ASTRAADA

ASTOR

AS56BOX-3625
User Manual

Fanless Industrial Computer

Copyright notice

Trademarks

Declaration of Conformity

This restriction is subject to provide protection for system operation in business environment, which will produce, use and transmit radio frequency energy. Without notice of the instructions of the correct installation and use, it may cause harmful interference to radio communication. The interference prevention cannot be guaranteed even with proper installation according to the manual. If the device gets bad affect on the signal of radio / TV. User could insure by turn device on/off. When this device produces some harmful interference, user can use the following measure to solve interference problem:

- Set the receiving antenna's direction or location.
- Increase the distance between this device and receiver.
- Plug in this device's power connector into different circuits of the power outlet with receiver

If you need technical support, please inform the dealer or experienced radio/TV technical personnel.

Technical Support and Service

Please visit the ASTOR website https://www.astor.com.pl/wsparcie/dokumentacja-techniczna.html to get more details.

If you need additional assistance, please contact us on support@astor.com.pl

Safety instructions

1. Please read the manual and related manual mentioned in this user manual before installing, wiring, operating, checking this Panel PC. All the operations should be based on the premise of full safety attention.
2. Please kindly keep this user manual for further reference.
3. Please unplug the cable before clean the device. Don’t use liquid or decontamination sprays to clean the device.
4. For devices that use power cables, there must be easily accessible power sockets around the devices
5. Make sure the device placed on a flat surface in case any damages casued by falling off.
6. Please make sure your voltage meet the requirements before plug in.
7. Please arrange the power cord in a position where people can not easily stumble. Do not cover any thing on the power cord.
8. Notice to all the warnings and cautions on this device.
9. Please unplug the device if you will not use it for a long time in case any damages caused by excessive voltage.
10. Please do not let any liquid in the device in case of causing fire or short circuit.
11. Do not open the device by yourself. To ensure your safety, before turning on the device, disconnect all external power supplies used by the system and

have the device turned on by a certified professional engineer with sufficient electrical knowledge.

In the following cases, please repair by professional personnel

- The damage of power cord or plug；
- Liquid flows into the device；
- The device can not work properly, or you can make it work properly by referring to the user manual;
- Fall off or any damage；
- Obvious damage on the surface;

12. Do not place the device over the environment range we suggested which is not below -30° or higher than 80 °, otherwise it may cause the damange to the device.
13. Please clean dust or replace fan regularly.

Content:

Chapter 1 Overview

In this chapter, it offers the descriptions of products files, functions and specifications etc..

1.1 Reference file

Related file are shown as below table, please read before use the device.

File Name	File Aim	File Content	File Save
User manual	Please do read before use	Description of the product's function and relative setting	Please download from ASTOR official website get it from distributor.

The download link of Official website:
https://www.astor.com.pl/wsparcie/dokumentacja-techniczna.html

1.2 Product naming format

This product series contains two types, one is standard industrial computer type, which uses standard carry board interfaces.Customers can choose the corresponding CPU, memory and SSD according to heir requirement. The other type is designed with additional extension board. The product naming format is shown as below:

1.3 Safety Introduction

For security purposes, the following SIGNS are used in this document to provide more security information for users.

SIGN	DESCRIPTION
	Warning： Indicates a potential situation which could result in death, serious injury or significant property damage if do not deal with properly.
	Danger：Indicate a urgent danger which could result in death, serious injury or significant property damage if do not deal with properly.
	Reminder：Indicates important information.

Chapter 2 AS56BOX-3625

The product is a high-performance industrial computer for automation, machine vision and other industries, supporting Intel ® Core ™ 6, 7, 8 ,9,10,11 generation i3, i5 CPU . The product adopts solid aluminum alloy profile structure, aluminum profile embedded fan auxiliary heat dissipation, to ensure excellent heat dissipation and robustness of the product, fully closed design to prevent dust invasion, but also fully consider the ergonomic structure design.

The hardware structure of the product adopts modular design. The product is composed of CPU core module, carrier board and customizable expansion board. Mature modular circuits and devices ensure the stability of the product

- Independent CPU core module is convenient to change and upgrade according to the customer's actual requirements, and can better control the cost.
- The carrier board provides a variety of interfaces, providing three independent GIGABit lan ports, DVI-D video display interface, four USB3.0 interfaces, two RS232/RS485(optional) interfaces, double power terminals with over current voltage and anti-reverse connection, etc.
- All external interfaces are located at the front end of the product, which is more convenient for user wiring and maintenance. .

2.1 AS56BOX-3625

2.1.1 Product Features

- Intel® Core™ 10-11th generation i3/i5, LGA1200 socket type CPU, TDP 35W
- Memory： DDR4 ， up to 32GB
- 1x mSATA Slot / 1 x 2.5” SATA bay
- 3 x 10/100/1000Mbps Gbe Lan
- 4 x USB3.0/2.0
- 2 x COM(DB-9)，supporting RS-232/485optional，RS485 supports automatically data flow control
- DVI-D display interface
- Board carried with mini PCIE slot ， extensional for Wifi、3G/4G function
- Support DC12~24V power input with overcurrent protection.
- Fully enclosed structure, embedded fan auxiliary heat dissipation, no cable design, with strong anti-electromagnetic interference ability
- Wide working temperature：-10 ~ 60℃

2.1.2 Product Specifications

Model		AS56BOX-3625
Processor	CPU	Intel Core i3-10100T preinstalled (option Intel® Core™ 10-11th generation i3/i5, LGA1200 socket type CPU, TDP 35W)
Memory	Architecture	2 x 260-pin SODIMM
	Capacity	DDR4-2666MHz，Up to 32GB
Storage	SSD	1 x Full-size PCIe Mini slot support mSATA+2.5” SATA
I/O port	USB	4 x USB3.0，2.0，1.1
	COM	2x COM(DB-9)，supporting RS-232/485optional，RS485 supports automatically data flow control
	Mini PCIe	1 x full size PCIe with SIM holder
	Watch Dog	0~255 seconds programmable
Ethernet	LAN1	10/100/1000Mbps controller
	LAN2	10/100/1000Mbps controller
	LAN3	10/100/1000Mbps controller
Display	DVI-D	Support 1920 x 1200@60Hz
Power	Input voltage	DC12~24V ±10%,
	Minimum Input	12V/10A, 24V/5A
	Idle mode	27Watt
Mechanism	Box structure	Aluminum alloy BOX
	Mounting	Support Desktop and Wall-mounted mounting
	Dimensions (L*W*H)	238mm * 191.5mm * 120mm
	Net weight	4KG
Environmental	Operating Temp.	-20ºC ~ 60ºC (-4°F~140°F) with air flow (mSATA), 5~95% ((Non-condensing))
	Storage Temp.	-40ºC ~ 80ºC (-40 ~ 176°F) with air flow (msATA), 5~95% ((Non-condensing))
	Vibration	SSD : 1.5 Grms, IEC 6006 x -2-64, random, 5 ~ 500 Hz, 1 hr/axis
	Shock	SSD: : Operating 10G peak acceleration (11ms duration), follow IEC 60068-2-27
	EMC	CE/FCC Class B
OS	Windows	Windows 10 、 Windows11
	Linux	Ubuntu

2.1.3 Dimension

AS56BOX-3625 Dimension:（mm）

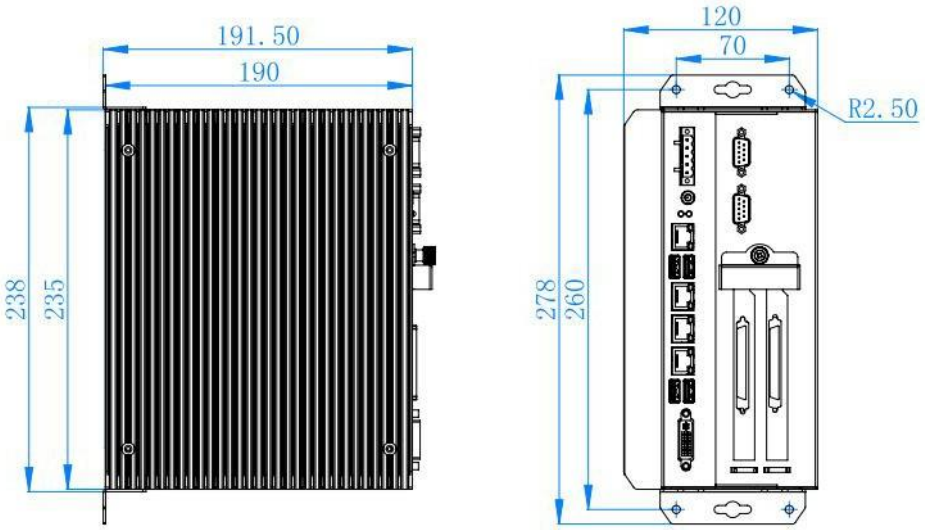


Figure 0- 1 Dimention

2.1.4 I/O Definition

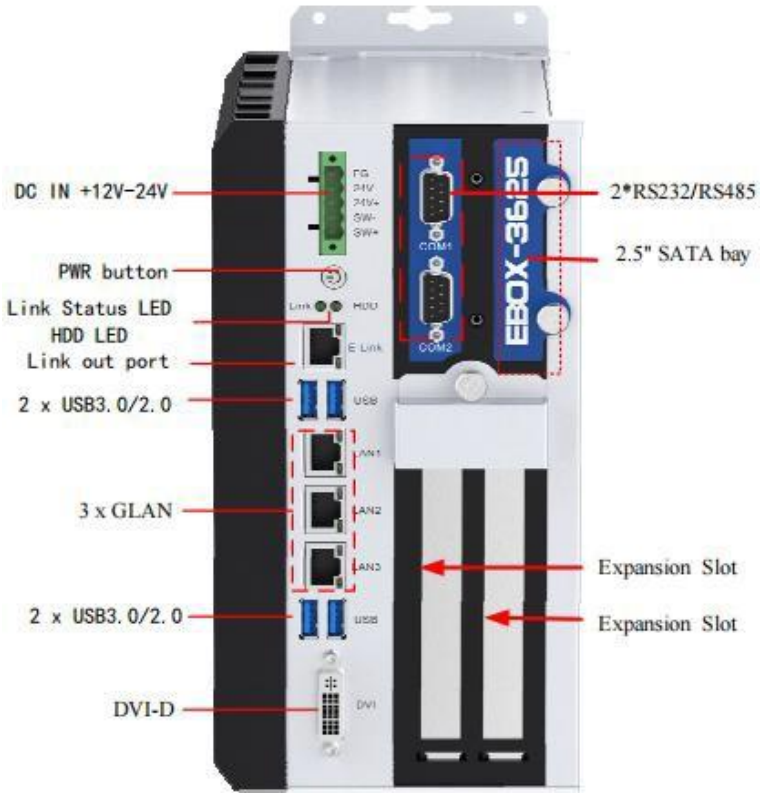


Figure 0-2 I/O Definition

1.3.1.1 PWR LED/HDD LED

There are 2 LEDs on the front panel to indicate power status and HDD status.

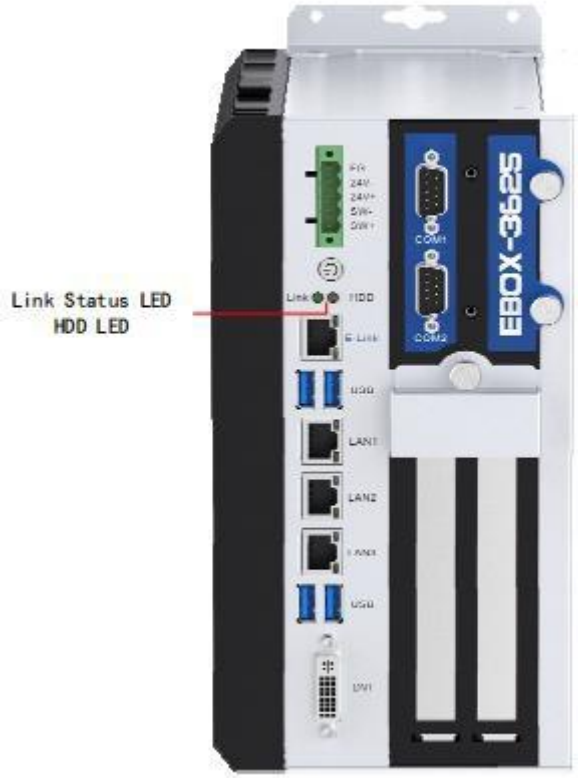


Figure 0-3 LEDs

LED NAME	STATUS	DESCRIPTION
LINK LED	Off	Without LINK to monitor
	On (green)	LINK ok
HDD LED	Blink (orange)	It indicates the HDD is being accessed.

1.3.1.2 Power Button

There is a power button on the front panel which can be used to power on/ off the PANEL PC.

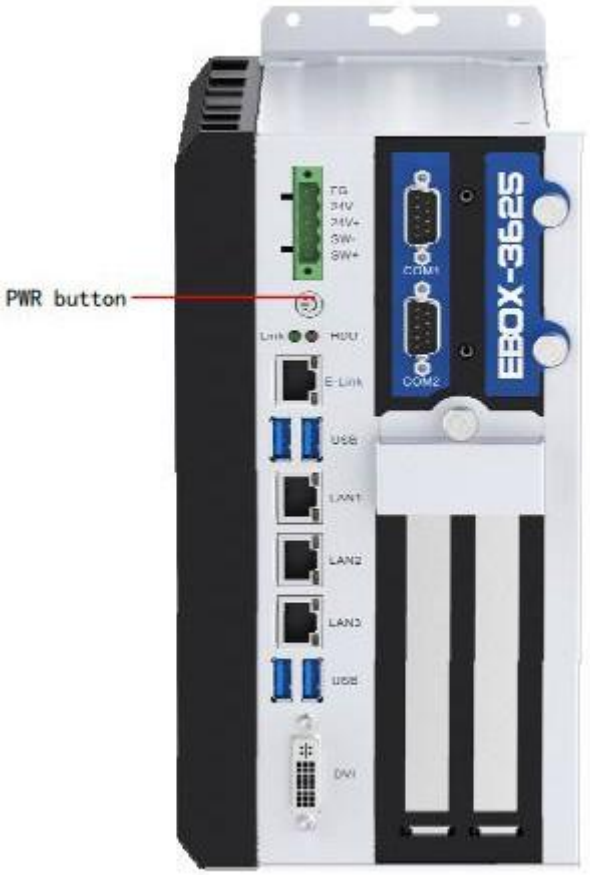


Figure 0-4 Power button

1.3.1.3 DC IN

There are power input interfaces provided on the front panel which ensures reliable power connection. These power input interfaces support DC 12V-24V. Paying attention to the positive and negative marks before connecting any power input interfaces to the PANEL PC. Don not connect mains (220V) directly.

