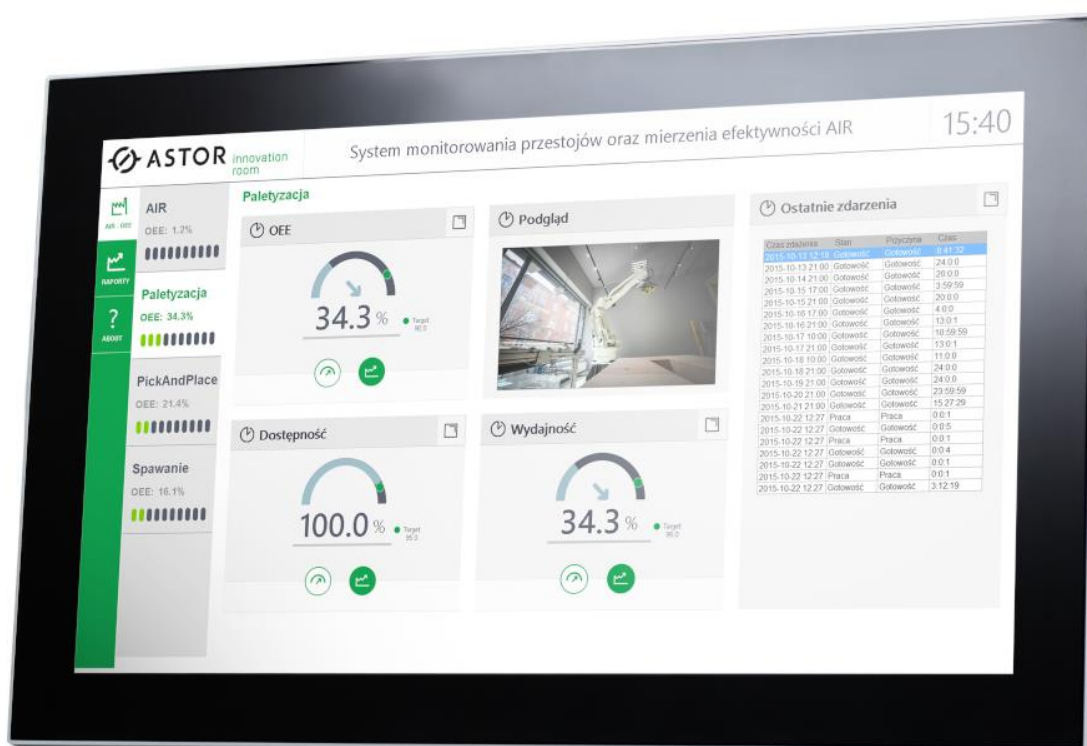


Industrial PC: Astraada PC AS56

USER MANUAL



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CHAPTER 1. OVERVIEW

1.1 Introductions



Figure 1. Astraada PC

AS56 series is fanless industrial Panel PC with projected capacitive and resistive touch panel, IP65 water and dust proof panel, stylish enclosure, and reliable modular structure. Through flexible combination among the different panel sizes and system boxes, customer could get various solution, and replace system upgrade the platform without changing cabinet design. Which is convenient to product maintenance, replacement, production and upgrade in future.

OS supports: Windows7/WES, Windows10, Linux, Vxworks, QNX.

Monitor can be: 12.1", 15", 17", 18.5", 21.5" optional.

1.2 Features

- Aluminum Magnesium alloy die-casting, IP65 enabled in front panel;
- Capacitive / Resistive touch screen;
- Support 7th generation Intel® Core™i5 7200U/3855U,
- 2 Ethernet ports, 2 RS232 ports, with magnetic-coupling isolation and 600W TV surge protection, 8KV ESD Protection, support RS485 automatic data flow control.
- Wide power supply : DC12V ~ 24V, support reverse polarity protection, overvoltage protection, overcurrent protection
- Extensive WIFI/3G/4Gwireless, /1 x Mini-PCle slot
- Fanless design, embedded and VESA, wall mounted
- Interfaces: : VGA/DVI/2GLAN/4USB/2COM/AUDIO

1.3 External Overview

AS56 make up of front panel monitor and back panel.

1.3.1 Front panel

The front side of TPC6000-Cxx3 is front panel LCD touch screen monitor surrounded by an aluminum magnesium alloy die-cast frame.

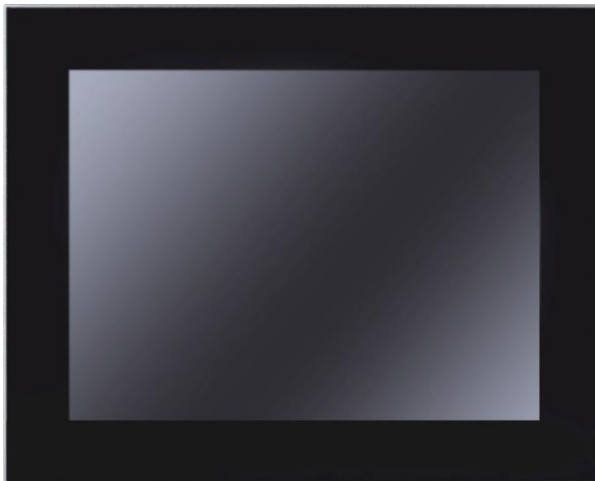


Figure 2. Front panel

1.3.2 Rear panel

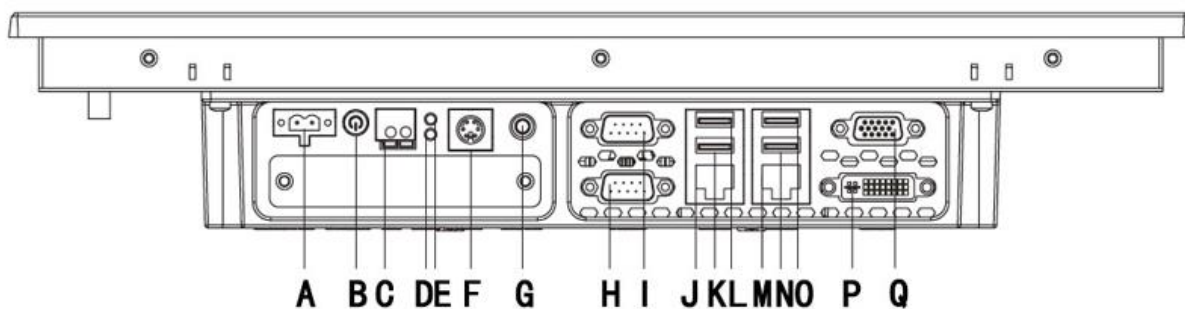


Figure 3. Rear panel

Interface definition :

A : DC IN (12/24V)	J : LAN 2
B : Power	K : USB3
C : Remote switch	L : USB4
D : Power Indicator light	M : LAN1
E : Hard Disk indicator	N : USB1
F : PS2	O : USB2
G : Audio	P : DVI
H : COM1	Q : VGA
I : COM2	

1.4 Internal overview

The internal components include the touch panel module and the motherboard. The motherboard has memory, a wireless module and a hard drive, 3G wireless modular optional.

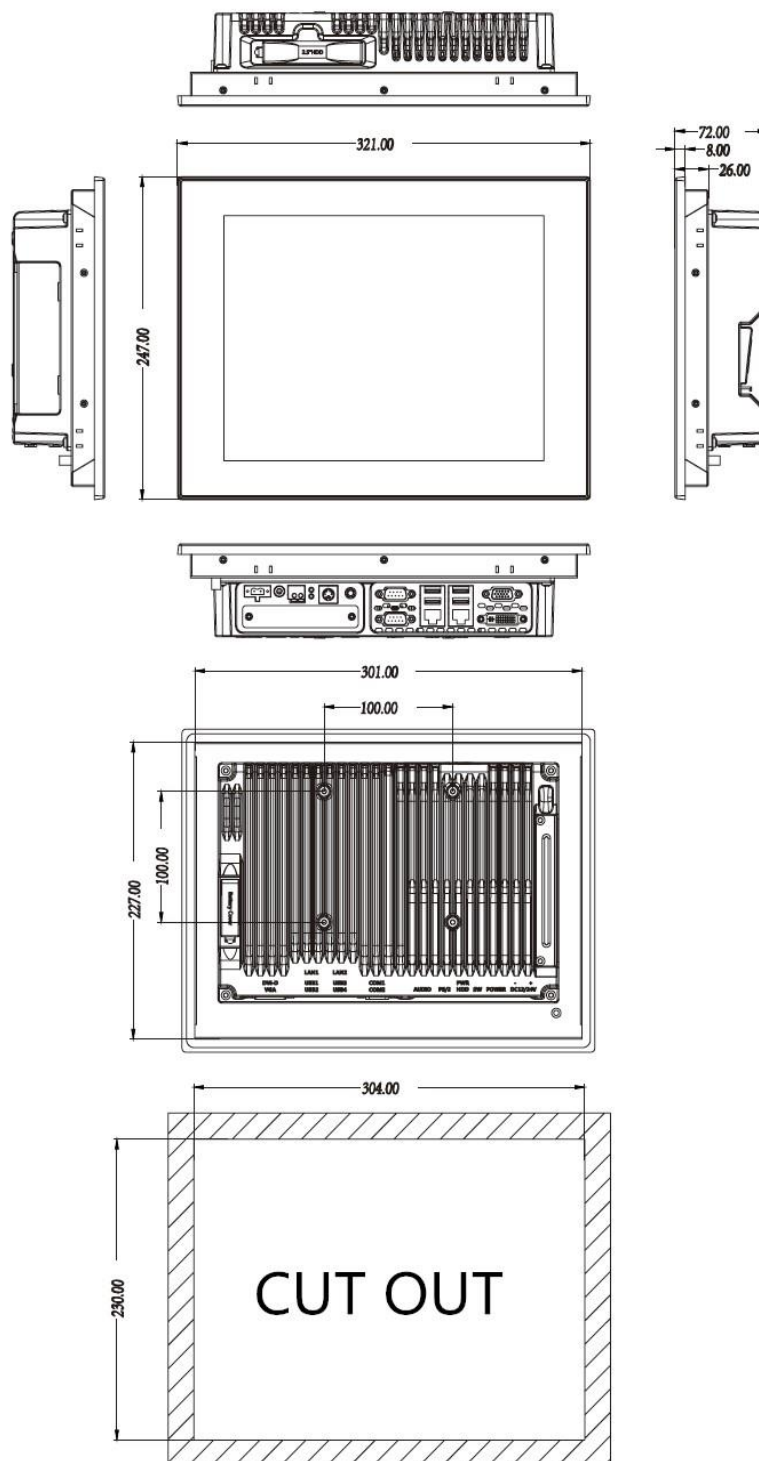
1.5 Specifications

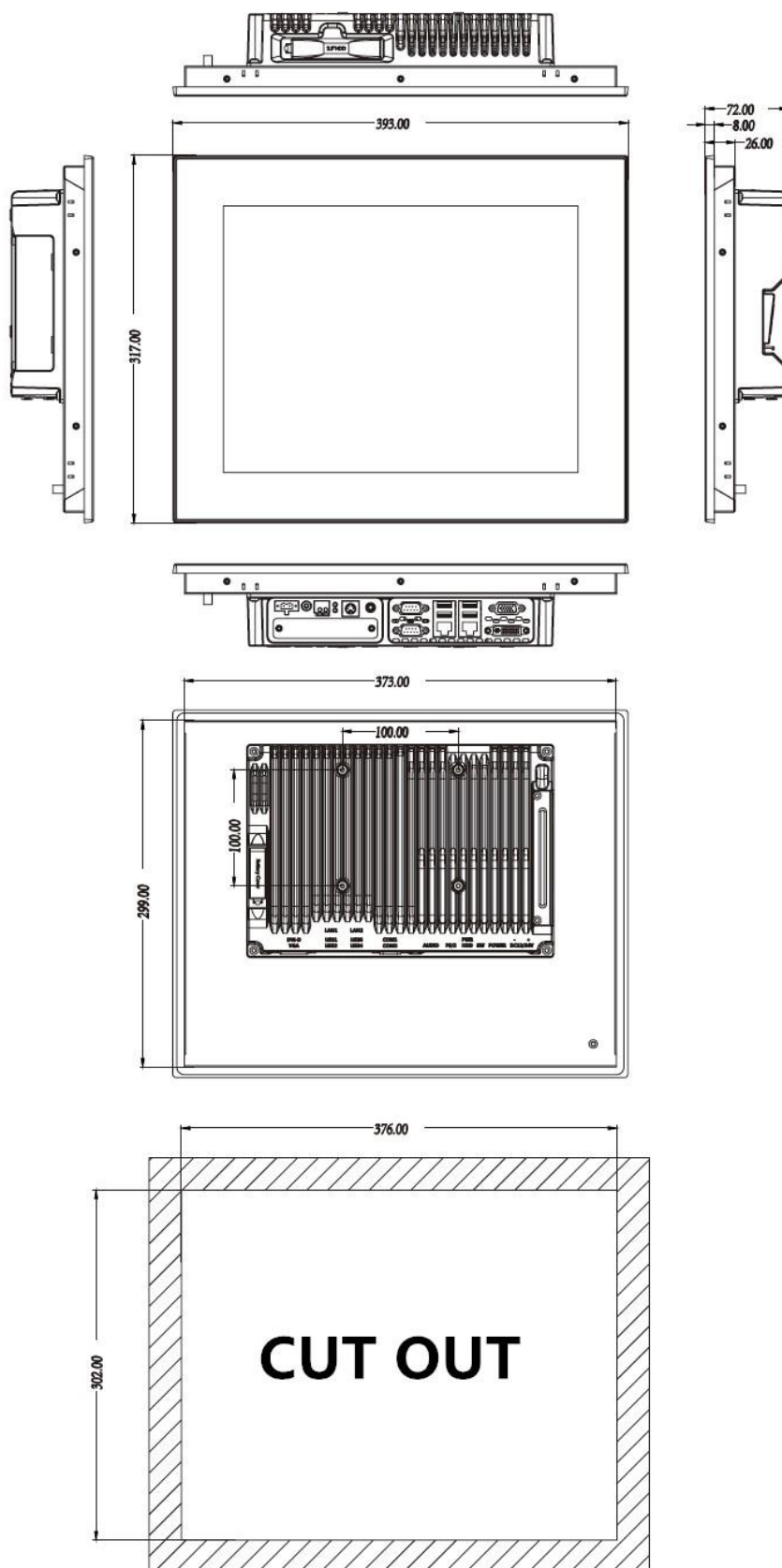
	Type	AS56
Processor	CPU	Support 7th generation Intel® Core™i5-7200U
	Main frequency	Dual Core 2.3GHz
	L3 Cache	3MB
	Chipset	Integrated PCH-LP
	Memory	1 x 204-pin DDR3L-1600MHz SODIMM
	Hard Drive	1 x 2.5" SATA + 1 x mSATA
I/O	LAN	1000Mbps RJ-45 z ochroną przeciwprzepięciową, odgromową oraz ochroną ESD 15kV
	Audio	Realtek ACL662
	USB	4 x USB3.0/2.0/1.1
	COM	2 x RS-232 / RS-485 z ochroną przeciwprzepięciową, RS-485 obsługuje automatyczną kontrolę przepływu
	Expansion slot	1 x Mini-PCIe, 3G, WIFI, 1 x EasyBUS
	I/O	DVI-I, VGA, 2 x GLAN, 4 x USB, 2 x COM, 2 x PS2
OS	OS	Windows 7, Windows 7 Embedded, Windows8, Windows10, Ubuntu, VXWORKS, QNX
Power	Input Voltage	12-24VDC ±10% , support reverse polarity protection, overvoltage protection, overcurrent protection
	Maximum Power Dissipation	-
Touchscreen	Type	Multi-point capacitive touch screen
	Transmittance	> 75%
	Controller Interface	USB
	Driver Support	Windows7, Windows 8, Windows 10, Linux
	Multi-touch	10 points (Windows system)
	Surface Hardness	Mohs' 7
Environmental	Work temperature	-20 ~ 60° C, 0 ~ 45° C
		0 ~ 45°C (32~113°F) (General temperature HDD/SSD)
	Storage temperature	-20 ~ 60° C
	Relative humidity	5~95% (non-condensation)
	Shake	1.5 Grms, IEC 60068-2-64, 5 ~ 500 Hz, 1 hr/axis

