

BIOS Setup Guide

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. 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. peripheral devices
3. Password protection

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 DEL to enter the BIOS interface if no error occurs. If the indicative information disappears before operating, you can shut down the computer and turn it on again, 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.
F3	Load the optimized values
F4	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].

D. Main menu

When the system enters the BIOS 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.

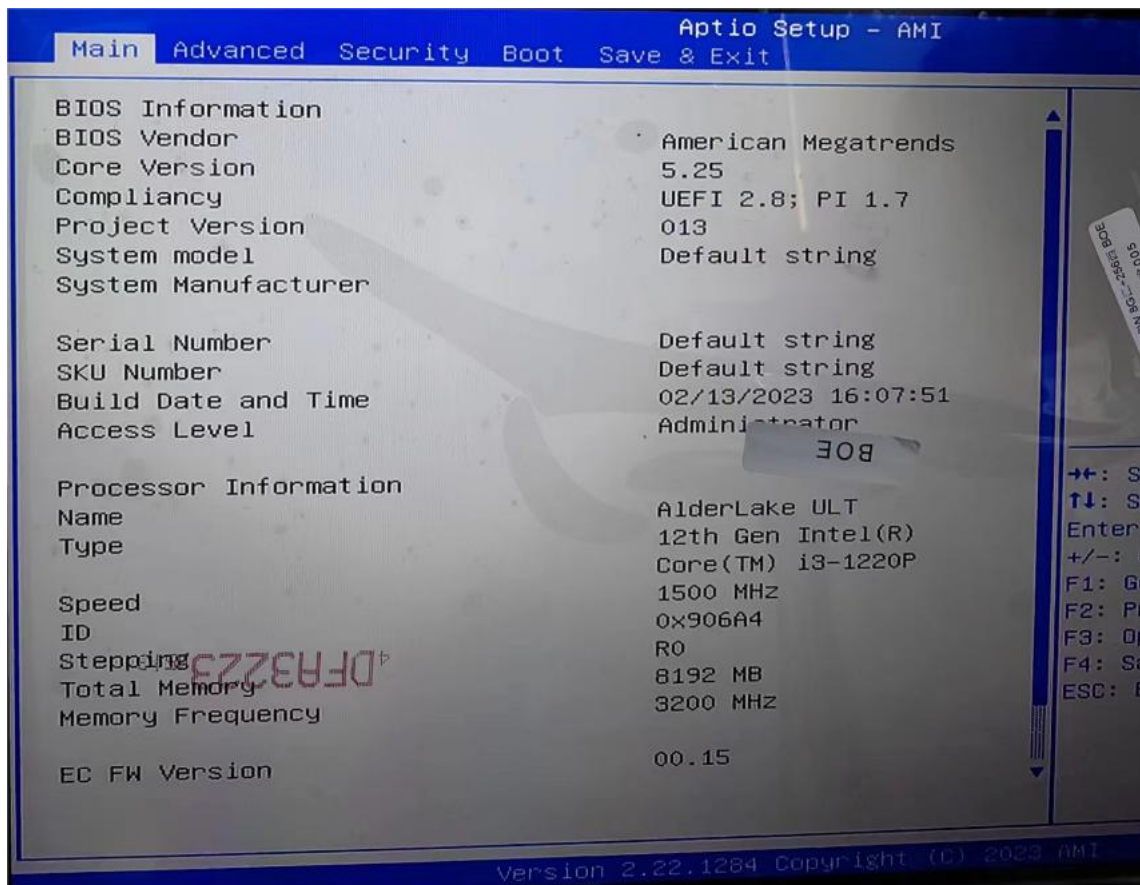


Fig 1

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, HDD, Network, etc.

