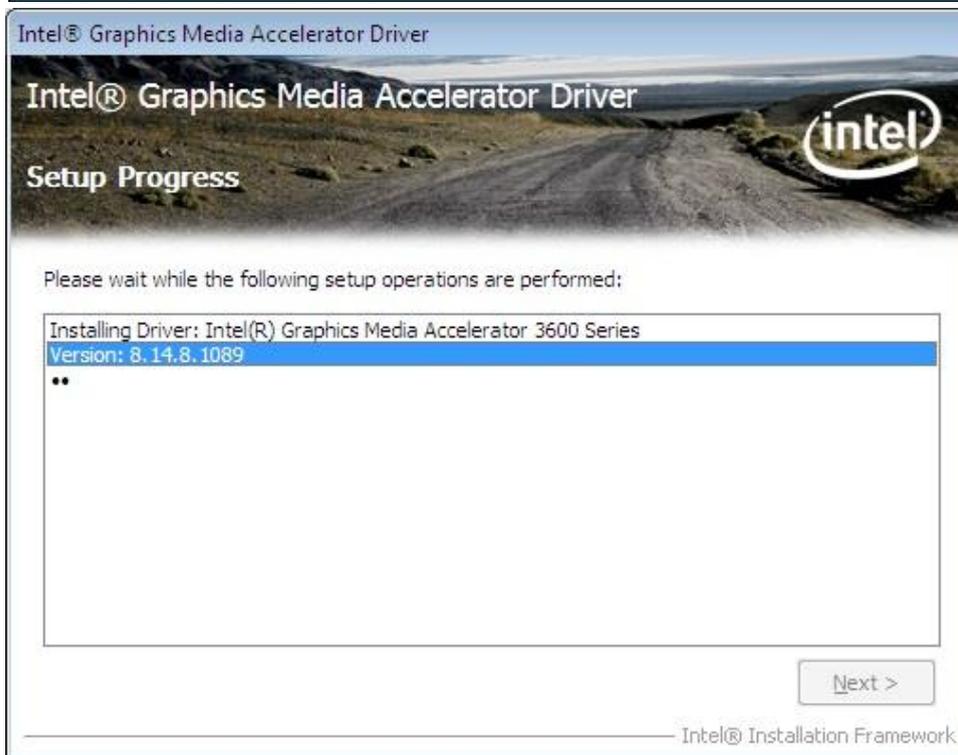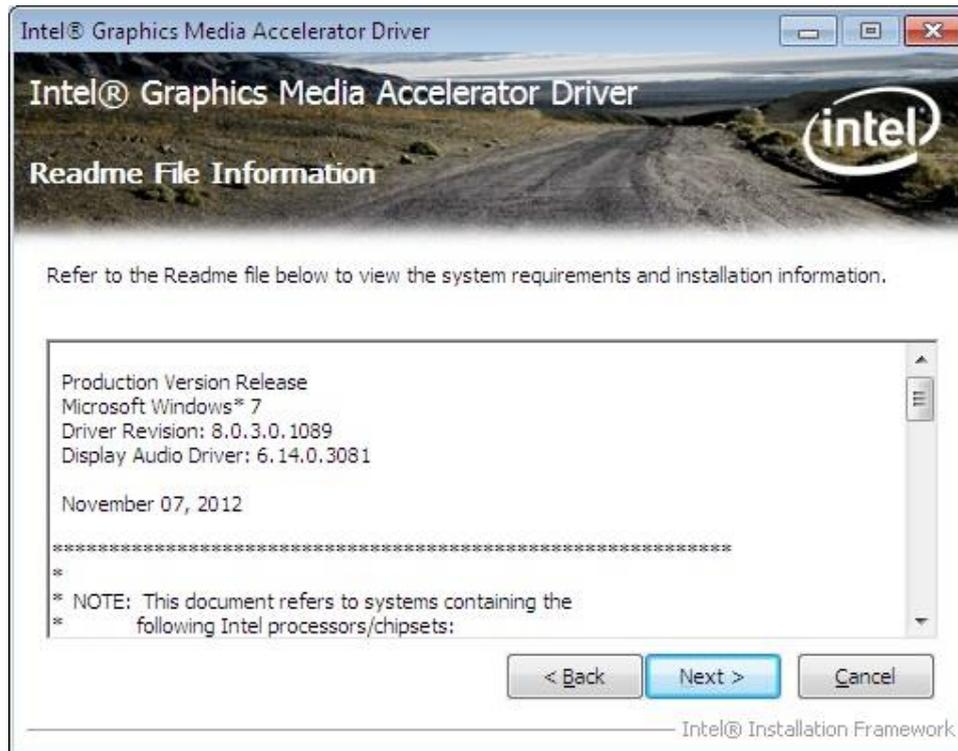
Step 5 Click **Next** to continue.
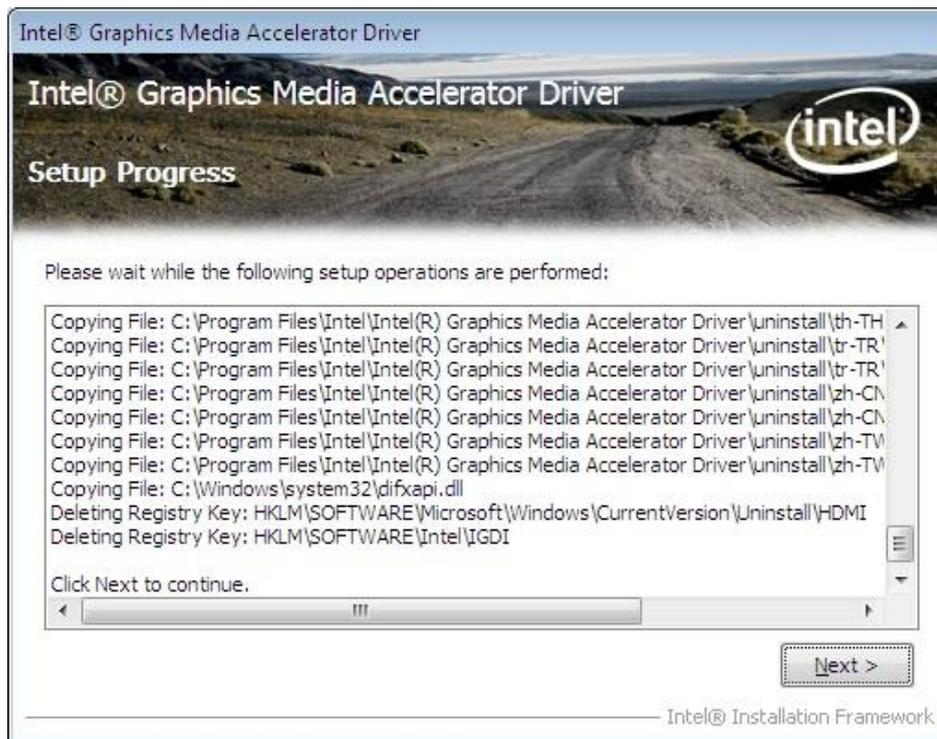
Step 6 Setup is complete, select **"Yes, I want to restart this computer now"**. Click **Finish** to complete the installation and restart the computer.