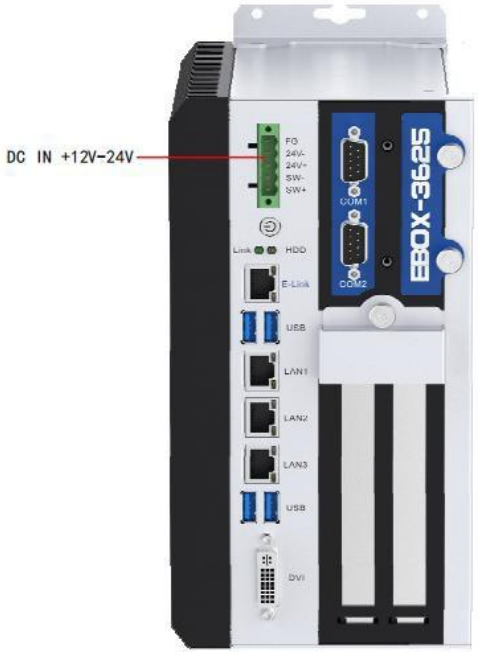


Figure 0-5 Connector Definition

The signal of the power input connector is defined as below:

Pin No.	Signal
1	FG（GND）
2	V+
3	0V
4	Remote switch on+
5	Remote switch on-

:

1. Make sure that the output voltage of the power supply matches the service voltage of the before power on the device.
2. Pay attention to the positive and negative poles on the panel cover, do not connect them interactively, otherwise it may cause damage on the hardware or even cause electric shock.
3. Be sure not connect mains (220V) to the power supply terminal directly.

1.3.1.4 LAN PORTS：LAN1,LAN2，LAN3

There are three gigabit Ethernets ports on the carry board, which are LAN1, LAN2 and LAN3.

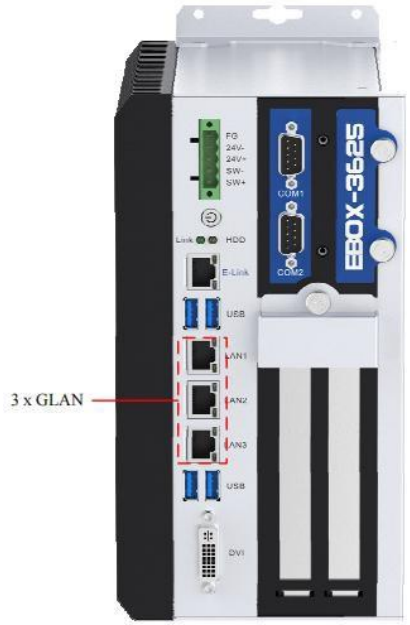
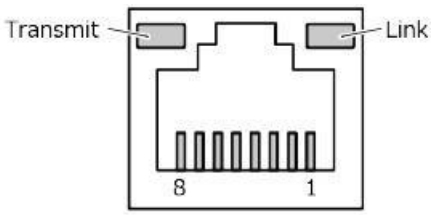


Figure 0-6 Gigabit Ethernet Ports

TYPE	参数
Network Type	1000BASE-T/100BASE-TX/10BASE-T
Transmission Speed	1000M/100M/10M bps
Maximum Cable Distance	100m/segment
Network Card Type	Intel® Ethernet Controller I210

*When transmission speed is 1000Mbp, please use cable CAT 5e or above.

Network Signal Definition：



Pin No.	Signal Name	
	100BASE-TX	1000BASE-T
1	TX+	TRD+(0)
2	TX-	TRD-(0)
3	RX+	TRD+(1)
4	N.C.	TRD+(2)
5	N.C.	TRD-(2)
6	RX-	TRD-(1)
7	N.C.	TRD+(3)
8	N.C.	TRD-(3)

1.3.1.5 USB

The front panel of AS56BOX-3625 provides four separate USB3.0 ports Compatible with USB2.0。

1.3.1.5.1 USB3.0/2.0

The carry board has four USB3.0 TYPE-A type.

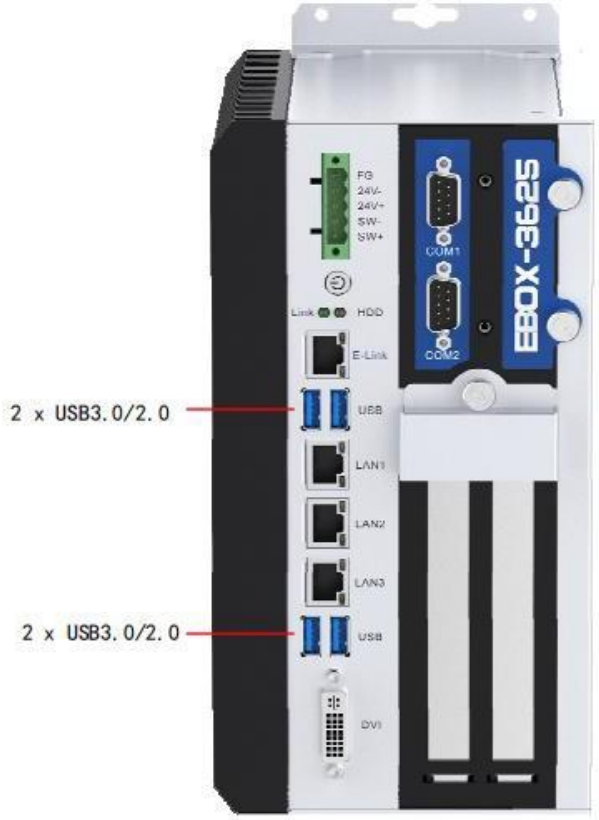
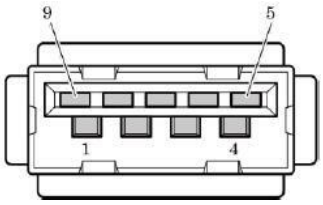


Figure 0-7 USB

USB3.0 Connector Pin Definiton：



Pin No.	Signal
1	USB_VCC
2	DATA-
3	DATA+
4	USB_GND
5	SSRX-
6	SSRX+
7	USB_GND
8	SSTX-
9	SSTX+

1.3.1.6 USB2.0

Built-in USB2.0 TYPE-A interface for easy USB dongle installation

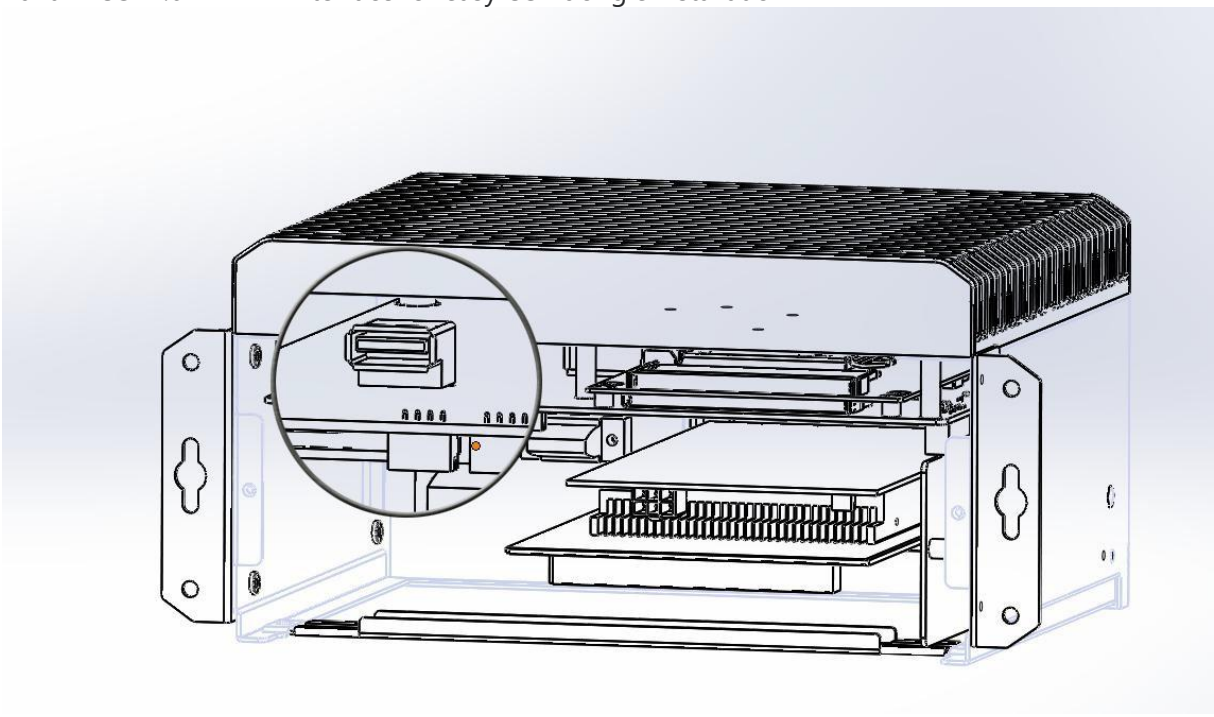
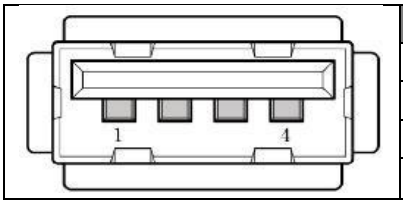


Figure0- 8 Inside USB

USB2.0 Connector Pin Definiton：



Pin No.	Signal
1	USB_VCC
2	DATA-
3	DATA+
4	USB_GND

1.3.1.7 Serial Ports: COM1, COM2

AS56BOX-3625 provides 2 serial ports which are COM1—COM2. They all use standard DB9 male connector terminals supporting RS232 or RS485 communication protocol(can be selected by the slide switch).

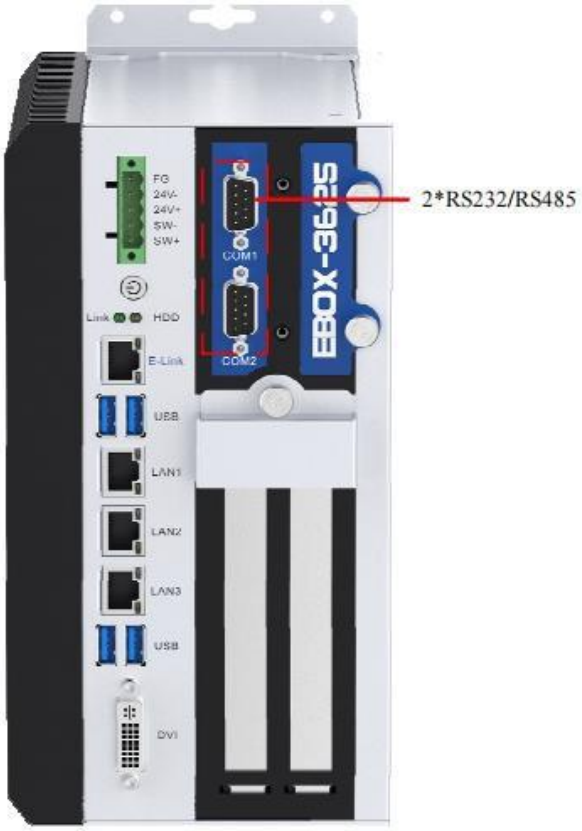
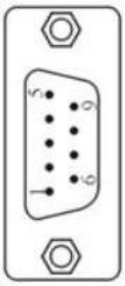


Figure 0-9 Serial Ports Setting

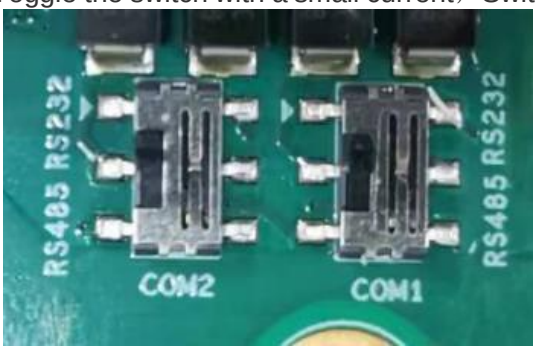
The serial ports signal definition of DB9 male terminal is shown as below:



Pin No.	Signal Name	
	RS232	RS485
1	N.C.	B
2	RXD	A
3	TXD	N.C.
4	N.C.	N.C.
5	GND	GND
6	N.C.	N.C.
7	RTS	N.C.
8	CTS	N.C.
9	N.C.	N.C.

Slide switch

Toggle the switch with a small current，Switch signals to achieve RS22-485 function



Switch table

COM1		COM2	
Switch 1		Switch 2	
RS232	Pin1-2(default)	RS232	Pin1-2(default)
RS485	Pin2-3	RS485	Pin2-3

Toggle switch is to switch the circuit on or off by flipping the switch handle, so as to achieve the purpose of switching the circuit
The switch can be made with a slight flip of the switch

1.3.1.8 Display Interface

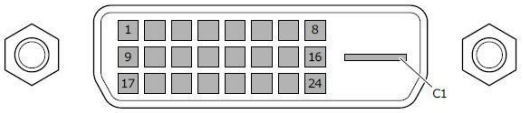
AS56BOX-3625 provides standard DVI-D video interface.

Figure 0- 10 Video Interface

1.3.1.8.1 DVI-D

The device also has DVI-D high definition multimedia video display interface. The terminal signal is defined as below:

DVI-D 24pin



Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	DATA2-	11	DATA1 SHIELD	21	N.C.
2	DATA2+	12	N.C.	22	DATA0 SHIELD
3	DATA2 SHIELD	13	N.C.	23	CLK+
4	N.C.	14	+5V	24	CLK-
5	N.C.	15	GND	C1	N.C.
6	DDC CLK	16	HPD		
7	DDC DATA	17	DATA0-		
8	N.C.	18	DATA0+		
9	DATA1-	19	DATA0 SHIELD		
10	DATA1+	20	N.C.		

：

1. If the DVI-D is not connected before restarting the BIOS Settings, the monitor may fail to display relevant content, and then the boot information will be displayed when the system boots up.
2. When using HDMI, the operating temperature should be between 0 and + 45°C.

1.3.1.9 Link Out Port

The eLink interface uses a standard RJ45 connector to transmit the display signal and USB signal to the Panel display via a network cable. The advantages are simple wiring, strong anti-interference ability.