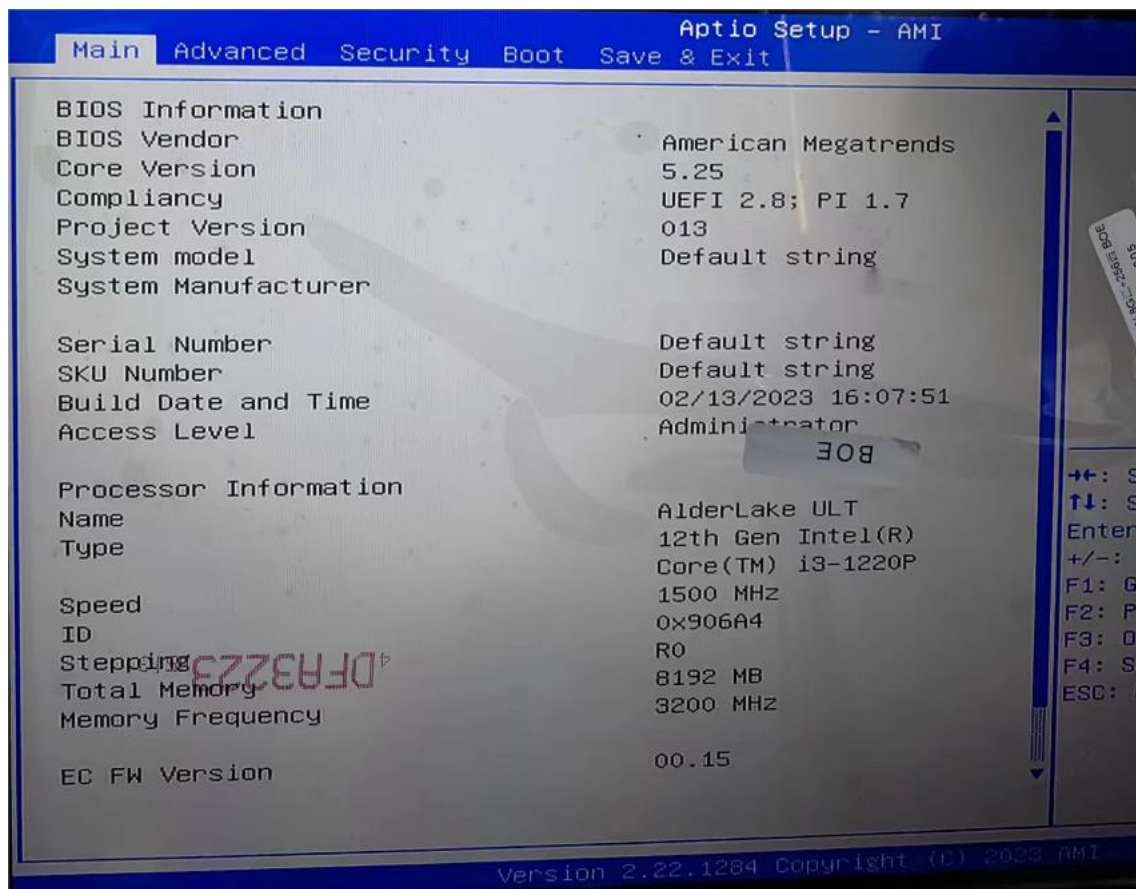
3) Security (set the administrator/user password)

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.

Main (Standard CMOS Setup)



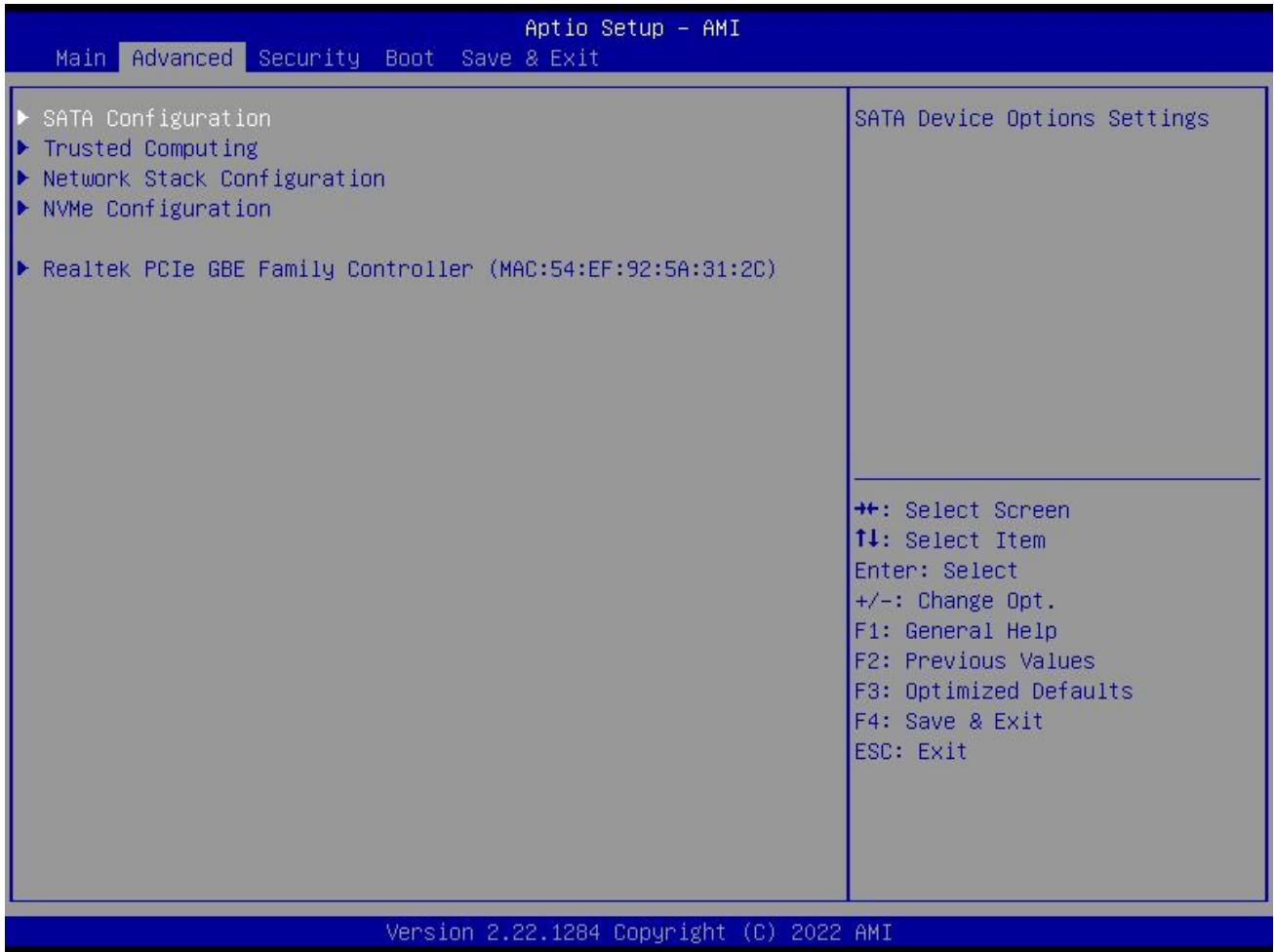
1) System time (hh:mm:ss)

