WINMATE

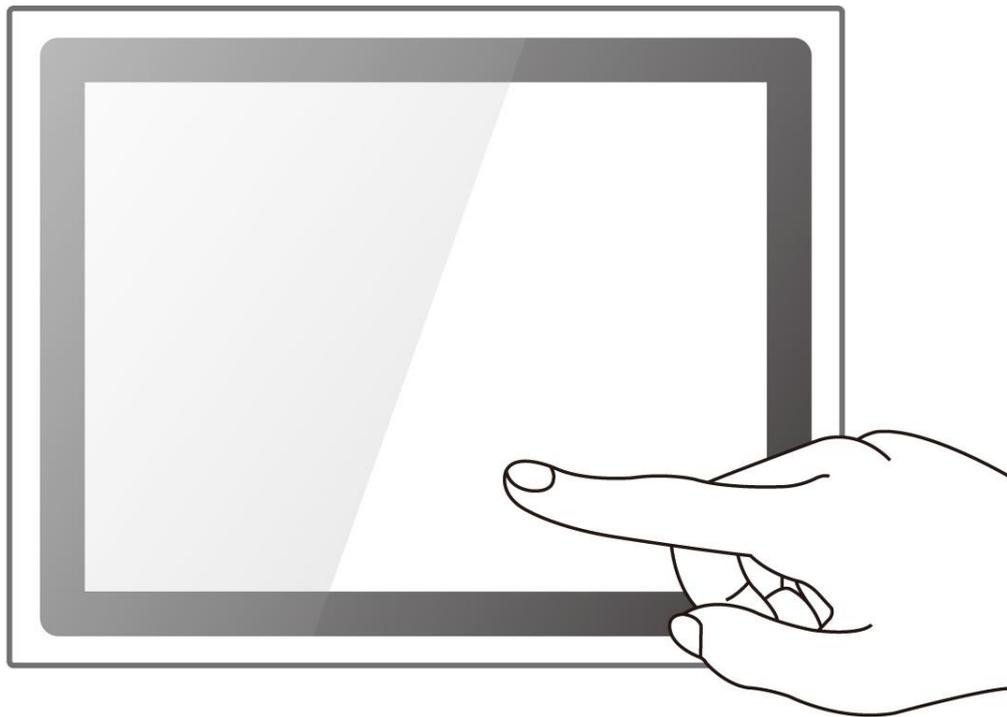# Flat Stainless P-Cap Panel PC

Intel® Celeron® Bay Trail-M N2930, 1.83 GHz

Full IP69K

User Manual

Version 1.0

Please read this instructions before operating the device and retain them for future reference.

CONTENTS

PREFACE

Copyright Notice

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Disclaimer

Winmate Inc. reserve 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 make 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

Winmate Inc. 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 the following steps: First, visit the website of our distributor to find the update information about the product. Second, contact 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
- 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.

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 potential 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.

Important Information

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.

European Union

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/ A1: 2015
    - IEC61000-4-2: 2009
    - IEC61000-4-3: 2006+A1: 2007+A2: 2010
    - IEC61000-4-4: 2012
    - IEC61000-4-5: 2014
    - IEC61000-4-6: 2014
    - IEC61000-4-8: 2010
    - IEC61000-4-11: 2004
- EN55032: 2012/AC:2013
- EN61000-3-2:2014
- EN61000-3-3:2013

Low Voltage Directive (2014/35/EU)

- EN 60950-1:2006/A11:2009/A1:2010/A12:2011/ A2:201

ABOUT THIS USER MANUAL

This User Manual provides information about using the Winmate® IP69K Stainless P-Cap Panel PC with Intel ® Celeron ® Bay Trail-M N2930 1.83 GHz processor. This User Manual applies to the IP69K Flat Stainless P-CAP Panel PC – R10IB3S-SPT269, R15IB3S-SPC369, R19IB3S-SPM169 and W22IB3S-SPA369.

The documentation set for the IP69K Flat Stainless P-CAP Panel PC provides information for specific user needs, and includes:

- **IP69K Stainless P-Cap Panel PC User Manual** – contains detailed description on how to use the Panel PC, its components and features.

- **IP69K Stainless P-Cap Panel PC Quick Start Guide -** contains detailed description on how to use the Panel PC, its components and features.

NOTE:
Some pictures in this guide are samples and can differ from actual product.

Revision History

Version	Date	Note
1.0	23-Mar-2018	Initial document release

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.

CHAPTER 1: INTRODUCTION

Congratulations on purchasing Winmate® IP69K Stainless P-Cap Panel PC.

Winmate flat stainless steel P-Cap panel PCs and display are designed for applications with high hygienic requirements. IP69K series is completely waterproof with IP69K level of protection allowing for easy cleaning and sterilization.

The IP69K stainless series work well in food, beverage industry, including food processing operations and packaging, chemical manufacturing and other industrial applications.

1.1 Product Features

The IP69K Stainless P-Cap Panel PC features:

- Intel® Celeron® Bay Trail-M N2930, 1.83 GHz
- SUS304 stainless steel for food and chemical industries
- Full IP69K waterproof enclosure, good corrosion resistance
- A true flat, easy-to-clean front surface with edge-to-edge design
- Flat multi-touch panel pc with superior readability and P-CAP technology
- Various mounting solutions, Yoke mount and VESA mount
- Plenty of I/O s including USB 2.0, RS-232 serial port and RJ45- 10/100/1000 LAN ports
- Waterproof ports with adapter cables for external connectivity
- Supports VESA mount
- Supports Rain/ Glove mode (Optional)

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.

Factory shipment list:
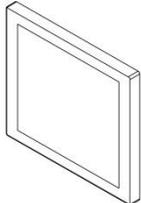
Panel PC	**Quick Start Guide (Hardcopy)**	**Driver CD & User Manual**
Varies by product specifications	915211101030	IB32: 9171111I101Y
AC Adapter	**Power Cable***	**Serial Cable**
50W 90PO12050002 80W 90PO12080003	Varies by destination	94G0103090Q0
Ethernet Cable	**USB Cable**	**VESA Screws**
94I0080080KF	9480108080Q0	913511101101
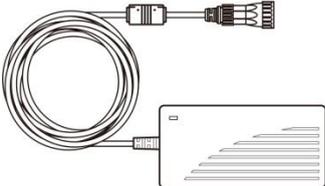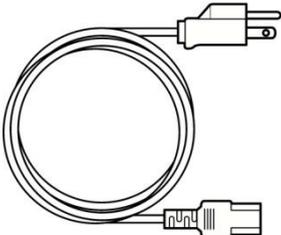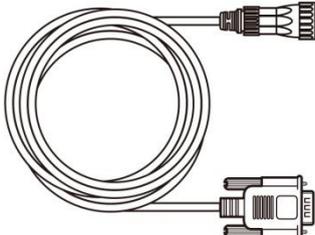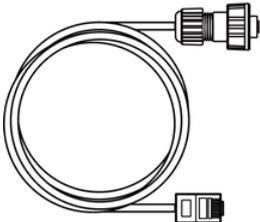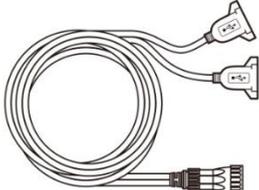
1.3 Connector Placement

IP69K Flat Stainless P-CAP Panel PC has M25 type connectors with protection cap and air venting valve.

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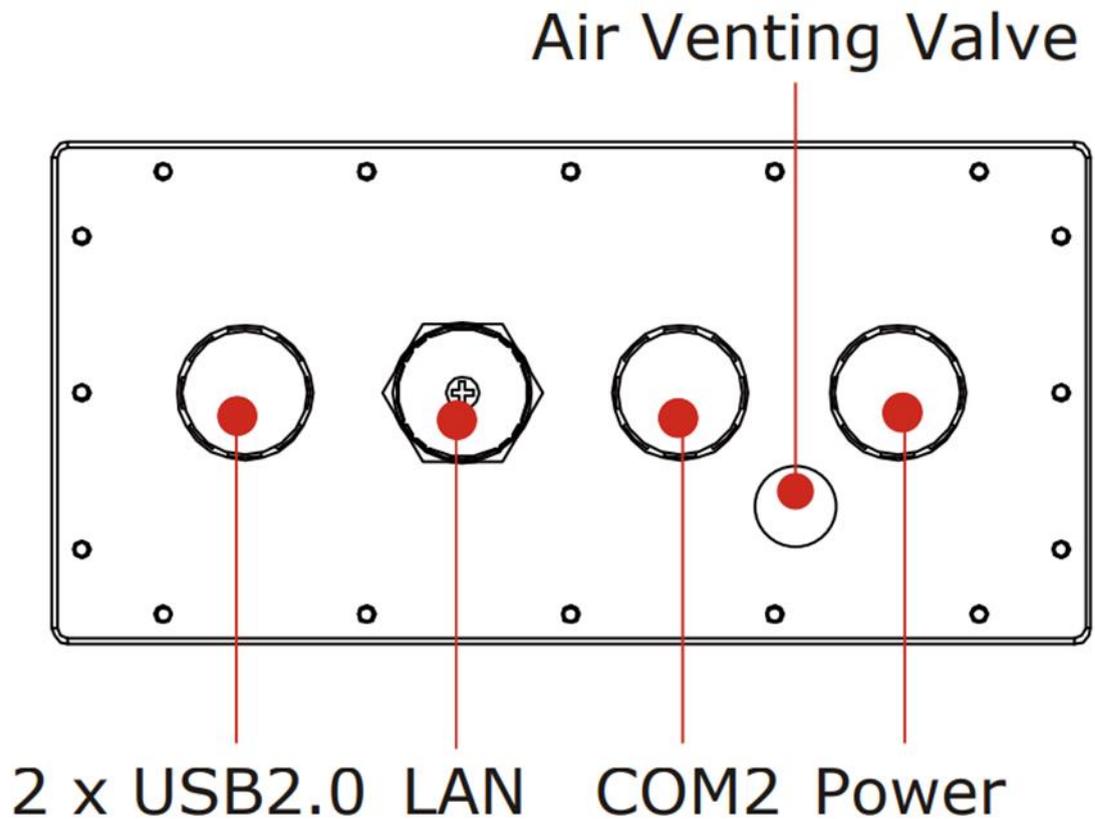
1.4 Physical Buttons and LED Indicators

Physical buttons and LED indicators located on the rear side of the Panel PC.
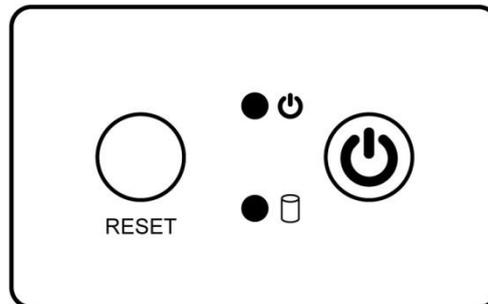
Physical Buttons

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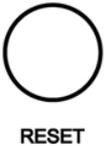
LED Indicators

LED Type	Status	Description
● (power icon)	On	Power is on
	Off	Power is off
● (storage icon)	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 10.4"

Unit: mm
Dimensions : 289 x 246 x 49.9
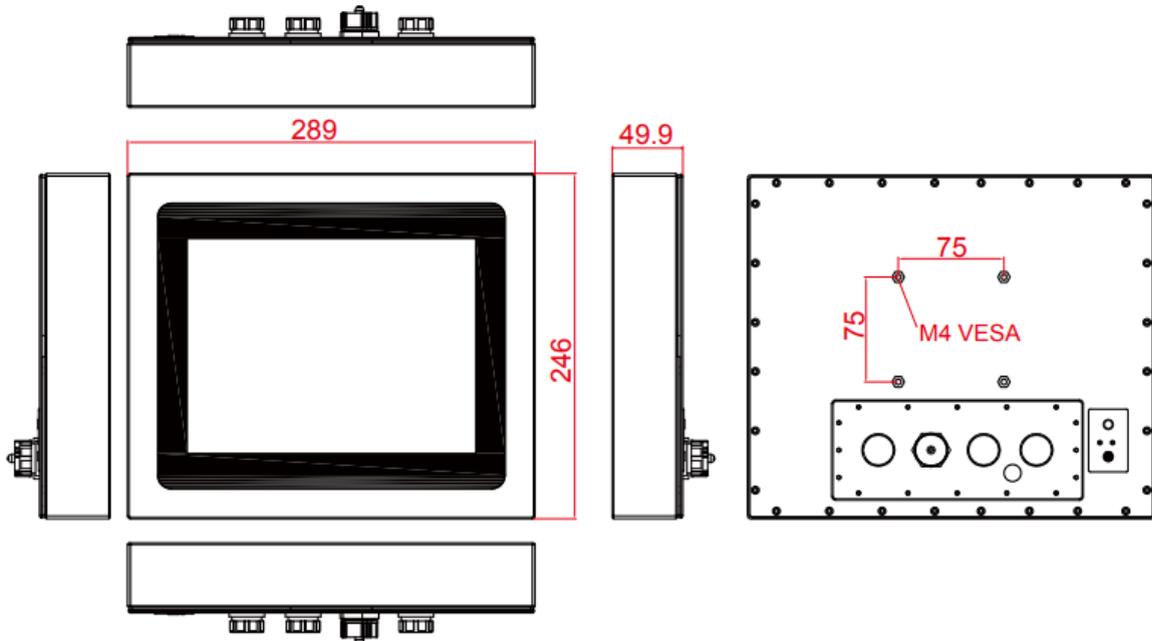
1.5.2 Dimensions 15"