5.3 Audio Driver

The ALC886 series are high-performance 7.1+2 channel high definition audio codecs that provide ten DAC channels for simultaneous support of 7.1 sound playback, plus 2 channels of independent stereo sound output (multiple streaming) through the front panel stereo outputs. The series integrates two stereo ADCs that can support a stereo microphone, and feature Acoustic Echo Cancellation (AEC), Beam Forming (BF), and Noise Suppression (NS) technology.

Step 1 Insert the CD that comes with the motherboard. Open the file document "Audio Driver" and click "Setup.exe" to install the driver.
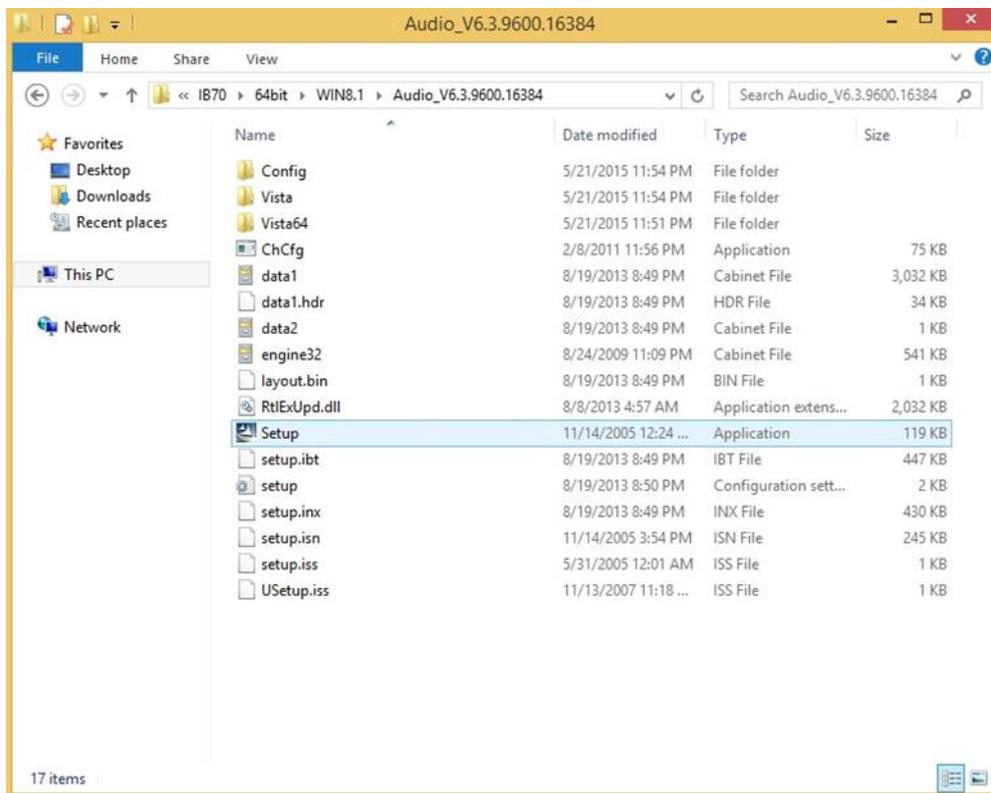
Step 2 Please wait while the InstalShield Wizard prepares the setup.

Step 3 Welcome window will appear, click **Next** to install the driver.

Step 4 It might take some time to configure new software installation. Please wait.

Step 5 Windows security will appear, click **Install** to install the audio driver.

Step 6 The installation is complete, select **"Yes, I want to restart my computer now"**, and click **Finish** to complete the installation.

5.4 Ethernet Driver

Step 1.**Right-click** on the desktop, and then click **Properties.**
Step 2 In the **Other device** dialog box go to **Ethernet Controller**.
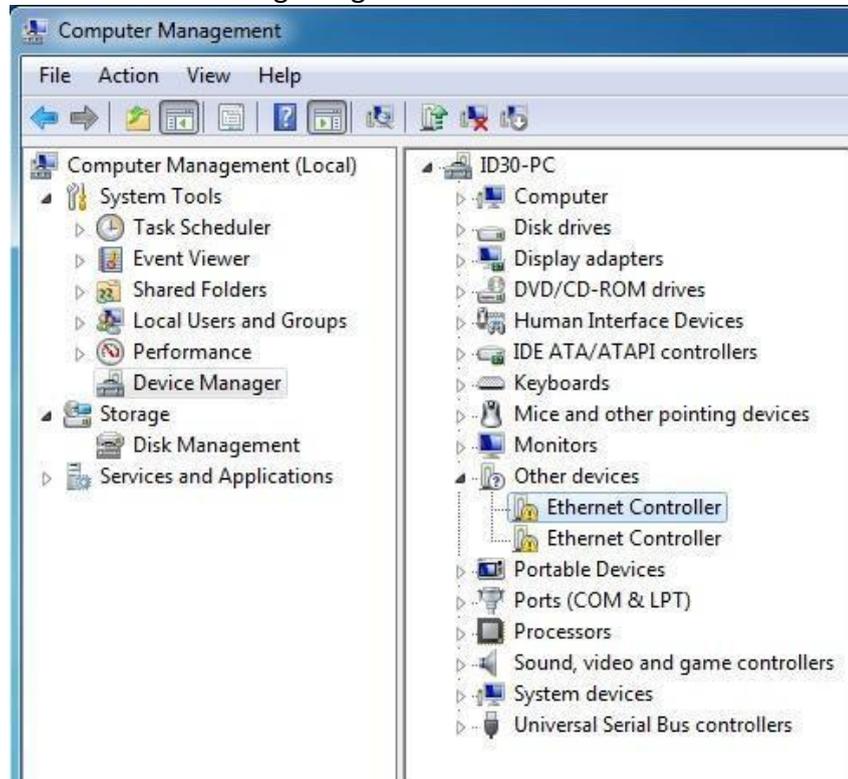
Step 3 In the **Ethernet Controller Proprieties** menu go to **Driver** tab, and click "**Update Driver**" to execute the setup.