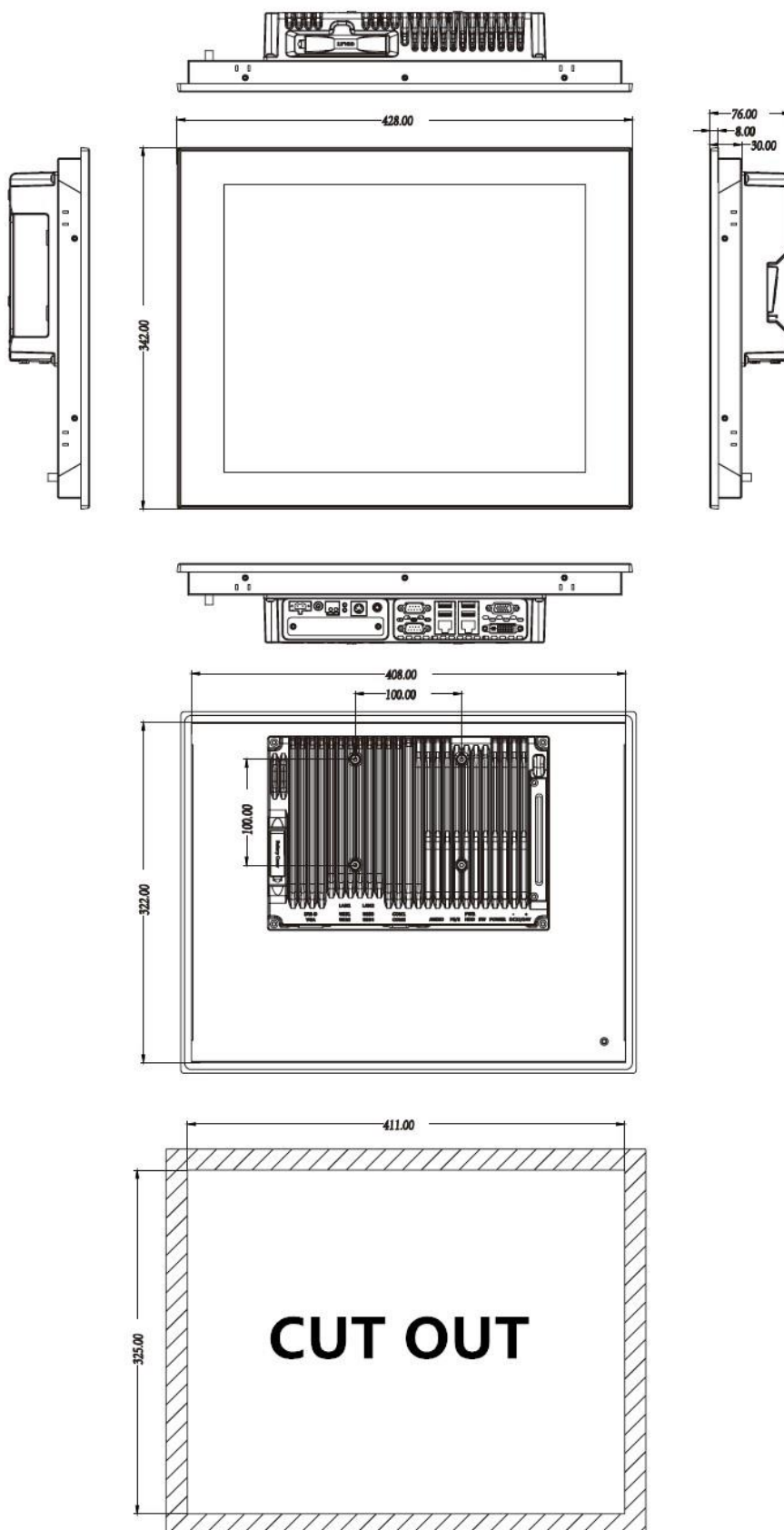
	Shock	10 G, IEC 60068-2-64, half-sine wave, 11ms duration
	EMC	CE/FCC Class A
	Wodoodporność	Front panel IP65

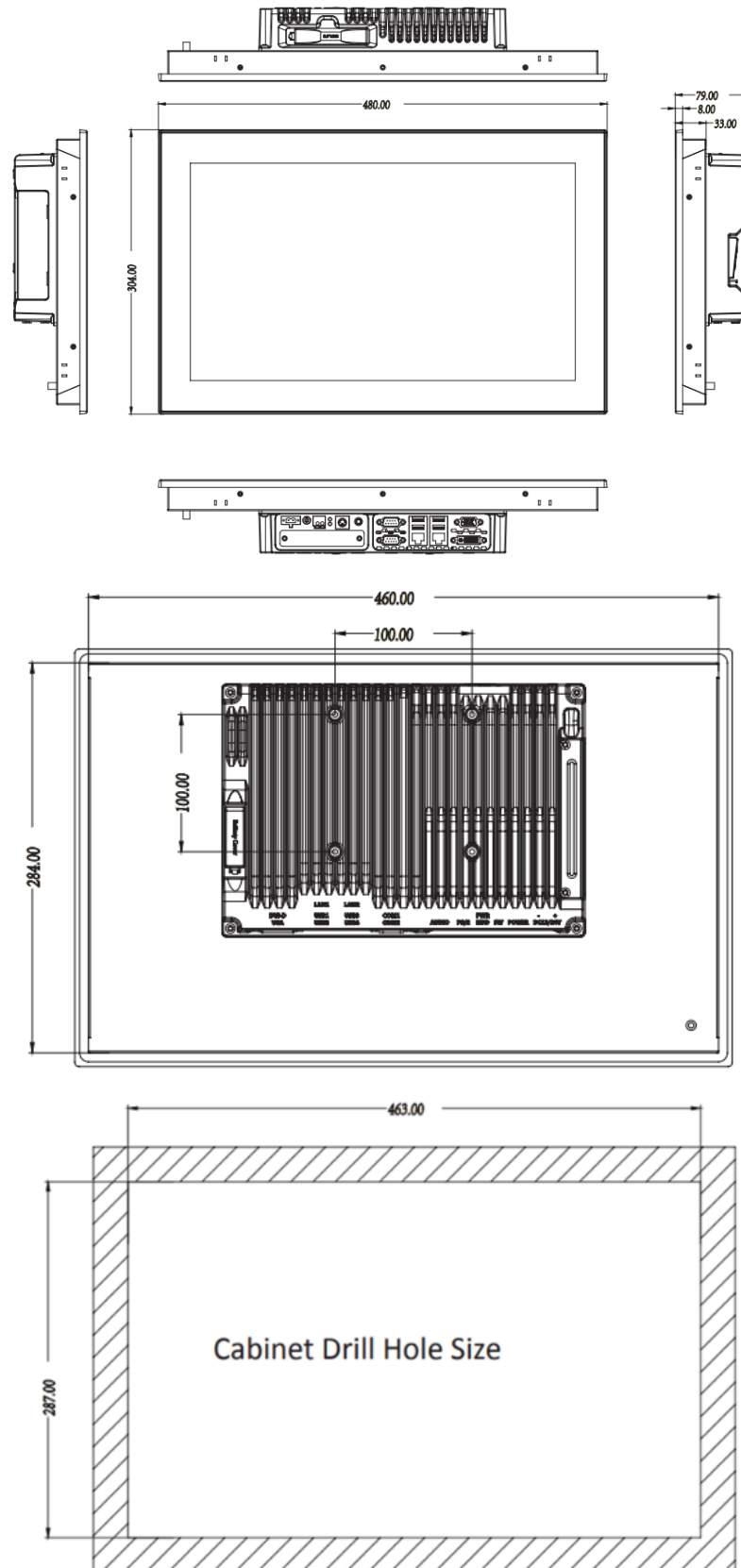
Typ	AS56A12C811	AS56A15C811/ AS56A15D811	AS56A17C811 / AS56A17D811	AS56A19C811	AS56A22C811
Dimension (W x H x D)	321 x 247 x 72mm	393 x 317 x 72mm	428 x 342 x 76mm	480 x 304 x 79mm	550mm x 342mm x 80mm
Drill Hole Size (W x H)	304 x 230mm	376 x 302mm	411 x 325mm	463 x 287mm	533 x 325mm
NW	-	-	-	-	-
LCD type	12.1"SVGA TFT	15"XGA TFT	17" SXGA TFT	18.5" HD TFT	21.5" Full HD TFT
Resolution	1024 x 768	1024 x 768	1280 x 1024	1366 x 768	1920 x 1080
Colors	16.7MB	16.7MB	16.7MB	16.7MB	16.7MB
Active area (W x H)	246 x 184.5mm	304.13 x 228.10mm	338 x 270mm	409.8 x 230.4mm	476.64 x 268.11mm
Backlight	LED	LED	LED	LED	LED
MTBF (Hour)	50000hrs	30000hrs	30000hrs	30000hrs	30000hrs
Pixel Pitch (H x V)	0.3075 x 0.3075	0.297 x 0.297	0.264 x 0.264	0.300 x 0.300	0.248 x 0.248
Luminance	450cd/m2	420cd/m2	250cd/m2	250cd/m2	250cd/m2
Contrast Ratio	800:1	800:1	1000:1	1000:1	3000:1
Viewing Angle	(L) 80 / (R) 80 / (T) 60 / (B) 80	(L) 80 / (R) 80 / (T) 80 / (B) 80	(L) 85 / (R) 85 / (T) 80 / (B) 80	(L) 85 / (R) 85 / (T) 80 / (B) 80	(L) 89 / (R) 89 / (T) 89 / (B) 89

1.6 Dimensions









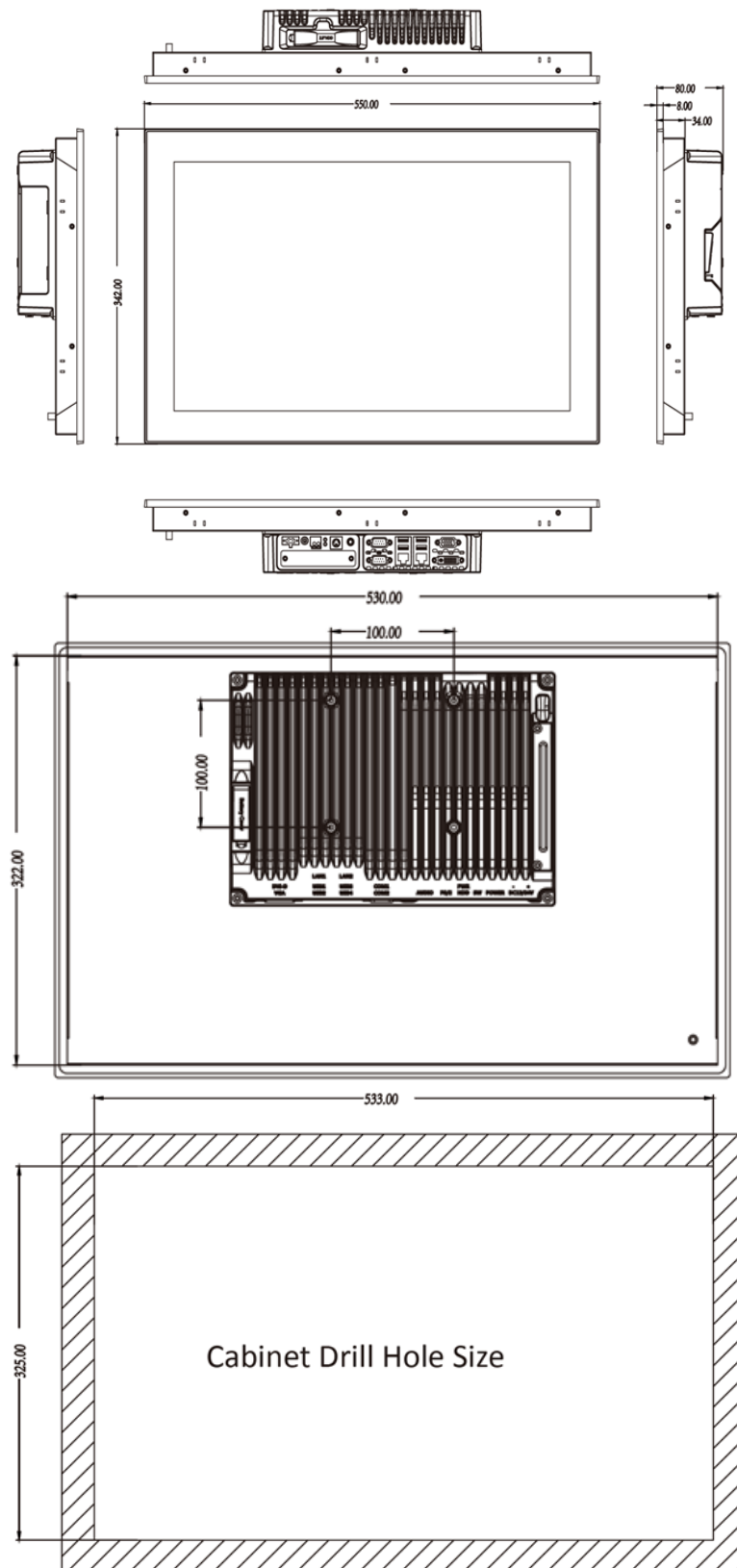


Figure 5. AS56A12C811, AS56A15C811, AS56A17C811, AS56A19C811, AS56A22C811 dimensions

CHAPTER 2. INSTALLATIONS

2.1 Unpack the flat panel PC

Unpack the flat panel PC, follow the step below:

Step 1: Carefully cut the tape sealing the outside box. Only cut deep enough to break the tape.

Step 2: Open the outside box.

Step 3: Carefully cut the tape sealing the inside box. Only cut deep enough to break the tape.





Step 4: Open the inside box.

Step 5: Lift the monitor out the box.

Step 6: Remove the peripheral box from the main box

2.2 Packing list

Please check out all items by following list when you open the package:

Item	Picture	Quantity
IPC		1
Power cord		1
Power adapter		1
Mounting Clamps		4

If any items are missing or damaged, contact the ASTOR.

2.3 Hard drive installation

This section outlines the installation of the hard drive in the AS56. To install the hard drive, please follow the steps below:

Step 1 : Flip over this device and you can see its back.

Step 2 : On the machine, find the orange HDD cover.

Step 3 : Open up the hard disk cover and remove it.

Step 4 : Locate the HDD bracket.

Step 5 : Paste the pull and push label and height pad on HDD.

Step 6 : Insert the hard disk into the slot along the chute.

Step 7 : Recover the orange HDD hard disk cover.



2.4 SSD installation by using mSATA

The installation for a SSD is described in this section.

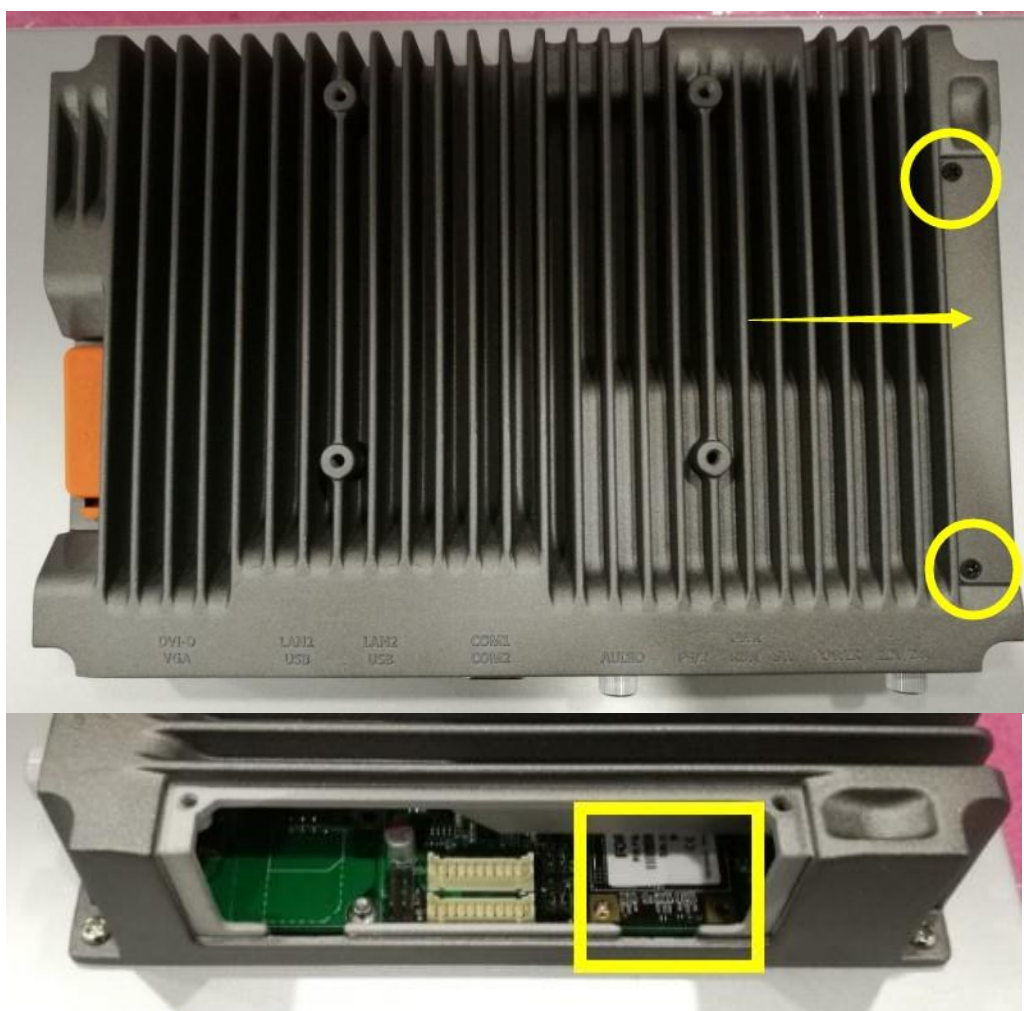
Step 1 : Flip over this device and you can see its back.

