Giada

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F105D User Manual

Shenzhen JEHE Technology Development Co., Ltd.

Statement

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.
• Don't disconnect the power cord 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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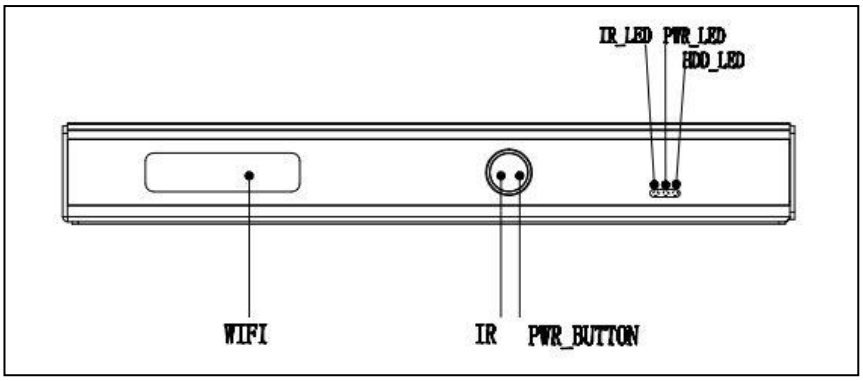
1. Product Introduction

Based on Intel® Apollo Lake platform, Giada F105D adopts DDR3L dual-channel memory as well as M.2, mSATA and SATA storage interface design. With one DP, one HDMI and one VGA display outputs, it supports three independent display outputs. The player is suitable to be applied in mainstream digital signage applications.

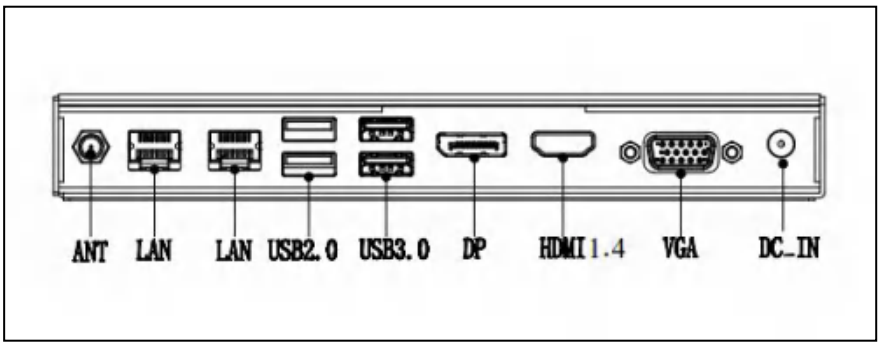
2. Interface Description and Hardware Specifications

2.1 Interface Description

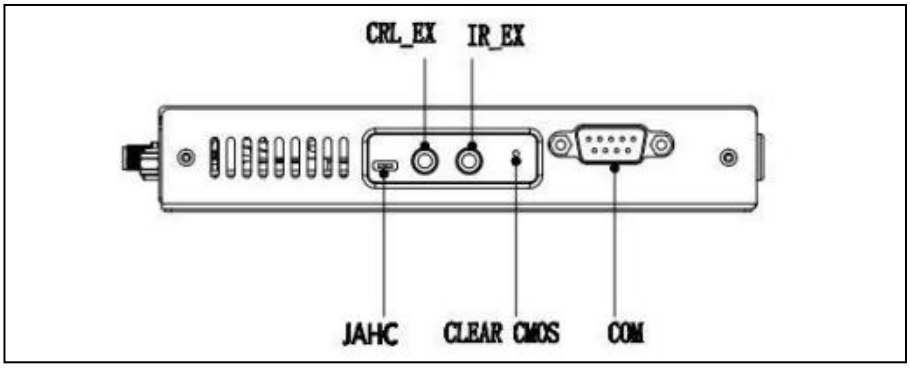
Front I/O Port



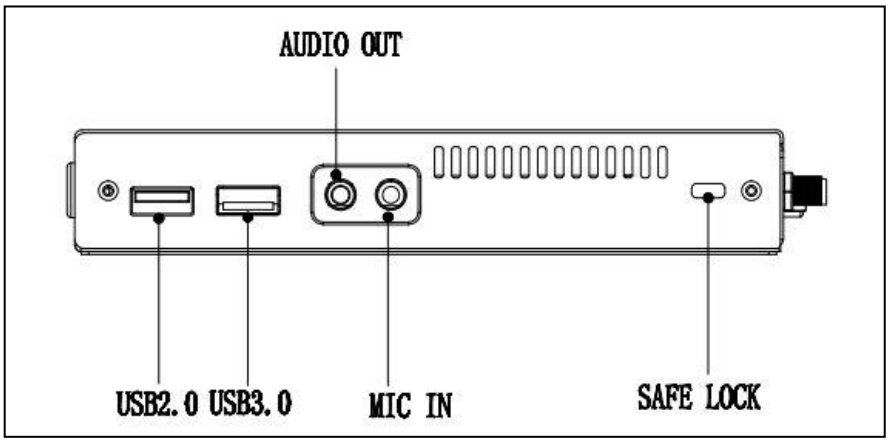
Rear I/O Port



Left I/O Port



Right I/O port



2.2 Hardware Specifications

F105D		F105D-BS200	F105D-BQ200
Processor	**CPU**	Intel® Celeron N3350	Intel® Celeron N3450
	Frequency	1.10GHz (Up to 2.40GHz)	1.10GHz (Up to 2.20GHz)
	BIOS	AMI Source Code	
	Chipset	SOC	
Memory	**Type**	DDR3L-1866MHz	
	Socket	1 x SO-DIMM	
	Onboard	2GB	
	Max Capacity	8GB	
Graphics	**GPU**	Intel® Gen9 Graphics engine	
	Graphic Engine	Direct X 12.0, OpenGL 4.3, OpenCL 2.0	
	DP	1 x DP (Max.4096 x 2304 @60Hz)	
	HDMI	1 x HDMI (Max.3840 x 2160 @30Hz)	
	VGA	1 x VGA (Max.2048 x 1536 @60Hz)	

Network	**Controller**	2 x Realtek 8111H Gigabit Ethernet
	Interface	2 x RJ45
I/O Interface	**USB**	3 x USB 3.0, 3x USB 2.0
	Audio	1 x MIC-IN, 1x AUDIO OUT&SPDIF
	Mini PCIe #1	1 x Full-size Mini-PCIe for mSATA
	Mini PCIe #2	1 x Full-size Mini-PCIe for WiFi/BT/3G/4G
	M.2 (2242/2280)	1 x M.2 (2242/2280) for SSD
	SIM Slot	1 x SIM Slot
	Serial Port	1 x RS232
Storage	**SATA**	1 x 2.5" SATA
	M.2	1 x M.2 (2242/2280)
	mSATA	1 x Full-size mSATA
JAHC	**JAHC**	Watchdog / Auto power on/IR Remote Control / RTC/Wake On Lan
Operation System	**OS**	Windows 10（64-bit) / Linux
Power	**Power Type**	DC-IN
	Input Voltage	19V/2.1A
Mechanical	**Construction**	Metal
	Mounting	Desk/VESA Mounting（JZ183）
	Dimension (W x D x H)	189.6mm x 148.3mm x 26mm
	Color	Black
Environment	**Operating Temperature**	0-40℃ 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 top cover and bottom cover

Unscrew the four screws and remove the top cover. (2.5” SATA slot and M.2 slot for SSD are on top side)
Unscrew the four screws, push the bottom cover and remove it. (SO-DIMM, mini PCIE#1 slot for MSATA, mini PCIE#2 slot for WIFI/3G/4G and SIM card slot are on bottom side)

3.1 Memory Installation

⚠ This product only supports DDR3L 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.

3.2 WiFi/3G/4G (Mini-PCIe) Installation

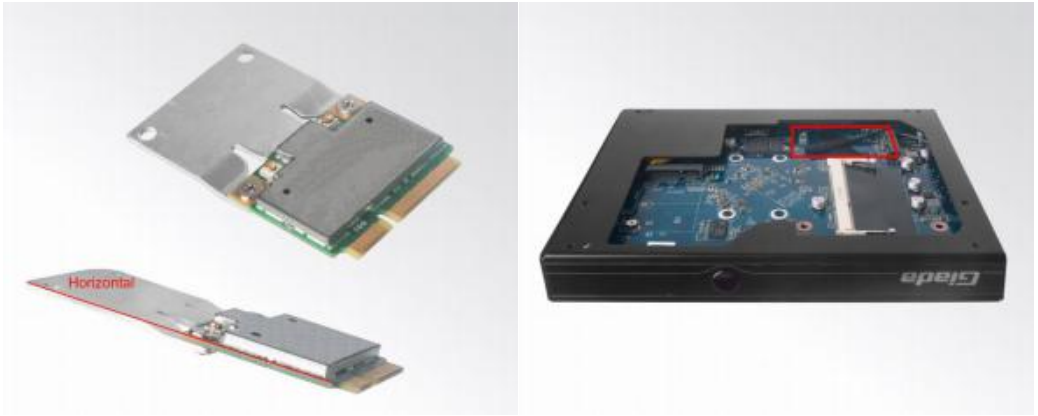
- **WIFI Installation**

1. Tighten the WIFI module and WIFI module bracket with screws.
2. Plug the WIFI module into the mini PCIE slot.
3. Secure the module to the carrier by tightening up the screw.
4. Connect the black cable to **Main** and grey cable to **AUX**. Install the antenna.

- **3G/4G Installation**

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



3.3 MSATA Installation

1. Plug the SSD (MSATA) into the mini PCIE slot.
2. Secure the MSATA module to the carrier by tightening up the screw.

3.4 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.

3.5 2.5" SATA Installation

1. Plug 2.5” SATA into the slot.
2. Tighten up the two screws from another (bottom) side
3. Remove the clear membrane of the thermal pad and paste the pad on the 2.5” SATA.
4. Remove the blue membrane of the thermal pad.

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 occurs. If the indicative information disappears before you operating, you can shut down 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 press < Ctrl > + < Alt > + < Delete > simultaneously.

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.

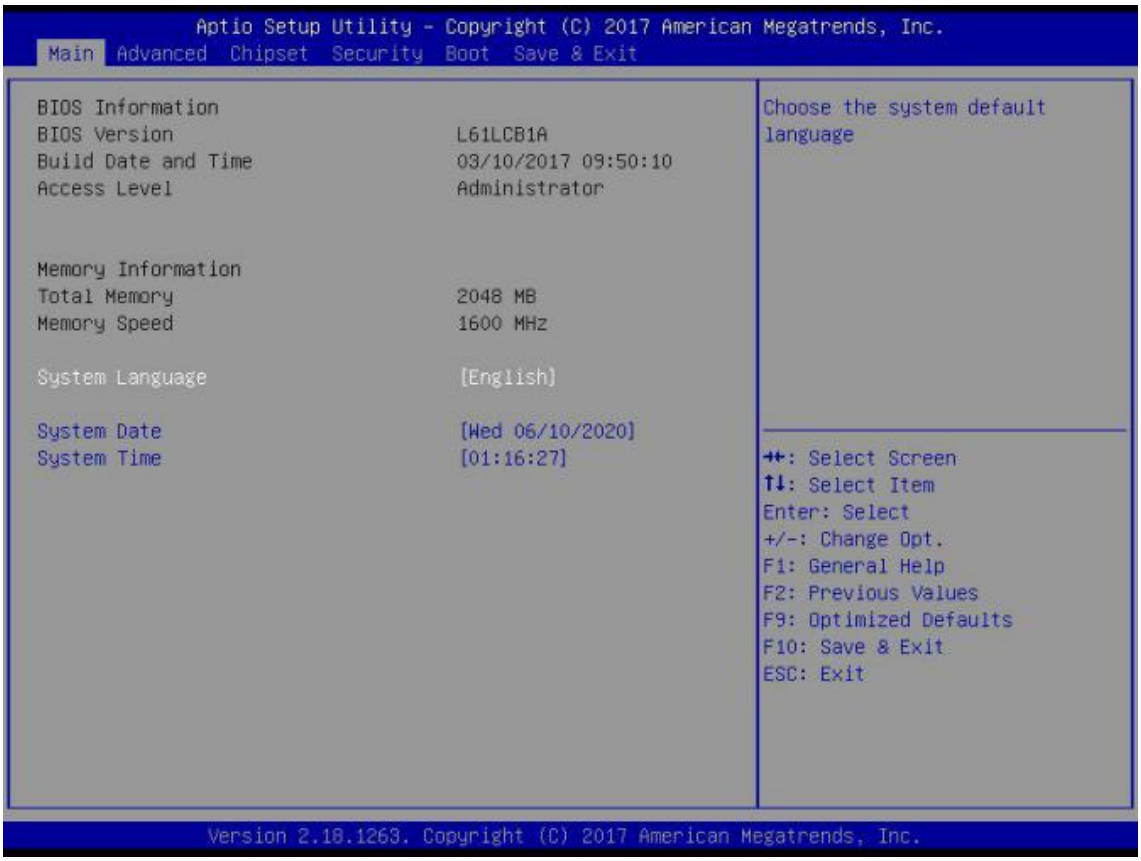
When you set the value for each column, you can view the preset value of the column and the values that can be set if you press F2, for example, the BIOS default values or CMOS Setup values.
To exit the interface for auxiliary information, press [ESC].