Step 4 Click on **"Browse my computer for driver software"** to install the driver.
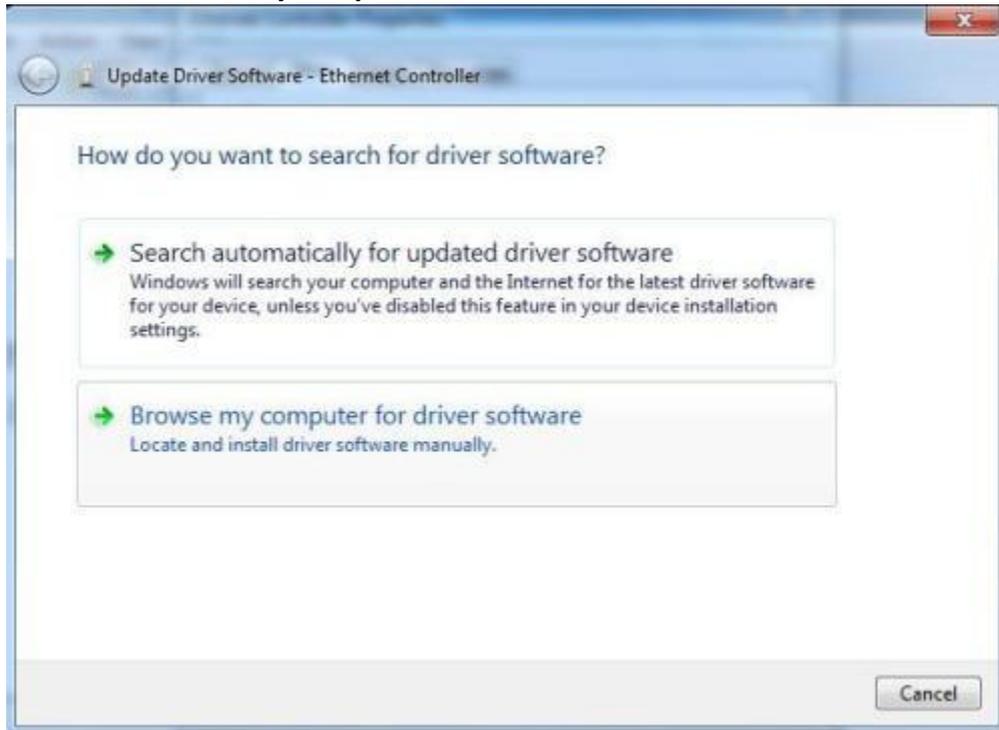
Step 5 Choose the path where to install driver. Click **Next** to continue.

Step 6 Windows has successfully updated Ethernet driver software. Click **Close** to exit setup.
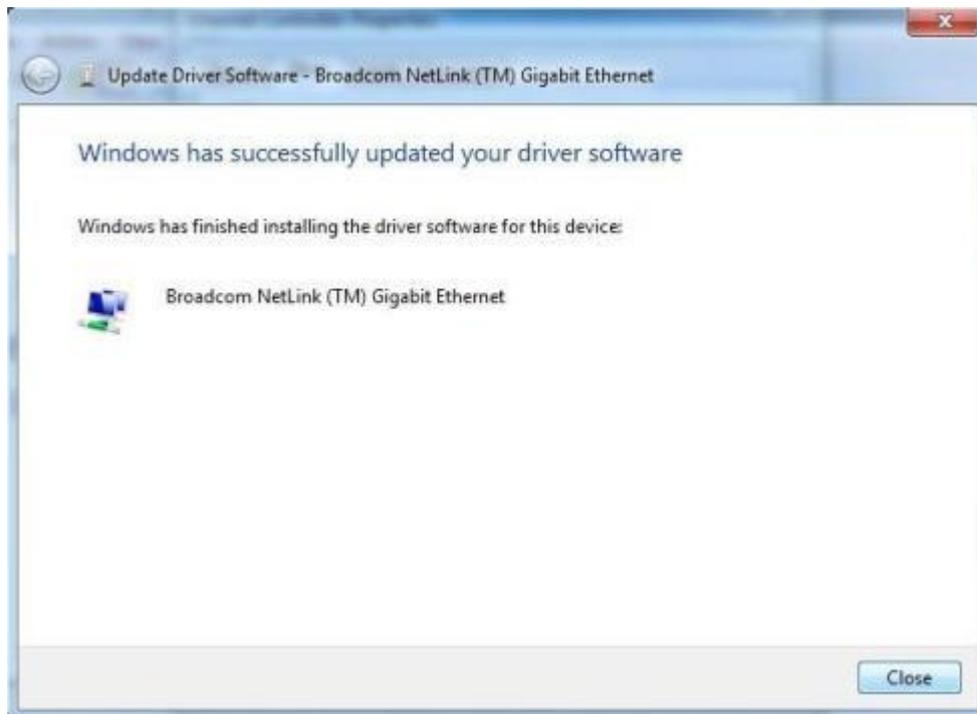
Mounting Solutions

