Giada

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F106D User Manual

Statement

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Safety Notice

• Read the user manual carefully before setting up the Giada product.
• Disconnect the power cord 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 cord when the system is running to avoid damage to the sensitive components by instantaneous surge voltage.

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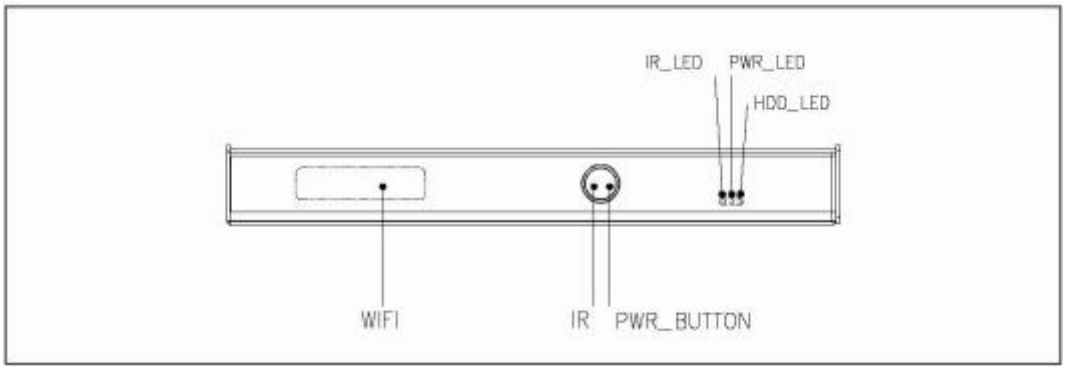
1. Product Introduction

Based on Jasper Lake platform, Giada F106D has both fan and fanless design options. Giada F106D adopts LPDDR4 dual-channel memory as well as M.2 and mSATA storage interface design. With one DP and one HDMI displays output, it can support 4K 60Hz display. The player is suitable to be applied in mainstream digital signage applications.

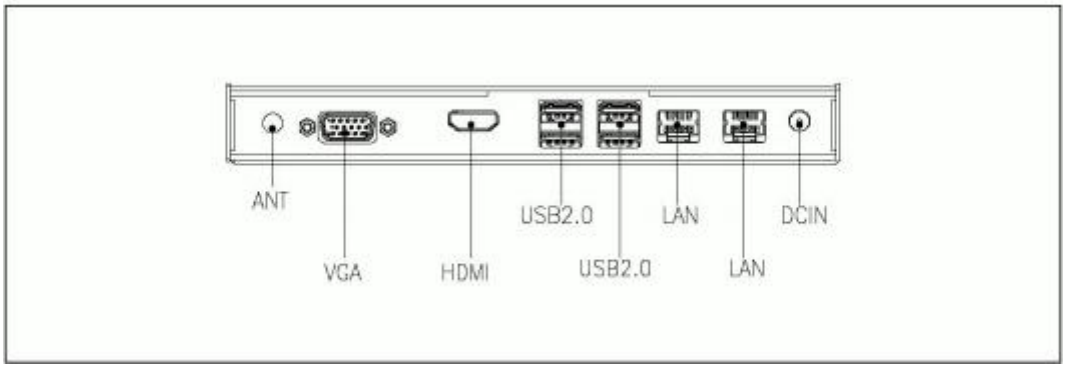
2. Interface Description and Hardware Specifications

2.1 Interface Description

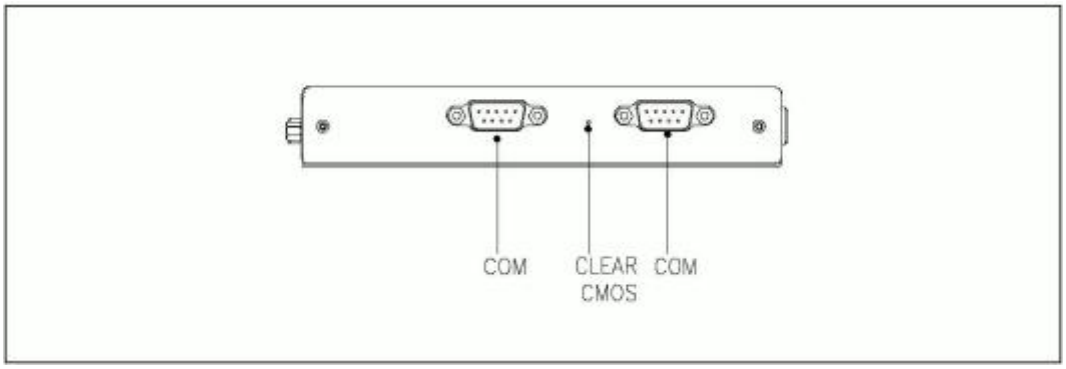
Front I/O Port



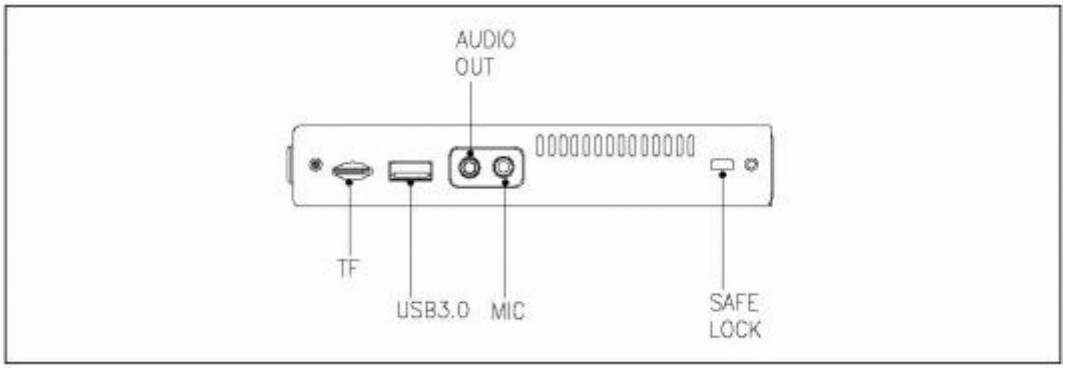
Rear I/O Port



Left I/O Port



Right I/O port



2.2 Hardware Specifications

F106D		
Processor	**CPU**	Intel® Jasper Lake Celeron N5095(Fan)/N5100 (Fanless)
	BIOS	AMI EFI 64 Mbit
	Chipset	SoC
Memory	**Type**	LPDDR4-2666MHz
	Socket	Onboard
	Channel	2
	Size	4GB (Optional: 8GB)
Graphics	**GPU**	Intel® UHD Graphics
	Graphic Engine	DirectX 12.1, OpenGL 3.0, OpenCL 1.1, OpenGL ES 2.0, H.264, MEPG2
	Interface	1 x DP (Max.3840 x 2160 @60Hz)
		1 x HDMI (Max.4096 x 2160 @60Hz)

Network	**Controller**	RTL 8111H Gigabit Ethernet
	Interface	1 x RJ45 (Optional: 2 x RJ45)
I/O Interface	**USB**	2 x USB3.2 Gen2, 4 x USB2.0
	Serial Port	1 x RS232
	Audio	1 x MIC-IN, 1 x AUDIO-OUT
	Wireless	1 x E-key M.2 (2230) for WiFi/BT
	SIM Card	1 x SIM-Slot
JAHC	**WatchDog Timer**	0-255 Second Time Out Support
	Auto Power On	Power Activated Automatically Start
	RTC	Set Up Independently Every Day
	Remote Control	Wake on LAN
Storage	**Socket 1**	1 x M-key M.2 (2242/2280) for SSD
	Socket 2	1 x Full-size Mini-PCIe for MSATA 3G/4G
	Onboard	eMMC 5.1 (optional)
Operation System	**Windows**	Windows 10（64-bit）
	Linux	Ubuntu 18.04
Power	**Power Type**	DC-IN
	Power Adapter	12V/19V
Mechanical	**Construction**	Metal
	Mounting	VESA Mounting JZ183
	Dimension (W x D x H)	189.6mm x 148.3mm x 26mm (7.46” x 5.83” x 1.02”)
	Color	Black
Environment	**Operating Temperature**	0-40℃ (32℉- 104℉) at 0.7m/s Air Flow
	Relative Humidity	95%@40℃ (non-condensing)
Certification		CE, FCC

3. Accessories Installation Steps

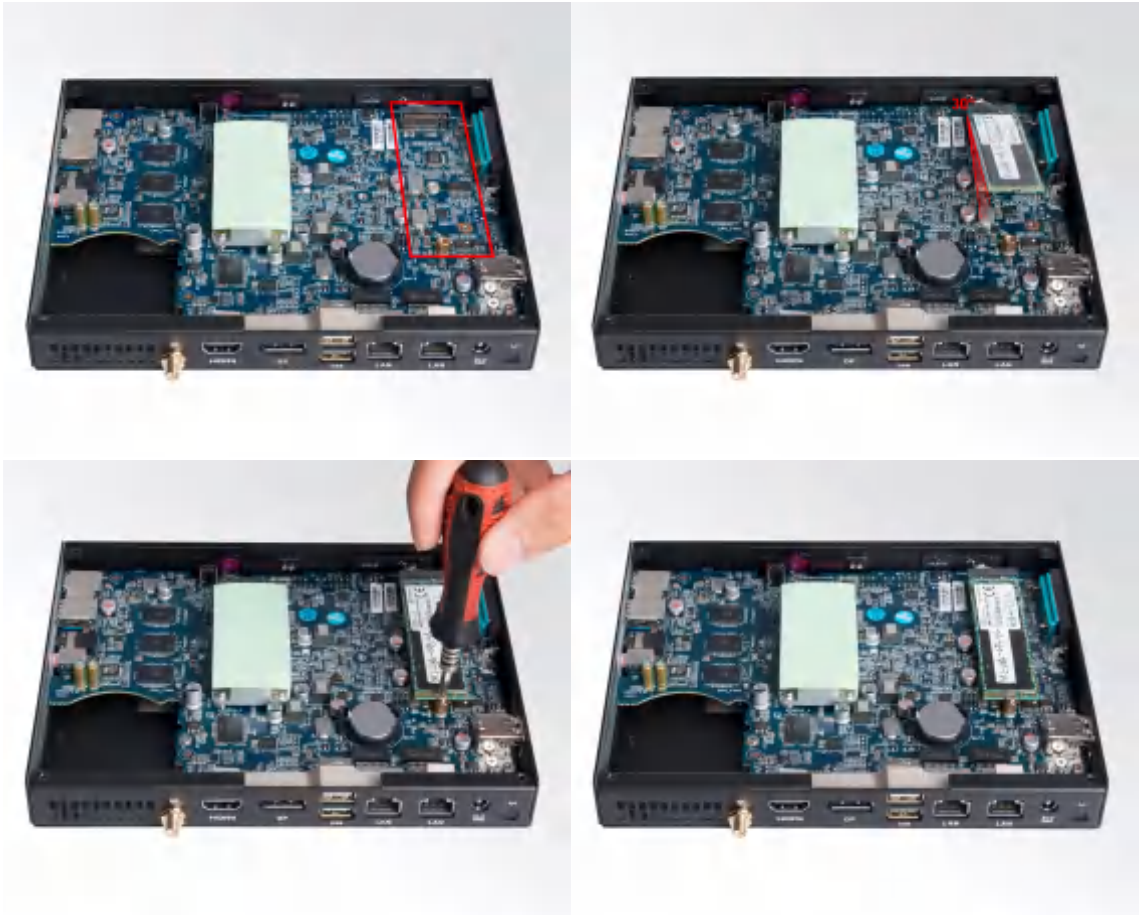
⚠ For safety reasons, please ensure that the power cord is disconnected before opening the case.