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

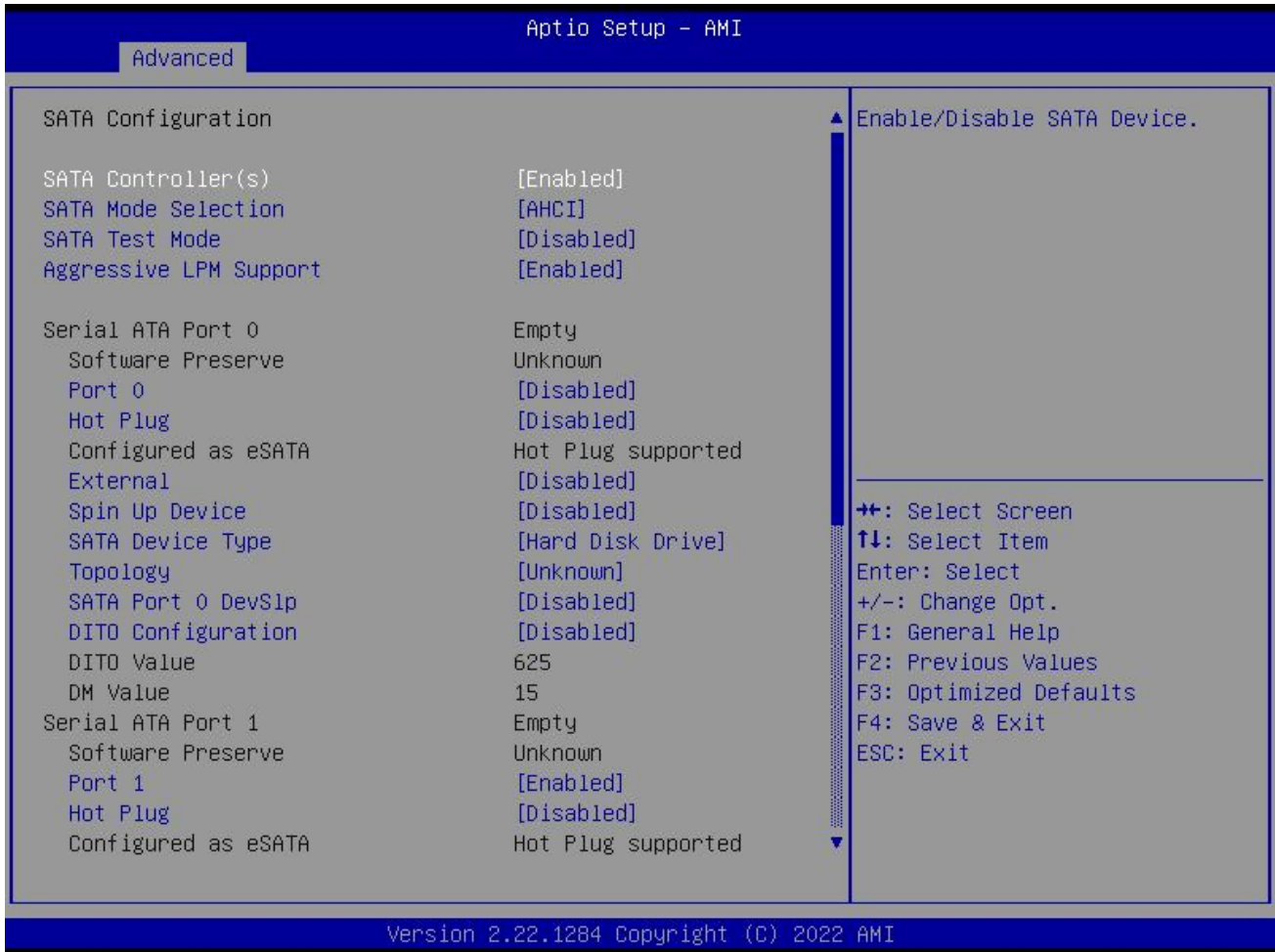
2) System date (mm:dd:yy)