Unit: mm
Dimensions : 378 x 301 x 56.4
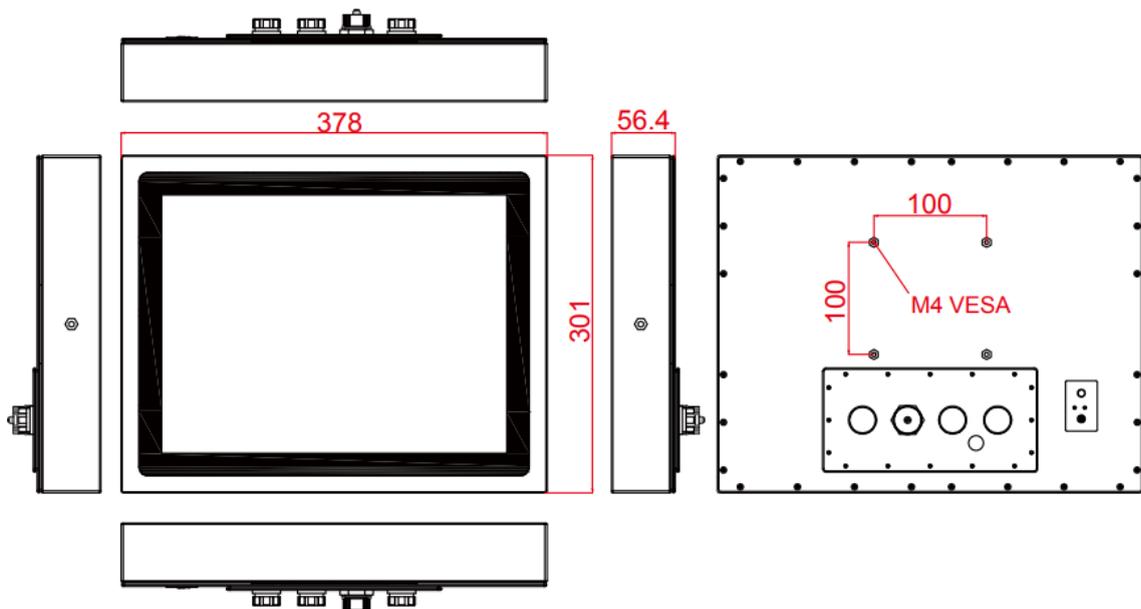
1.5.3 Dimensions 19"

Unit: mm
Dimensions : 467.4 x 392 x 56.6
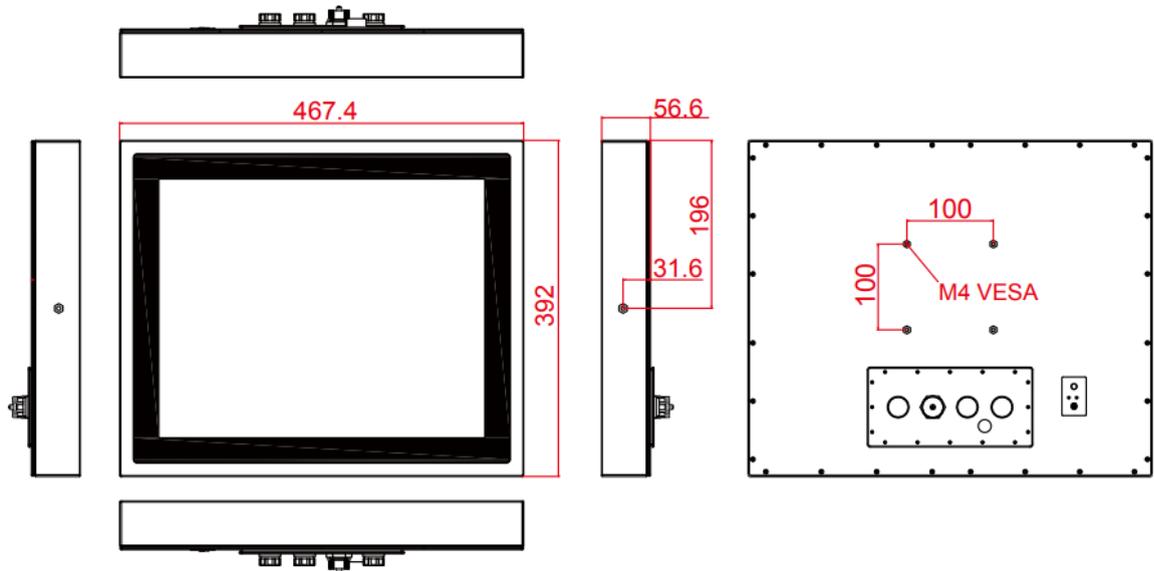
1.5.4 Dimensions 21.5"

Unit: mm
Dimensions : 541 x 337 x 53
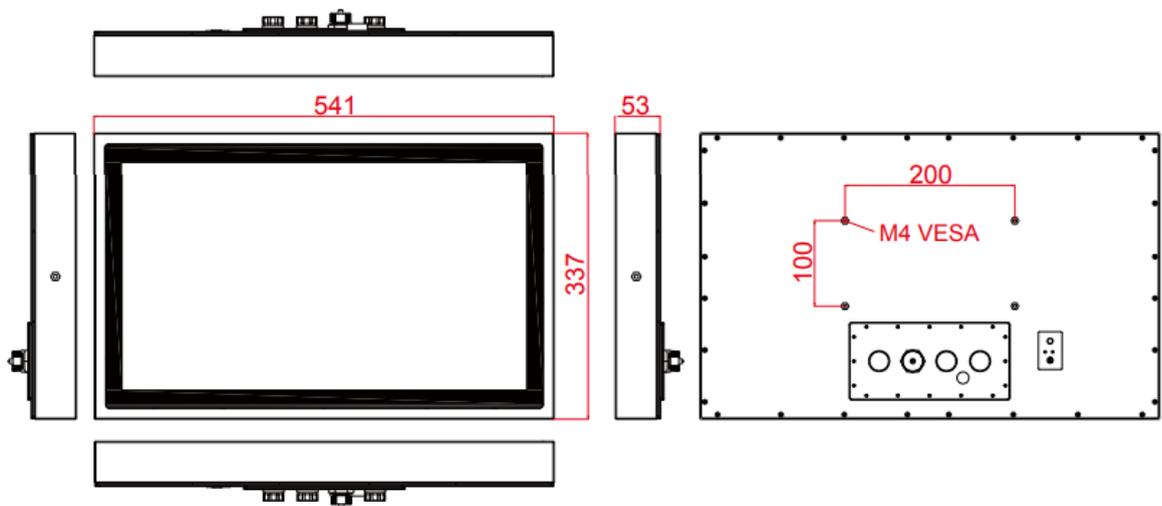
Getting Started

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

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 Cord
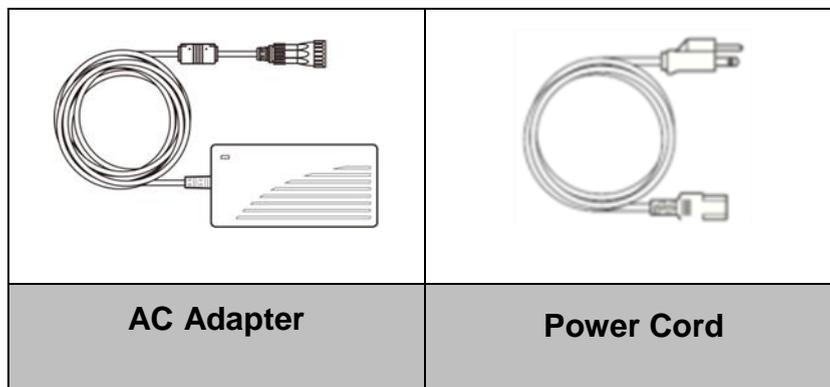
AC Adapter specifications vary by panel size.

Size	10.4"	15"	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 Flat Stainless P-CAP Panel PC.

Size	10.4"	15"	19"	21.5"
Power Consumption*	33W (typ.)	38W (typ.)	45W (typ.)	56W (typ.)

With maximum backlight and high CPU load.

2.1.4 Connecting the Power

Cable Mounting Steps:

1. Connect the AC adapter to the DC-in jack 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.

Panel PC

Power Cord

AC Wall
Outlet

AC Adapter

DC Power
Connector
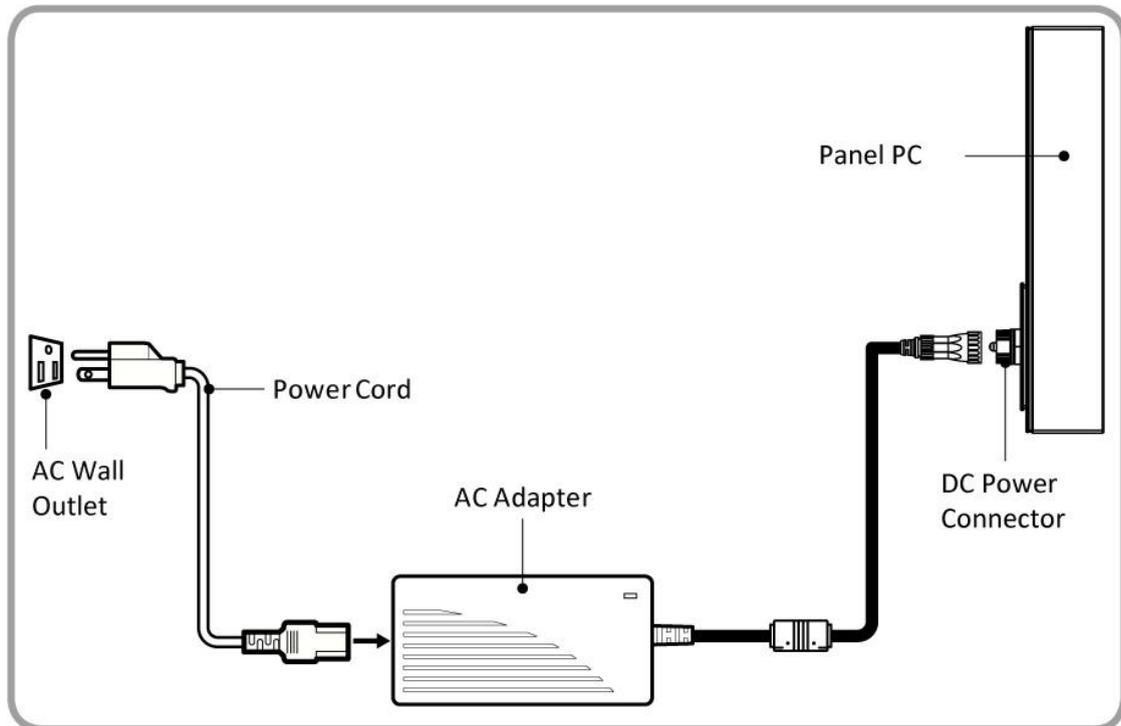
NOTE:
Power cords vary in appearance by region and country.

2.2 Connector Pin Assignments

This Panel PC is equipped with four M25 type waterproof connectors. 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 IP69K Stainless P-CAP Panel PC has M25 type connector. Use power cable to connect Panel PC to the source of power.

IP69K Stainless P-CAP Panel PC support 12V DC power input.
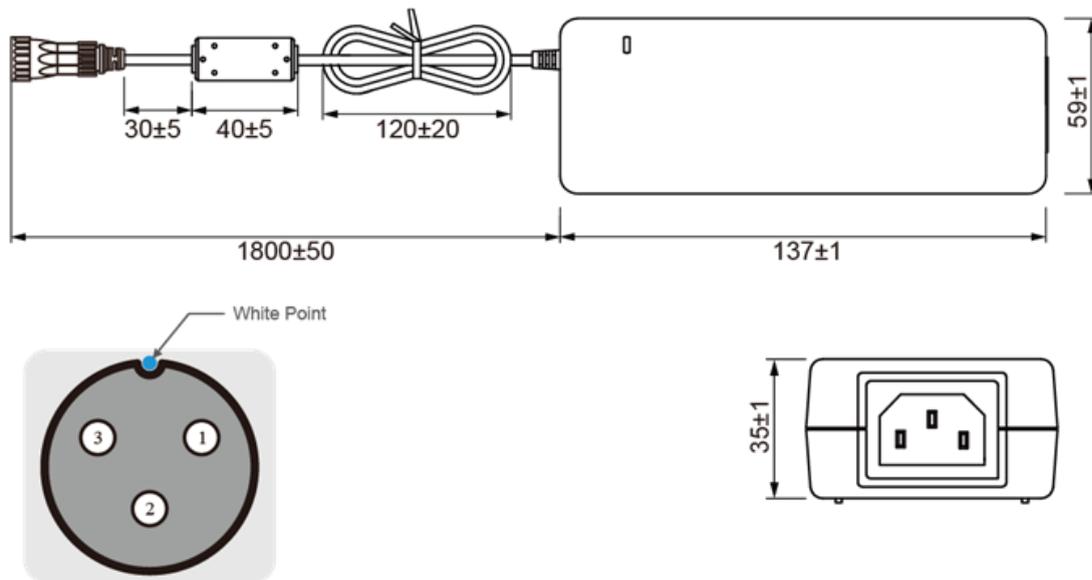
Pin No.	Symbols	Color
CN1-3	GND	Black
CN1-2	shield	
CN1-1	VCC	White