How to open the cover

Unscrew the four screws and push to open the case. (1 x M.2 for SSD are on top side).
Unscrew the four screws, push the bottom cover and remove it. (1 x Mini-PCIe for 3G/4G or mSATA, 1 x M.2 (2230) for WiFi/BT, SIM card slot are on bottom side).

3.1 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.



3.2 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.

3.3 3G/4G/ Installation

⚠ Default SMA connector and cable is for WIFI. Please change to 3G/4G/5G SMA connector and cable.

1. Plug the 3G/4G module into the Mini-PCIe slot.
2. Secure the module to the carrier by tightening up the screw.
3. Connect the cable to **Main** and install the antenna.

3.6 SIM Card Installation

⚠ This product supports standard SIM card with the size of 25mm × 15mm.

1. [Open] the SIM card holder and pull it up.
2. Insert the SIM card.
3. [Lock] the card holder.

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
Page Up	Change the setup state, or add the values
Page Down	Change the setup state, or deduct the values
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）Chipset

4) Security (set the administrator/user password)

5) Boot (startup configuration characteristics)

6) 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 setting)

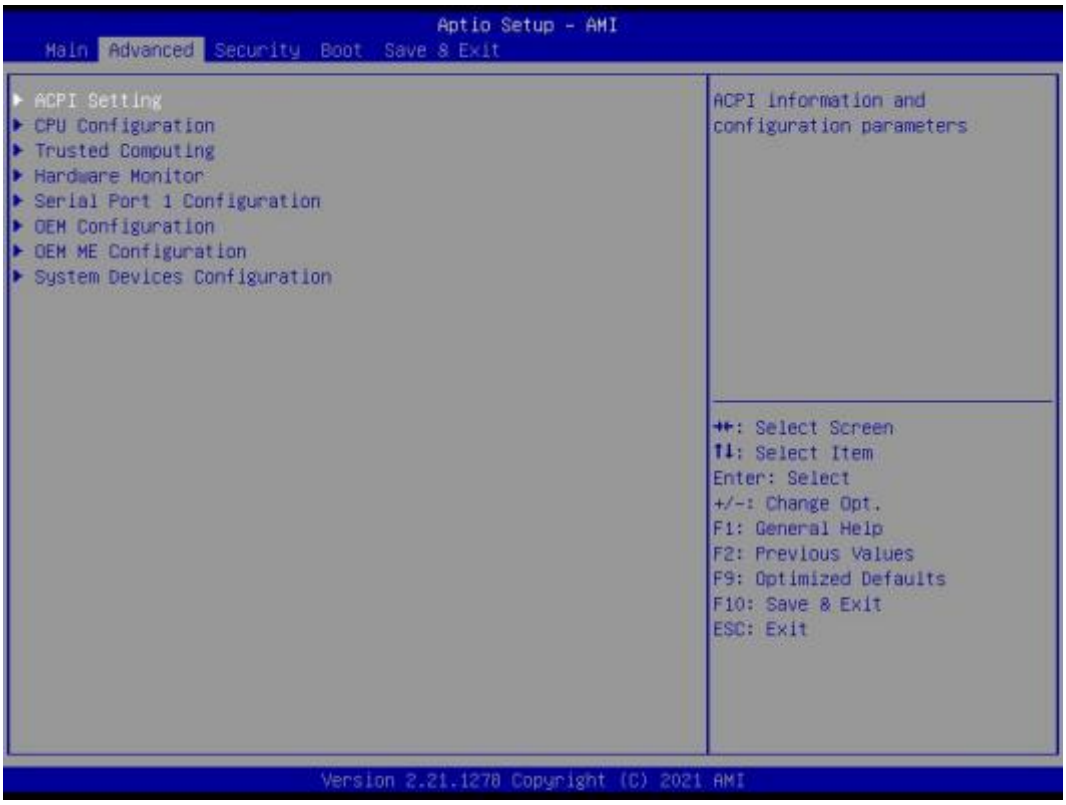
1) System time (hh:mm:ss)

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

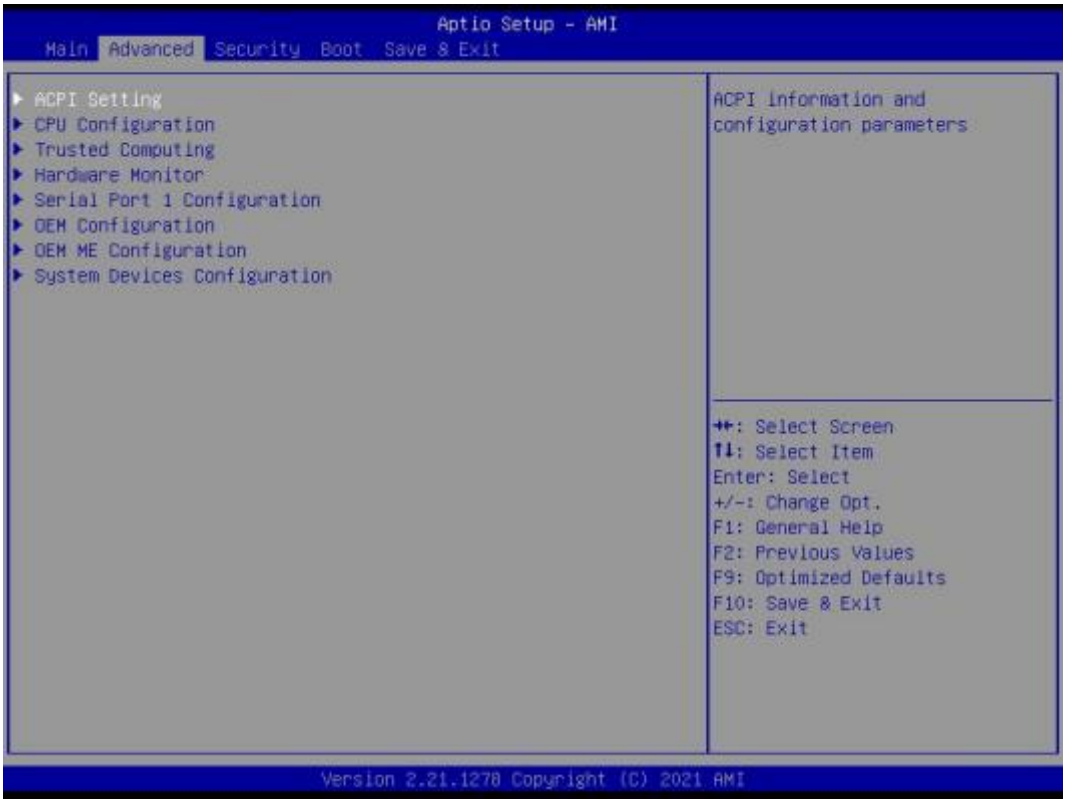
2) System date (mm:dd:yy)

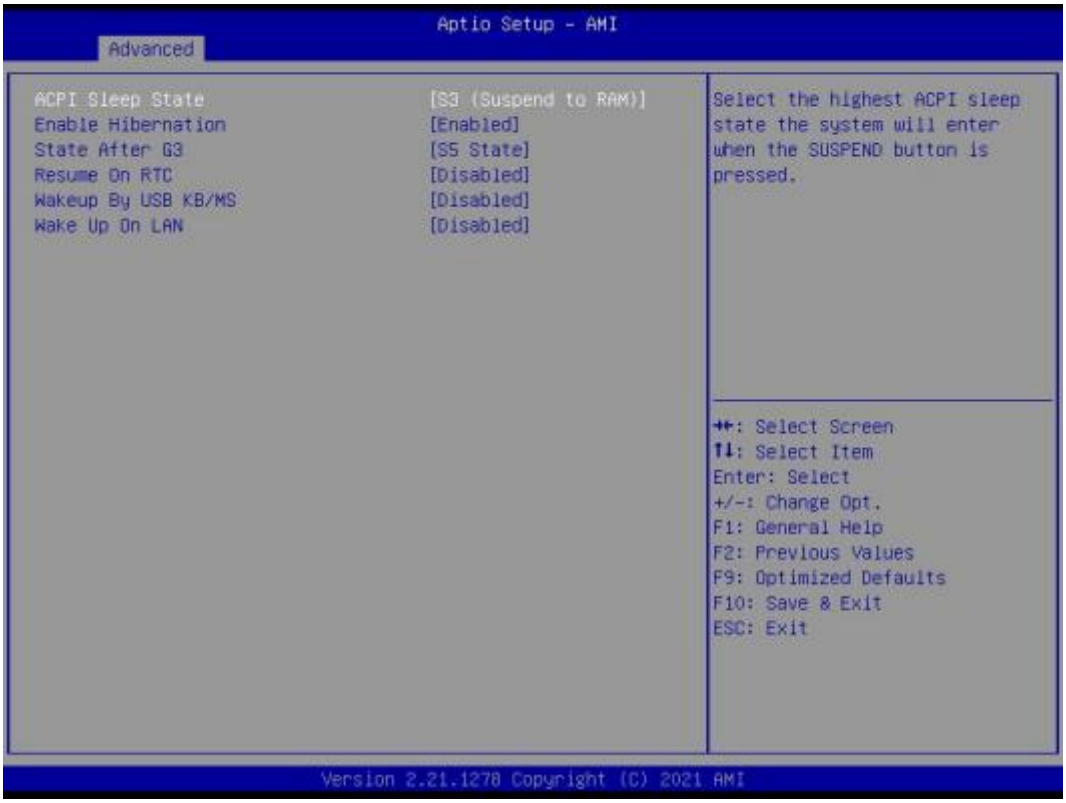
Use this item to set the date for the computer, with the format as "week, MM / DD / YY".