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

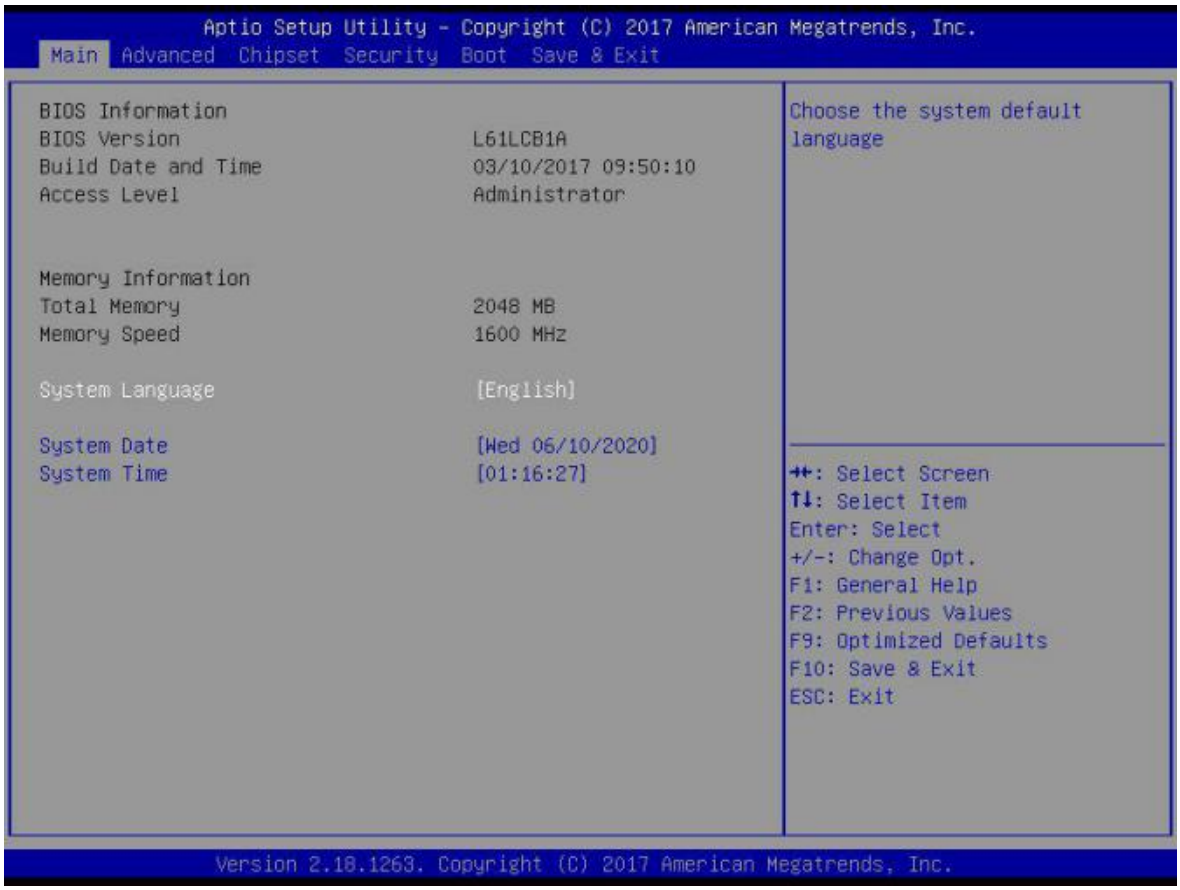
4) Security (set the administrator/user password)

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)



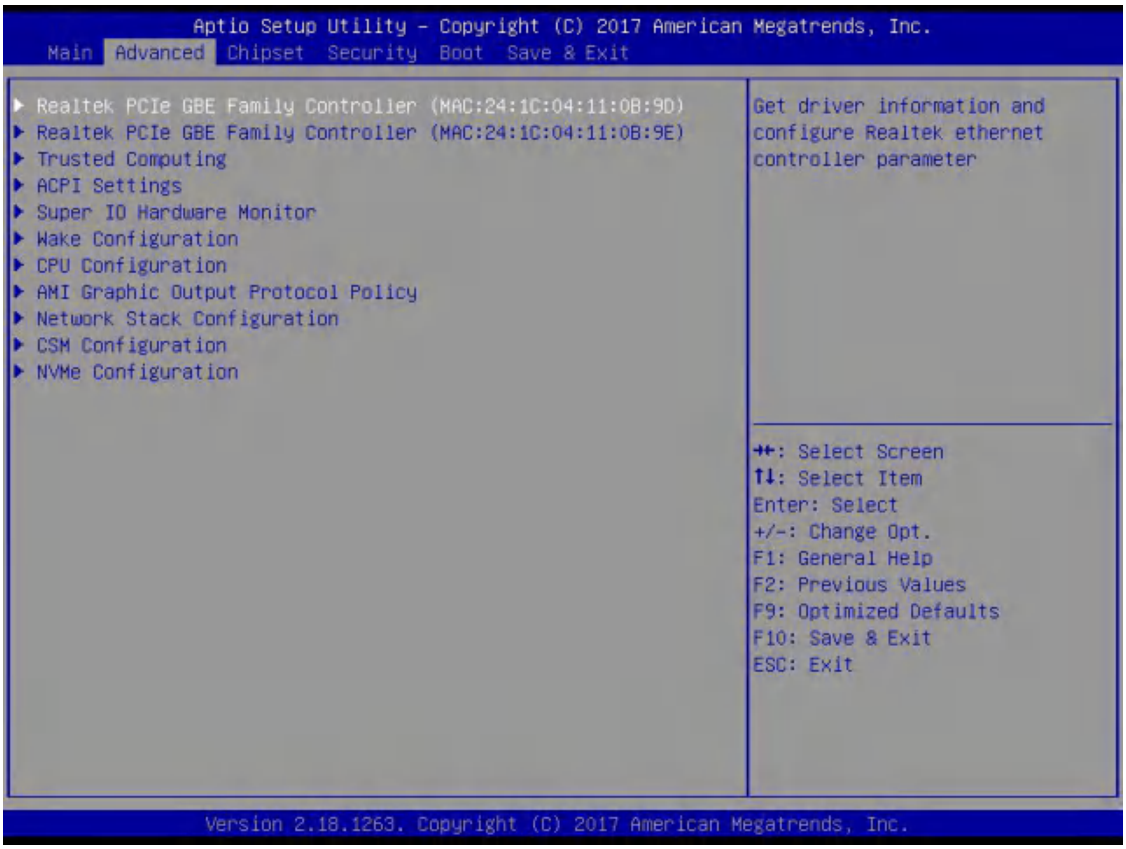
1) System time (hh:mm:ss)

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

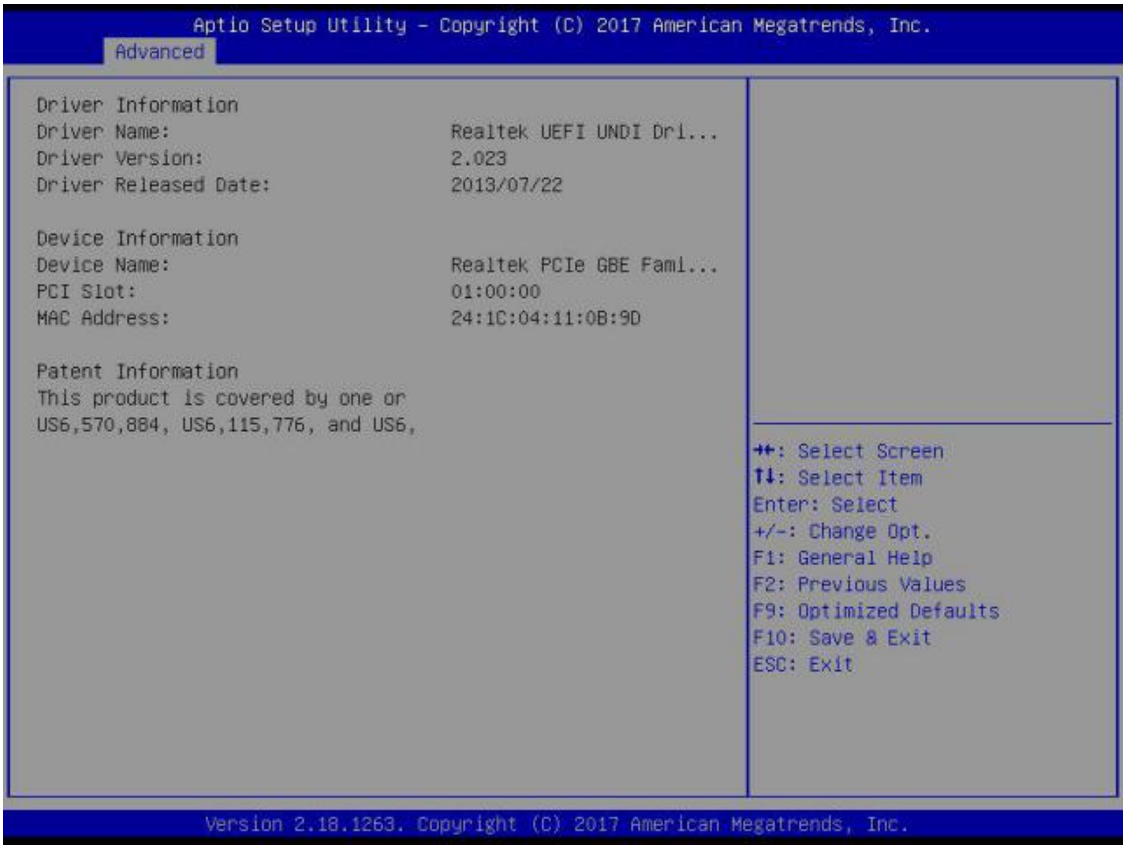
2) System date (mm:dd:yy)

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

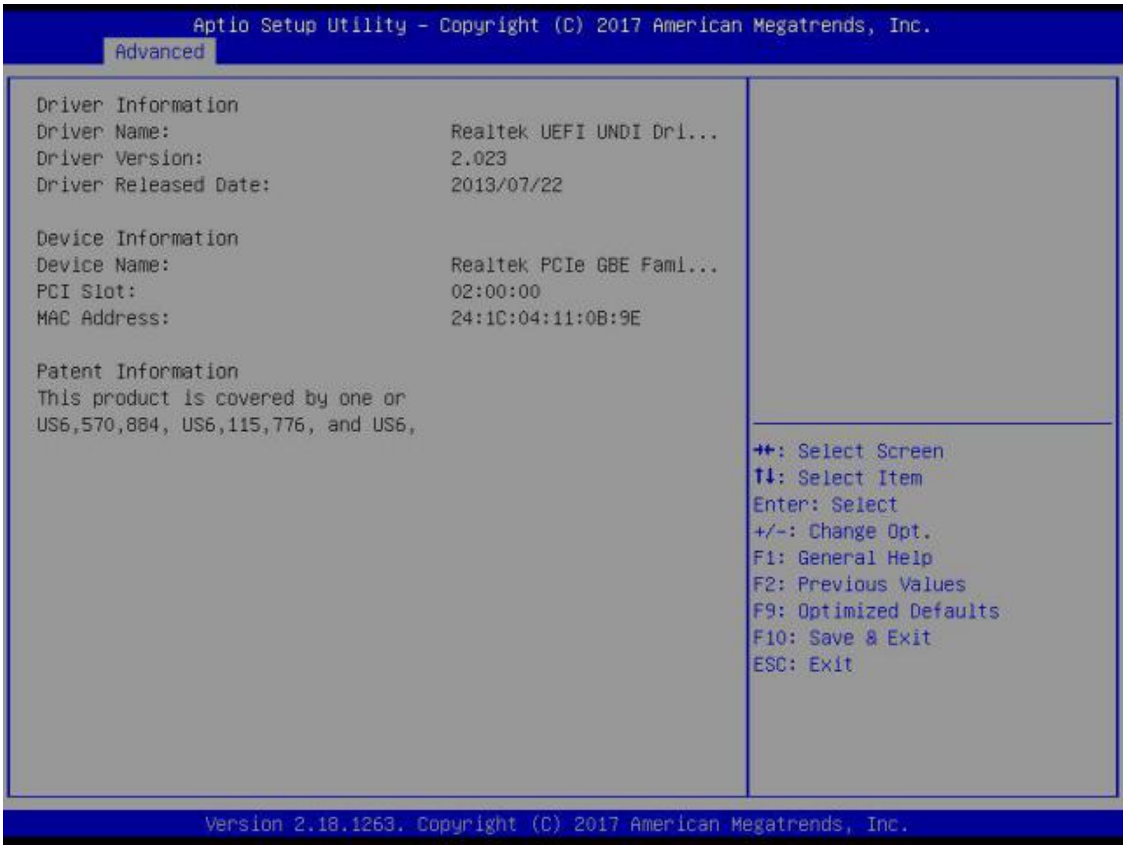
4.2 Advanced (Advanced BIOS setup)