This chapter provides step-by-step
mounting guide for all available
mounting options.

6

Chapter 6: Mounting Solutions

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

	WARNING! / AVERTISSEMENT!
⚠	Follow mounting instructions and use recommended mounting hardware to avoid the risk of injury.
	Suivez les instructions de montage et d'utilisation recommandé le matériel de montage pour éviter le risque de blessure.

6.1 Cable Mounting Considerations

For a nice look and safe installation, make sure cables are neatly hidden behind the HMI device. Refer to Chapter 2, section 2.1 for the cable installation instruction.

	WARNING! / AVERTISSEMENT!
⚠	Observe all local installation requirements for connection cable type and protection level.
	Suivre tous les règlements locaux d'installations, de câblage et niveaux de protection.

	WARNING! / AVERTISSEMENT!
⚠	Turn off the device and disconnect other peripherals before installation.
	Éteindre l'appareil et débrancher tous les périphériques avant l'installation.

	ALTERNATING CURRENT / MISE À LE TERRE!
≈	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
	Pour éviter les chocs électriques, l'emplacement de la prise terre à l'arrière doit être lié à terre locale, à travers un 12 AWG minimum et aussi court que possible.

6.2 Safety Precautions

Observe the following common safety precautions before installing any electronic device:

• 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.

6.3 Mounting Guide

The IP65 Stainless Resistive Panel PC comes with different mounting options suitable for most of the industrial applications. The main mounting approach is chassis - very user-friendly in terms of installation. Refer to sub-sections below for more details.

6.3.1 VESA Mount

The IP65 Stainless Resistive Panel PC has VESA mount holes on the rear side. Follow instructions below to mount the unit with VESA Mount bracket (not supplied).