4.2 Advanced (Advanced BIOS setup)



4.2.1 ACPI Setting



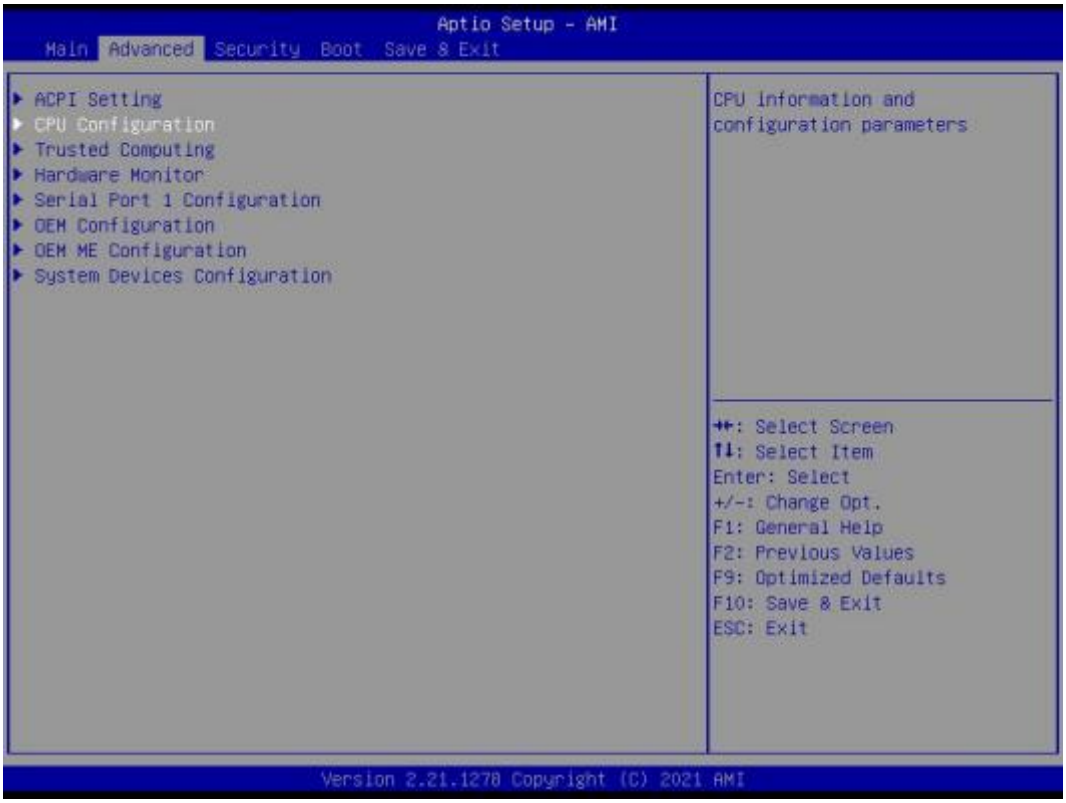


ACPI Menu	Description
ACPI Sleep State	● Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.
Enable Hibernation	● Enables or disables system ability to Hibernate (OS/S4 Sleep). This option may be not effective with some OS.
State After G3	● State After G3 means 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. ● Last State: If set it as Last State, it means the system will keep State of last setup.
Resume On RTC	● Enable or disable System wake on alarm event. Select FixedTime, system will wake on the hr::min::sec specified.Select DynamicTime,System will wake on the current time + Increase minute(s).

Wake Configuration

ACPI Menu	Description
Wakeup By USB KB/MS	Enabled or Disabled Wake Up by USB KB/MOUSE from S3 Status. ● Disabled: The wake on USB is disabled by default. ● Enabled.
Wake Up On LAN	Wake On LAN Function. ● Disabled: The WOL is disabled by default. ● Enabled.

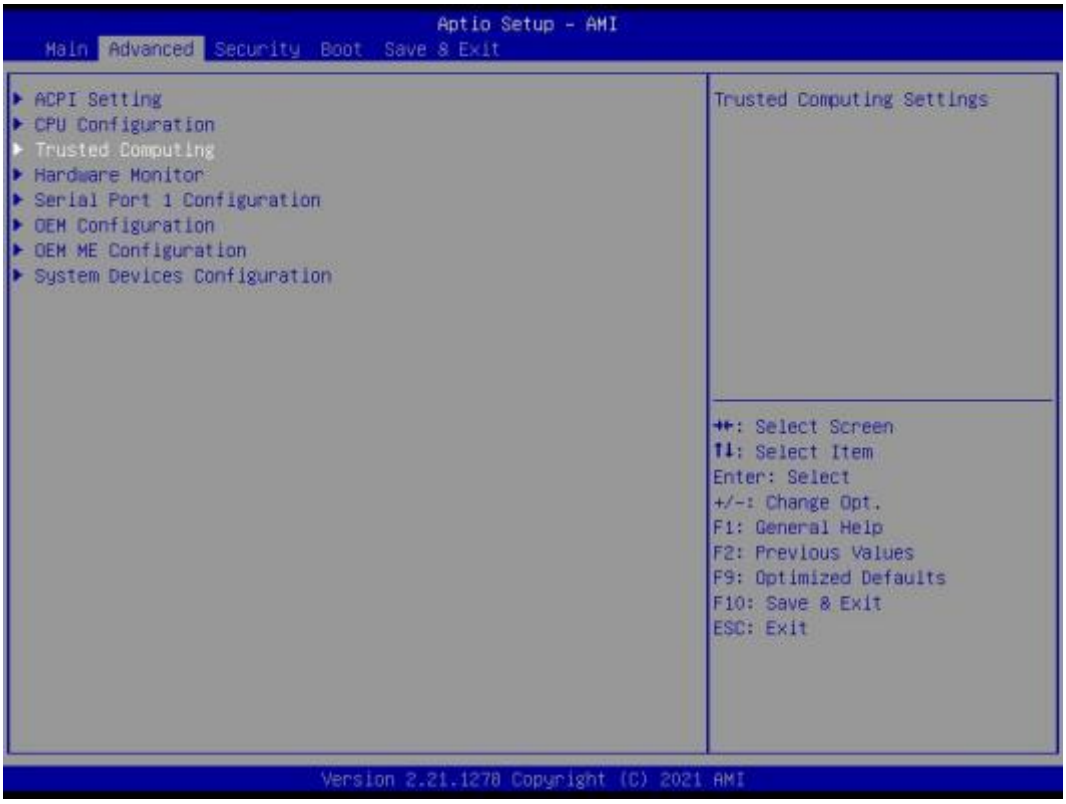
4.2.2 CPU Configuration



CPU Configuration Menu	Description
Boot performance mode	• 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.

CPU Configuration Menu	Description
Intel（R）Speed Shift Technology	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.
C states	The C-State function is disabled by default.
Turbo Mode	● Disabled. ● Enabled.