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

Advanced (Advanced BIOS Setup)



SATA Configuration



Options	Description
SATA Configuration	
SATA Controller(S)	Enable/Disable SATA Device.
SATA Mode Selection	Determines how SATA controller(s) operate.
SATA Test Mode	Test Mode Enable/Disable (Loop Back).
Aggressive LPM Support	Enable PCH to aggressively enter link power state.

Trusted Computing

Aptio Setup - AMI

Advanced

<pre> TPM 2.0 Device Found Firmware Version: 600.18 Vendor: INTC Security Device Support [Enable] Active PCR banks SHA256 Available PCR banks SHA256,SHA384,SM3 SHA256 PCR Bank [Enabled] SHA384 PCR Bank [Disabled] SM3_256 PCR Bank [Disabled] Pending operation [None] Platform Hierarchy [Enabled] Storage Hierarchy [Enabled] Endorsement Hierarchy [Enabled] Physical Presence Spec Version [1.3] TPM 2.0 InterfaceType [CRB] Device Select [Auto] Disable Block Sid [Disabled] </pre>	<pre> Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available. ++: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit </pre>
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Options	Description
Trusted Computing	
TPM20 Device Found Firmware Version: Vendor:	It shows the information of TPM device.
Security Device Support	Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.
SHA256 PCR Bank	Enable or Disable SHA256 PCR Bank

SHA384 PCR Bank	Enable or Disable SHA384 PCR Bank
SM3_256 PCR Bank	Enable or Disable SM3_256 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	Enable or Disable Platform Hierarchy
Storage Hierarchy	Enable or Disable Storage Hierarchy
Endorsement Hierarchy	Enable or Disable Endorsement Hierarchy
Physical Presence Spec Version	Select to Tell O.S. to support PPI Spec Version 1.2 or 1.3. Note some HCK tests might not support 1.3.
Device Select	TPM 1.2 will restrict support to TPM1.2 devices, TPM 2.0 will restrict support to TPM 2.0 devices, Auto will support both with the default set to TPM 2.0 devices if not found, TPM 1.2 devices will be enumerated
Disable Block Sid	Override to allow SID authentication in TCG Storage device