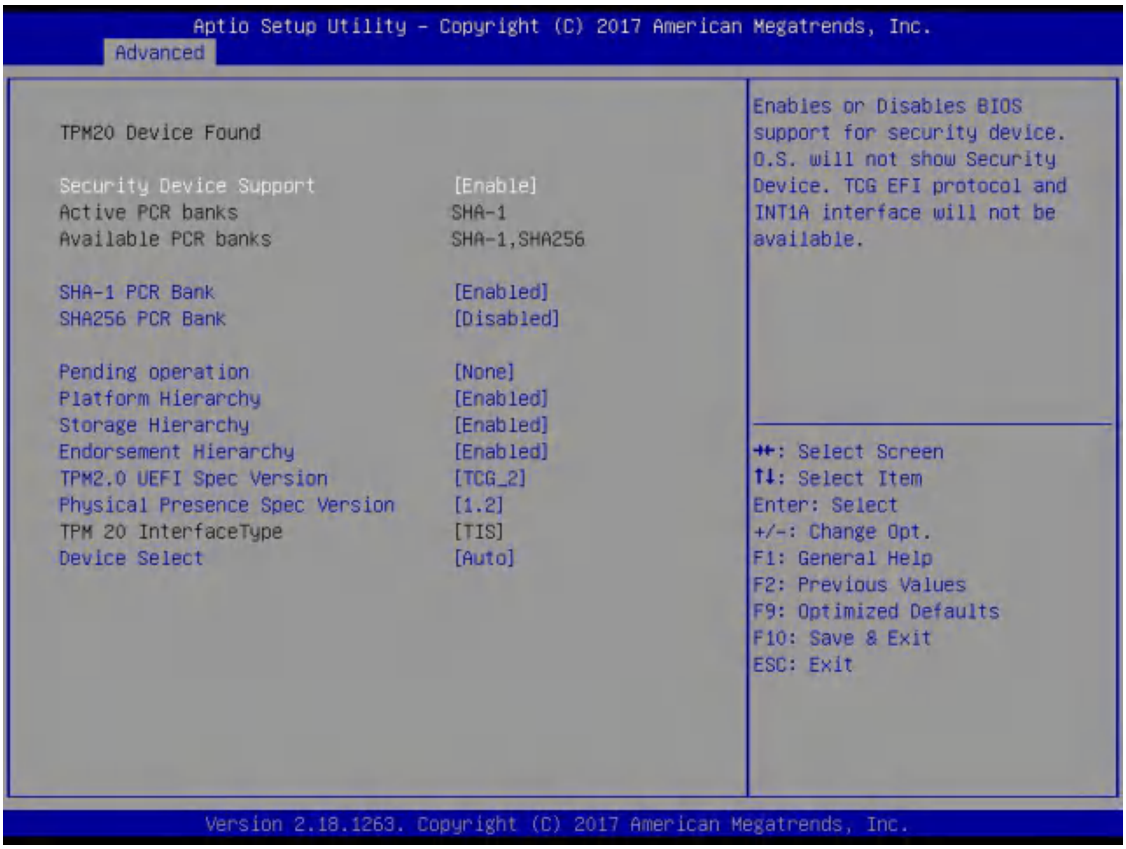
4.2.1 Realtek PCIE GBE Family Controller1



4.2.2 Realtek PCIE GBE Family Controller2

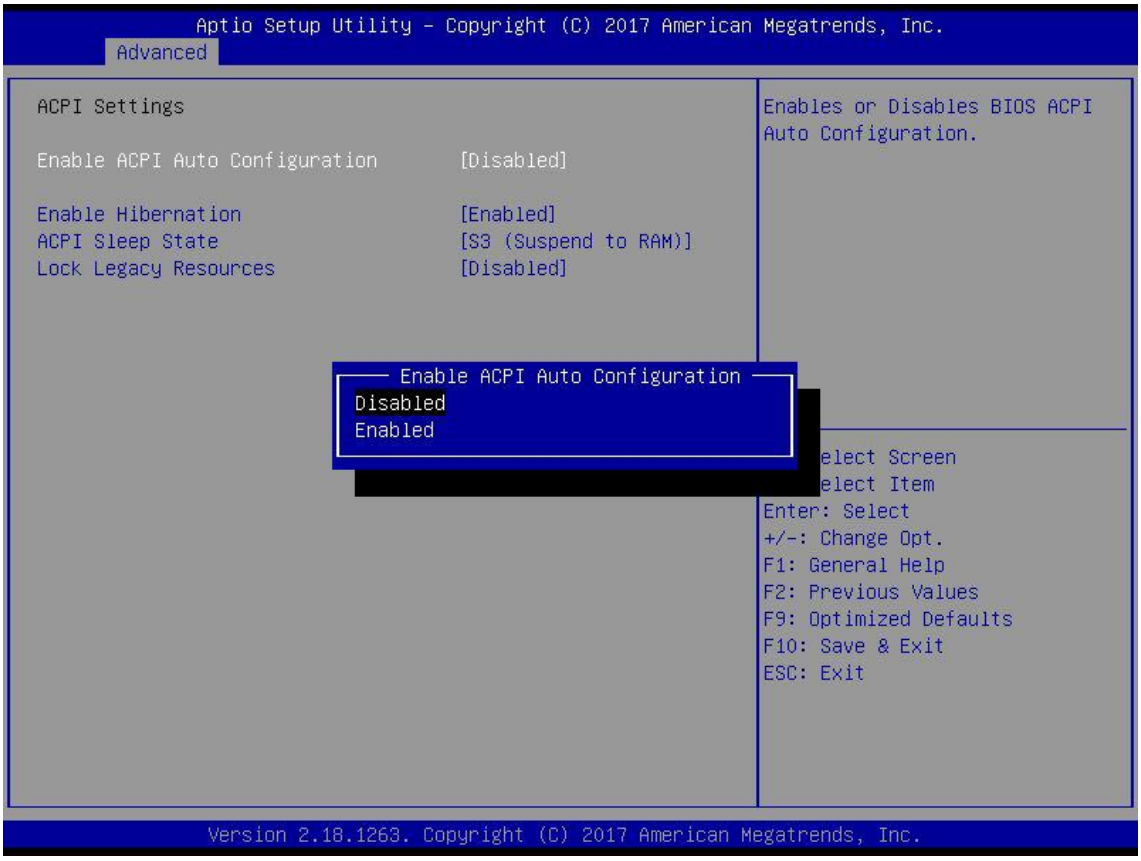


4.2.3 Trusted Computing



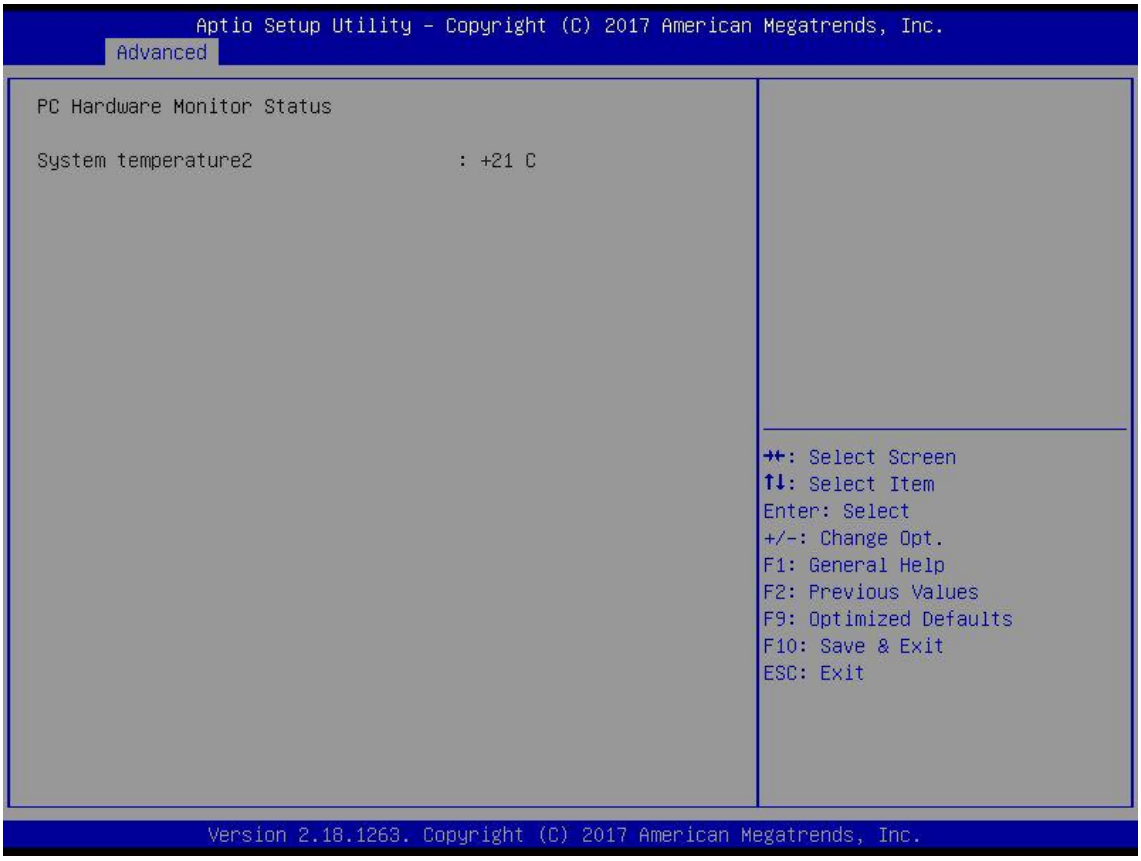
Trusted Computing	Description
TPM20 Device Found	TPM2.0 device information.
Security Device Support	Enables or Disables BIOS support for security device. OS will not show security device. TCG EFI protocol and INT1A interface will not be available.
SHA-1 PCR Bank	Enabled/Disabled SHA-1 PCR Bank
SHA256 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.
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 ACPI Settings



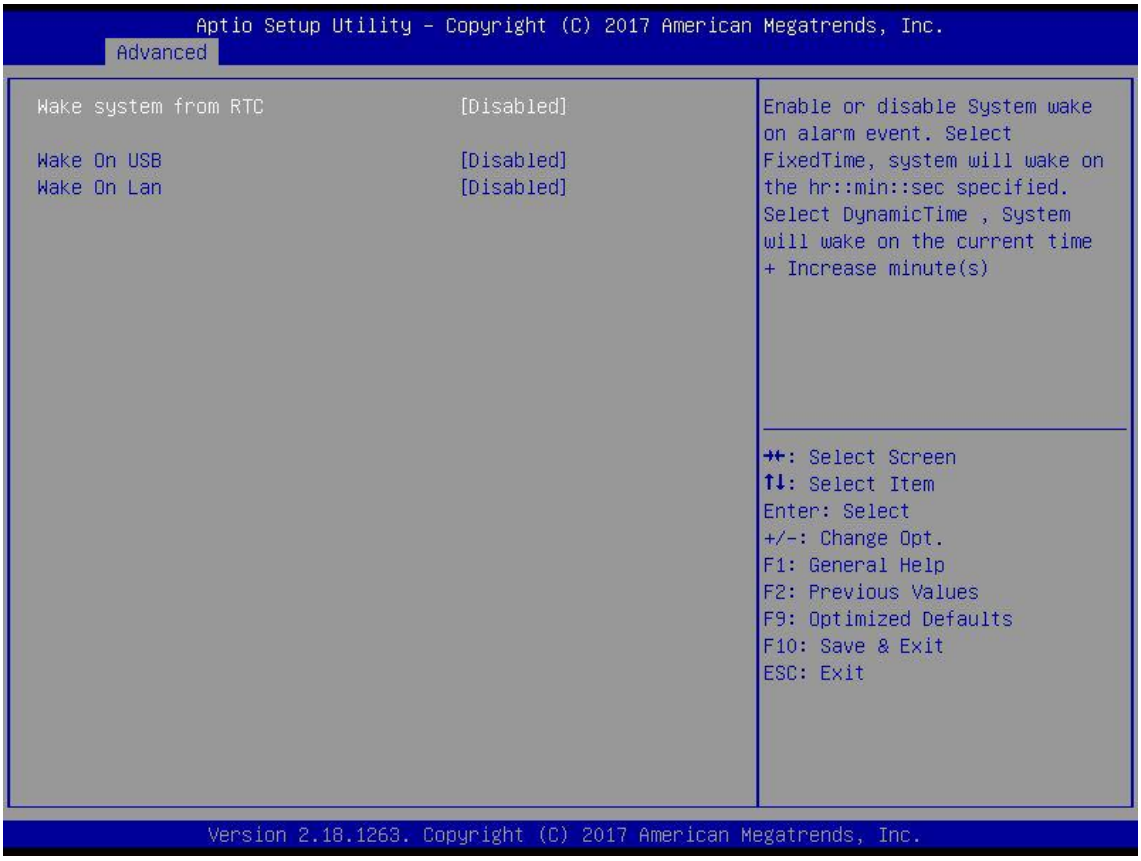
ACPI Menu	Description
Enable ACPI Auto Configuration	Enables or Disables BIOS ACPI auto configuration.
Enable Hibernation	Enables or disables system ability to Hibernate (OS/S4 Sleep). This option may be not effective with some OS.
ACPI Sleep State	Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.
Lock Legacy Resources	Enabled or disabled lock of legacy resources.

4.2.5 Super IO Hardware Monitor



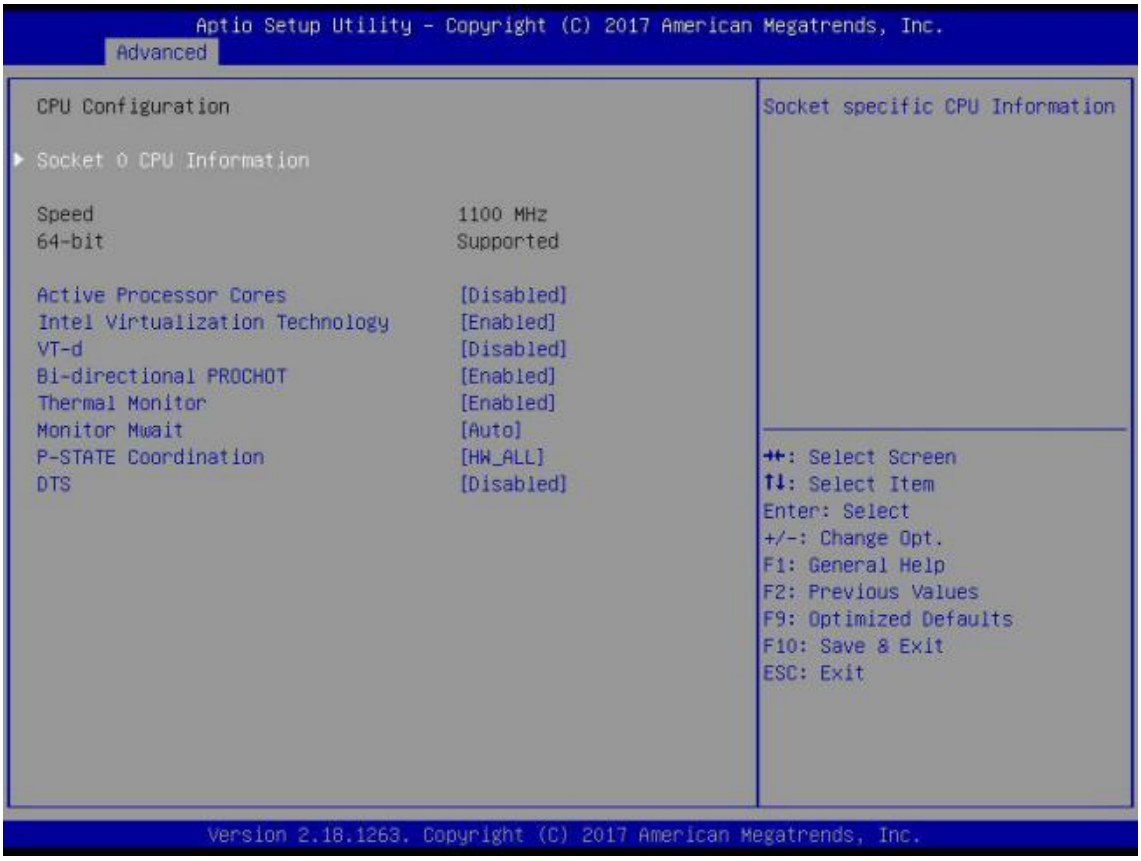
Super IO Hardware Monitor Menu	Description
PC Health Monitor Status	PC Health Monitor Status
System temperature2	The Current System temperature2.