2.2.2 Serial Cable

The IP69K Stainless P-CAP Panel PC has M25 type serial port connector. Use serial cable to connect serial interfaces.
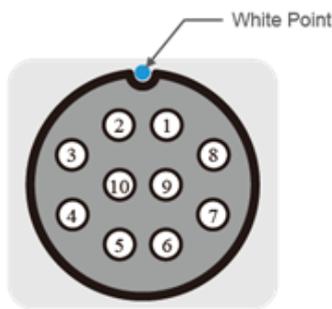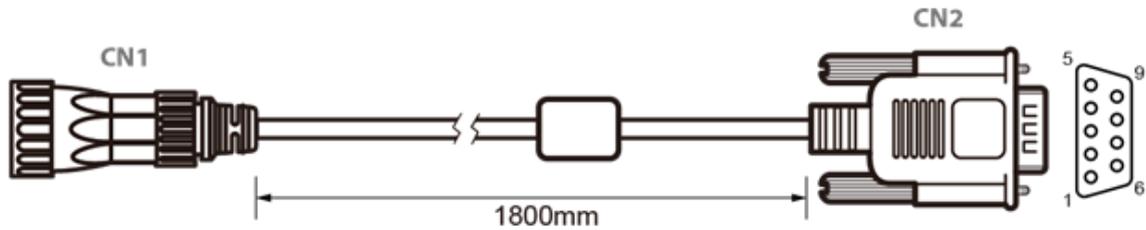
Pin No.	Symbols	Color		Pin No.	Symbols	Color
CN1-1	DCD-CON2	Green	⟷	CN2-1	DCD-CON2	Green
CN1-2	DSR-CON2	Brown	⟷	CN2-6	DSR-CON2	Brown
CN1-3	RXD-CON2	Red	⟷	CN2-2	RXD-CON2	Red
CN1-4	RTS-CON2	Orange	⟷	CN2-7	RTS-CON2	Orange
CN1-5	TXD-CON2	Blue	⟷	CN2-3	TXD-CON2	Blue
CN1-6	CTS-CON2	White	⟷	CN2-8	CTS-CON2	White
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 IP69K Stainless P-CAP Panel PC has M25 type Ethernet connector. Use Ethernet cable to connect the Panel PC to the Internet.
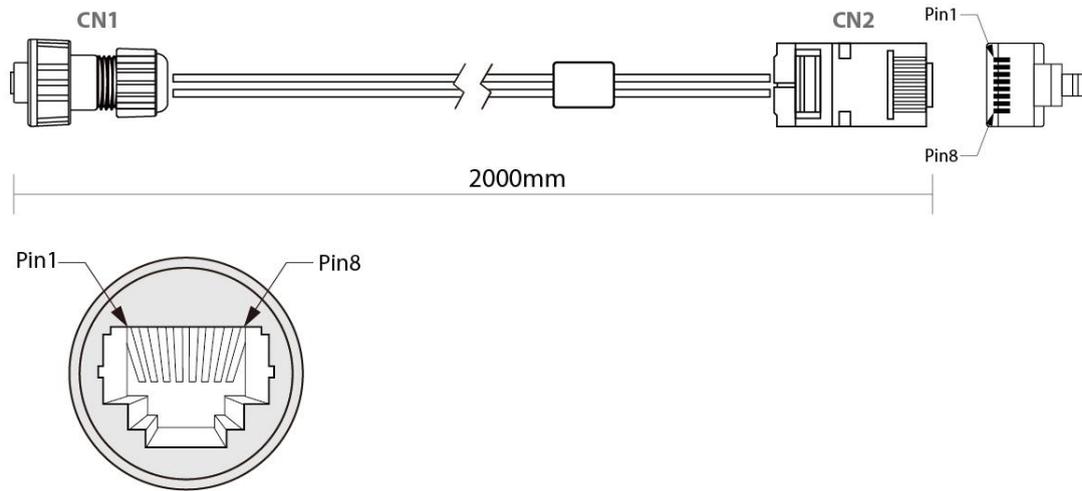
Plug	Wire Color	Conn.	
1	Orange / White	1	Twist
2	Orange	2	
3	Green / White	3	
4	Blue	4	Twist / Twist
5	Blue / White	5	
6	Green	6	
7	Brown / White	7	Twist
8	Brown	8	

2.2.4 USB 2.0 Cable

The IP69K Stainless P-CAP Panel PC has one M25 type 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
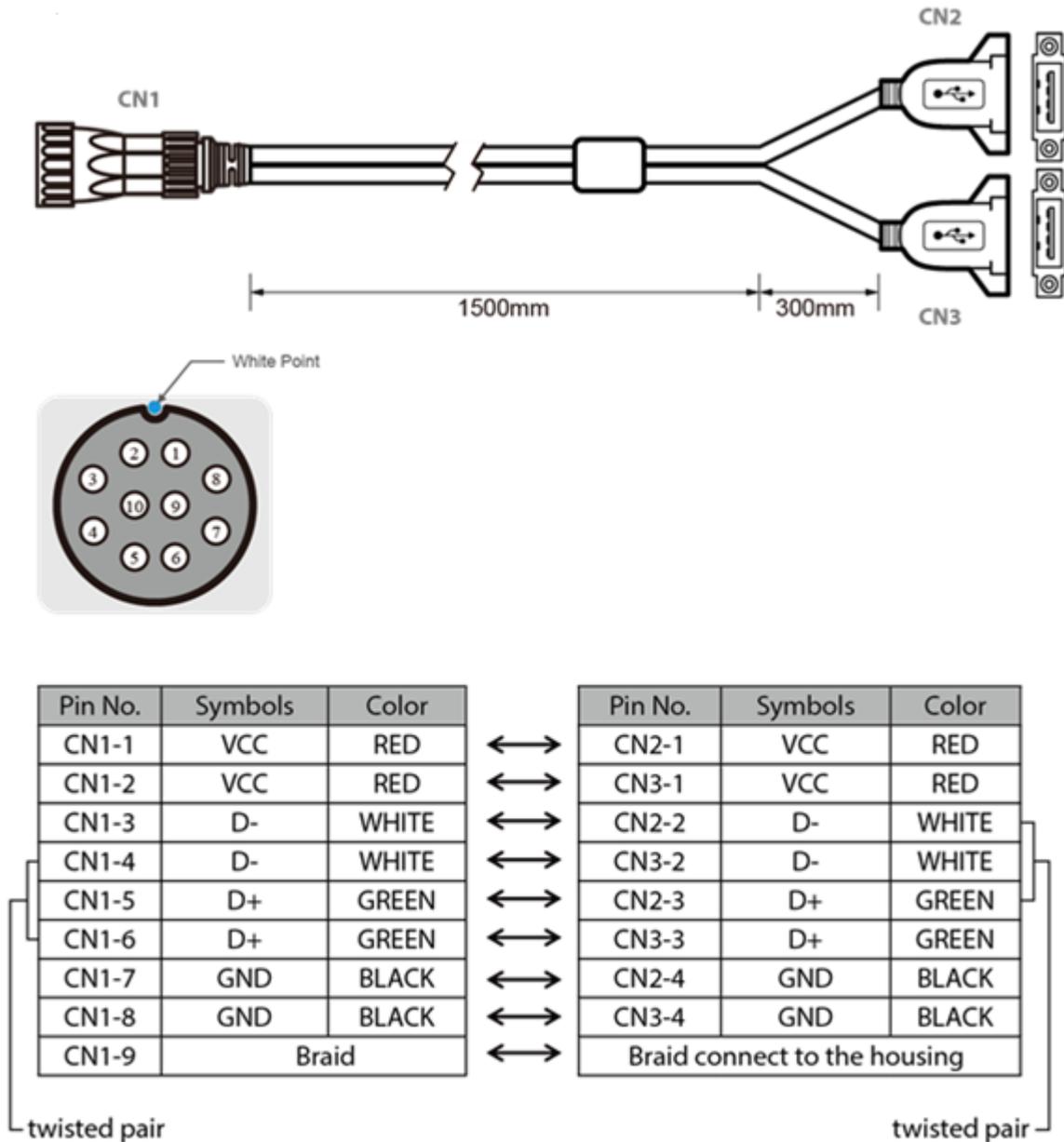
2.3 Turning On and Off

The unit is configured to **Power ON** when is connected to the power source (refer to <u>Ch.2, "Powering On"</u> 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).

2.4 Cleaning the Monitor

NOTE:

The IP69K Stainless Panel PCs withstand regular intense cleaning and could hold up against steam and high-pressure water. The devices are able to sustain water temperatures up to 80°C and a water jet operating at 99.97 bar.

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

When cleaning:
- Use water up to 80°C to clean the housing.
- Wipe the screen with a clean, soft, lint-free cloth. This removes dust and other particles.
- The display area is highly prone to scratching. Do not use ketene type material (ex. Acetone), Ethyl alcohol, toluene, ethyl acid or Methyl chloride to clear the panel. It may permanently damage the panel and void the warranty.
- If it is still not clean enough, apply a small amount of non-ammonia, non-alcohol based glass cleaner onto a clean, soft, lint-free cloth, and wipe the screen.
- Don not use oil directly on the display screen. If droplets are allowed to drop on the screen, permanent staining or discoloration may occur.

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.

CHAPTER 3: OPERATING THE DEVICE

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

3.1 Operating System

The Panel PCs support 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 Multi-Touch

The touchpad supports the core gestures for Windows.

Gesture	Windows Usage	Gesture Action	Action
Tap/ Double-tap	Click / Double-click	Click or double-click	
Panning with Inertia	Scrolling	Drag one or two fingers up and down	
Selection /Drag *(left to right with one finger)*	Mouse-drag/ Selection	Drag one finger left/right	
Zoom	Zoom (default to CTRL key + scroll wheel)	Move two fingers apart/ toward each other	
Rotate	No system default unless handled by Application (using WM_Gesture API)	Move two fingers in opposite directions *or* Use one finger to pivot around another	
Press and Hold	Right-click	Press, wait for blue-ring animation to complete, then release	
Flicks	Default: Pan Up/ Down/ Back, and Forward	Make quick drag gestures in the described direction	
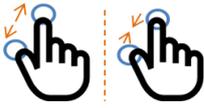
Reference from Microsoft®

3.3 How to Enable Watchdog

To enable Watchdog, you need to download Winmate Watchdog utility. Find more information on Watchdog in "Watchdog Guide" that you can download from Winmate Download Center or File Share. Refer to the Ch.7, "Technical Support" for more details.

To enable watchdog in Watchdog AP follow the instructions below:

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

2. Click W icon to open Watchdog utility.
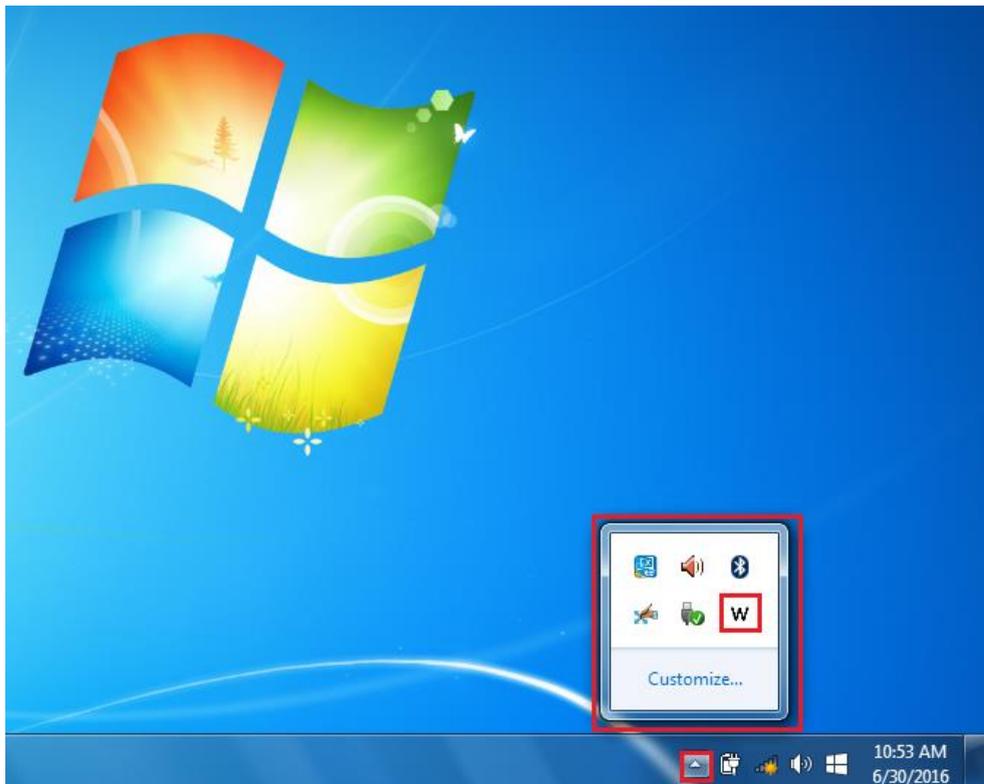
3. In Watchdog utility window set countdown time and periodically feed time, or disable watchdog.
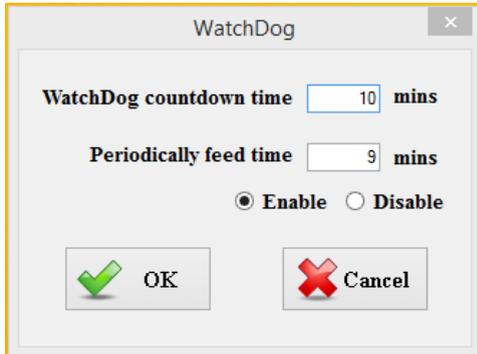
Example:

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*
Enable / Disable	Enable or disable watchdog. *Default: Enable*

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.

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

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) 2015 American Megatrends, Inc.
     Main  Advanced  Chipset  Security  Boot  Save & Exit

     BIOS Information                                        Choose the system default
     BIOS Vendor                    American Megatrends      language
     Core Version                   5.010
     Compliancy                     UEFI 2.4; PI 1.3
     Project Version                IB32V122 x64
     Build Date and Time            09/14/2015 11:05:27

     CPU Configuration
     Microcode Patch                322

     Memory Information
     Total Memory                   4096 MB (LPDDR3)

     TXE Information                                         ++: Select Screen
     Sec RC Version                 00.05.00.00              ↑↓: Select Item
     TXE FW Version                 01.00.04.1089            Enter: Select
                                                             +/-: Change Opt.
     System Language                [English]                F1: General Help
                                                             F2: Previous Values
     System Date                    [Mon 09/14/2015]         F3: Optimized Defaults
     System Time                    [11:43:54]               F4: Save & Exit
                                                             ESC: Exit
     Access Level                   Administrator


                Version 2.17.1246. Copyright (C) 2015 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.