Step 2 : Find the expansion slot baffle on the right side of the machine and remove two screws

Step 3 : Remove the expansion slot baffle and can see the mSATA SSD slot.

Step 4 : Install mSATA SSD and cover and screws.

Step 5 : Recover the expansion slot baffle.



2.5 BAT Button Battery Replacement

This section outlines the installation of the replacement of button battery. Please follow the steps below:

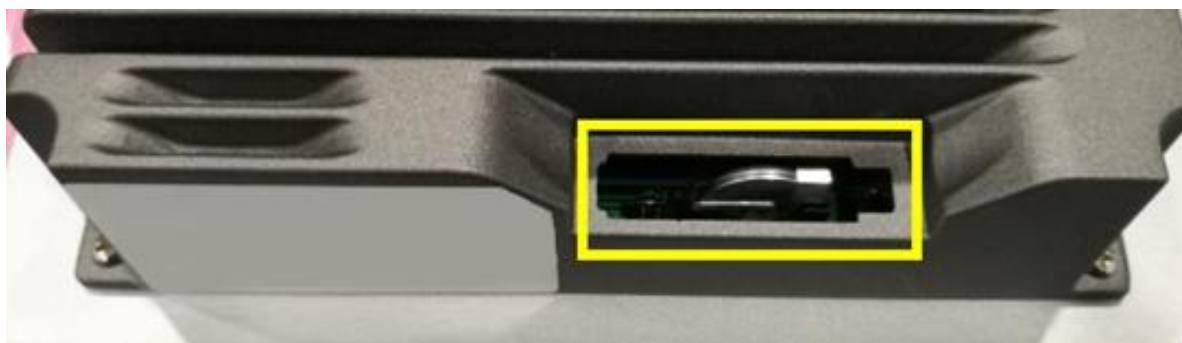
Step 1 : Flip over this device and you can see its back.

Step 2 : Find the BAT battery cover on the right of machine.

Step 3 : Remove the battery cover.

Step 4 : Replace the 3.3V button battery.

Step 5 : Recover the expansion slot baffle.



2.6 Mounting

2.6.1 Arm mounting

AS56 can be installed on any arm that supports the standard VESA mounting interface. An example wall arm is shown below:



Figure 6. Arm mounted

To install the TPC6000-CXX3 on the arm, follow the direction below:

Notice: Make sure the arm supports standard VESA mounting. The AS65 uses a VESA mounting to attach to the arm.

Step 1 : The arm purchased separately, 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 surface, lift the flat panel PC onto the interface pad of the mounting.

Step 3 : Align the retention screw holes on the mounting arm interface with those in the flat panel PC.

Step 4 : Secure the flat panel PC to the interface pad by inserting four retention screws through the bottom of the mounting arm interface pad and into the flat panel PC.

2.6.2 Wall mounting

To mount the flat panel PC onto the wall, please follow the steps below:



Figure 8. Wall mounting

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 rear panel of the flat panel PC and tighten 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. And ensure that all four of the mounting screws fit snugly into their respective slotted holes.

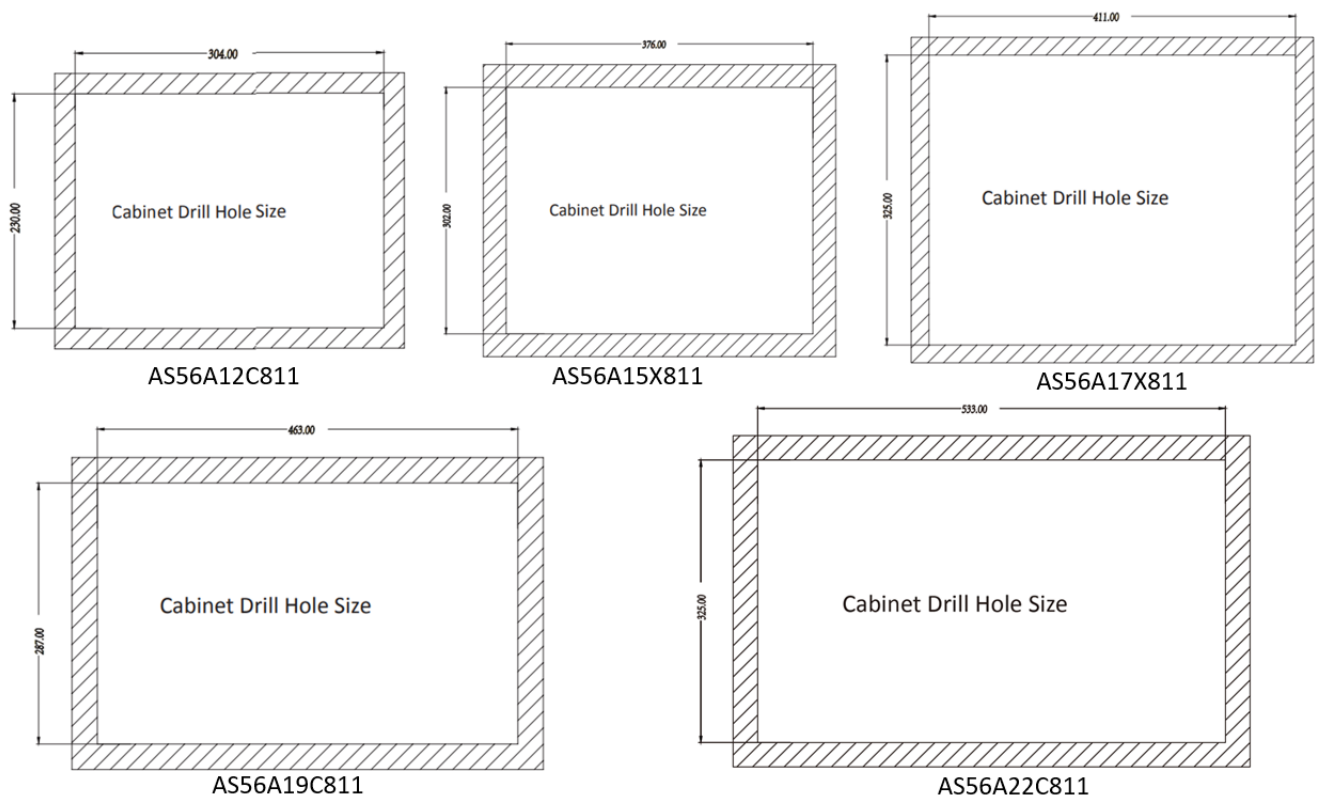
Step 9 : Secure the panel PC by fastening the retention screw of the wall-mounting bracket.

2.6.3 Panel mounting

To mount the AS56 flat panel PC into a panel (not standard attached), please follow the steps below:

Step 1 : Select the location on the panel to mount the flat panel PC.

Step 2 : Cut out a section from the panel that corresponds to the rear panel dimensions of the flat panel PC. Take care that the panel section that is cut out is smaller than the overall size of the metal frame that surrounds the flat panel PC but just large enough for the rear panel of the flat panel PC to fit through. Recommended cutout size as shown below:



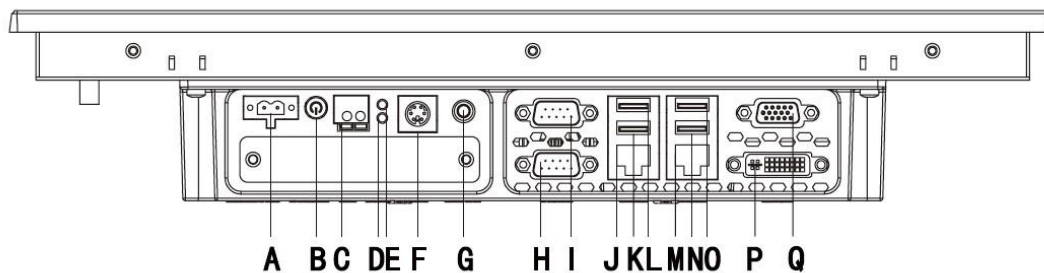
Step 3 : Slide the flat panel PC through the hole until the frame is flush against the panel.

Step 4 : Insert the panel mounting clamps into the pre-formed holes along the edges of the chassis, on the two side of the frame.

Step 5 : Tighten the screws that pass through the panel mounting clamps until the caps at the front of all the screws are firmly secured to the panel.

2.7 I/O connectors

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



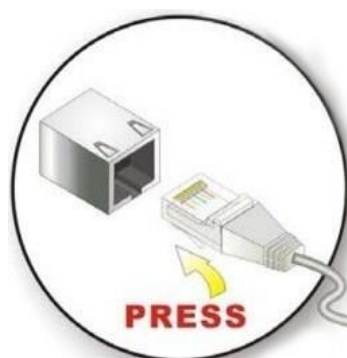
A : DC IN (12-24VDC)	J : LAN 2
B : Power switch	K : USB3
C : Remote switch	L : USB4
D : Power Indicator light	M : LAN 1
E : Hard Disk Indicator	N : USB1
F : PS/2	O : USB2
G : Audio	P : DVI
H : COM 1	Q : VGA
I : COM 2	

2.7.1 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 AS56.

Step 2 : Align the connectors. Align the RJ-45 connector on the LAN cable with one of the RJ-45 connector on the bottom panel of the AS56.



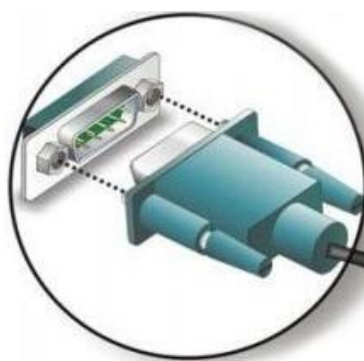
Step 3 : Secure the connector. Secure the serial device connector to the external interface by tightening the two retention screws on either side of the connector.

2.7.2 Serial device connection

To connect USB device to the AS56, please follow the instruction below:

Step 1 : Locate the DB-9 connector. The location of the DB-9 connector is shown in chapter 2.

Step 2 : Insert the serial connector. Insert the DB-9 connector of a serial device into the DB-9 connector on bottom panel.



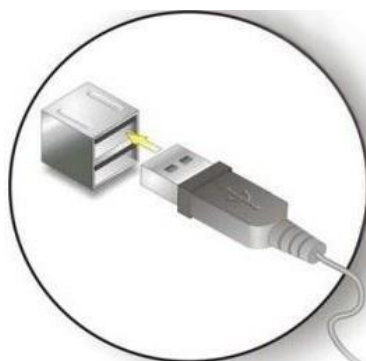
Step 3 : Secure the connector. Secure the serial device connector to the external interface by tightening the two retention screws on either side of the connector.

2.7.3 USB connection

To connect USB device to the TPC6000-CXX3, please follow the instruction below:

Step 1 : Located the USB connectors. The locations of the USB connectors are shown in Chapter 2

Step 2 : Align the connectors. Align the USB device connector with one of the connectors on the bottom panel.



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

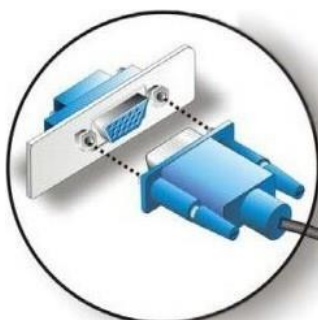
2.7.4 VGA monitor connection

The VGA output can be connected to an external VGA monitor. To connect the VGA monitor to the TPC6000-CXX3, please follow the instruction below:

Step 1 : Located the female DB-15 connectors. The locations of the VGA connectors are shown above.

Step 2 : Align the connectors. Align the male DB-15 connector on VGA screen cable with the female DB-15 connector on the external peripheral interface.

Step 3 : Insert the VGA connector. Once the connectors are properly aligned with the insert the male connector from the VGA screen into female connector on the AS56.



Step 4 : Secure the VGA connector. Secure the DB-15 VGA connector from the VGA monitor to the external interface by tightening the two retention screws on either side of the connector.

2.8 Power connector

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

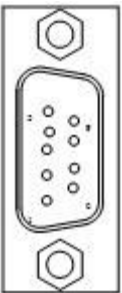
Step 1 : Connect one end to the panel PC.

Step 2 : Connect the other end to the included power supply.

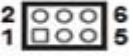
2.9 Connectors Definition

COM Ports

COM1 – 6 are DB9 connector and its definition is:

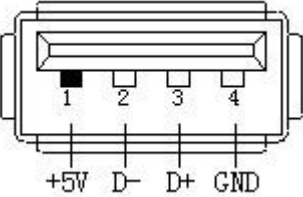
	PIN	SIGNAL	
		RS-232	RS-485 (Only COM6)
	1	DCD	Data-
	2	RXD	Data+
	3	TXD	N/A
	4	DTR	N/A
	5	GND	GND
	6	DSR	N/A
	7	RTS	N/A
	8	CTS	N/A
	9	RI	N/A

PIN9 on DB9 defaults RI, you can set to 5V or 12V by jumpers here is the definitions:

	Setting	Function
	(1-2)	+5V
	(3-4)	+12V
	(5-6)	Ring (default)

USB

We provide a standard single deck USB port in front panel and 2 x 2 standard double-deck USB interface on I/O interfaces, you can use the 5 USB interfaces at the same time, and here is the interface definition:

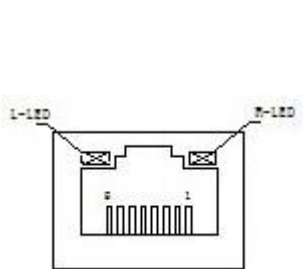
	PIN	Signal
	1	+5V
	2	Date-
	3	Date+
	4	GND

Audio interface (LINE_OUT)

We provide a standard Ø3.5 PhoneJack audio output interface (LINE_OUT), you can use it directly.


Ethernet interface (LAN1, LAN2)

We provide two 10 / 100 / 1000 Mbps 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	SYGNAŁ	PIN	SYGNAŁ
	1	TX0+	5	TX2+
	2	TX0-	6	TX2-
	3	TX1+	7	TX3+
	4	TX1-	8	TX3-

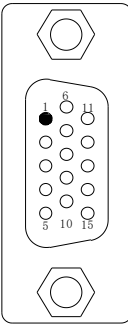
Network status	Left (LILED) double colors (Orange / Green)		Right (ACTLED) single color (Yellow)	
1000M	N/A	Constant ON	Flash	OFF
100M	Constant ON	N/A	Flash	OFF
10M	OFF	OFF	Flash	OFF
Active	Green	Orange	Data Transferring	No Data Transferring
Description	Linking indicator		Active status indicator	

PS2 Keyboard / Mouse

Slot	Pin	Definition	Pin	Definition
	1	KB_Data	2	MS_DATA
	3	GND	4	+5V
	5	KB_Clock	6	MS_Clock

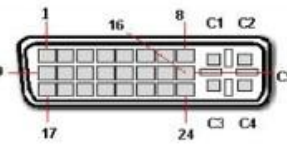
VGA

We provide a standard DB15 monitor interface, you can connect it directly. Here is the definition:

		PIN	SIGNAL	PIN	SIGNAL
		1	RED	9	5V
		2	GREEN	10	GND
		3	BLUE	11	GND
		4	NC	12	DDC_Data
		5	GND	13	HS
		6	GND_R	14	VS
		7	GND_G	15	DDC_Clock
		8	GND_B		

DVI

We provide a DVI-D interface in the rear panel, can be double display with VGA under the system. The definition is below:

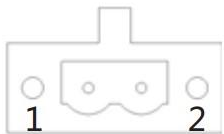
DVI-1 Connector		PIN	FUNCTION	PIN	FUNCTION
		1	TMDS Data 2-	13	TMDS Data 3+
		2	TMDS Data 2+	14	+5V DCPower
		3	TMDS Data 2/4 Shield	15	Earth (+5 circuit)
		4	TMDS Data	16	HPD
		5	TMDS Data	17	TMDS Data 0-
		6	DDC clock	18	TMDS Data 0+
		7	DDC Data	19	TMDS Data 0/5 Shield
		8	Analog Vertical Synchronization	20	TMDS Data 5-
		9	TMDS Data 1-	21	TMDS Data 5+
		10	TMDS Data 1+	22	TMDS Data clock Shield
		11	TMDS Data 1/3 Shield	23	TMDS Data clock+
		12	TMDS Data 3-	24	TMDS Data clock-
		C1	Analog Vertical Synchronization	C4	Analog horizontal synchronization
		C2	Analog Green	C5	Analog Earth(RGB circuit)
		C3	Analog Blue		

Switch button (PWR)

We provide a ATX power touch switch button (PWR) to power up on rear panel.

