

PC610 User Manual



Statement

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Safety Notice

- Read the user manual carefully before setting up the Giada product.
- Disconnect the power before installing the internal components
- Most electronic components are sensitive to static electrical charge, please wear a wrist-grounding strap when installing the internal components.
- Do not disconnect the power when the system is running to avoid damage to the sensitive components by instantaneous surge voltage.

Contact Information

Shenzhen JEHE Technology Development Co., Ltd.

Website: www.giadatech.com

Phone: +86-755-3330 0336

Email: support@giadatech.com

Address: 1~3/F, Block A, Tsinghua Information Harbor, North Section, Shenzhen Hi-tech Park, Nanshan District, Shenzhen, China

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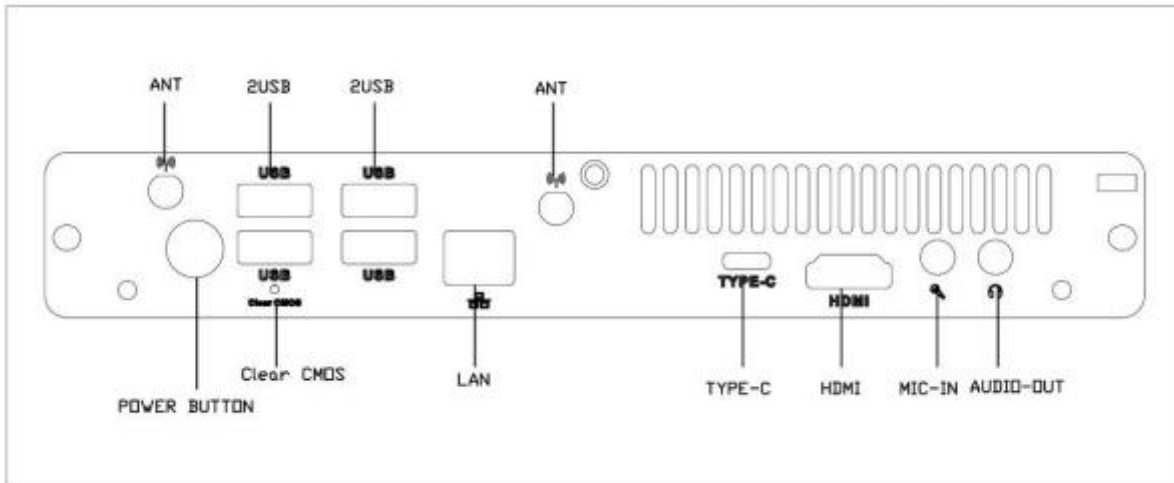
1. Product Introduction

Complies with Intel OPS standard and based on Intel® Comet Lake platform, Giada PC610 adopts DDR4 dual-channel memory (Max 32GB) as well as M.2 storage interface design. With selectable desktop processors, it provides high computing and graphics performance. The player is suitable to be applied in interactive white board, video conference and other high-end digital signage applications.

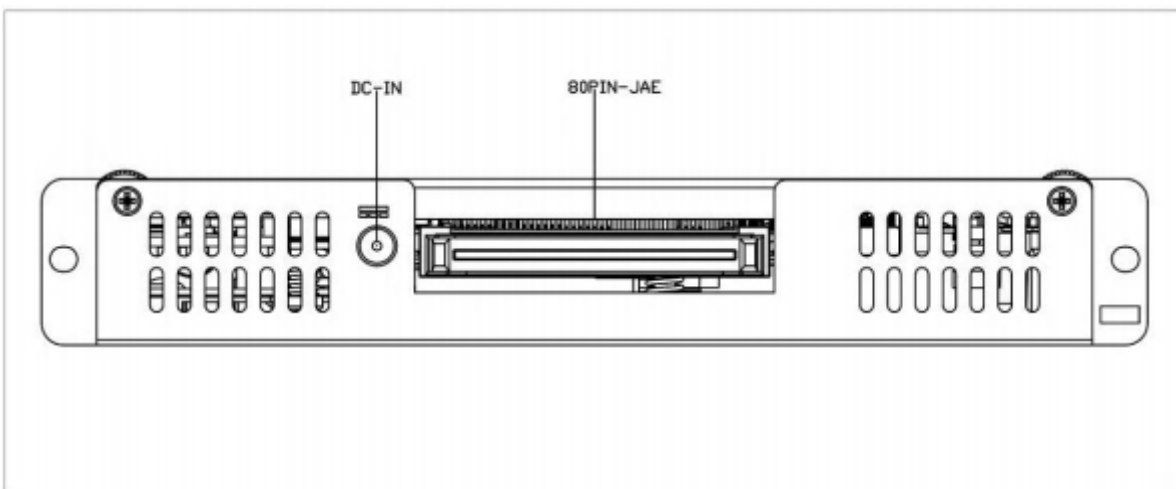
2. Interface Description and Hardware Specifications

2.1 Interface Description

Front I/O Port



Rear I/O Port



2.2 Hardware Specifications

PC610		
Processor	CPU	Intel® LGA1200 Socket 10 th / 11 th Gen. Processor
	BIOS	AMI Source Code
	Chipset	Intel® H470 (Optional Q470/H420E)
Memory	Type	DDR4-2666MHz
	Socket	2 x SO-DIMM
	Max Capacity	32 GB
Graphics	DP (80 Pin JAE)	1 x DP (Max.4096 x 2304 @ 60Hz)
	HDMI (80 Pin JAE)	1 x HDMI (Max.4096 x 2304 @ 60Hz)
	HDMI	1 x HDMI (Max.4096 x 2304 @60Hz)
Network	Controller	Realtek 8111H Gigabit Ethernet
	Interface	1 x RJ45
I/O Interface	USB	2 x USB 3.2 Gen1, 2 x USB 3.2 Gen2 1 x USB Type-C 3.2 Gen1 (H470)
		4 x USB 3.2 Gen1 1 x USB Type-C 3.2 Gen1 (H420E)
	Audio	1 x MIC-in, 1 x Audio-out
	Serial Port	1 x UART (JAE)
	M.2	1 x M.2 (2230) E-KEY for WIFI/BT
	TPM	Infineon TPM 2.0
Storage	M.2	1 x M.2 (2242/2280) for SSD
Operation System	Windows (Optional)	Windows 10 (64-bit)
	Linux	Supported
Power	Power Type	2.5/5/5 DC Jack / 12V~19V
		80 Pin JAE DC-IN / 12V~19V
Mechanical	Construction	Metal
	Dimension (W x D x H)	200mm x 119mm x 30mm (7.87" x 4.69" x 1.18")
	Color	Black
Environment	Operating Temperature	0°C ~ 40°C (32 °F ~ 104 °F) at 0.7m/s Air Flow
	Relative Humidity	95%@40°C (non-condensing)
Certification		CE, FCC

3. Accessories Installation Steps

▲ For safety reasons, please ensure that the power is disconnected before opening the case.

How to open the top cover and bottom cover

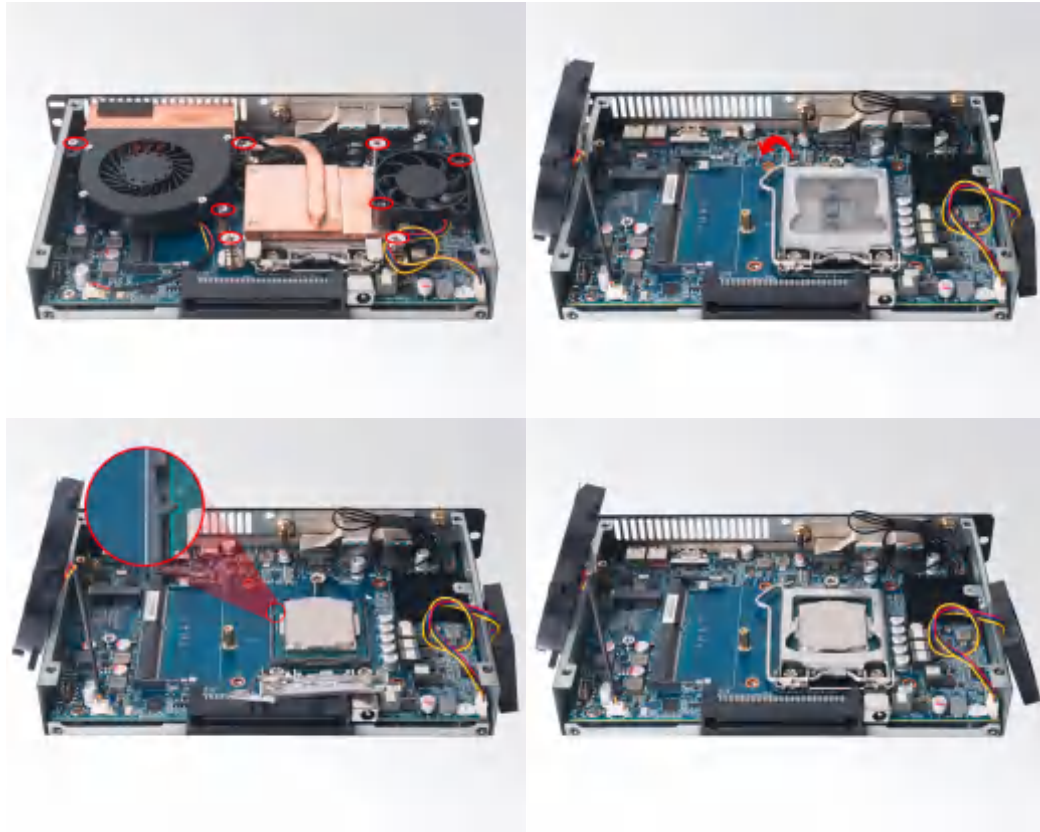
Unscrew the seven screws and remove the top cover. (CPU, SO-DIMM #1 and M.2 for WIFI are on top side)

Unscrew the three screws and remove the two covers. (SO-DIMM#2 and M.2 for SSD are on bottom side)



3.1 CPU Installation

1. Unscrew the screws and remove the CPU cooler.
2. Remove the hook to open the closure.
3. Put the CPU on the board and paint the top side with heat conduction grease.
4. Remove the closure and put the hook back.
5. Tighten up the screws.

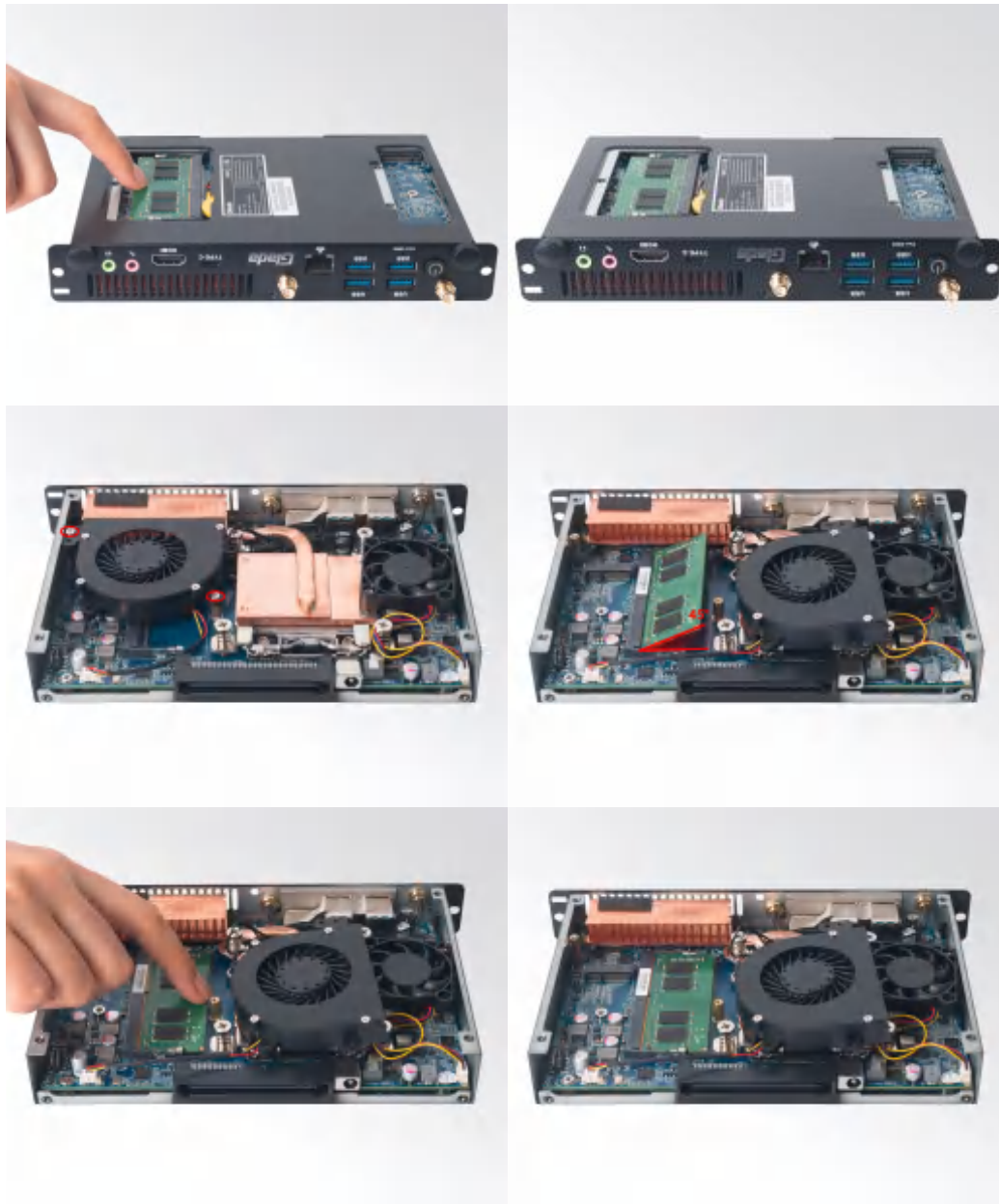


3.2 Memory Installation

▲ This product only supports DDR4 SO-DIMM memory modules.