4.2.6 Wake Configuration



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

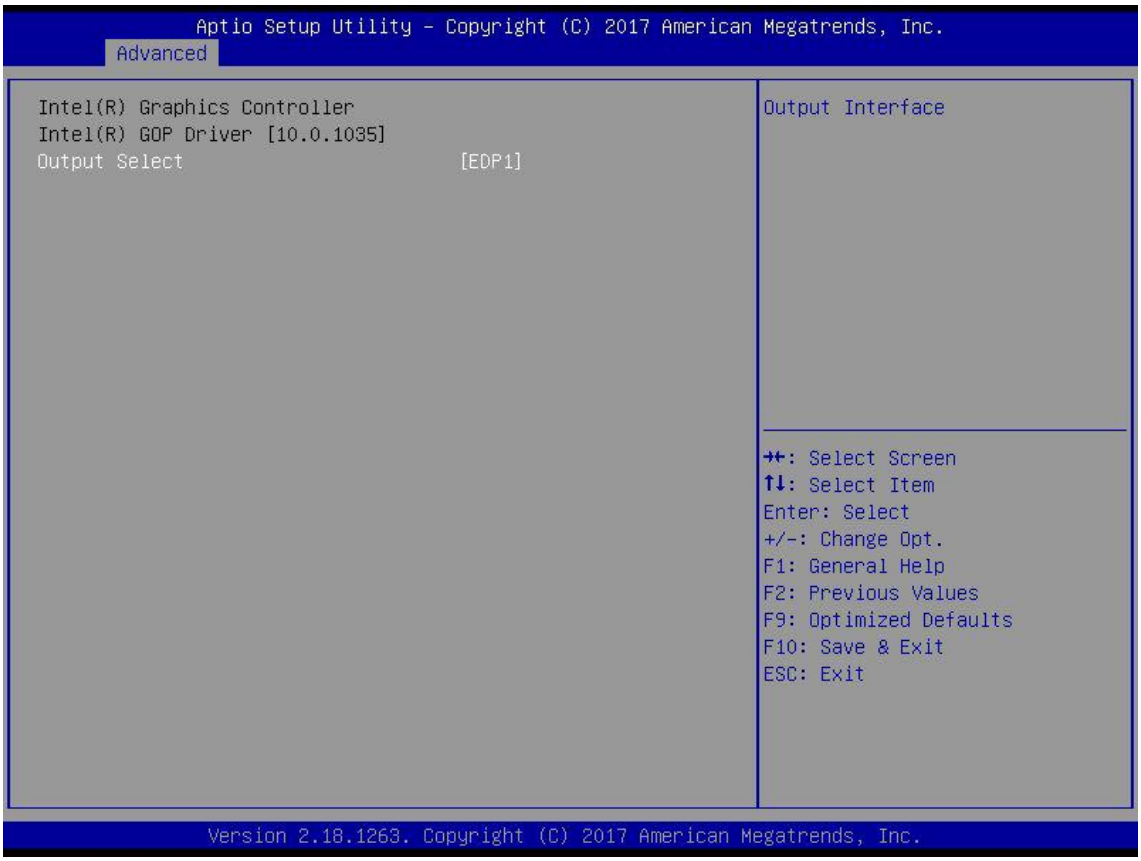
4.2.7 CPU Configuration



CPU Configuration Menu	Description
Socket 0 CPU Information	Socket specific CPU information.
Active Processor Cores	Number of cores to enable in processor package.
Intel Virtualization Technology	Intel Virtualization Technology is enabled by default. User can enable and disable the Intel Virtualization Technology function.
VT- d	Intel® Virtualization Technology for Directed I/O
Thermal Monitor	Enable/Disable Thermal Monitor. ● Enabled. This item is enabled by default. ● Disabled.
Monitor Mwait	Enable/Disable Monitor Mwait. ● Enabled. This item is enabled by default. ● Disabled. ● AUTO.

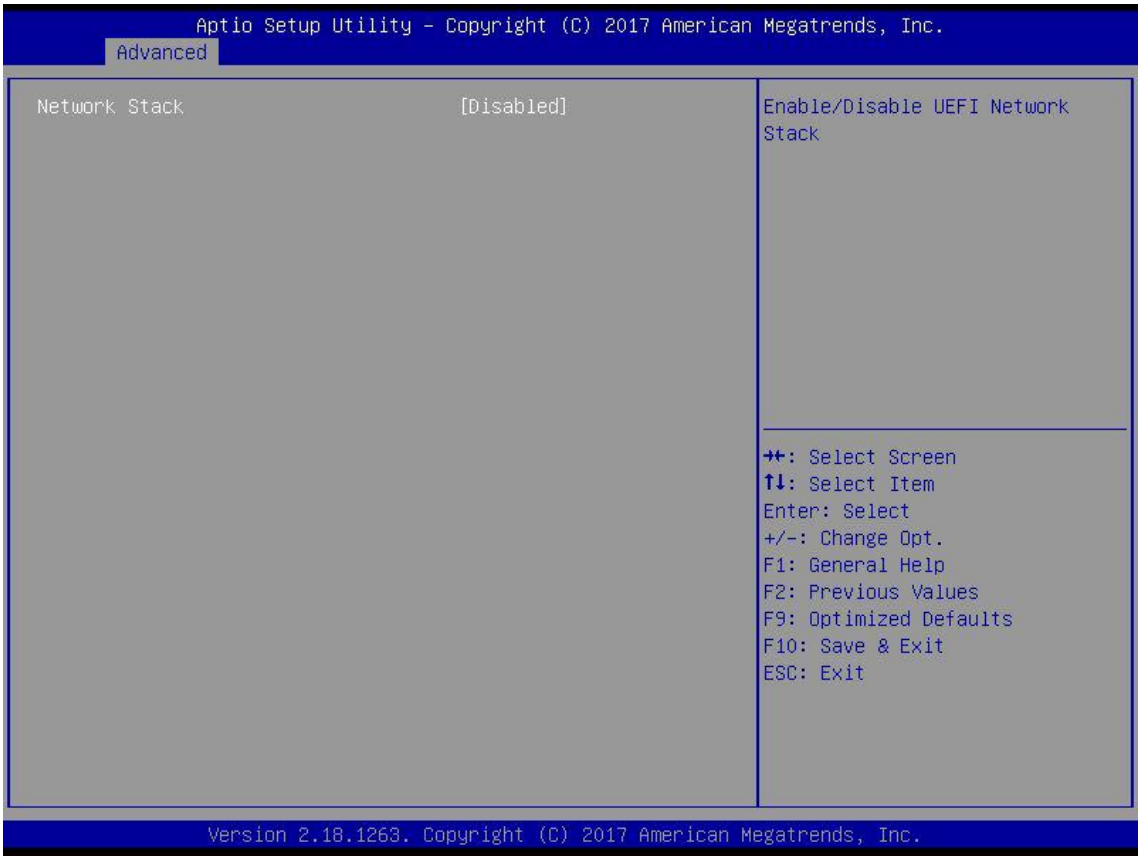
CPU Configuration Menu	Description
P-STATE Coordination	The user can set the CPU P-States by P-STATE Coordination. ● HW_ALL. Enable hardware to support P-STATES. This item is enabled by default. ● SW_ALL. Enable software to support P-STATES ● SW_ANY. Disabled P-STATE Function.
DTS	This item is CPU digital thermal sensor.

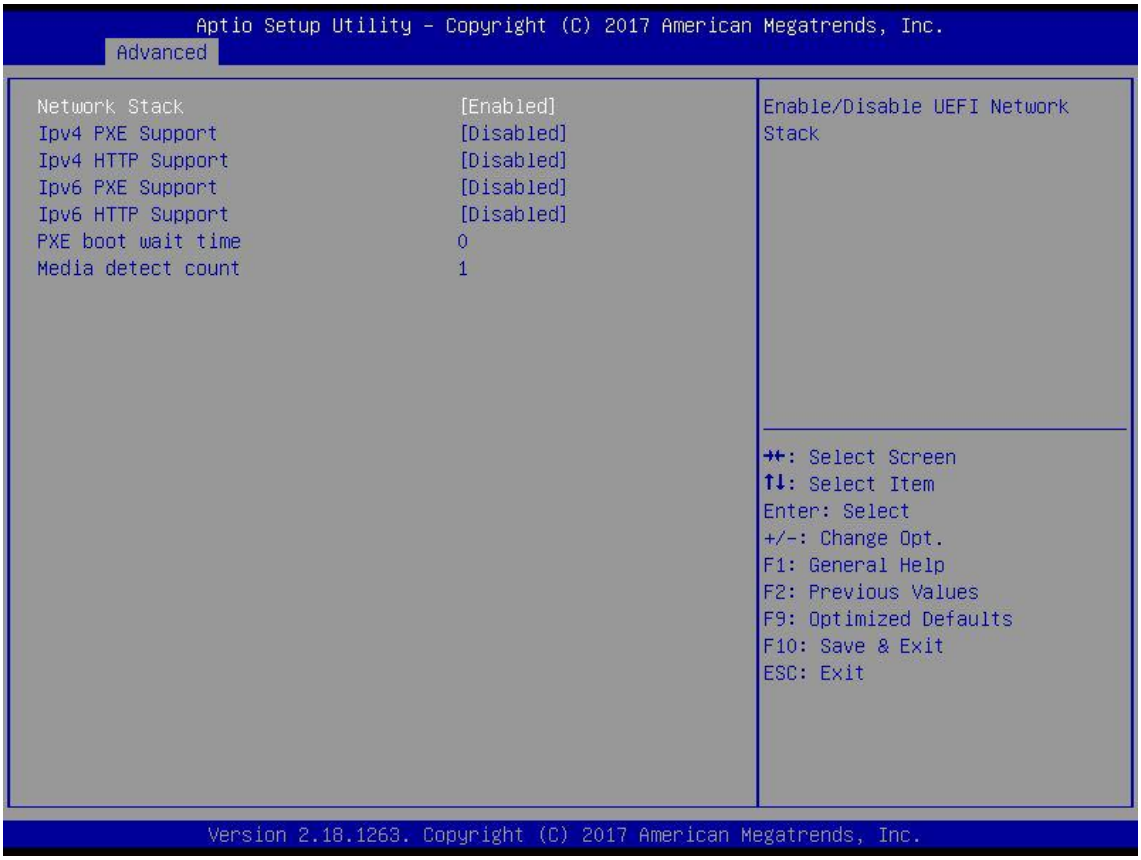
4.2.8 AMI Graphic Output Protocol Policy



Graphic Output Protocol Policy Menu	Description
Output Select	User select monitor output by graphic output protocol.