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.

```
         Aptio Setup Utility - Copyright (C) 2015 American Megatrends, Inc.
     Main  Advanced  Chipset  Security  Boot  Save & Exit

  ► ACPI Settings                                        System ACPI Parameters.
  ► F81866 Super IO Configuration
  ► Hardware Monitor
  ► S5 RTC Wake Settings
  ► CPU Configuration
  ► PPM Configuration
  ► Thermal Configuration
  ► IDE Configuration
  ► Miscellaneous Configuration
  ► CSM Configuration
  ► USB Configuration
  ► Platform Trust Technology
  ► Security Configuration
                                                        ++: Select Screen
  ► Intel(R) 82574L Gigabit Network Connection - 00:03:E1:92...   ↑↓: Select Item
  ► Intel(R) 82574L Gigabit Network Connection - 00:03:E1:92...   Enter: Select
                                                        +/-: Change Opt.
                                                        F1: General Help
                                                        F2: Previous Values
                                                        F3: Optimized Defaults
                                                        F4: Save & Exit
                                                        ESC: Exit




         Version 2.17.1246. Copyright (C) 2015 American Megatrends, Inc.
```

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

4.2.2.1 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) 2014 American Megatrends, Inc.
     Advanced

 ACPI Settings

 Enable ACPI Auto Configuration        [Disabled]

 Enable Hibernation                    [Enabled]








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




                  Version 2.15.1236. Copyright (C) 2014 American Megatrends, Inc.
```
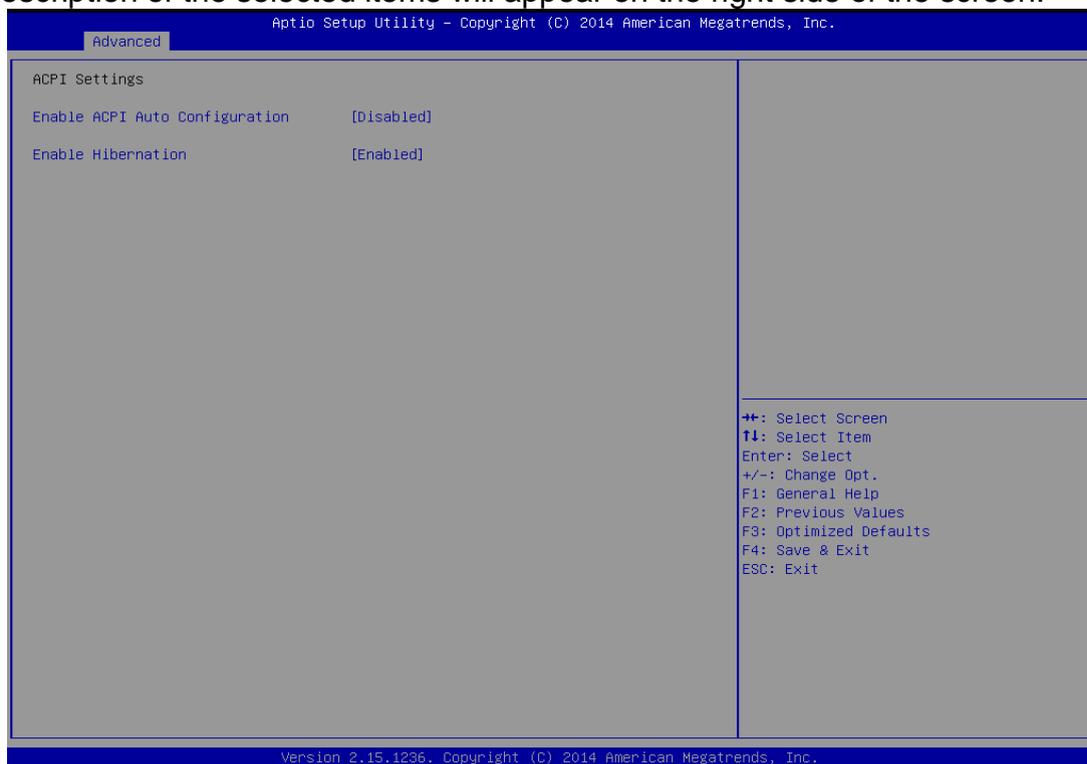
BIOS Setting	Description	Setting Option	Effect
Enable ACPI Auto Configuration	BIOS ACPI Auto Configuration	Enable/ Disable	Enables or Disables this function
Enable Hibernation	Control hibernation	Enable/ Disable	Enables or Disables this function

4.2.2.2 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.
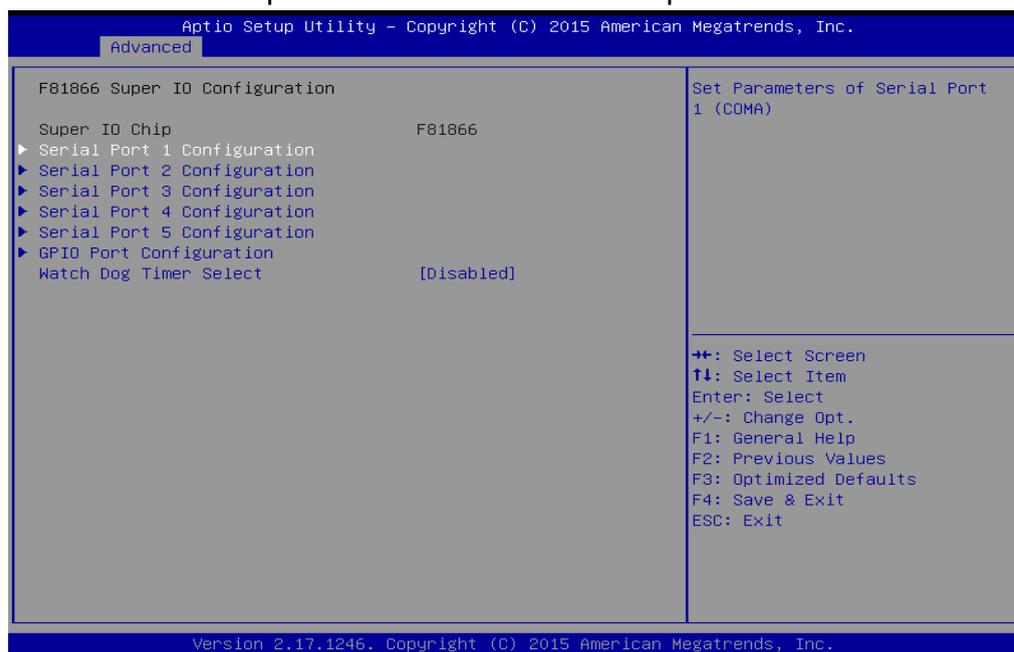
Watch Dog Time Select

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.
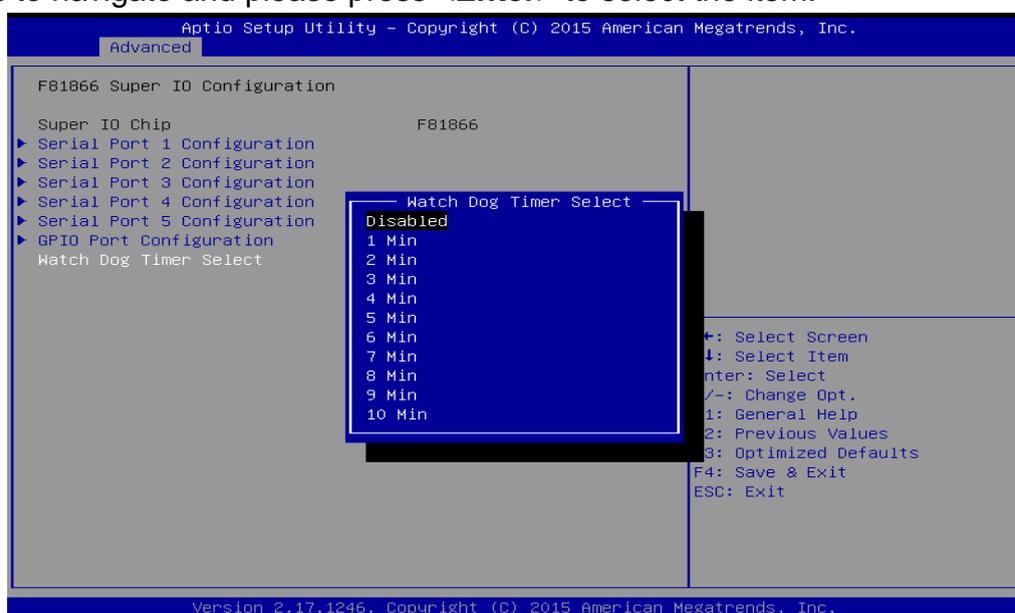
GPI0 Port Configuration

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

```
            Aptio Setup Utility – Copyright (C) 2015 American Megatrends, Inc.
        Advanced

    GPIO Port Configuration

    PIN 3 Control                       [Input]
    PIN 4 Control                       [Input]
    PIN 5 Control                       [Input]
    PIN 6 Control                       [Input]
    PIN 7 Control                       [Input]
    PIN 8 Control                       [Input]
    PIN 9 Control                       [Input]
    PIN 10 Control                      [Input]
    PIN 11 Control                      [Input]
    PIN 12 Control                      [Input]
    PIN 13 Control                      [Input]
    PIN 14 Control                      [Input]
                                                         ↔: Select Screen
                                                         ↑↓: Select Item
                                                         Enter: Select
                                                         +/-: Change Opt.
                                                         F1: General Help
                                                         F2: Previous Values
                                                         F3: Optimized Defaults
                                                         F4: Save & Exit
                                                         ESC: Exit


            Version 2.17.1246. Copyright (C) 2015 American Megatrends, Inc.
```

4.2.2.3 Hardware Monitor

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

```
            Aptio Setup Utility – Copyright (C) 2015 American Megatrends, Inc.
        Advanced

    Pc Health Status

    System temperature1              : +28 C
    Fan1 Speed                       : N/A
    Fan2 Speed                       : N/A
    VIN1                             : +0.800 V
    VIN2                             : +12.144 V
    VIN3                             : +3.408 V
    VIN4                             : +5.160 V
    VCC3V                            : +3.424 V
    VSB3V                            : +3.424 V
    VSB5V                            : +5.208 V
    VBAT                             : +3.392 V
                                                         ↔: Select Screen
                                                         ↑↓: Select Item
                                                         Enter: Select
                                                         +/-: Change Opt.
                                                         F1: General Help
                                                         F2: Previous Values
                                                         F3: Optimized Defaults
                                                         F4: Save & Exit
                                                         ESC: Exit


            Version 2.17.1246. Copyright (C) 2015 American Megatrends, Inc.
```

4.2.2.4 S5 RTC Wake Settings

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

```
              Aptio Setup Utility – Copyright (C) 2015 American Megatrends, Inc.
  Advanced

  Wake system from S5              [Disabled]              Enable or disable System wake
                                                          on alarm event. Select
                                                          FixedTime, system will wake on
                                                          the hr::min::sec specified.
                                                          Select DynamicTime , System
                                                          will wake on the current time
                                                          + Increase minute(s)


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




              Version 2.17.1246. Copyright (C) 2015 American Megatrends, Inc.
```

Wake System from S5 with fixed time setting

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.

```
            Aptio Setup Utility - Copyright (C) 2015 American Megatrends, Inc.
            Advanced
   Wake system from S5              [Fixed Time]        Enable or disable System wake
   Wake up hour                    0                    on alarm event. Select
   Wake up minute                  0                    FixedTime, system will wake on
   Wake up second                  0                    the hr::min::sec specified.
                                                        Select DynamicTime , System
                                                        will wake on the current time
                                                        + Increase minute(s)

                          ┌─── Wake system from S5 ───┐
                          │ Disabled                  │
                          │ Fixed Time                │
                          │ Dynamic Time              │
                          └───────────────────────────┤
                                                        ↔: Select Screen
                                                        ↑↓: Select Item
                                                        Enter: Select
                                                        +/-: Change Opt.
                                                        F1: General Help
                                                        F2: Previous Values
                                                        F3: Optimized Defaults
                                                        F4: Save & Exit
                                                        ESC: Exit

            Version 2.17.1246. Copyright (C) 2015 American Megatrends, Inc.
```

Wake system from S5 after dynamic time setting

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

```
            Aptio Setup Utility - Copyright (C) 2015 American Megatrends, Inc.
            Advanced
   Wake system from S5              [Dynamic Time]      Enable or disable System wake
   Wake up minute increase         1                    on alarm event. Select
                                                        FixedTime, system will wake on
                                                        the hr::min::sec specified.
                                                        Select DynamicTime , System
                                                        will wake on the current time
                                                        + Increase minute(s)

                          ┌─── Wake system from S5 ───┐
                          │ Disabled                  │
                          │ Fixed Time                │
                          │ Dynamic Time              │
                          └───────────────────────────┤
                                                        ↔: Select Screen
                                                        ↑↓: Select Item
                                                        Enter: Select
                                                        +/-: Change Opt.
                                                        F1: General Help
                                                        F2: Previous Values
                                                        F3: Optimized Defaults
                                                        F4: Save & Exit
                                                        ESC: Exit

            Version 2.17.1246. Copyright (C) 2015 American Megatrends, Inc.
```

4.2.2.5 CPU Configuration

```
           Aptio Setup Utility – Copyright (C) 2015 American Megatrends, Inc.
     Advanced

    CPU Configuration                                        Socket specific CPU Information

  ▶ Socket 0 CPU Information
  ▶ CPU Thermal Configuration

    CPU Speed                        1834 MHz
    64-bit                           Supported

    Limit CPUID Maximum              [Disabled]
    Execute Disable Bit              [Enabled]
    Intel Virtualization Technology  [Enabled]
    Power Technology                 [Energy Efficient]

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



           Version 2.17.1246. Copyright (C) 2015 American Megatrends, Inc.
```

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 the performance and power management.	Disabled	Disable this function
		Energy Efficient	Enable energy efficient mode

4.2.2.6 PPM Configuration

```
              Aptio Setup Utility - Copyright (C) 2016 American Megatrends, Inc.
        Advanced

 PPM Configuration                                          Enable/Disable CPU C state
                                                            report to OS
 CPU C state Report                    [Enabled]
 Max CPU C-state                       [ C1]






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




              Version 2.17.1246. Copyright (C) 2016 American Megatrends, Inc.
```

BIOS Setting	Description	Setting Option	Effect
CPU C State Report	Shows CPU C State Report	Enabled/ Disabled	Enable or Disable CPU C state report to OS
Max CPU C-State	Allows to enter power-saving mode in order to save energy	C1, C3, C6, C7, Auto	Enable or Disable CPU C Max CPU S-Sate

4.2.2.7 Thermal Configuration

This menu allows controlling thermal settings of the computer. Refer to the descriptions on the top right side of the screen for detailed information about each setting.

```
Aptio Setup Utility – Copyright (C) 2015 American Megatrends, Inc.
 Advanced

Thermal Configuration Parameters                    This value controls the
Critical Trip Point            [90 C]               temperature of the ACPI
Passive Trip Point             [85 C]               critical Trip Point in which
                                                    the OS will shut the system
                                                    off.