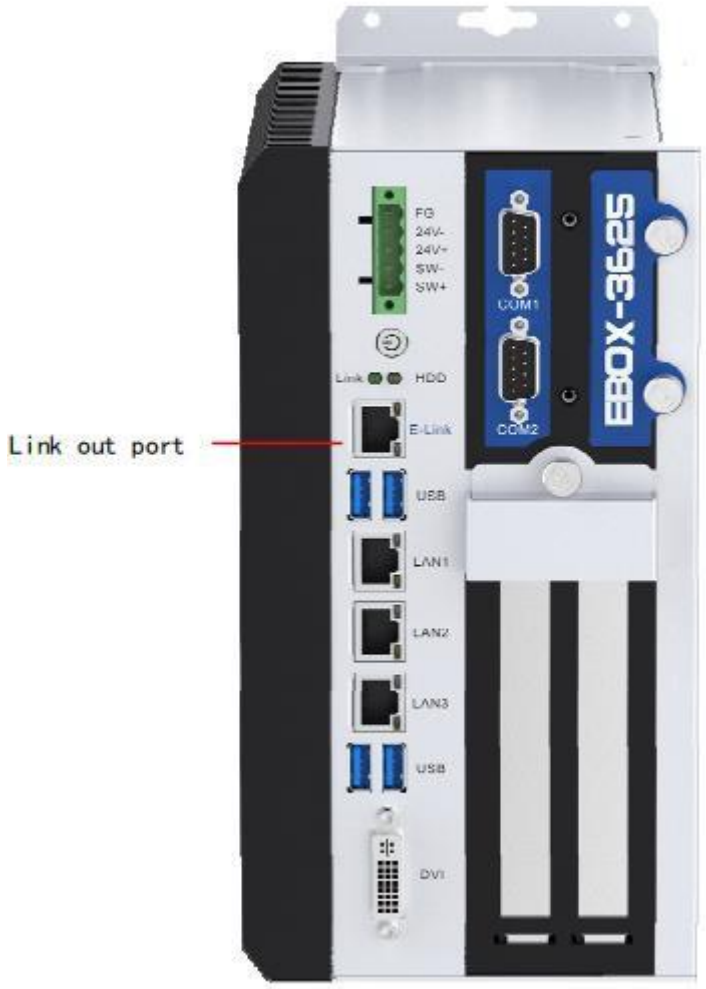
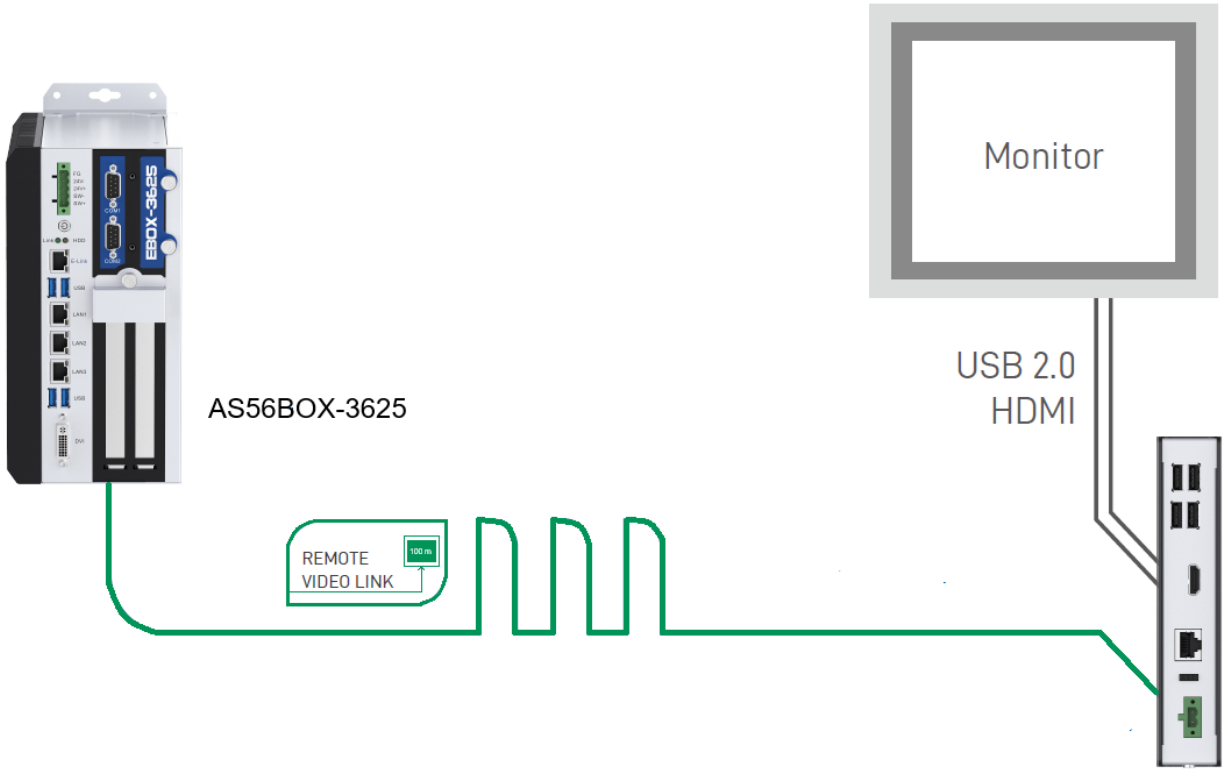


Figure 0- 11 LINK out

1.3.1.9.1 Link Application

Link out port connects monitor integerated receiver with link in port



NOTICE:

a, Network cable using CAT6e specification above network cable, and need to have a shielding layer。

b, link LED ---- Remote transmission magic box and display end link status light

1.3.1.10 2.5” SATA bay

The 36xx series offers an extended 2.5 "SATA bay，Supports the SATA3.0

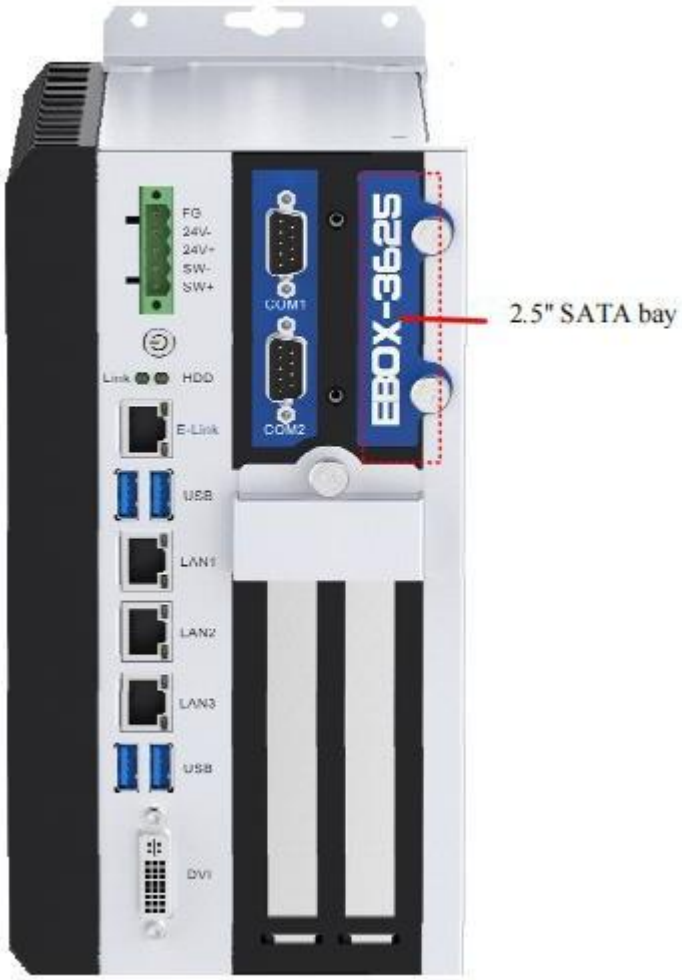


Figure 0-13 2.5”SATA bay

1.3.1.11 PCI/PCIe Expansion port

The 36xx series provides a standard PCIe x16 slot，Standard PCIe 16x signal available。Can expantion network cards, graphics cards and other devices Provides a standard PCI bus slot, the default 32-bit, operating frequency 33MHz

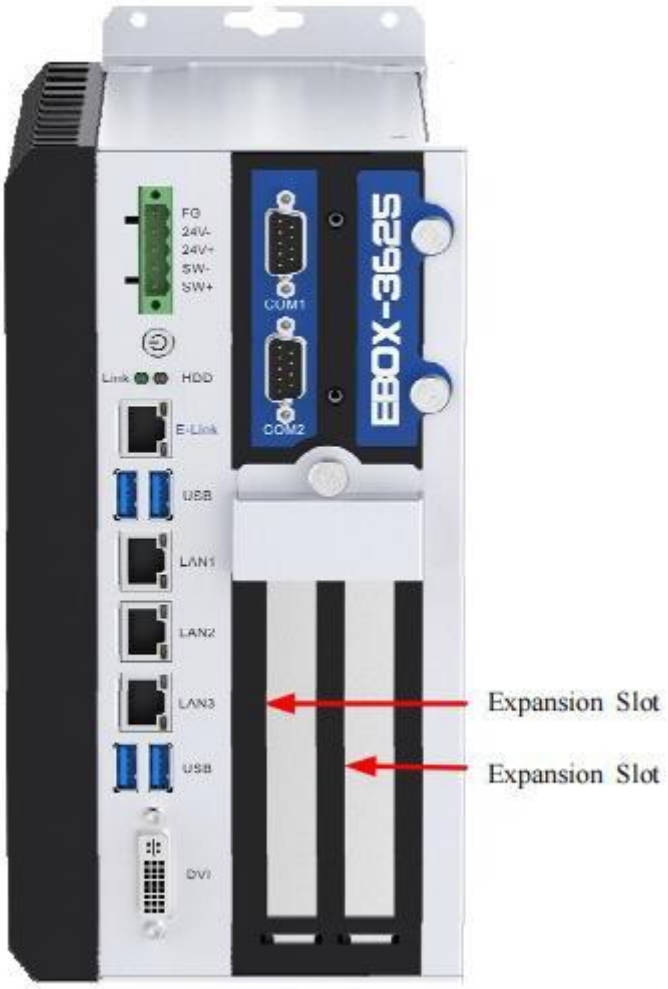


Figure 0-14 Expansion Slot

Chapter 3 BIOS Setting

3.1 Introduction of this chapter

This section describes how to set up your system using AMI's BIOS configurator. Correct setting of BIOS parameters can make the system work stably and reliably, and also improve the overall performance of the system. Improper or even incorrect SETTING of BIOS parameters will greatly reduce the system performance, making the system unstable or even unable to work properly.

When the BIOS Settings in the CMOS are damaged, the system will also require entering the BIOS Settings program. All Settings modified through the BIOS are also stored in the CMOS memory of the system. The CMOS memory is powered by the battery, and its content will not be lost even if the external power is cut off, unless remove the CMOS content.

3.2 BIOS Setting

When the system is powered on, BIOS setup program prompted information will be seen after boot.

```
Press <DEL> or <ESC> to enter setup.
```

At this time (invalid at other time) press the key specified by the prompt (usually the <Del> key) to enter the BIOS setup program.

If the message disappears but you need to re-enter the BIOS setting system, restart the PANEL PC after power-off or press <Ctrl> + <Alt> + <Delete> to reload the system. Then re-enter the BIOS setting screen as prompted.

3.3 BIOS method

In general, use the arrow keys on the keyboard to select the Settings, <Enter> to enter the settings, + and - to switch settings, <F1> to get help information, and <Esc> to exit the settings.

See the table below.

Keys	Function Description
< ↑ >	Move to previous item
< ↓ >	Move to next item
<← >	Move to the item on the left side
<→>	Move to the item on the right side
<Esc>	Reset
<Enter>	Enter to select
< + >	Increase the numeric value or make changes
< - >	Decrease the numeric value make changes
< F1 >	General help
< F2 >	Load previous defaults from CMOS
< F3 >	Optimized defaults
< F4 >	Save all the CMOS changes and reset

3.4 BIOS Setting Items

：Since BIOS programs are updated from time to time, the following BIOS setup interface and description are for reference only.

BIOS Main

Once enter BIOS to set the system, Main interface will show up.

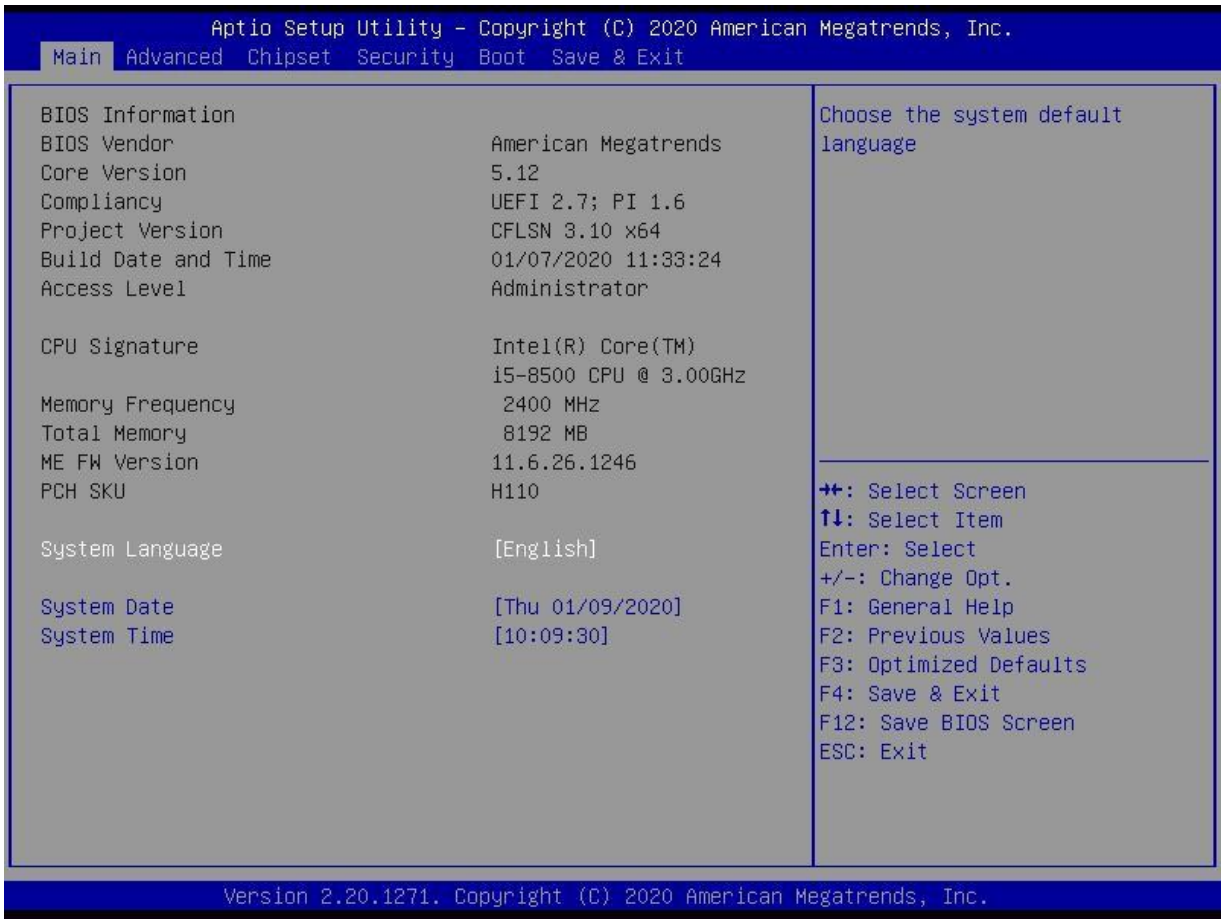


Figure 0- 1 BIOS-Main

The menu bar which is anchored to the top of the BIOS screen has the following main items:

- **Main -** Change the basic system configuration.
- **Advanced -** Changes the advanced system settings
- **Chipset -** Changes the chipset settings.
- **Security -** Sets user and supervisor passwords.