Network Stack Configuration



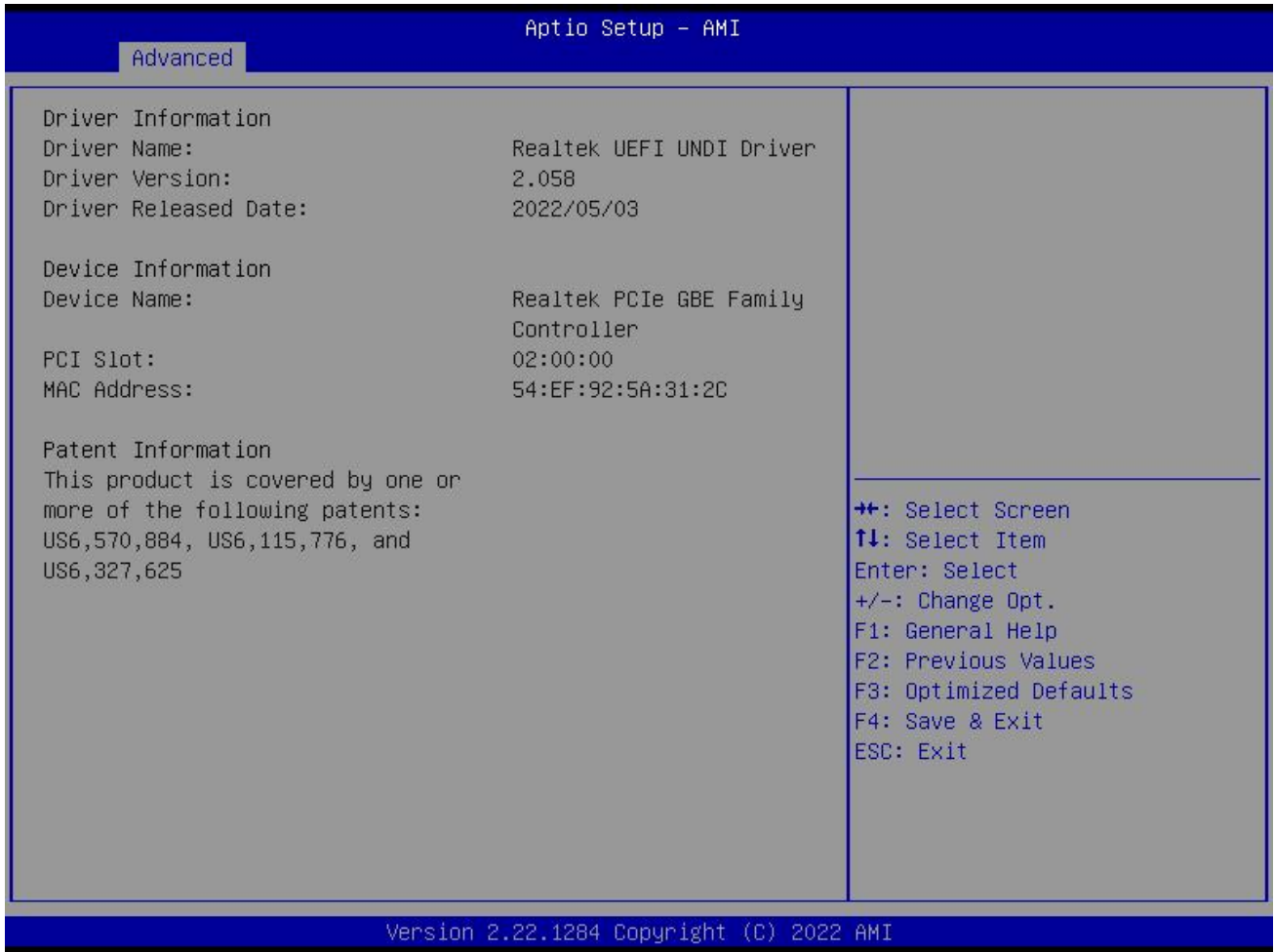
You can enable or disable IPV4 PXE and IPV6 PXE Boot function.