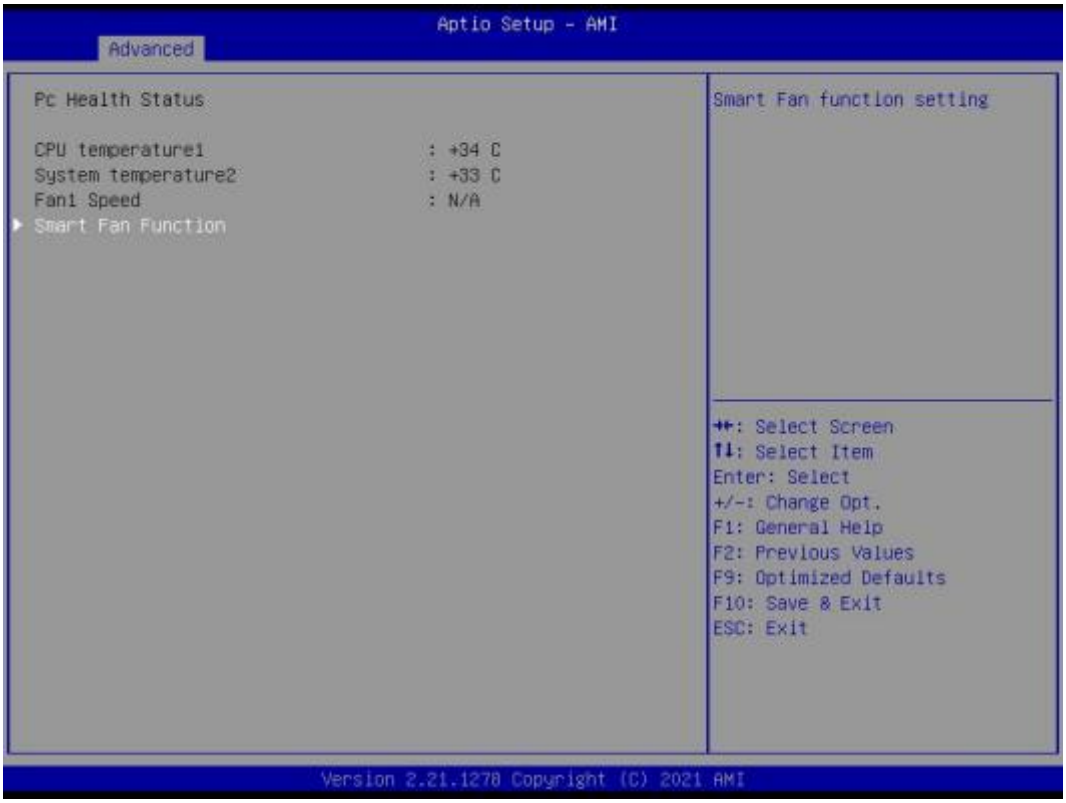
4.2.3 Trusted Computing

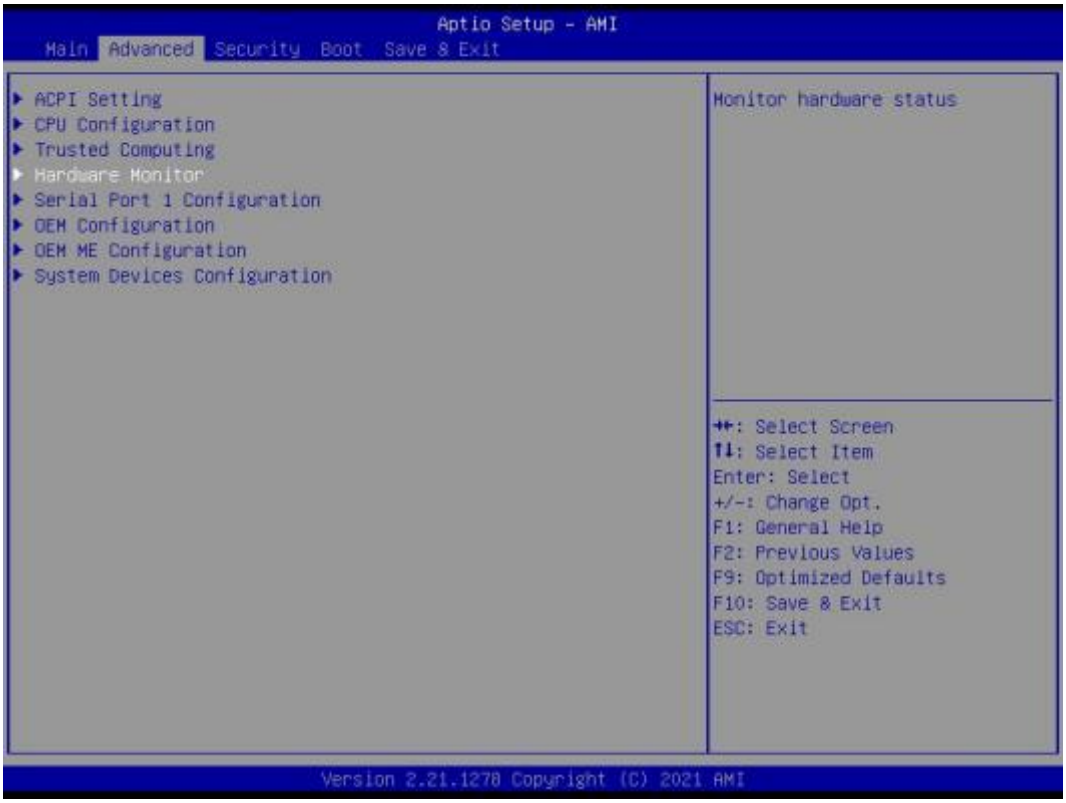


Trusted Computing	Description
TPM20 Device Found	● TPM2.0 device information.
Security Device Support	● Enables or Disables BIOS support for security device. OS will not show security device. TCG EFI protocol and INT1A interface will not be available.
SHA-1 PCR Bank	● Enabled/Disabled SHA-1 PCR Bank
SHA256 PCR Bank	● Enabled/Disabled SHA256 PCR Bank
Pending operation	● Schedule an operation for the security device. Note: Your computer will reboot during restart in order to change State of security device.
Platform Hierarchy	● The user can enable or disable this item.
Storage Hierarchy	● The user can enable or disable this item.
Endorsement Hierarchy	● The user can enable or disable this item.
TPM2.0 UEFI spec version	Select the TCG2 SPEC version support. ● TCG_1_2: The compatible mode for win8/win8. ● TCG_2: Support new TCG2 protocol and event format for win10 or later.

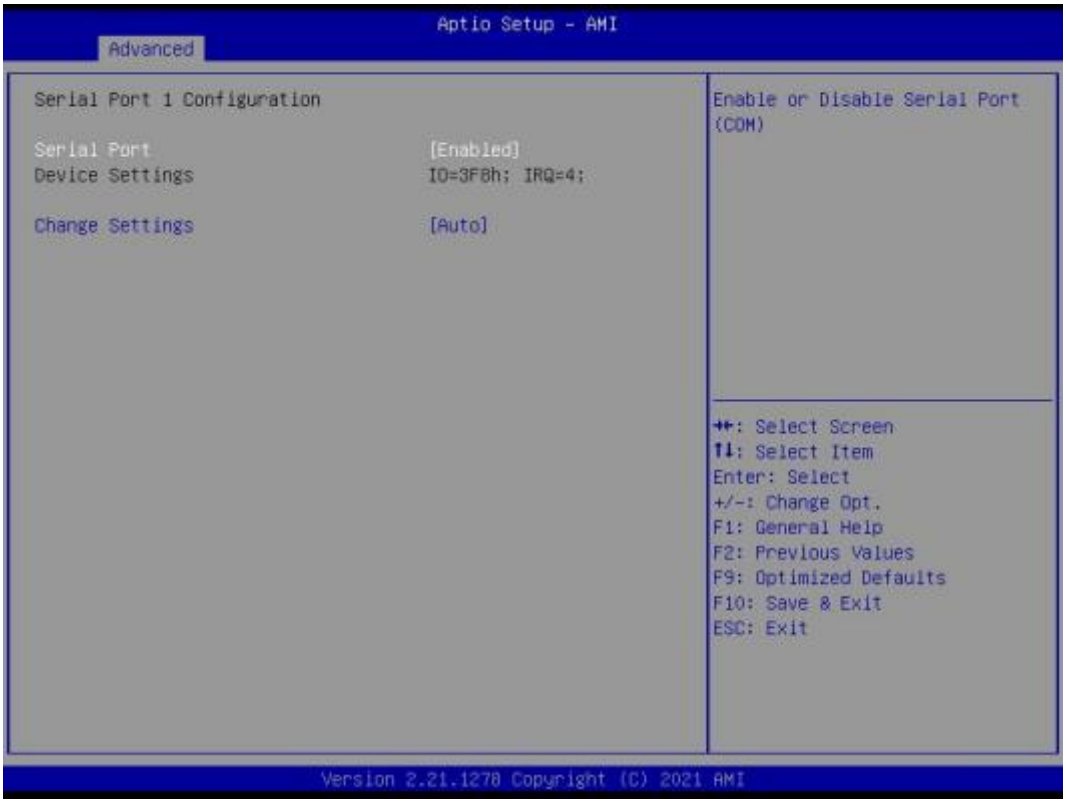
Trusted Computing	Description
Physical Presence Spec Version	● Select to tell OS to support PPI SPEC version 1.2 or 1.3.Note some HCK tests might not support 1.3.
TPM 20 Interface Type	● Select the communication interface to TPM20 device.
Device Select	● TPM1.2 will restrict support to TPM1.2 device, TPM2.0 will restrict support to TPM2.0 device, Auto will support both the default set to TPM2.0 devices if not found, TPM1.2 devices will be enumerated.

4.2.4 Hardware Monitor



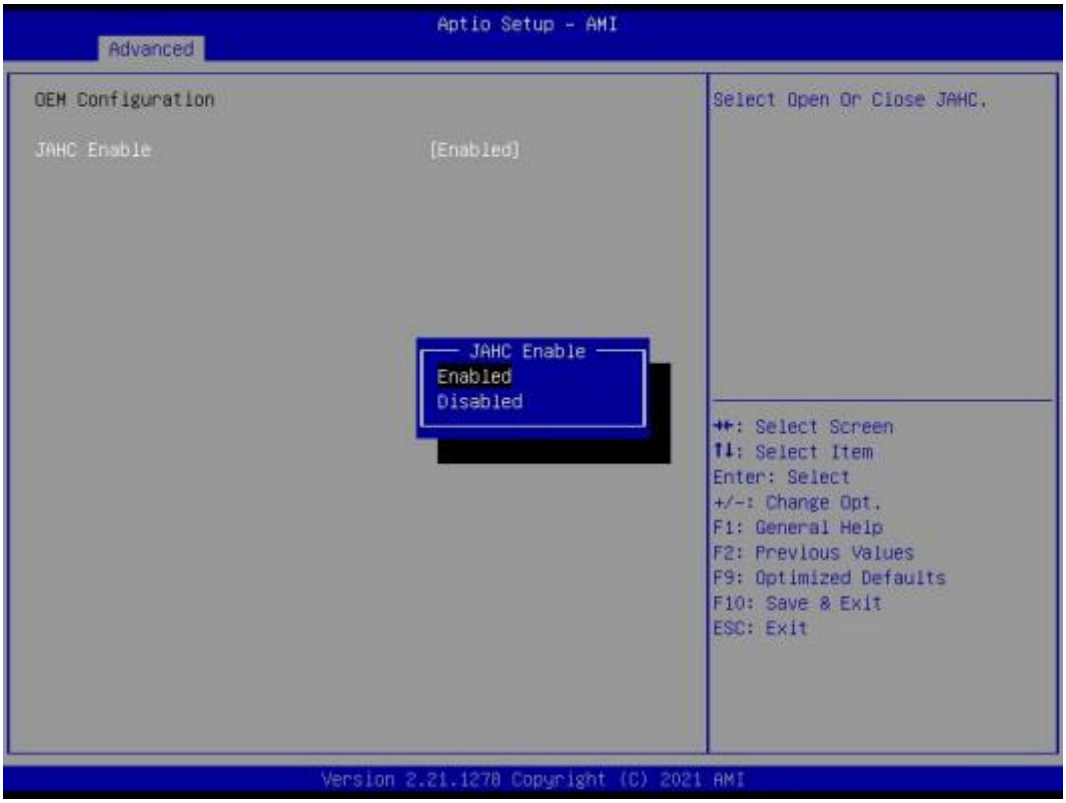


4.2.5 Serial Port 1 Configuration



Serial Port 1 Configuration	Description
Serial Port 1 Configuration	This item can be used to set the Serial Port 1 after entering the Serial Port 1 Configuration. It can be set according to user's needs.
Serial Port 1 Configuration	
Serial Port	The serial port is enabled by default. ● Enabled ● Disabled.
Device Settings	IO-3F8h; IRQ=4;
Change settings	User can set the serial port by change settings option. ● Auto ● IO=3E8H；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。