Size	VESA Plate Dimensions	Screw hole diameter
15", 17", 19"	100 x 100 mm	VESA M4x5 mm
21.5"	100 x 200 mm	VESA M4x5 mm
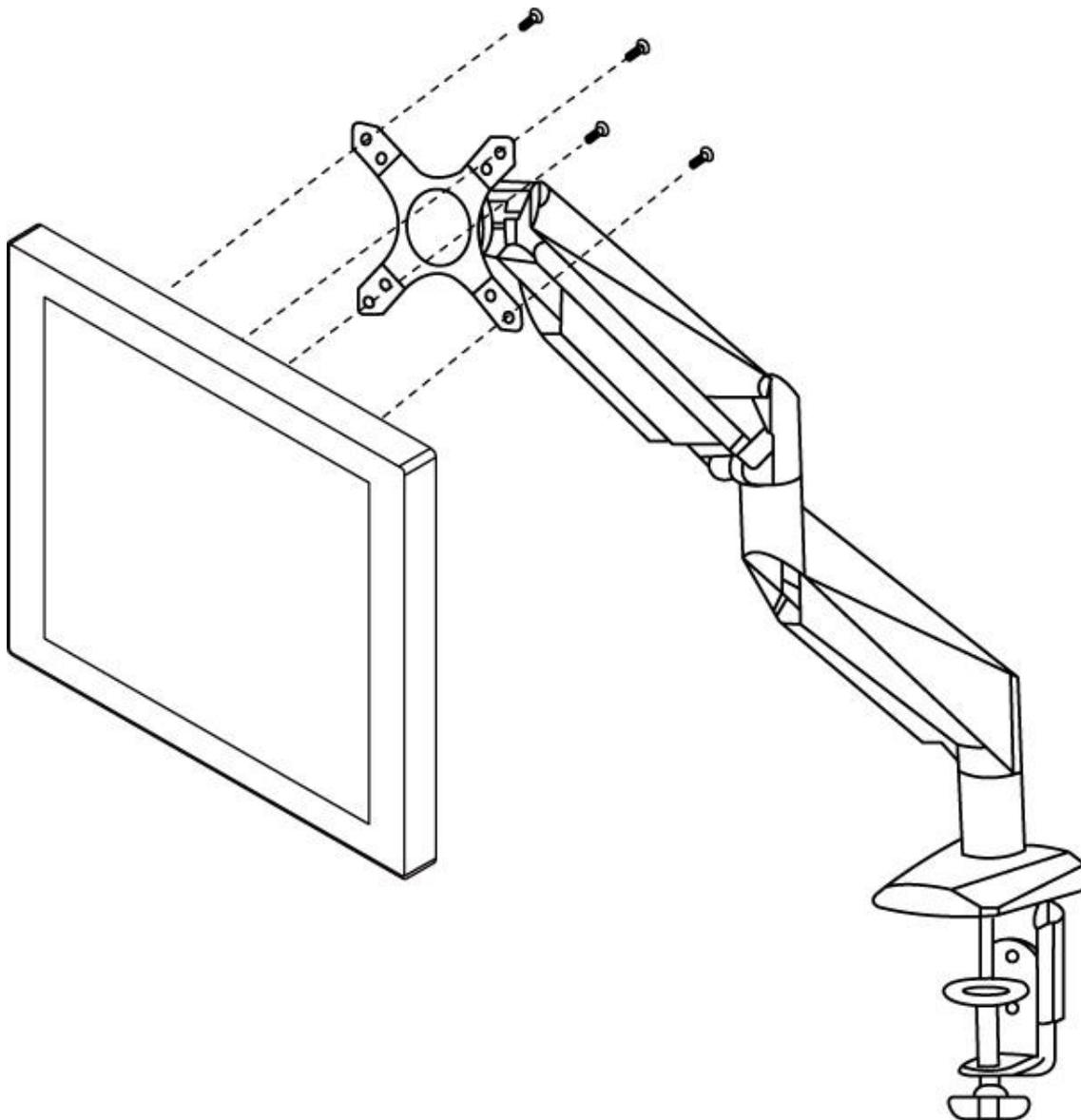
Mounting Steps:

1.   Screw VESA bracket to the fixture (ex. swing arm) with four VESA screws.
2.   Place the device on VESA bracket.

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

6.3.2 Yoke Mount

Yoke Mount solution allows installing the Panel PC with the bracket (not supplied).
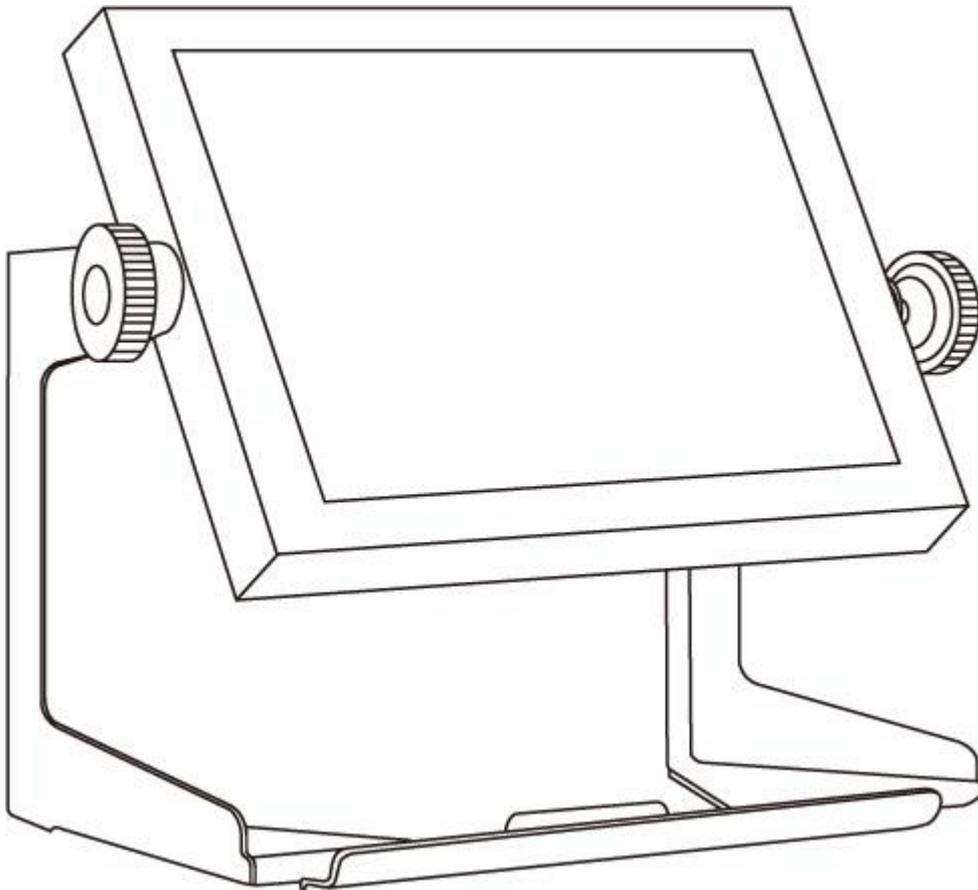
Mounting instruction:

1.   Place the Panel PC on the bracket stand, aiming screw holes for each other.
2.   Secure screws to fix the device upon the bracket stand.
3.   Firmly secure the locking handle to the Panel PC.

Product Specifications

This section includes product specifications.

Appendix

A

Appendix A: Product Specifications

Hardware Specifications

	Model Name			
	WM 15-ID32-ES	WM 17-ID32-ES	WM 19-ID32-ES	WM 22W-ID32-ES
Display				
Size	15"	17"	19"	21.5"
Resolution	1024 x 768	1280 x 1024	1280 x 1024	1920 x 1080
Brightness	250 cd/m^2 (typ.)	350 cd/m^2 (typ.)	250 cd/m^2 (typ.)	250 cd/m^2 (typ.)
Contrast Ratio	700 : 1 (typ.)	1000 : 1 (typ.)	1000 : 1 (typ.)	1000 : 1 (typ.)
Viewing Angle	-70~70(H);-65~60(V)	-85~85(H);-80~80(V)	-85~85(H);-80~80(V)	-85~85(H);-80~80(V)
Max Colors	16.2M	16.7M	16.7M	16.7M
System				
Processor	Intel® Atom™ Dual Core D2550 1.86 GHz Processor			
BIOS	AMI 16Mbit Flash			
System Chipset	Intel® NM10			
System Memory	1 x SO-DIMM, Default 2GB, Max 4GB DDR3L 1600			
Graphic Driver	GMA3600			
Audio	Built in ALC886 HD Audio Codec			
Ethernet	2 x RJ45 Gigabit LAN			
USB	6 x USB2.0 (4 x USB internal) 4 x RS232 (3 x RS232 internal)			
Storage	1 x Mini PCIe SSD, Default 32GB			
Power Input	DC-IN (Lockable, Power Jack)			
Security	Trusted Platform Module (TPM 1.2)			
Input/ Output Connectors				
Ethernet LAN	1 x RJ45 - 10/100/1000 Mbps			
COM	1 x RS232			
USB	2 x USB Type-A Receptacle			
Power	12V DC			

Mechanical Specification	
Cooling System	Fanless
Mounting	Yoke Mount, VESA Mount
Environmental Consideration	
Operating Temperature	0°C to +45°C
Operating Humidity	30% to 90% (non-condensing)
IP Rating	Full IP65
Power Specifications	
Power Input	12V DC IN (Lockable Power Jack)

Power Consumption	42W (typ.)	65W (typ.)	72W (typ.)	72W (typ.)

Standards and Certification	
Certification	CE, FCC, RoHs

Software support – Drivers

Item	Driver	Windows 7	Windows 8	Windows 10
1	Chipset Driver	☑	☑	☑
2	Graphics Driver	☑	☑	☑
3	Audio Driver	☑	☑	☑
4	Ethernet Driver	☑	☑	☑
5	Watchdog Driver	☑	☑	☑

Software Support- SDK

Item	File Type	Description
1	Watchdog SDK & AP	Watchdog SDK and AP