Power connector interface

AS56 offers a 2-pins power input interface:

	PIN	SIGNAL
	1	GND
	2	12V




PWR, hard drive status indicators

We provide a set of power, hard drive status indicators, you can know the procedure status by these indicators, green light constantly is for power-up. Red light flashing on hard drive indicator is shows that the hard drive is reading/writing data for now.

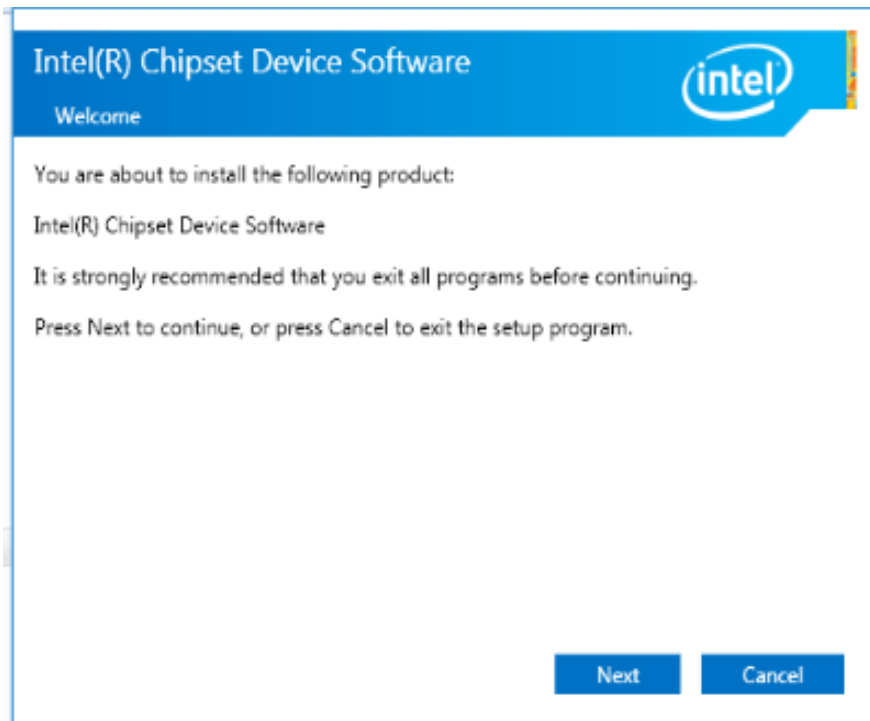
2.10 Driver installation

2.10.1 Chipset driver

Double click the setup chipset driver program:

Nazwa	Typ	Rozmiar po skompr...	Chronione...	Rozmiar
 mup	Dokument XML	14 KB	Nie	586 KB
 SetupChipset	Aplikacja	3 087 KB	Nie	3 342 KB
 WixLicenseNote	Dokument tekstowy	2 KB	Nie	4 KB

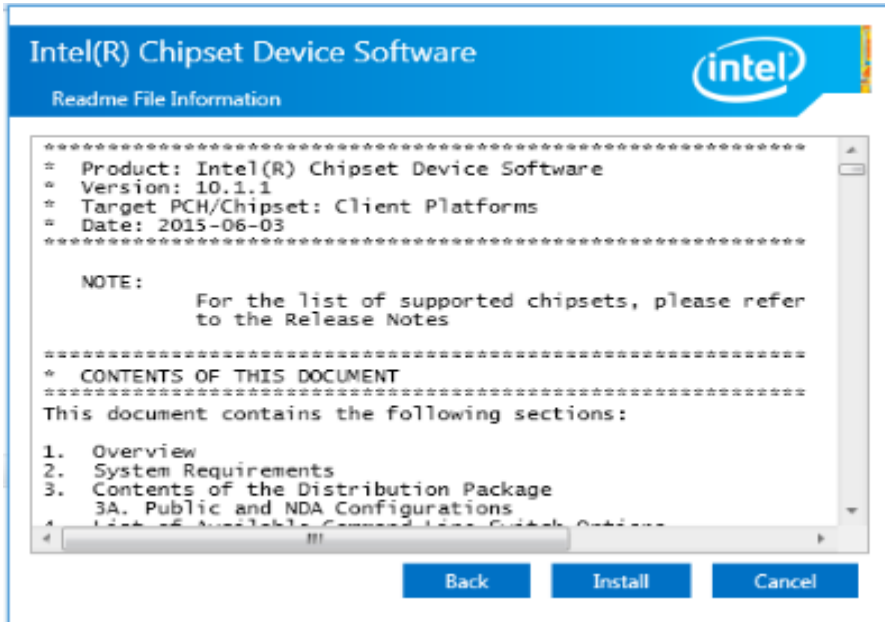
Wait for its loading:



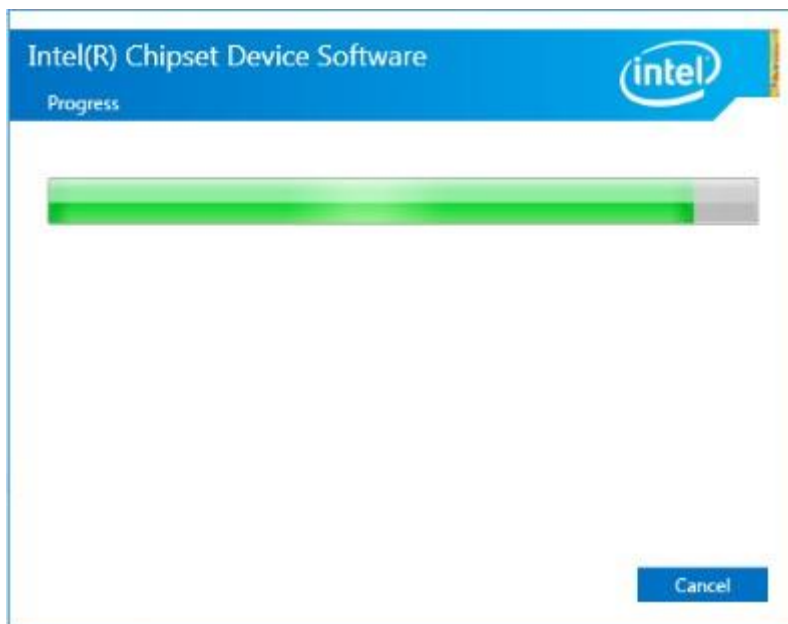
Press <NEXT> then go to the next step.



Press <Accept> to agree the License agreement then go to the next step:



Press <Install> to continue.



Wait for the installation: if it done completely, then the <NEXT> key will been set to active, then press <NEXT> to continue.



After finish this installation, you should restart the computer immediately then you can install other device's driver. Select the <Yes, I want to restart this computer now> and press <Finish> to reboot the computer.

2.10.2 Graphics driver

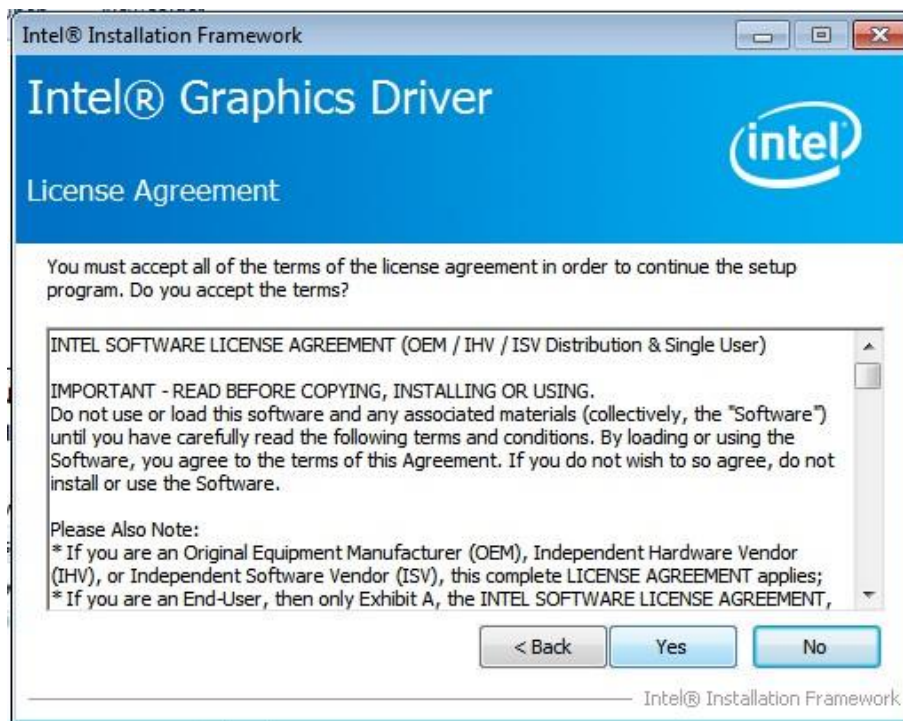
Double click the graphics driver program:

Nazwa	Typ	Rozmiar po skompr...	Chronione...	Rozmiar
DisplayAudio	Folder plików			
Graphics	Folder plików			
Lang	Folder plików			
x64	Folder plików			
autorun	Informacje Instalatora	1 KB	Nie	1 KB
DIFxAPI.dll	Rozszerzenie aplikacji	149 KB	Nie	312 KB
Installation_Readme64	Dokument tekstowy	12 KB	Nie	41 KB
mup	Dokument XML	3 KB	Nie	46 KB
ReadMe	Dokument tekstowy	2 KB	Nie	5 KB
Setup	Aplikacja	378 KB	Nie	978 KB
Setup.if2	Plik IF2	3 KB	Nie	18 KB

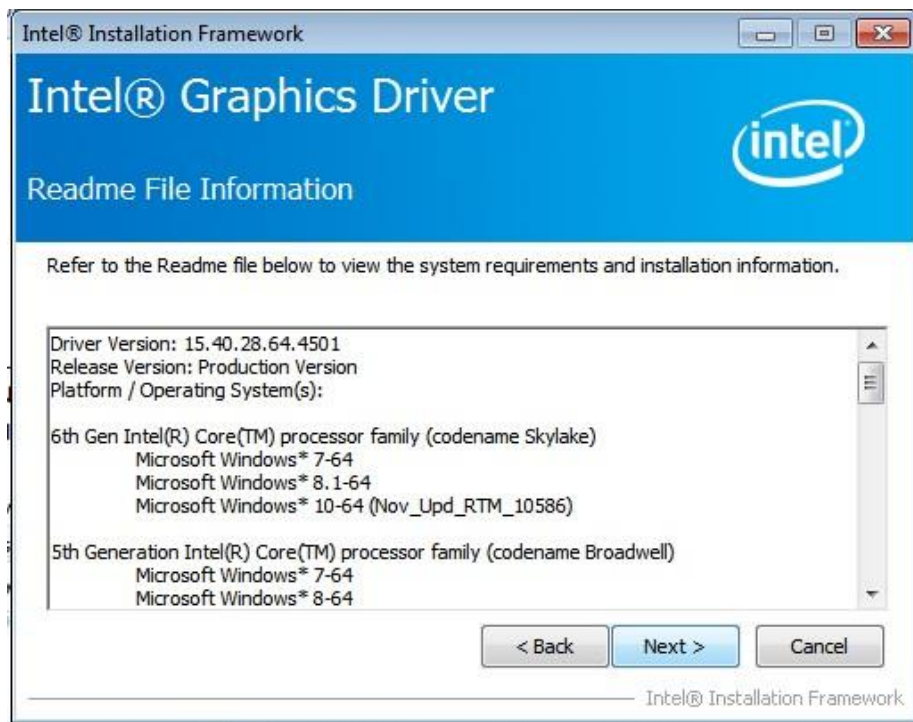
Please select “Automatically run WinSAT and enable the Windows Aero desktop theme (if supported)” then press <NEXT> to go to the next install page.



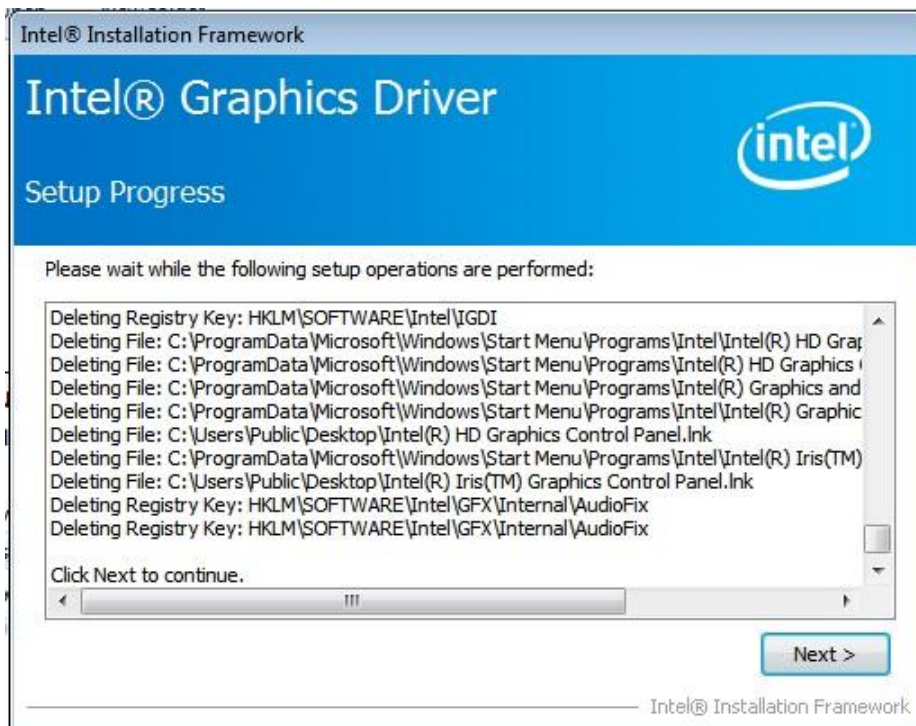
Press <Yes>, to get to the next step:



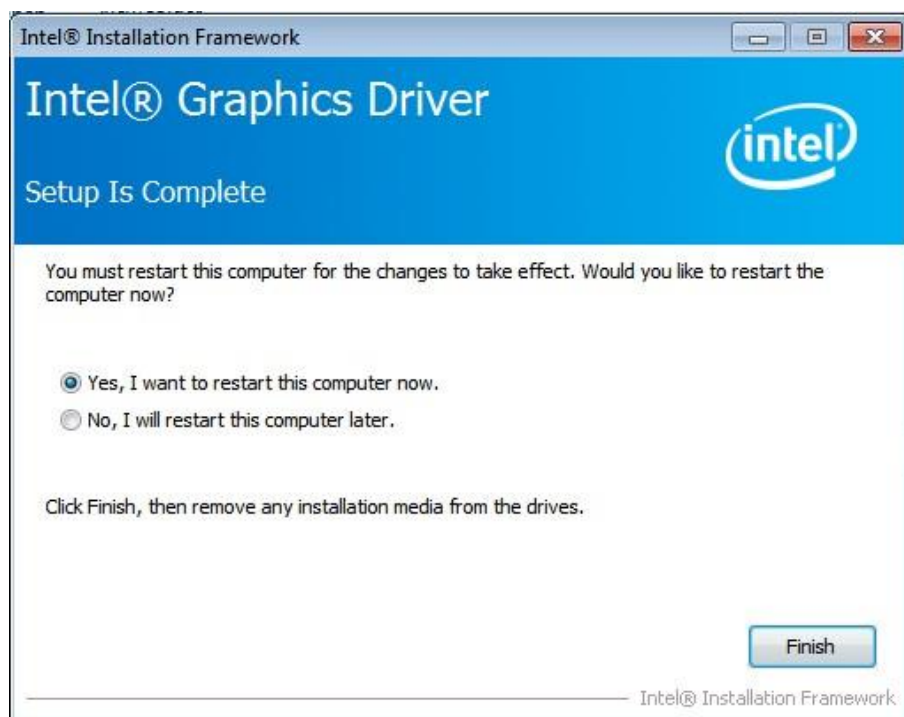
Press <NEXT> to go on.



Press <NEXT> to go on.



After finish this installation, you should restart the computer immediately then you can install other device's driver. Select the <Yes, I want to restart this computer now> and press <Finish> to reboot the computer.