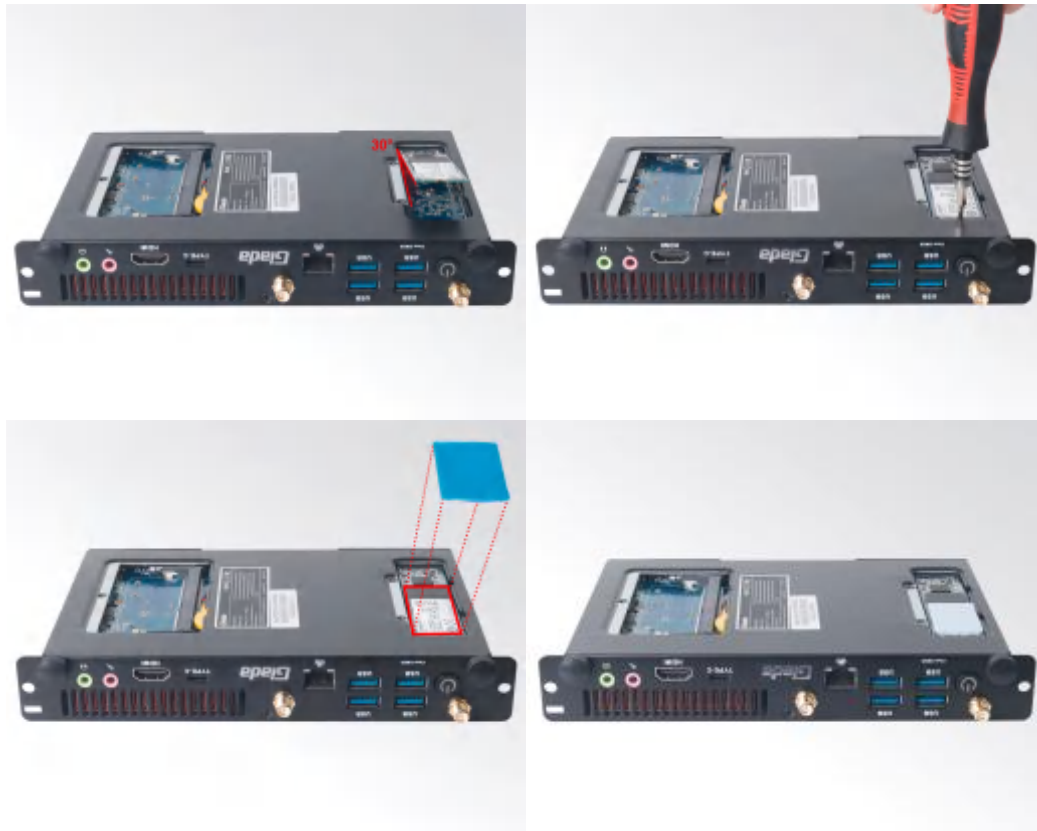
1. Locate the SO-DIMM slot on the board.
2. Gently insert the module into the slot in a 45-degree angle.
3. Carefully push down the memory module until it snaps into the locking mechanism.





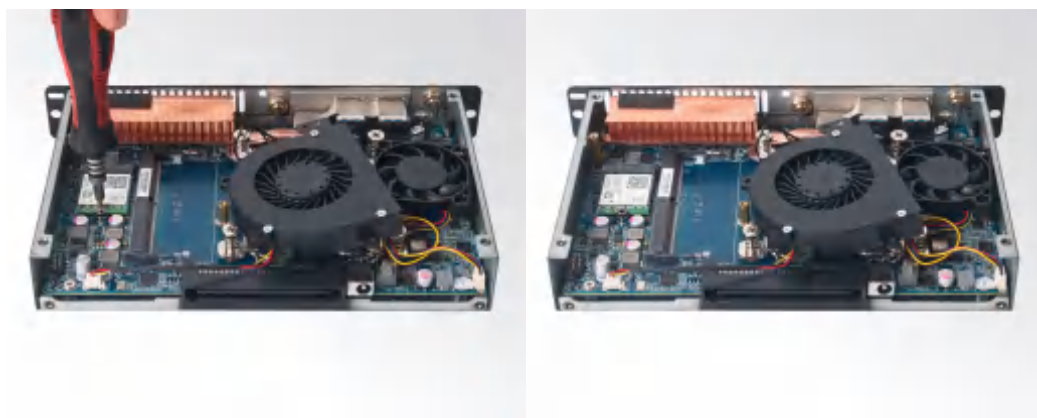
3.3 SSD (M.2) Installation

1. Plug the SSD (M.2) into the appropriate slot.
2. Secure the module to the carrier by tightening up the screw.
3. Remove the clear membrane of the thermal pad and paste the pad on the SSD.
4. Remove the blue membrane of the thermal pad.



3.4 WIFI (M.2) Installation

1. Plug the WIFI module into the appropriate slot.
2. Secure the module to the carrier by tightening up the screw.
3. Connect the two black cables to **Main** and **AUX**. Install antennas.



▲ Hot-plugging may cause damage to the OPS PC. Please disconnect the power of the monitor before installing the OPS PC into the slot.

4. Bios Setup

Notice:

The descriptions relating to BIOS setup in this Manual is for reference only since the BIOS version of the product might be upgraded. Giada provides no guarantee that all the contents in this Manual are consistent with the information you acquired.

BIOS is a basic I/O control program saved in the Flash Memory. Bridging the motherboard and the operation system, BIOS is used for managing the setup of the related parameters between them.

When the computer is activated, the system is first controlled by the BIOS program. Firstly, a self-detection called POST is performed to check all hard devices and confirm the parameters of the synchronous hardware.

Once all detections are completed, BIOS will hand over the controlling to the operation system (OS). As BIOS serves as the only channel that connects the hardware and software, whether your computer can run stably and work in optimized state will hinge on how to properly set the parameters in BIOS. Therefore, the correct setup of BIOS plays a key role in stably running the system and optimizing its performance.

The CMOS Setup will save the set parameters in the built-in CMOS SRAM on the motherboard. When the power is shut off, the lithium battery on the motherboard will provide continuously power to CMOS SRAM.

The BIOS setup program will allow you to configure the following items:

1. HD drive and peripheral devices
2. Video display type and display items
3. Password protection
4. Power management characteristics

A. State of BIOS Setup

When the computer is started up, BIOS will run the self-detection (Post) program. This program includes series of diagnosis fixed in BIOS. When this program is executed, the following information will appear if any error is found:

Press [F1] to Run General help

Press [F2] to Load previous values and continue

To enter BIOS, you can press F2; to load the default values and enter the system, you can press DEL to enter the BIOS interface if no error is found. If the indicative information disappears before you operate, you can shut off the computer and turn it on again, or you can press the RESET key on the product case. To restart your computer, you can also simultaneously press < Ctrl > + < Alt > + < Delete >.

B. Function Keys definitions

Hot Key	Description
↑	(Up key) Move to the previous item
↓	(Down key) Move to the next item
←	(Left key) Move to the left item
→	(Right key) Move to the right item
ESC	Exit the current interface
F1	Display the information of the current function Keys definitions.
F9	Load the optimized values
F10	Save the settings and exit the CMOS SETUP

C. Auxiliary information Main interface

When the system enters the main interface of Setup, the major selected contents will be displayed at the lower part of the interface with the change of the options.

When you set the value for each column, you can view the preset value of the column and the values that can be set if you press F2, for example, the BIOS default values or CMOS Setup values. To exit the interface for auxiliary information, press [ESC].

1) Main menu

When the system enters the CMOS Setup menu, you can see the main menu on the upper part of the screen, as shown in Figure1.

In this main menu, you can use the left and right direction keys to select the setup items.

Once the item is selected, the lower part of the computer screen will show the details of setting.

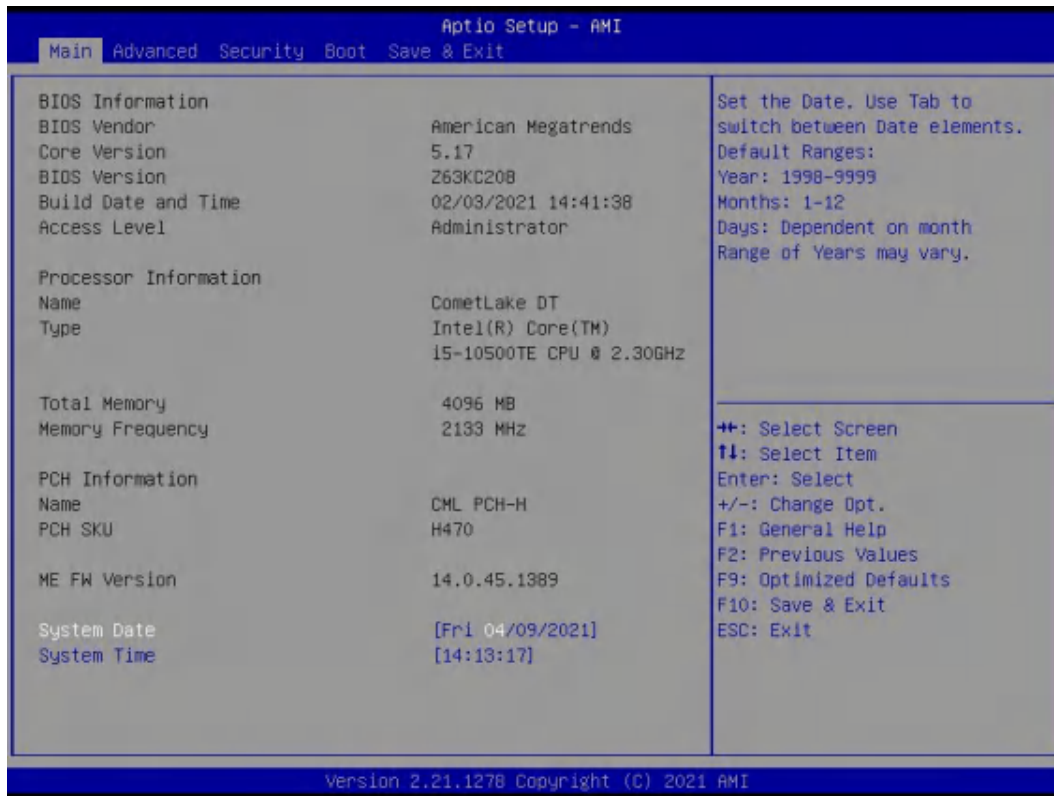


Fig 1

1) Main (standard CMOS setup)

This item is used for setting the date and time.

2) Advanced (advanced BIOS setup)

This item is used for setting the advanced functions provided by BIOS, such as specifications of PCIe facilities, CPU, HDD, etc.