4.2.6 OEM Configuration

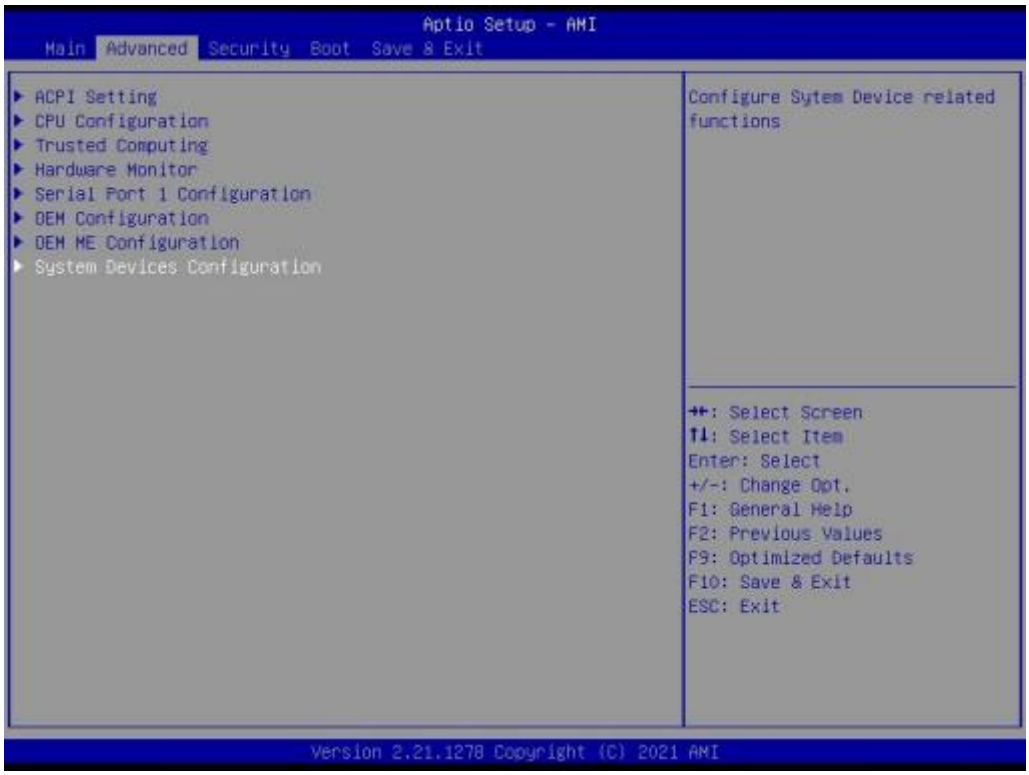


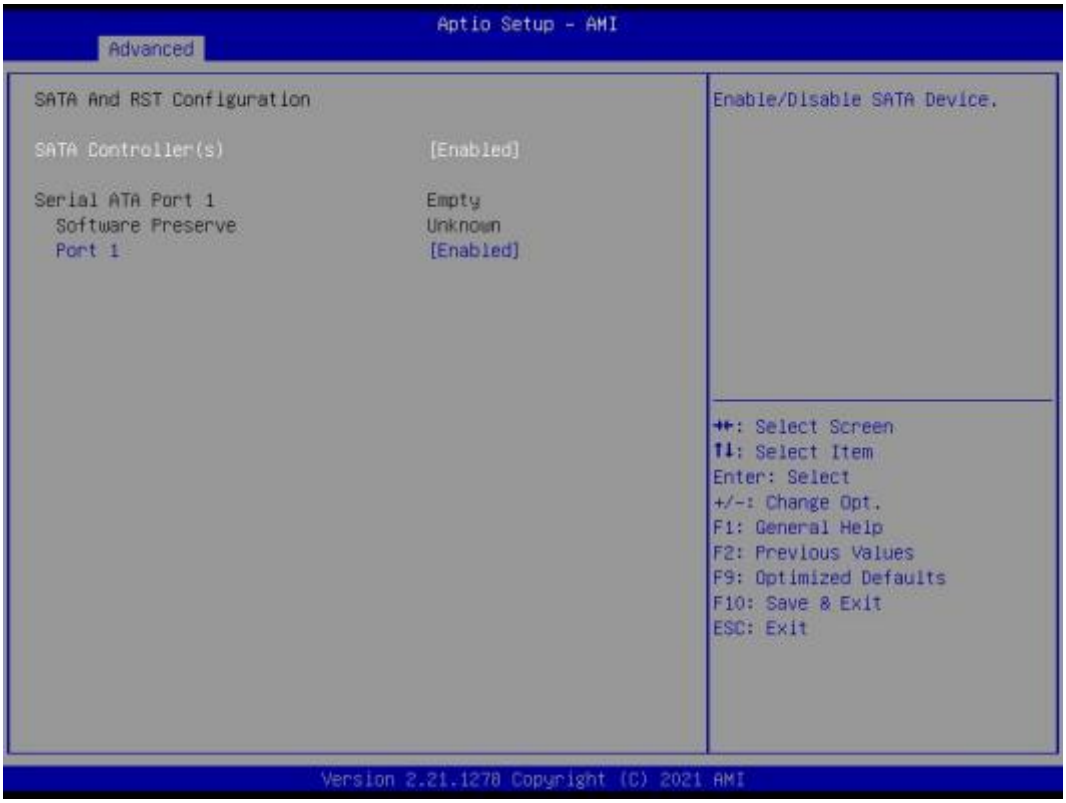
OEM ME Configuration Menu	Description
JAHC Enable	Control Unit (MCU) and software (JAHC Technology Manager). ● Disabled: The JAHC is disable by default. ● Enabled.

4.2.7 OEM ME Configuration

OEM ME Configuration menu	Description
ME Control	● Enable and disable ME control. When disabled ME will be put into ME Temporarily disabled Mode.

4.2.8 System Devices Configuration




Aptio Setup - AMI
Advanced
SATA And RST Configuration
SATA Controller(s) [Enabled]
Serial ATA Port 1 Empty
Software Preserve Unknown
Port 1 [Enabled]
Enable/Disable SATA Device.
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F9: Optimized Defaults
F10: Save & Exit
ESC: Exit
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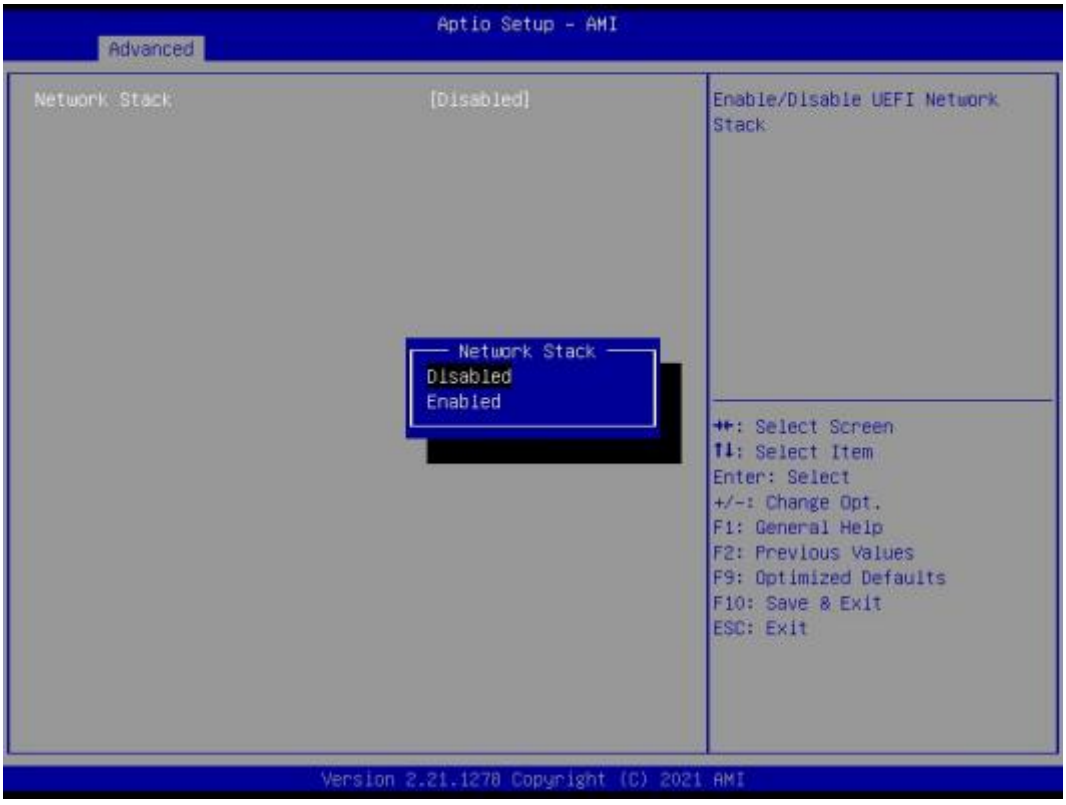
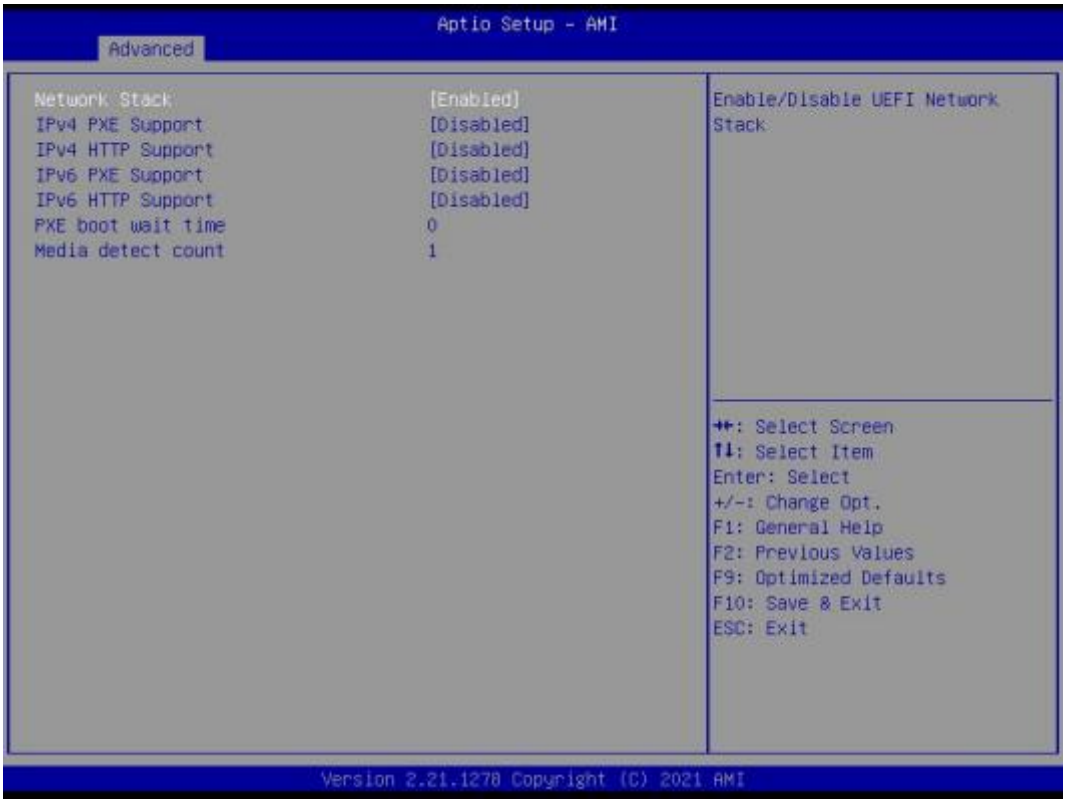