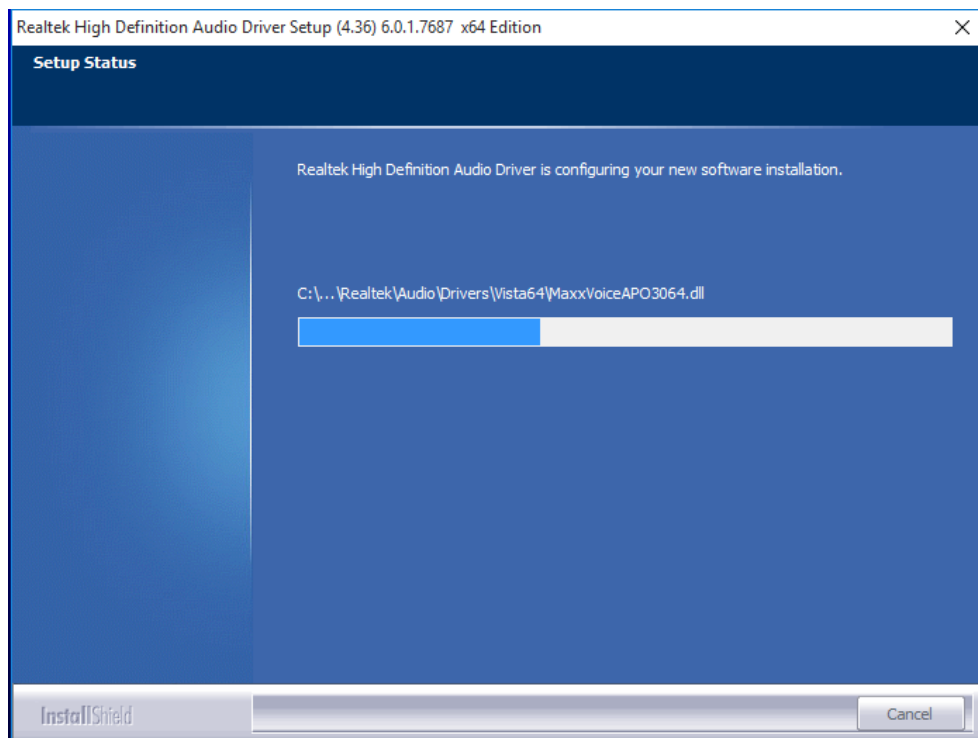


2.10.3 Audio driver

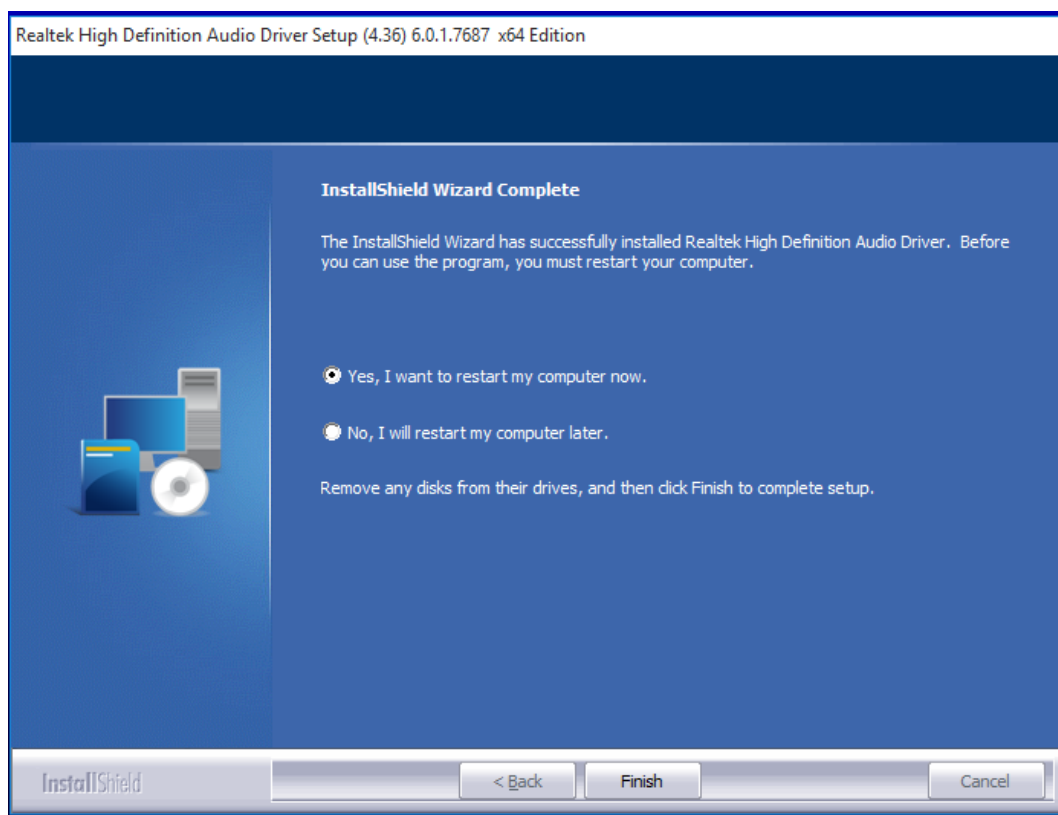
Double click the graphics driver program

Nazwa	Typ	Rozmiar po skompr...	Chronione...	Rozmiar
0x0411	Ustawienia konfiguracyjne	5 KB	Nie	15 KB
0x0412	Ustawienia konfiguracyjne	5 KB	Nie	14 KB
0x0413	Ustawienia konfiguracyjne	6 KB	Nie	25 KB
0x0414	Ustawienia konfiguracyjne	5 KB	Nie	24 KB
0x0415	Ustawienia konfiguracyjne	6 KB	Nie	24 KB
0x0416	Ustawienia konfiguracyjne	5 KB	Nie	24 KB
0x0419	Ustawienia konfiguracyjne	6 KB	Nie	23 KB
0x0421	Ustawienia konfiguracyjne	6 KB	Nie	25 KB
0x0424	Ustawienia konfiguracyjne	6 KB	Nie	24 KB
0x0804	Ustawienia konfiguracyjne	5 KB	Nie	11 KB
0x0816	Ustawienia konfiguracyjne	6 KB	Nie	25 KB
ChCfg	Aplikacja	35 KB	Nie	75 KB
data1	Plik Cabinet	5 987 KB	Nie	6 006 KB
data1.hdr	Plik HDR	9 KB	Nie	45 KB
data2	Plik Cabinet	1 KB	Nie	1 KB
ISSetup.dll	Rozszerzenie aplikacji	697 KB	Nie	782 KB
layout.bin	Plik BIN	1 KB	Nie	2 KB
Readme	Dokument tekstowy	55 KB	Nie	1 416 KB
RtlExUpd.dll	Rozszerzenie aplikacji	449 KB	Nie	2 760 KB
Setup	Aplikacja	508 KB	Nie	1 166 KB
setup	Ustawienia konfiguracyjne	2 KB	Nie	6 KB
setup.inx	Plik INX	345 KB	Nie	518 KB
setup.isn	Plik ISN	59 KB	Nie	254 KB
setup.iss	Plik ISS	1 KB	Nie	1 KB
USetup.iss	Plik ISS	1 KB	Nie	1 KB

Wait for loading preparations



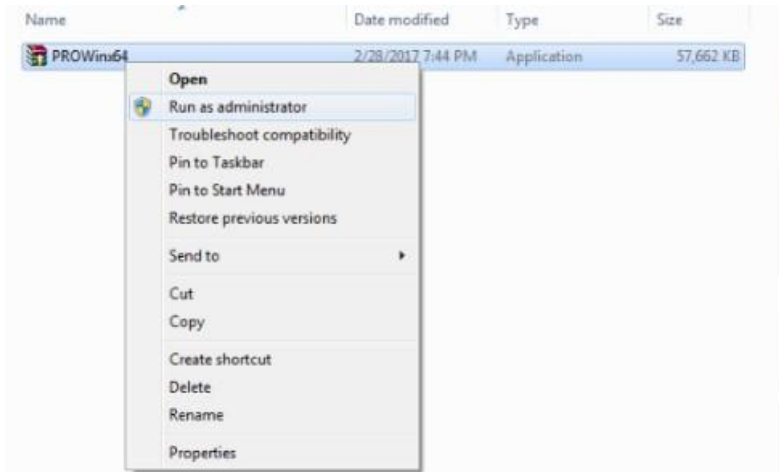
Press <YES> to continue



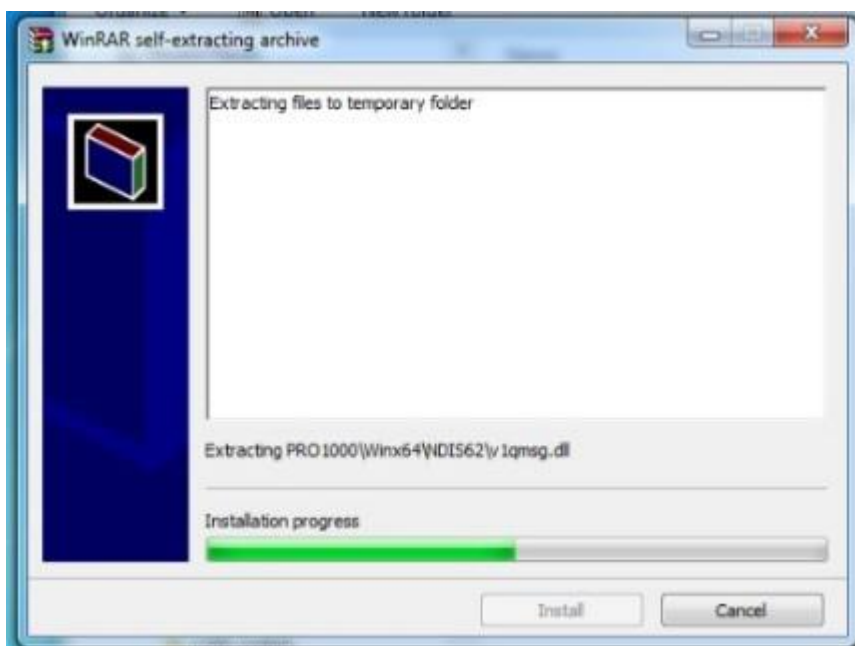
Wait for its installation and after finish this installation, you should restart the computer immediately then you can install other device's driver. Select the <Yes, I want to restart this computer now> and press <OK> to reboot the computer.

2.10.4 LAN driver

Double click Run as administrator:



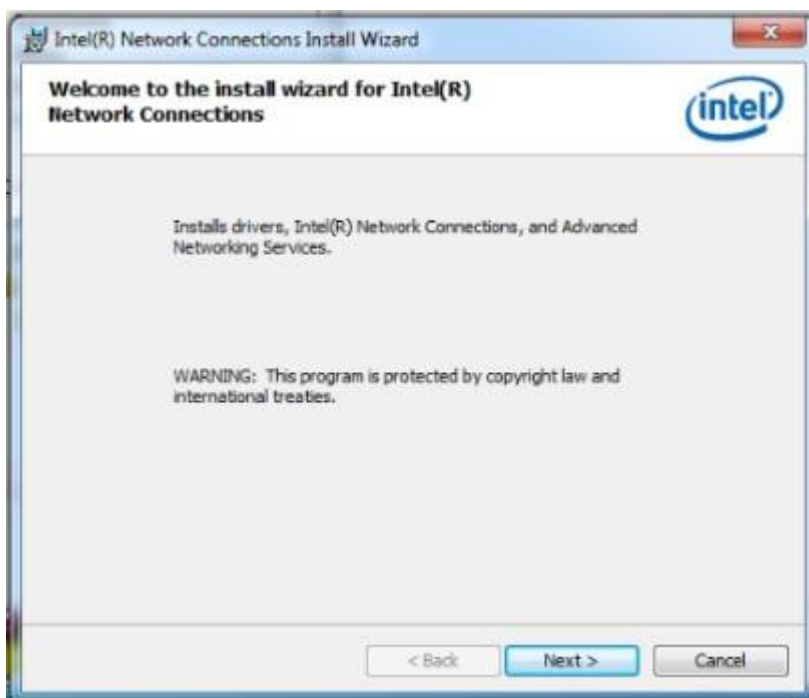
Wait for preparing setup.



Press <Yes> to continue



All Selected should be installed into the computer, then press <NEXT>



Press <I accept the terms in the license agreement>



Press <NEXT> to go on.





Wait for the installation process to complete, then click <Finish>



2.10.5 Touch screen driver

Browse the product's driver disc or D : \Backup\Drivers\5.touch\RisintechSetup.exe, you will see the driver file as following figure.

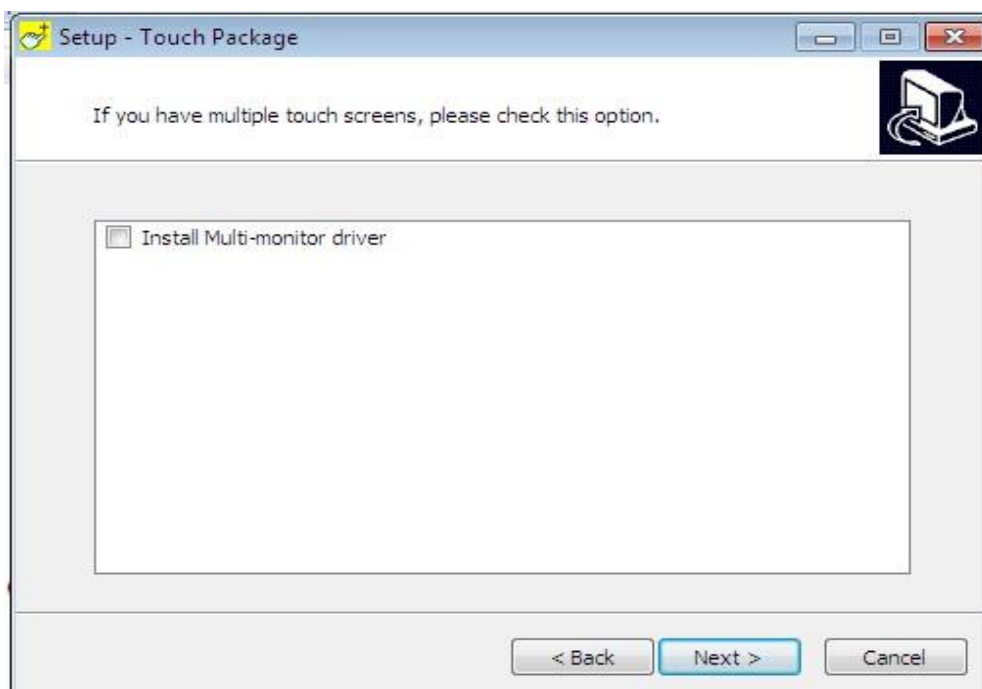
Double click the touch pad driver program

<input type="checkbox"/>	Name	Date modified	Type	Size
	Risintech-natch-151214-RgtButton-re...	12/14/2015 5:32 PM	Application	546 KB
	RisintechSetup-3.2.0.2-150216	2/16/2015 4:41 PM	Application	5,921 KB