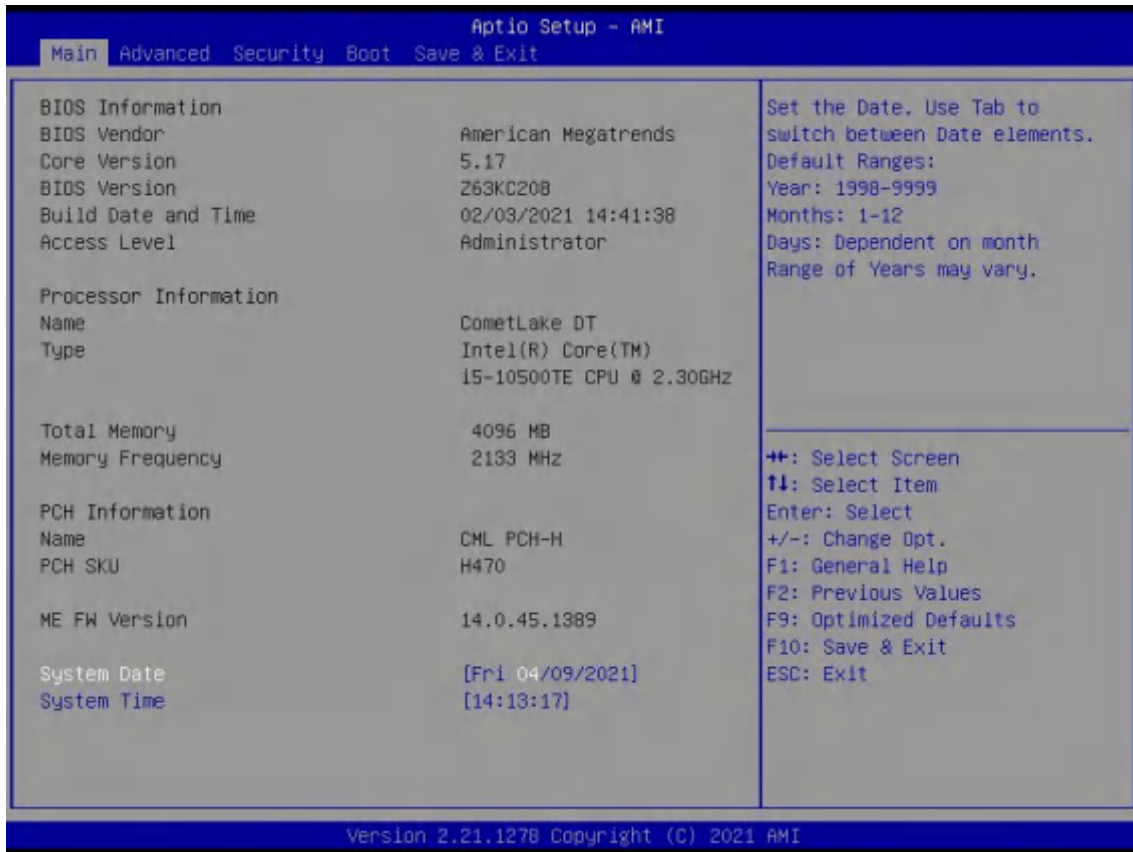
3) Security (set the administrator/user password)

4) Boot (startup configuration characteristics)

5) Save & Exit (option of exit)

This item includes load optimal defaults / load failsafe defaults value / discard changes / discard changes and exit.

4.1 Main (Standard CMOS Setup)



1) System time (hh:mm:ss)

Use this item to set the time for the computer, with the format as “HH / MM / SS”.

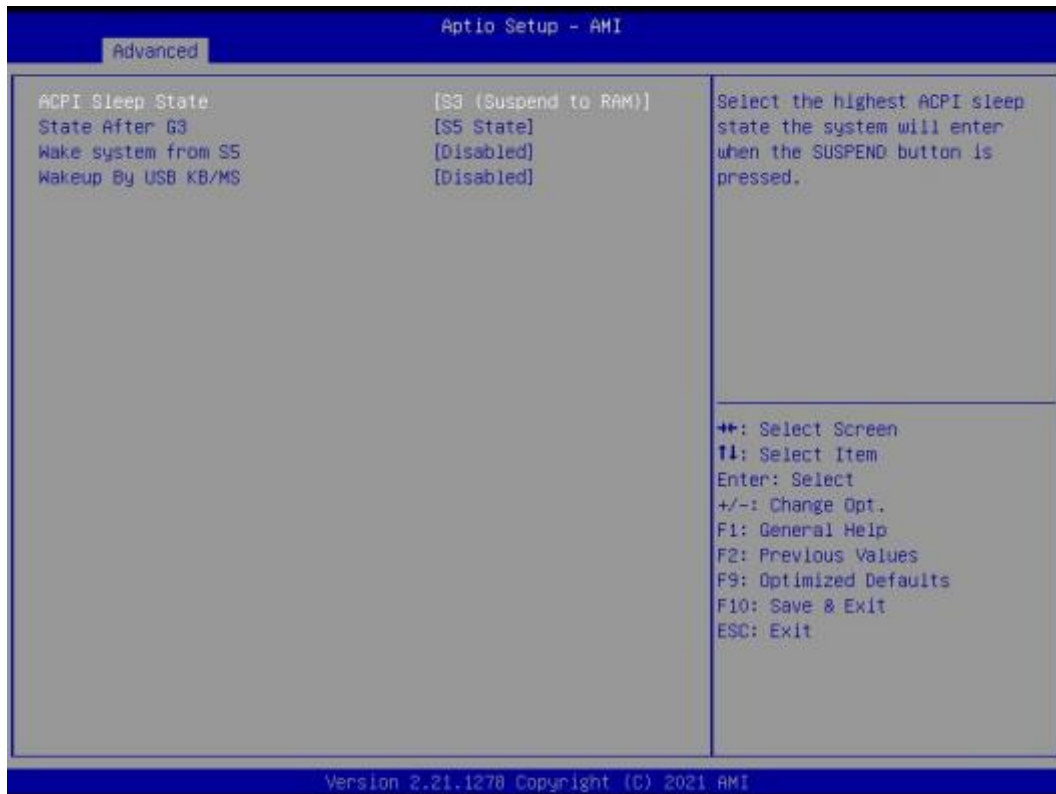
2) System date (mm:dd:yy)

Use this item to set the date for the computer, with the format as “week, MM / DD / YY”.

4.2 Advanced (Advanced BIOS Setup)

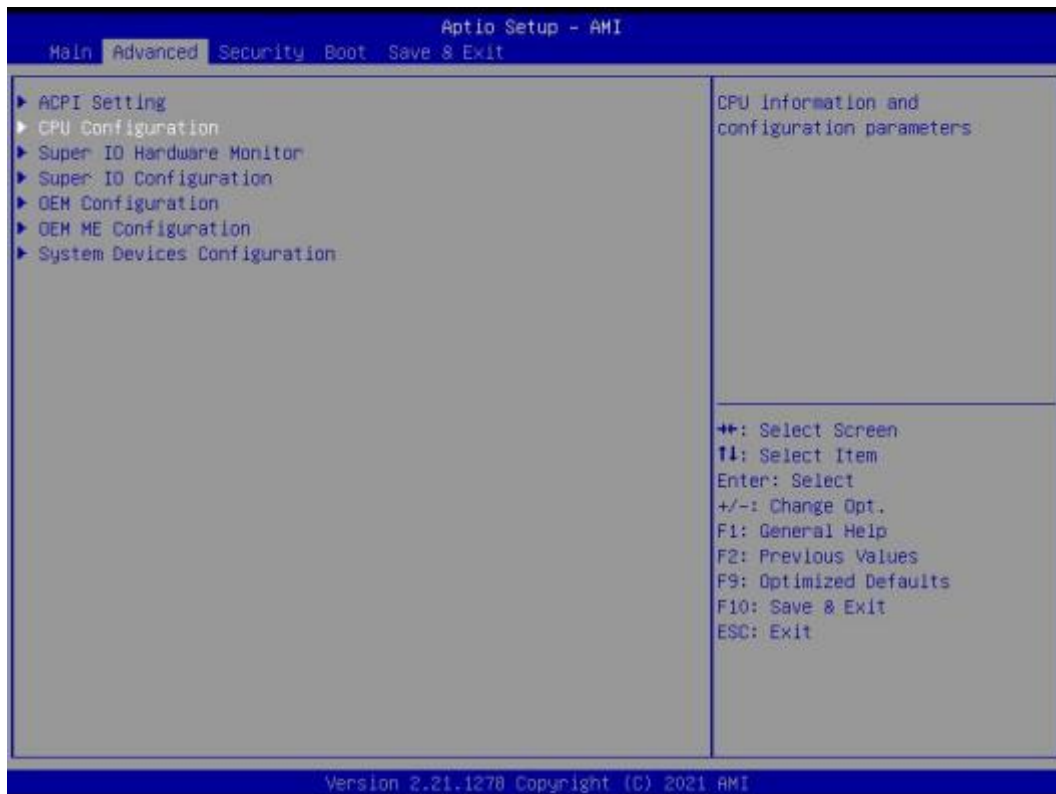


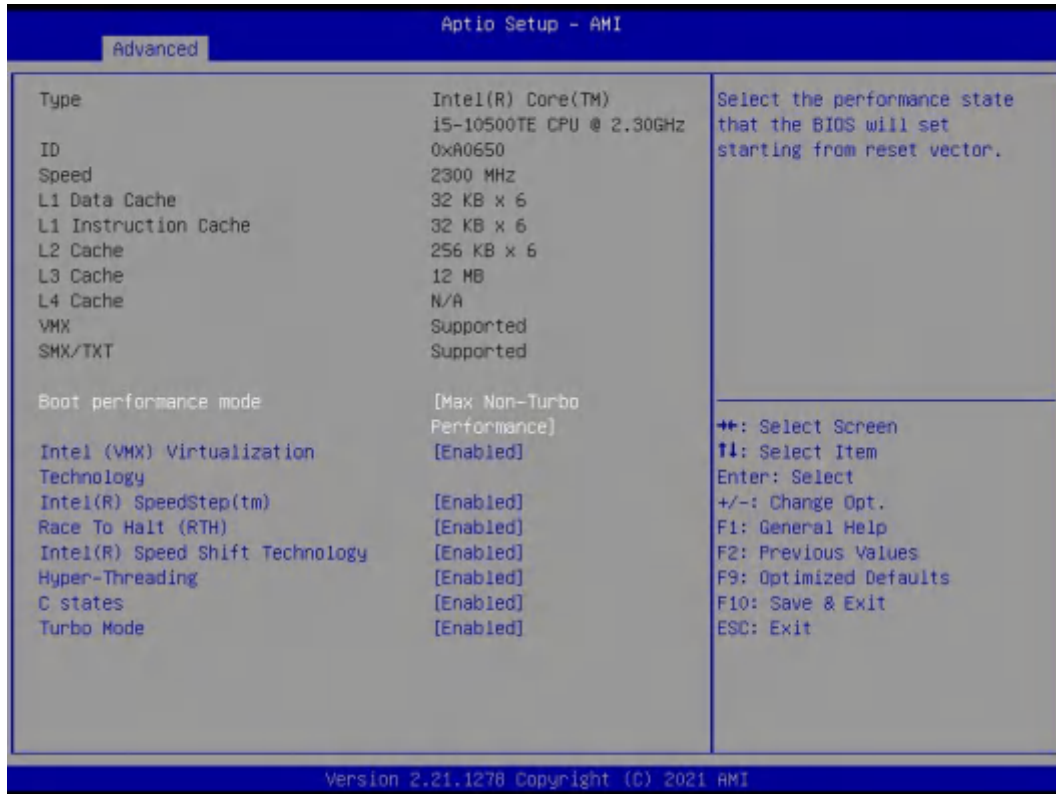
4.2.1 ACPI Setting



ACPI Setting Menu	Description
ACPI Sleep state	<p>You can use the ACPI Sleep state option to control system hibernation</p> <ul style="list-style-type: none"> ● Suspend Disabled: Disable system Suspend. ● S3 (Suspend to RAM): Enable S3(Suspend to RAM)
State After G3	<ul style="list-style-type: none"> ● State After G3 means after restore power supply. ● S5 State (Default): If set it as S5 State, it means the system will remain shutdown state ● S0 State: If set it as S0 State, it means the system will be power on automatically.
Wake system from S5	<ul style="list-style-type: none"> ● Disabled: By default, the functions is disabled. ● Fixed Time: You can use the fixed Time menu to modify the wake time. ● Dynamic Time: You can set multithreaded to wake system from S5 after enabling Dynamic Time.
Wakeup By USB KB/MS	<p>Enabled or Disabled Wake Up by USB KB/MOUSE from S3 Status.</p> <ul style="list-style-type: none"> ● Disabled: The wake on USB is disabled by default. ● Enabled.