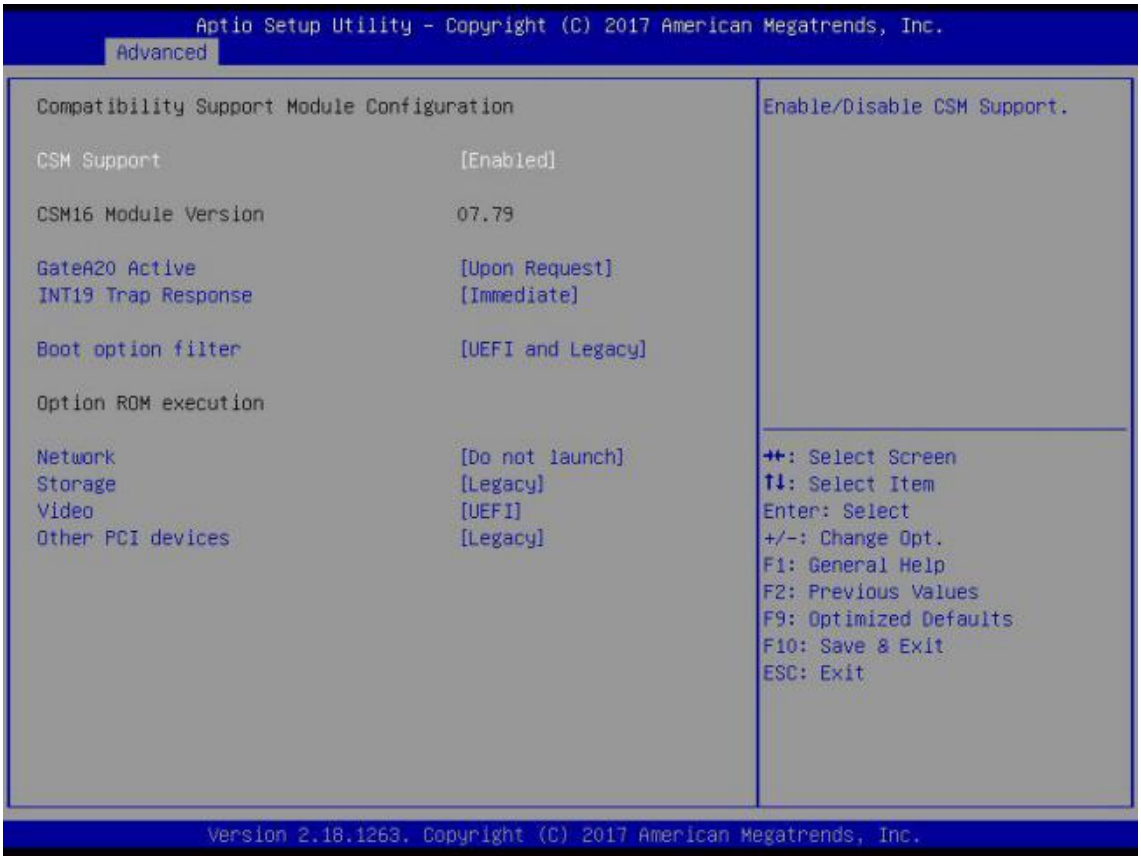
4.2.9 Network Stack Configuration





Network stack Menu	Description
Network Stack	This item can enable and disable UEFI network stack.
Ipv4 PXE Support	The user can enable or disable IPV4 PXE Boot support. ● Enabled. ● Disabled.IPV4 PXE support is disabled by default.
Ipv4 HTTP Support	The user can enable and disable IPV4 PXE Boot support. ● Enabled. ● Disabled. IPV4 HTTP support is disabled by default
Ipv6 PXE Support	The user can enable or disable IPV4 PXE Boot support. ● Enabled. ● Disabled.IPV6 PXE support is disabled by default.
Ipv6 HTTP Support	The user can enable and disable IPV4 PXE Boot support. ● 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.
Media detect count	Number of time presence of media will be checked.

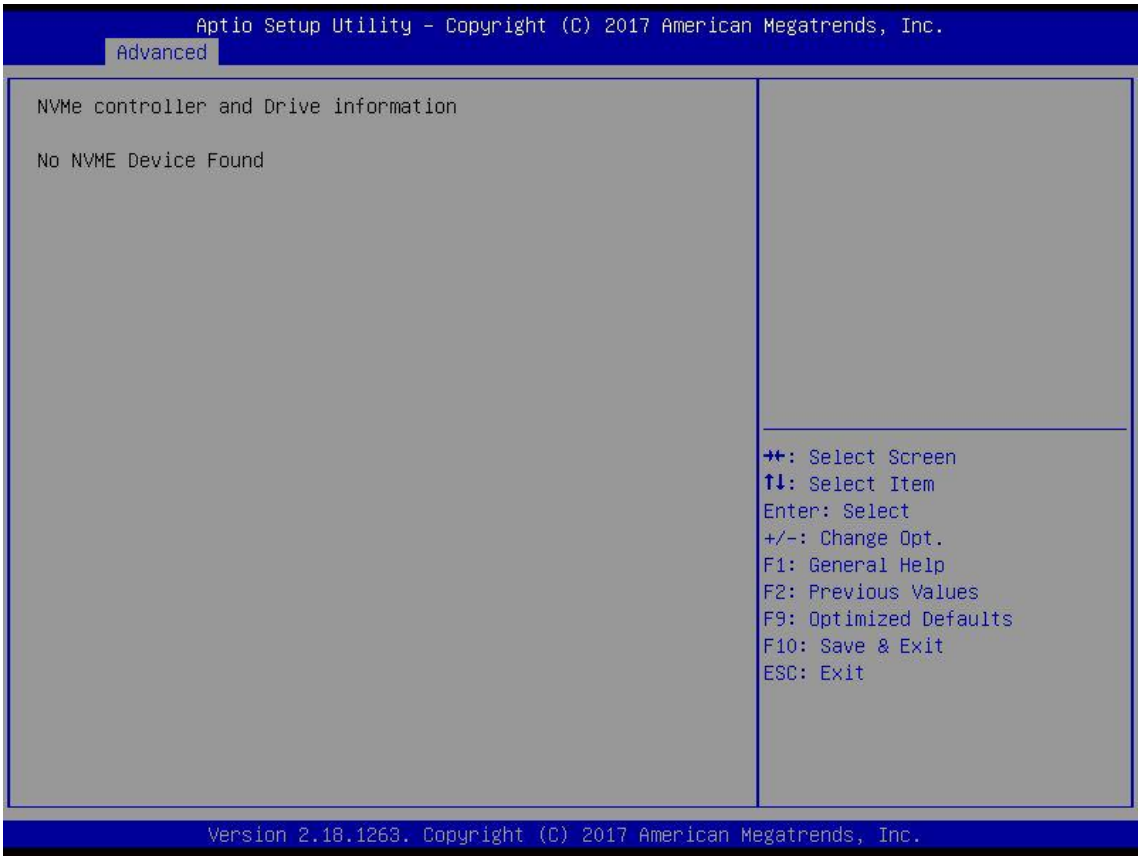
4.2.10 CSM Configuration



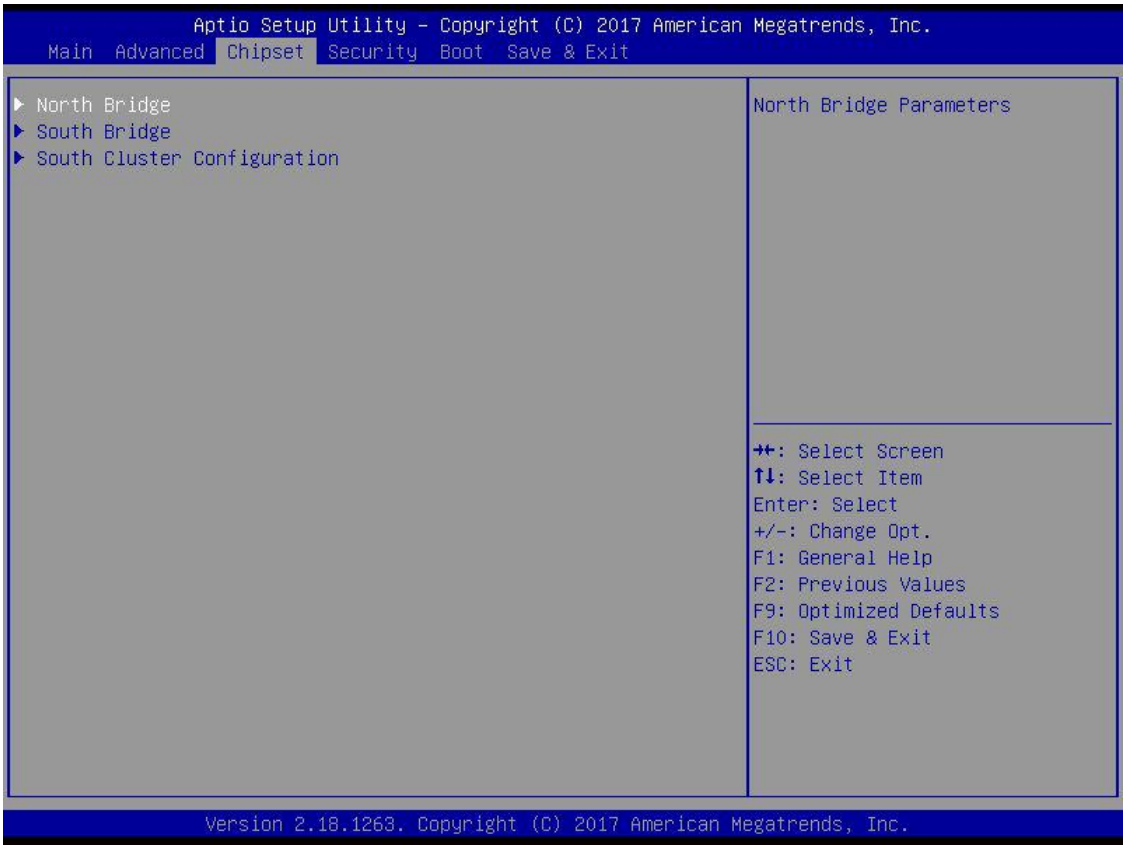
Advanced Menu	Description
Compatibility support Module Configuration	
CSM Support	● Enabled: The CSM support function is enabled by default. ● Disabled.
GateA20 Active	● UPON REQUEST:GA20 can be disabled using BIOS services . ● ALWAYS: Do not allow disabling GA20;this option is useful when any RT code is executed above 1MB.
INT19 Trap Response	BIOS reaction on INT19 trapping by option ROM; ● IMMEDIATE. Execute the trap right away; ● POSTPONED. Execute the trap during legacy boot.
Boot option filter	● UFEI and Legacy: It will support both UEFI and legacy mode. ● Legacy only: It only supports legacy mode. ● UEFI only: It only supports UEFI mode.

Advanced Menu	Description
Option ROM execution	
Network	Network ROM Boot. ● Do not launch: Do not Boot. ● UEFI: It will support UEFI mode network ROM. ● Legacy: It will support legacy mode network ROM.
Storage	Storage ROM Boot. ● Do not launch: Do not Boot. ● UEFI: It will support UEFI mode storage ROM. ● Legacy: It will support legacy mode storage ROM.
Video	Video ROM Boot. ● UEFI: It will support UEFI mode Video ROM. ● Legacy: It will support Legacy mode Video ROM.
Other PCI devices	● Do not launch: Do not Boot. ● UEFI: It will support UEFI mode PCI ROM. ● Legacy: It will support Legacy mode PCI ROM.