- **Boot -** Changes the system boot configuration.
- **Save & Exit -** Selects exit options and loads default settings.

3.4.1 Main

Main is used to confirm basic system configuration information.

■ Items

Items	Content	Description
Project Version	xxxxx x.xx x64	BIOS version
Build Date and Time	xx/xx/xxxx xx:xx:xx	BIOS create time

■ Settable Items

Items	Content	Description
System Language	[English]	Set BIOS language, the default is English.
System Date	Week Day Month / Day / Year	Set system date
System TIme	Hour : Minute : Second	Set system time

3.4.3 Advanced

In this menu, you can set detailed system functions as below:

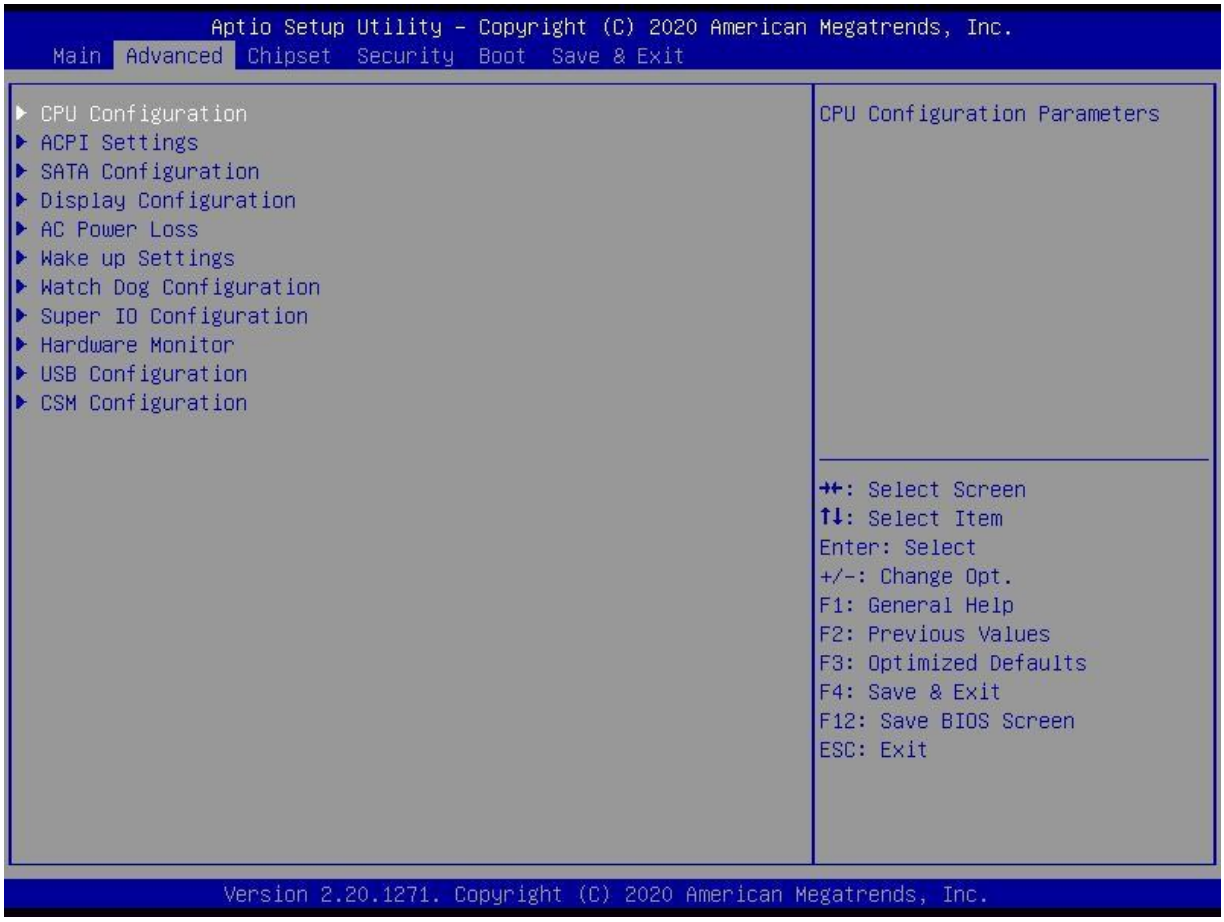


Figure 0- 2 BIOS-Advanced

- CPU Configuration
  The main function of this item is to display CPU information and configuration items.

  - ACPI Settings
    This is the setting item related to Advanced Configuration and Power Management Interface (ACPI)

- SATA Configuration
  This item is mainly for SATA setting.

- Display Configuration
  This item is mainly for display configuration.

- AC Power Loss
  This item is mainly for power management setting.

- Wake up settings
  This item is mainly to set sleep or wake up function.

- Watch Dog Configuration
  This item is for watch dog setting.

- Super IO Configuration
  This item is for IO setting.

- Hardware Monitor
  The primary function of this item is to display hardware monitoring parameters such as CPU temperature

- USB Configuration
  The main function of this item is the setting of USB interface.

- CSM Configuration
  This is the setting of the Compatibility Support Module. This option is designed to work with devices that only work in Legacy mode and operating systems that do not or do not fully support UEFI.

Set this parameter with caution under the guidance of technical support. Improper Settings may cause system startup failure or hardware damage.

3.4.4 CPU Configuration

On this screen, you can view CPU configuration information and configure the CPU.

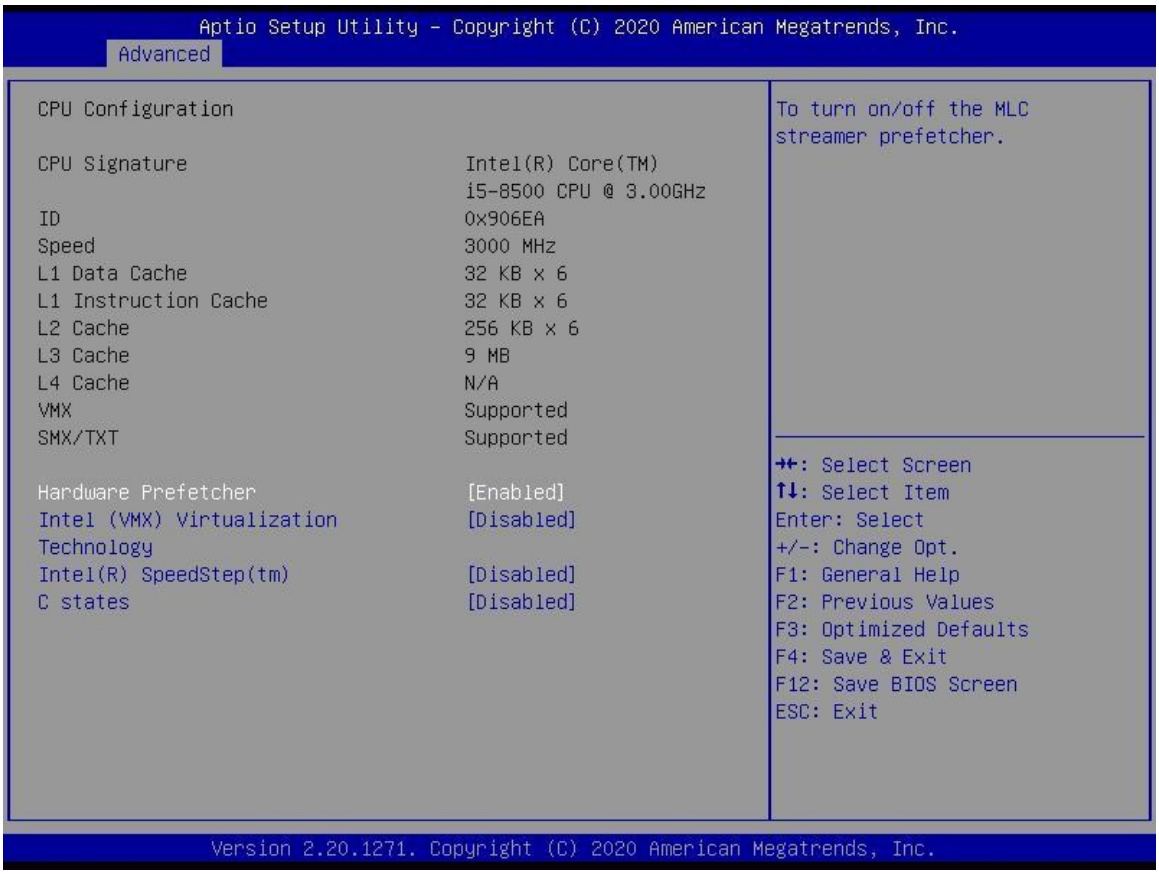


Figure 0- 3 BIOS-CPU Configuration

■ **CPU Configuration:**

Items	Contents	Description
Hardware Prefetcher	Disabled / Enabled	The hardware prefetch option indicates that the CPU has the hardware prefetch function. The CPU prefetches instructions or data from the memory to the L2 cache before processing the instructions or data. This reduces the memory read time, eliminates potential bottlenecks, and improves system performance. Generally, you are advised to set it to Enabled.
Intel (VMX) Virtualization Technology	Disabled / Enabled	Intel virtualization technology, which makes it possible to run multiple operating systems on a single computer by making one CPU work as if it were multiple cpus running in parallel. Normally, the state is Disabled.
Intel(R) Speed Step(tm)	Disabled / Enabled	This option is Intel's intelligent frequency reduction technology. The CPU automatically adjusts the voltage and frequency doubling based on the CPU

		usage to reduce power consumption and heat. The state must be Disabled.
C states	Disabled / Enabled	The CPU is in standby state. The clock and voltage can be adjusted according to the state, or the CPU can be turned off completely. Set this parameter to Disabled.

3.4.5 ACPI Settings

On this screen, you can set ACPI (Advanced Configuration and Power Management interface) parameters.

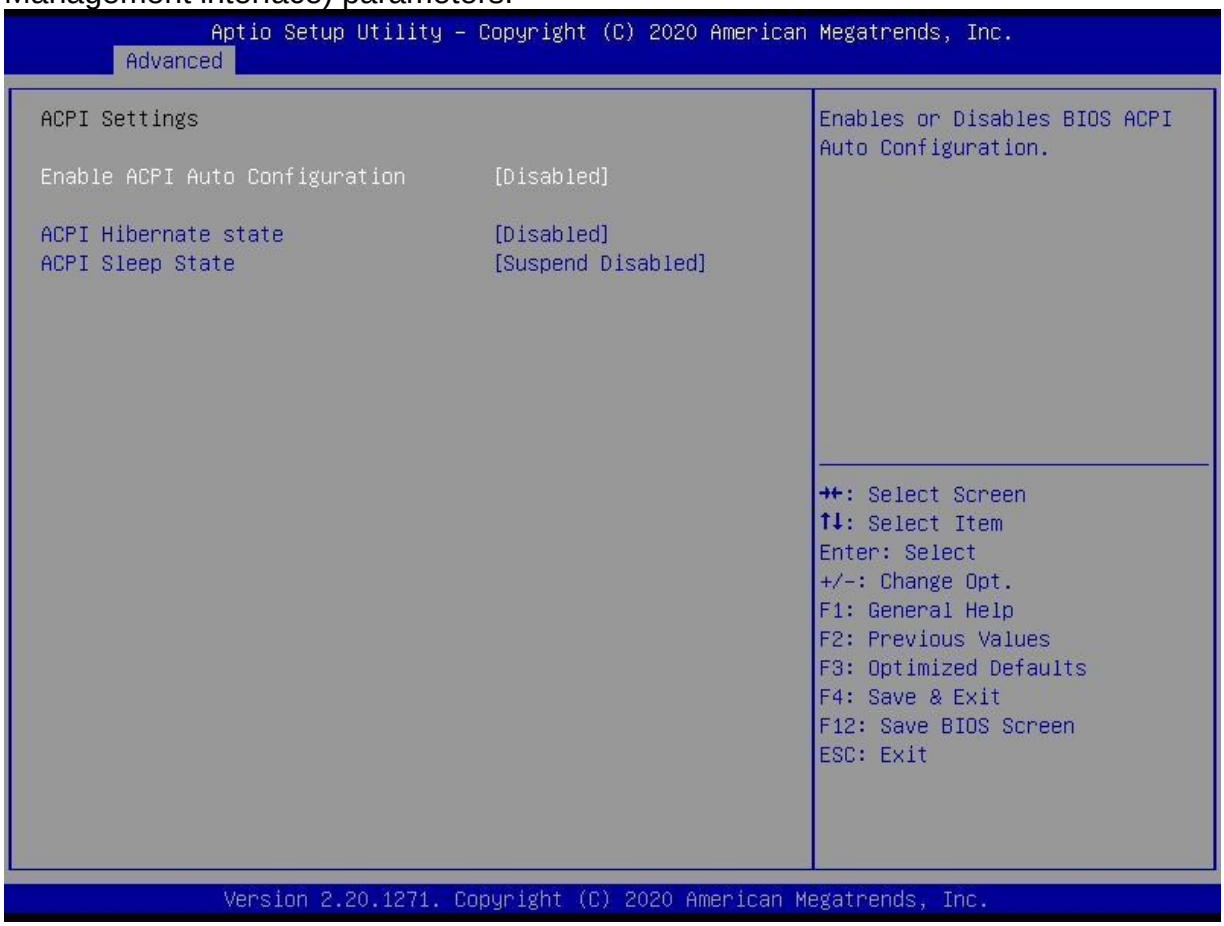


Figure 0- 4 ACPI Settings

■ **ACPI Settings:**

Items	Contents	Description
Enable ACPI Auto Configuration	Disabled / Enabled	Whether to allow ACPI to be configured automatically. The state is usually set to Disabled.
ACPI Hibernate state	Disabled / Enabled	Whether to allow ACPI to go to sleep. This is usually set to Disabled.
ACPI Sleep state	Suspend Disabled	Whether ACPI is allowed to go to sleep. The default is Suspend Disabled.