4.2.2 CPU Configuration



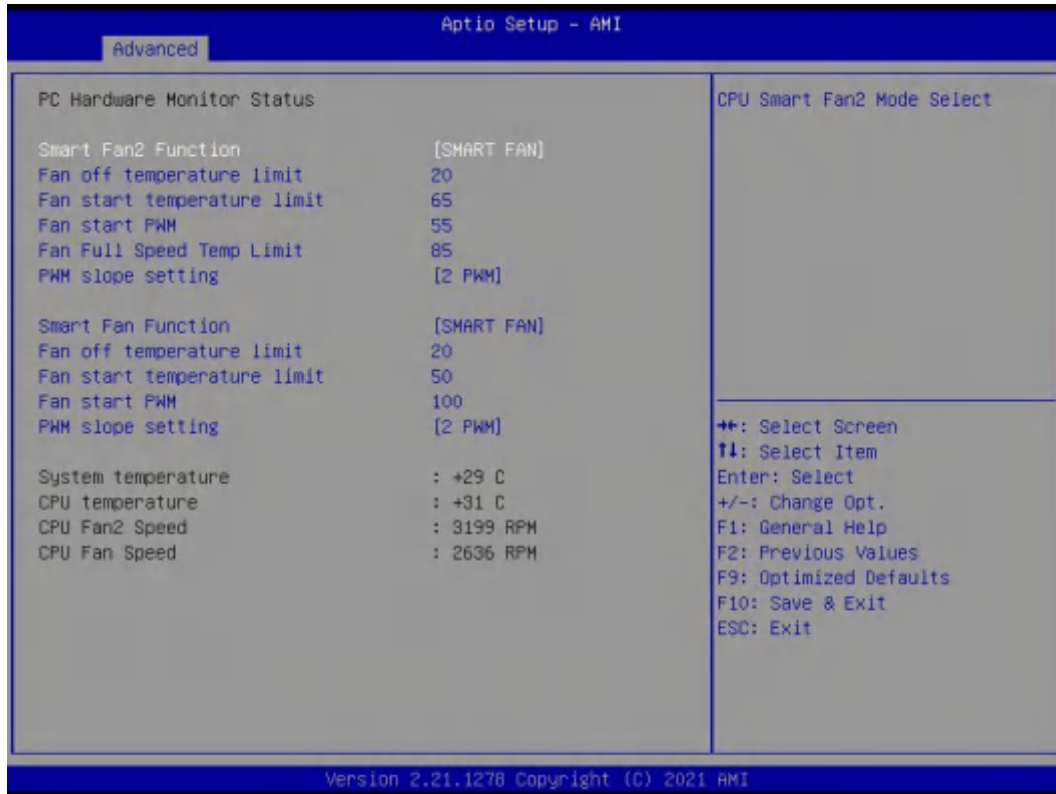


CPU Configuration Menu	Description
CPU Configuration	
Boot performance mode	<ul style="list-style-type: none"> ● Max Non-Turbo Performance: the best performance. ● Max Battery. ● Turbo performance.
Intel (VMX) Virtualization Technology	Intel Virtualization Technology is enabled by default. User can enable and disable the Intel Virtualization Technology function.
Intel (R) SpeedStep (tm)	Intel (R) SpeedStep Technology dynamically increases the processor's frequency as needed by taking advantage of thermal and power headroom to give you a burst of speed when you need it, or increased energy efficiency. The option is enabled by default. You can disable the function if it's necessary.
Race To Halt (RTH)	The Race To Halt (RTH) function is enable by default. It can adjust the CPU base frequency work in C-state. Optional: C-state.

<p>Intel (R) Speed Shift Technology</p>	<p>Intel speed shift function is enabled by default. Intel® Speed Shift Technology uses hardware-controlled P-states to deliver dramatically quicker responsiveness with single-threaded, transient (short duration) workloads, such as web browsing, by allowing the processor to more quickly select its best operating frequency and voltage for optimal performance and power efficiency.</p>
<p>Hyper-Threading</p>	<p>Intel Hyper-Threading technology is enabled by default. Intel® Hyper-Threading Technology (Intel® HT Technology) delivers two processing threads per physical core. Highly threaded applications can get more work done in parallel, completing tasks sooner.</p>
<p>C states</p>	<p>The C-State function is disabled by default.</p>
<p>Turbo Mode</p>	<ul style="list-style-type: none"> ● Disabled. ● Enabled.

4.2.3 Super IO Hardware Monitor

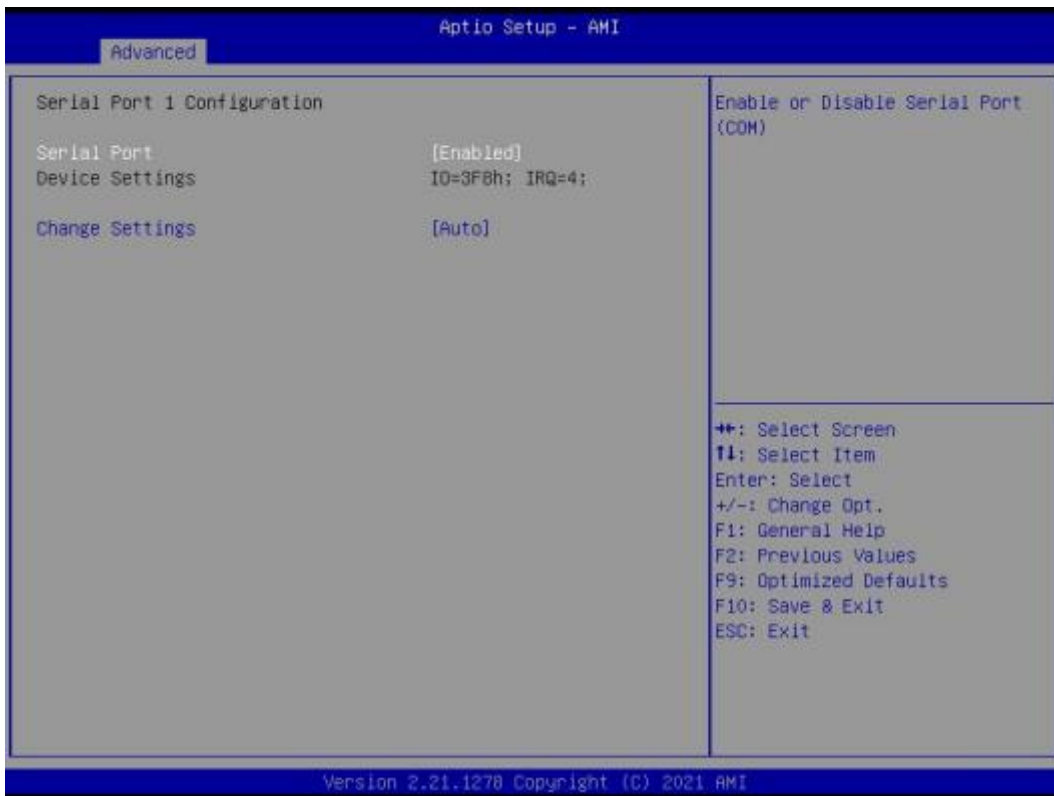
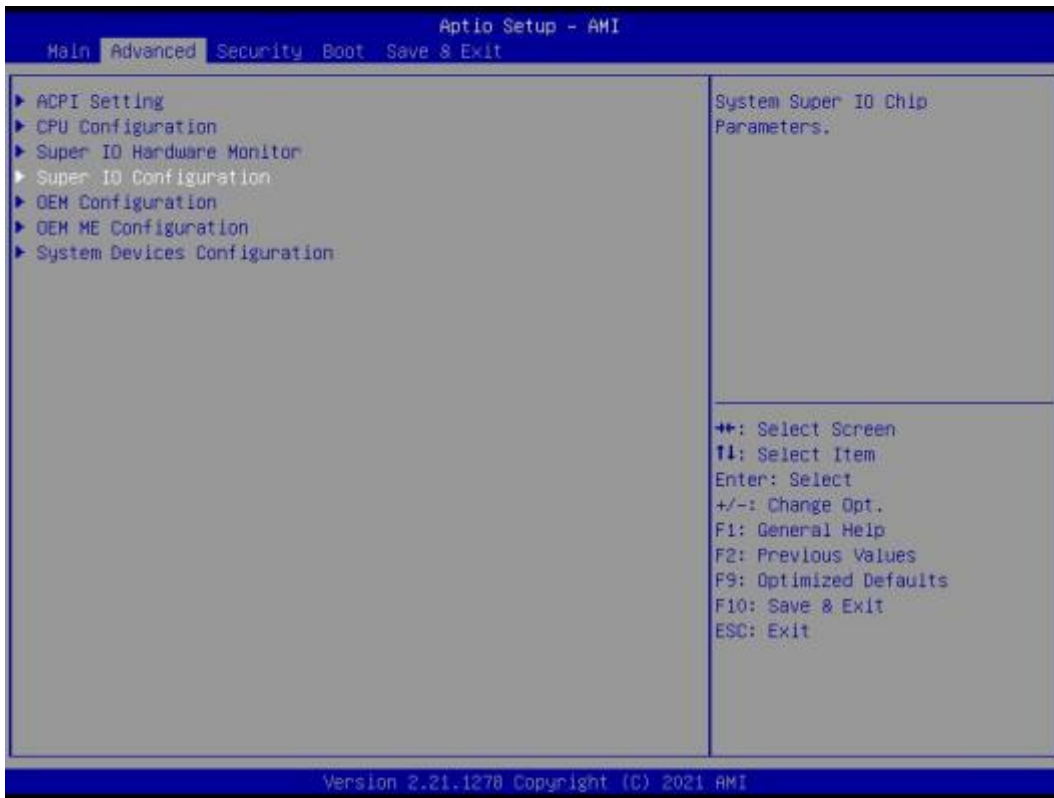


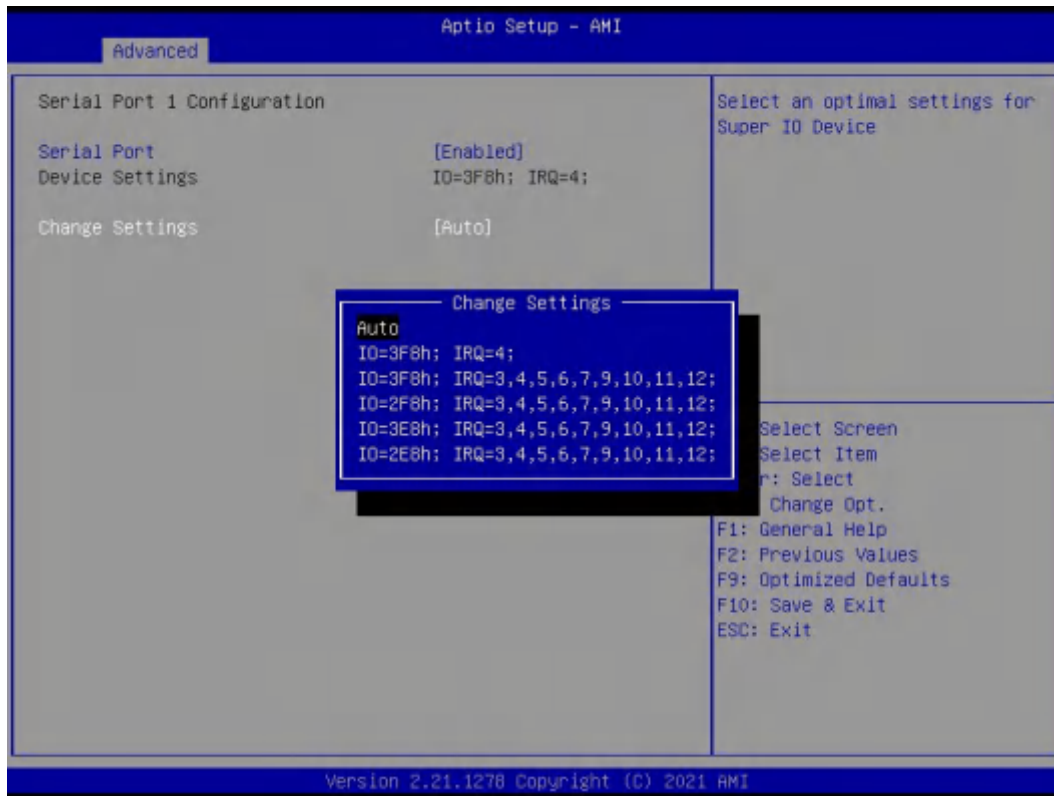


Menu	Description
Pc Hardware Monitor Status	
Smart Fan2 Function	It includes "Full on mode", "Smart Fan" and "manual mode". <ul style="list-style-type: none"> ● Full on mode. ● Smart Fan: Smart Fan is enabled by default. ● Manual Mode.
Fan off temperature limit	FAN will stop work If temperature is lower than the Fan off temperature limit value.
Fan start temperature limit	If the temperature is higher than fan off temperature limit, FAN will start work.
Fan start PWM	If the temperature is higher than the FAN start PWM value, the FAN will start work.
Fan Full Speed Temp limit	If the temperature is higher than the FAN Full Speed temp limit value, the FAN will work at full speed.
PWM slope setting	<ul style="list-style-type: none"> ● 1 PWM ● 2 PWM ● 4 PWM

Smart Fan Function	<p>It includes "Full on mode", "Smart Fan" and "manual mode".</p> <ul style="list-style-type: none">● Full on mode.● Smart Fan: Smart Fan is enabled by default.● Manual Mode.
Fan off temperature limit	FAN will stop work If temperature is lower than the Fan off temperature limit value.
Fan start temperature limit	If the temperature is higher than fan off temperature limit, FAN will start work.
Fan start PWM	If the temperature is higher than the FAN start PWM value, the FAN will start work.
PWM slope setting	<ul style="list-style-type: none">● 1 PWM● 2 PWM● 4 PWM● 8 PWM
System temperature	Current System Temperature.
CPU temperature	Current CPU Temperature.
CPU Fan2 Speed	Current FAN2 Speed.
CPU Fan Speed	Current FAN Speed.

