User Manual Ver1.0

WPxxx1T-C

IP69K Stainless Steel Panel PC

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Manual Conventions

WARNING:

Warnings appear where overlooked details may cause damage to the equipment or result in personal injury. Warnings should be taken seriously.

CAUTION:

Cautionary messages should be heeled to help reduce the chance of losing data or damaging the product.

NOTE:

These messages inform the reader of essential but non-critical information. These messages should be read carefully as any directions or instructions contained therein can help avoid making mistakes.

Declaration of Conformity

This restriction is subject to provide protection for system operation in business environment, which will produce, use and transmit radio frequency energy. Without notice of the instructions of the correct installation and use, it may cause harmful interference to radio communication. The interference prevention cannot be guaranteed even with proper installation according to the manual. If the device gets bad affect on the signal of radio / TV. User could insure by turn device on/off.

When this device produces some harmful interference, user can use the following measure to solve interference problem:

- Set the receiving antenna's direction or location.
- Increase the distance between this device and receiver.
- Plug in this device's power connector into different circuits of the power outlet with receiver

If you need technical support, please inform the dealer or experienced radio/TV technical personnel.

NOTE:

If user changes the setting unauthorized or repairs the device without any approval of the relevant authority, then user's rights of controlling this device will be canceled.

Technical Support and Service

Please visit the Nodka website http://nodka.eu to get more details.

If you need additional assistance, please contact your system reseller or vendor. Please have the following information ready before you call:

1. Product name and serial number
2. The product specification
3. Description of your software (operational system, vision, application software, etc.)
4. A complete description of the problem
5. The exact wording of any error messages

Ordering Information

Product code	Description
WP1501T-C-4205U	15”LCD/ Capacitive touch screen/ 1024*768/ CPU 4205U/ no memory /no SSD/ 2LAN/ 2RS232 (option RS485)/ 2USB/ option WIFI&3G/ DC IN 12~24V
WP1901T-C-4205U	19”LCD/ Capacitive touch screen/ 1280*1024/ CPU 4205U/ no memory /no SSD/ 2LAN/ 2RS232 (option RS485)/ 2USB/ option WIFI&3G/ DC IN 12~24V
WP2151T-C-4205U	21.5”LCD/ Capacitive touch screen/ 1920*1080/ CPU 4205U/ no memory/ no SSD/ 2LAN/ 2RS232 (option RS485)/ 2USB/option WIFI&3G/ DC IN 12~24V

Option items:

Material NO.	Specific
5040200005	WIFI (7260HMWBN)with waterproof cover
5040100001	EC20(4G/3Gmodule)
2020200067	M12 plug with 5pin（USB） Length=2Meters
2020200068	M12 plug with 4pin（COM） Length=2Meters
2020200069	M12 plug with 8pin（LAN cable） Length=2Meters
2010300015	IP67 waterproof Meanwell power adapterOWA-60E-12(EU type)

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Chapter 1
Overview

1.1 Introductions

WPxxx1T-C series is a fanless industrial panel PC based on a projected capacitive touch operation panel design. It is suitable for the food industry (such as meat factory, fish factory, brewery, dairy factory, etc.) that requires hygiene, cleanliness, easy disinfection, pollution prevention, anti-mold, and anti-corrosion, etc. WPxxx1T-C series is easy to clean and reaches IP69 waterproof rating. It is made of SUS304 stainless steel die-casting, which can prevent the growth of bacteria and rust for a long time.

Supports: Windows7/WES7、Windows10、Linux、Vxworks、QNX.

1.2 Key Features

- The housing of the whole machine is SUS304 stainless steel structure, which meets the IP69K waterproof level
- Projected capacitive touch screen
- Support 8th generation 4205U CPU module
- 2 Gigabit Ethernet ports, 2 RS232 serial ports, 8KV electrostatic protection and 600W TVS surge protection, support RS485 automatic data flow control
- Wide voltage power supply: DC12V~24V, with overcurrent, overvoltage and reverse connection protection measures
- Expandable WIFI / 3G / 4G wireless communication / 1 Mini-PCIe slot
- The whole machine has no fan design, VESA wall-mounted installation method
- Interface: 2GLAN100M \ 1000M adaptive/2USB2.0/2COM adjustable 485

1.3 External Overview

Figure 1-1 External overview of WPxxx1T-C (WP1501T-C)

1.4 Specifications

Processor	CPU	Support 8th generation 4205U CPU module
	BIOS	Dual Core 1.8GHz
	L2 Cashi	2MB
	Chipset	Intel Bay Trail-M
	Memory	1 x 204-pin SODIMM DDR4-2133/ 2400MHz support up to 16GB
	Storage	1 x mSATA
I/O	LAN	2 x Intel I210 1000Mbps
	Audio	NULL
	USB	2 x USB2.0
	COM	2 x RS232 (option RS485 before ordering)
	Mini PCIe	Option either Wifi or 4G/3G module (Default: wifi)
OS	OS	Windows 7, Windows8, Windows10, Linux
Power	Power input	12-24VDC ±10% , Support reverse connection protection, over current protection
Touchscreen	Screen type	Multi- points Capacitive touch screen
	Transmittance	> 87%
	Controller	USB interface
	Driver support	Windows 7, Windows8, Windows10, Linux
	Surface Hardness	Mohs Hardness 7H
	Multi-touch	10 points when using Windows system
Environmental	Operating Temperature	-20 ~ 60° C (14 ℉ ~122 ℉) Use a wide temperature grade SSD
	Storage Temperature	0 ~ 45℃ (-4 ~ 158 ℉)
	Relative Humidity	10~95% RH@40°C,non-condensing
	Vibration	SSD applied: 1.5 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis
	Shock	SSD applied: 10 G, IEC 60068-2-64, Half-sine wave, 11ms duration
	EMC	CE/FCC Class A
	Water-proof	IP69K

	Type	WP1501T-C	WP1901T-C	WP2151T-C
Physical	Dimensions (W x H x D)	360 x 284 x 54mm 14.17 x 11.18 x 2.13”	440 x 365 x 54mm 17.32 x 14.37 x 2.13"	540 x 332 x 54mm 21.26 x 13.07 x 2.13"
	Net Weight	5.3kg	7.5kg	8.2kg
	Max. power consumption	38.6W	42W	46W
	Mounting	Desktop, VESA		
LCD	LCD type	15"XGA TFT	19" SXGA TFT	21.5" Full HD TFT
	Resolution	1024*768	1280 x 1024	1920 x 1080
	Colors	16.7MB	16.7MB	16.7MB
	Active Area	304.13 x 228.10mm	376 x 301mm	476.64 x 268.11mm
	(W x H)	11.97 x 8.98"	14.82 x 11.85"	18.77 x 10.56"
	Backlight	LED	LED	LED
	MTBF (Hour)	30000hrs	30000hrs	30000hrs
	Pixel Pitch (H x V)	0.297 x 0.297	0.294 x 0.294	0.248 x 0.248
	Luminance	420cd/m2	250cd/m2	250cd/m2
	Contrast Ratio	800 : 1	1000 : 1	3000:1
	Viewing Angle	(L)80/(R)80/(T)80/(B)80	(L)85/ (R)85 /(T) 80/(B)80	(L) 89 / (R) 89 / (T) 89 / (B)89

1.5 Dimensions

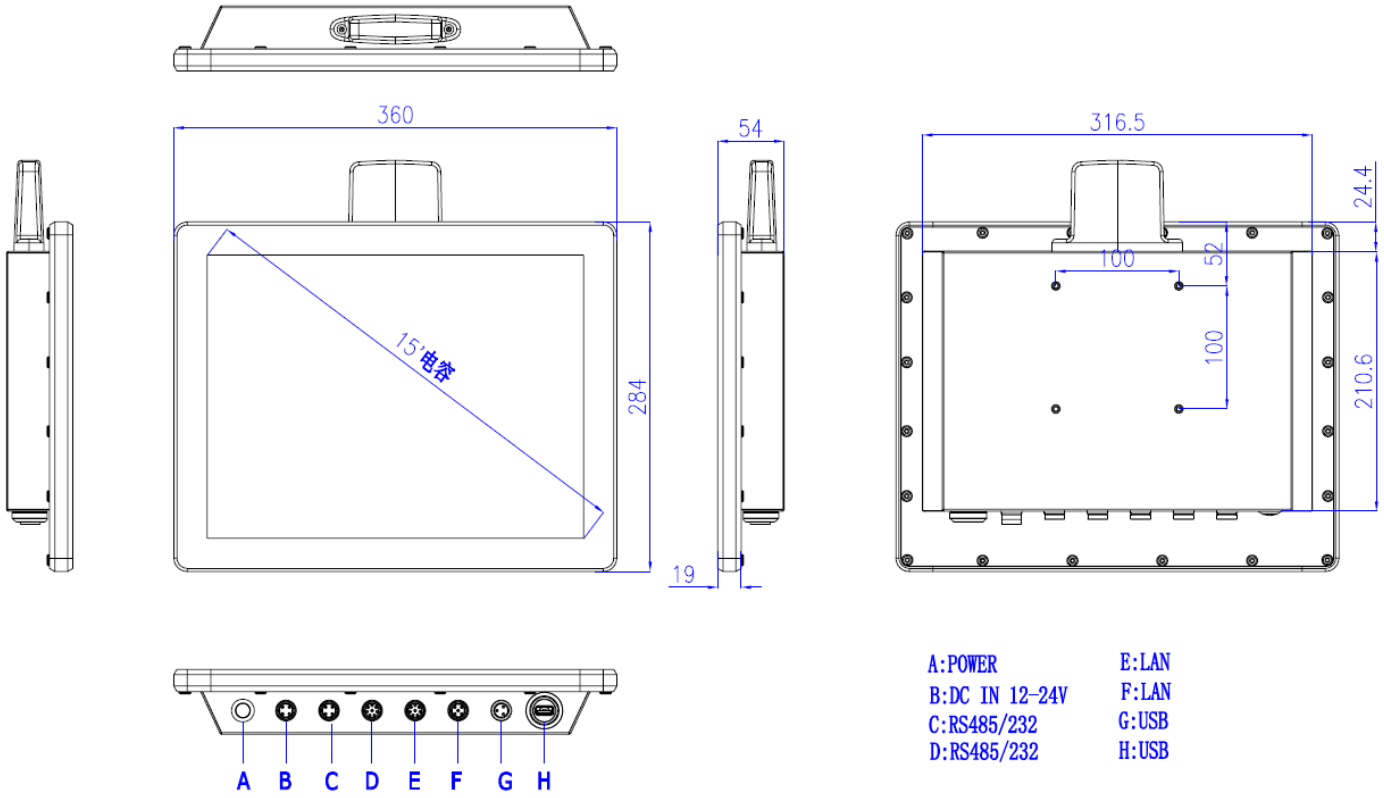


Figure 1-2 Dimension of WP1501T-C

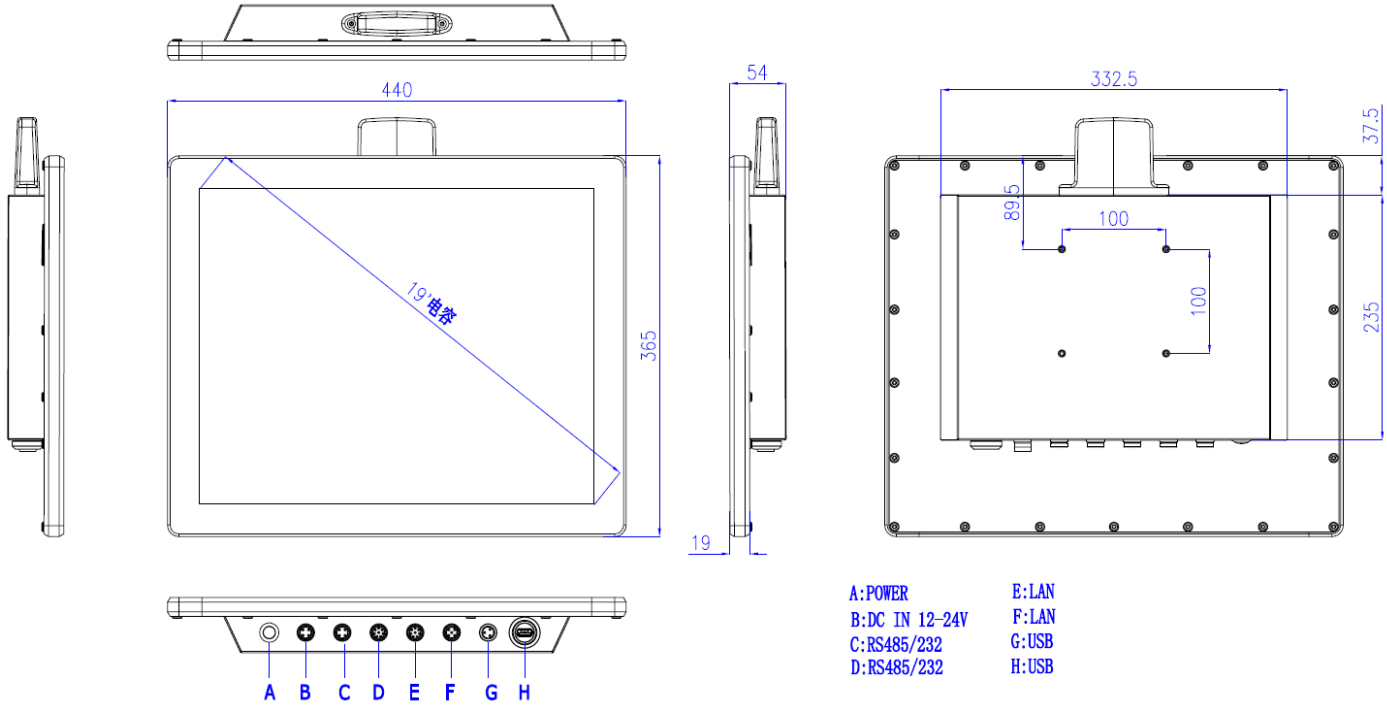


Figure 1-3 Dimension of WP1901T-C

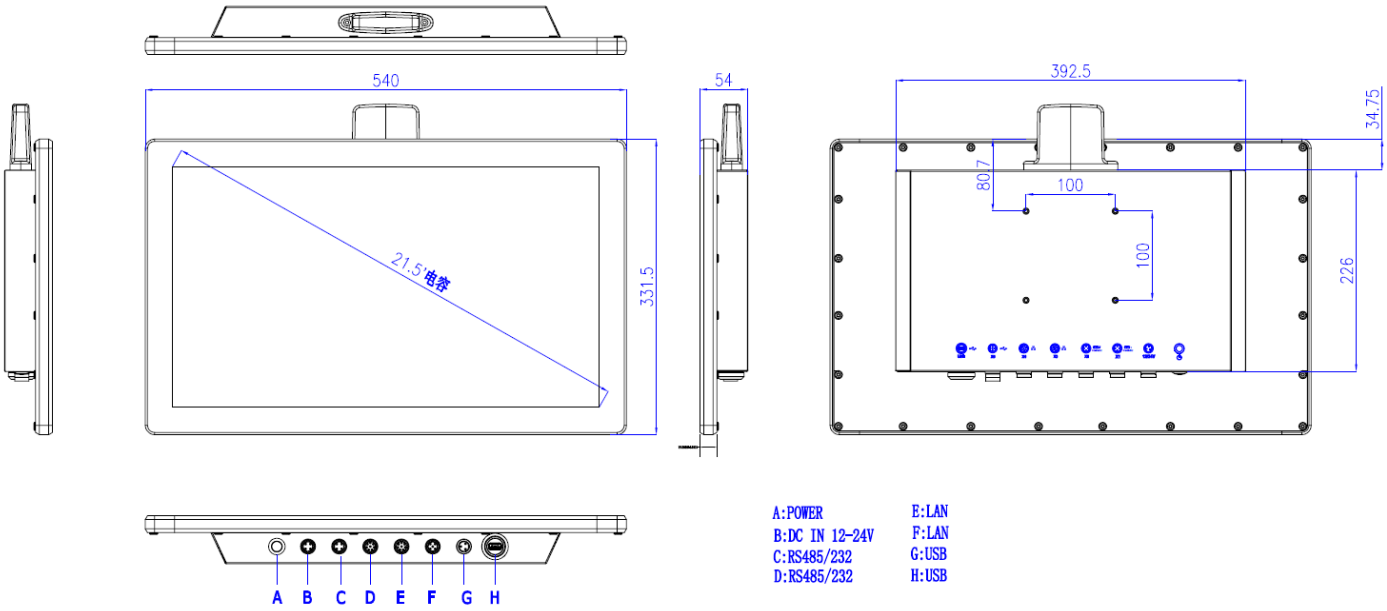


Figure 1-4 Dimension of WP2151T-C

Chapter 2
Hardware Installation

CAUTION:

There might be a risk of electric shock. Please always disconnect or turn off the main power before and during the installation.