3.4.6 SATA Configuration

Configure SATA controllers on this screen.

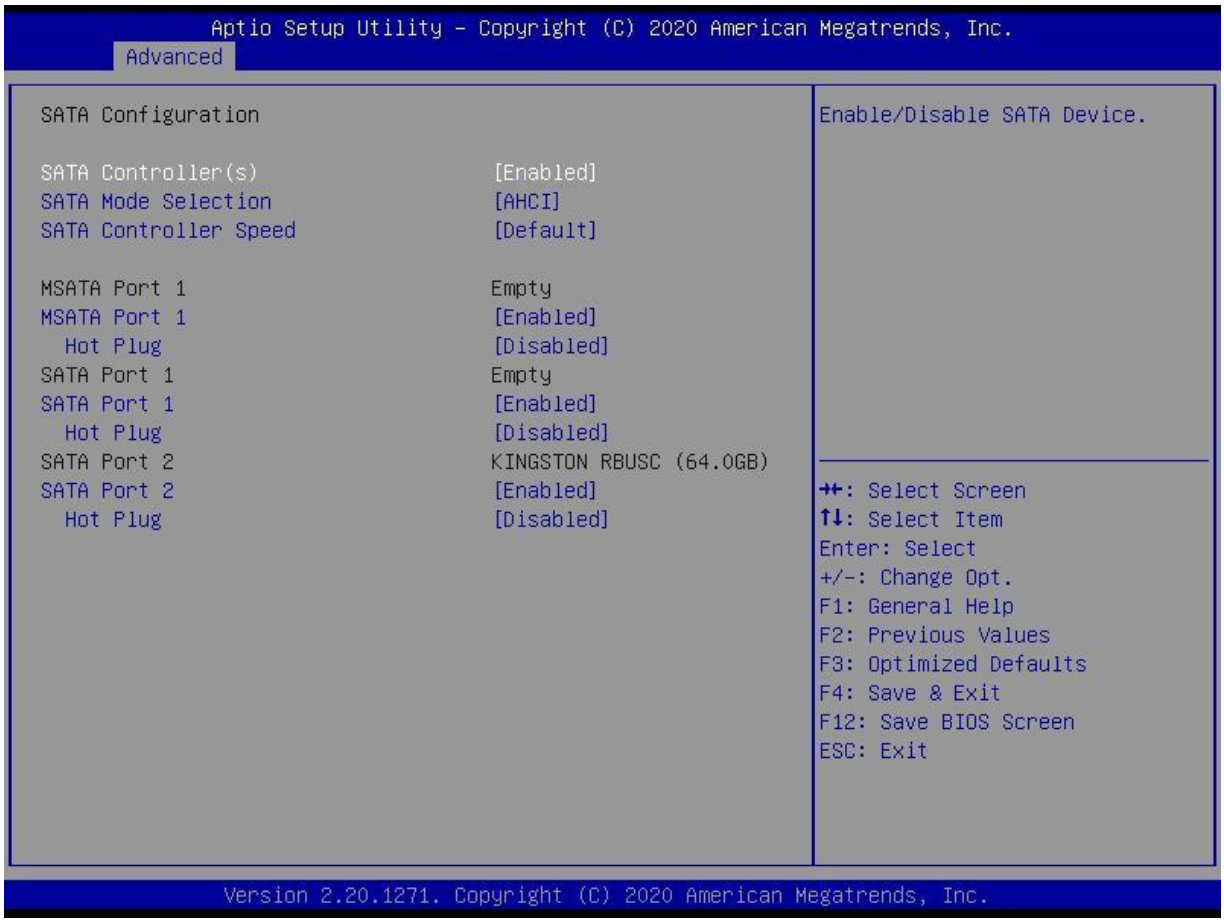


Figure 0- 5 BIOS SATA Configuration

- **SATA Configuration:**

Items	Contents	Description
SATA Controller(s)	Disabled / Enabled	Whether to enable SATA controller. If you change this parameter, you may need to reinstall the system. Do not change this parameter.
SATA Mode Selection	AHCI	SATA access mode, do not change this item.
SATA Controller Speed	Default/Gen1/Gen2/Gen 3	SATA control The access speed of the device. Do not change this item.
MSATA Port 1	-	Whether to enable MSATA Port 1 and display information about MSATA disks connected to MSATA Port 1
SATA Port 1	-	Whether to enable MSATA Port 2 and display information about SATA disks connected to SATA Port 1.
SATA Port 2	-	Whether to enable SATA Port 2 and display information about SATA disks connected to SATA Port 2.

3.4.7 Display Configuration

On this screen, you can set the parameters related to the integrated graphics card.

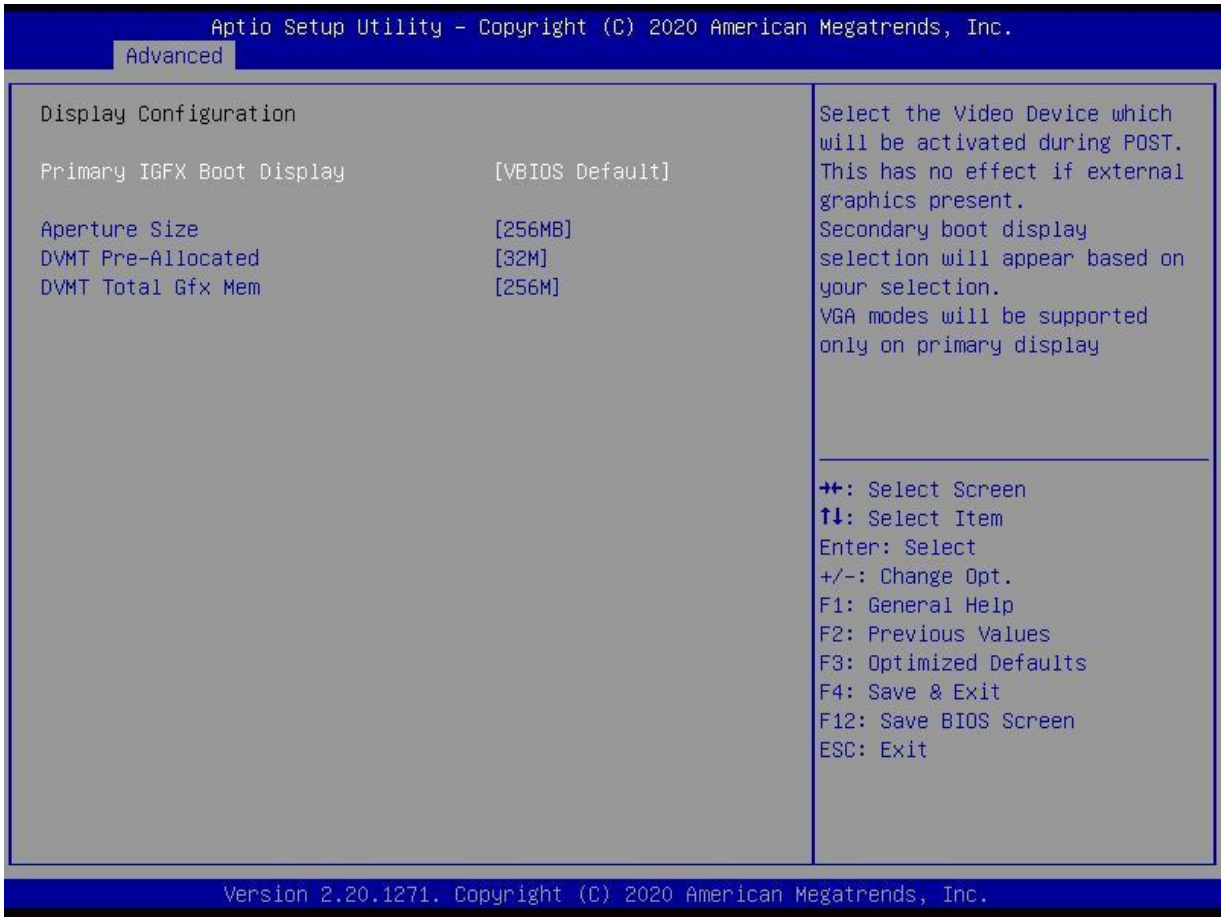


Figure 0- 6 BIOS-Display Configuration

■ **Display Configuration:**

Items	Contents	Description
Primary IGFX Boot Display	VBIOS Default / DVI / HDMI / VGA	Indicates which device connected to the integrated graphics card is displayed from when starting POST self-check. The default is VBIOS.
Aperture Size	128MB/256MB/512MB/1024MB/2048MB	This parameter is the upper limit of memory that the integrated graphics card can call when necessary. Keep the default Settings.
DVMT Pre-Allocated	0-60M	This parameter is the default value of dynamic shared video memory. It means that the system allocates this size of memory as video memory

		when the system starts up. If the memory is insufficient, the system allocates the memory again. The default is 32 MB
DVMT Total Gfx Mem	256M/128M/MAX	The default value is 256 MB. Do not change the total capacity of the allocated dynamic video memory.

3.4.8 AC Power Loss

In this interface, you can set the power-on self-start.

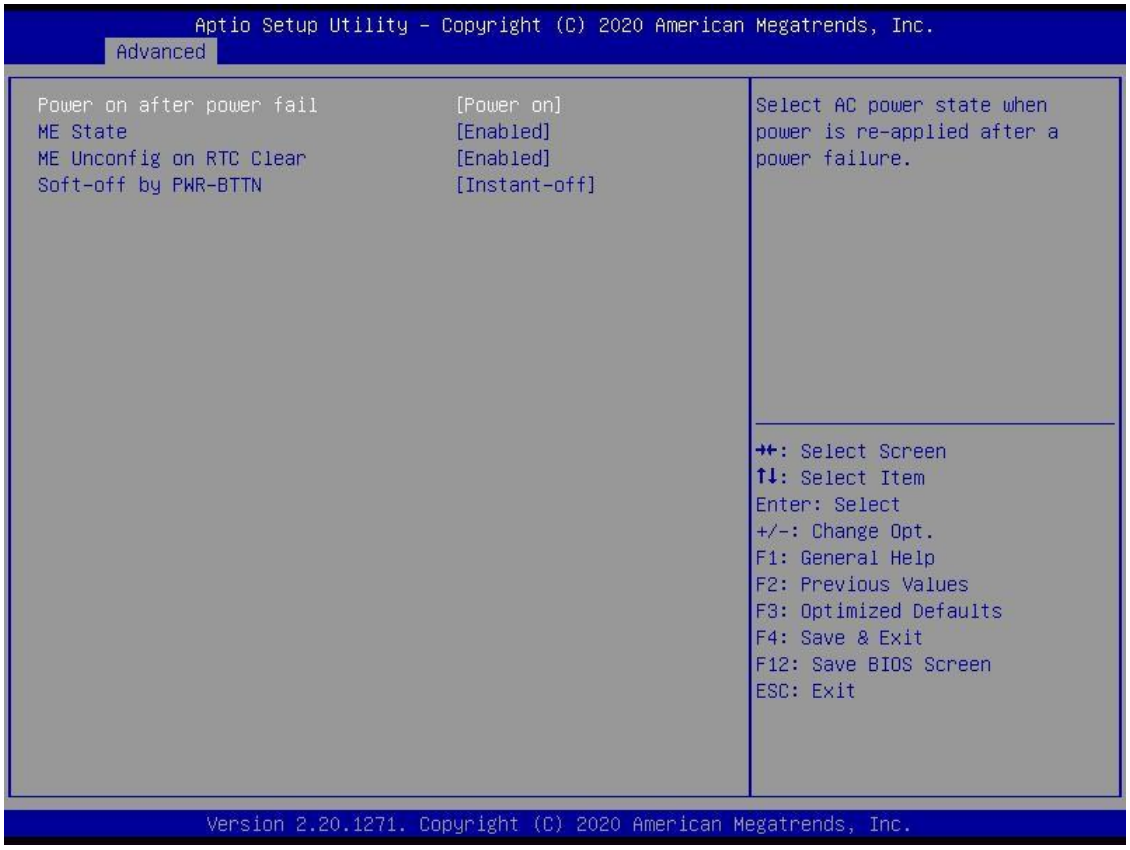


Figure 0- 7 BIOS-AC Power Loss

Items	Contents	Description
Power on after power fail	– Power off / Power on / Last status	Indicates the power status of the mainboard after it is switched on again. – Power off：No matter what the state of the last power failure is, the motherboard power supply after power failure, the motherboard does not power on; – Power on ： No matter what the state of the last power failure is, the motherboard after power supply suddenly, the motherboard automatically power on and start; – Last State ： After the mainboard is powered off, the power supply is suddenly restored.

ME State	Enabled / Disabled	Do not change this item.
ME Unconfig on RTC Clear	Enabled / Disabled	Do not change this item.
Soft-off by PWR-BTTN	Delay 4 sec / Instant-off	The way to shut down a computer when you click "Shut down computer" or run the shutdown command in the system. The default mode is instant-off. Delay 4 sec：Shut down delay of 4 seconds； Instant-off：Shut down immediately.