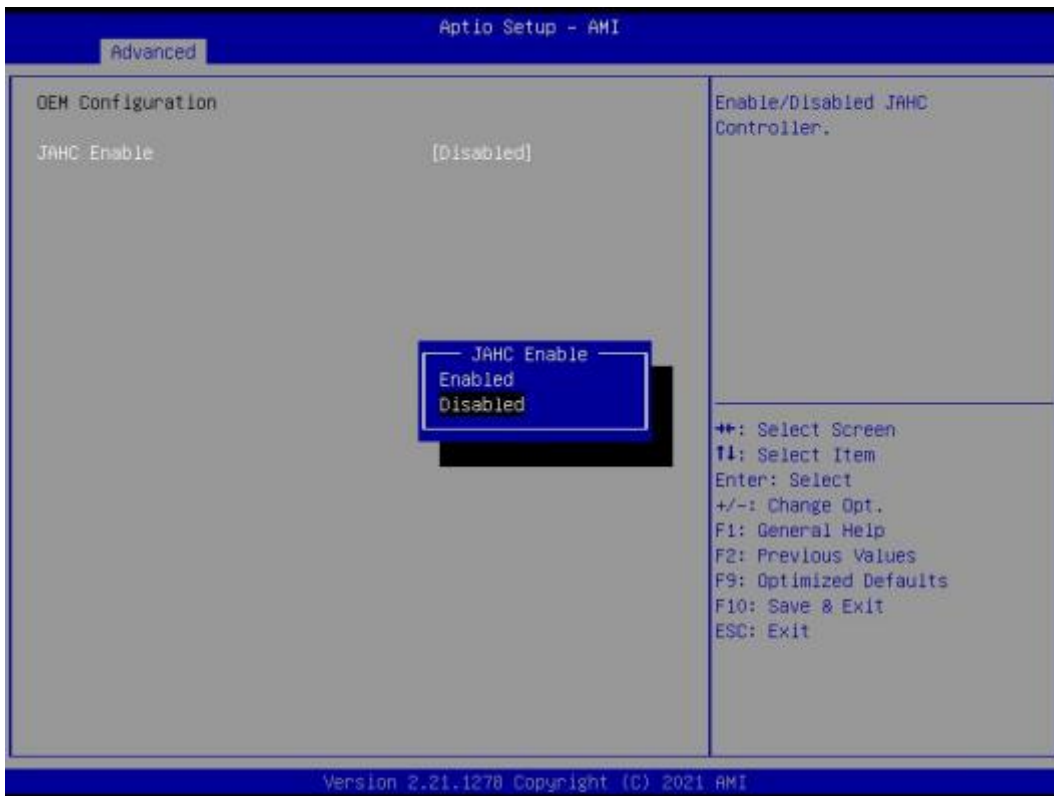
4.2.4 Super IO Configuration





Menu	Description
Serial Port 1 Configuration	
Serial Port	<p>The serial port is enabled by default.</p> <ul style="list-style-type: none"> ● Enabled ● Disabled.
Change settings	<p>User can set the serial port by change settings option.</p> <ul style="list-style-type: none"> ● Auto ● IO=3F8H ; IRQ=4 ; ● IO=3F8H ; IRQ=3 , 4 , 5 , 6 , 7 , 9 , 10 , 11 , 12 ; ● IO=2F8H ; IRQ=3 , 4 , 5 , 6 , 7 , 9 , 10 , 11 , 12 ; ● IO=3E8H ; IRQ=3 , 4 , 5 , 6 , 7 , 9 , 10 , 11 , 12 ; ● IO=2E8H ; IRQ=3 , 4 , 5 , 6 , 7 , 9 , 10 , 11 , 12.

4.2.5 OEM Configuration



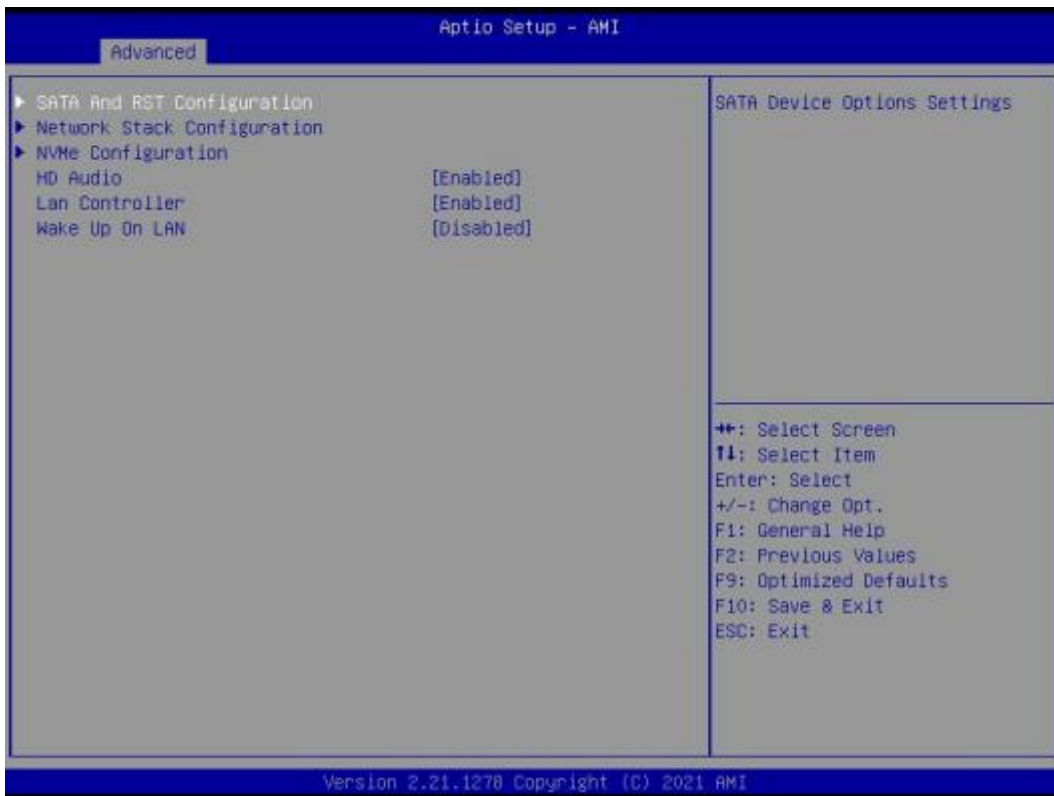
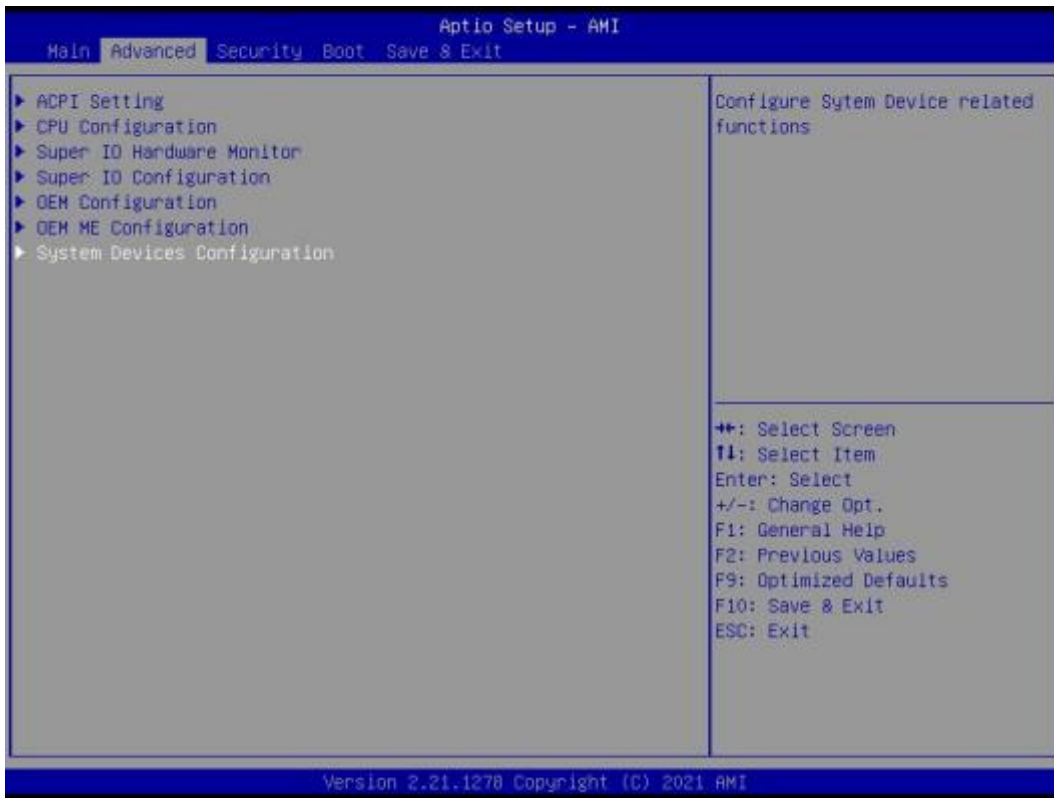
Menu	Description
Wake Configuration	
JAHC Switch	<p>Control Unit (MCU) and software (JAHC Technology Manager).</p> <ul style="list-style-type: none"> ● Disabled: The JAHC is disable by default. ● Enabled.

4.2.6 OEM ME Configuration



The ME Menu	Description
OEM ME Configuration	
ME Control	The user can enable and disable ME control.