Incorrect settings can cause irreparable damage to the product. Only certified engineer can change settings of the hardware.

2.1 Unpack the panel PC

WARNING:

Failure to take electrostatic discharge precautions during the installation of the product may result in permanent damage to the product and severe injury to the user.

Please follow the steps below to unpack your panel PC:

Step 1: Carefully cut the tape stealing outside the box,

Step 2: Open the box,

Step 3: Carry the panel PC out of the box,

Step 4: Carry out the accessory box.

2.2 Packing list

NOTE:

If some of the components listed in the checklist below are missing, please do not proceed with the installation. Contact the sales representative or vendor you purchased the product from.

Table 0-1 Package list

Item	Image	Quantity
WPxxx1T-C		1
Power cord		1
USB		1
COM		2
Cable		2

2.3 Mounting methods

CAUTION:

Make sure that installing the product with assistance, since the product is very heavy and could be damaged by falling and collision.

Multiple types of mounting methods are available for WPxxx1T-C installation. You can choose the best way you want.

2.3.1 Desk-top support

WPxxx1T-C is designed to be installed on desk-top stand. For the installation introduction, please follow the manual of the stand.

Figure 2-1 Desk-top stand

2.3.2 Arm mounting

WPxxx1T-C is designed to be VESA mounted with the mounting bracket shows in Figure 2-2.

Figure 2-2 Arm mounting of WPxxx1T-C

NOTE:

The WPxxx1T-C uses a VESA mounting to attach to the arm. Please make sure that the arm supports a standard VESA mounting.

Please follow the steps below to install:

Step 1: Follow the instructions in the arm's user manual to securely attach the arm to the wall.

Step 2: Once the mounting arm has been firmly attached to the wall, lift the panel PC onto the interface pad of the mounting.

Step 3: Align the screw holes of the mounting arm to the screw holes of the panel PC.

Step 4: Insert four retention screws through the bottom of the mounting arm interface pad and into the panel PC. Then screw the screws.

2.3.3 Wall mounting

WPxxx1T-C is designed to be wall mounted with the mounting bracket shows in Figure 2-3.

Figure 2-3 Wall mounting

Please follow the steps below to install:

Step 1: Select the location on the wall for the wall-mounting bracket.

Step 2: Carefully mark the locations of the four bracket screw holes on the wall.

Step 3: Drill four pilot holes at the marked locations on the wall, for the bracket retention screws.

Step 4: Align the wall-mounting bracket screw holes with the pilot holes.

Step 5: Secure the mounting-bracket to the wall by inserting the retention screws into the four pilot holes and tightening them.

Step 6: Insert the four monitor mounting screws provided in the wall mounting kit into the four screw holes on the real panel of the panel PC. Then screw screws until the screw shank is secured against the rear panel.

Step 7: Align the mounting screws on the monitor rear panel with the mounting holes on the bracket.

Step 8: Carefully insert the screws through the holes and gently pull the monitor downwards until the monitor rests securely in the slotted holes. Ensure that all four of the mounting screws fit snuggly into their respective slotted holes.

Step 9: Secure the panel PC by fastening the retention screw of the wall-mounting bracket.

2.4 IO connectors

The IO connectors extend the capabilities of the panel PC but are not essential for operation (except power).

Figure 2-5 IO interface of WPxxx1T-C

2.4.1 LAN connection

The RJ-45 connectors enable connection to an extend network. To connect a LAN cable with a RJ-45 connector, please follow the instructions below.

Step 1: Locate the RJ-45 connector on the bottom panel of the WPxxx1T-C (see Figure 2-5).

Step 2: Align the RJ-45 connector on the LAN cable with one of the RJ-45 connector on the bottom panel of the WPxxx1T-C (see Figure 2-6). Then, gently insert.

Figure 2-6 LAN connection

Step 3: Screw the retention screws on both side of the connector to secure the connection.

2.4.2 Serial device connection

To connect USB device to the WPxxx1T-C, please follow the instruction below.

Step 1: Locate the DB-9 connector on the rear panel of the WPxxx1T-C (see Figure 2-5).

Step 2: Insert the serial connector. Insert the DB-9 connector of a serial device into the DB-9 connector on bottom panel (see Figure 2-7).

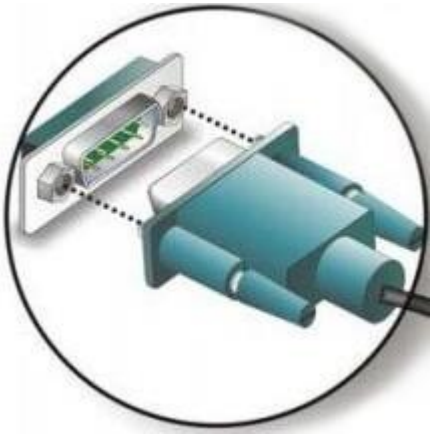


Figure 2-7 Serial device connection

Step 3: Screw the retention screws on both side of the connector to secure the connection.

2.4.3 USB connection

To connect USB device to the WPxxx1T-C, please follow the instruction below.

Step 1: Located the USB connectors on the rear panel of the WPxxx1T-C (see Figure 2-5)**.**

Step 2: Align the USB device connector with one of the connectors on the bottom panel (see Figure 2-8).

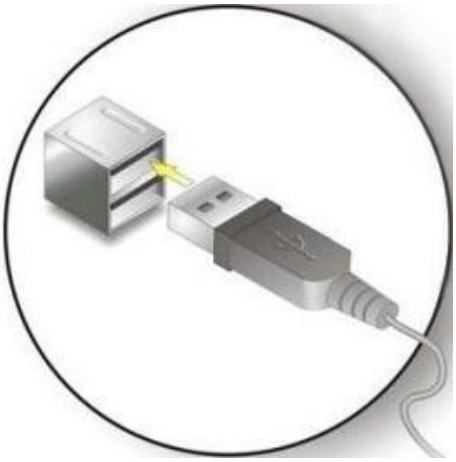


Figure 2-8 USB Device connection

Step 3: Once aligned, gently insert the USB device connector into the onboard connector.

2.5 Power connector

The power cable connects the panel PC to the power supply. The power cable is required for operation of the panel PC.

Step 1: Connect one end of the power cable to the panel PC.

Step 2: Connect the other end of the power cable to the enclosed power supply.

2.6 Connectors Definitions

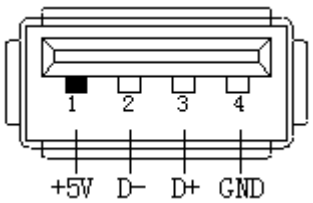
2.6.1 COM Ports

COM1~24 core M12 connector

	PIN	SIGNAL	
		RS-232 (default)	RS-485
	1		Data-
	2	RXD	Data+
	3	TXD	N/A
	4	GND	GND

2.6.2 USB

We provide a 1 x 2 standard double-deck USB interface and 5 core M12 connector.



PIN	SIGNAL
1	+5V
2	Date-
3	Date+
4	GND

PIN	SIGNAL
1	+5V
2	Date-
3	Date+
4	GND
5	⏚

2.6.3 Ethernet Interfaces (LAN1, LAN2)

We provide two 10/100/1000Mbps RJ-45 Ethernet interfaces, you can use it directly. There are two status indicators, links status on the left side, data transmission status on the right side.

PIN	SIGNAL	PIN	SIGNAL
1	White blueTX2+	5	White green TX1+
2	White brownTX3+	6	Orange TX0-
3	BrownTX3-	7	Blue TX2-
4	White orangeTX0+	8	Green TX1-

2.6.4 Switch button (PWR)

On rear panel, we provide an ATX power touch switch button (PWR) to power up.

2.6.5 Power connector

WPxxx1T-C offers a 2-pins power input.

PIN	SIGNAL
1	12~24V
2	GND
3	⏚

2.6.6 PWR, hard drive status indicators

This product provides a set of power and hard drive status indicators. According to these indicators, the operating status can be known. A steady green light indicates that the power is on. The hard drive indicator keeps flashing red, indicating that the hard drive is reading/writing data.

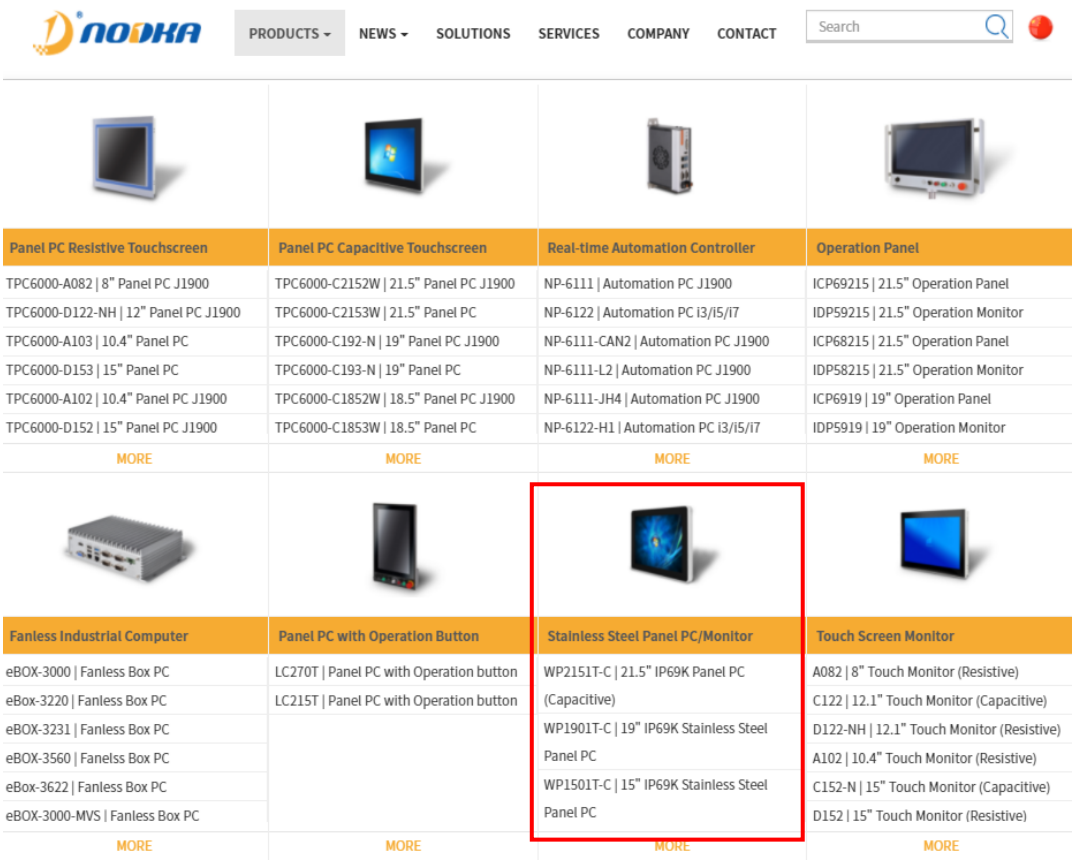
Chapter 3
Driver installation

3.1General introduction

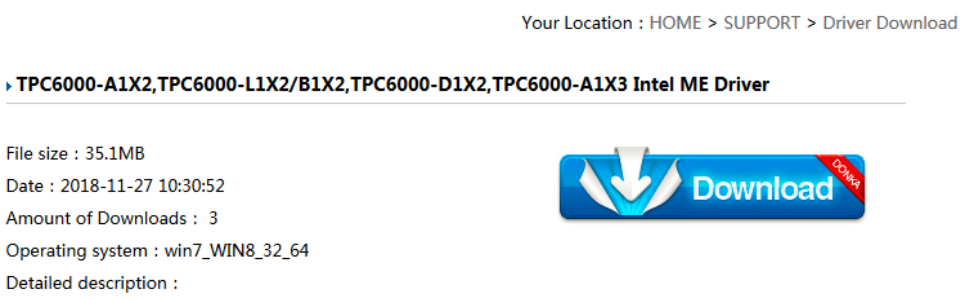
Before using the panel PC, users need to set up corresponding drivers to make sure all functions are normal. To install the drivers, please follow the steps below:

Step 1. Please download the drivers from https://nodka.eu/.

Step 2. Select the correct diver corresponding with the model of your product.



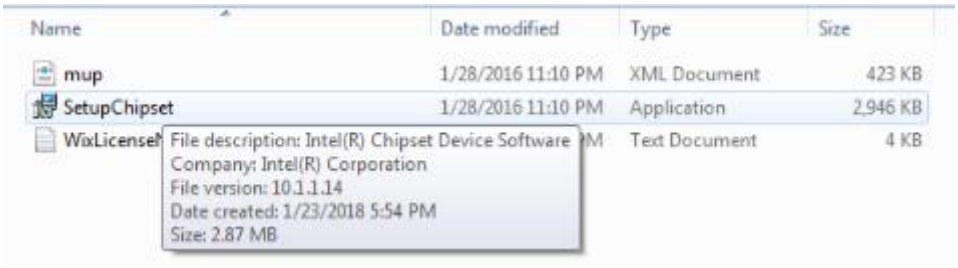
Step 3. Enter the download page of the corresponding diver and click **Download** button.



3.2 Chipset driver

To install the chipset diver, please follow the steps below.

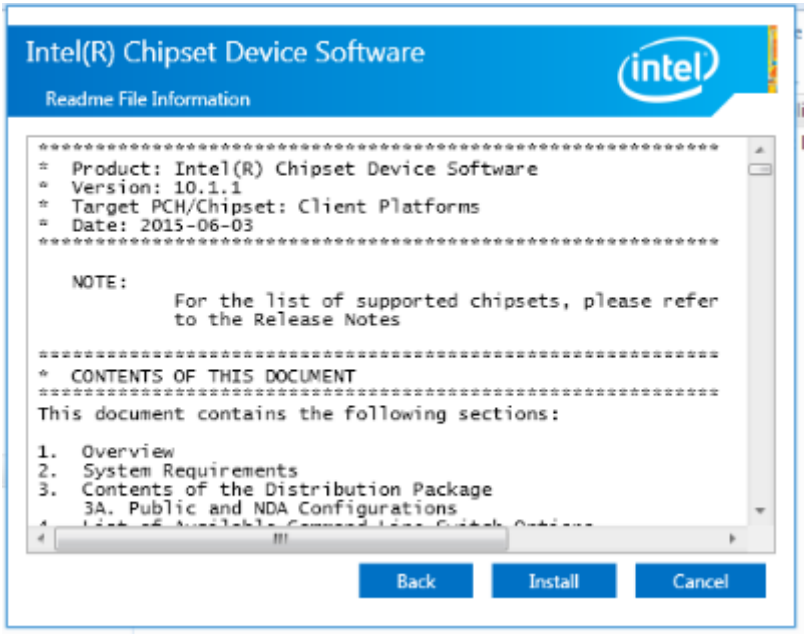
Step 1. Double-click the **SetupChipset** driver.