3.4.9 Wake up settings

On this screen, you can set the wake up mode of the system in sleep mode

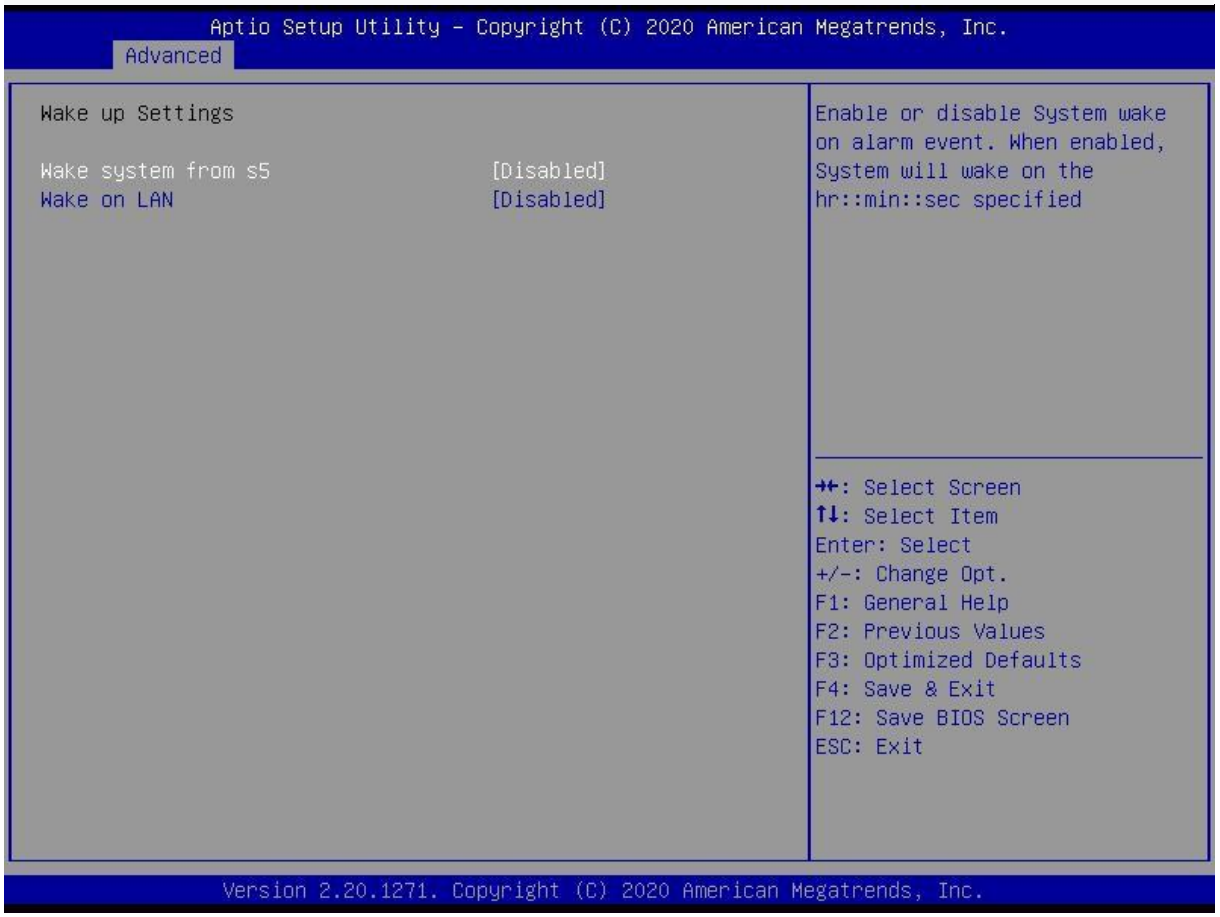


Figure 0- 8 NP-6122 BIOS-Wake up Settings

- **Wake up Settings:**

Items	Contents	Description
Wake system form s5	Enabled / Disabled	Don't change this item.
Wake on LAN	Enabled / Disabled	Don't change this item.

3.4.10 Watch Dog Configuration

On this interface, you can enable the watch dog timer and set its parameters.

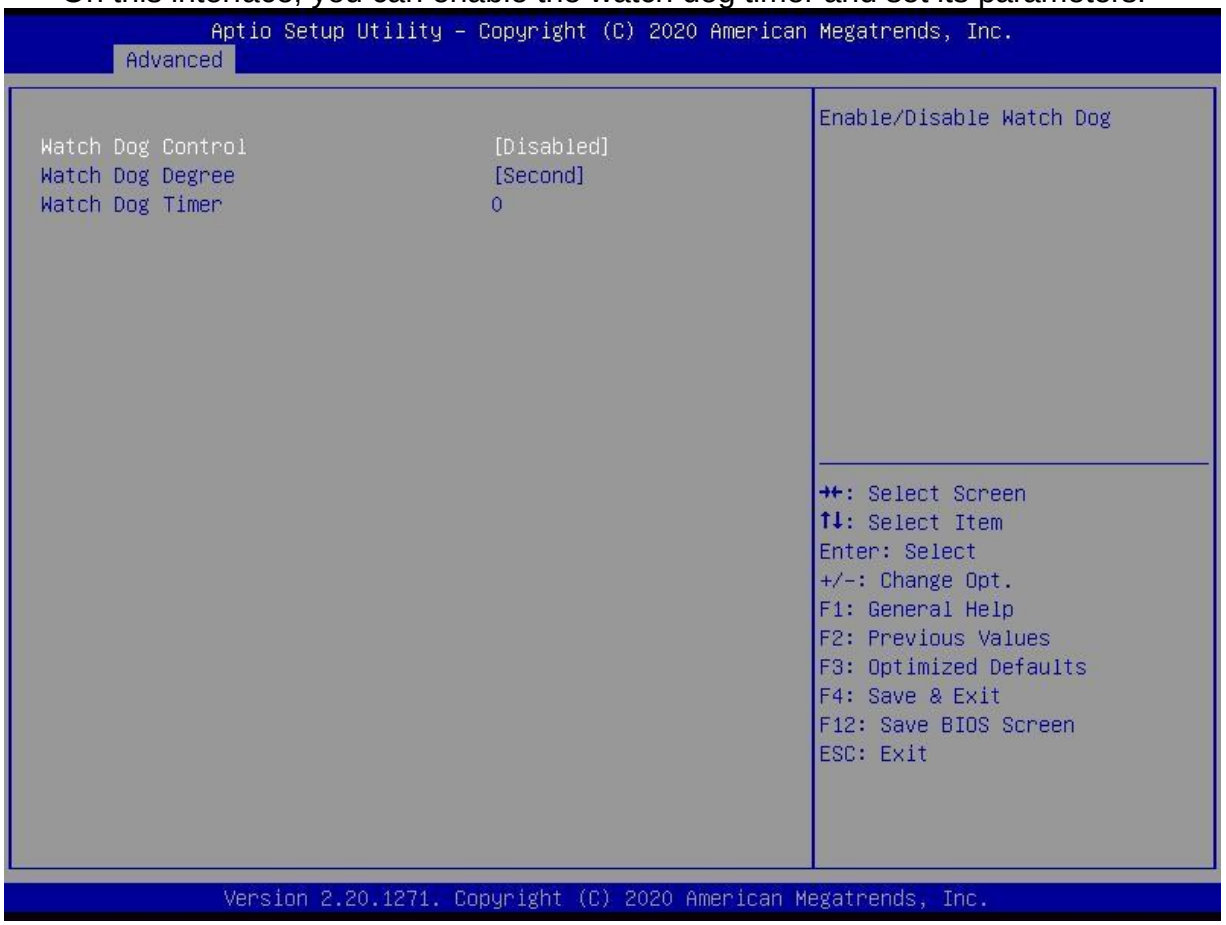


Figure 0- 9 BIOS-Watch Dog Settings

Items	Contents	Description
Watch Dog Control	Enabled / Disabled	The watch dog function is on and off.
Watch Dog Degree	Second / Minute	The unit of set point of watchdog timer.
Watch Dog Timer	0-255	Set the watchdog timer timeout value. After the timer is enabled, the software needs to periodically feed the dog (reset timer). When the timer time exceeds the set value, the system will be reset and restarted.

3.4.11 Super IO Configuration

On the Super IO screen, you can configure the Serial Port X and Parallel Port.

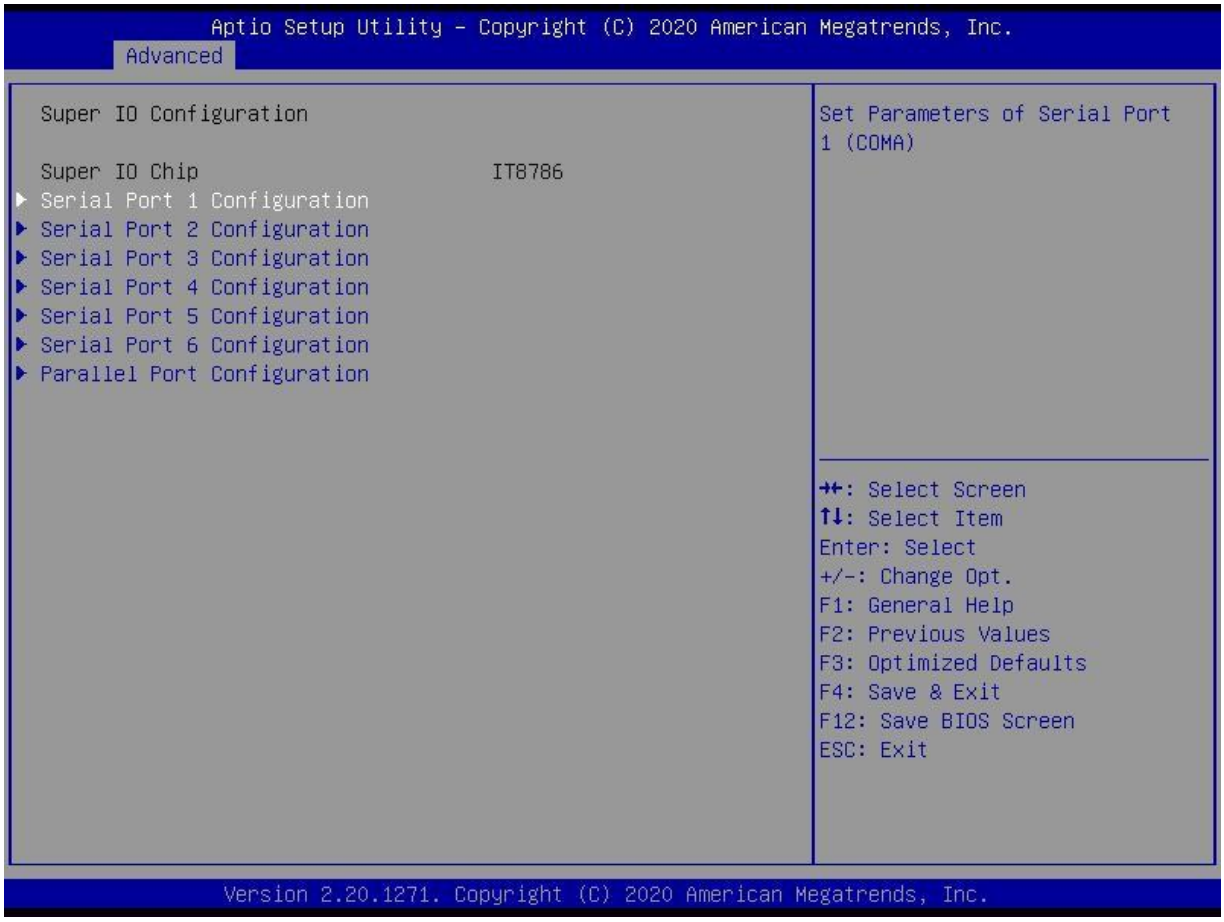


Figure 0- 1 0 BIOS-Super IO Configuration

3.4.12 Serial Port x Configuration

This interface is mainly used to set the interrupt and IO address of the serial port, including Auto and IO and interrupt address

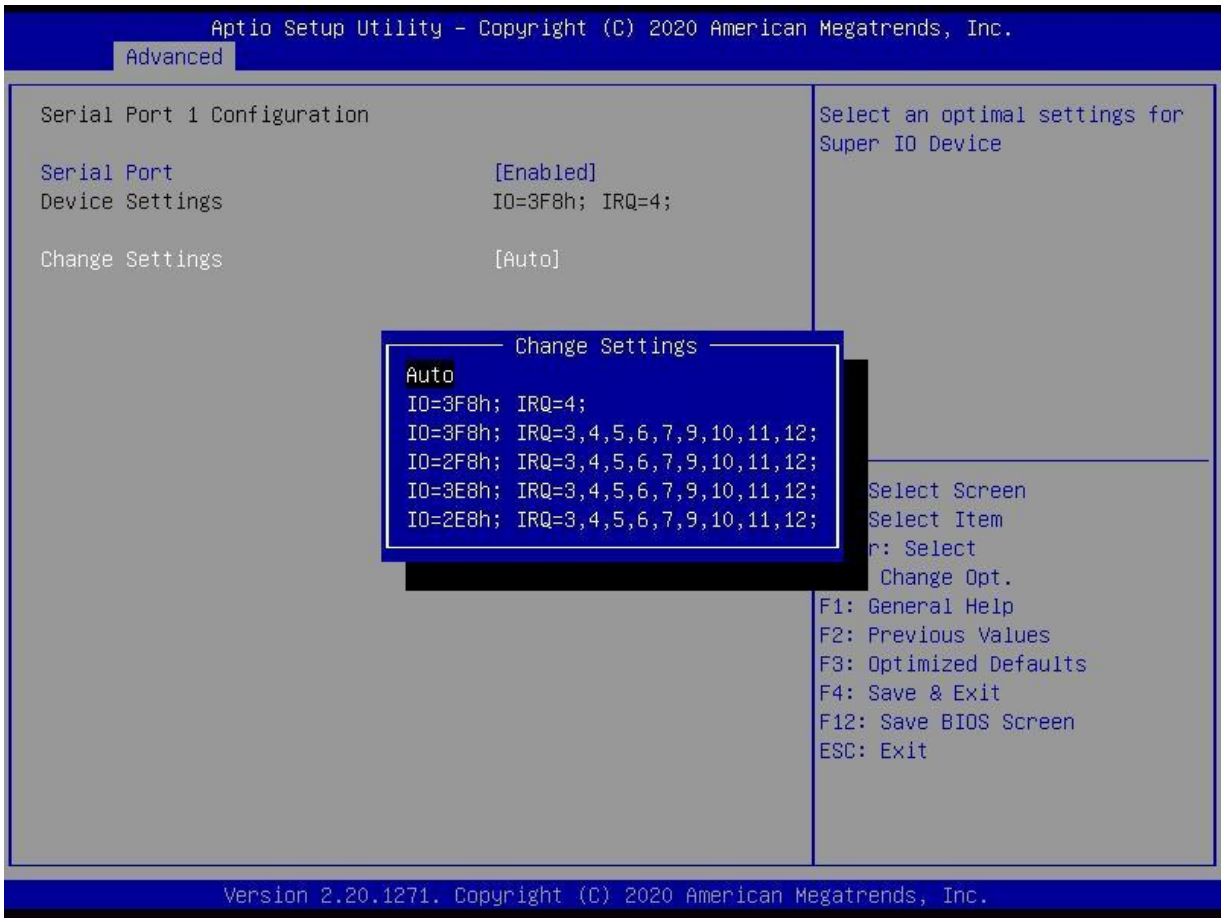


Figure 0- 1 1 BIOS-Serial Port Configuration

- **Serial Port x Configuration:**

Items	Contents	Description
Serial Port	Enabled / Disabled	Enable or disable a serial port
Device Settings	IO=3F8h; IRQ=4	IO address and interrupt priority of the serial port
Change Settings	Change Settings 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;	Serial port address and interrupt priority setting. The default value is Auto.