4.2.7 System Devices Configuration

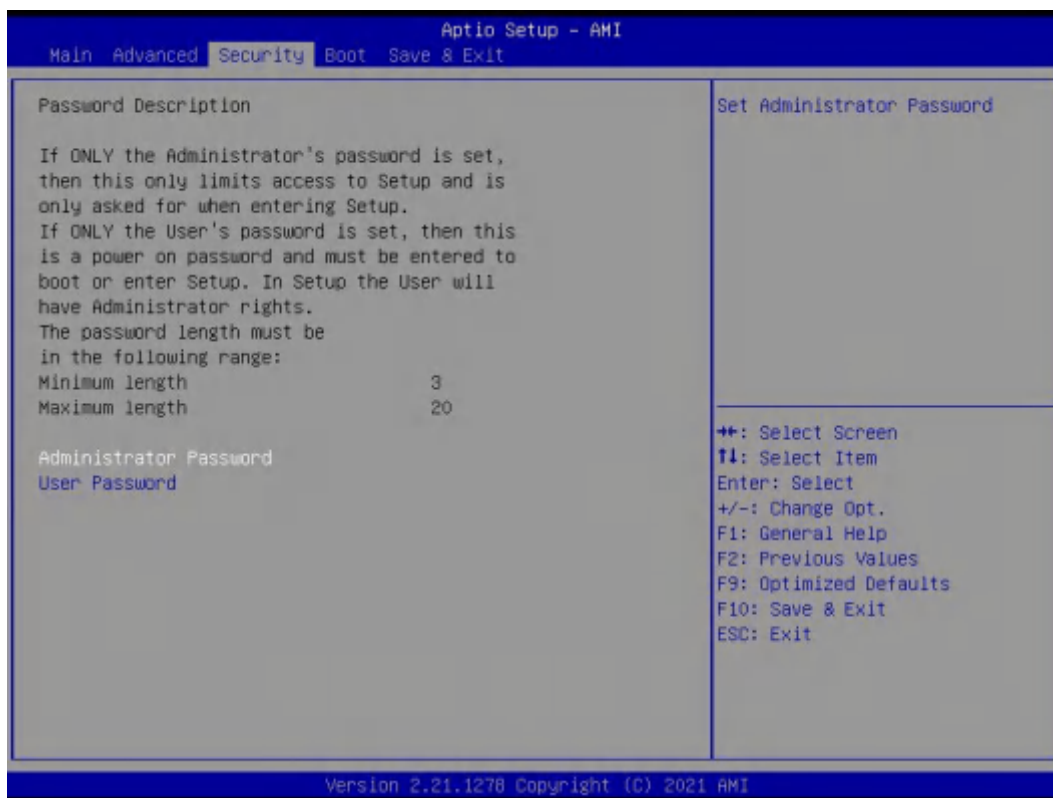




Menu	Description
SATA And RST Configuration	
SATA Controller(S)	<ul style="list-style-type: none"> This item can enable or disable the chipset SATA controller.
Network Stack Configuration	
PXE Function	<p>Enabled/Disabled UEFI Stack..</p> <ul style="list-style-type: none"> Disabled: The PXE function is disable by default. Enabled.
Ipv4 PXE Support	<p>Enabled/Disabled IPV4 PXE boot support. If disabled IPV4 boot support will not be available.</p> <ul style="list-style-type: none"> Enabled. Disabled. This item is disabled by default.
Ipv4 HTTP Support	<p>Enabled/Disabled IPV4 PXE boot support. If disabled IPV4 boot support will not be available.</p> <ul style="list-style-type: none"> Enabled. Disabled. This item is disabled by default.

Ipv6 PXE Support	<p>Enabled/Disabled IPV6 PXE boot support. If disabled, IPV6 PXE boot support will not be available.</p> <ul style="list-style-type: none"> ● Enabled. ● Disabled. This item is disabled by default.
Ipv6 HTTP Support	<p>Enabled/Disabled IPV6 HTTP boot support. If disabled, IPV6 HTTP boot support will not be available.</p> <ul style="list-style-type: none"> ● Enabled. ● Disabled. This item is disabled by default.
PXE boot wait time	<ul style="list-style-type: none"> ● Wait time in seconds to press ESC key to abort the PXE boot. Use either +/- or numeric keys to set the value.
Media detect count	<ul style="list-style-type: none"> ● Number of times the presence of media will be checked. Use either +/- or numeric keys to set the value.
<ul style="list-style-type: none"> ● NVME Configuration 	
<ul style="list-style-type: none"> ● HD Audion: ● Control detection of the HD- Audio device. ● Disabled=HAD will be unconditionally disabled ● Enabled=HAD will be unconditionally enabled. 	
<ul style="list-style-type: none"> ● Lan Controller 	<ul style="list-style-type: none"> ● The user can enable and disable LAN controller.
<ul style="list-style-type: none"> ● Wake Up On LAN 	<ul style="list-style-type: none"> ● The user can enable and disable WOL

4.3 Security



If this function is selected, the following information will appear:

Enter New Password hhhhhh

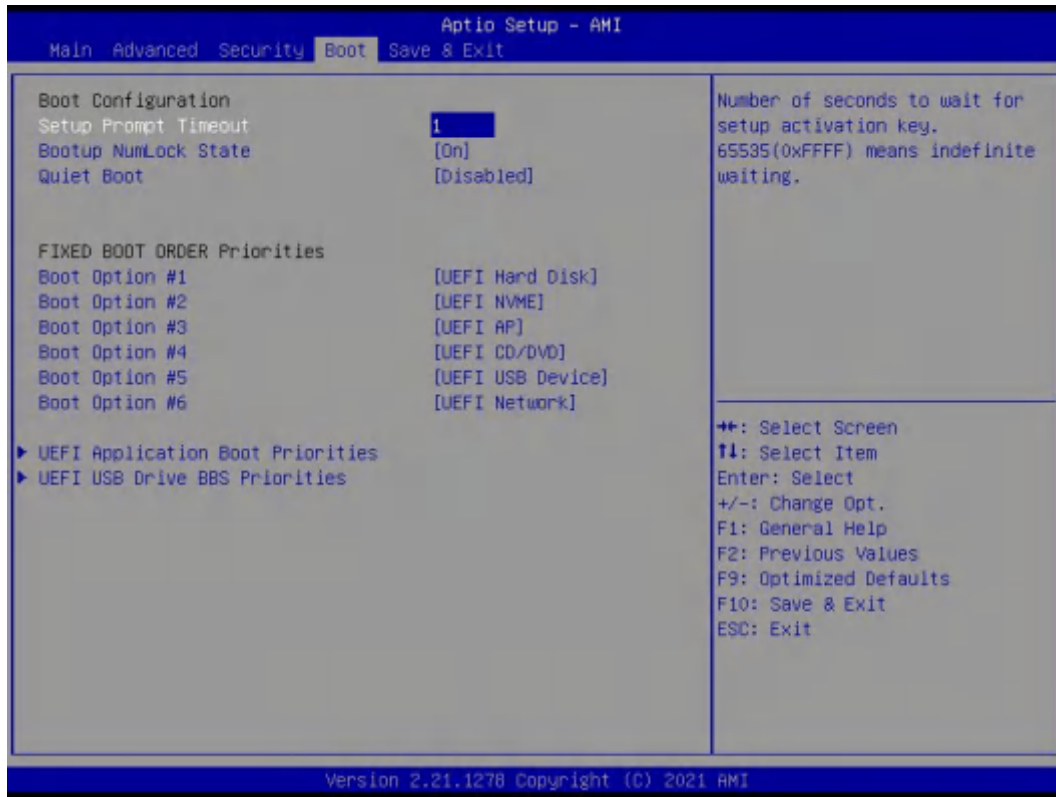
Then enter a password which is no more than eight characters and press <Enter>. BIOS will require to enter the password again.

Once you enter it again, BIOS will save the set password. Once the password item is enabled, you will be required to enter the password every time before the system entering to the setup program of BIOS. The user can set this item through the Security Option in advanced BIOS properties. If the Security Option is set as System, the password will be required to be entered before both the system guides and entering to the setup program of BIOS. If it is set as Setup, the password will be required to be entered only before the system entering to the setup program of BIOS.

To delete the password, press <Enter> in the popped-up window that requires to enter the password. Then information for confirmation will appear on the screen to allow you decide whether the password will be disabled. Once the password is disabled, you can enter the setup program directly without password when the system is restarted.

Boot Sector Virus Protection. This item is used for setting the alarm function in case of virus attack in IDE disk sector. If this item is set as Enable and some program writes information in the sector, BIOS will display alarm information on the screen and buzz.

4.4 Boot Menu



Boot Menu	Description
Boot Configuration	
Setup Prompt Timeout	<ul style="list-style-type: none"> This item is used to set the wait time of entering the operation system. During the BIOS post, if user doesn't press the keyboard, it won't respond unless you reboot the BIOS. The Setup Prompt Timeout is 3s by default. You can set the time as you want.
Bootup NumLock State	<ul style="list-style-type: none"> Options are OFF and ON. In other words, this item can be used to set the state of Num Lock after entering the system. It can be set according to user's needs and doesn't affect the performance of the computer.
Quiet Boot	<ul style="list-style-type: none"> If this item is set as Enabled, the system can be started within five seconds and some detection items will be ignored. The options are [Disabled] and [Enabled].
FIXED BOOT ORDER Priorities	
Boot Option #1	<ul style="list-style-type: none"> The first boot device. If BIOS doesn't detect the first boot device, it will check the second boot device.

Hard Drive BBS Priorities	<ul style="list-style-type: none"> You can set and management legacy Hard disk device after enabling this option.
UEFI Application Boot Priorities	<ul style="list-style-type: none"> Specifies the boot Device Priority sequence from available UEFI Application.
UEFI USB Drive BBS Priorities	<ul style="list-style-type: none"> Specifies the boot Device Priority sequence from available UEFI USB Application.

4.5 Save & Exit



Save Exit Menu	Description
Save Menu	
Save Changes and Reset	<ul style="list-style-type: none"> Save all changes and exit
Discard Changes and Reset	<ul style="list-style-type: none"> Give up the settings and exit.
Restore Defaults	<ul style="list-style-type: none"> Recover it to default.
Boot Override	<ul style="list-style-type: none"> Whole Boot devices

5. JAHC Introduction

JEHE Active Hardware Control (JAHC) management system includes both hardware Micro Control Unit (MCU) and software (JAHC Technology Manager). It can support following functions:

1. Automatically boot up when power on. It is controlled by the Micro Control Unit (MCU) chip.
2. Real Timer Controller (RTC) wake up: user can install the JAHC software to set up automatic startup and shutdown, one week as a circle.
3. Watchdog timer. It is a built-in API interface.
4. Infrared remote control (Optional IR controller).

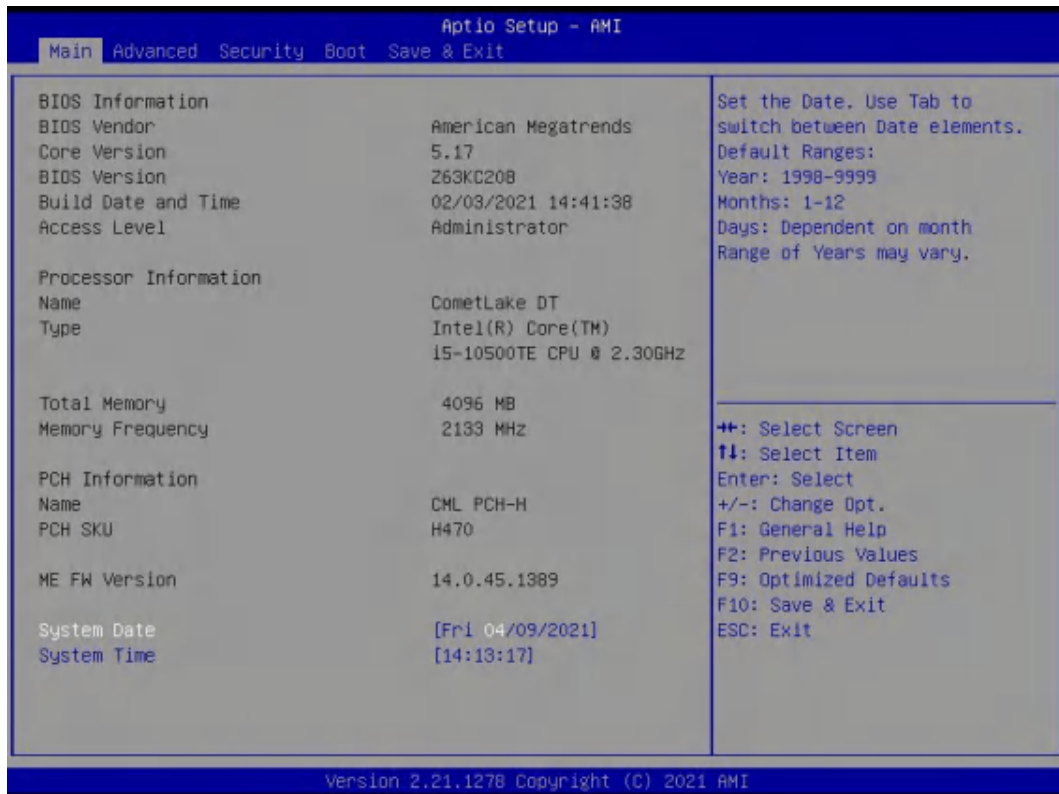
5.1 How to set up Auto power on function