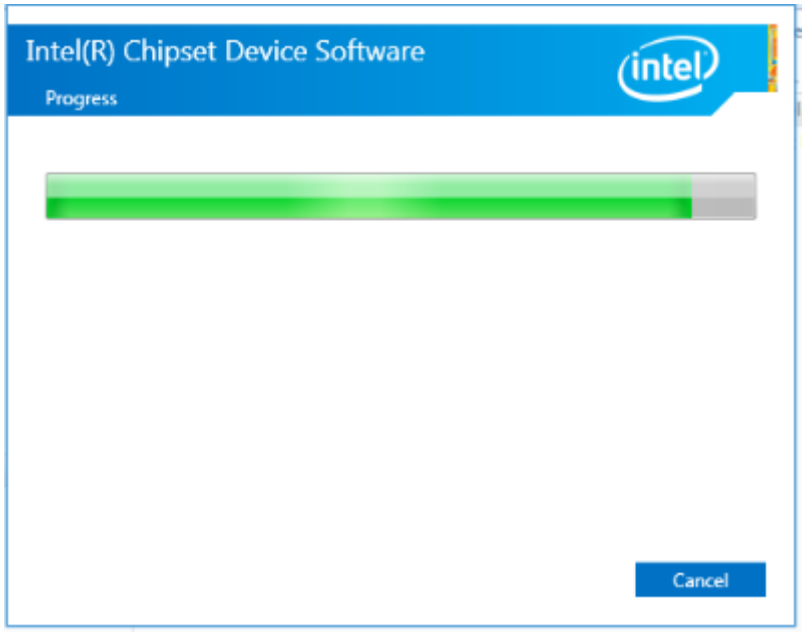
Step 2. Click **Next** to setup program.

Step 3. Read the license agreement. Click **Accept**.

Step 4. Click install to continue.



Step 5. Wait for the installation.

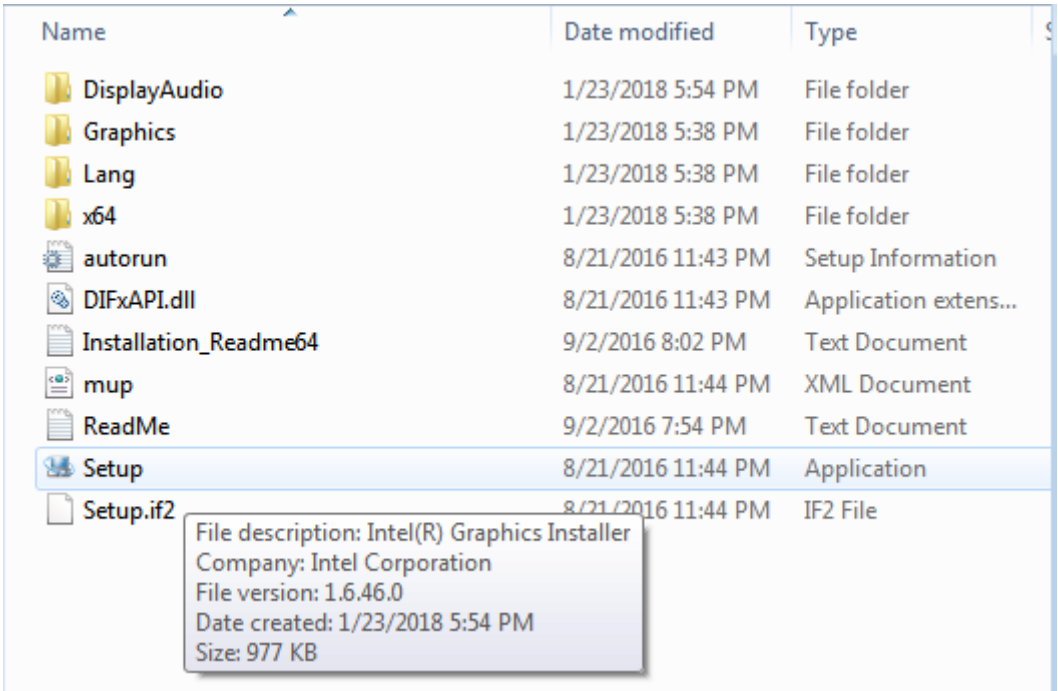


Step 6. Select **Restart Now** to complete installation.

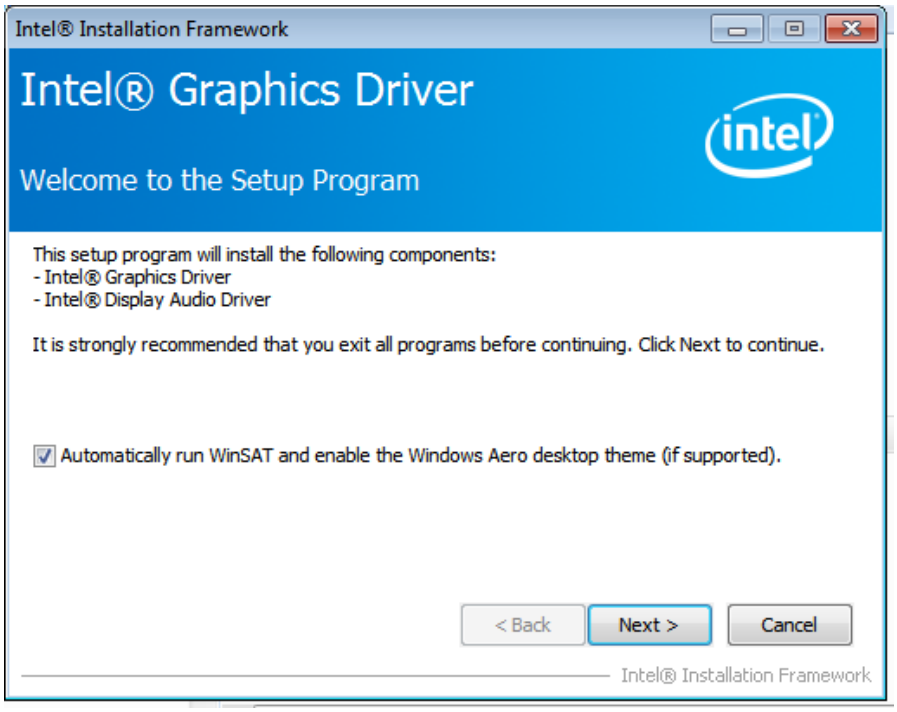
3.3 Graphics driver

To install graphics diver, please follow the steps below.

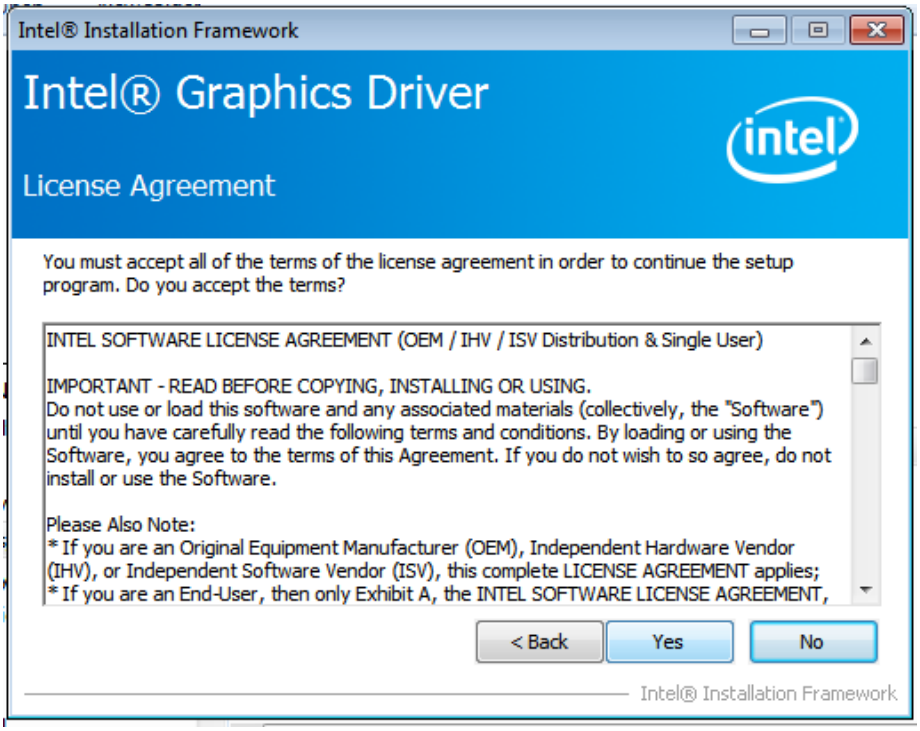
Steps 1. Select the application of graphics driver.



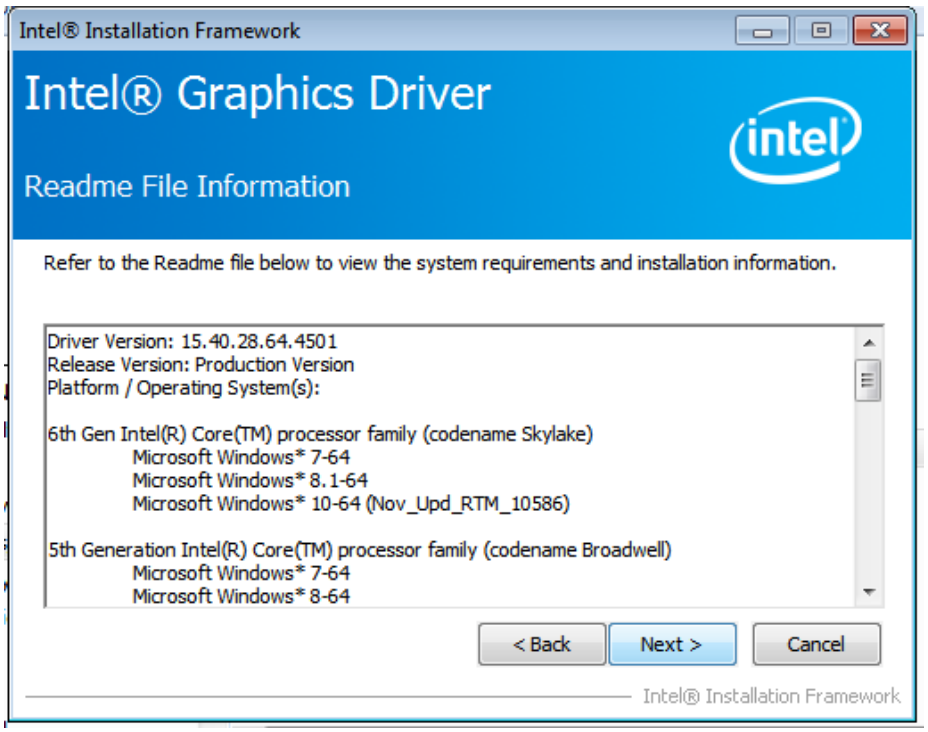
Step 2. Click **Automatically run WinSAT and enable the Windows Aero desktop theme (if supported)**. Click **Next**.



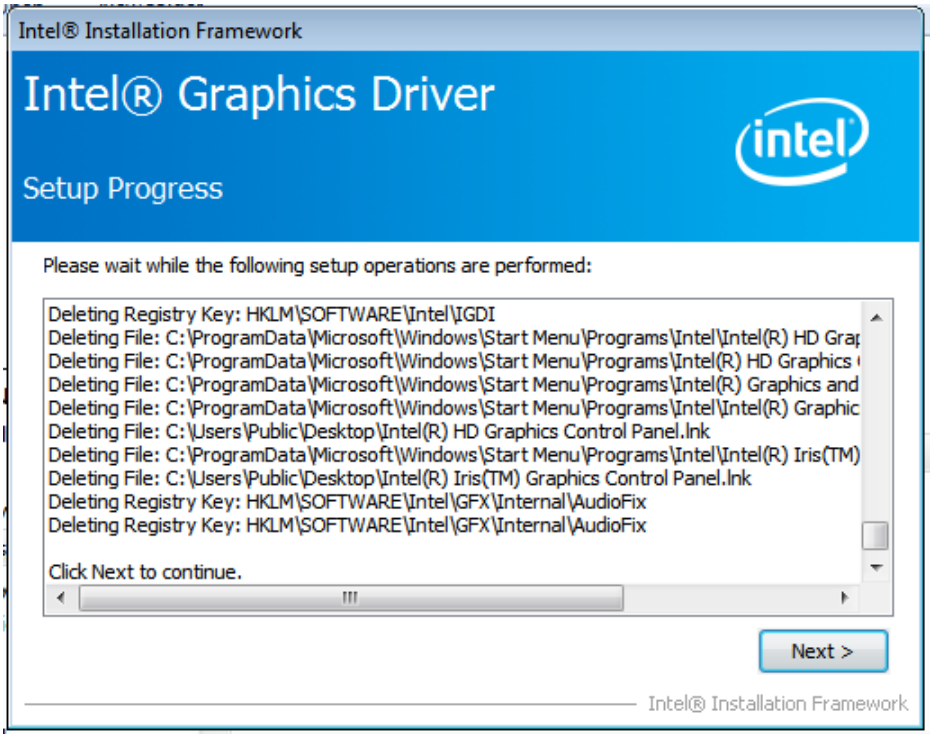
Step 3. Read license agreement. Click **Yes**.



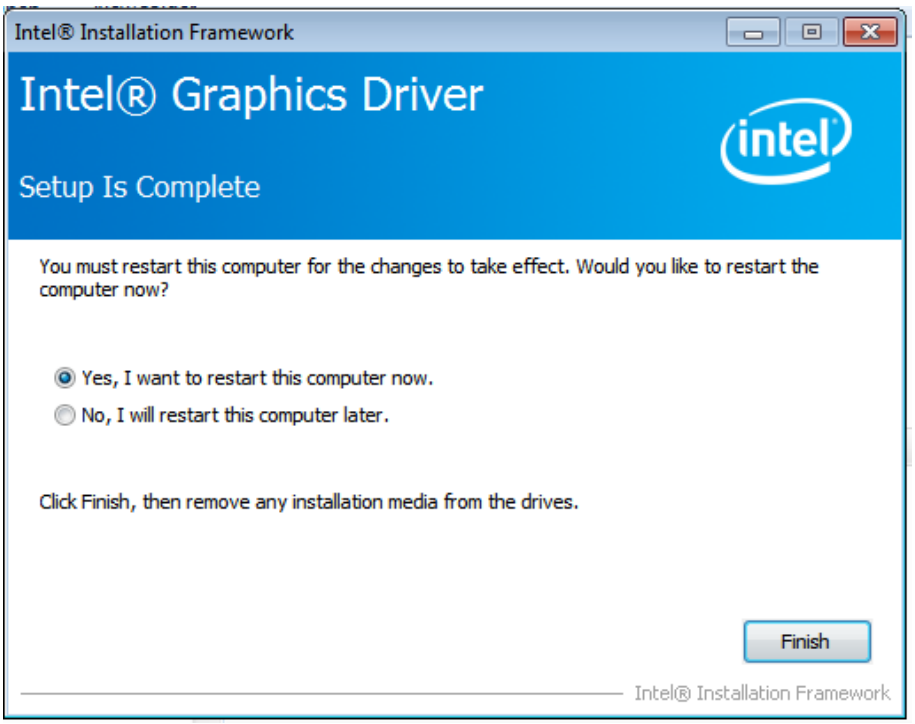
Step 4. Click **NEXT** to continue.



Step 5. Click **Next**.



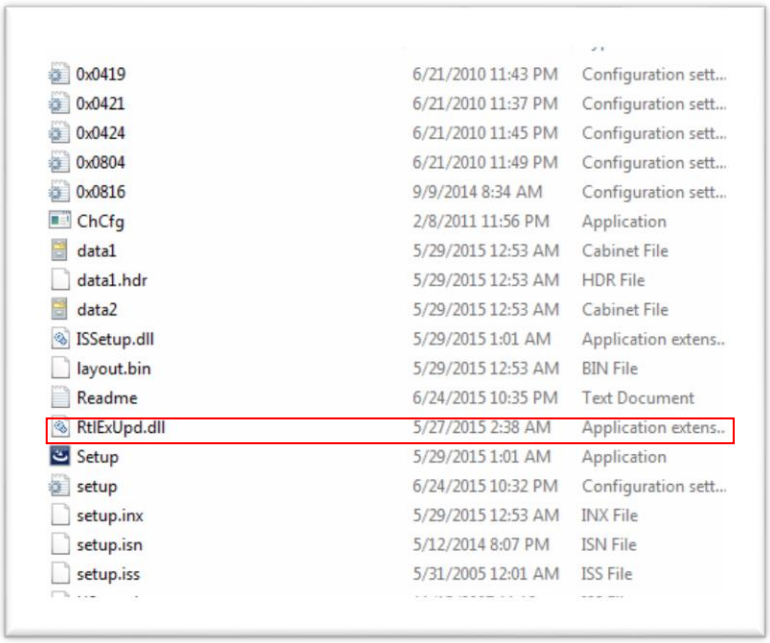
Step 6. Select **Yes, I want to restart this computer now.**. Click **Finish** to complete the installation.