NVMe configuration

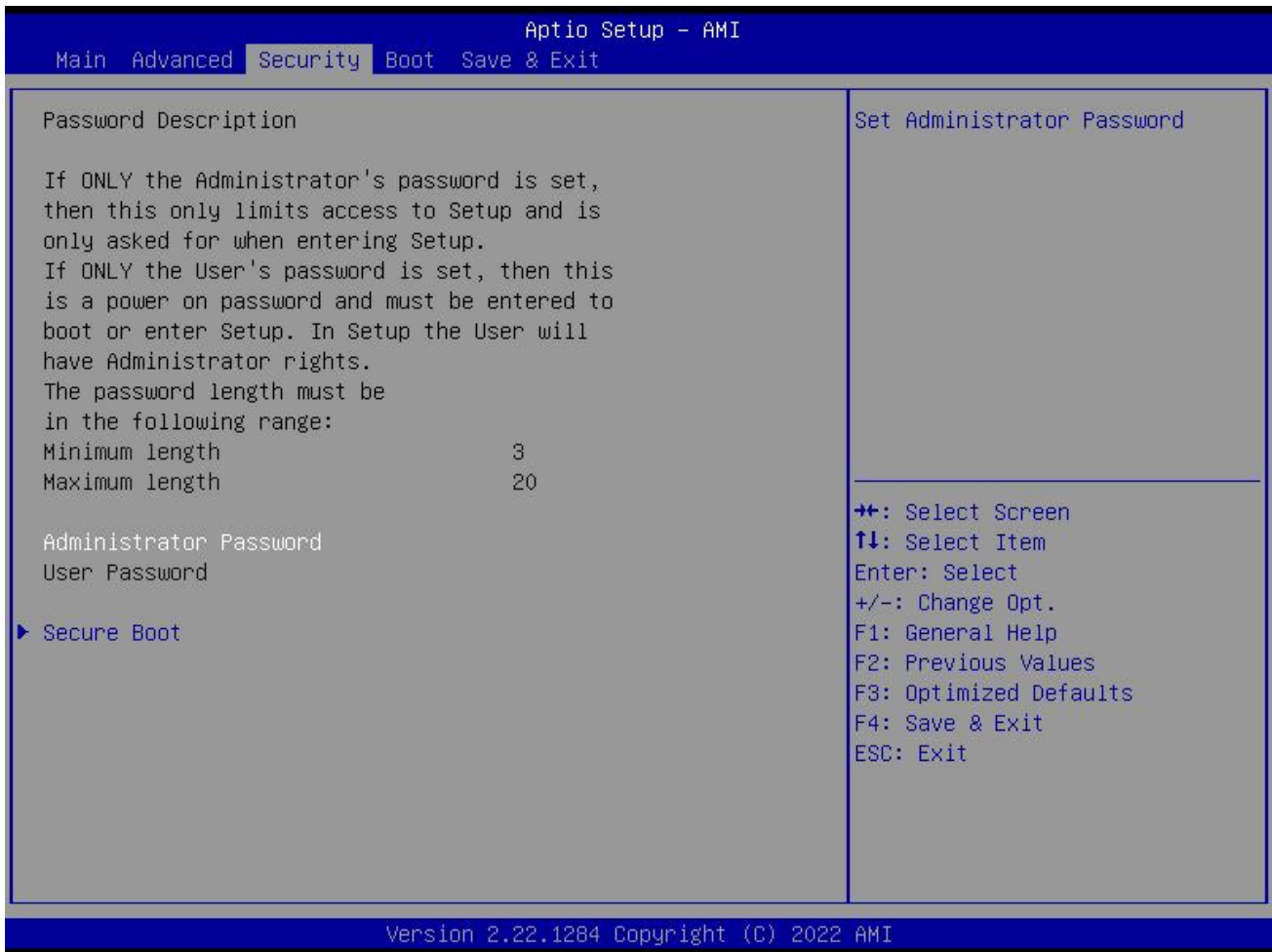


Display NVME SSD storage device information

Realtek PCIe GBE Family Controller (MAC:XX-XX-XX-XX-XX-XX)