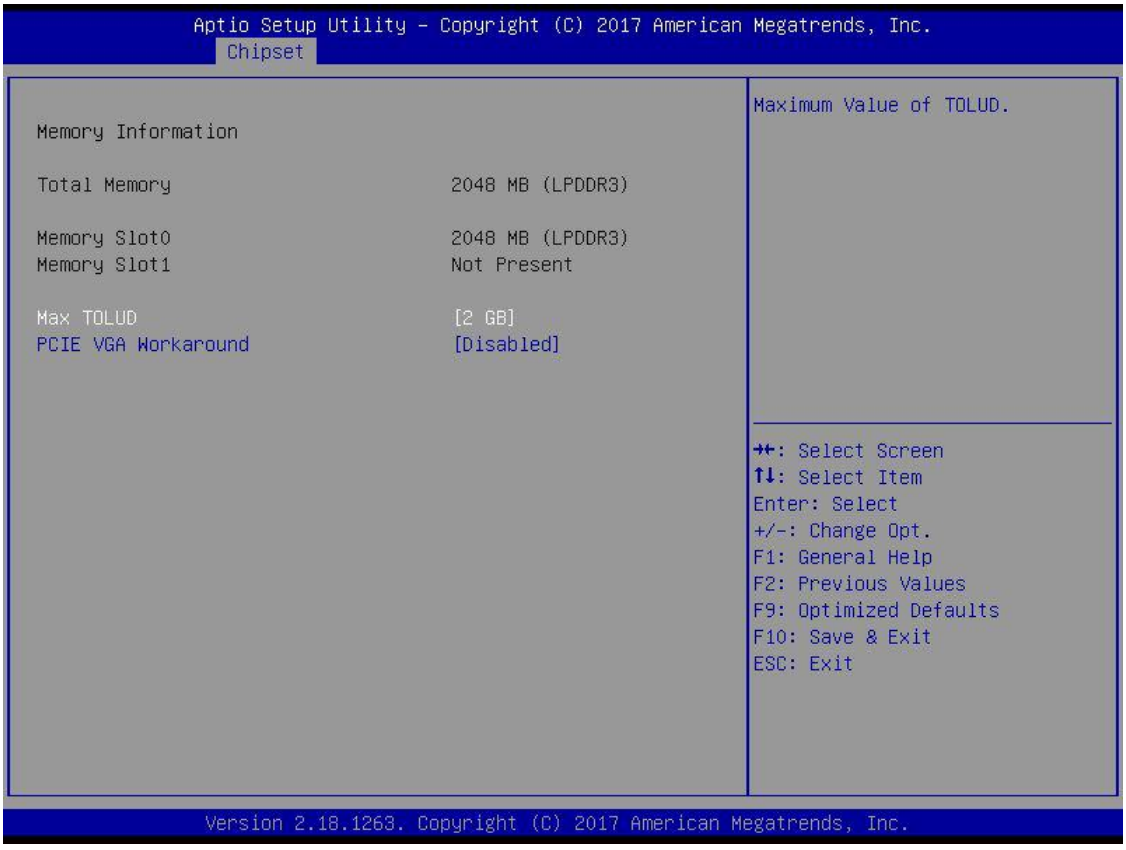
4.2.11 NVME Configuration



4.3 Chipset

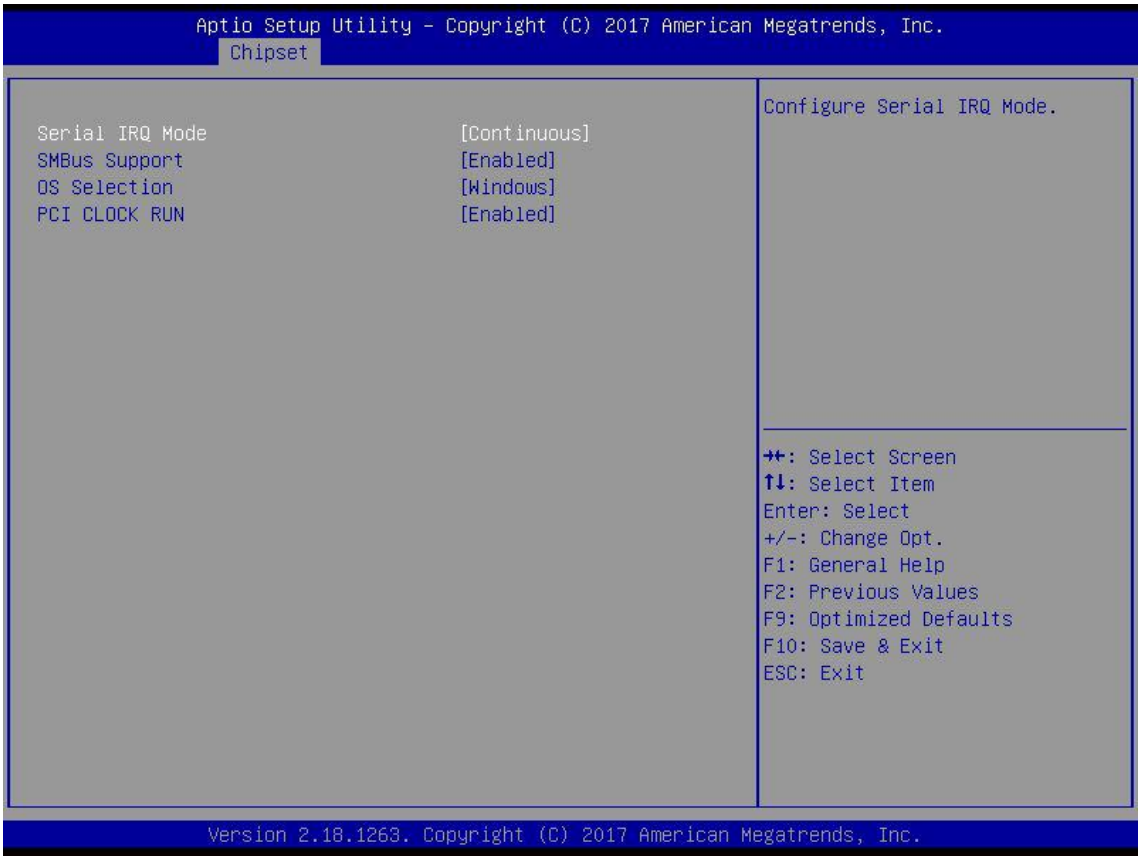


4.3.1 North Bridge



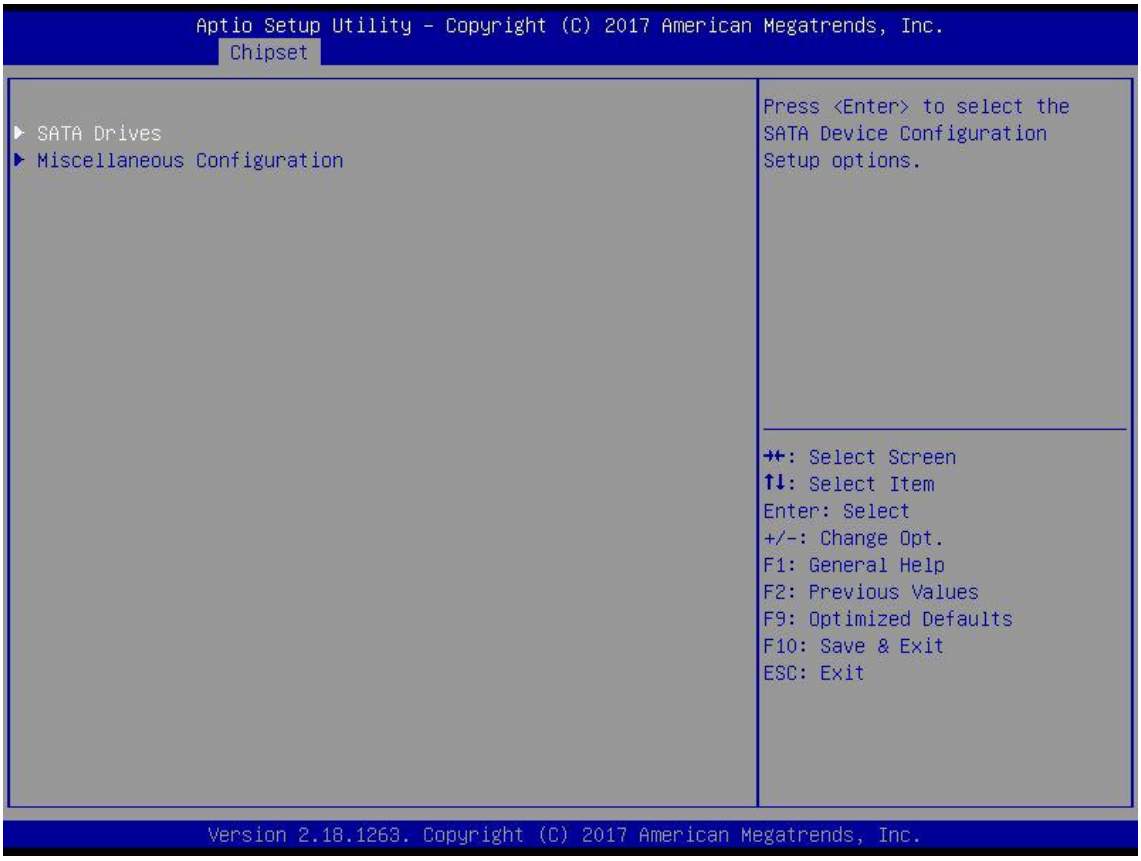
Chipset menu	Description
North Bridge Configuration	
Max TOLUD	Maximum value of TOLUD(Top of Low Usable Dram) for GPU ● 2 GB. The value TOLUD is 2GB by default.
PCIE VGA Workaround	Enable it if your PCIE card cannot boot to MS-DOS. This is for test only.

4.3.2 South Bridge

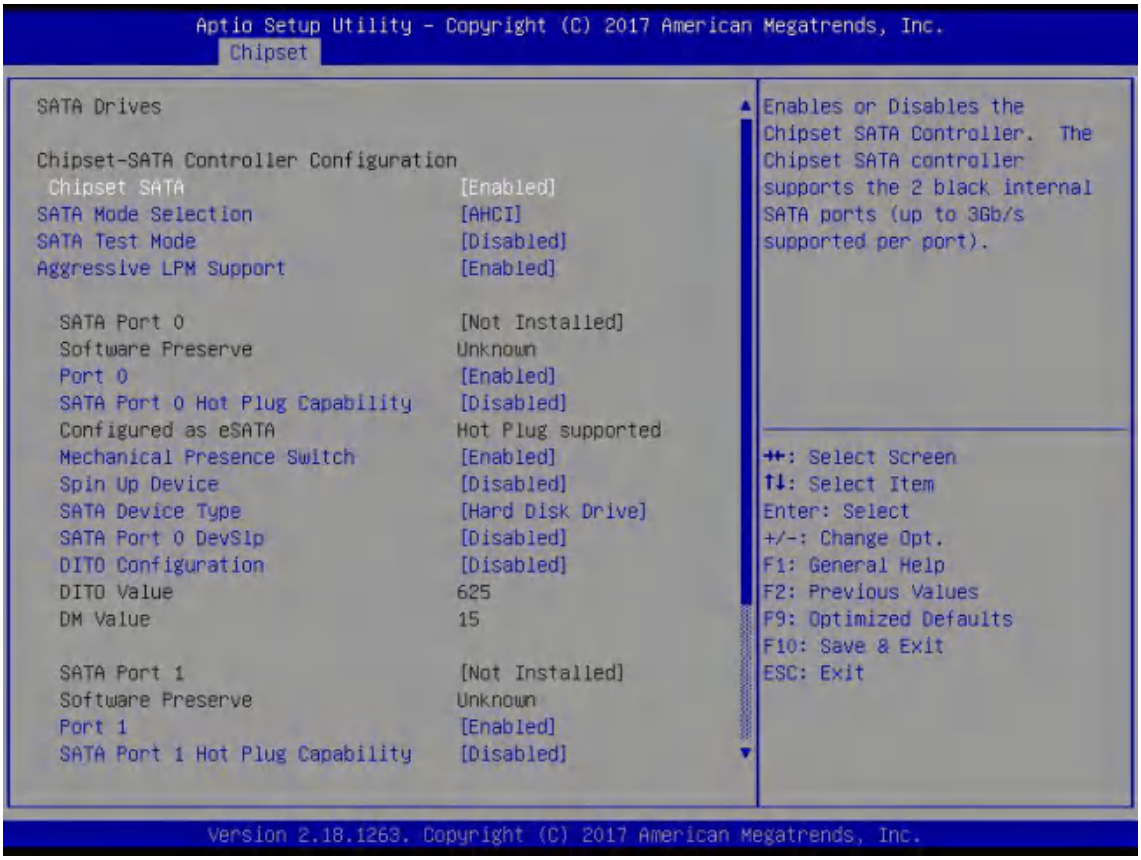


Chipset menu	Description
South Bridge Configuration	
Serial IRQ Mode	Configure Serial IRQ Mode
SMBus Support	Enable/Disable SMBUS Support.
OS Selection	The user can set the target OS (Android or windows) as needs. ● Windows. The OS selection is windows by default.
PCI CLOCK RUN	Enables CLKRUN# logic to stop PCI clocks.