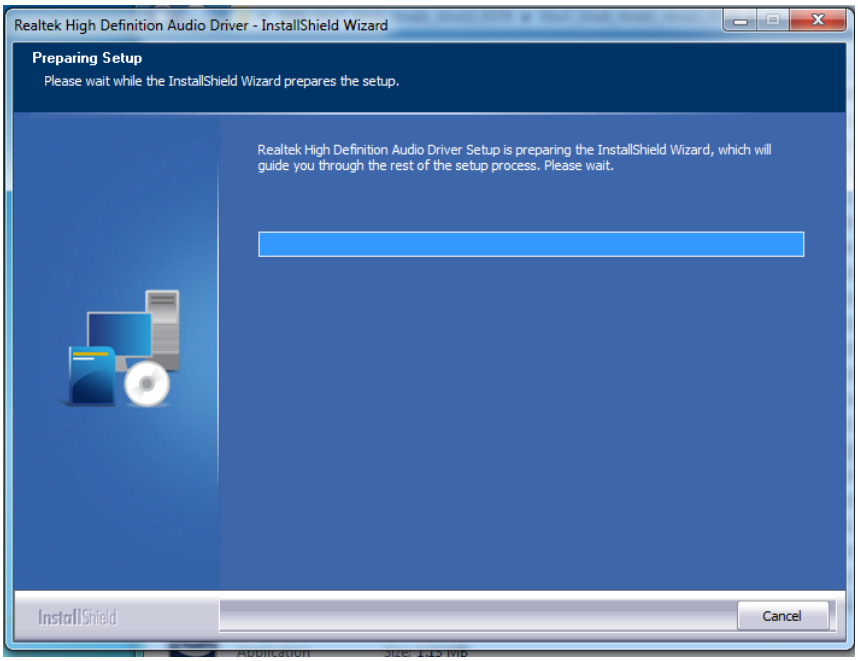
3.4 Audio driver

To install audio diver, please follow the steps below.

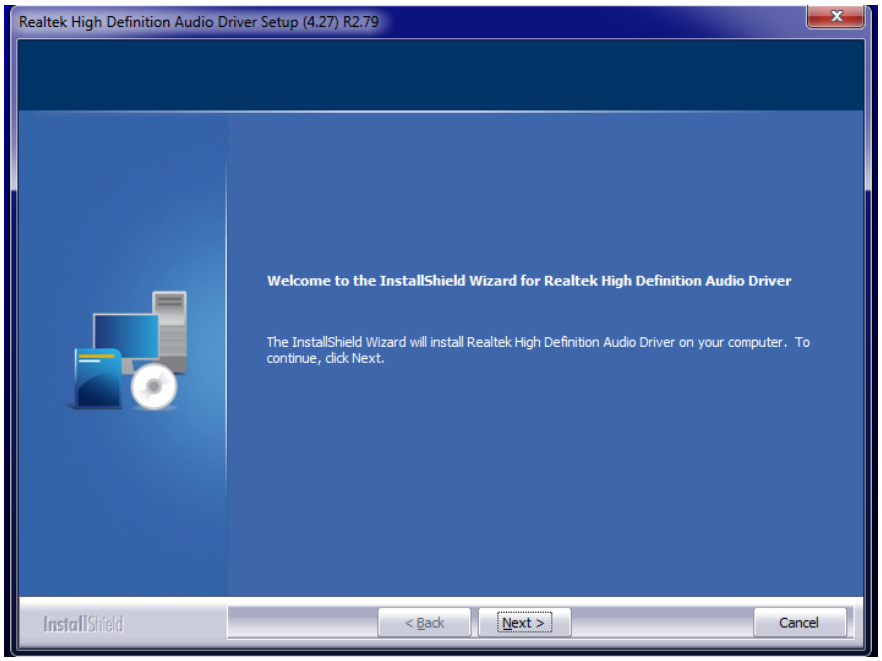
Step1. Double click the application of audio driver.



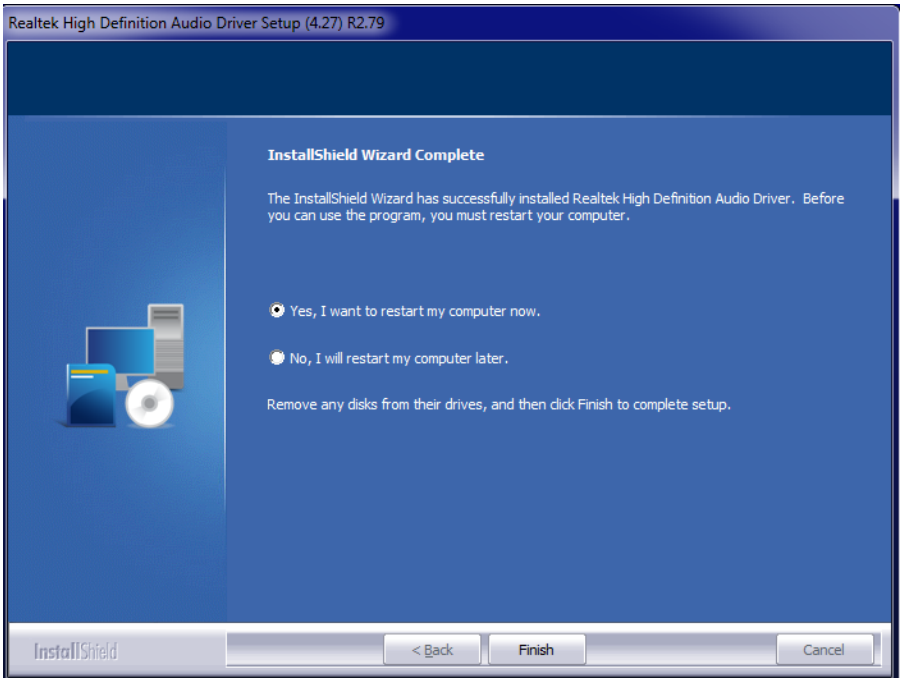
Step 2. Wait for loading.



Step 3. Click **Next** to continue



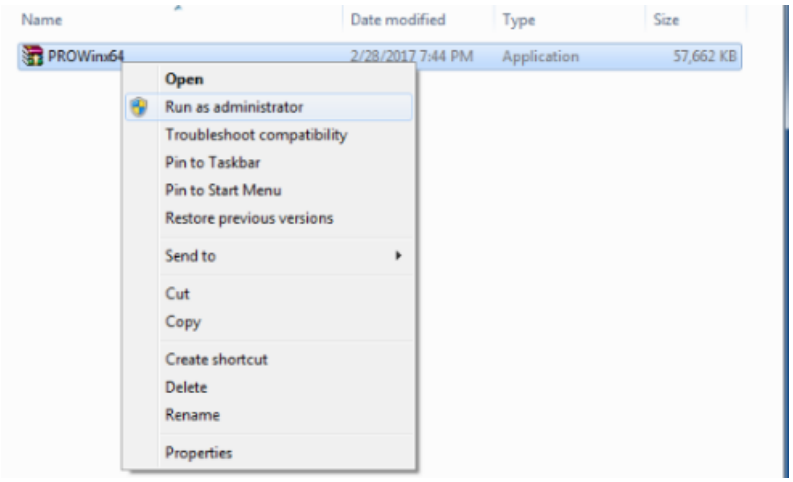
Step 4. Click **Yes, I want to restart this computer now.**, and then Click **Finish** to complete the installation.



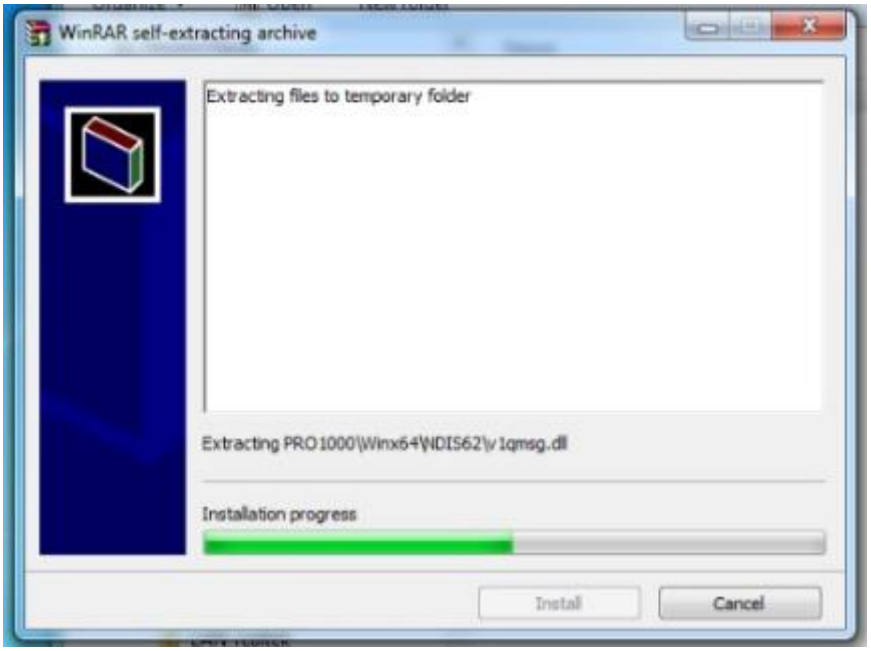
3.5 LAN driver

To install LAN driver, please follow the steps below.

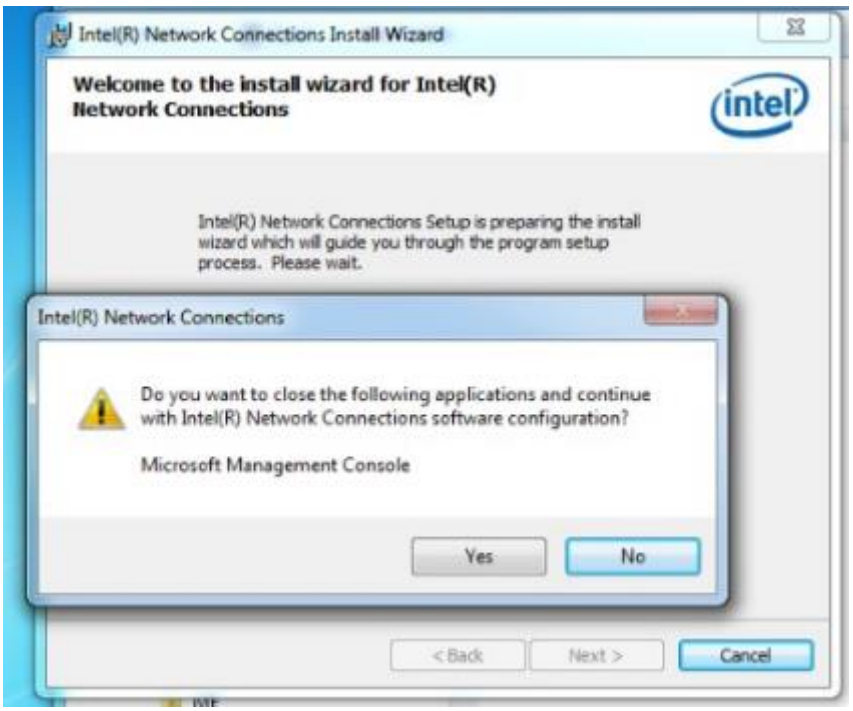
Step 1. Right- click LAN driver, then select **Run as administrator**.



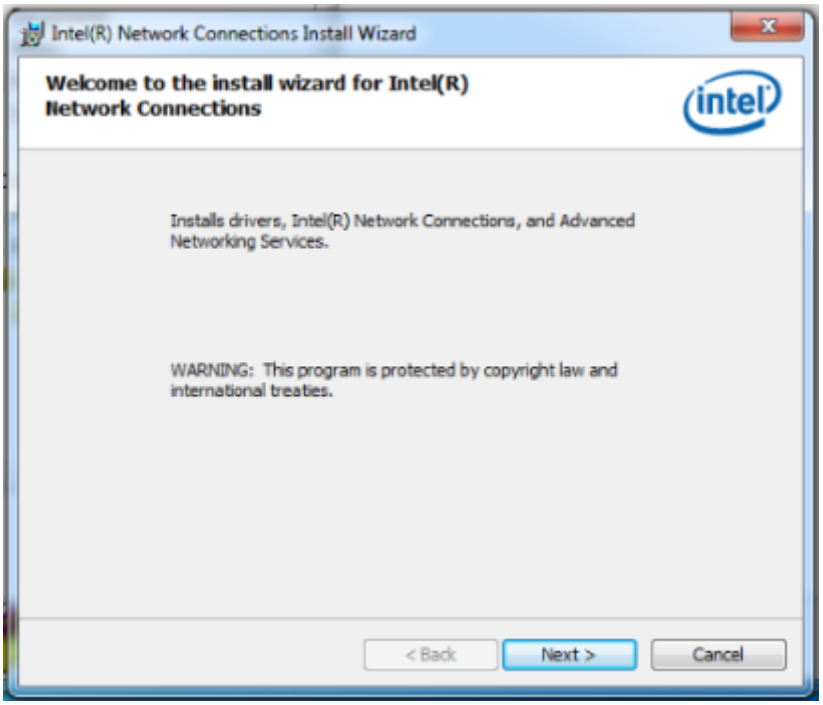
Step 2. Wait for installation progress.



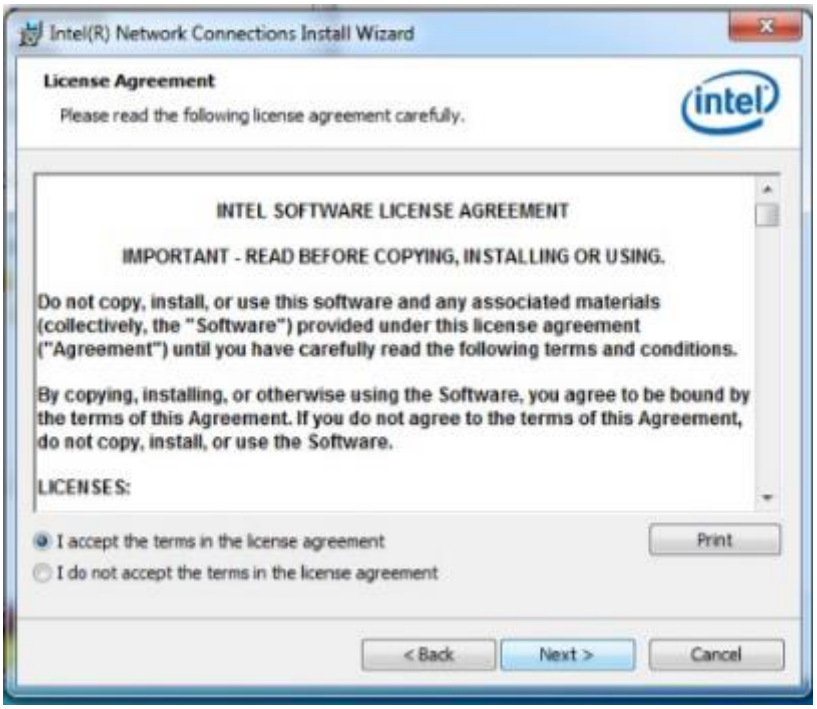
Step 3. Click **Yes** to continue.