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



        Version 2.17.1246. Copyright (C) 2015 American Megatrends, Inc.
```

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

4.2.2.8 IDE Configuration

```
              Aptio Setup Utility - Copyright (C) 2015 American Megatrends, Inc.
     Advanced

   IDE Configuration                                        Enable / Disable Serial ATA

   Serial-ATA (SATA)              [Enabled]

   SATA Speed Support             [Gen2]
   SATA Mode                      [AHCI Mode]

   Serial-ATA Port 0             [Enabled]
   SATA Port0 HotPlug            [Disabled]

   Serial-ATA Port 1             [Enabled]
   SATA Port1 HotPlug            [Disabled]

   SATA Port0                                               →←: Select Screen
   SSE032GPTC0-S8 (32.0GB)                                  ↑↓: Select Item
                                                            Enter: Select
   SATA Port1                                               +/-: Change Opt.
   Not Present                                              F1: General Help
                                                            F2: Previous Values
                                                            F3: Optimized Defaults
                                                            F4: Save & Exit
                                                            ESC: Exit



              Version 2.17.1246. Copyright (C) 2015 American Megatrends, Inc.
```

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	The maximum speed will be limited to 150 MB/s
		Gen2	The 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 Port 0	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 Port 1	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) Port 1
SATA Port1 HotPlug	This feature that allows you to attach and remove a SATA Port1	Enabled/ Disabled	Enable or disable this function

4.2.2.9 Miscellaneous Configuration

OS Selection

This item allows users to select the proper Operating System.

```
           Aptio Setup Utility – Copyright (C) 2015 American Megatrends, Inc.
          Advanced

    Miscellaneous Configuration                              OS Selection
    OS Selection                         [Windows 8.X]




                              ┌──── OS Selection ────┐
                              │ Windows 8.X          │
                              │ Windows 7            │     ───────────────────
                              └──────────────────────┘
                                                         →←: Select Screen
                                                         ↑↓: Select Item
                                                         Enter: Select
                                                         +/–: Change Opt.
                                                         F1: General Help
                                                         F2: Previous Values
                                                         F3: Optimized Defaults
                                                         F4: Save & Exit
                                                         ESC: Exit




            Version 2.17.1246. Copyright (C) 2015 American Megatrends, Inc.
```
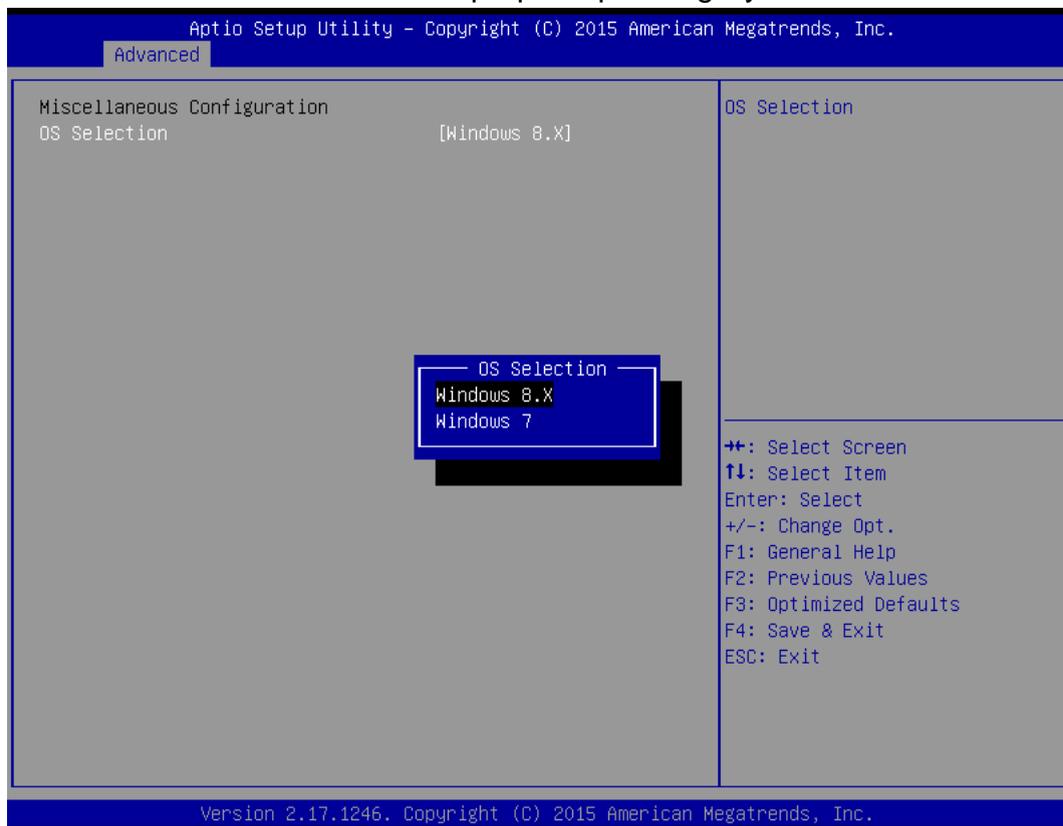
BIOS Setting	Description	Setting Option	Effect
Windows 8.X	Allows user to choose the proper OS.	Enter	Use Windows 8.X
Windows 7	Allows user to choose the proper OS.	Enter	Use Windows 7

IMPORTANT:
The device will be shipped with OS according to your order. BIOS OS Selection menu varies accordingly.

4.2.2.10 CSM Configuration

```
                Aptio Setup Utility - Copyright (C) 2015 American Megatrends, Inc.
      Advanced

    Compatibility Support Module Configuration                  Enable/Disable CSM Support.

    CSM Support                         [Enabled]

    CSM16 Module Version                07.76

    GateA20 Active                      [Upon Request]
    Option ROM Messages                 [Force BIOS]

    Boot option filter                  [Legacy only]

    Option ROM execution

    Network                             [Legacy]          →←: Select Screen
    Storage                             [Legacy]          ↑↓: Select Item
    Video                               [Legacy]          Enter: Select
    Other PCI devices                   [UEFI]            +/-: Change Opt.
                                                          F1: General Help
                                                          F2: Previous Values
                                                          F3: Optimized Defaults
                                                          F4: Save & Exit
                                                          ESC: Exit


                Version 2.17.1246. Copyright (C) 2015 American Megatrends, Inc.
```

BIOS Setting	Description	Setting Option	Effect
CSM Support	The Compatibility Support Module (CSM) is a component of the UEFI firmware that provides legacy BIOS compatibility by emulating a 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

4.2.2.11 USB Configuration

```
              Aptio Setup Utility - Copyright (C) 2013 American Megatrends, Inc.
      Advanced

 USB Configuration                                      Enables Legacy USB support.
                                                        AUTO option disables legacy
 USB Module Version              8.10.27                support if no USB devices are
                                                        connected. DISABLE option will
 USB Devices:                                           keep USB devices available
      1 Drive, 1 Keyboard, 1 Mouse, 6 Hubs, 1 SmartCard only for EFI applications.
 Reader
 Legacy USB Support              [Enabled]
 USB3.0 Support                  [Enabled]
 XHCI Hand-off                   [Enabled]
 EHCI Hand-off                   [Disabled]
 USB Mass Storage Driver Support [Enabled]
                                                        ─────────────────────────
 USB hardware delays and time-outs:                     ←→: Select Screen
 USB transfer time-out           [20 sec]               ↑↓: Select Item
 Device reset time-out           [20 sec]               Enter: Select
 Device power-up delay           [Auto]                 +/-: Change Opt.
                                                        F1: General Help
 Mass Storage Devices:                                  F2: Previous Values
 JetFlashTranscend 16GB 1.00     [Auto]                 F3: Optimized Defaults
                                                        F4: Save & Exit
                                                        ESC: Exit

              Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.
```

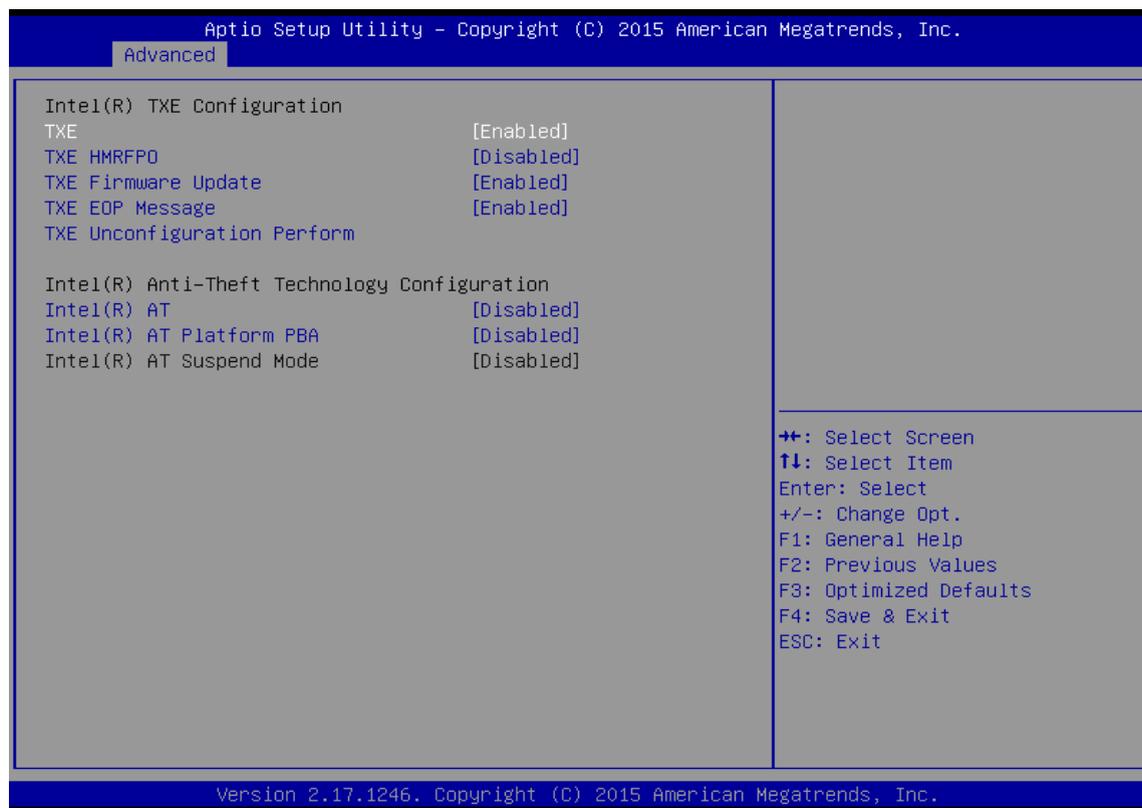| BIOS Setting	Description	Setting Option	Effect
Legacy USB Support	User can enable or disable USB port.	Disable	Will keep USB devices available only for EFI applications.
		Enable	Enable all the USB devices
USB 3.0 Support	User can enable or disable USB 3.0 (XHCI) controller support.	Enable	Enable USB 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

4.2.2.12 Platform Trust Technology

```
            Aptio Setup Utility - Copyright (C) 2015 American Megatrends, Inc.
  Advanced

                                                          Enable/Disable fTPM
   fTPM                              [Enabled]




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




            Version 2.17.1246. Copyright (C) 2015 American Megatrends, Inc.
```
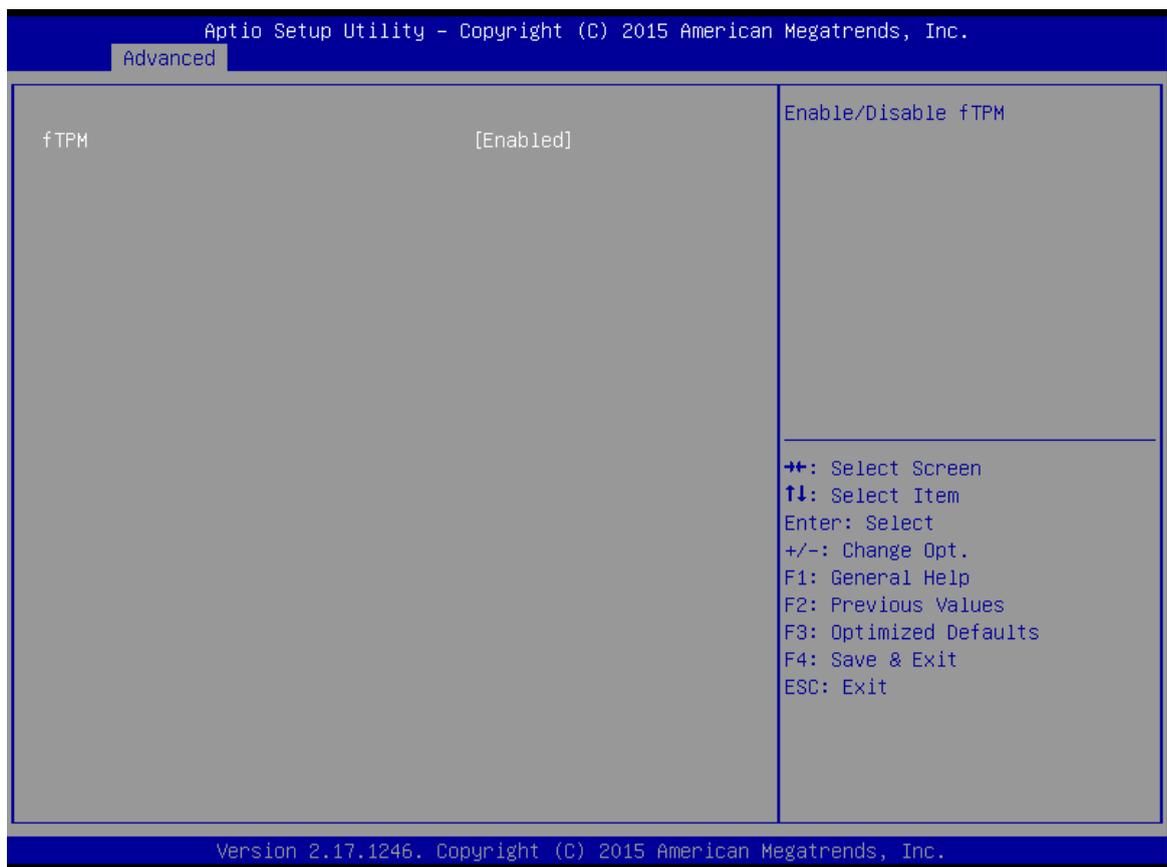
BIOS Setting	Description	Setting Option	Effect
fTPM	Trusted Platform Module parameters	Enabled/Disabled	Enables or disables this function

4.2.2.13 Security Configuration