4.3.3 South Cluster Configuration

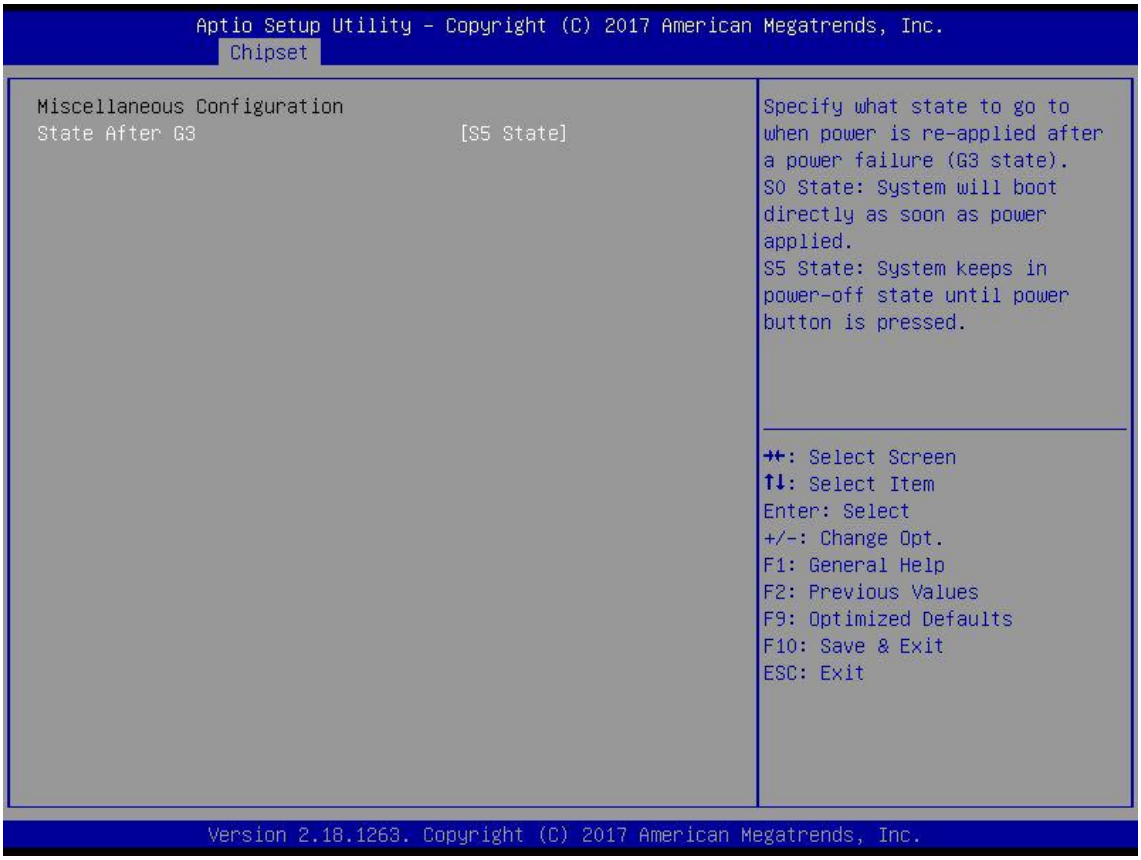


4.3.3.1 SATA Drivers Configuration



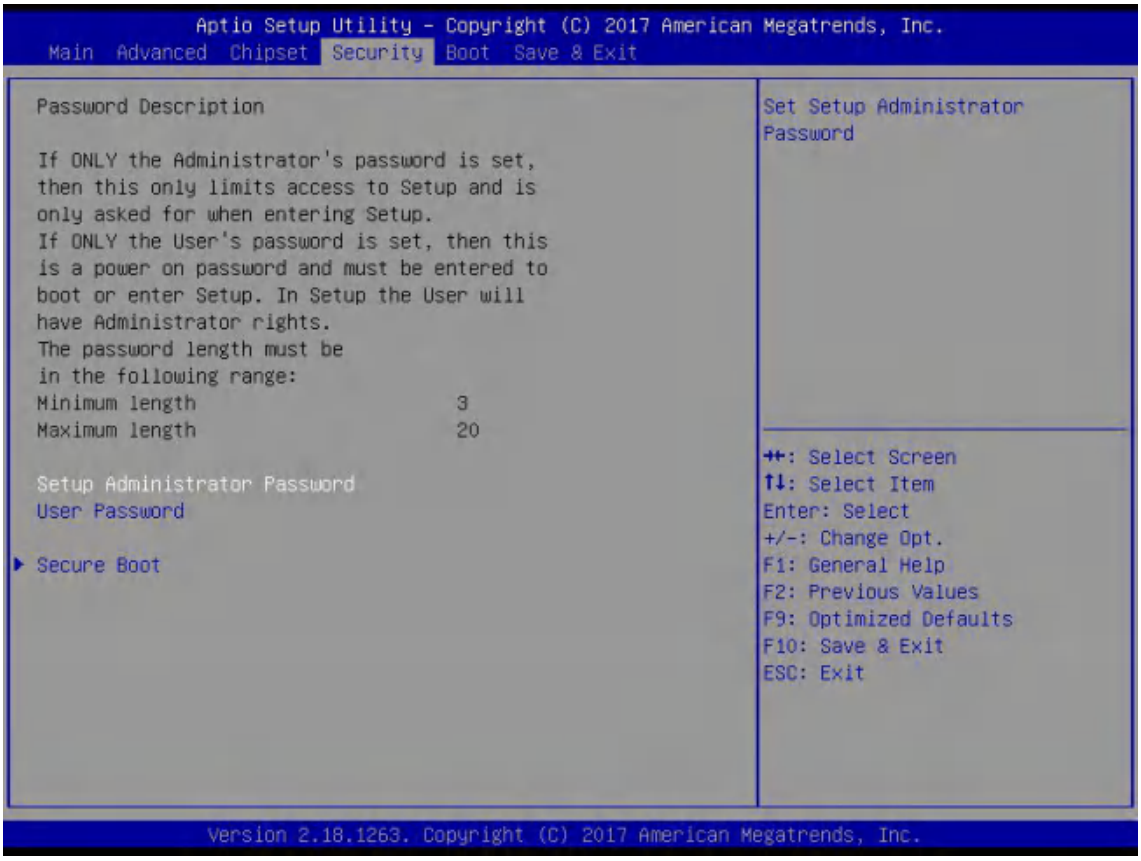
Options	Description
SATA Drivers Configuration	
Chipset SATA	This item can enable or disable the chipset SATA controller. The chipset SATA controller support the 2 black internal SATA ports (up to 3Gb/s supported per port).
SATA Mode Selection	The user can determine how SATA controller(s) operate. It can support AHCI and RAD mode. This item is AHCI mode by default.
SATA Test Mode	Test mode enable/Disabled.
Aggressive LPM Support	The user can enable PCH to aggressively enter link power state. ● Enabled. This item is enabled by default. ● Disabled.
Miscellaneous Configuration	
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.

4.3.3.2 Miscellaneous Configuration



Options	Description
SATA Drivers Configuration	
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.

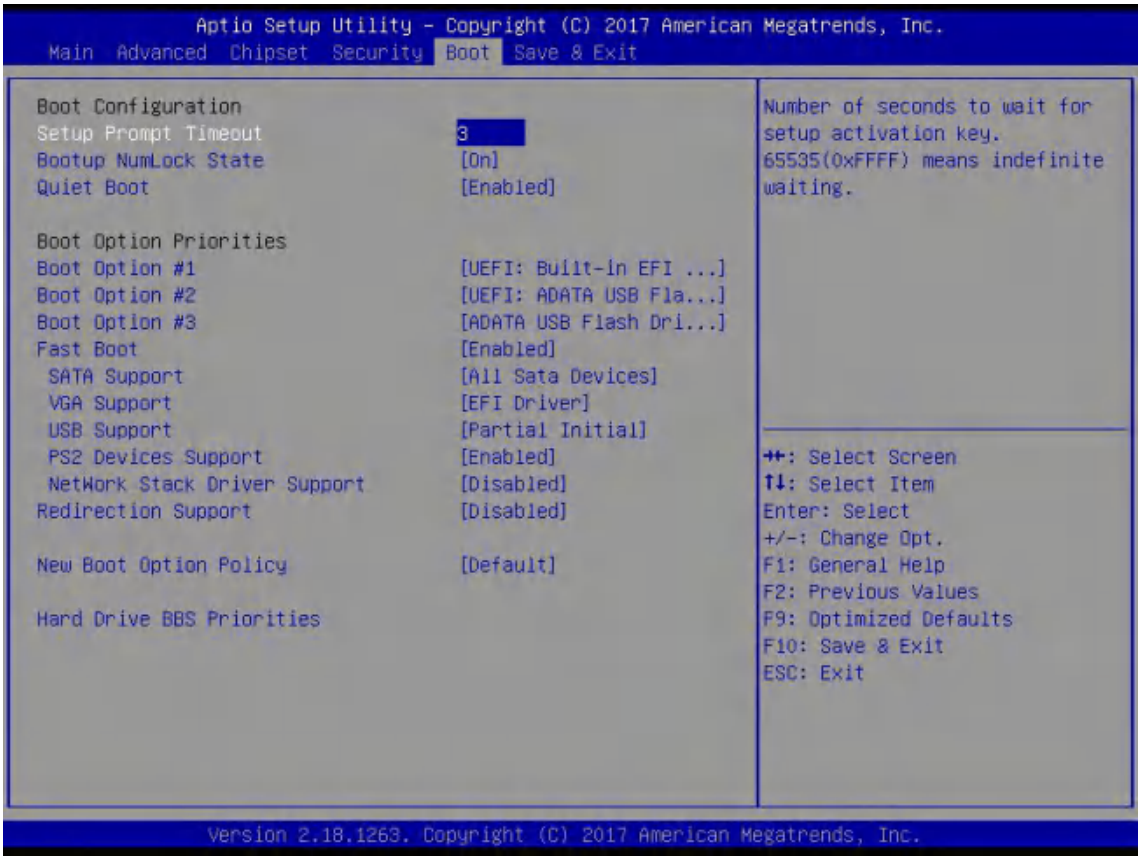
4.4 Security



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.

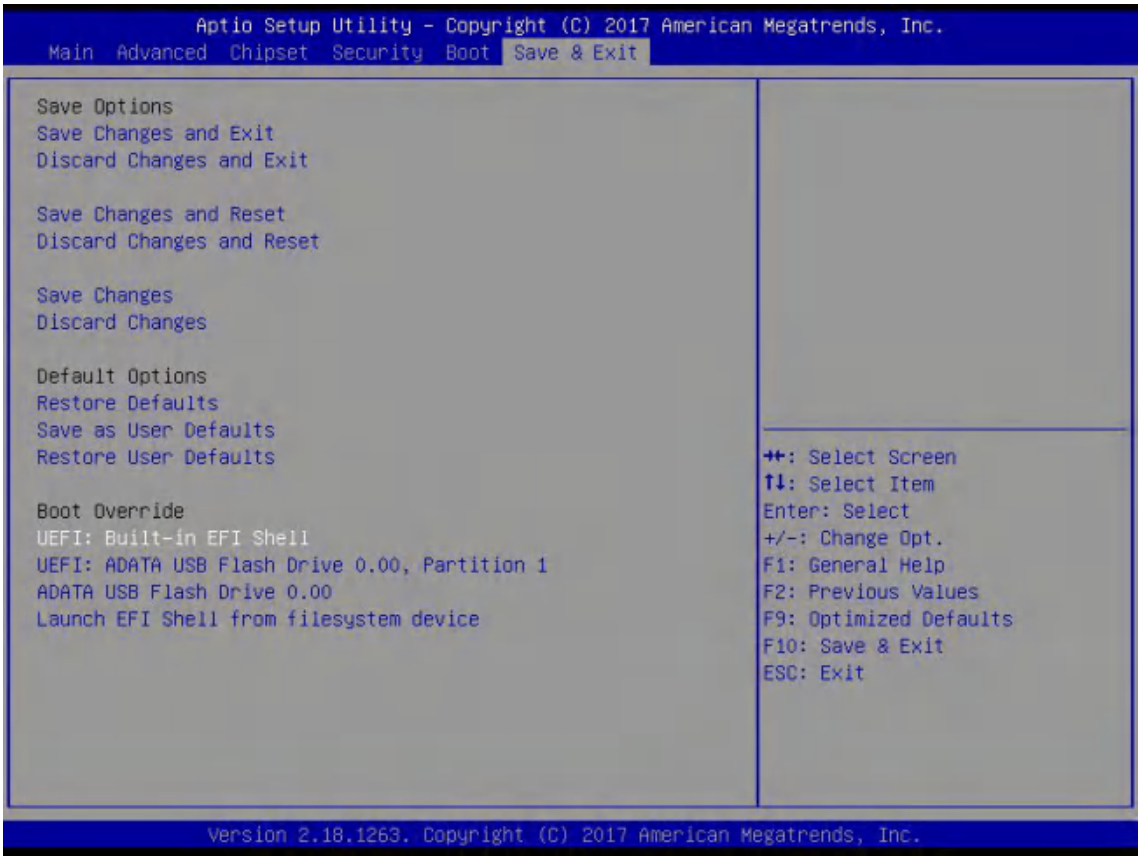
4.5 Boot Menu



Boot Item	Description
Boot Configuration	
Setup Prompt Timeout	This item is use to set the waiting 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].
FIXED BOOT ORDER Priorities	
Boot Option #1	The first boot device. If BIOS doesn't detect the first boot device, it will check the second boot device.

Boot Item	Description
Fast Boot	Most probes are skipped to reduce time cost during boot.
Hard Drive BBS Priorities	You can set and management legacy Hard disk device after enabling this option.

4.6 Save & Exit



Save Exit Item	Description
Save Options	
Save Changes and Reset	Save all changes and exit
Discard Changes and Reset	Give up the settings and exit.
Save Changes and Reset	Reset the system after saving the changes.
Discard Changes and Reset	Reset system setup without saving any changes.
Save Changes	Save changes done so far to any of the setup options.
Discard Changes	Discard changes done so far to any of the setup options.
Restore Defaults	Recover it to default.

Save Exit Item	Description
Save as User Defaults	Save the changes done so far as user default.
Restore User Defaults	Restore the user default to all the setup options.
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”. Please refer to FIG1.

FIG (1)

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

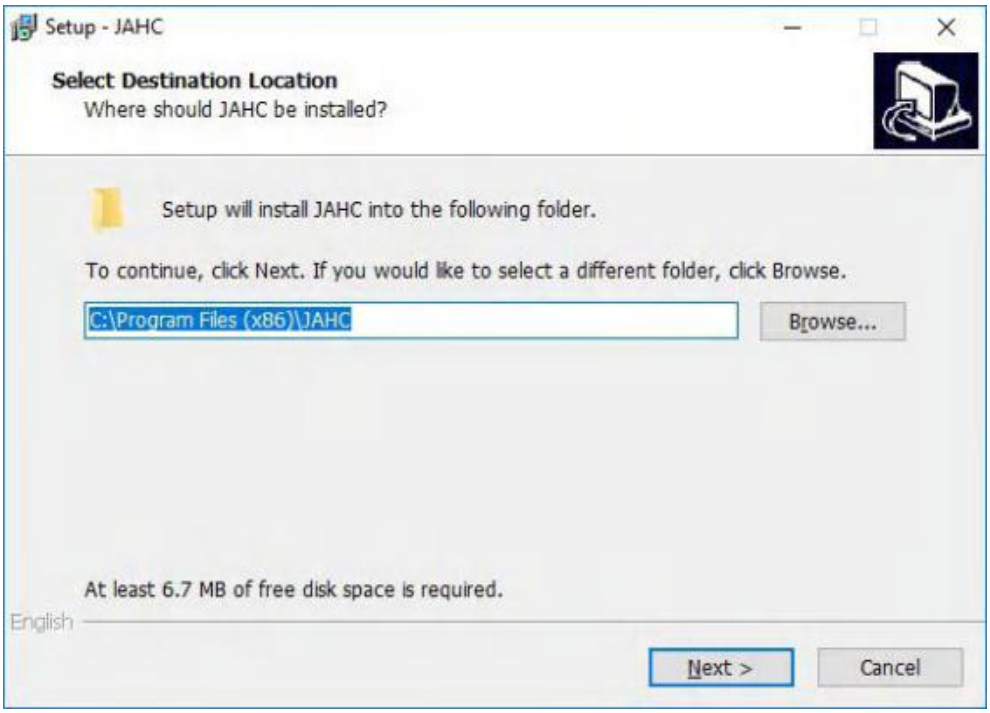
System Requirements:

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.