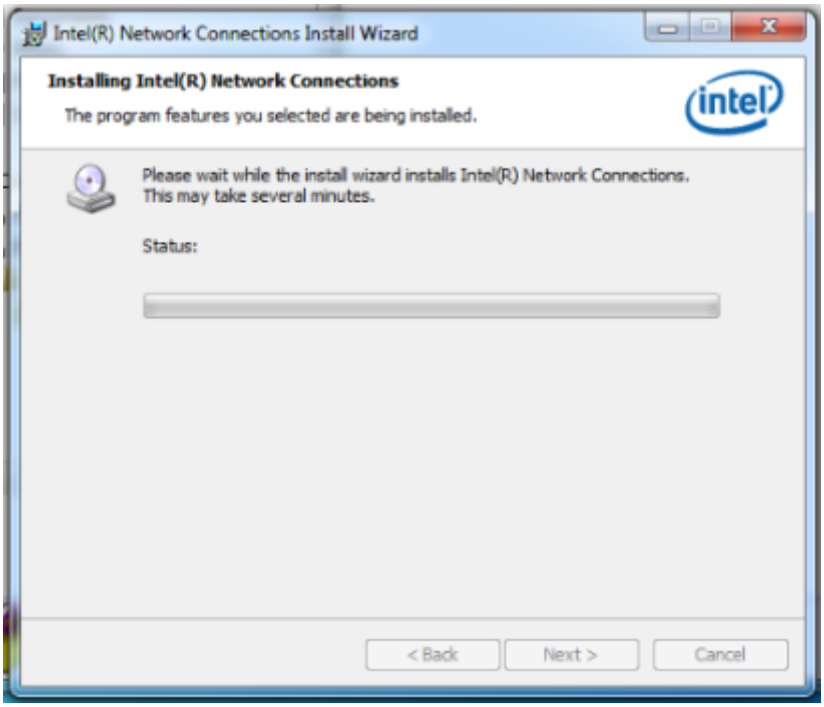
Step 4. Click **NEXT** to continue.



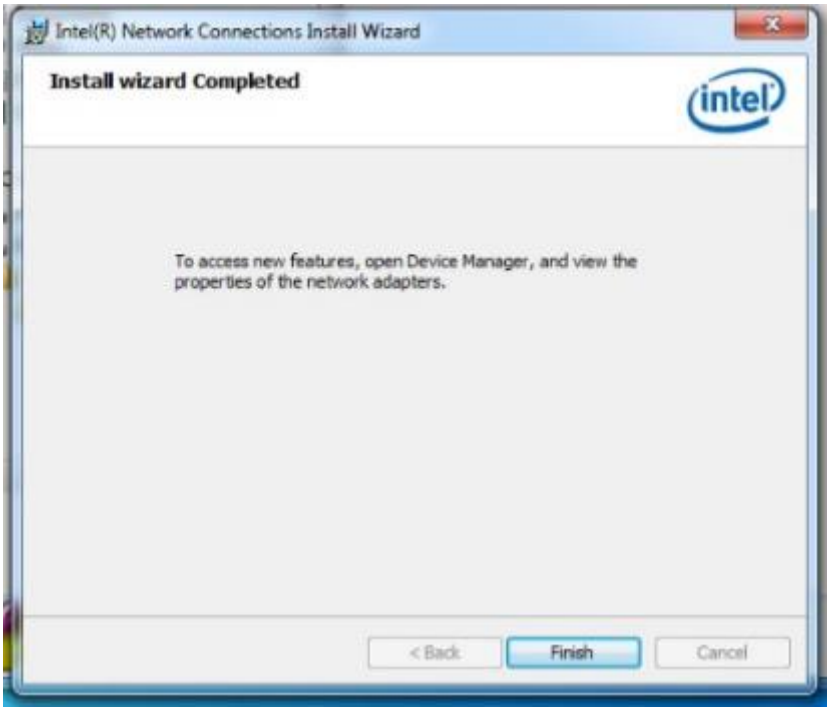
Step 5. Read license agreement. Choose **I accept the terms in the license agreement.** Click **Next**.



Step 6. Wait for the installation process to complete.

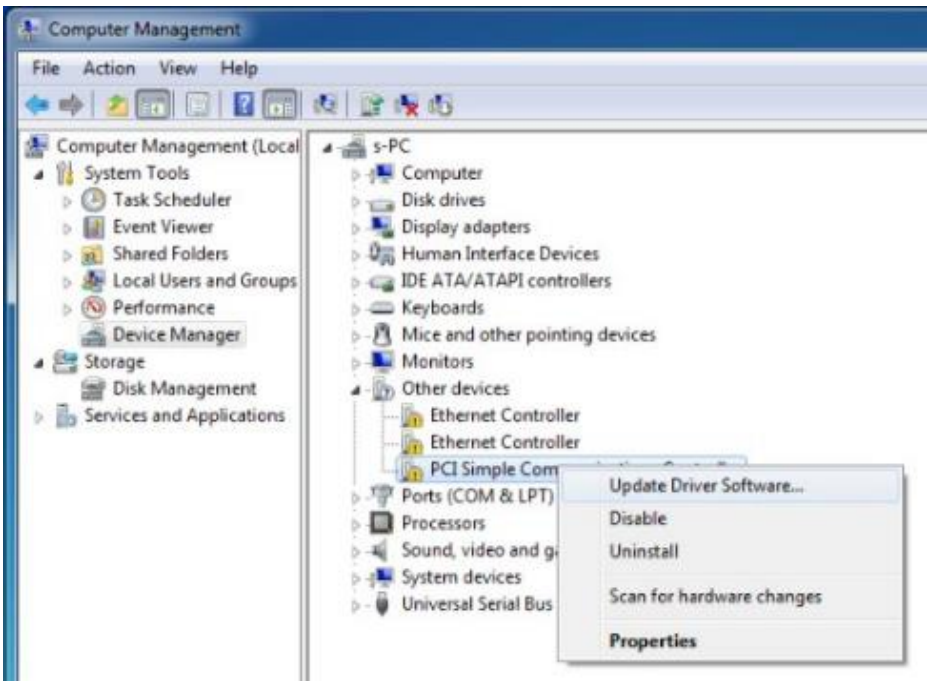


Step 7. Click **Finish** to exit the wizard.

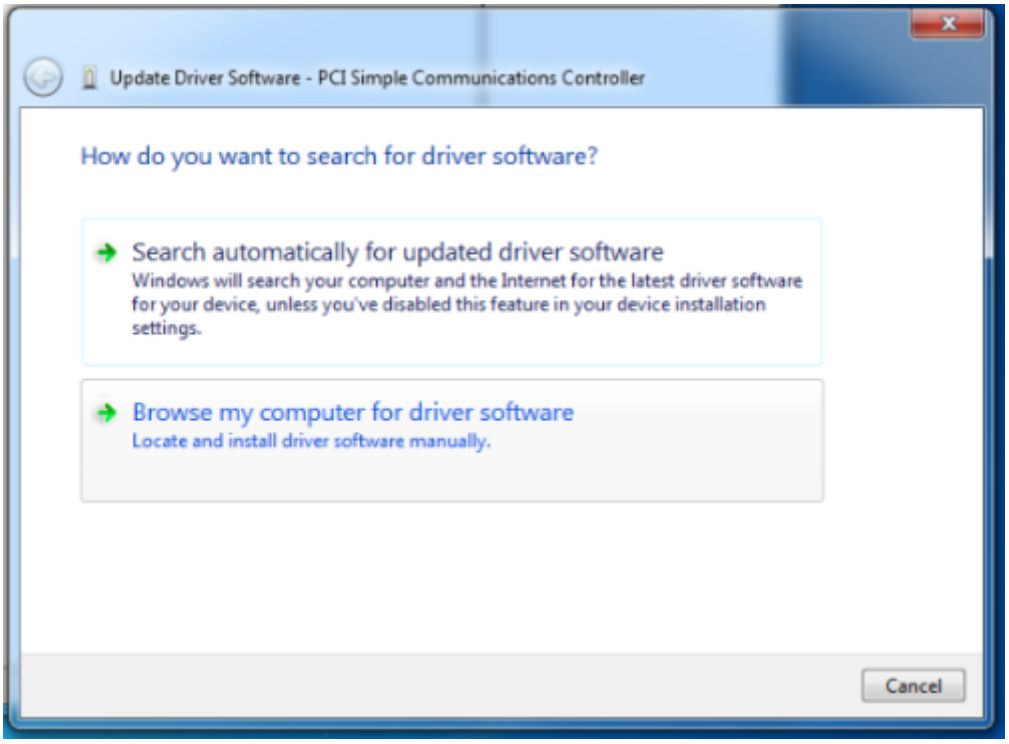


3.6 PCI installation

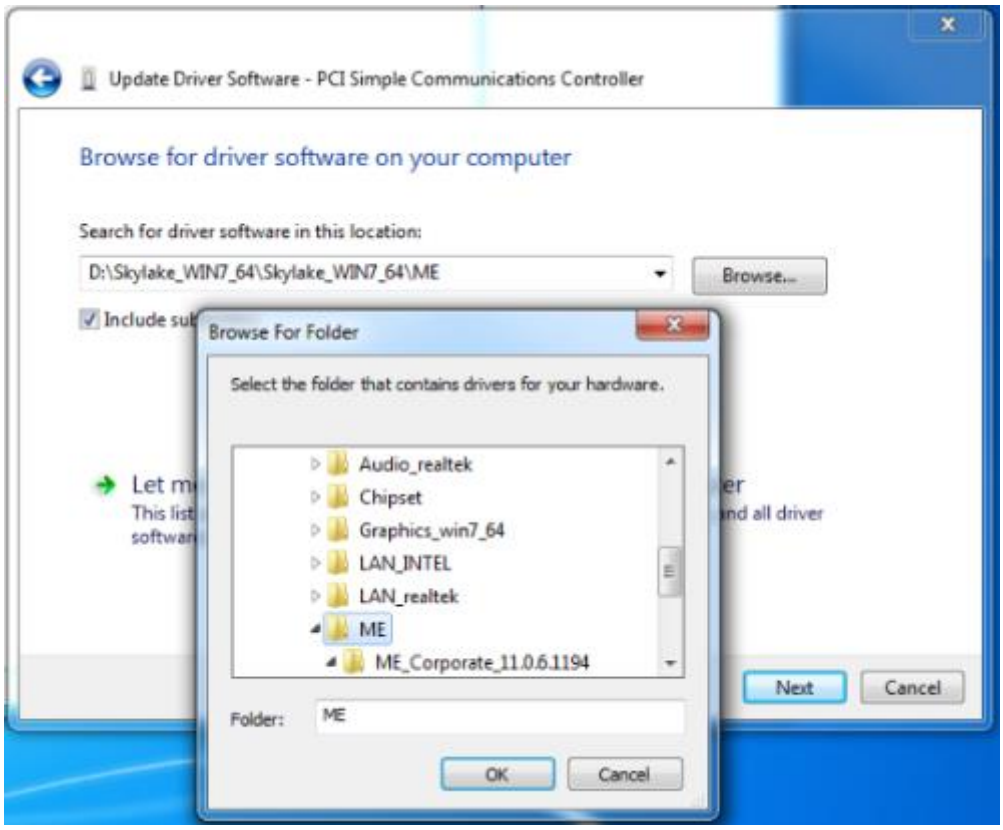
Step 1. Right-click the desktop icon **Computer** choose **Computer Management** choose **Device Manager.**



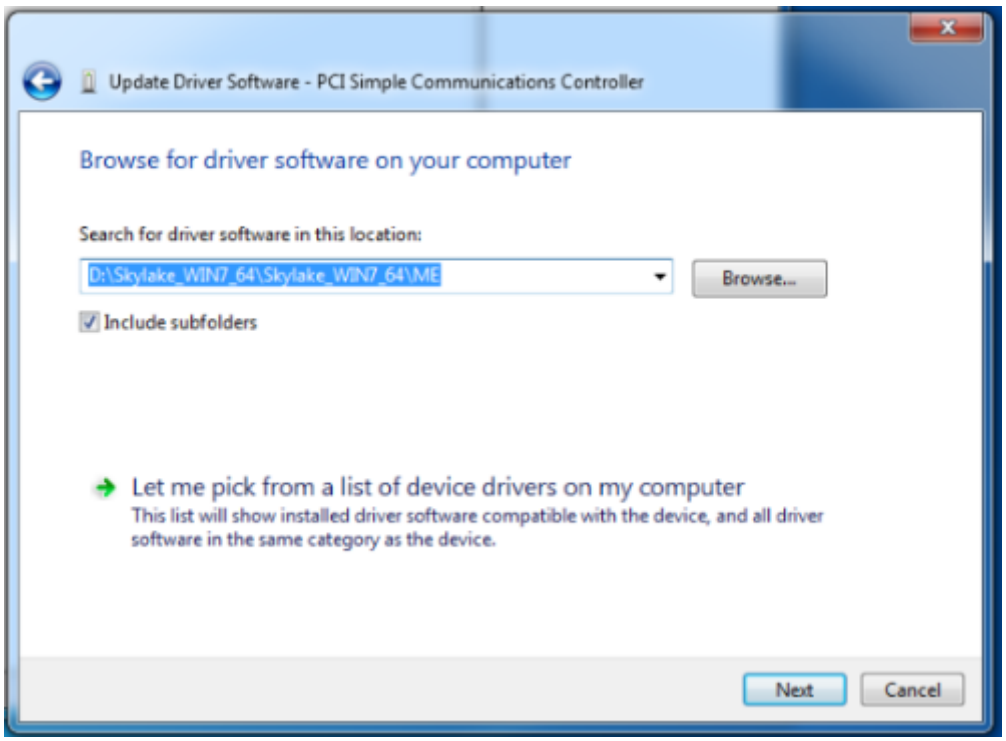
Step 2. Choose **Browse my computer for driver software**



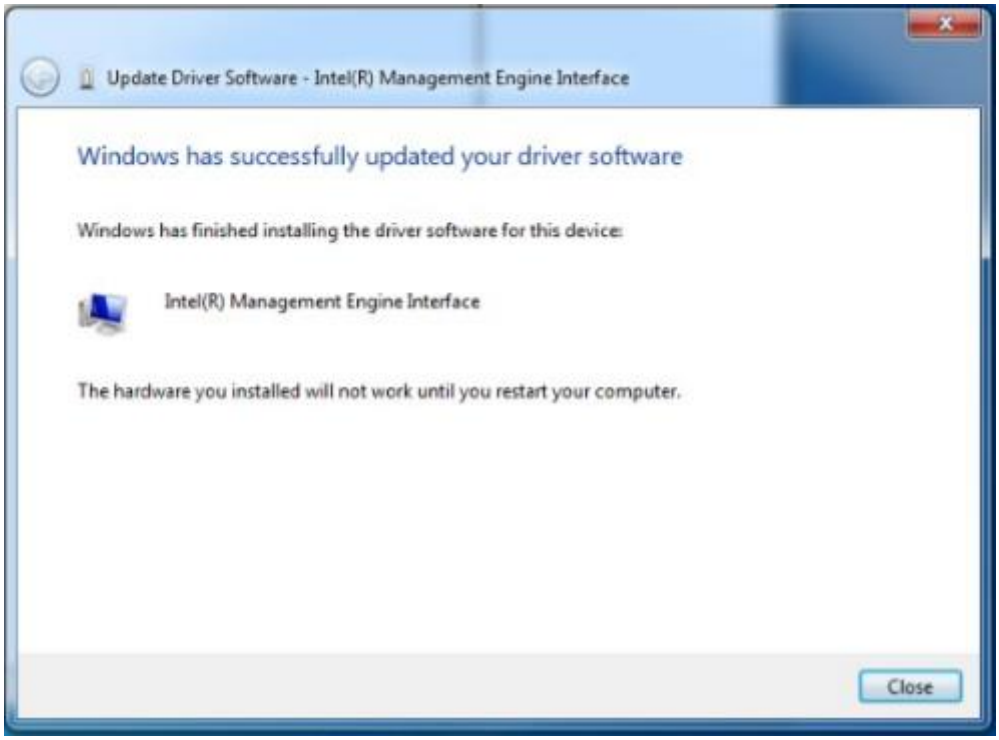
Step 3. Click **Browse…** choose the driver within ME.



Step 4. Press **NEXT** to continue



Step 5. Press **Close** to finish the installation



Chapter 4
BIOS Setup

4.1 BIOS Setup

The BIOS is programmed onto the BIOS chip, the BIOS setup program allows changes to certain system settings. This chapter outlines the options that can be changed.

NOTE:

Some of the BIOS options may very throughout the life cycle of the product and are subject to change without prior notice.