```
              Aptio Setup Utility - Copyright (C) 2015 American Megatrends, Inc.
        Advanced

   Intel(R) TXE Configuration
   TXE                                  [Enabled]
   TXE HMRFPO                           [Disabled]
   TXE Firmware Update                  [Enabled]
   TXE EOP Message                      [Enabled]
   TXE Unconfiguration Perform

   Intel(R) Anti-Theft Technology Configuration
   Intel(R) AT                          [Disabled]
   Intel(R) AT Platform PBA             [Disabled]
   Intel(R) AT Suspend Mode             [Disabled]

                                                      ➔←: 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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```

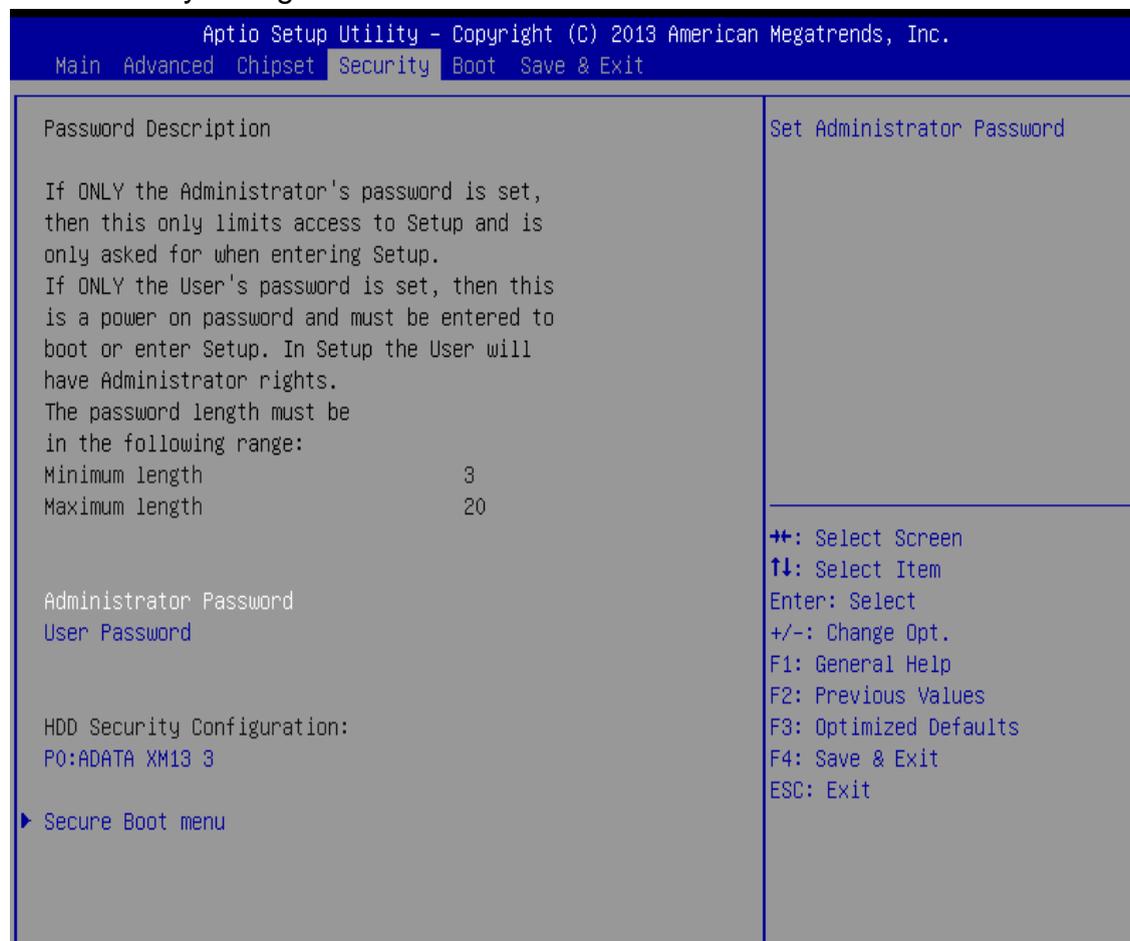| BIOS Setting	Description	Setting Option	Effect
TXE	Trusted Execution Technology parameters	Enabled/Disabled	Enables or disables this function
TXE HMRFPO	TXE HMRFPO parameters	Enabled/Disabled	Enables or disables this function
TXE Firmware Update	TXE Firmware Update parameters	Enabled/Disabled	Enables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

4.2.3 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 working 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

4.2.4 Security Menu

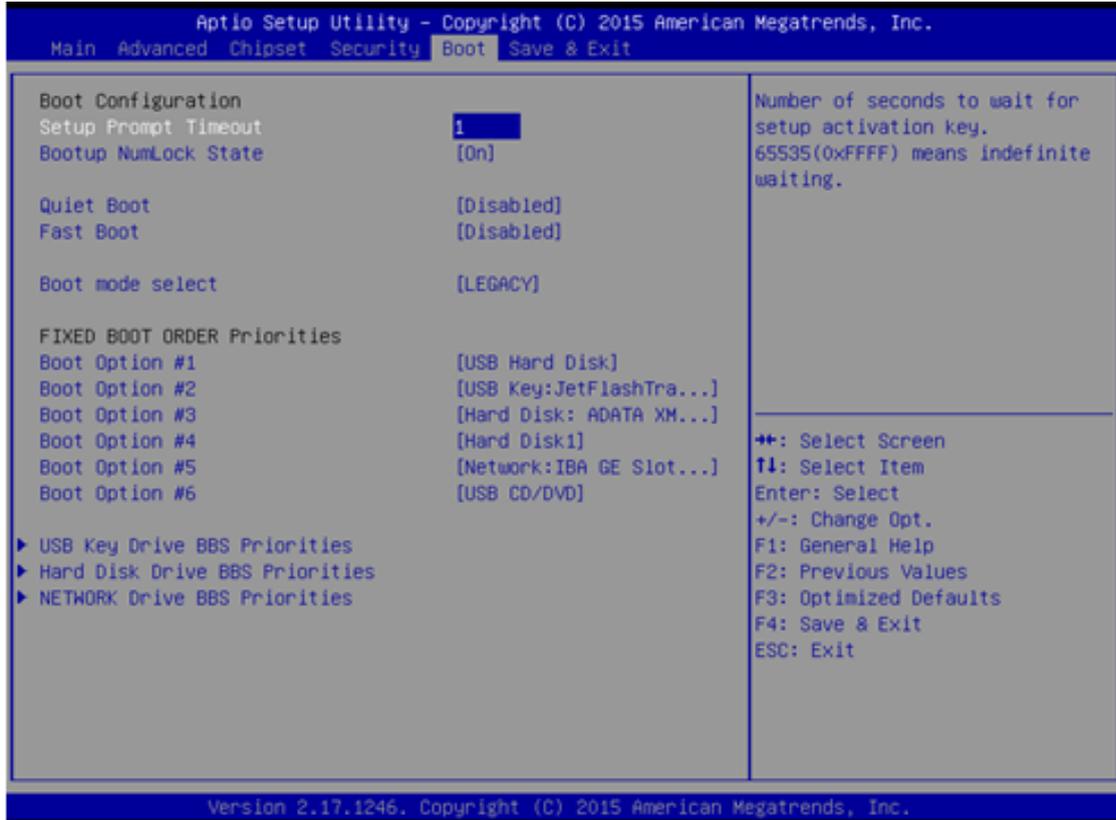In the Security menu, users can set administrator password, user password, and HDD security configuration.

```
             Aptio Setup Utility - Copyright (C) 2013 American Megatrends, Inc.
  Main  Advanced  Chipset  Security  Boot  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
  HDD Security Configuration:                            F3: Optimized Defaults
  P0:ADATA XM13 3                                        F4: Save & Exit
                                                         ESC: Exit
  ▶ Secure Boot menu



             Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.
```

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

4.2.5 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 uses to look for a boot device from which to load the operating system.
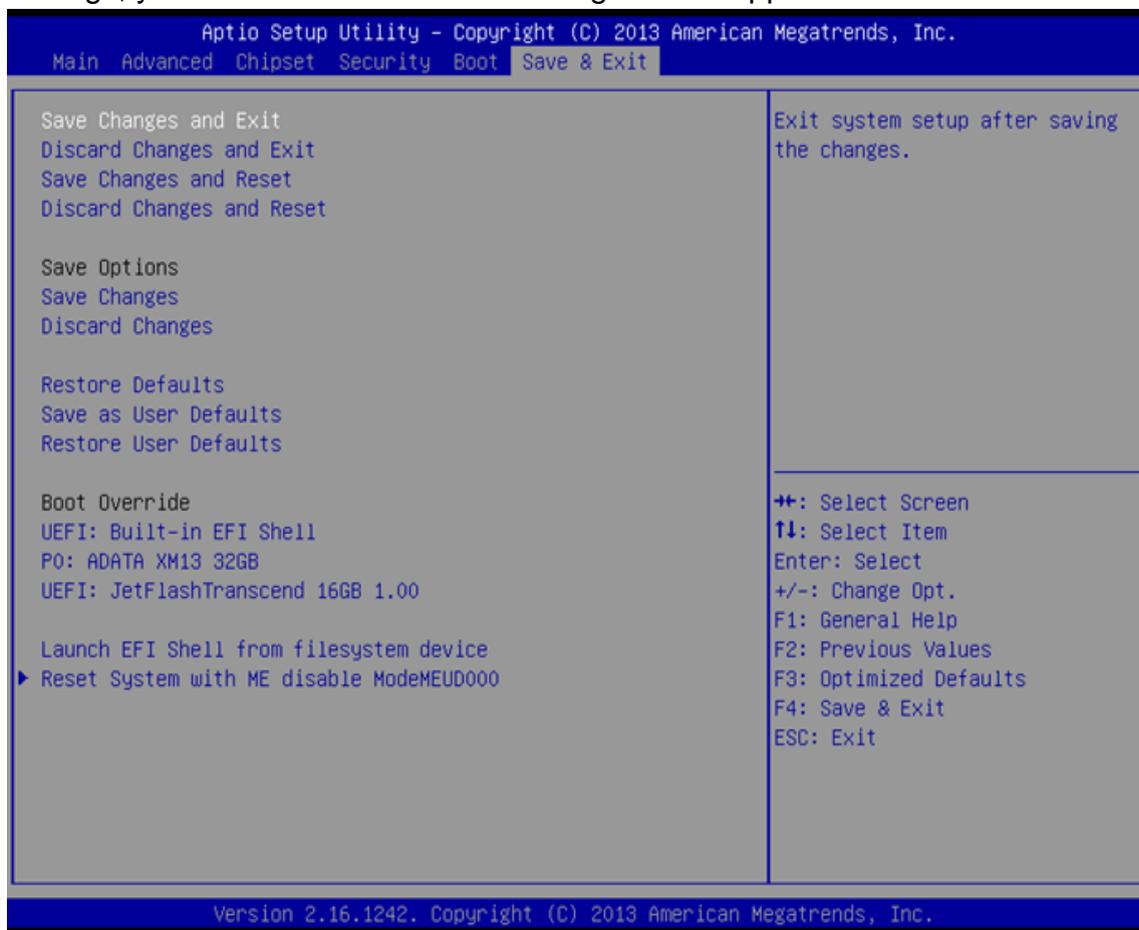
```
                Aptio Setup Utility - Copyright (C) 2015 American Megatrends, Inc.
      Main  Advanced  Chipset  Security  Boot  Save & Exit

   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                               [Disabled]

   Boot mode select                        [LEGACY]

   FIXED BOOT ORDER Priorities
   Boot Option #1                          [USB Hard Disk]
   Boot Option #2                          [USB Key:JetFlashTra...]
   Boot Option #3                          [Hard Disk: ADATA XM...]
   Boot Option #4                          [Hard Disk1]            ++: Select Screen
   Boot Option #5                          [Network:IBA GE Slot...] ↑↓: Select Item
   Boot Option #6                          [USB CD/DVD]            Enter: Select
                                                                  +/-: Change Opt.
 ▶ USB Key Drive BBS Priorities                                   F1: General Help
 ▶ Hard Disk Drive BBS Priorities                                 F2: Previous Values
 ▶ NETWORK Drive BBS Priorities                                   F3: Optimized Defaults
                                                                  F4: Save & Exit
                                                                  ESC: Exit

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```

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 or OEM logo (default = Black background) is displayed.	Disabled	Disables this 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 Drive BBS Priorities	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

4.2.6 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.