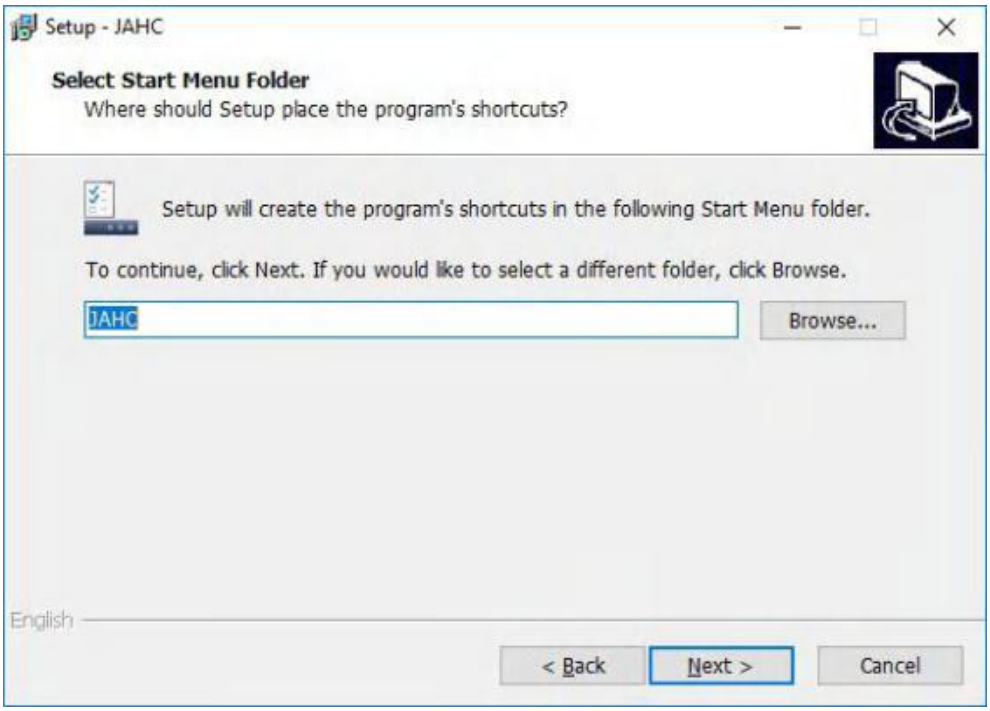
How to install JAHC software:

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

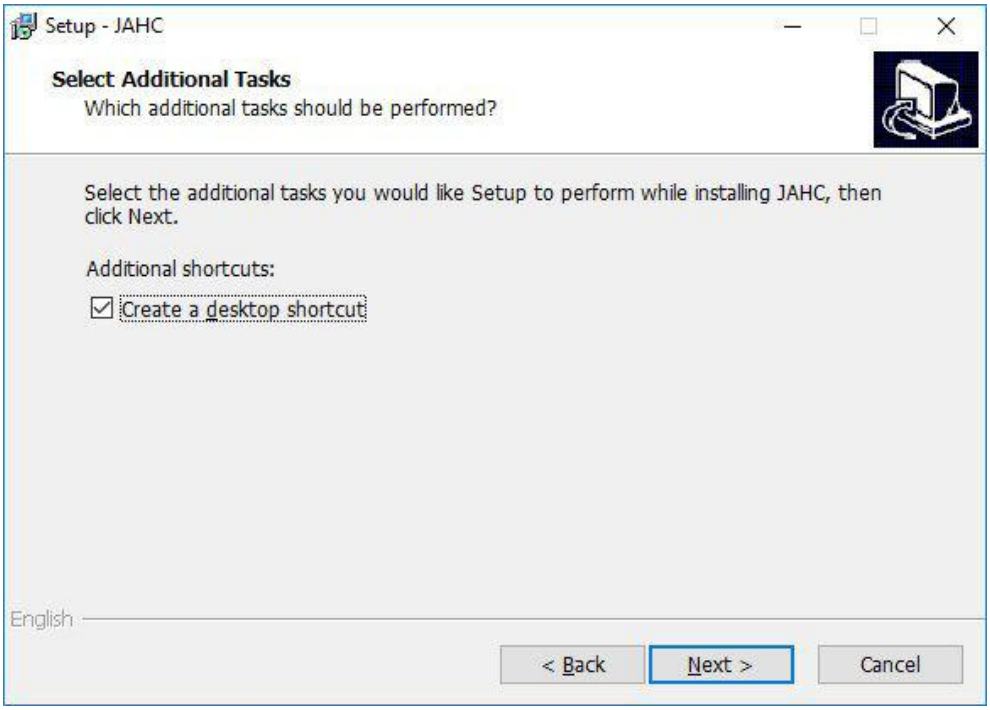
a. Double-click the JAHC.EXE file, the setup wizard will pop up, select destination location and click [Next] button to continue the installation.



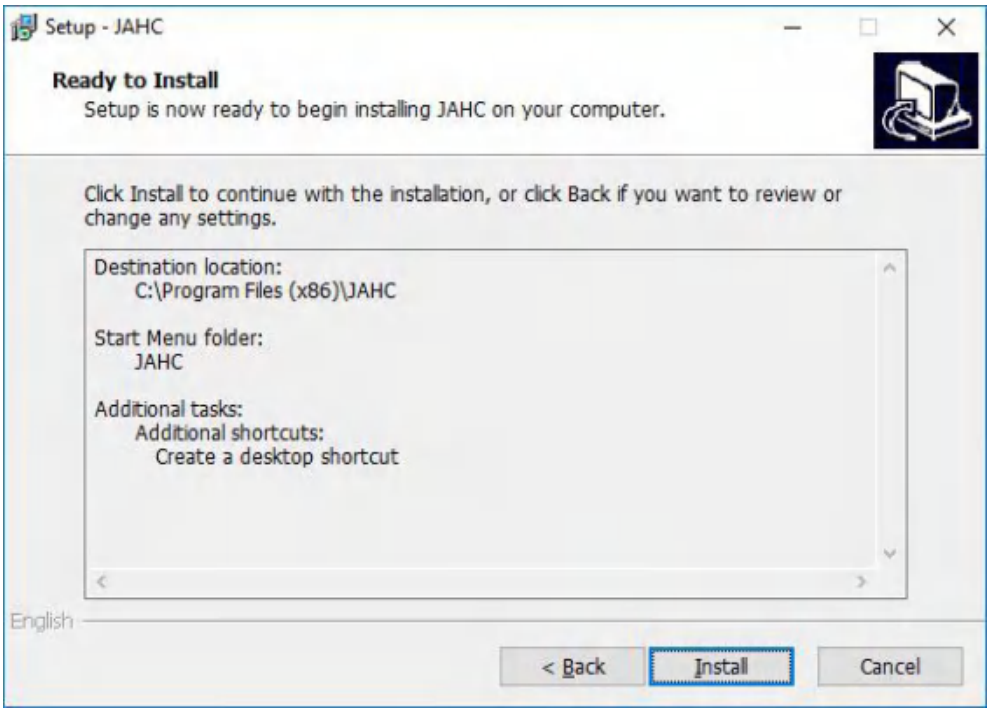
b. Click [Next] button to continue the installation.

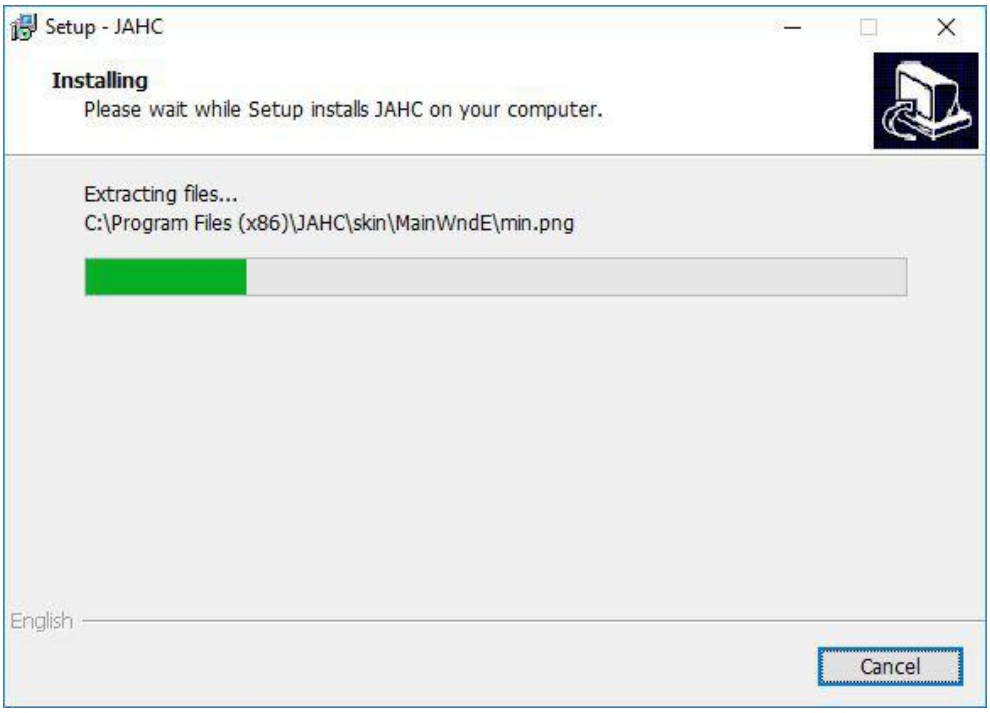


c. Select [Create a desktop shortcut] and click [Next] button.



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



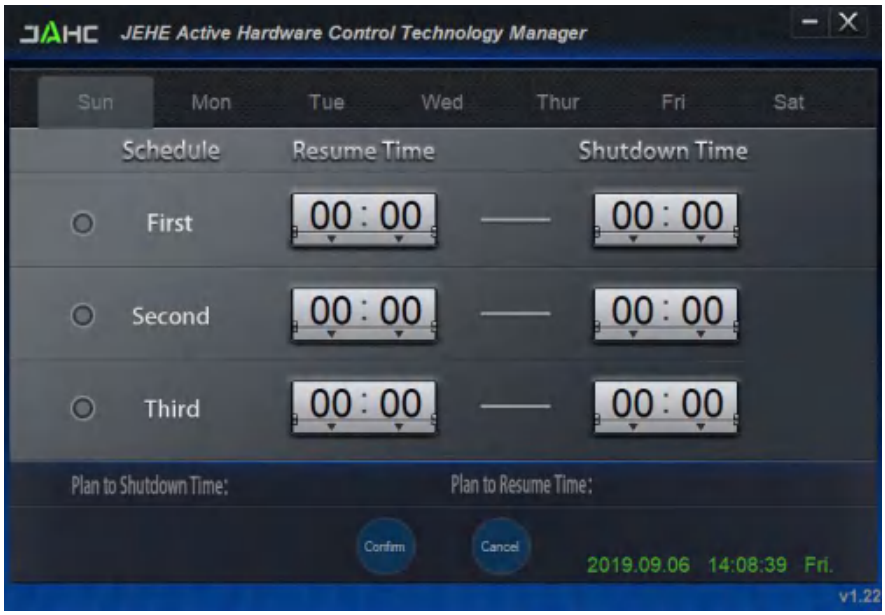


e. Click [Finish] button to finish the installation. You can select [Launch JAHC] to run the software automatically after finishing the installation.

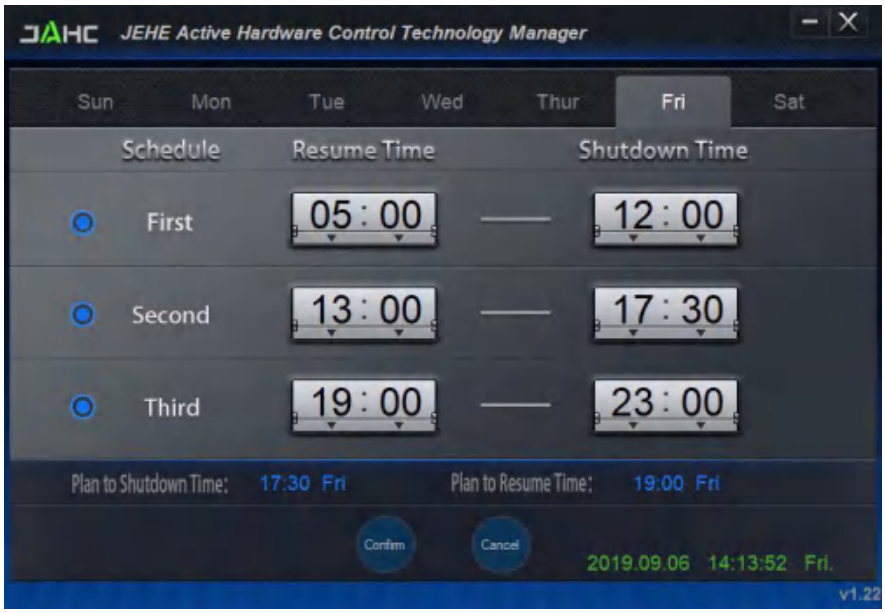
Notice: The JAHC will be added into boot item when it is installed. It will start up when system boot up.

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.



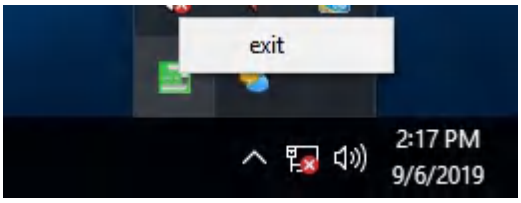
One week as a circle, maximum 3 schedules per day. Select each schedule to set up the resume time and shutdown time. Click [Confirm] button to launch the schedule.



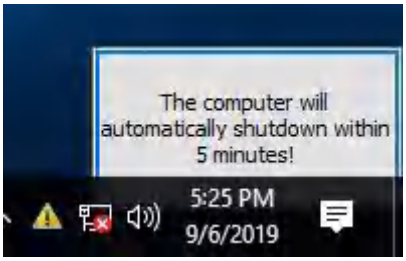
After finishing the setup, the menu window will notice the resume time and shutdown time.

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

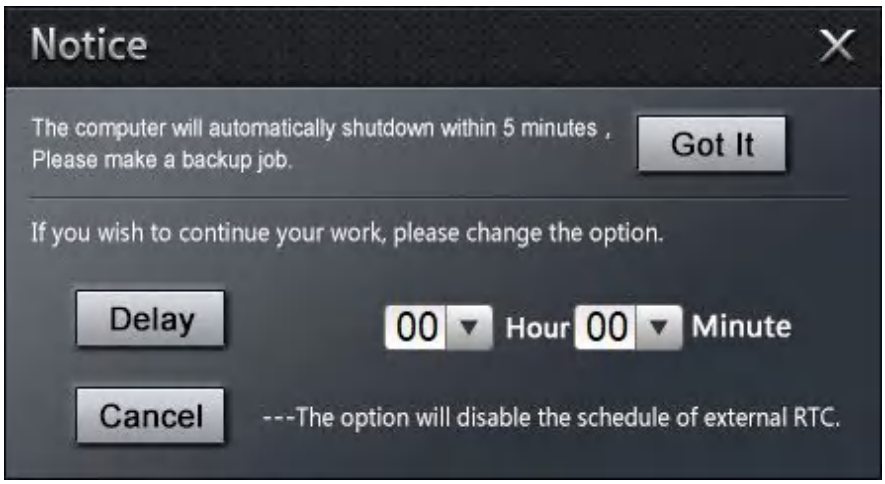
Click [Cancel] button to restore the time settings and cancel the shutdown status.
Click [X] button to hide the menu. You can find it on taskbar.
Right click the JAHC icon on taskbar and select [exit] to exit the software.



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.

Giada

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