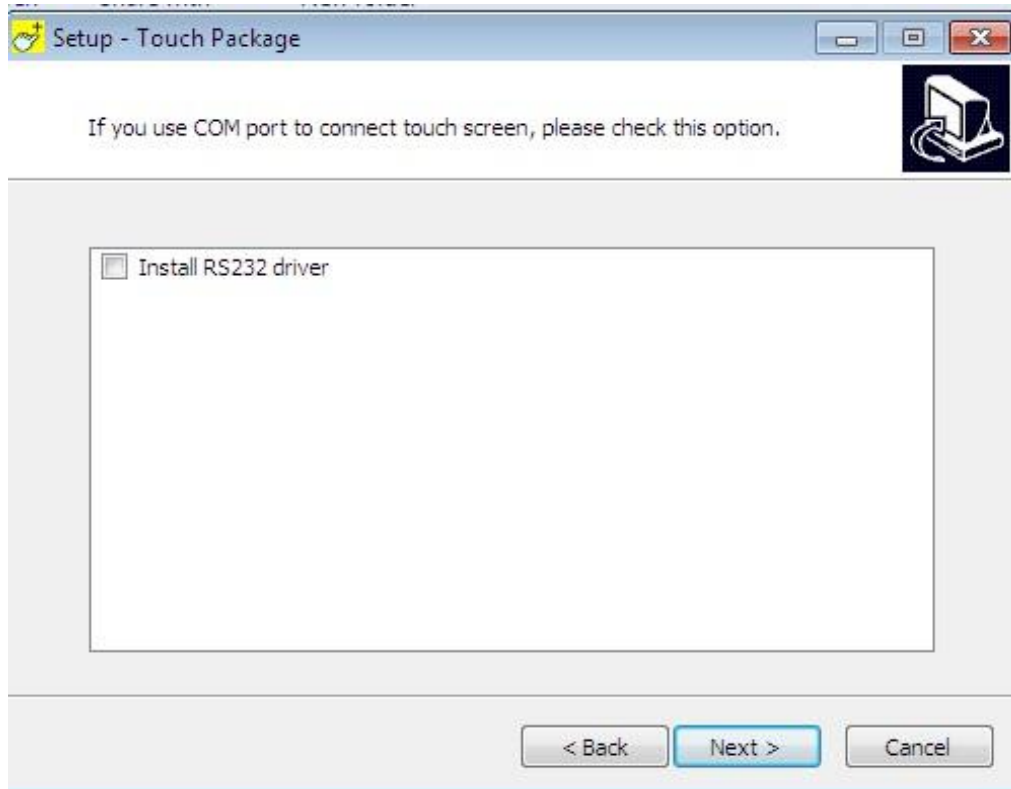
Press <NEXT> to continue



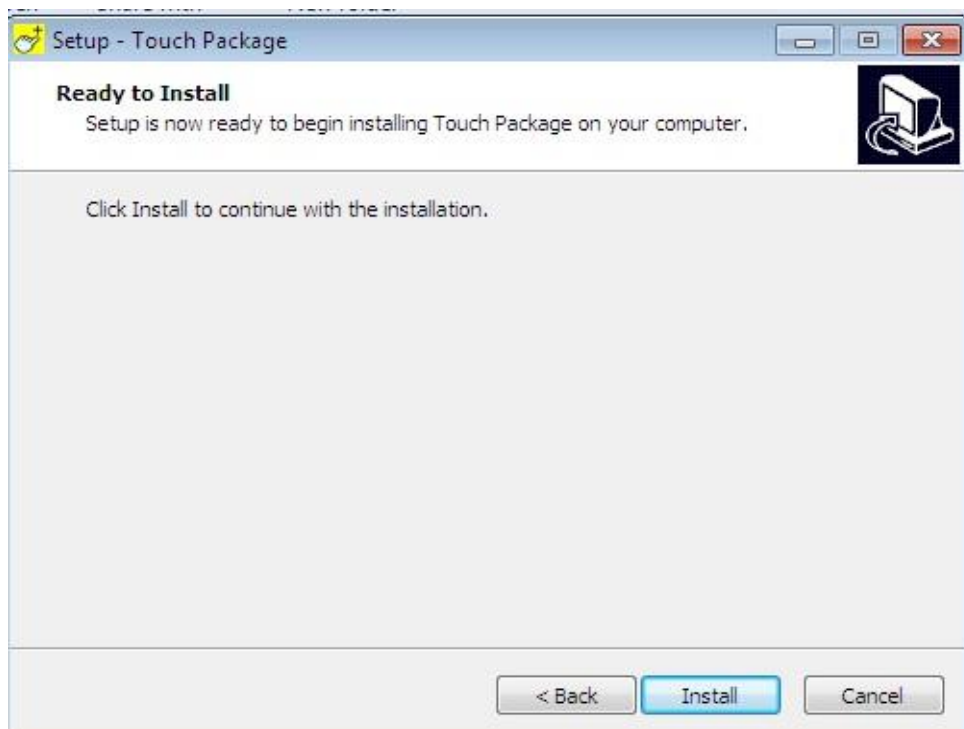
Press <NEXT> to continue



Press <NEXT> to continue



Press <NEXT> to continue



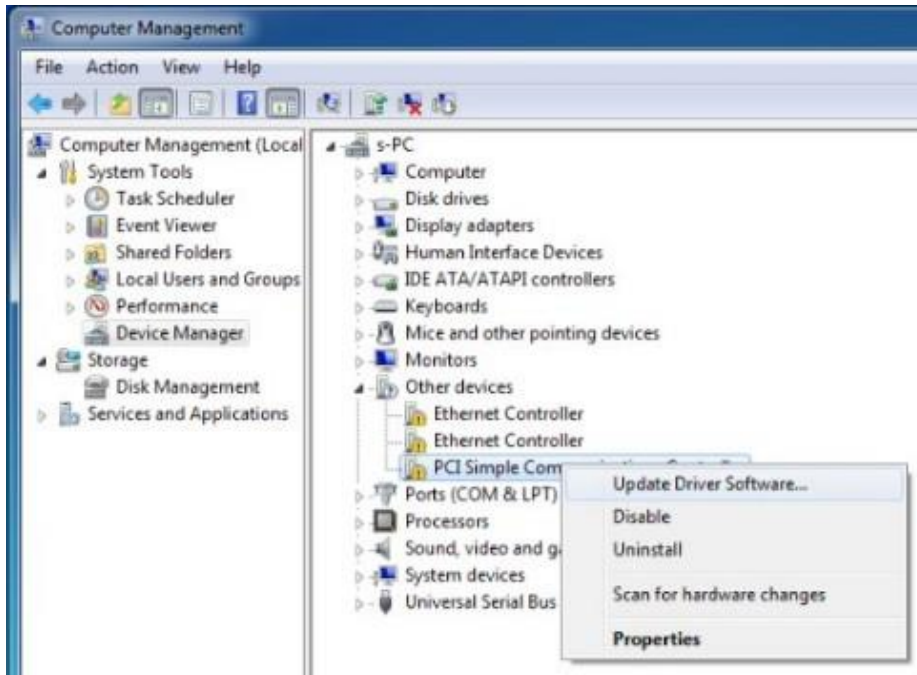
Wait for its installation and after finish this installation, you should restart the computer immediately then you can install other device's driver. Select the <Yes, I want to restart this computer now> and press <OK> to reboot the computer.



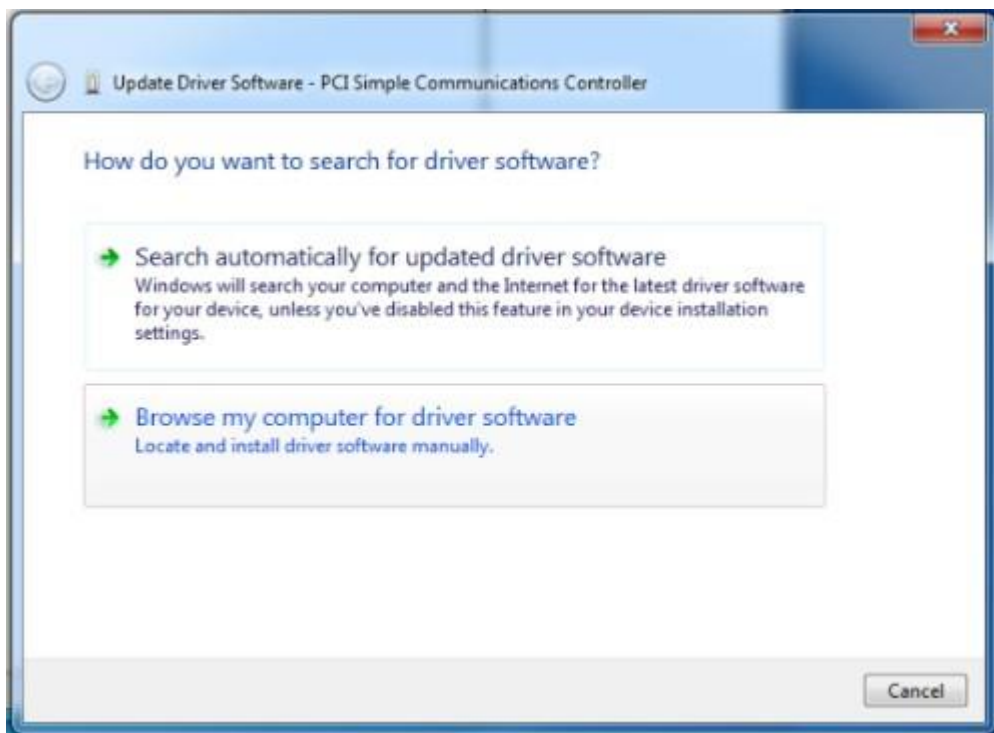
All drivers are been installed into this computer so far.

2.10.6 PCI installation

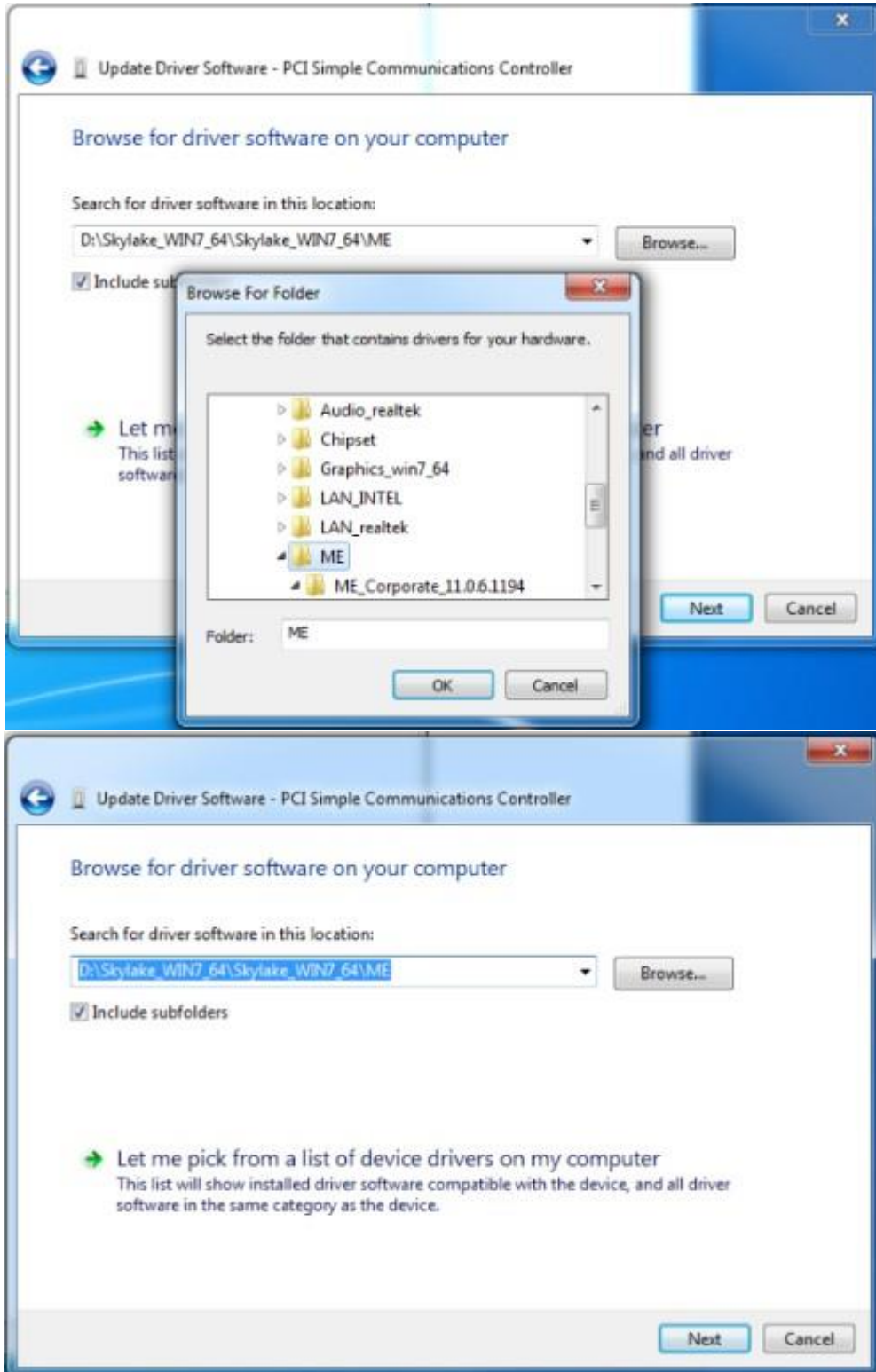
Right-click the desktop icon <computer> choose <Computer Management> choose <Device Manager>



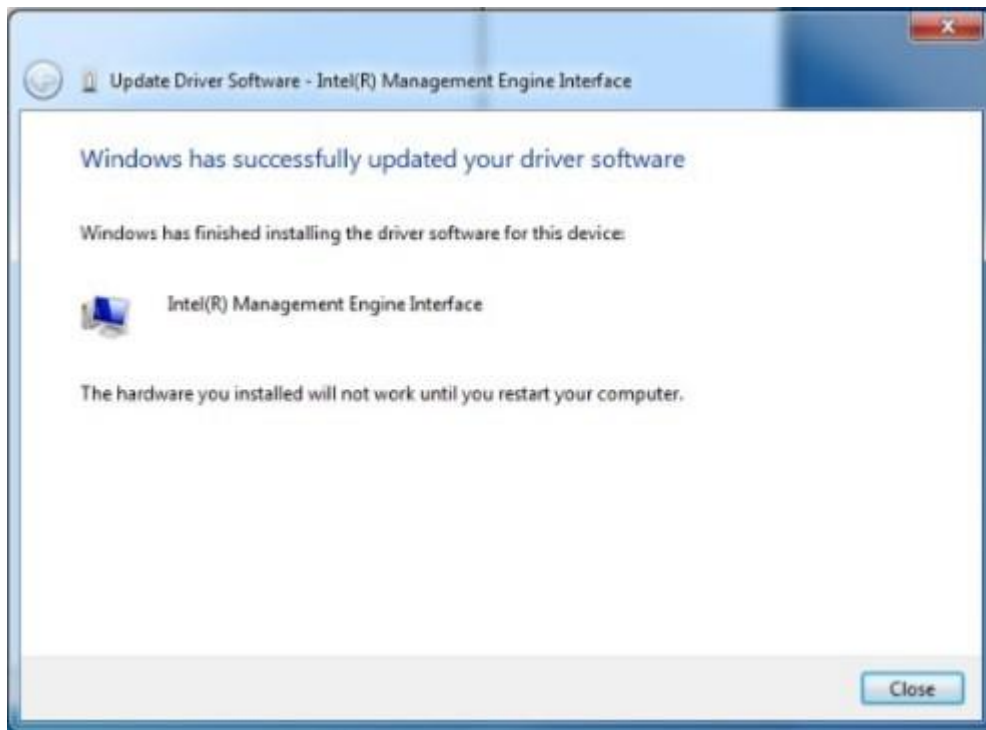
Choose <Browse my computer for driver software>



Click <Browse...> choose the driver within ME.



Press <NEXT> to continue



Press <close> to finish the installation

CHAPTER 3. BIOS SETTING

3.1 Introduction

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

3.1.1 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 key as soon as the system is turned on.
2. Press the key when the "Press Del to enter SETUP" tips appears on the screen.

If the message disappears before the key is pressed, restarted the computer and try again.

3.1.2 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 in.

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
ESC	Reset
+	Increase the numeric value or make changes
-	Decrease the numeric value or 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

3.1.3 Getting help

When <F1> is pressed a small help window describing the appropriate keys to use and the possible selection for the highlight item appears. To exit the help Windows press <ESC> or the <F1> key again.

3.1.4 Unable to reboot after configuration changes

If the computer cannot boot after changes to the system configuration is made, CMOS defaults. Use the jumper described in Chapter 2.