```
            Aptio Setup Utility - Copyright (C) 2013 American Megatrends, Inc.
    Main  Advanced  Chipset  Security  Boot  Save & Exit

    Save Changes and Exit                            Exit system setup 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                                    ++: Select Screen
    UEFI: Built-in EFI Shell                         ↑↓: Select Item
    P0: ADATA XM13 32GB                              Enter: Select
    UEFI: JetFlashTranscend 16GB 1.00                +/-: Change Opt.
                                                     F1: General Help
    Launch EFI Shell from filesystem device          F2: Previous Values
  ▶ Reset System with ME disable ModeMEUD000         F3: Optimized Defaults
                                                     F4: Save & Exit
                                                     ESC: Exit

            Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.
```

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

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

4.3 Using Recovery Wizard to Restore Computer

The Panel PC has a dedicate recovery partition stored on the hard drive of the PC to enable quick one-key recovery process. This partition occupies about 11GB of the storage space, and comes built-in to the PC.

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.
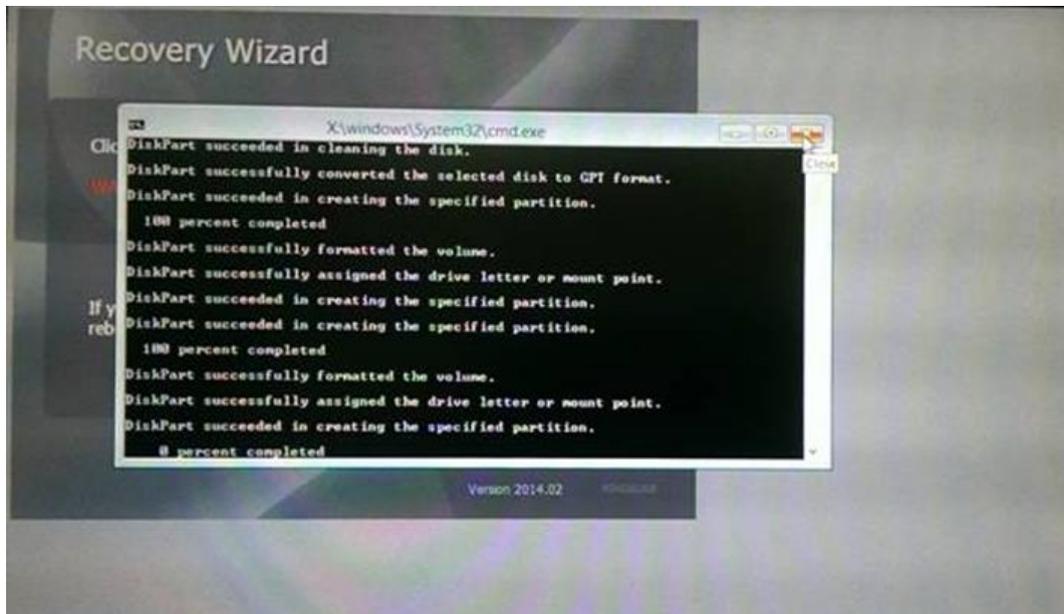
Driver Installation

This chapter describes how to install all
necessary drivers.

5

CHAPTER 5: DRIVER INSTALLATION

This chapter provides guideline to driver installations.

5.1 Installing Chipset Driver

Step 1 Insert the CD that comes with the motherboard. Open the file document "Chipset Driver" and click "infinst_auto.exe" to install driver.
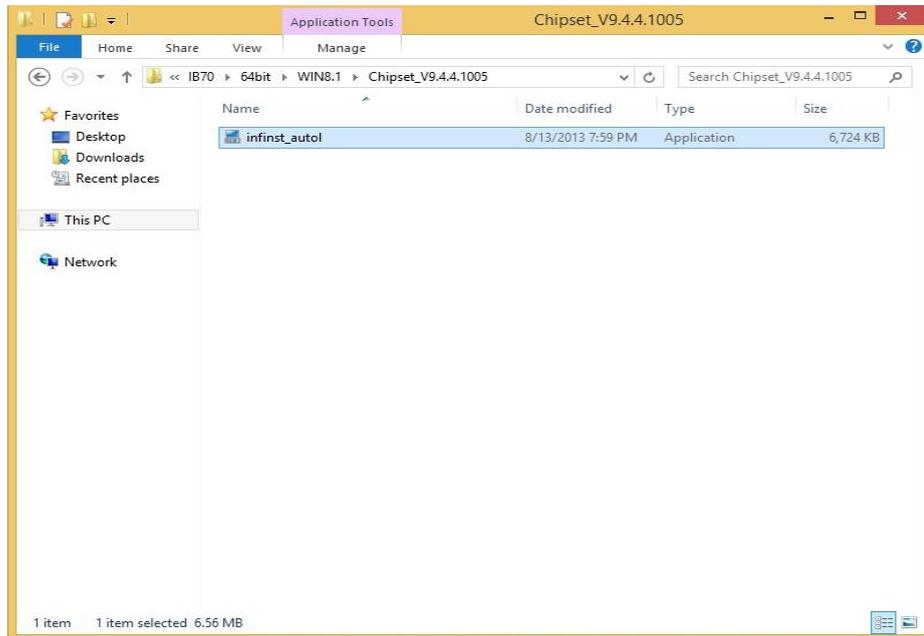
Step 2 Click **Next** to continue.

Step 3 Click **Yes** to agree the license terms.

Step 4 Click **Next** to install the driver.
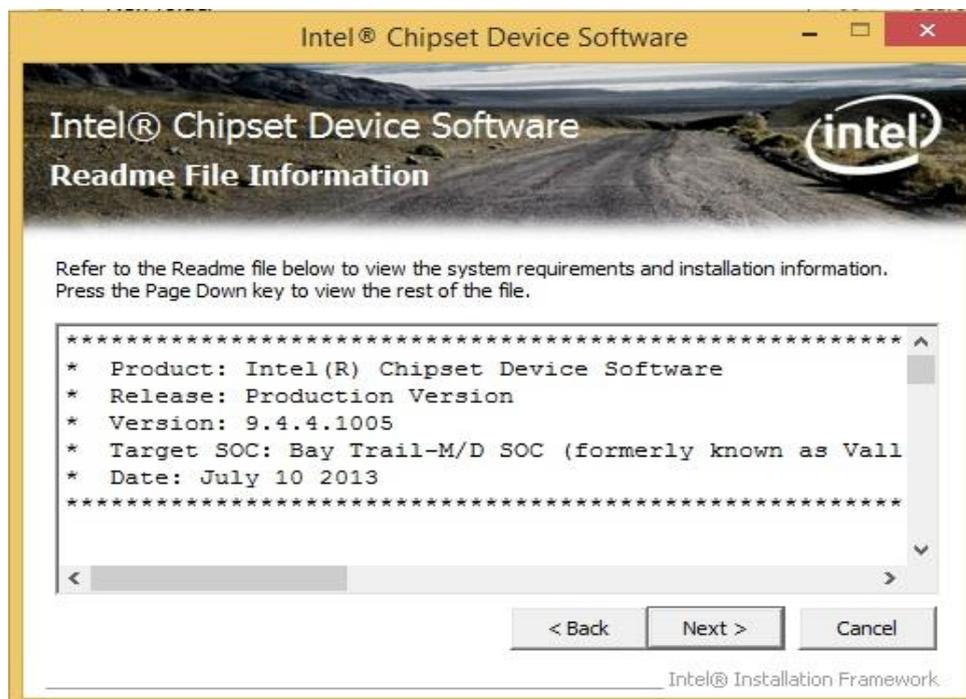
Step 5 Software setup progress window will appear, click **Next** to continue.
Step 6 Click **"Yes, I want to restart this computer now"** to finish the installation.

5.2 Installing 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.
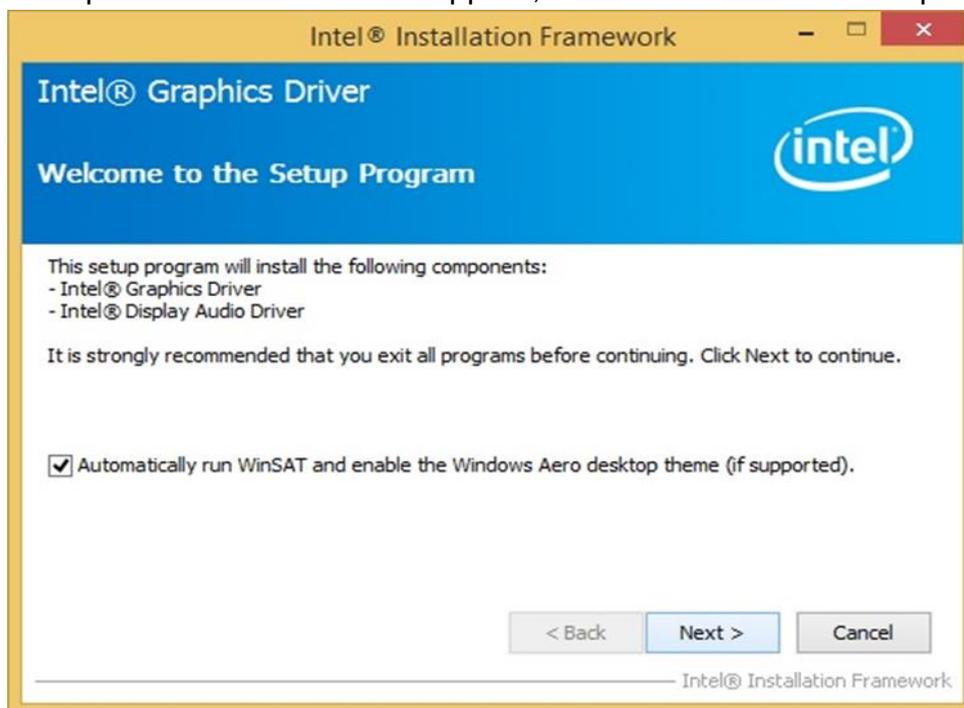
Step 3 Carefully read the license terms and click **Yes** to agree.

Step 4 Check Readme file information, and click **Next** to install driver.

Step 5 Click **Next** to continue.

Step 6 Windows Security window will appear, click **"Install this driver software anyway"** to continue.

Step 7 Setup Progress window will appear, click **Next** to continue the installation.

Step 8 Setup is complete, click **"Yes, I want to restart this computer now"** to finish the installation and restart the computer.

User Manual   Chapter 5   Driver Installation

5.3 Installing Intel Sideband Fabric Device (Intel MBI) Driver (Windows 8)

Step 1 Insert the CD that comes with the motherboard. Open the file document **"MBI"** and click **"Setup.exe"** to install the driver.
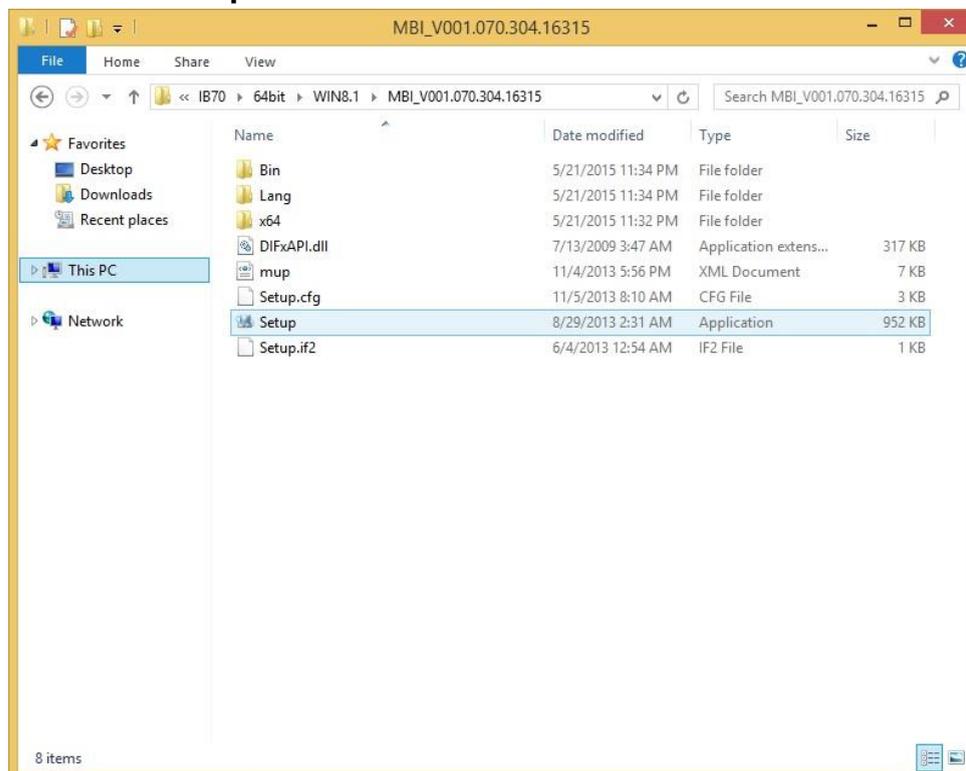
Step 2 Welcome to the setup program window will appear, click **Next** to start the installation.

Step 3 Carefully read the License Agreement terms and click **Yes** to agree.

Step 4 Setup progress will appear, please wait for the operations to be performed, then click **Next** to continue.

Step 5 The installation is complete, click "**Yes, I want to restart this computer now"** to finish and restart the computer.

5.4 Installing Intel Trusted Engine Interface (Intel TXE) Driver

Step 1 Insert the CD that comes with the motherboard. Open the file document "TXE" and click "Setup TXE.exe" to install the driver.

Step 2 Welcome to the setup program window will appear, click **Next** to start the installation.

Step 3 Carefully read the license terms and click **Yes** to agree.

Step 4 Confirmation window will appear, click **Next** to continue the driver installation.

Step 5 Please wait while the product is being installed.

Step 6 The installation is complete, click **Finish** to complete the installation and restart the computer.

5.5 Installing Intel Network Connections

User must confirm the type of operating system is being used before installing Intel Network Connections. Follow the steps below to complete the installation.

Step 1 Click "PROWin64.exe"

Step 2 Click **Yes** to start the installation.
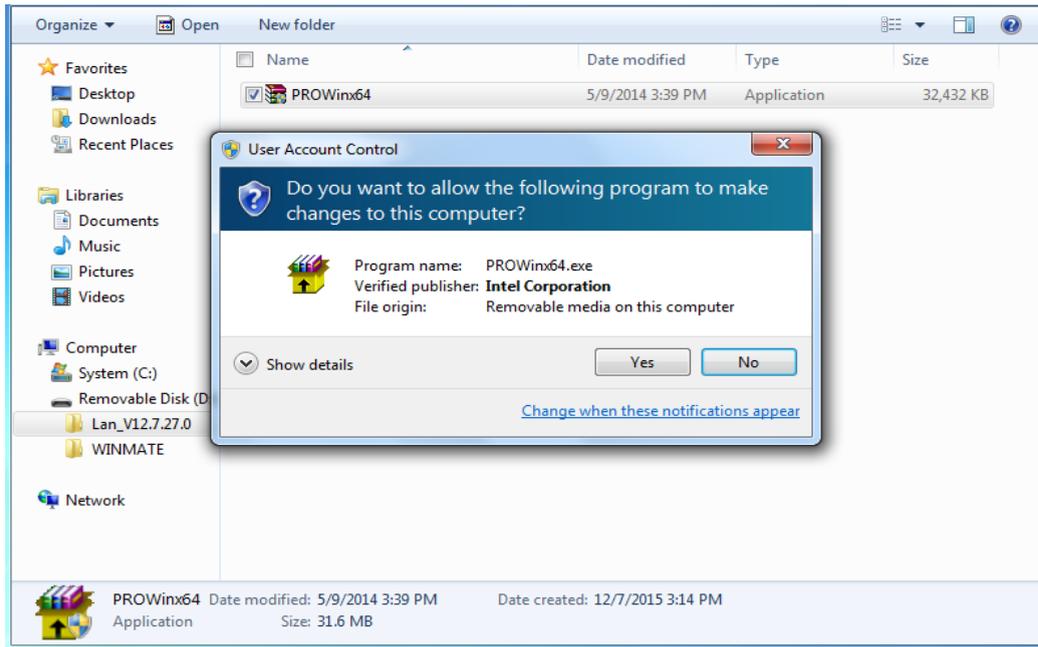
Step 3 Welcome window will appear, click **Next** to install the driver.

Step 4 In the program maintenance window you will see two options available. "Remove" is to remove Intel Networks Connections from your computer, and "Modify" is to make any changes. Choose **Modify** to continue.

Step 5 In the **Setup Options** window choose "**Intel® PRO Set for Windows® Device Manger**", "**Intel ® Network Connections SNMP Agent**" and "**Advanced Network Services**".

Step 6 The wizard is ready to begin installation, click **Install** to continue.

Step 7 Install wizard completed, click **Finish** to complete the installation.