3.4.13 Hardware Monitor

This interface is used for hardware check.

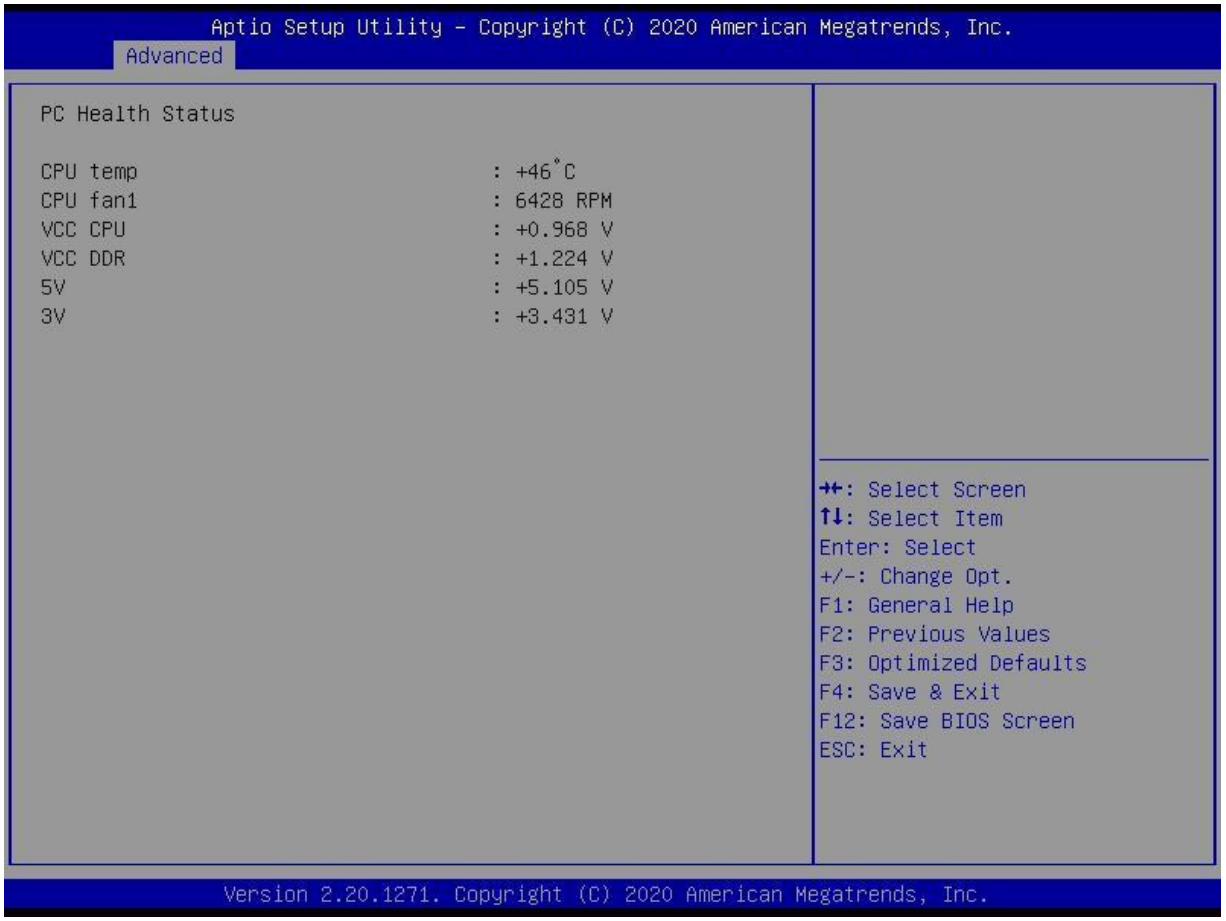


Figure 0- 1 2 BIOS-Hardware Monitor

3.4.14 USB Configuration

This interface is used to configure USB controller connectors.

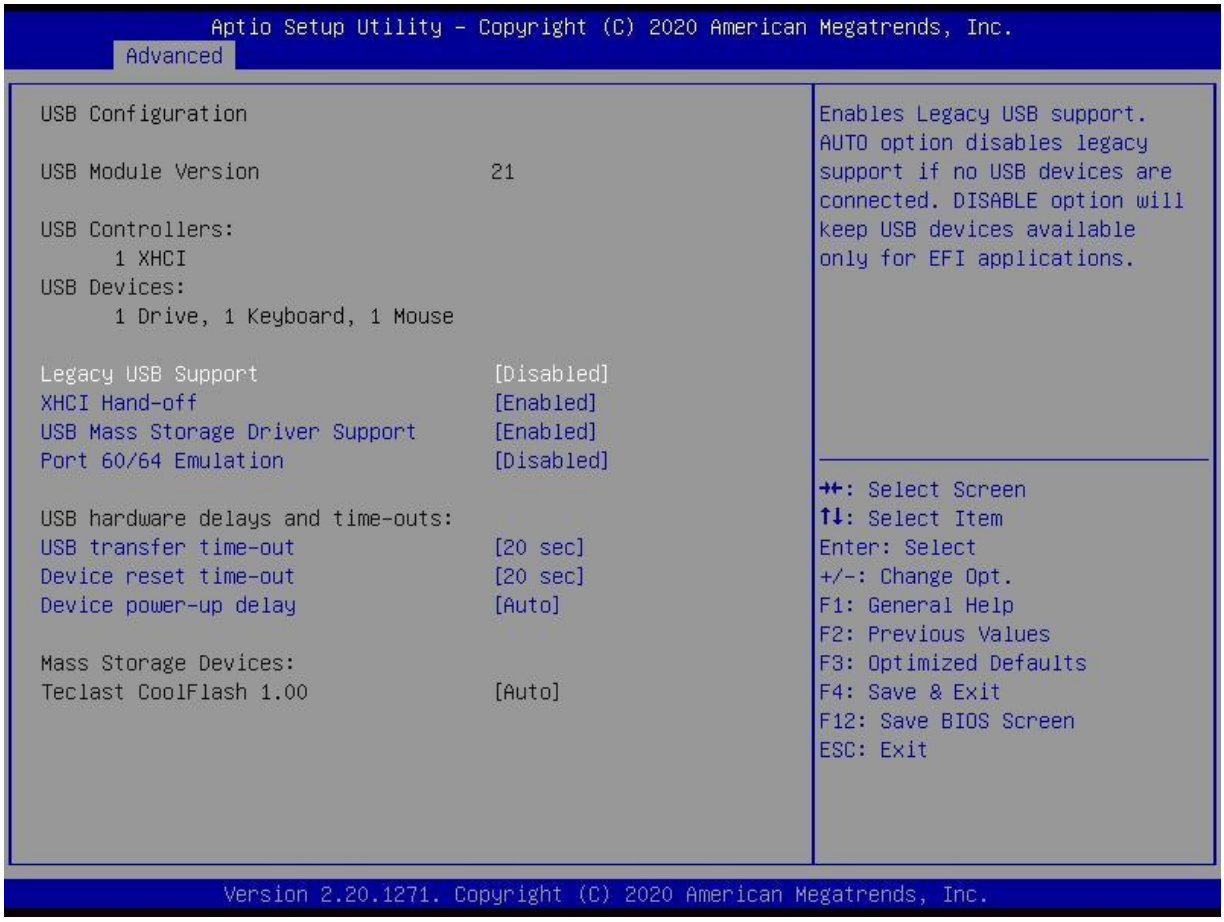


Figure 0- 1 3 BIOS-USB Configuration

- **USB Configuration:**

Items	Contents	Description
Legacy USB Support	Enabled / Disabled / Auto	Configure whether USB keyboards and similar devices can be used with older operating systems (such as MS-DOS).
XHCI Hand-off	Disabled / Enabled	Please don't change this setting.
USB Mass Storage Driver Support	Disabled / Enabled	The BIOS is configured to support USB storage devices
Port 60/64 Emulation	Disabled / Enabled	IO 60/64 analog switch. Please don't change this setting.
USB transfer time-out	1sec/5sec/10sec/20sec	USB transfer time out setting
Device reset time-out	10sec 20sec/30sec/40sec	USB command timeout setting.
Device power-up delay	Auto / Manual	USB startup delay setting.

3.4.15 CSM Configuration

This interface is designed to work with devices that only work in Legacy mode and operating systems that do not or do not fully support UEFI. CSM enables UEFI and NON-UEFI booting. To start a traditional MBR device, enable CSM. If CSM is disabled, UEFI starts and supports secure startup. Secure Boot: Secure Boot applies only to OS that start using UEFI.

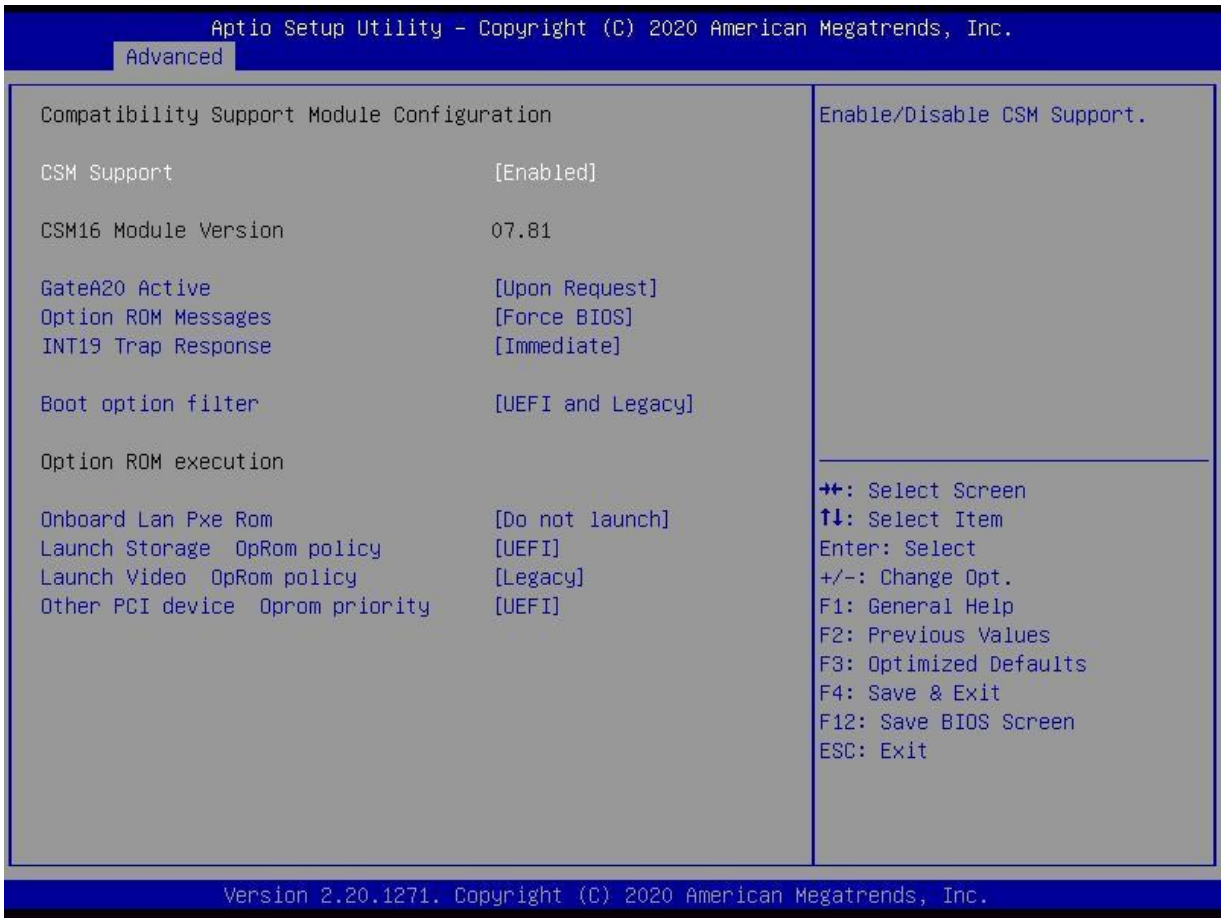


Figure 0- 1 4 BIOS-CSM Configuration

■ **CSM Configuration：**

Items	Contents	Description
CSM Support	Enabled / Disabled	Enable the compatible module function. Do not change this item!
GateA20 Active	Upon Request / Always	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
Option ROM Messages	Force BIOS / Keep Current	Set display mode for Option ROM
INT19 Trap Response	Immediate / Postponed	BIOS reaction on INT19 trapping by Option ROM Immediated: execute the trap right always;

		Postponed: execute the trap during legacy boot.
Boot option filter	UEFI and Legacy / Legacy only / UEFI only	This option controls Legacy/UEFI ROMs priority
Onboard Lan Pxe Rom	Do not launch / UEFI / Legacy	Controls the execution of UEFI and Legacy PXE OpROM
Launch Storage OpRom policy	Do not launch / UEFI / Legacy	Controls the execution of UEFI and Legacy Storage OpROM
Launch Video OpRom policy	Do not launch / UEFI / Legacy	Controls the execution of UEFI and Legacy Video OpROM
Other PCI device Oprom priority	Do not launch / UEFI / Legacy	Determines OpROM execution policy for devices other than Network, Storage, or Video

3.4.16 Chipset

This interface is used to display chipset information or set functions of the chipset.