3.1.5 BIOS menu bar

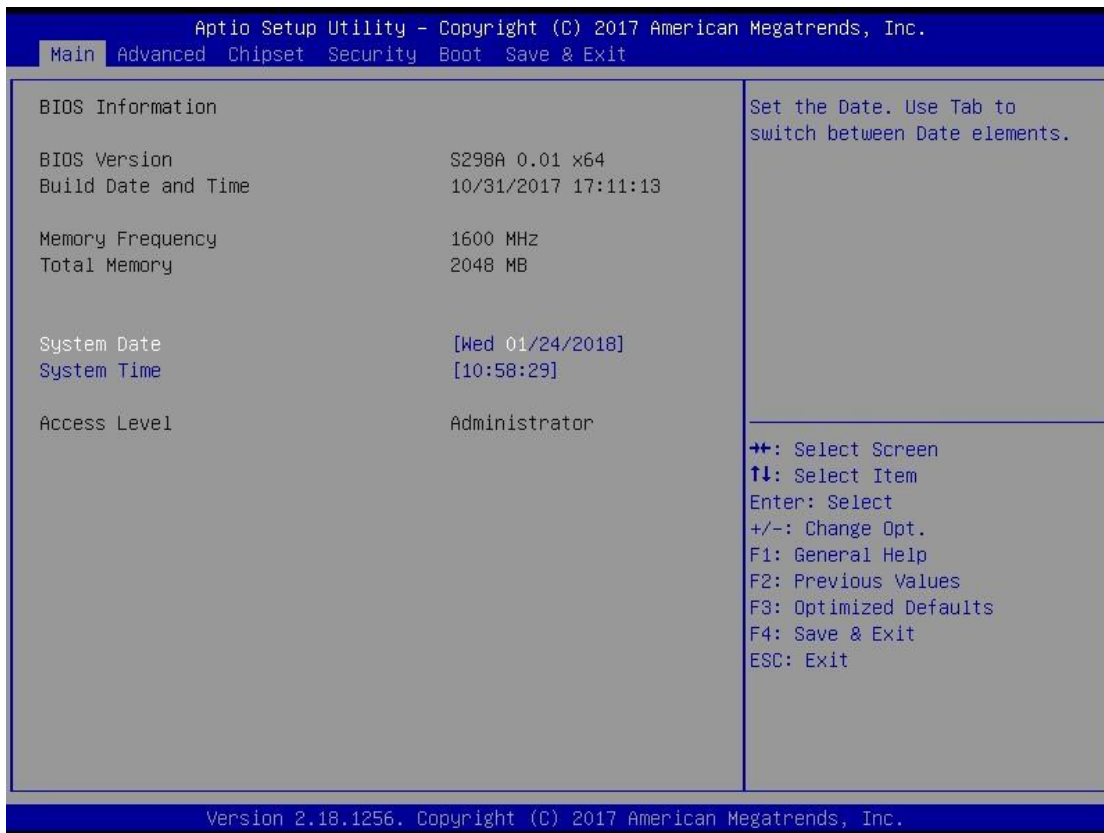
The menu bar on the top of the BIOS screen has the following main items:

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

The following sections completely describe the configuration options found in the menu items at the top of the BIOS screen and listed above.

3.2 Main

When you first enter the BIOS Setup Utility, you will enter the Main setup screen. You can always return to the Main setup screen by selecting the Main tab. There are two Main Setup options. They are described in this section. The Main BIOS Setup screen is shown below.



The Main BIOS setup screen has two main frames. The left frame displays all the options that can be configured. Grayed-out options cannot be configured; options in blue can. The right frame displays the key legend. Above the key legend is an area reserved for a text message. When an option is selected in the left frame, it is highlighted in white. Often a text message will accompany it.

3.2.1 System Time / System Date

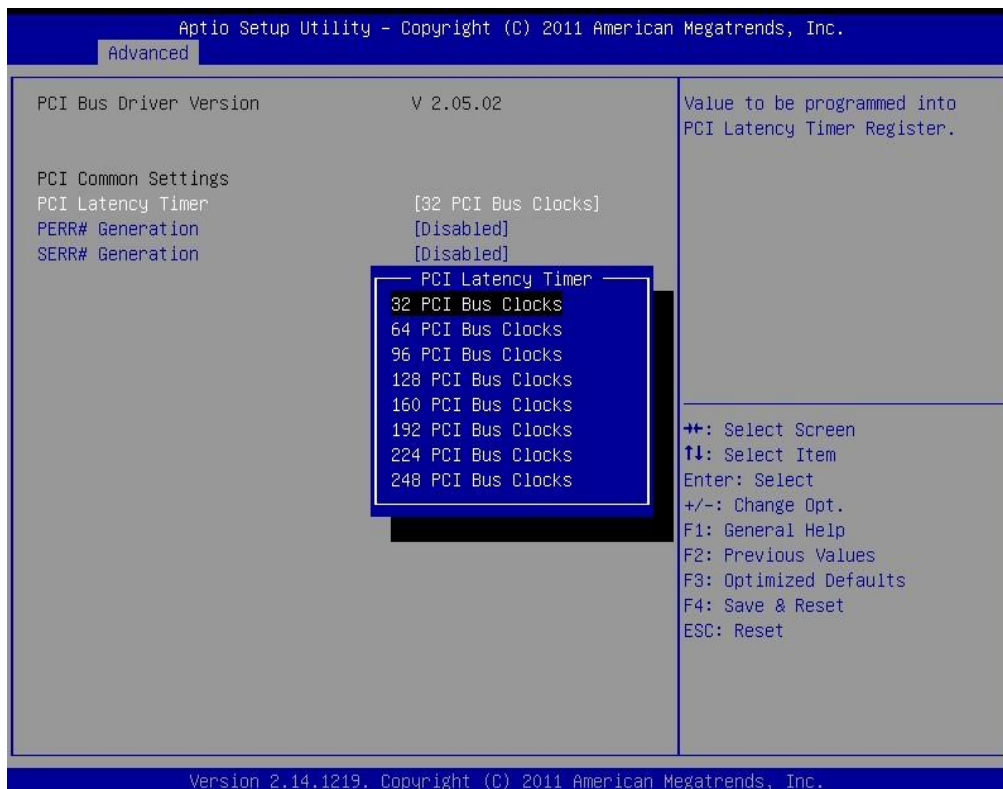
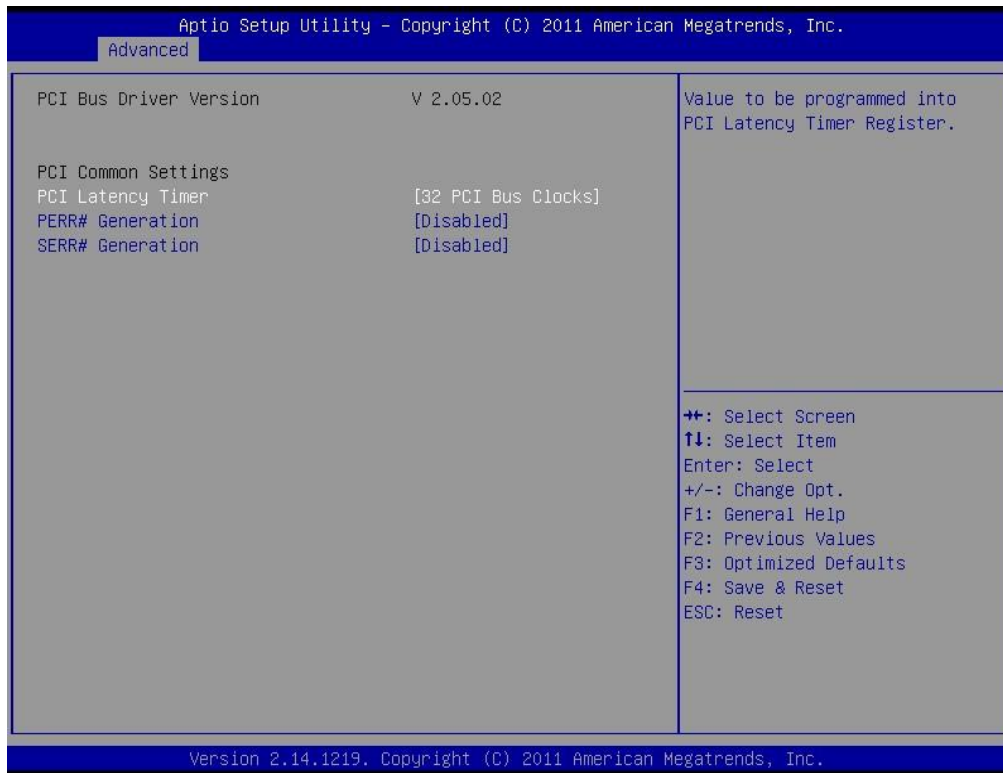
Use this option to change the system time and date. Highlight System Time or System Date using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM / DD / YY format. The time must be entered in HH : MM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

3.3 Advanced BIOS features setup

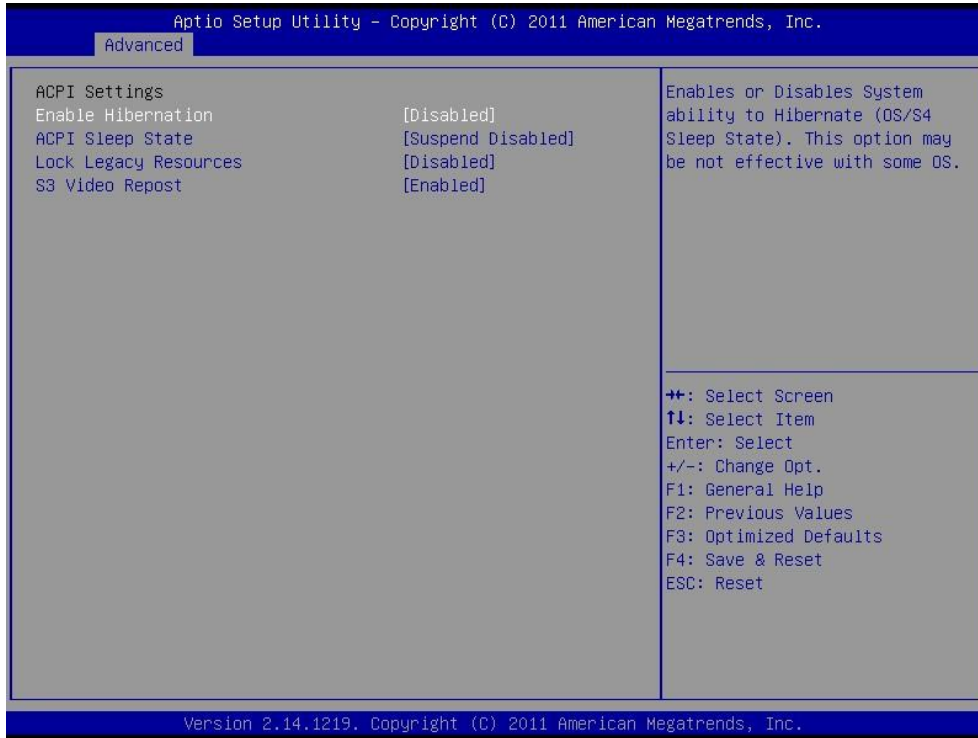
Select the Advanced tab from the TPC6000-CXX3 setup screen to enter the Advanced BIOS Setup screen. You can select any of the items in the left frame of the screen, such as CPU Configuration, to go to the sub menu for that item. You can display an Advanced BIOS Setup option by highlighting it using the <Arrow> keys. All Advanced BIOS Setup options are described in this section. The Advanced BIOS Setup screens is shown below. The sub menus are described on the following pages.



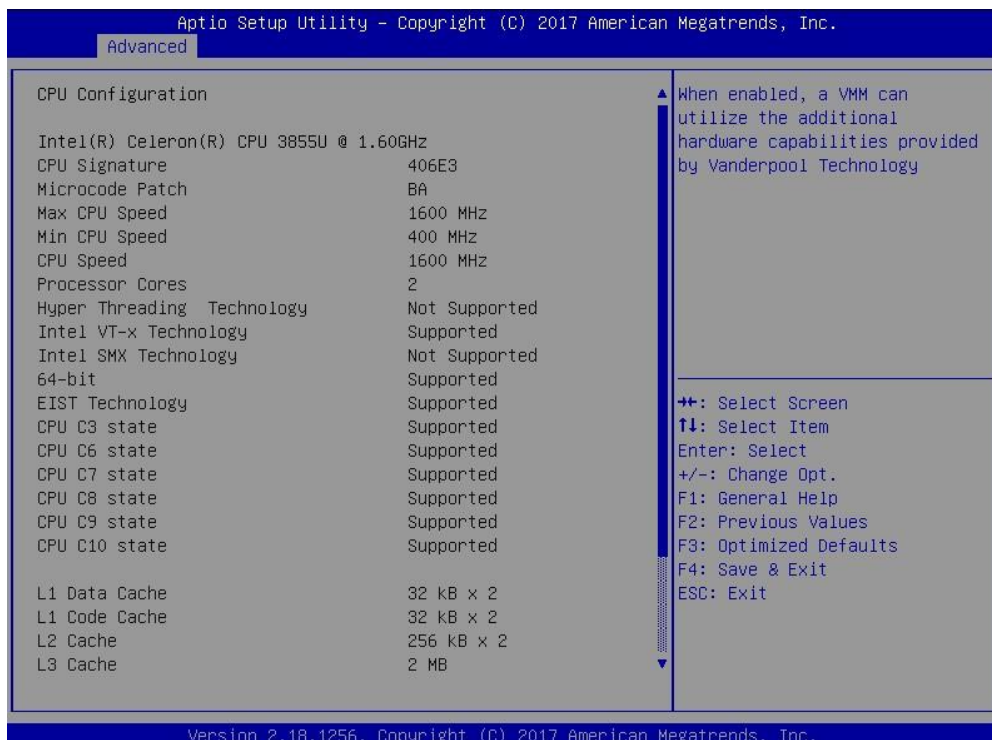
3.3.1 PCI Subsystem Setting



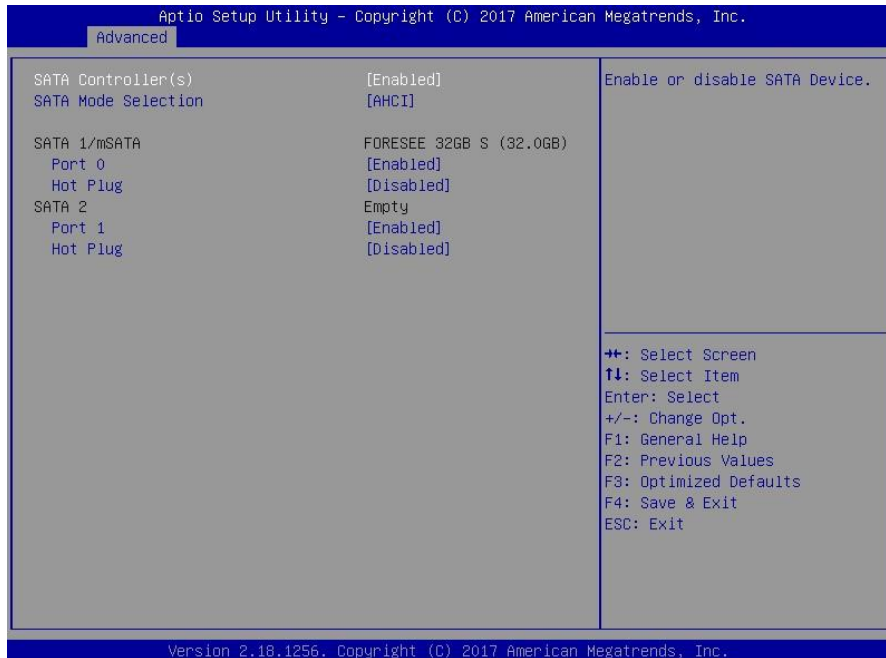
3.3.2 APCI Setting



3.3.3 CPU Configuration Setting



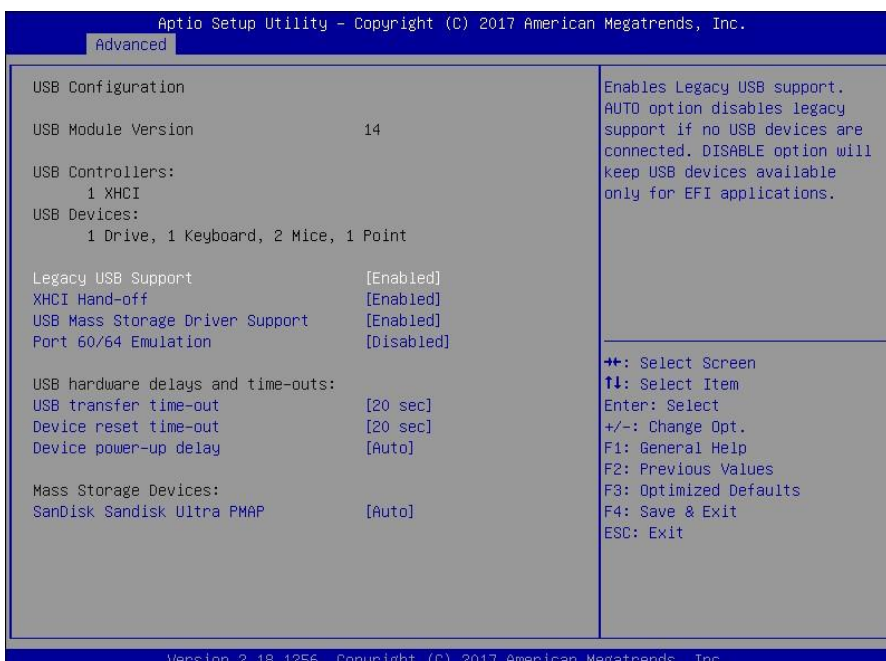
3.3.4 SATA Configuration



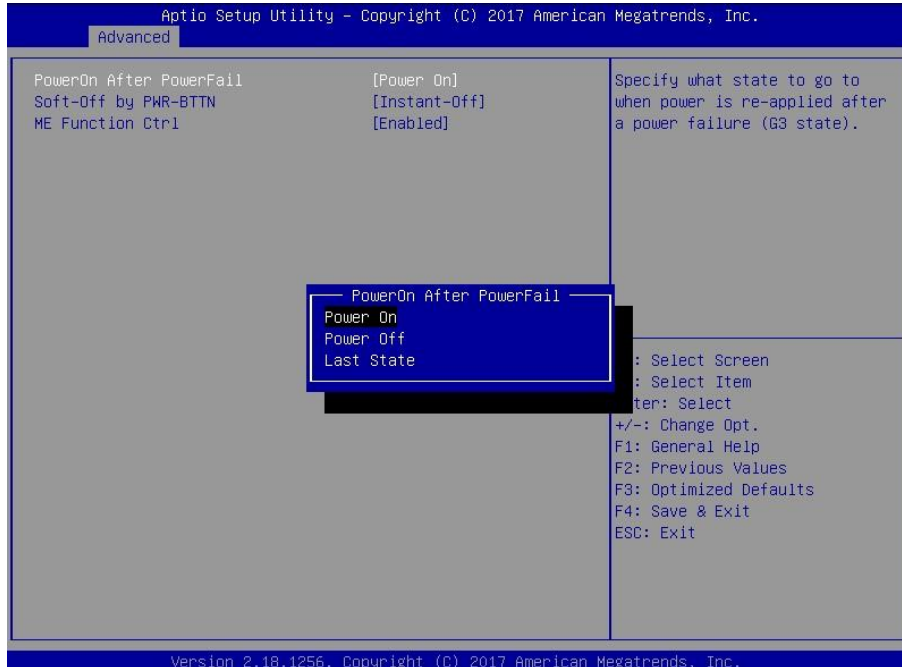
SATA Configuration

This item allows you to select Disabled / IDE / AHCI.