Aptio Setup - AMI
Advanced
Network Stack [Disabled]
Enable/Disable UEFI Network Stack
Network Stack
Disabled
Enabled
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F9: Optimized Defaults
F10: Save & Exit
ESC: Exit
Version 2.21.1278 Copyright (C) 2021 AMI


Aptio Setup - AMI
Advanced
Network Stack [Enabled]
IPv4 PXE Support [Disabled]
IPv4 HTTP Support [Disabled]
IPv6 PXE Support [Disabled]
IPv6 HTTP Support [Disabled]
PXE boot wait time 0
Media detect count 1
Enable/Disable UEFI Network Stack
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F9: Optimized Defaults
F10: Save & Exit
ESC: Exit
Version 2.21.1278 Copyright (C) 2021 AMI

Aptio Setup - AMI
Advanced
NVMe Configuration
No NVME Device Found
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F9: Optimized Defaults
F10: Save & Exit
ESC: Exit
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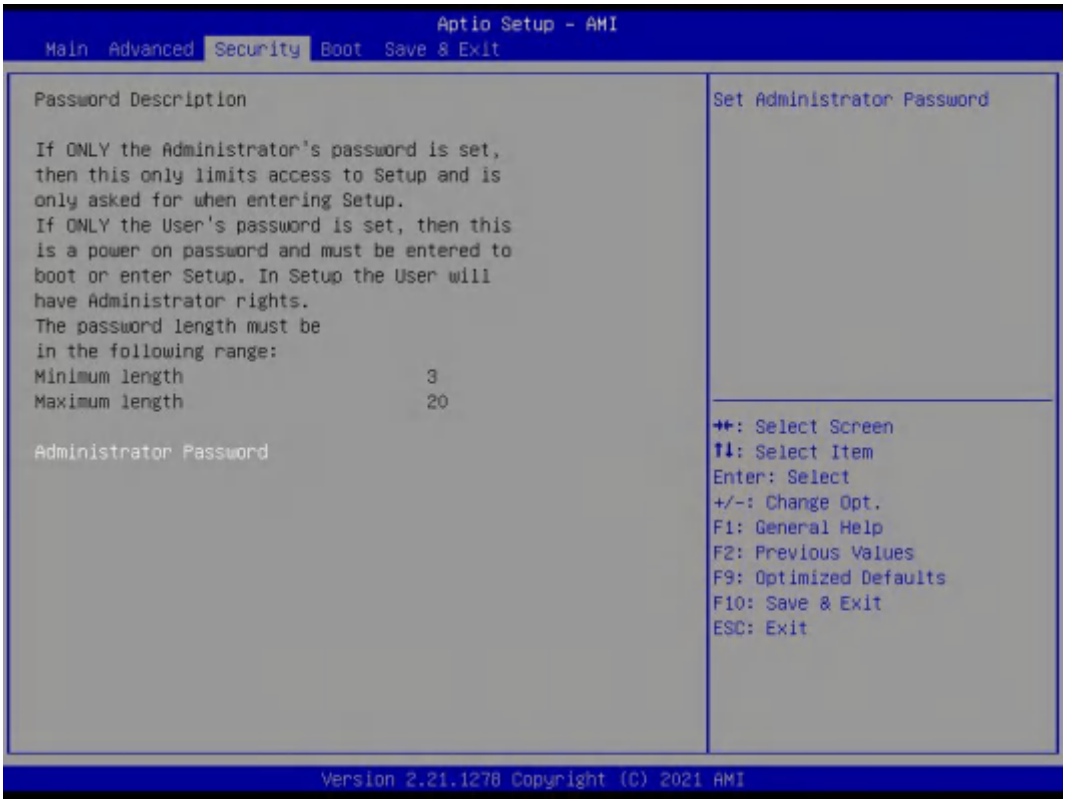
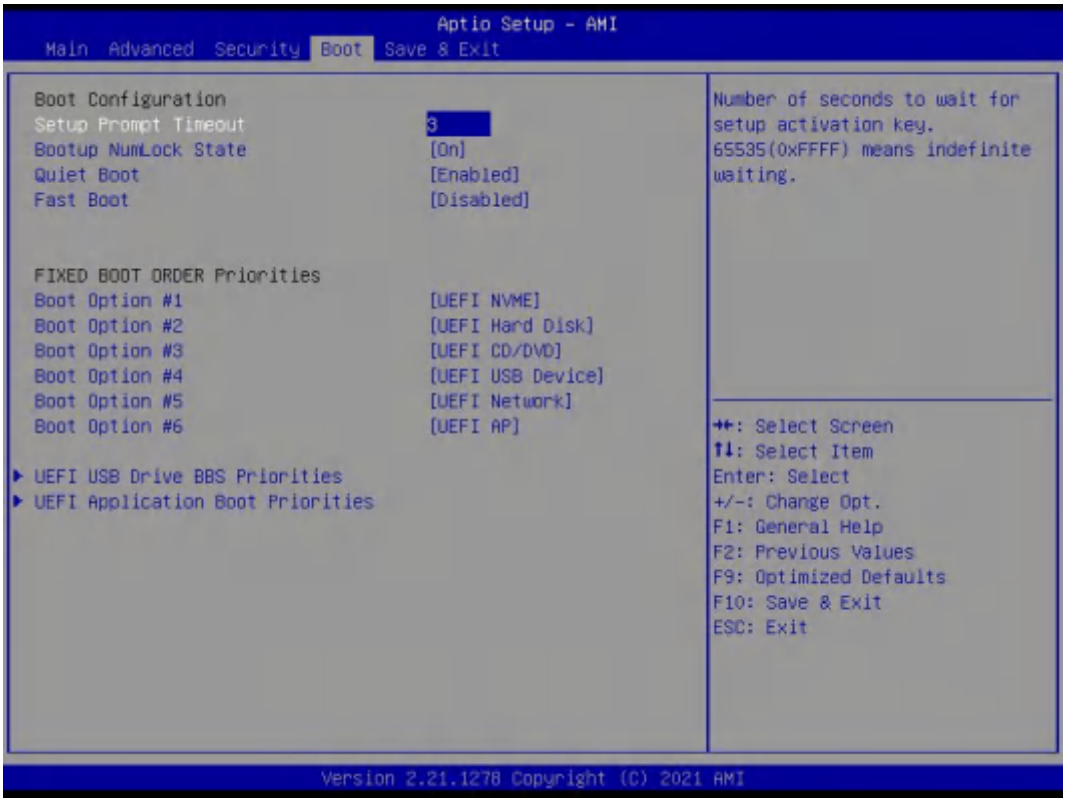
System Devices Configuration menu	Description
SDIO Configuration	● SDIO Configuration Parameters ● DMA Option: Access SD device in DMA mode. ● Auto option: Access SD device in DMA mode if controller support it, otherwise in PIO mode Access SD device in DMA mode if controller support it, otherwise in PIO mode
SATA And RST Configuration	
SATA Controller(s)	Enable/Disable SATA Controller(s)
Network Stack Configuration	This item can enable and disable UEFI network stack.
Ipv4 PXE Support	The user can enable or disable IPV4 PXE Boot support. If disabled IPV4 PXE boot option will not be created. ● Enabled. ● Disabled.IPV4 PXE support is disabled by default.
Ipv4 HTTP Support	The user can enable and disable IPV4 PXE Boot support. If disabled IPV4 HTTP boot option will not be created. ● Enabled. ● Disabled. IPV4 HTTP support is disabled by default
Ipv6 PXE Support	The user can enable or disable IPV4 PXE Boot support. If disabled IPV6 PXE boot option will not be created. ● Enabled. ● Disabled.IPV6 PXE support is disabled by default.
Ipv6 HTTP Support	The user can enable and disable IPV4 PXE Boot support. If disabled IPV6 HTTP boot option will not be created. ● Enabled. ● Disabled. IPV6 HTTP support is disabled by default
PXE boot wait time	● It means wait time to press ESC key to abort the PXE boot.
NVME Configuration	● NVME Device Information

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.