4.1.1 Starting setup

The AMI is activated when the computer is turned on. The setup program can be activated in one of two ways:

1. Press the **DEL** key as soon as the system is turned on.

2. Press the **DEL** key when the **Press Del to enter SETUP** tip appears on the screen. If the message disappears before the **DEL** key is pressed, restarted the computer and try again. General Introduction

4.1.2 Using setup

Use the arrow keys to highlight items. Press **ENTER** to select, use the **PAGE UP** and **PAGE DOWN** keys to change entries. Press **F1** for help and press **ESC** to quit.

Navigation keys are shown as table below.

Table 4-1 Keys of BIOS navigation

Key	Function
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left side
Right arrow	Move to the item on the right side
ESC	Reset
+	Increase the numeric value or make changes

-	Decrease the numeric value make changes
F1	General help, only for the status page setup menu and option page setup menu
F2	Previous value
F3	Optimized defaults
F4	Save all the CMOS changes and reset

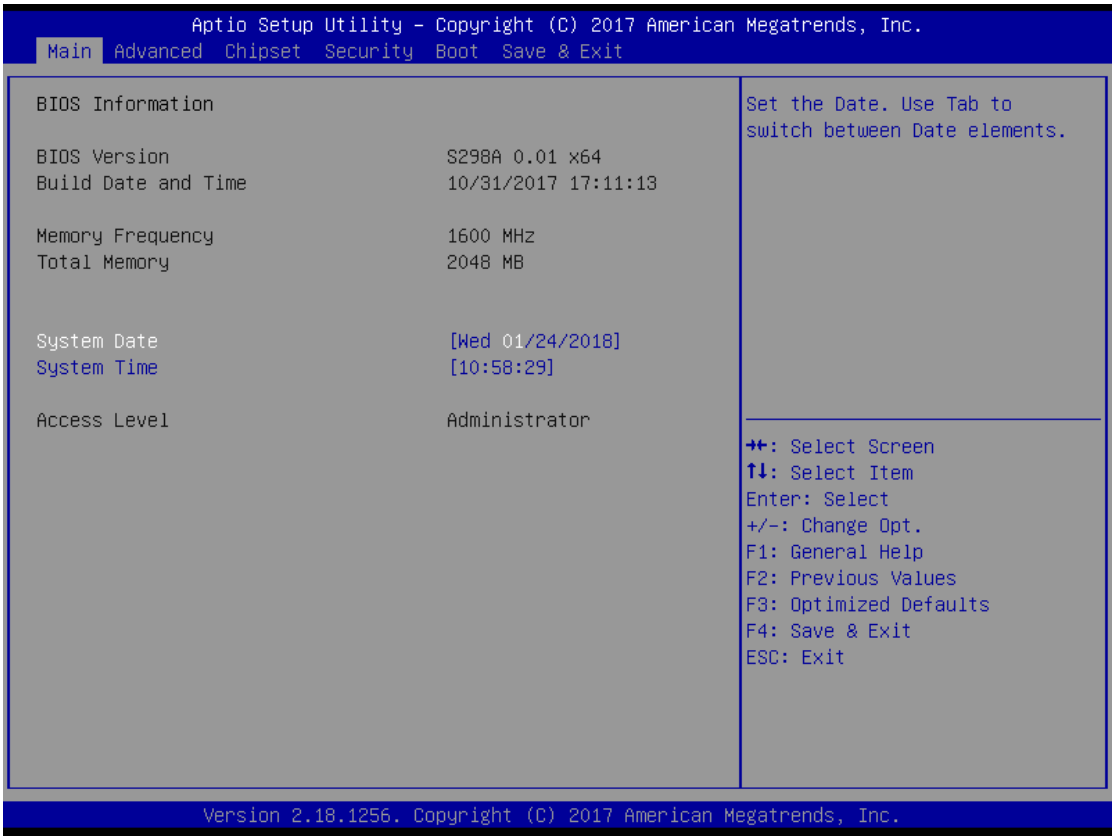
The menu bar which is anchored to the top of the BIOS screen has the following main items:

- Main – Changes the basic system configuration.
- Advanced – Changes the advanced system settings
- Chipset – Changes the chipset settings.
- Security – Sets user and supervisor passwords.
- Boot – Changes the system boot configuration.
- Exit – Selects exit options and loads default settings.

CAURION:

Please set it carefully under the guidance of technical support. If the settings are not correct, it may cause the system to fail to start or damage the hardware.

4.1.3 Main settings



You can find information of *Project version* and *Build Date and Time* in the **Main** menu.

The **Main** menu has two user configurable fields.

System Time:

Set the system time, the time format is HH: MM: SS

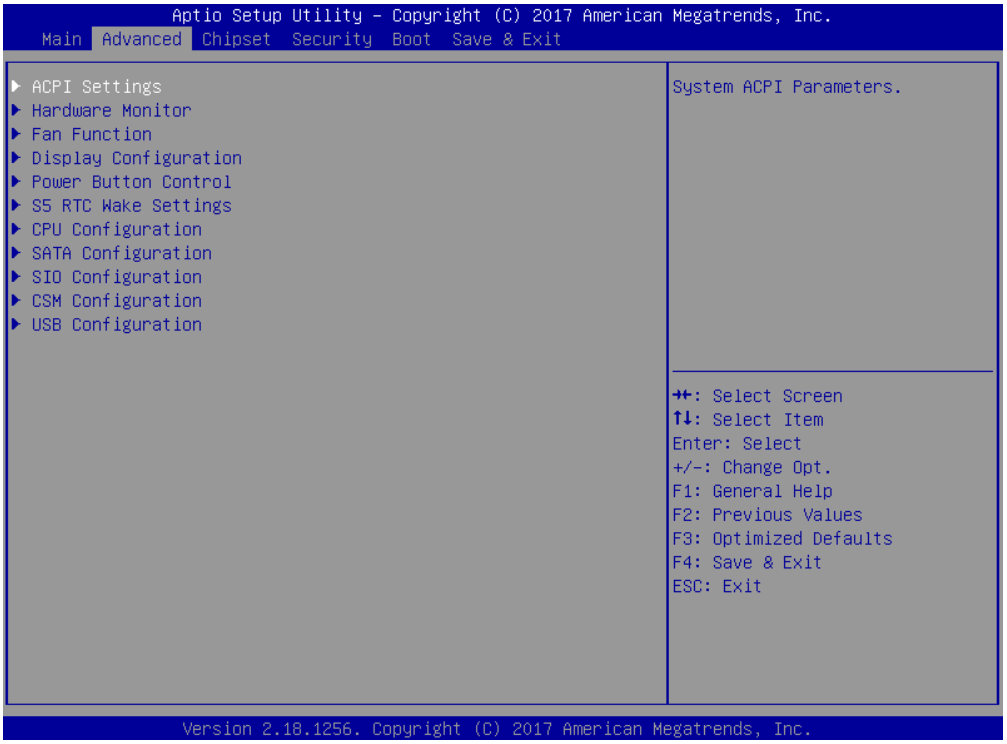
System Date:

Set the system date, the date format is MM/DD/YY

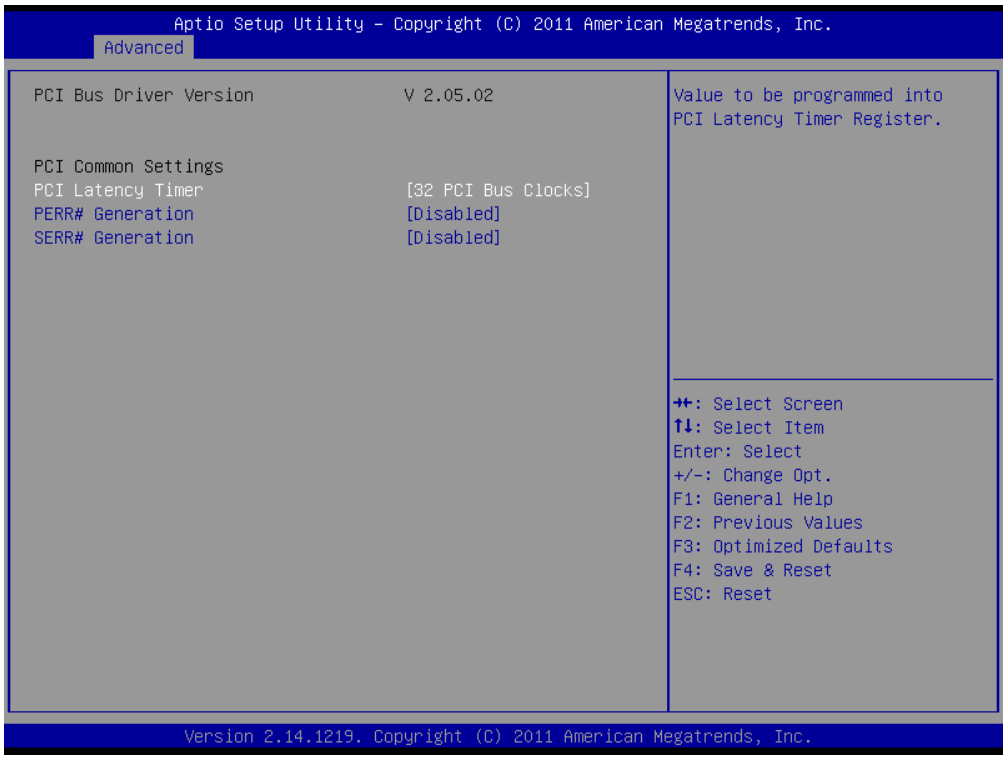
Day: Note that the 'Day' automatically changes when you set the date.

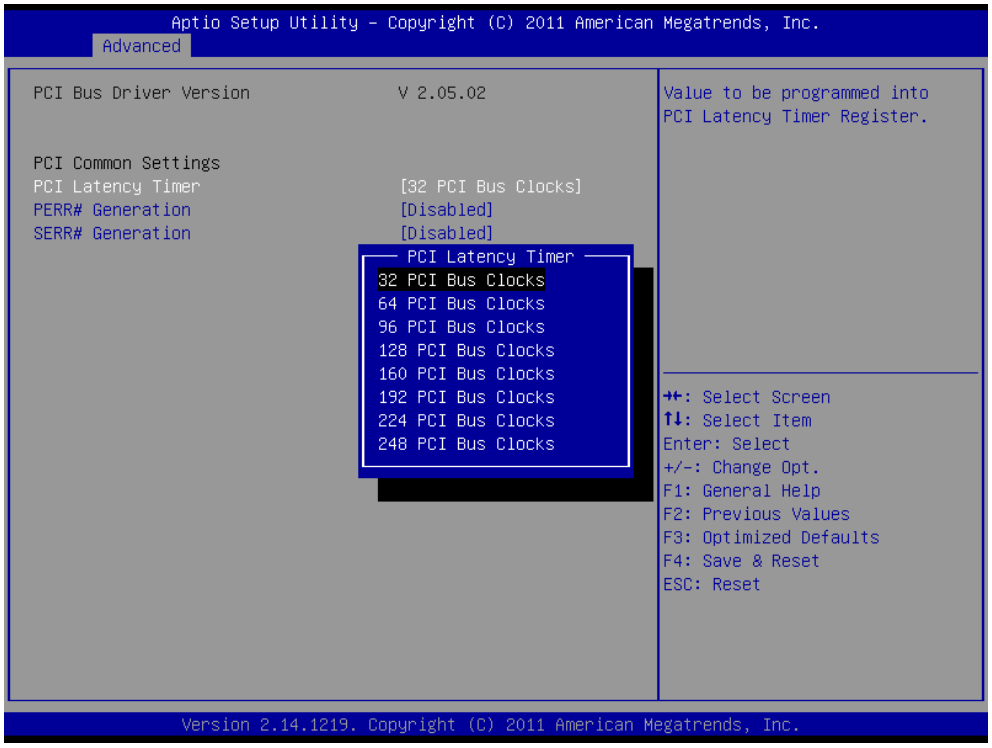
4.1.4 Advanced setting

The Advanced BIOS Setup screen is shown as below. The sub menus are described on the following pages.