5.6 Installing 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.
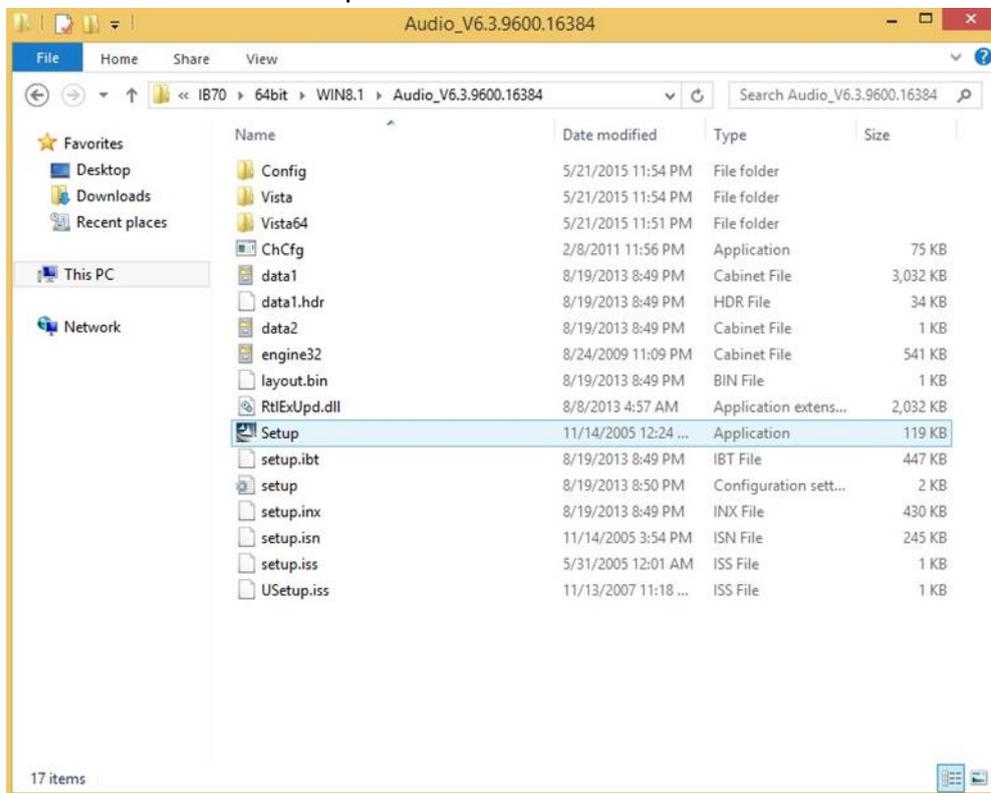
Step 2 Please wait while the InstalShield Wizard prepares the setup.
Step 3 Welcome window will appear, click **Next** to install the driver.
Step 4 It might take some time to configure new software installation. Please wait.
Step 5 Windows security will appear, click **Install** to install the audio driver.
Step 6 The installation is complete, select **"Yes, I want to restart my computer**

now", and click **Finish** to complete the installation.

Mounting

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

6

CHAPTER 6: MOUNTING

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 IP69K Stainless P-CAP 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

Flat Stainless P-CAP Panel PC has VESA mount holes on the rear side. Follow instructions below to mount the unit with VESA Mount bracket (not supplied by Winmate).

Size	VESA Plate Dimensions	Screw hole diameter
10.4", 15",19"	100 x 100 mm	VESA M4x5 mm
21.5"	100 x 200 mm	VESA M4x5 mm

Mounting Instruction:

1. Screw VESA bracket to the fixture (ex. swing arm) with four VESA screws.
2. Place the device on VESA bracket.
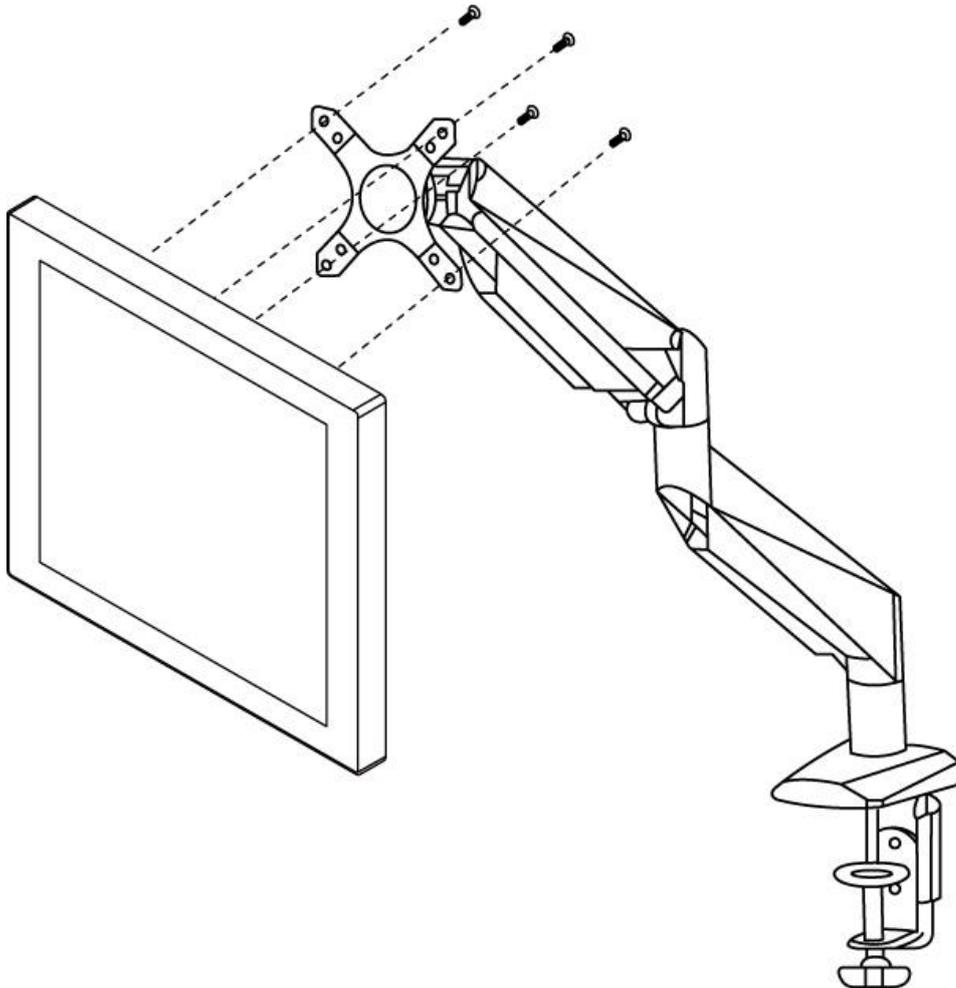
NOTE:
Notice that both hooks on bracket should lock the notches on the back cover of the device.

6.3.2 Yoke Mount

Yoke Mount solution allows installing the Panel PC with the bracket (not supplied by Winmate).

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.
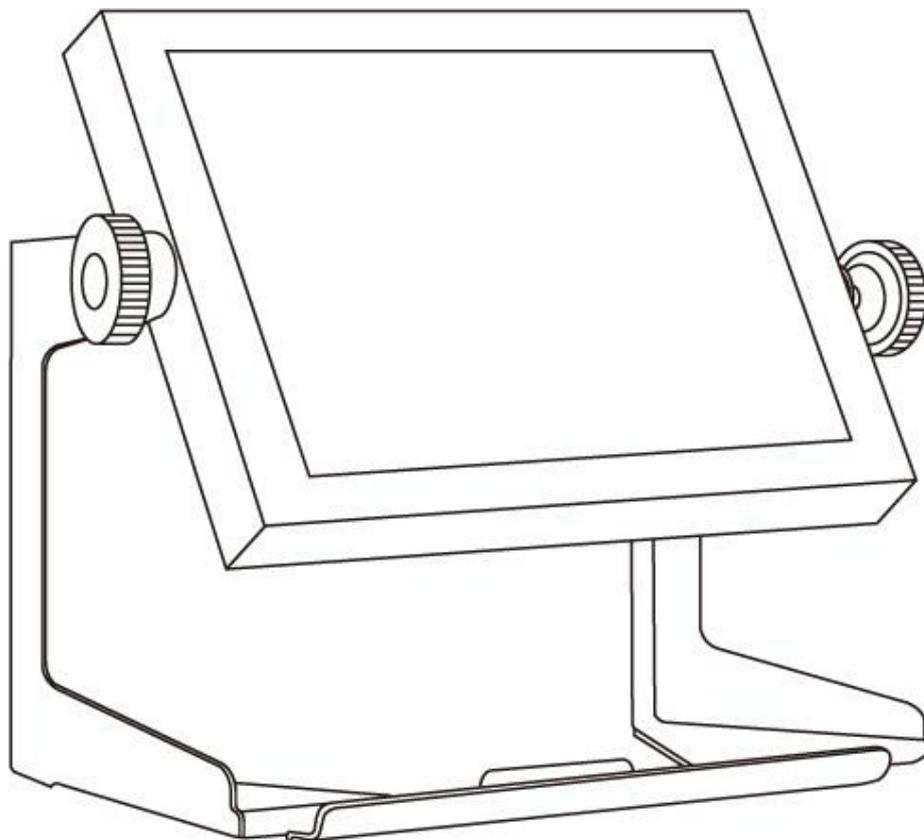
Technical Support

This chapter includes directory to
Winmate technical support.

7

CHAPTER 7: TECHNICAL SUPPORT

This chapter includes technical support documents and software developing kit (SDK). If any problem occurs fill in problem report form enclosed and immediately contact us.

7.1 Software Developer Support

Winmate provides the following SDK and Utilities for the IP69K Stainless P-CAP Panel PC.

Item	File Type	Description
1	SDK	Watchdog SDK
2	Utility	Watchdog Utility

To find the Drivers and SDK, please refer to the Driver CD that comes in the package or contact us. Also, you can download drivers from Winmate Download Center.

Winmate Download Center

Go to http://www.winmate.com.tw/ **>** Support **>** Download Center **>** Full IP65/IP69K Stainless PPC > IP69 Flat PCAP Series – Bay Trail

Or follow the link:
http://www.winmate.com.tw/DownCenter/DownLoadCenter.asp?DownType=4302

7.2 Problem Report Form

IP69K Flat Stainless P-CAP Panel PC

Customer name:	
Company:	
Tel.:	Fax:
E-mail:	Date:

Product Serial Number:

—————————————————————————————————————

Problem Description: Please describe the problem as clearly as possible.
Detailed description of the occurred problem will allow us to find the best solution
to solve the problem as soon as possible.

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Product Specifications

This section includes product specifications.

Appendix

A

APPENDIX A: PRODUCT SPECIFICATIONS

Hardware Specifications

	Model Name			
	R10IB3S-SPT269	R15IB3S-SPC369	R19IB3S-SPM169	W22IB3S-SPA369
Display				
Size	10.4"	15"	19"	21.5"
Resolution	1024 x 768	1024 x 768	1280 x 1024	1920 x 1080
Brightness	350 cd/m^2 (typ.)	250 cd/m^2 (typ.)	250 cd/m^2 (typ.)	250 cd/m^2 (typ.)
Contrast Ratio	1000 : 1 (typ.)	700 : 1 (typ.)	1000 : 1 (typ.)	3000 : 1 (typ.)
Viewing Angle	-88~88(H);-88~88(V)	-80~80(H);-70~70(V)	-85~85(H);-80~80(V)	-89~89(H);-89~89(V)
Max Colors	16.2M	16.2M	16.7M	16.7M
Touch	P-Cap(Default), Glass (Optional)			
System				
Processor	Intel® Celeron® Bay Trail-M N2930 1.83 GHz			
BIOS	AMI 16Mbit Flash			
System Chipset	Intel® Atom™ SoC Integrate			
System Memory	1 x SO-DIMM, Default 4GB, max. 8GB DDR3L 1600			
Storage	Default 64GB			
Graphic Chipset	Integrated HD Graphics			
Audio	Built in ALC886 HD Audio Codec			
Ethernet	2 x RJ45 Gigabit LAN (1 x RJ45 internal)			
USB	6 x USB2.0 (4 x USB internal) 4 x RS232 (3 x RS232 internal)			
Expansion Slot	1 x Mini PCIe (Internal)			

SSD Interface	1 x Mini PCIe SSD			
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	1 x 12VDC			
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 IP69K			
Power Specifications				
Power Input	12V DC IN (Lockable Power Jack)			
Power Consumption	33W (typ.)	38W (typ.)	45W (typ.)	56W (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	Intel Sideband Fabric Device (Intel MBI) Driver	☒	☑	☑
5	Intel Trusted Engine Interface (Intel TXE) Driver	☑	☑	☑
6	USB 3.0 Driver	☑	☒	☒
7	Watchdog Driver	☑	☑	☑

Software Support- SDK

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

Order Information

This section includes product specifications.

Appendix

B

APPENDIX B: ORDER INFORMATION

The IP69K Flat Stainless P-CAP Panel PC available for ordering in the following configurations.

SBC		Panel PC	
RAM	SODIMM DDR3L Max 8GB	OS	Windows 10 IoT Enterprise Windows Embedded 8.1 Industry Pro Windows Embedded 8 Standard Windows Embedded 7 Standard
Storage	Mini PCIe SSD	Touch	Glass

NOTES