Automatically reboot when power on

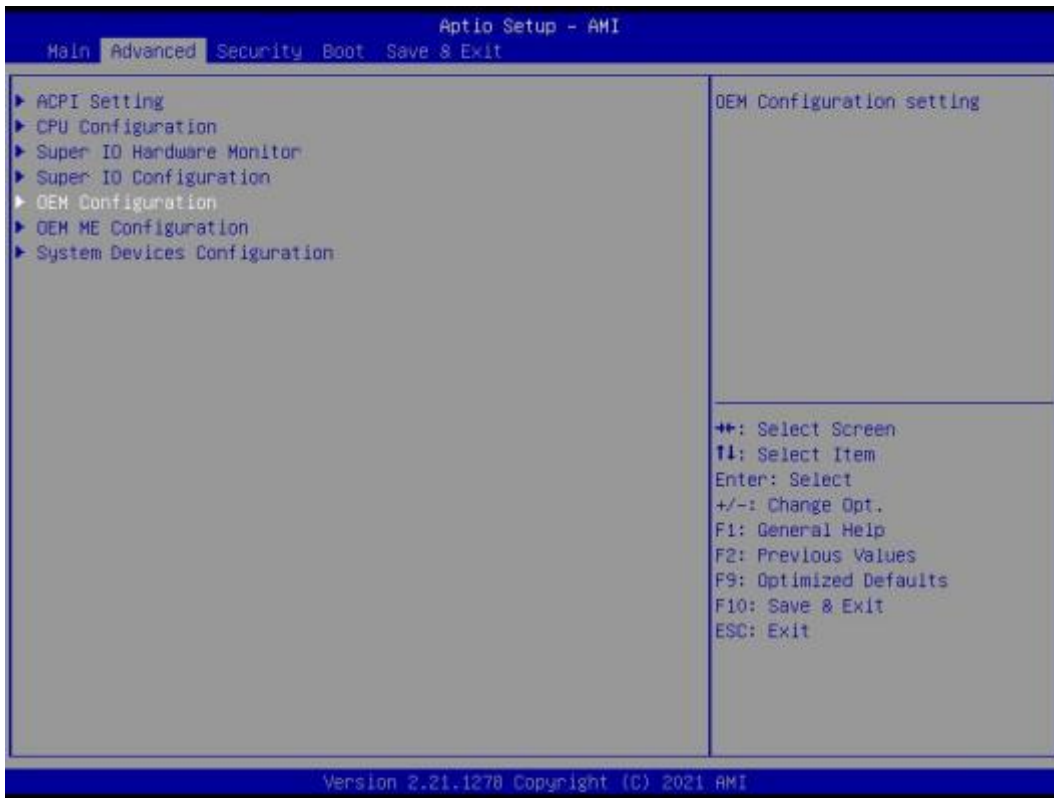
The function of automatically reboot when power on is controlled by hardware. You can enable it by switching the JAHC button to “on”.

If you cannot find the physical switch on the player, then you can go into the BIOS to enable it by following steps:

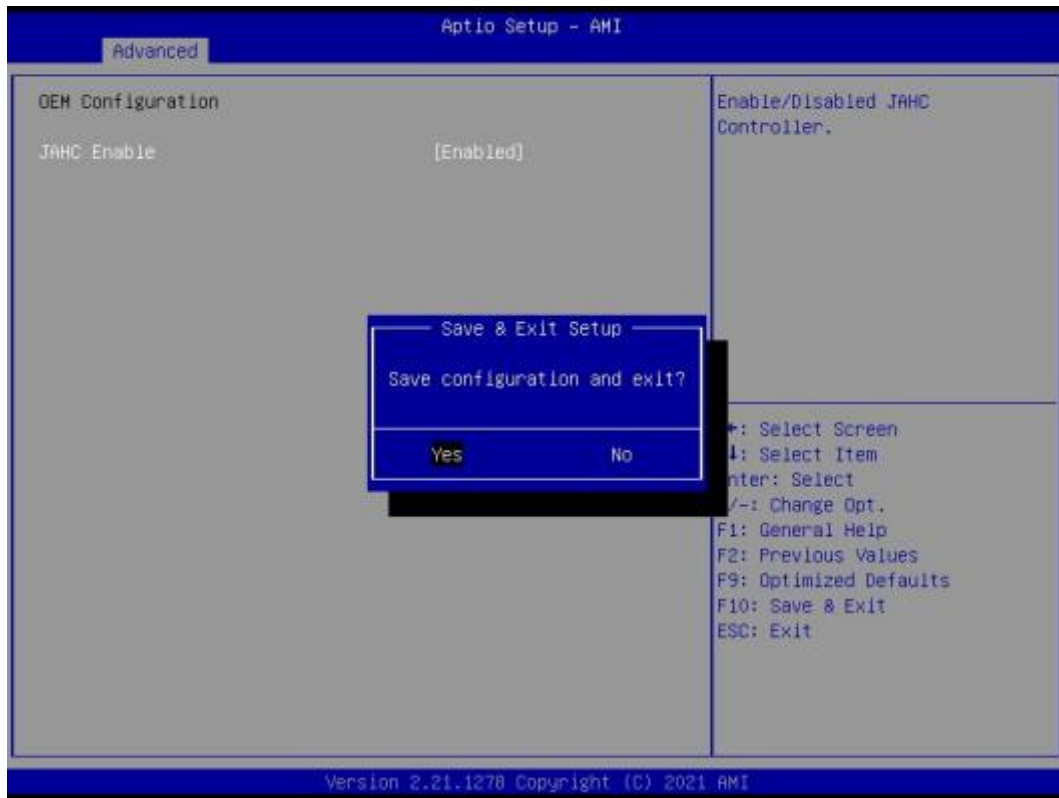
- a. Turn on the player and continually press ‘Del’, then it can enter BIOS setup menu.



b. Select Advanced- > OEM Configuration- > JAHC Enable- > Enabled.



c. Press 'F10' to save change & exit after select "JAHC enabled" option.



5.2 JAHC Software

5.2.1 JAHC Software Function

- RTC wake up. The user can set up automatic startup and shutdown, one week as a circle
- Caution message prior to shutdown to remind user to save the data. User can also choose to postpone the shutdown process.
- When JAHC is running, it can support reboot automatically when system is crashed. No additional settings needed.

5.2.2 JAHC Software Installation Guide

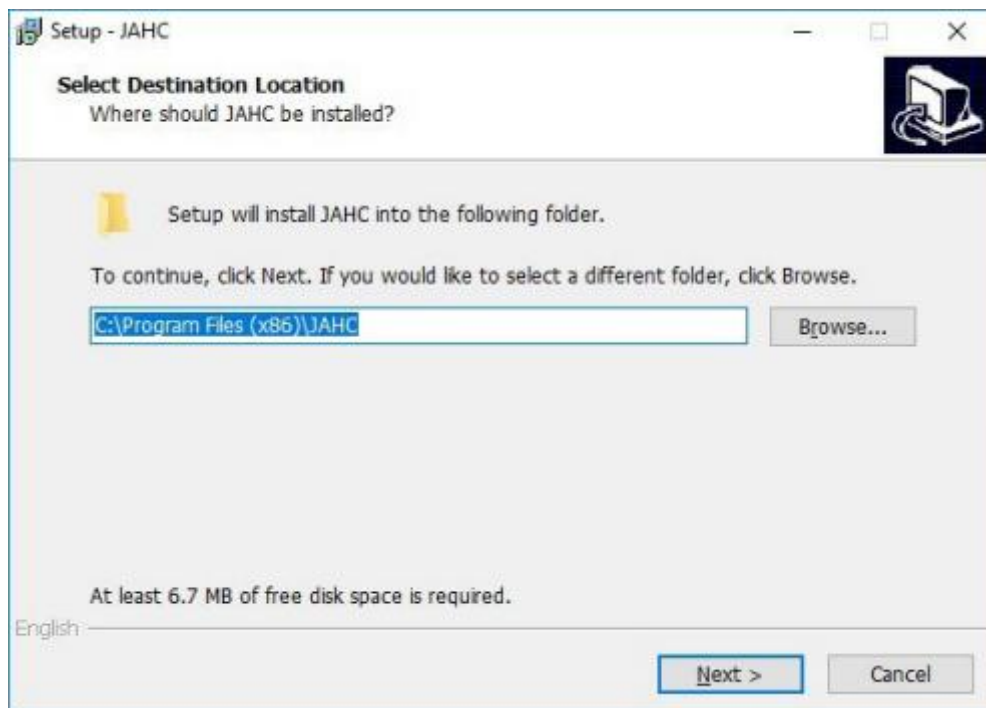
System Requirements:

- Giada player with JAHC function.
- Switch the JAHC button to “on” or enable it in BIOS if there is no physical button on the chassis.
- Supported operation system: Windows 10 64bit, Linux 64bit.

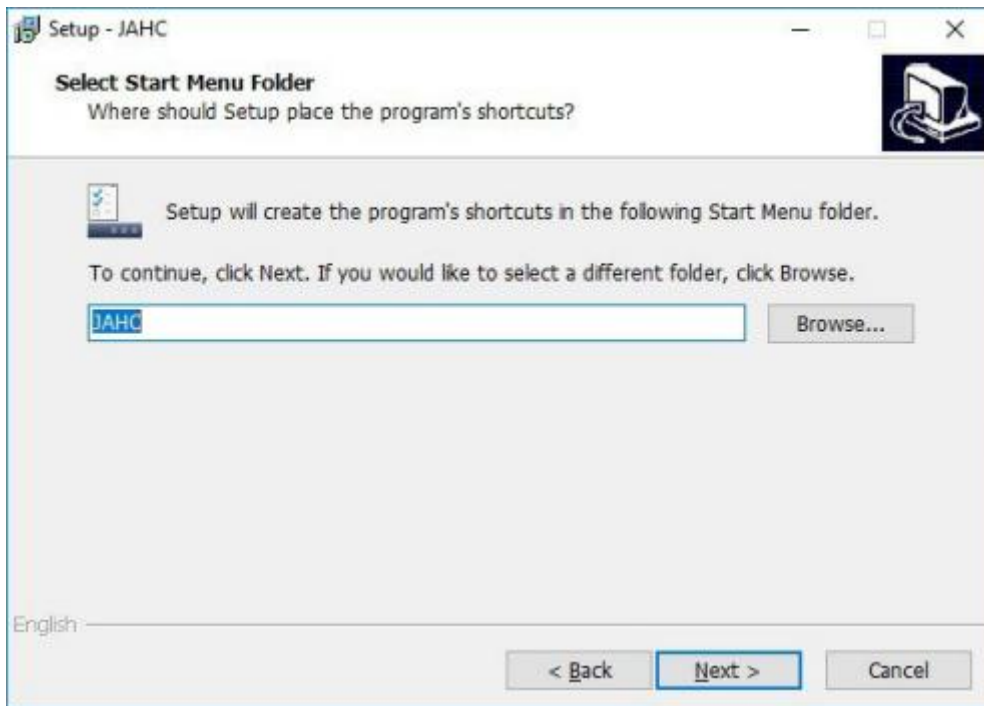
How to install JAHC software:

Please download the JAHC.EXE from Giada website: www.giadatech.com, then follow up below steps:

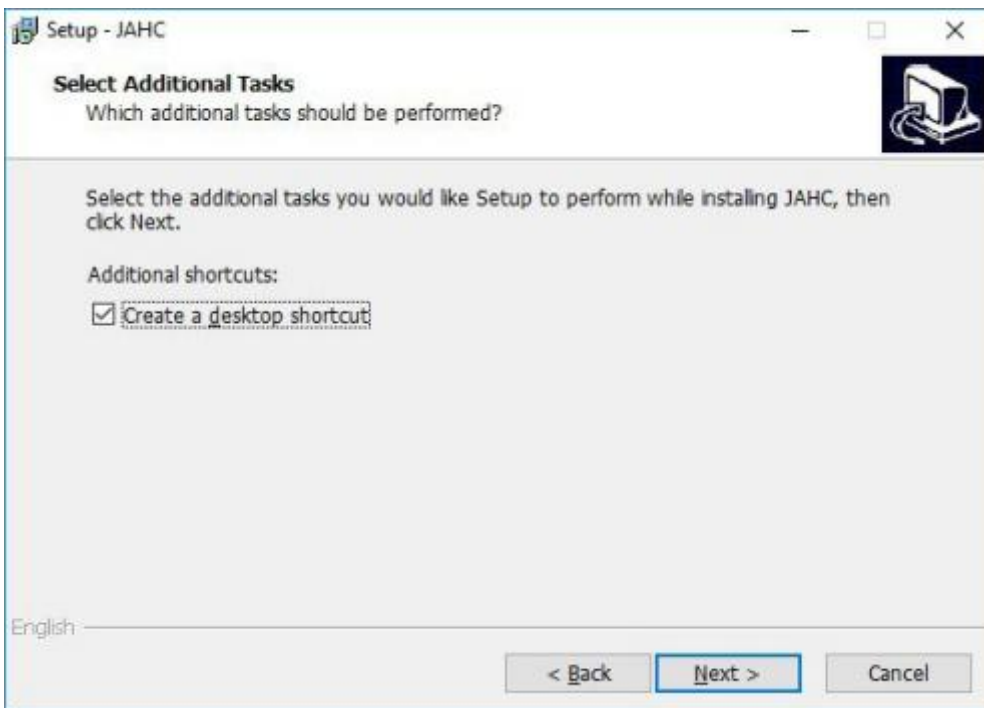
- Double-click the JAHC.EXE file, the setup wizard will pop up, select destination location and click [Next] button to continue the installation.