4.4 Boot Menu



Boot Menu	Description
Boot Configuration	
Setup Prompt Timeout	● This item is use 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	● 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	● 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].
Fast Boot	● Enables or disables boot with initialization of a minimal set of devices required to launch active boot option. Has no effect for BBS boot options.
FIXED BOOT ORDER Priorities	

Boot Menu	Description
Boot Option #1	● The first boot device. If BIOS doesn't detect the first boot device, it will check the second boot device.
Boot Option #2	● The second boot device.
Boot Option #3	● The third boot device.
Boot Option #4	● The fourth boot device.
Boot Option #5	● The fifth boot device.
Boot Option #6	● The sixth boot device.
UEFI USB Driver BBS Priorities	● Specifies the boot Device Priority sequence from available UEFI USB Drivers.
UEFI Application Boot Priorities	● Specifies the boot Device Priority sequence from available UEFI Application.

4.6 Save & Exit

Save Exit Item	Description
Save Options	
Save Changes and Reset	● Save all changes and exit

Save Exit Item	Description
Discard Changes and Reset	● Give up the settings and exit.
Restore Defaults	● Recover it to default.
Boot Override	● 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->Enable

c. Press ‘F10’ to save change & exit after select “JAHC enabled” option.

5.2 JAHC software

5.2.1 JAHC software functions

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

5.2.2 JAHC software installation guide

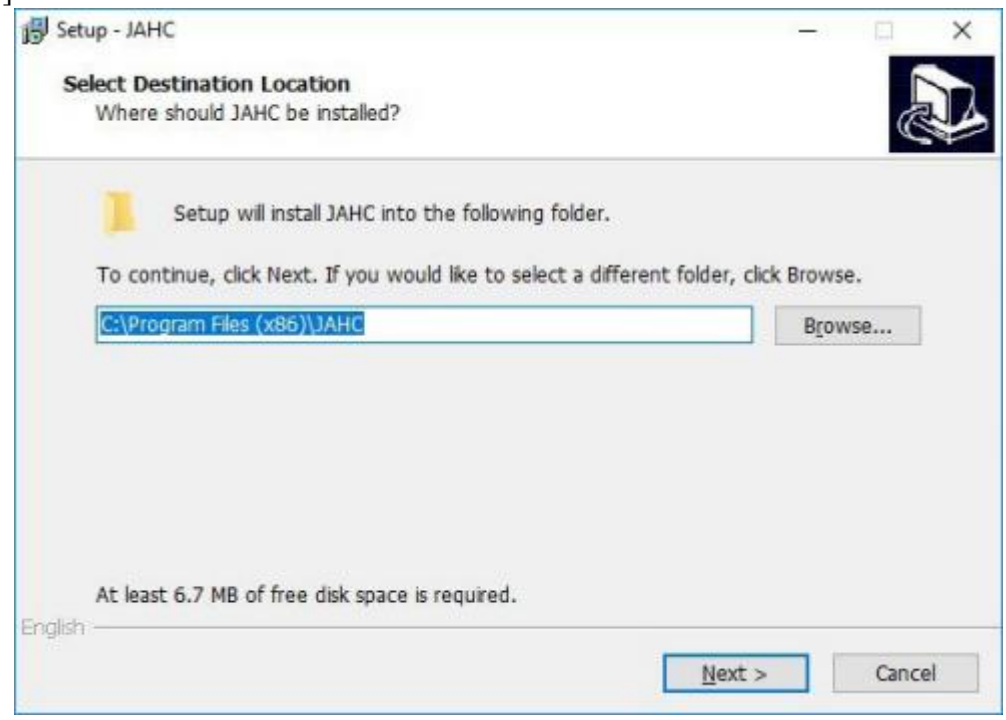
System Requirements:

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

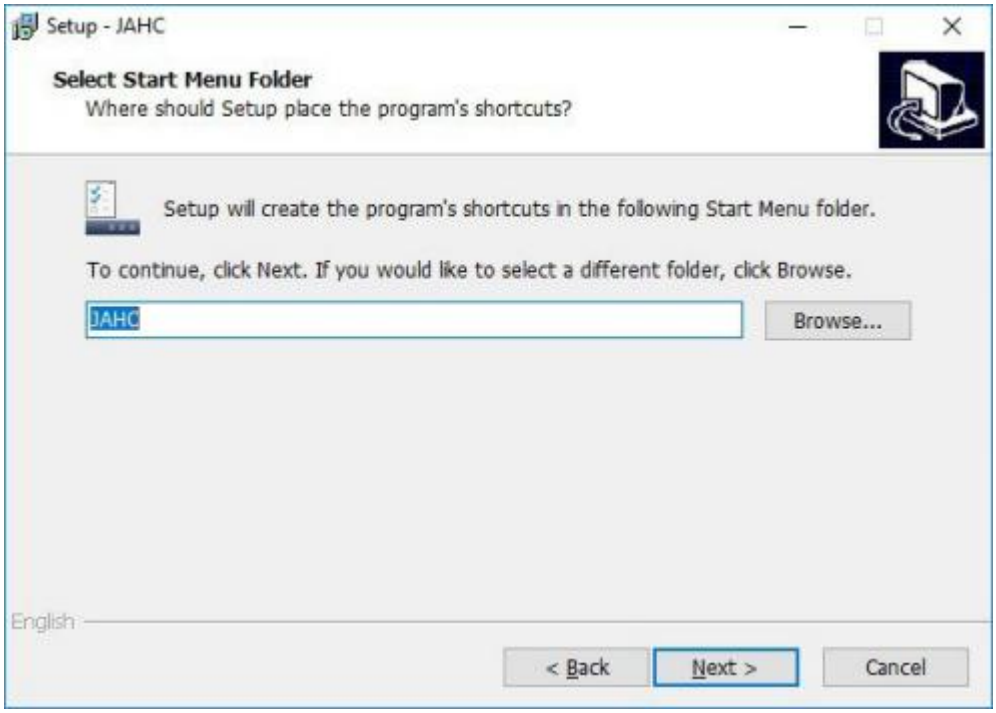
How to install JAHC software:

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

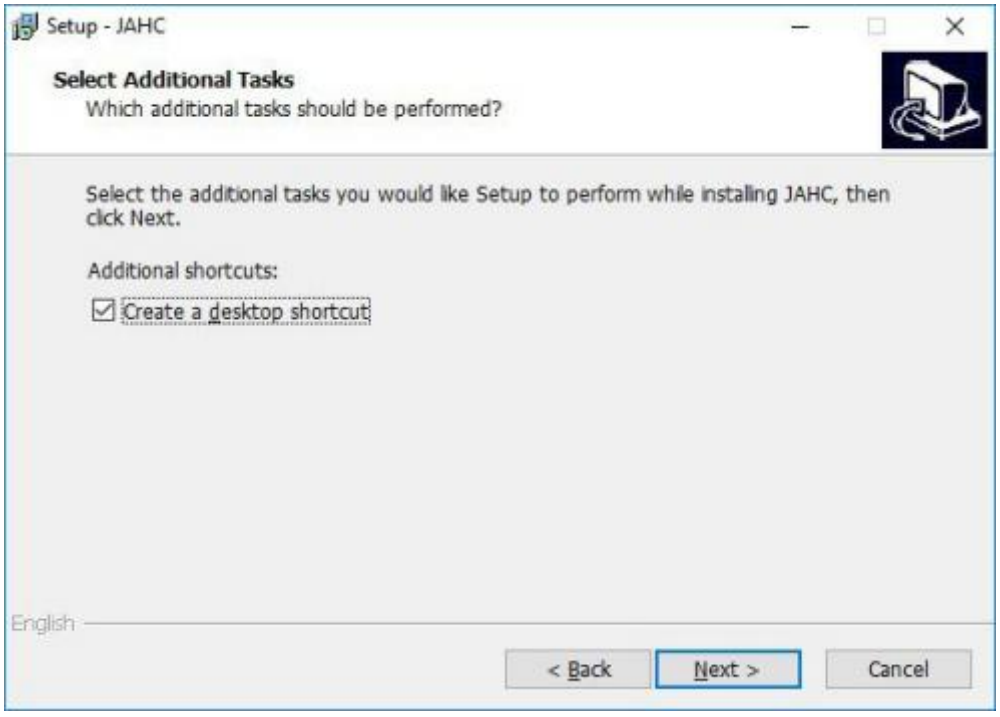
a. Double-click the JAHC.EXE file, the setup wizard will pop up, select destination location and click [Next] button to continue the installation.