Show Realtek ethernet controller information



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

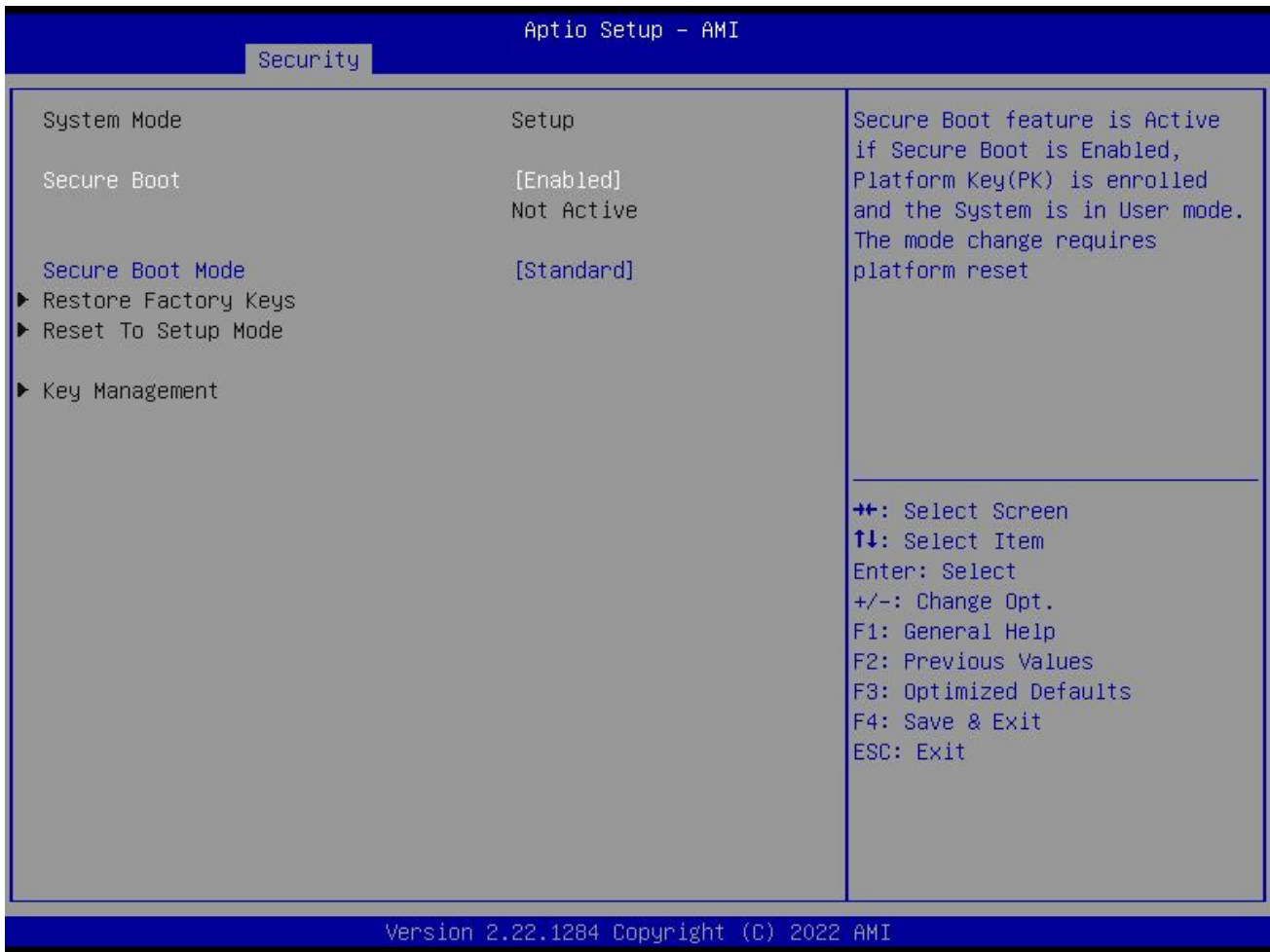
Enter New Password xxxxxxxx

Then enter a password of no more than 3-20 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.

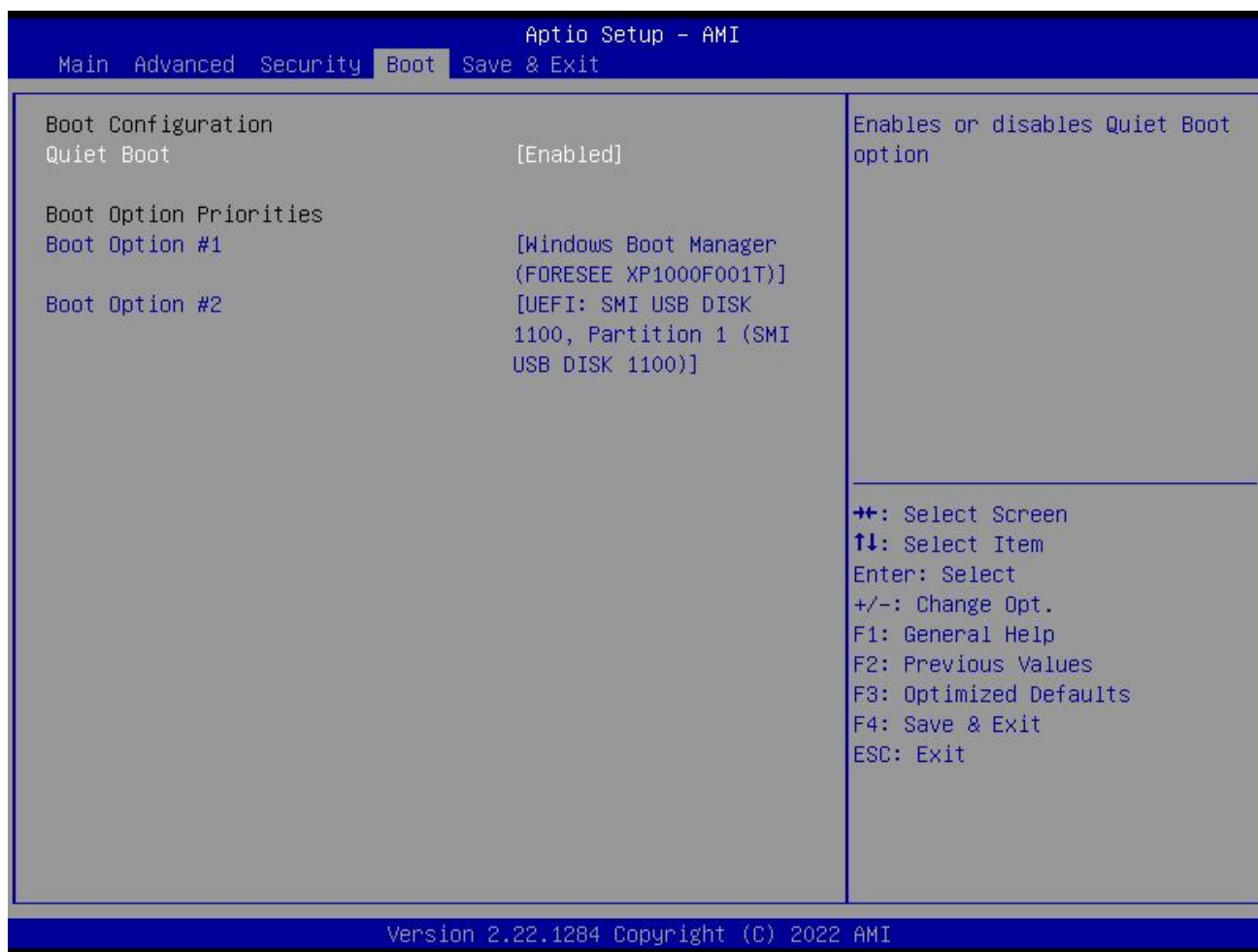
Secure Boot



Options	Description
Secure Boot	
Secure Boot	Secure Boot feature is Active if Secure Boot is Enabled, Platform Key(PK) is enrolled and the System is in User mode. The mode change requires platform reset
Scure Boot Mode	Secure Boot mode options: Standard or Custom. In Custom mode, Secure Boot Policy