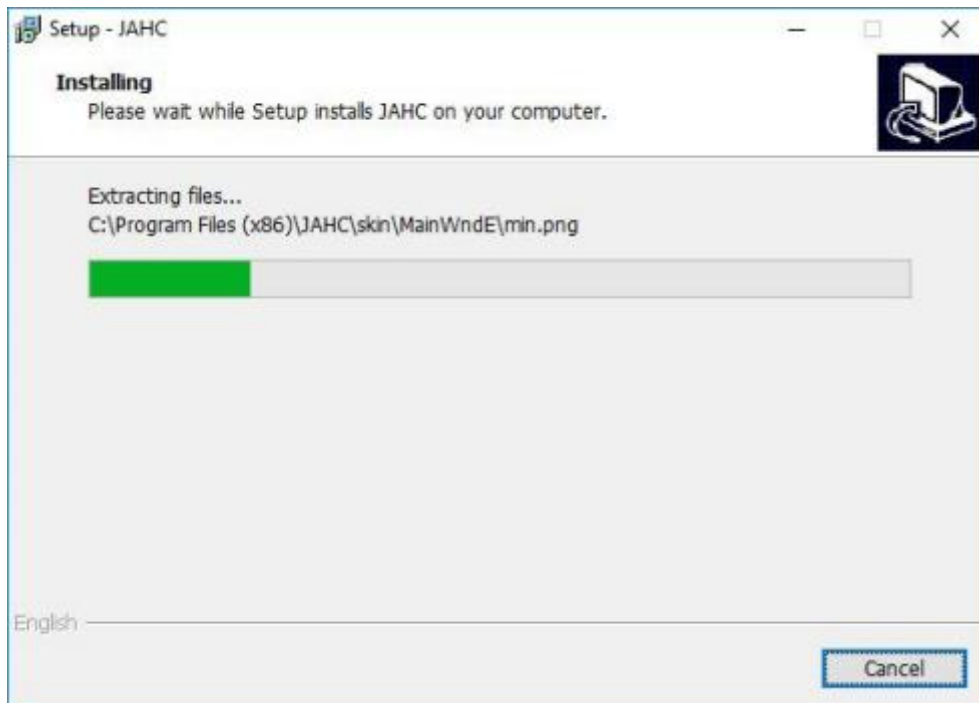
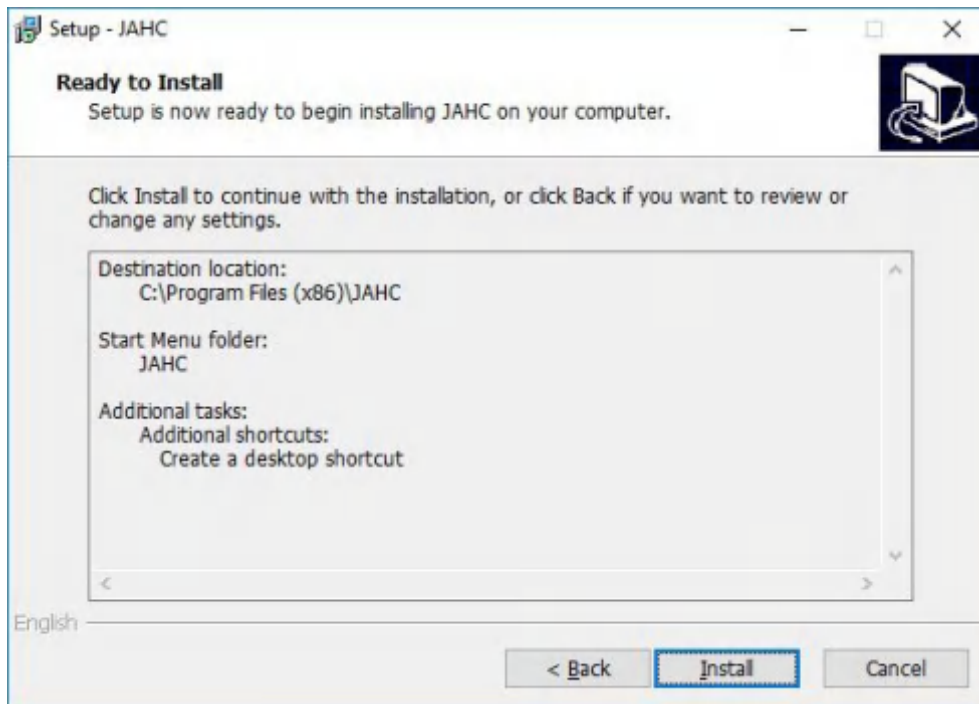
b. Click [Next] button to continue the installation.



c. Select [Create a desktop shortcut] and click [Next] button.



d. Click [Install] button to continue the installation.



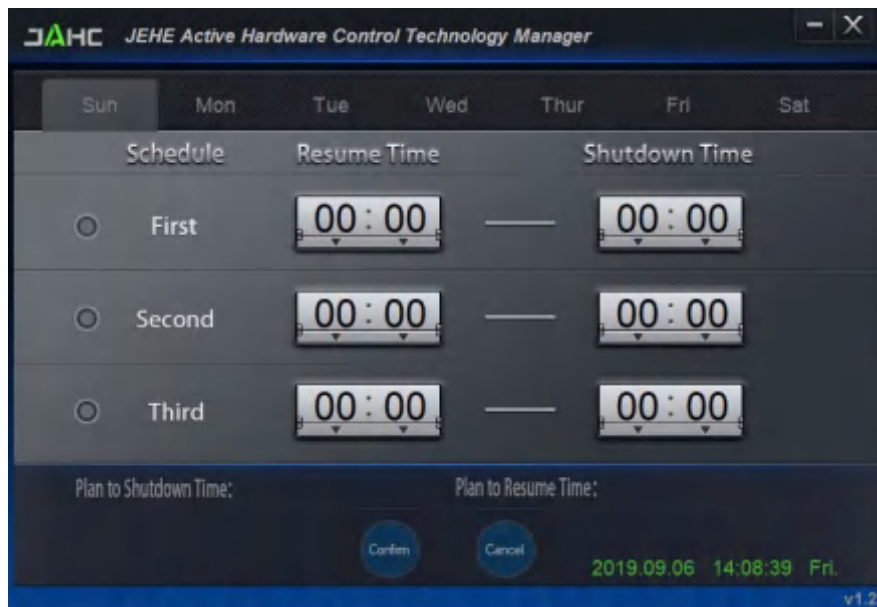
e. Click [Finish] button to finish the installation. You can select [Launch JAHC] to run the software automatically after finishing the installation.



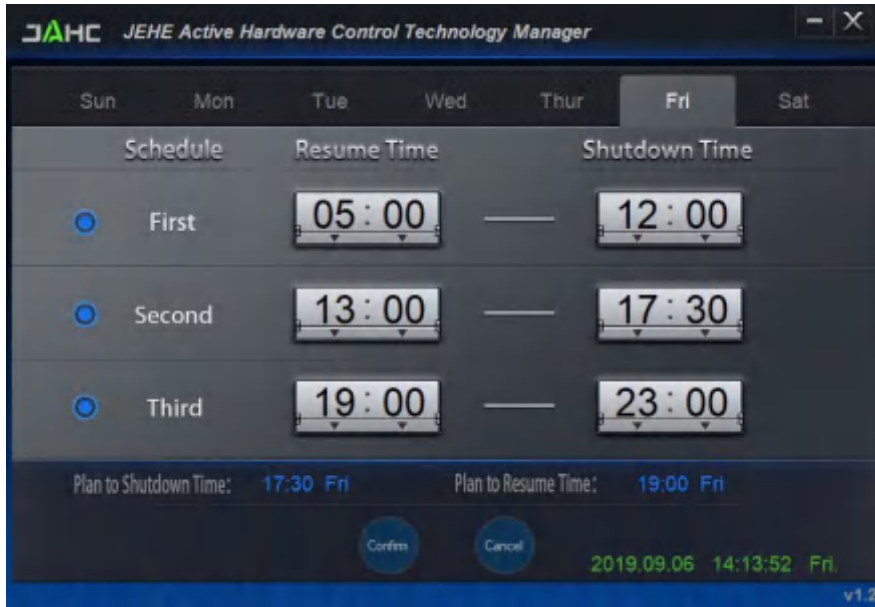
Notice: The JAHC will be added into boot item when it is installed. It will start up when system boot up.

5.2.3 Startup & hutdown Time Setup

After install the JAHC software, double click the JAHC icon on taskbar and the setup menu will pop up.



One week as a circle, maximum 3 schedules per day. Select each schedule to set up the resume time and shutdown time. Click [Confirm] button to launch the schedule.



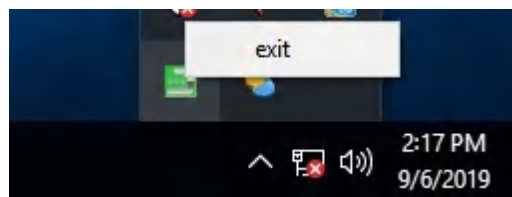
After finishing the setup, the menu window will notice the resume time and shutdown time.

▲ Caution: If the interval from shutdown time to next resume time is less than 3 minutes, the system will not shut down.

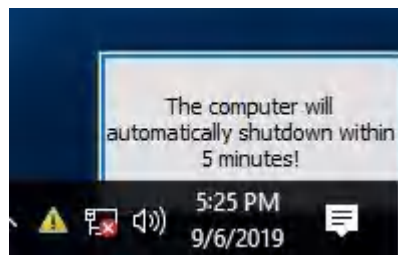
Click [Cancel] button to restore the time settings and cancel the shutdown status.

Click [X] button to hide the menu. You can find it on taskbar.

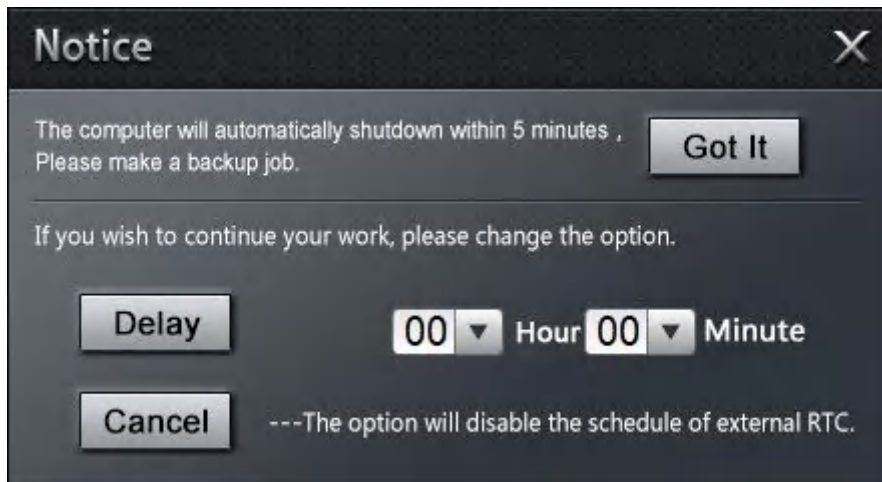
Right click the JAHC icon on taskbar and select [exit] to exit the software.



Shutdown caution: the shutdown caution will pop up before the system shutdown.



You can double click the message window and a new dialog box will pop up.



You can click [Delay] button and set up the time to delay the shutdown or click [Cancel] button to cancel the shutdown.

5.3 Watchdog API & Instruction

Please contact Giada FAE (email:support@giadatech.com) for watchdog API software and instruction.



Shenzhen JEHE Technology Development Co., Ltd.

Website: www.giadatech.com

Phone: +86-755-33300336

Email: support@giadatech.com

Address: 1~3/F, Block A, Tsinghua Information Harbor, North Section,
Shenzhen Hi-tech Park, Nanshan District, Shenzhen, China



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