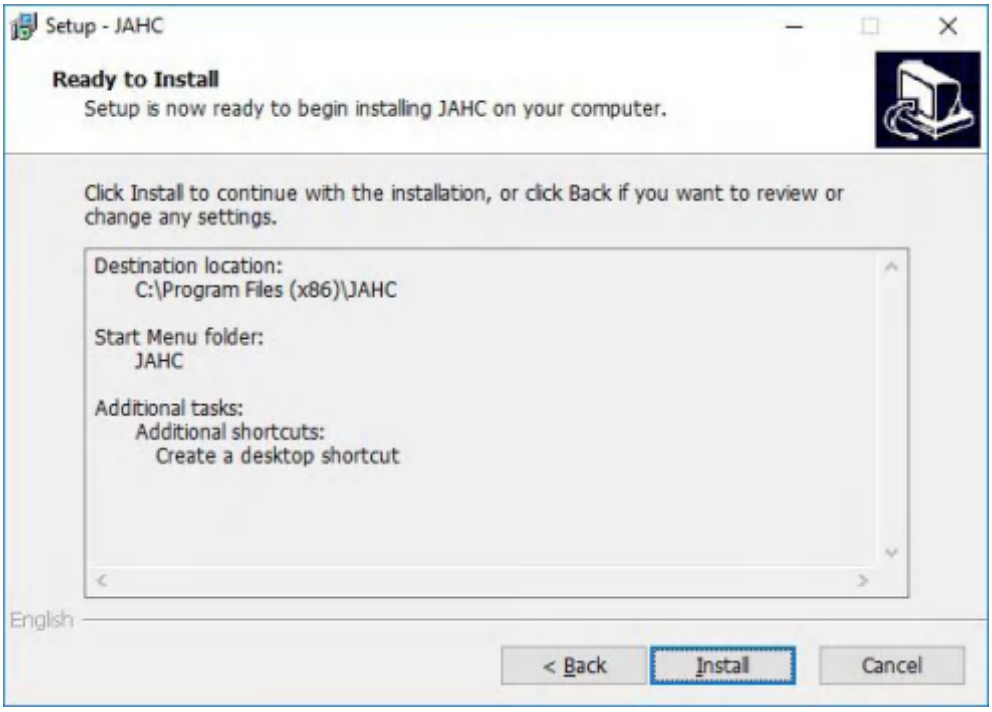
b. Click [Next] button to continue the installation.

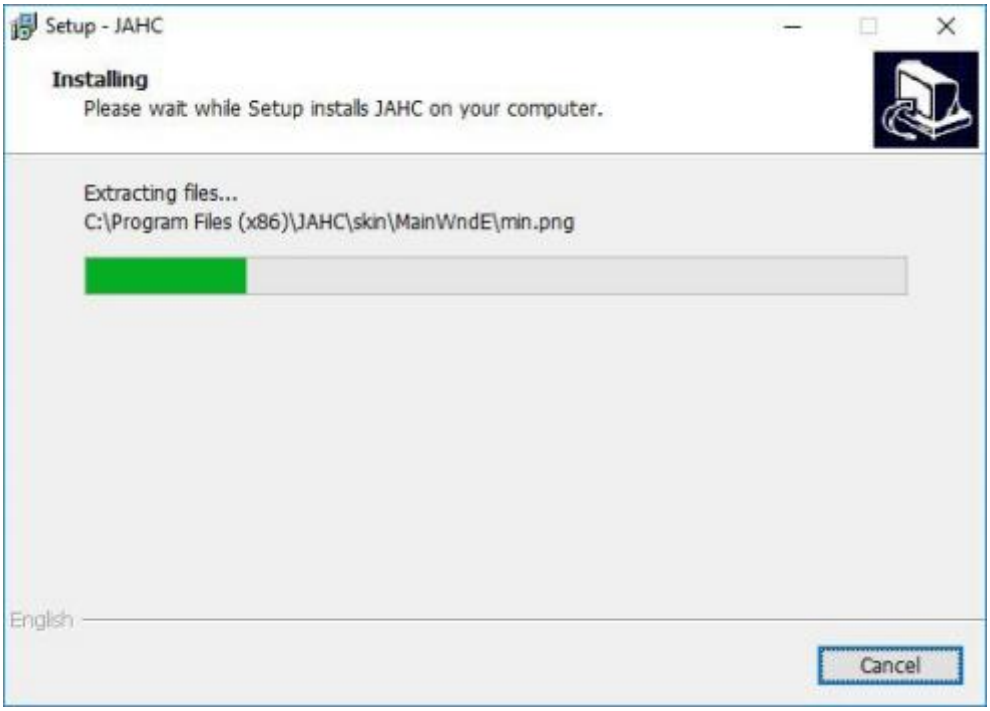


c. Select [Create a desktop shortcut] and click [Next] button.



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



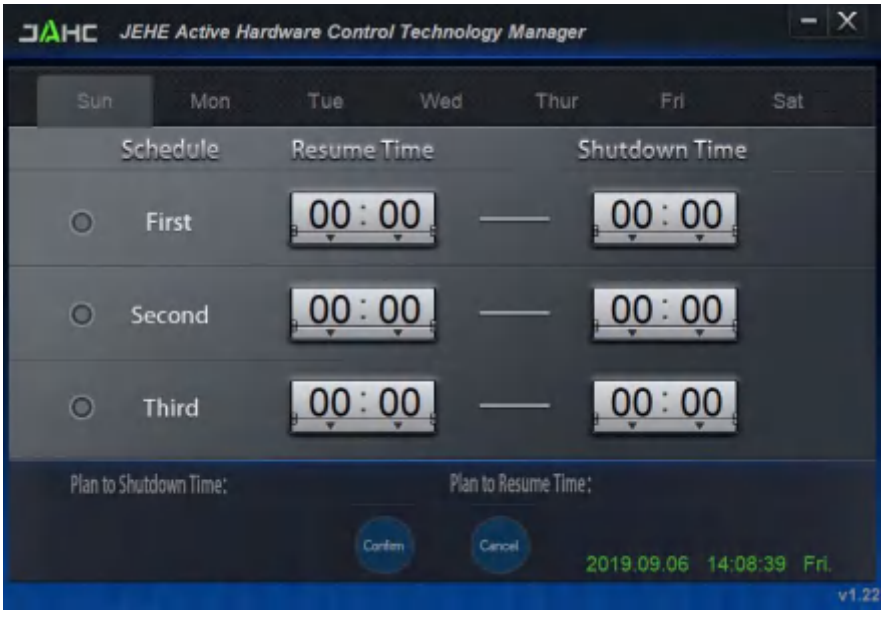


e. Click [Finish] button to finish the installation. You can select [Launch JAHC] to run the software automatically after finishing the installation.

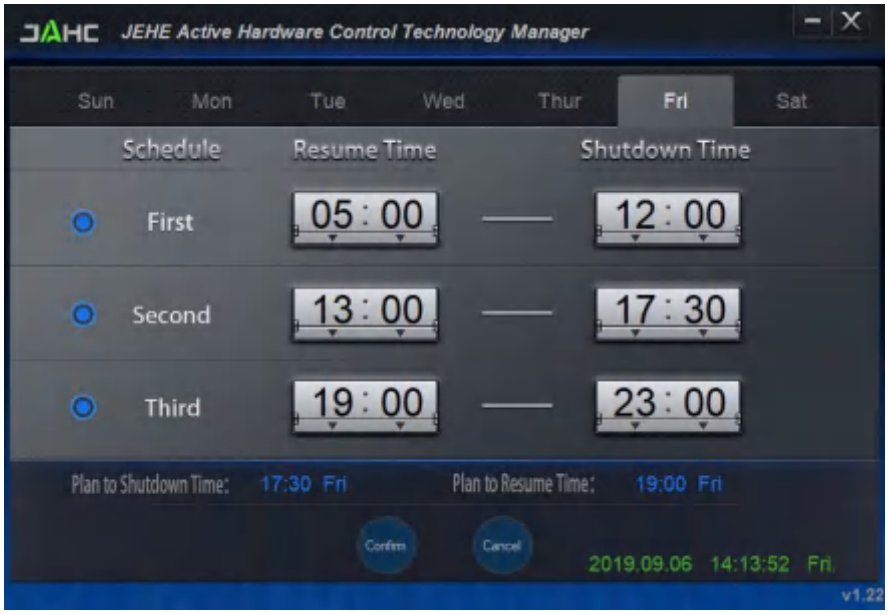
Notice: The JAHC will be added into boot item when it is installed. It will start up when system boot up.

5.2.3 Startup & shutdown time setup

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



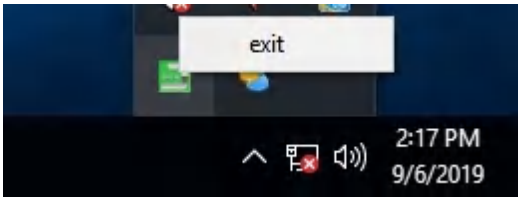
One week as a circle, maximum 3 schedules per day. Select each schedule to set up the resume time and shutdown time. Click [Confirm] button to launch the schedule.



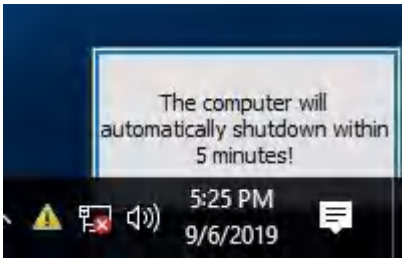
After finishing the setup, the menu window will notice the resume time and shutdown time.

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

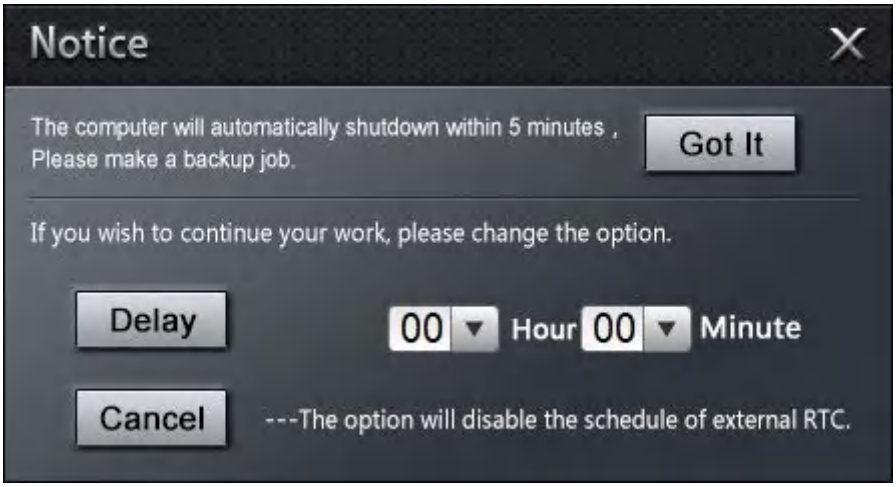
Click [Cancel] button to restore the time settings and cancel the shutdown status.
Click [X] button to hide the menu. You can find it on taskbar.
Right click the JAHC icon on taskbar and select [exit] to exit the software.



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 and 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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