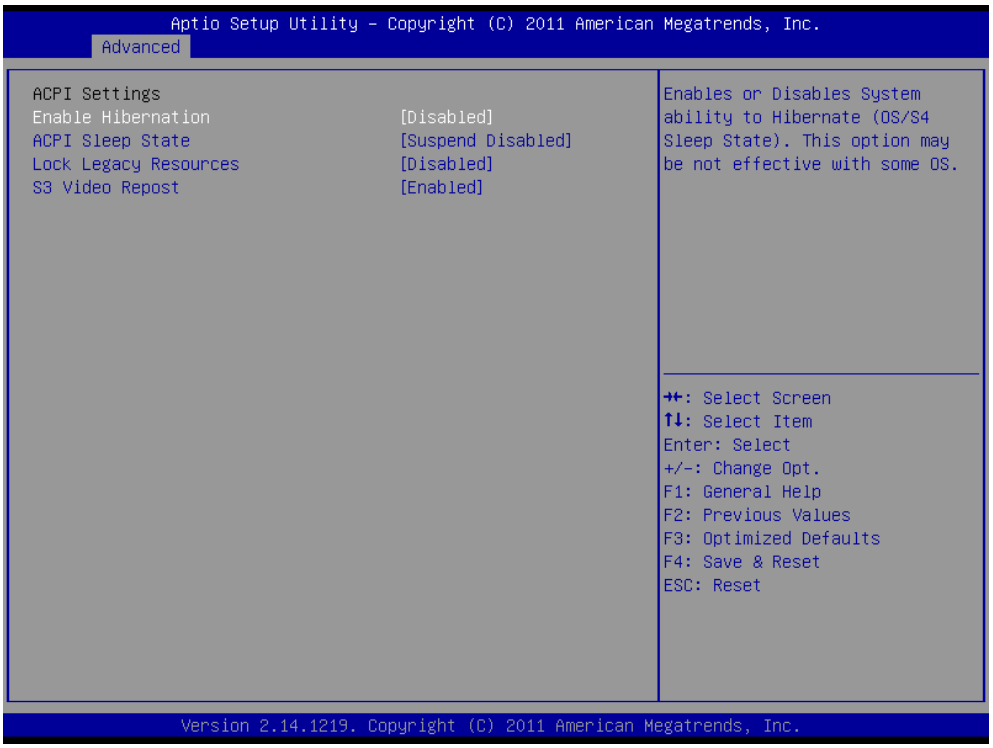


a. PCI Subsystem Setting

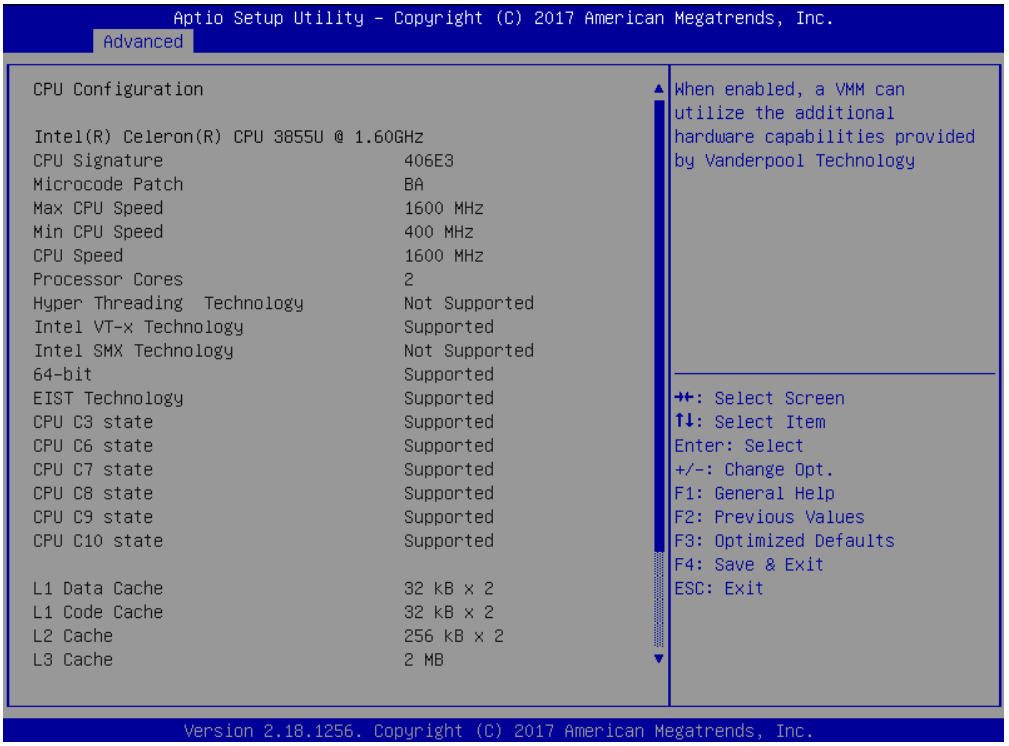




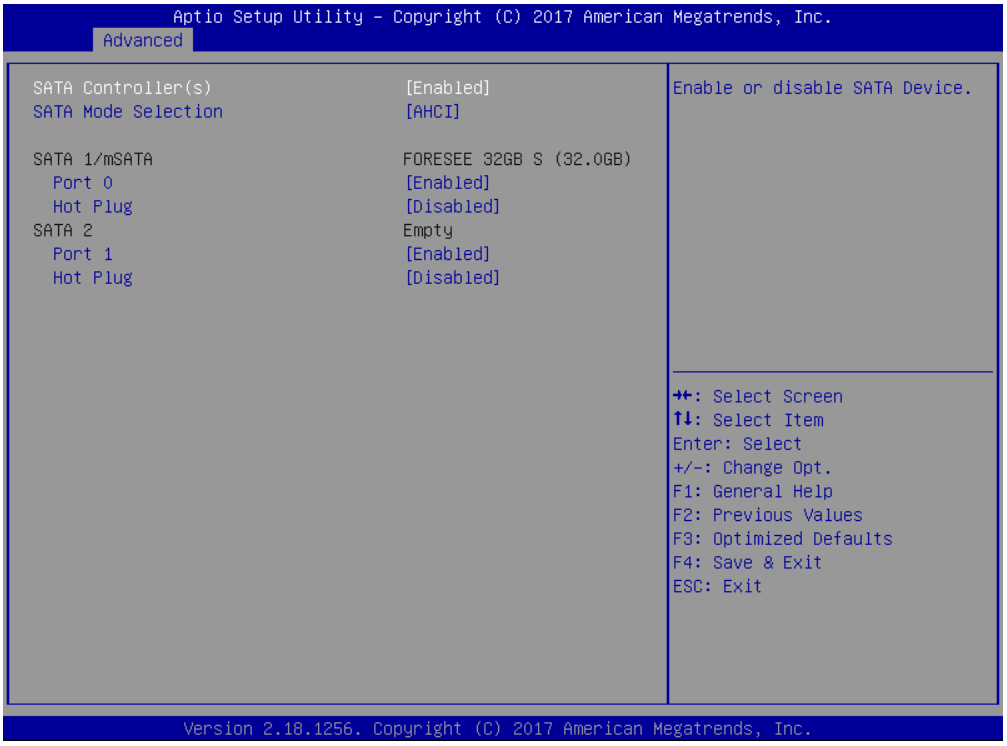
b. Advance - ACPI Configuration



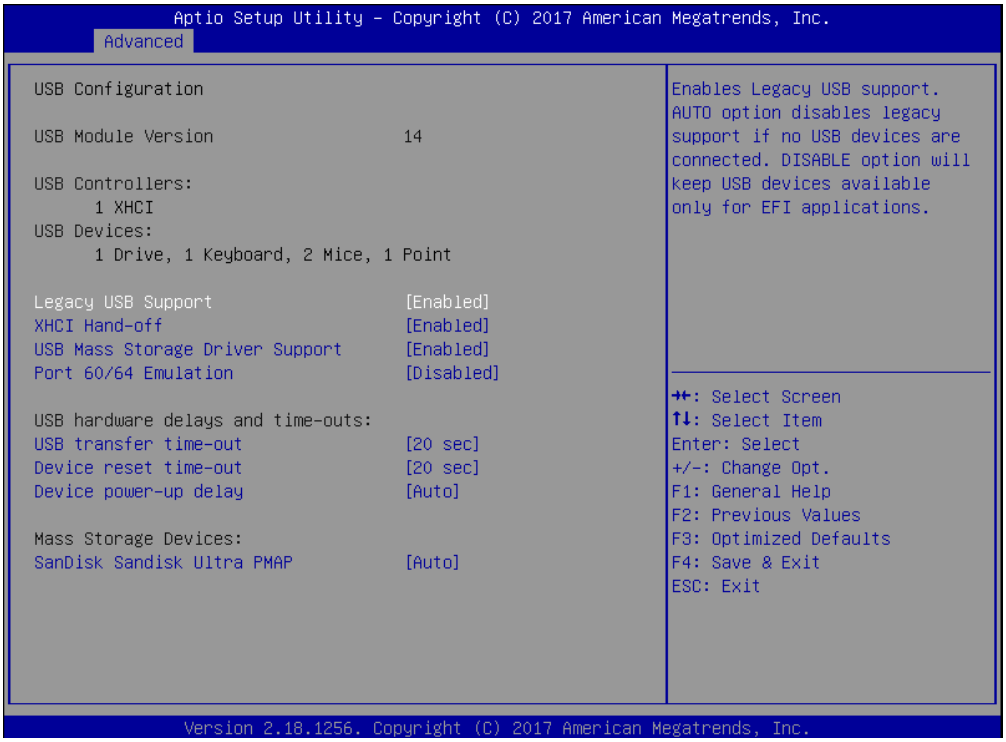
c. Advance - CPU Configuration



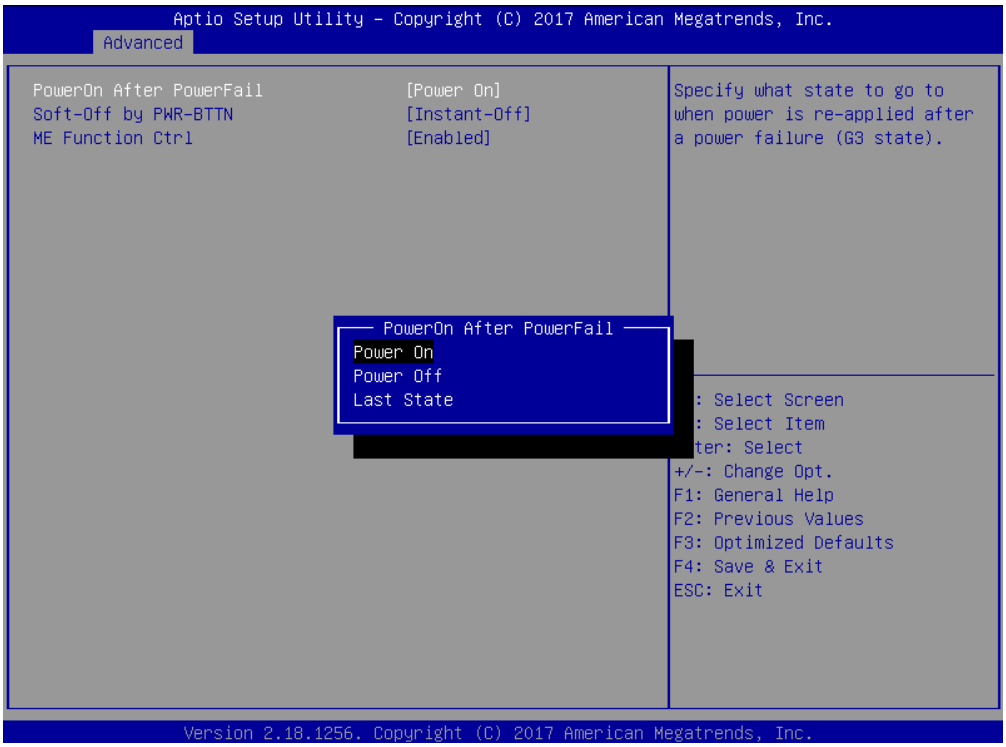
d. SATA Configuration



e. USB Configuration



f. Power on configuration

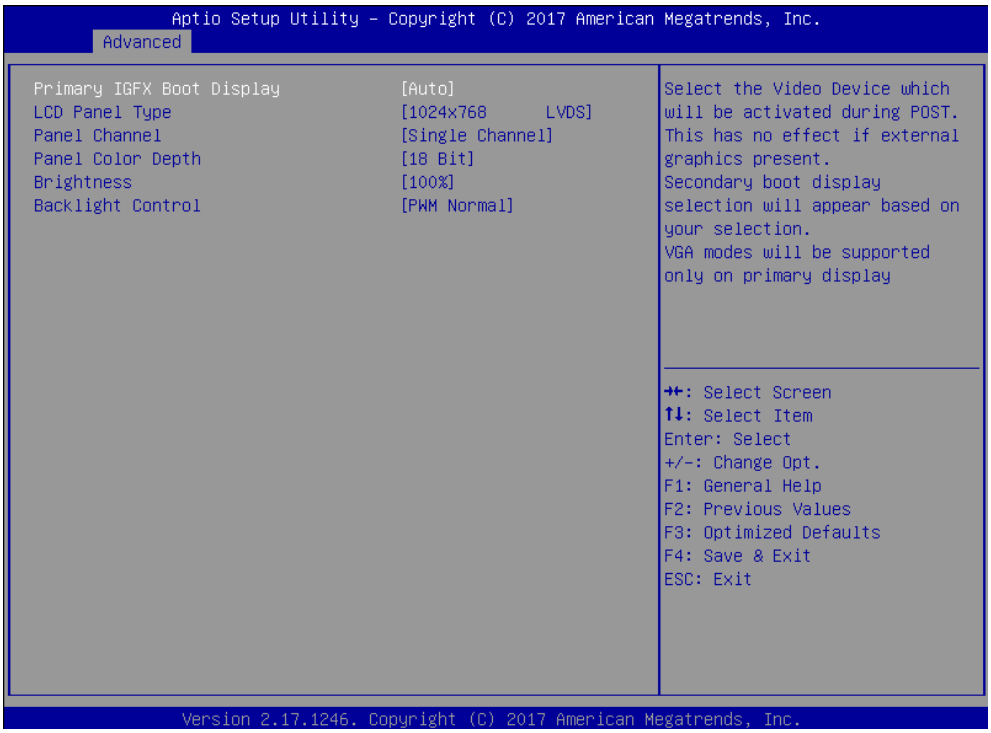


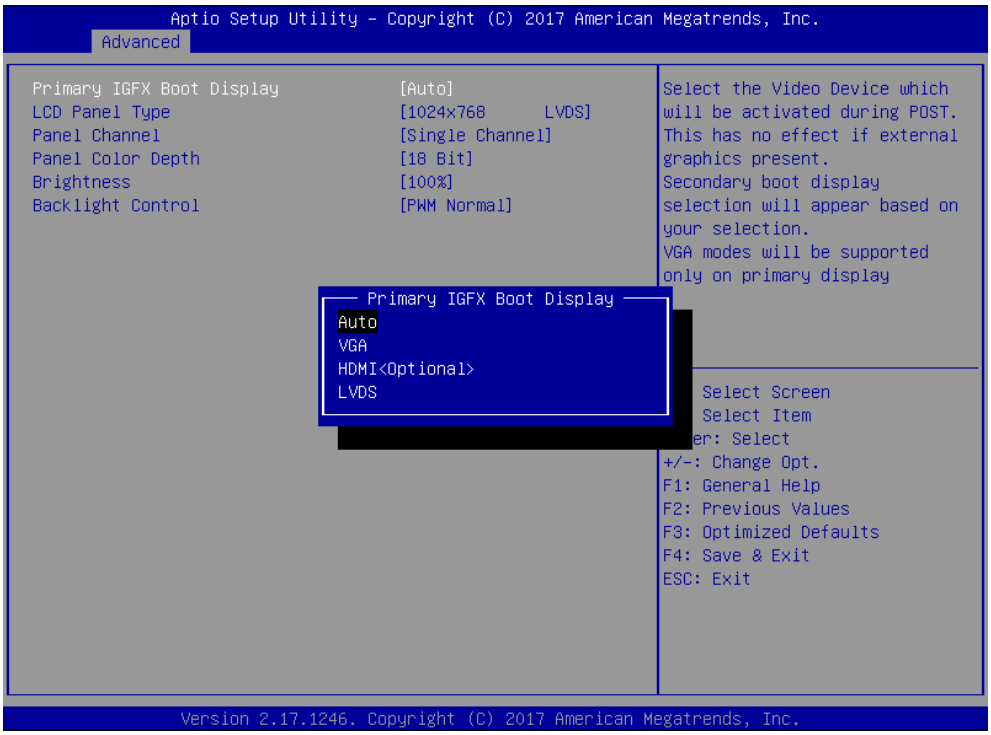
Power off: the computer will stay off when power is restored, regardless of whether it was on or off when power was lost.

Power on: the computer will boot when power is restored, regardless of whether it was on or off when power was lost.

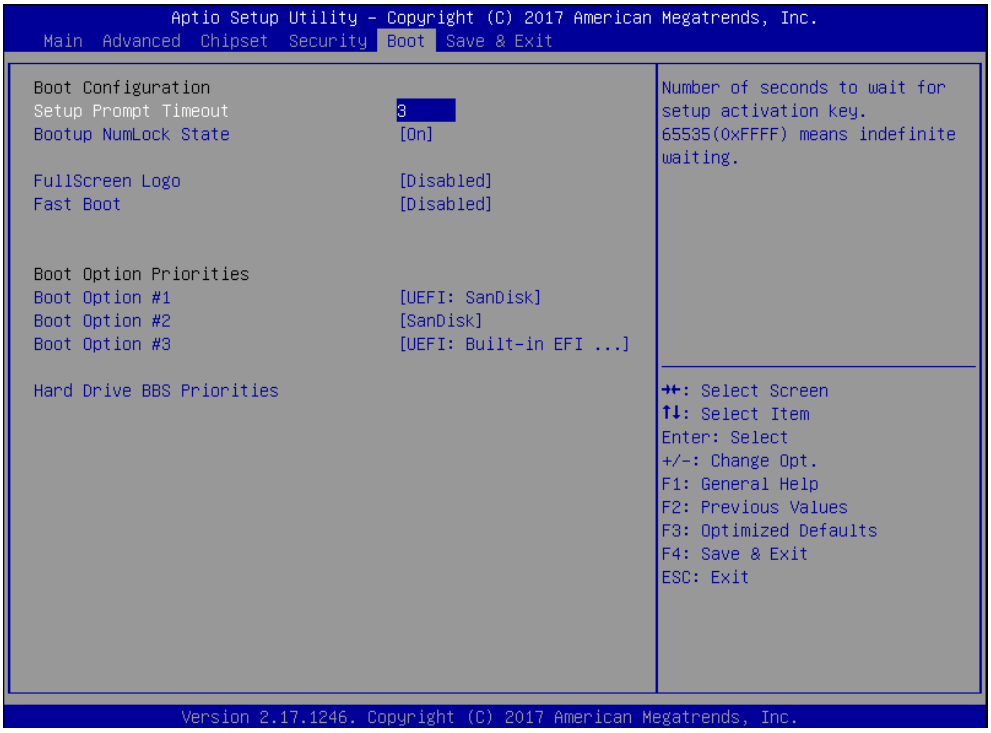
Last state: if the computer was on when power was cut, it will restore to the state before power off. Otherwise, it will stay off.