3.3.5 USB Configuration



3.3.6 Power on configuration

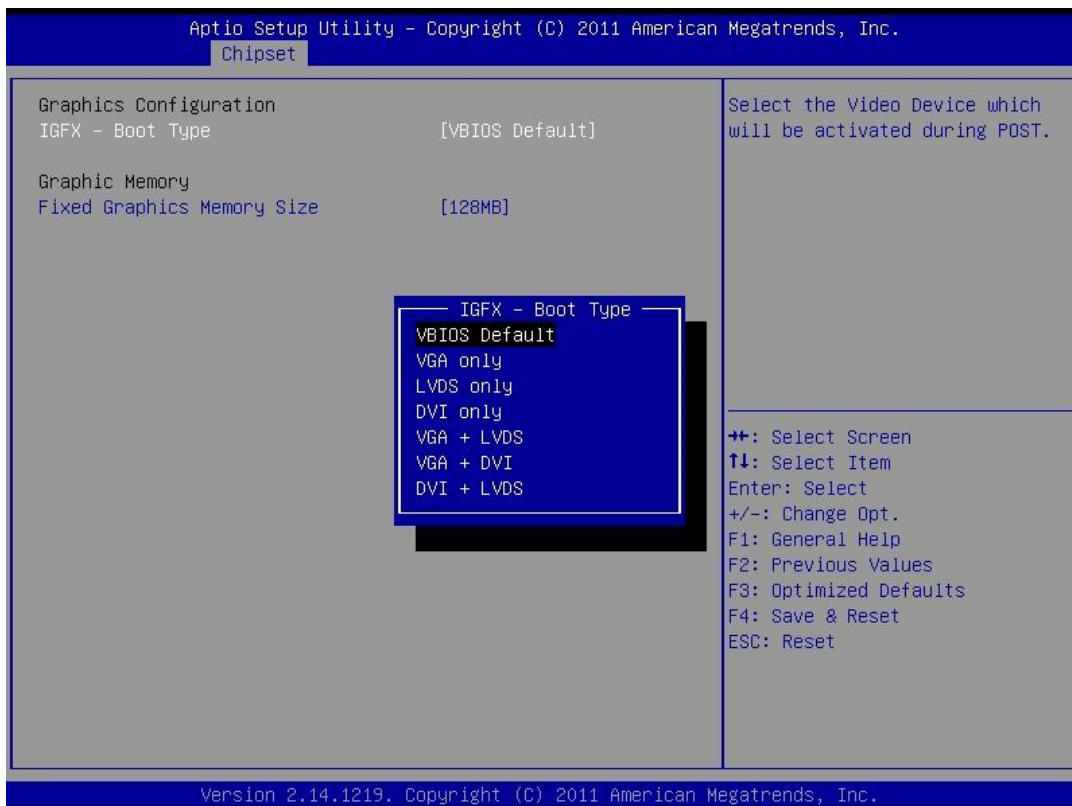
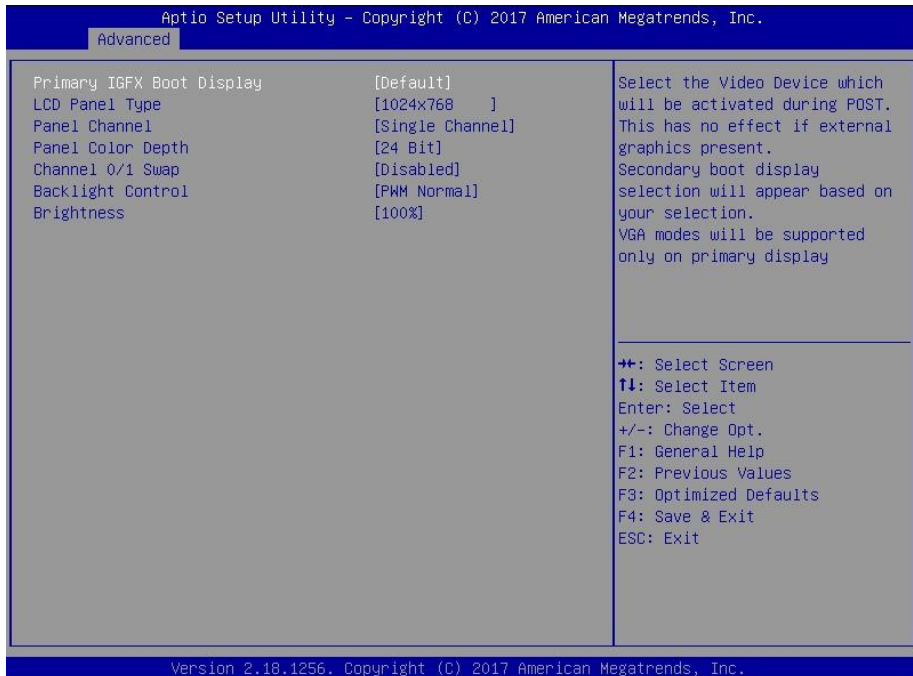


Power OFF: After accidental power-off, the device won't automatically boot-up when power-on again.

Power ON: After accidental power-off, the device will automatically boot-up when power-on again.

Last State: After accidental power-off, the device will recover to the state of the former state before power-off. i.e.: If the former state is "Power On", then the device will automatically boot-up when power-on again; if the former state is "Power off", then the device will remain power-off when the power- on again.

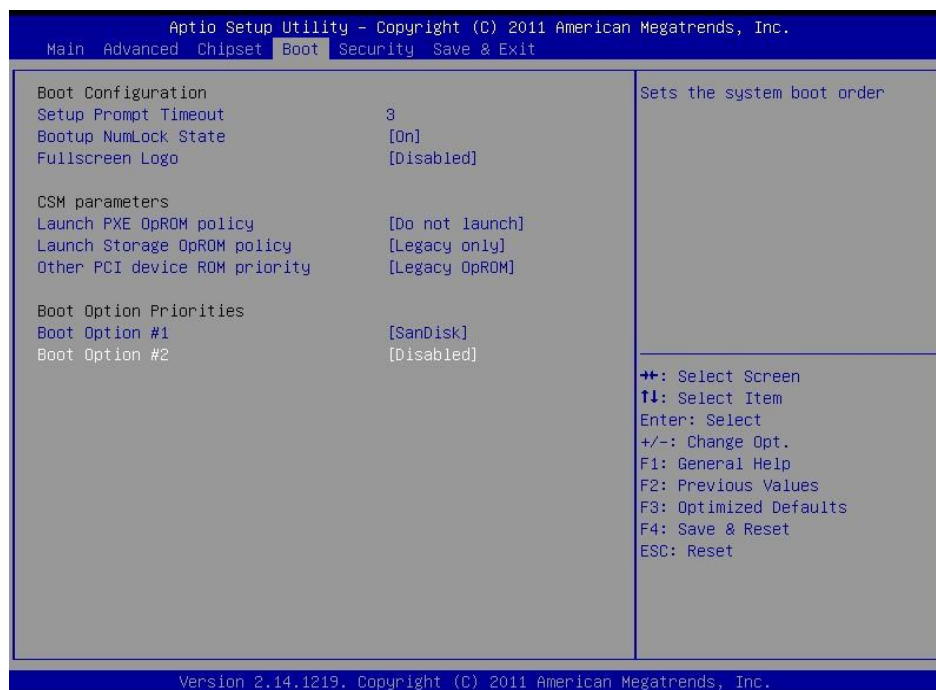
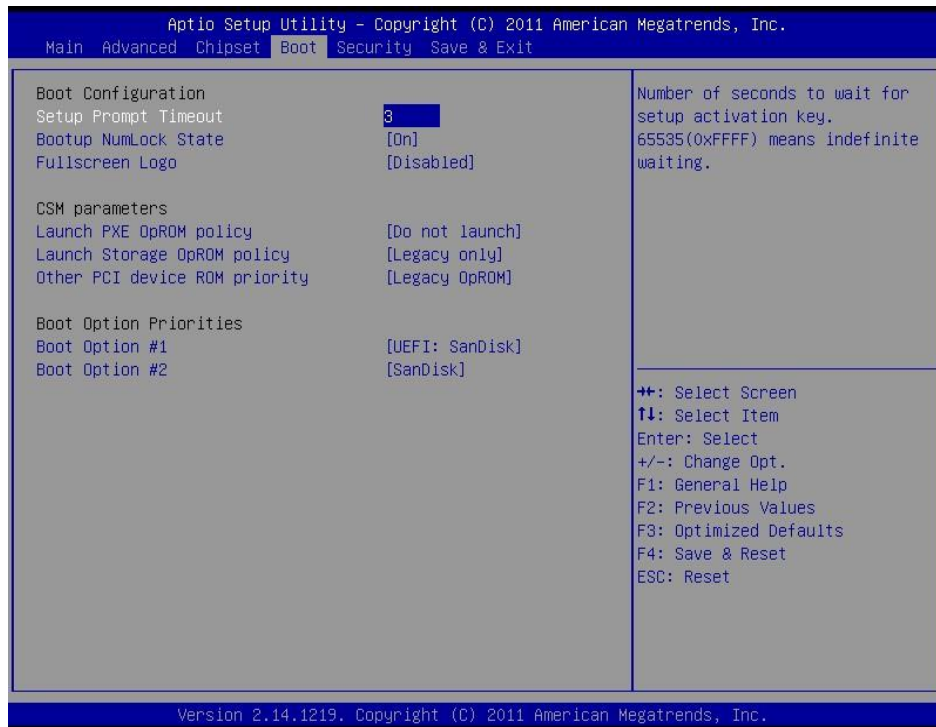
3.3.7 Intel graphic configuration



This selection item mainly for display application configuration.

IGFX--Boot Type is for configuration of boot-up main display: VGA / LVDS /VBIOS Default.

3.3.8 BOOT Configuration



3.4 Security settings

```

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

Password Description
-----
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

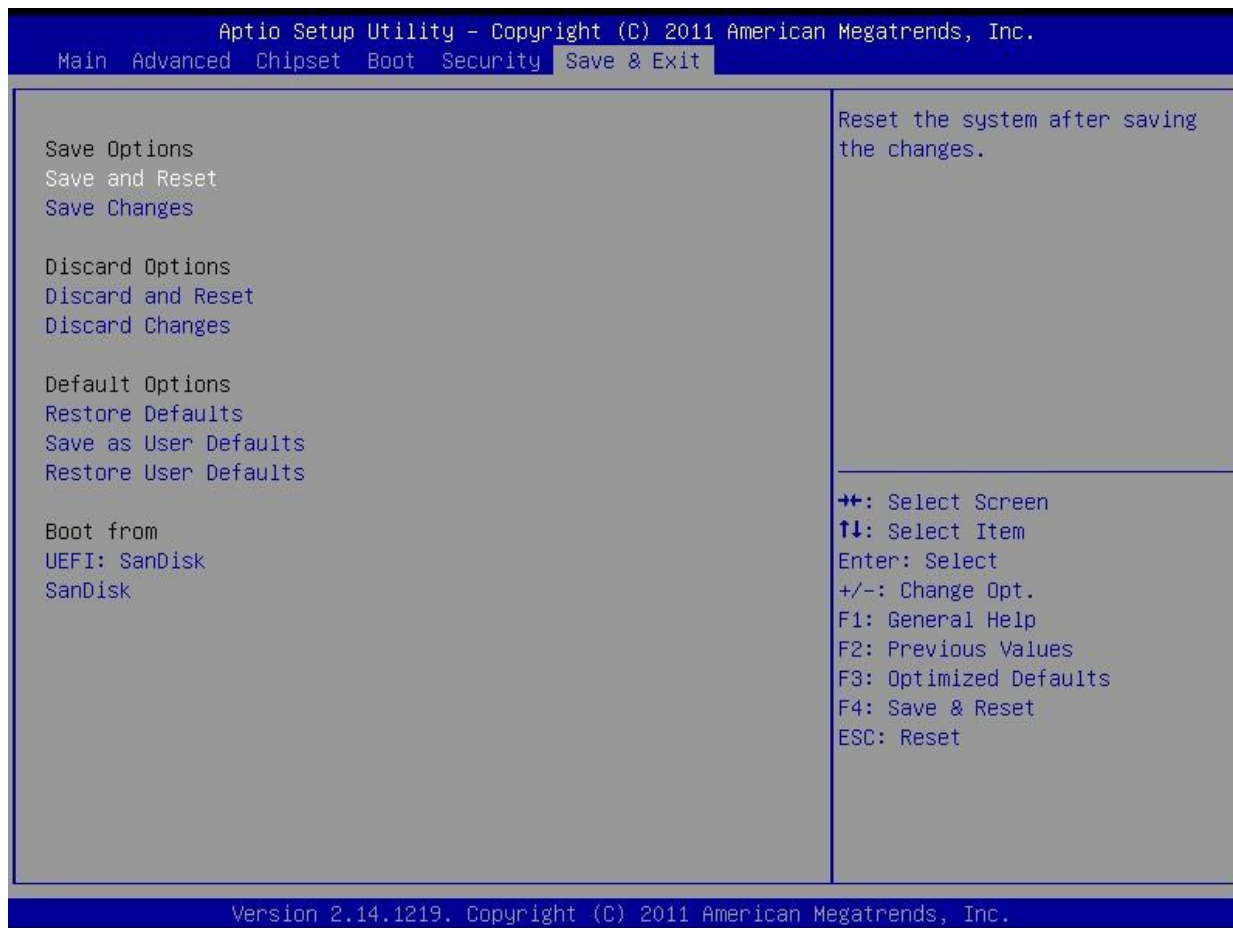
Administrator Password
User Password

Set Administrator Password

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

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

3.5 Exit Option



3.5.1 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.

3.5.2 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. Discard Changes
3. Select Discard Changes from the Exit menu and press <Enter>.

3.5.3 Load Optimized Defaults

The AS56 automatically configures all setup items to optimal settings when you select this option. Optimized Defaults are designed for maximum system performance, but may not work best for all computer applications. In particular, do not use the Optimal Defaults if your computer is experiencing system configuration problems. Select Load Optimal Defaults from the Exit menu and press <Enter>.

CHAPTER 4. SYSTEM MAINTENANCE

4.1 System Maintenance Introduction

If the components of the AS56 fail they must be replaced, such as the wireless LAN module or the motherboard. Please contact ASTOR to purchase the replacement parts. Back cover removal instructions and jumper settings for the AS56 are described below.

4.2 Motherboard Replacement

In the case of motherboard failure, please contact an NODKA sales representative, reseller or system vendor. The motherboard is accessible after opening the rear cover.

4.3 Cover Removal

Warning: Turn off the power before removing the back cover. Risk of electrocution. Severe damage to the product and injury to the body may occur if internal parts are touched while the power is still on.

Warning: Take antistatic precautions when working on the internal components. Some internal components are easily damaged or destroyed by electrostatic discharge. Take antistatic precautions to prevent electrostatic discharge.

To replace any of the following components,

- Memory module
- Wireless LAN module
- Inverter

The back cover of the AS56 must be removed. To remove the back cover, loosen the four silver screws, slide the cover down and then lift to remove.