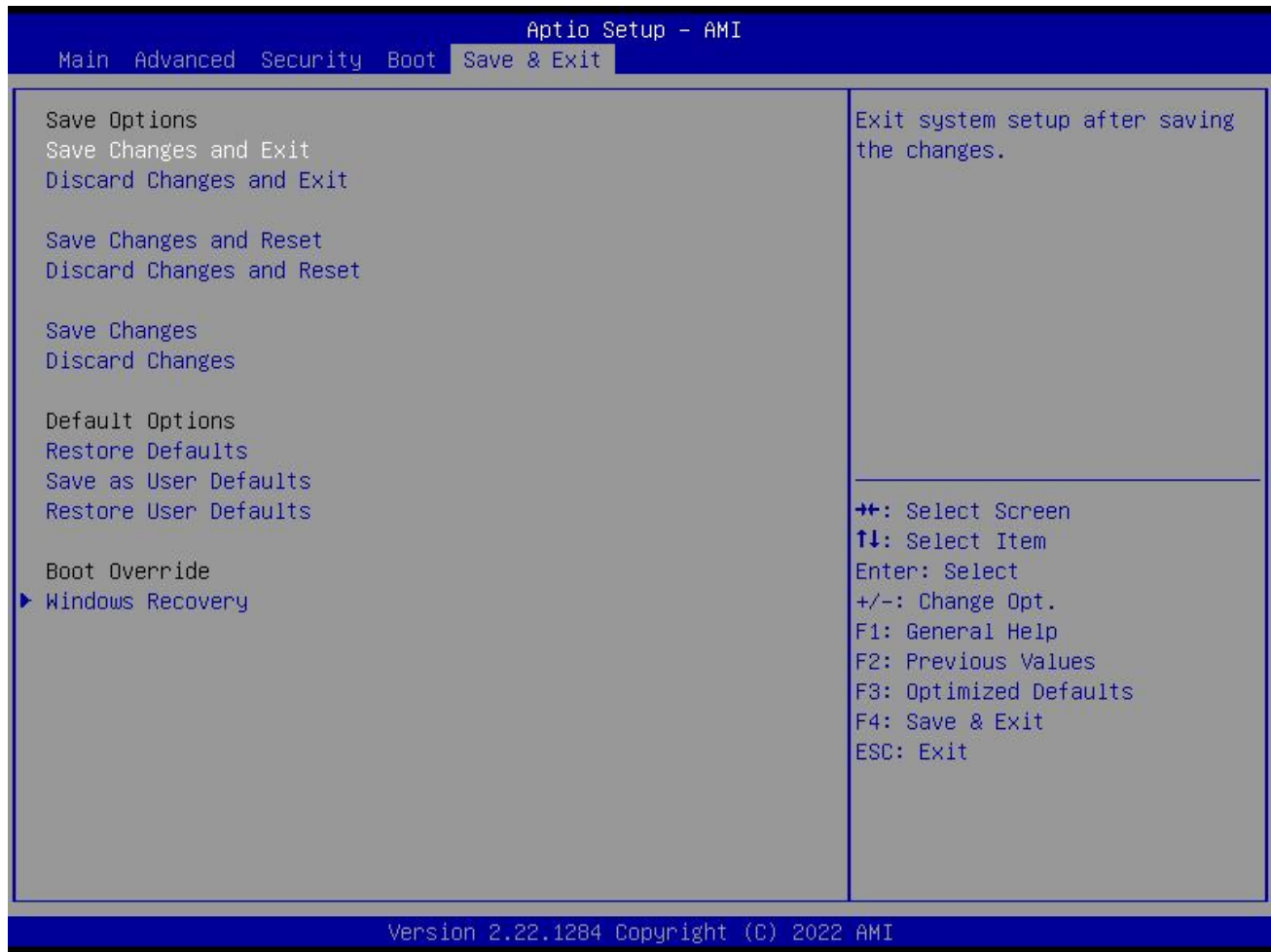
variables can be configured by a physically present user without full authentication

Boot



Options	Description
Boot Configuration	
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].
BOOT Option 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 Option #2	The second boot device.

Save & Exit



Options	Description
Save Options	
Save Changes and Reset	Save all changes and exit
Discard Changes and Reset	Give up the settings and exit.
Restore Defaults	Recover it to default.
Boot Override	Whole Boot devices
Windows Recovery	Exit system setup after saving the changes.