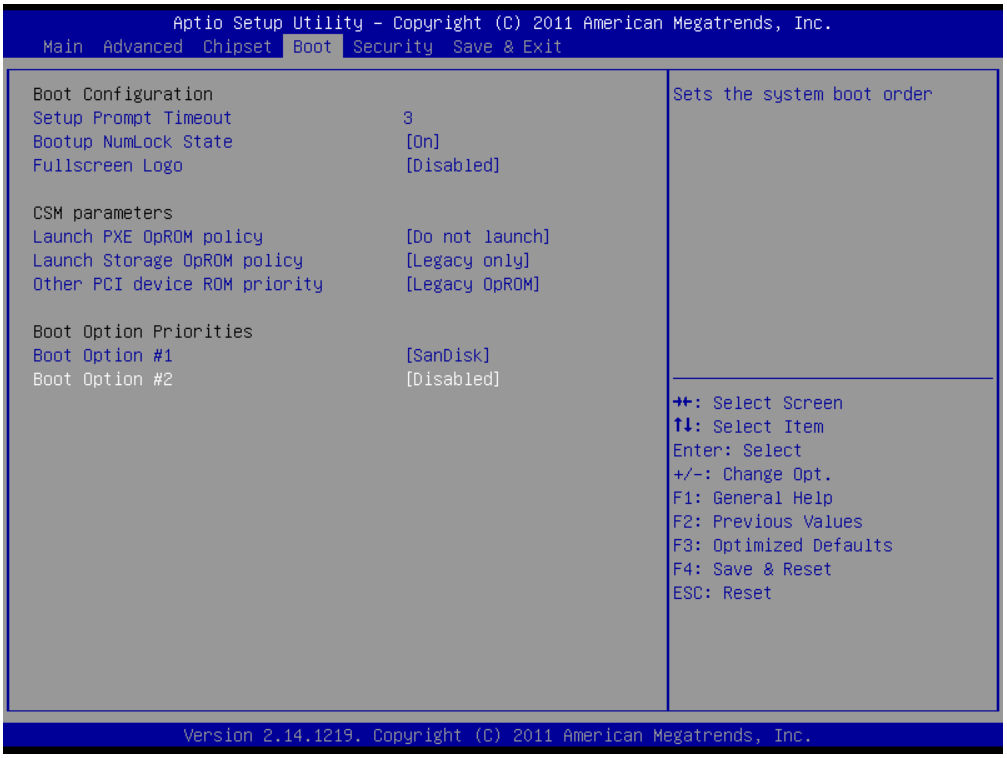
g. Intel Graphic Configuration

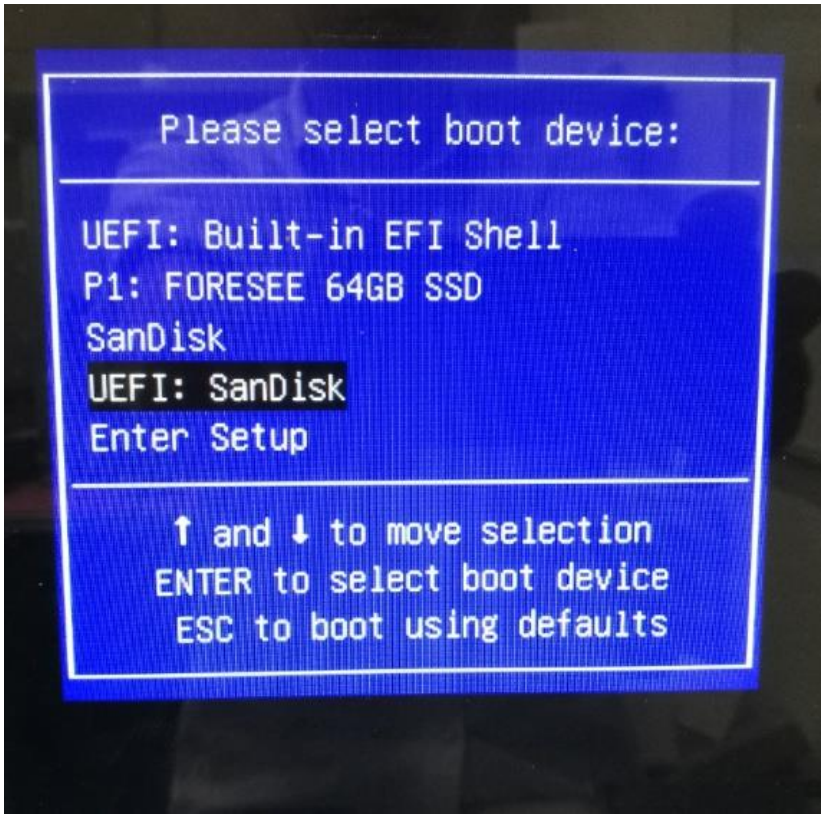




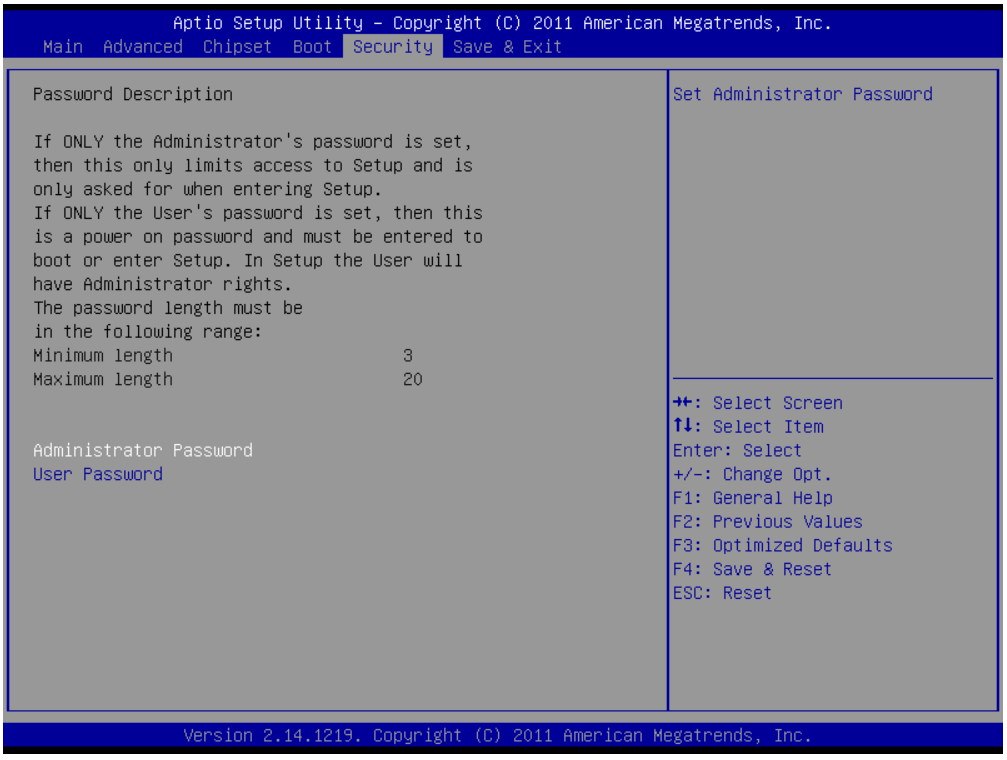
4.1.5 BOOT Configuration



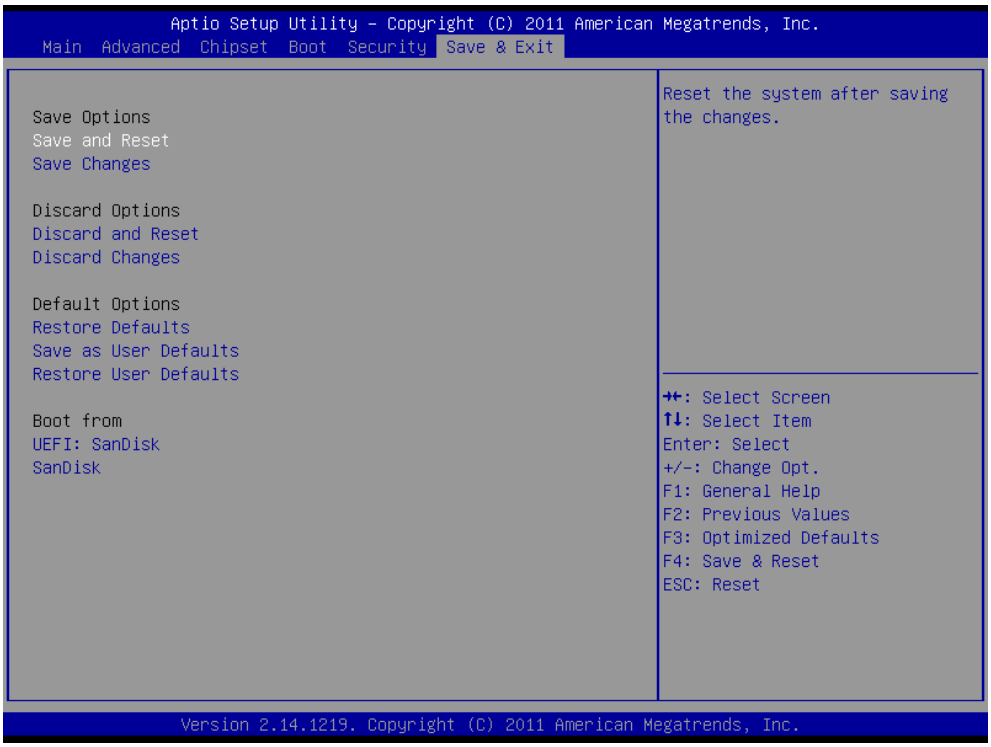




4.1.6 Security settings



4.1.7 Exit Option



a. Save Changes and Exit

When you have completed system configuration, select this option to save your changes, exit BIOS setup and reboot the computer. So the new system configuration parameters can take effect.

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

b. Discard Changes and Exit

Select this option to quit Setup without making any permanent changes to the system configuration.

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

c. Load Optimized Defaults

The WPXXX1T-C automatically configures all setup items to optimal settings when you select this option. Optimized Defaults is designed for maximizing the performance of the system. So it might not suitable for all computer applications. In particular, do not use the Optimal Defaults if your computer has system configuration problems.

Select Load Optimal Defaults from the **Exit** menu and press **Enter**

Chapter 5
System installation

5.1 System Maintenance Introduction

If the components of the WPxxx1T-C malfunction, they must be replaced, such as the wireless LAN module or the motherboard. Please contact the system reseller or vendor to purchase the replacement parts.

5.2 Cover Removal

CAURION:

Turn off the power before removing the back cover. Otherwise, there might be a risk of electrocution which may result in permanent damage to the product and severe injury to the user.

To replace any of the following components,

- Memory module
- Wireless LAN module
- Inverter

The back cover of the WPxxx1T-C must be removed. To remove the backcover, loosen the four silver screws, slide the cover down and then lift to remove

Appendix A Safety Precautions

CAURION:

The precautions outlined in this chapter should be strictly followed. Failure to do so may cause permanent damage to the product.

A.1 General Safety Precautions

Please read the following safety precautions carefully. Make sure you always follow the precautions. Keep this User Manual for later reference.

1. Always follow the **Anti-static precautions (A.2)** when the product is opened.
2. **Make sure the power is turned off and the power cord is disconnected** when the PRODUCT is being installed, moved or modified.
3. When the PRODUCT is running, **electric shocks may occur if the chassis of product is open**.
4. If amounts of dust, water, or fluids enter the product, please immediately **turn off the power supply and pull out the plug**, then contact the vendor.
5. DO NOT APPLY A VOLTAGE WHICH EXCEEDS THE SPECIFIED VOLTAGE RANGE. OTHERWISE, THIS MAY RESULT IN FIRE OR ELECTRIC SHOCK.
6. DO NOT DROP OR INSERT ANY OBJECTS INTO THE VENTILATION OPENINGS OF THE PRODUCT.
7. DO NOT DROP THE PRODUCT AGAINST A HARD SURFACE.
8. DO NOT STRIKE OR EXERT EXCESSIVE FORCE ONTO THE LCD PANEL.
9. DO NOT TOUCH ANY OF THE LCD PANELS WITH A SHARP OBJECT.
10. DO NOT STORE THE PRODUCT IN OUT OF THE TEMPERATURE RANGE WHAT WE SUGGESTED, NOT LESS THEN -30°C OR HIGHER THAN 80°C, OR MAY DAMAGE THE DEVICE.

A.2 Anti-static Precautions

WARNING:

During the installation of the product, failure to take ESD precautions may result in permanent damage to the device and cause severe injury to the user.

Electrostatic discharge (ESD) may cause severe damage to electronic components of product, especially during dry weather. Therefore, please strictly observe the anti-static precautions when opens the product to handle any electrical components inside.

1. **Wear an anti-static wristband** to prevent ESD from damaging any electrical components.
2. Before and during handling the electrical components, **please frequently touch grounded conducting materials to ground yourself.**
3. When configuring or working with an electrical component, **please put the component on an anti-static pad** in order to reduce the possibility of ESD damage.
4. **Only touch the edges of the electrical component**, when handling it.

A.3 Disposing of the Equipment

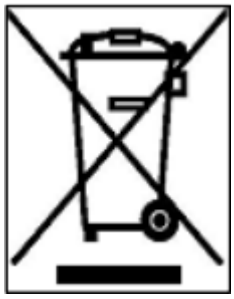
CAURION:

If the battery is replaced with the wrong type, there might be a risk of a battery explosion. Only certified engineers can replace the on-board battery.

NOTE:

Disposal of used batteries must be in accordance with local environmental regulations.

Within the European Union:



EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your display products, please follow the guidance of your local authority, or ask the shop where you purchased the product. The mark on electrical and electronic products only applies to the current European Union Member States.

Please follow the national guidelines for electrical and electronic product disposal.

Outside the European Union:

If you want to dispose the used electrical and electronic products outside the European Union, please contact your local authority so as to comply with the correct disposal method.

A.4 Maintenance and Cleaning Precautions

When maintaining or cleaning the product, please follow the guidelines below.

A.4.1. Maintenance and Cleaning

Prior to cleaning any part or component of the product, please read the details below.

1. Except for the LCD panel, never spray or squirt liquids directly onto any other components. To clean the LCD panel, gently wipe it with a piece of soft dry cloth or a slightly moistened cloth.
2. The interior does not require cleaning. Keep fluids away from the interior.
3. Be careful not to damage the small, removable components inside.
4. Turn off before cleaning.
5. Never drop any objects or liquids through the openings.
6. Be cautious of any possible allergic reactions to solvents or chemicals used when cleaning.
7. Avoid eating, drinking and smoking nearby.

A.4.2. Cleaning Tools

Some components may only be cleaned using a product specifically designed for the purpose. In such case, the product will be explicitly mentioned in the cleaning tips. Below is a list of items to use for cleaning.

1. **Cloth** – Although paper towels or tissues can be used, a soft, clean piece of cloth is recommended.
2. **Water or rubbing alcohol** – A cloth moistened with water or rubbing alcohol should be used.
3. **Using solvents** – The use of solvents is not recommended as they may damage the plastic parts.
4. **Vacuum cleaner** – Using a vacuum specifically designed for computers is one of the best methods of cleaning. Dust and dirt can restrict the airflow and cause circuitry to corrode.

5. **Cotton swabs** - Cotton swaps moistened with rubbing alcohol or water are excellent tools for wiping hard to reach areas.
6. **Foam swabs** - Whenever possible, it is best to use lint free swabs such as foam swabs for cleaning.

Appendix B

B.1 Hazardous Materials Disclosure Table for IPB Products Certified as RoHS Compliant Under 2002/95/EC without Mercury

The details provided in Appendix B are to ensure that the product is compliant with the Peoples Republic of China (China) RoHS standards. The table below acknowledges the presences of small quantities of certain materials in the product, and is applicable to China RoHS only.

A label will be placed on each product to indicate the estimated “Environmentally Friendly Use Period” (EFUP). This is an estimate of the number of years that these substances would “not leak out or undergo abrupt change.” This product may contain replaceable sub-assemblies/components which have a shorter EFUP such as batteries and lamps. These components will be separately marked.

Please refer to the table on the next page.

B-1 Poisonous or hazardous substances or element in products

Component	Toxic or Hazardous Substances and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium(Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
Housing	X	O	O	O	O	X
Printed Circuit Board	X	O	O	O	O	X
Metal Fasteners	X	O	O	O	O	O
Cable Assembly	X	O	O	O	O	X
Fan Assembly	X	O	O	O	O	X
Battery	O	O	O	O	O	O

O: The quantity of poisonous or hazardous substances or elements found in each of the component's parts is below the SJ/T 11363-2006-stipulated requirement.

X: The quantity of poisonous or hazardous substances or elements found in at least one of the component's parts is beyond the SJ/T 11363-2006-stipulated requirement.