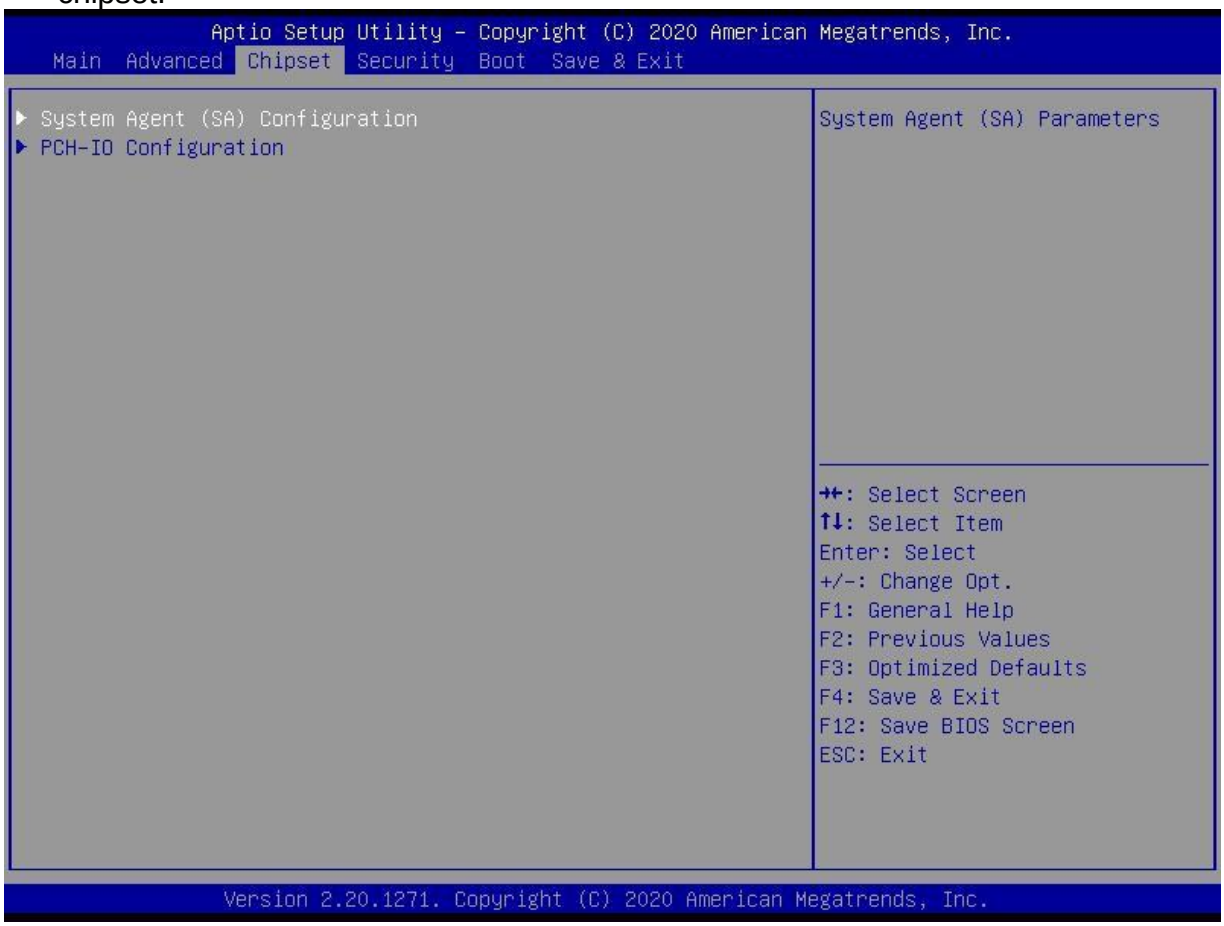


Figure 0- 1 BIOS-Chipset

View or set the following functions under this interface:

- System Agent(SA) Configuration
  - Supporting information for system
- PCH-IO Configuration
  - Configure PCI Express、LAN、USB and HD Audio device connectors.

3.4.17 System Agent Configuration

Display the current auxiliary configuration items.

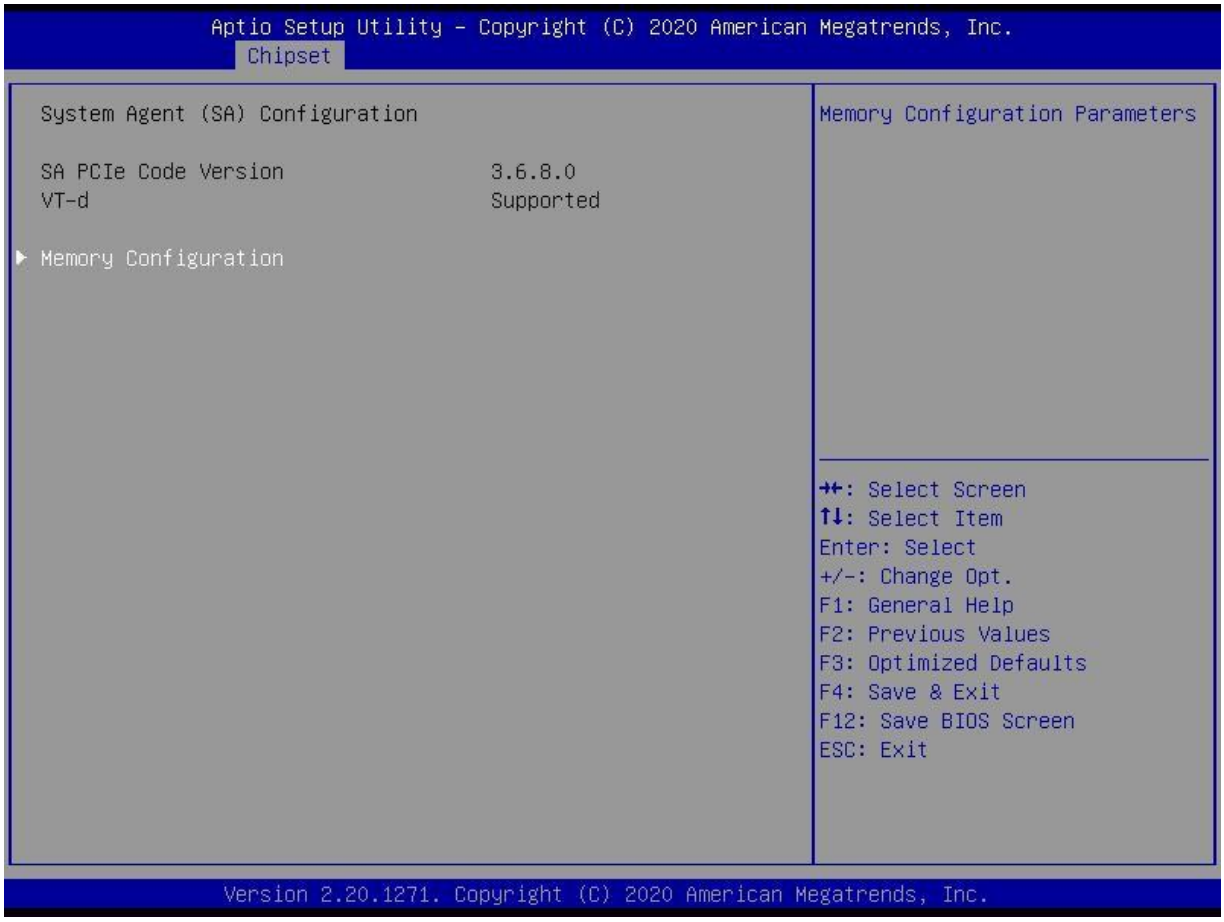


Figure 0- 2 BIOS-System Agent Configuration

3.4.18 Memory Configuration

Display the current memory channel configuration information.

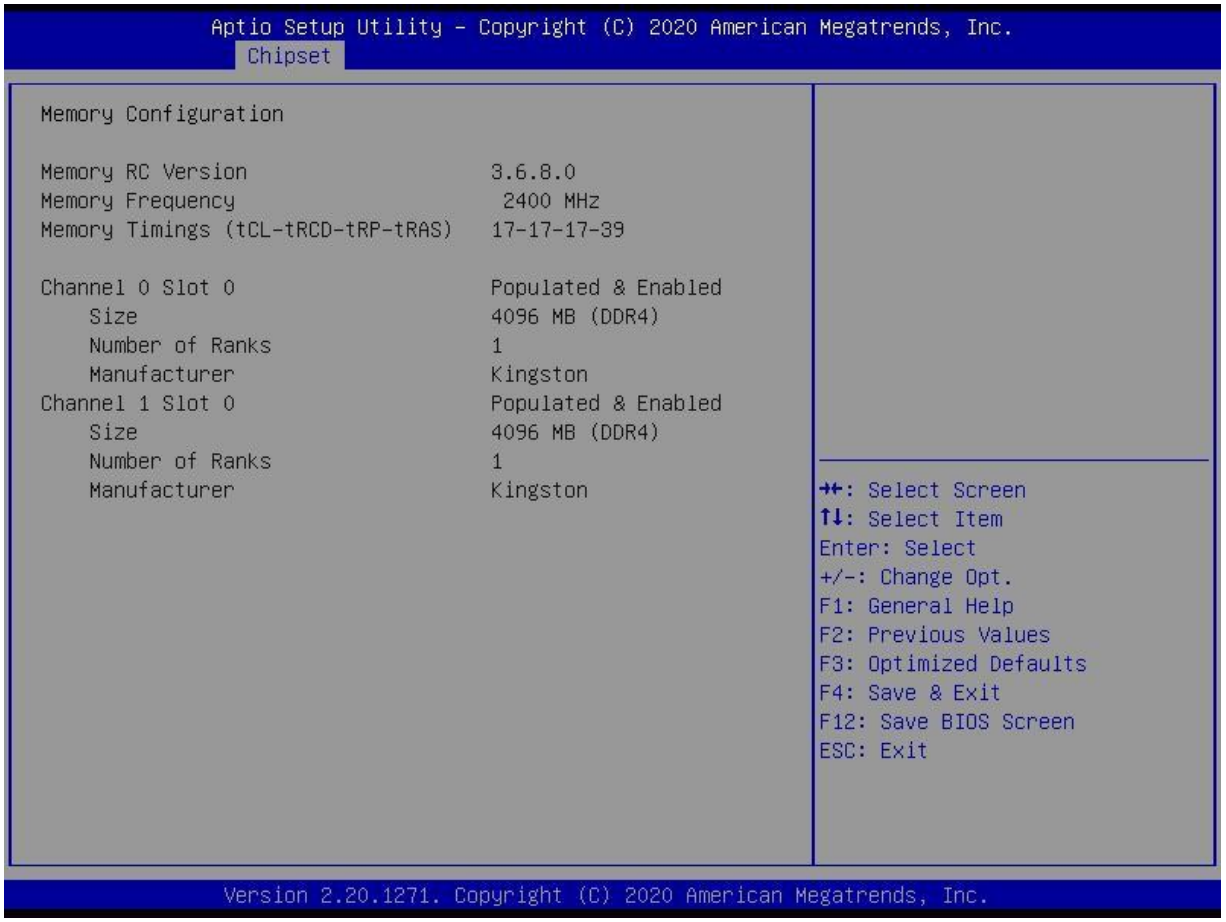


Figure 0- 3 BIOS-Memory Configuration

3.4.19 PCH-IO Configuration

This interface is used to configurate PCI Express、LAN、USB and HD Audio device connectors on carry board.

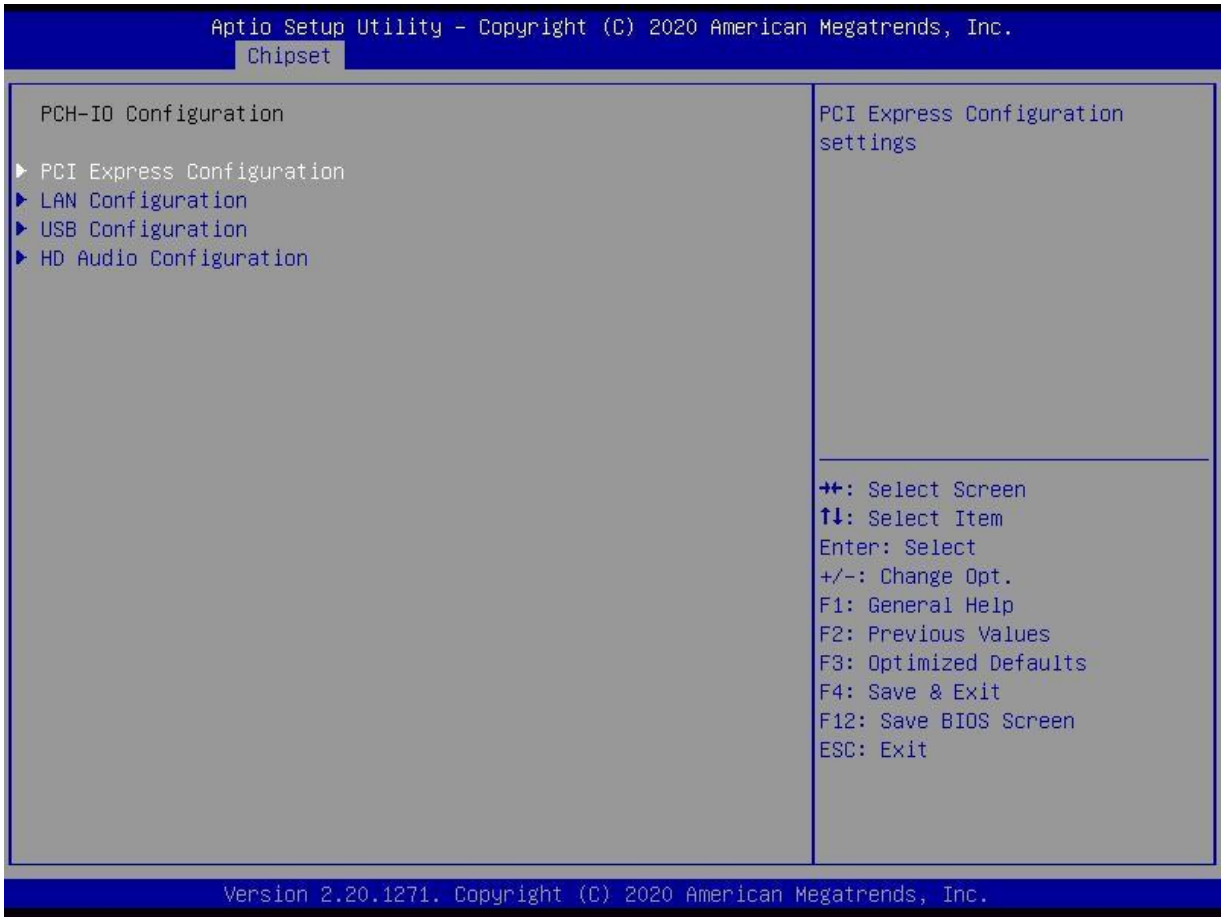


Figure 0- 4 BIOS-PCH-IO Configuration

Mainly contains the sub-menus as below:

- PCI Express Configuration
- LAN Configuration
- USB Configuration
- HD Audio Configuration

3.4.20 PCI Express Configuration

This interface configures the onboard PCI Express bus. Do not change the Settings on this interface!

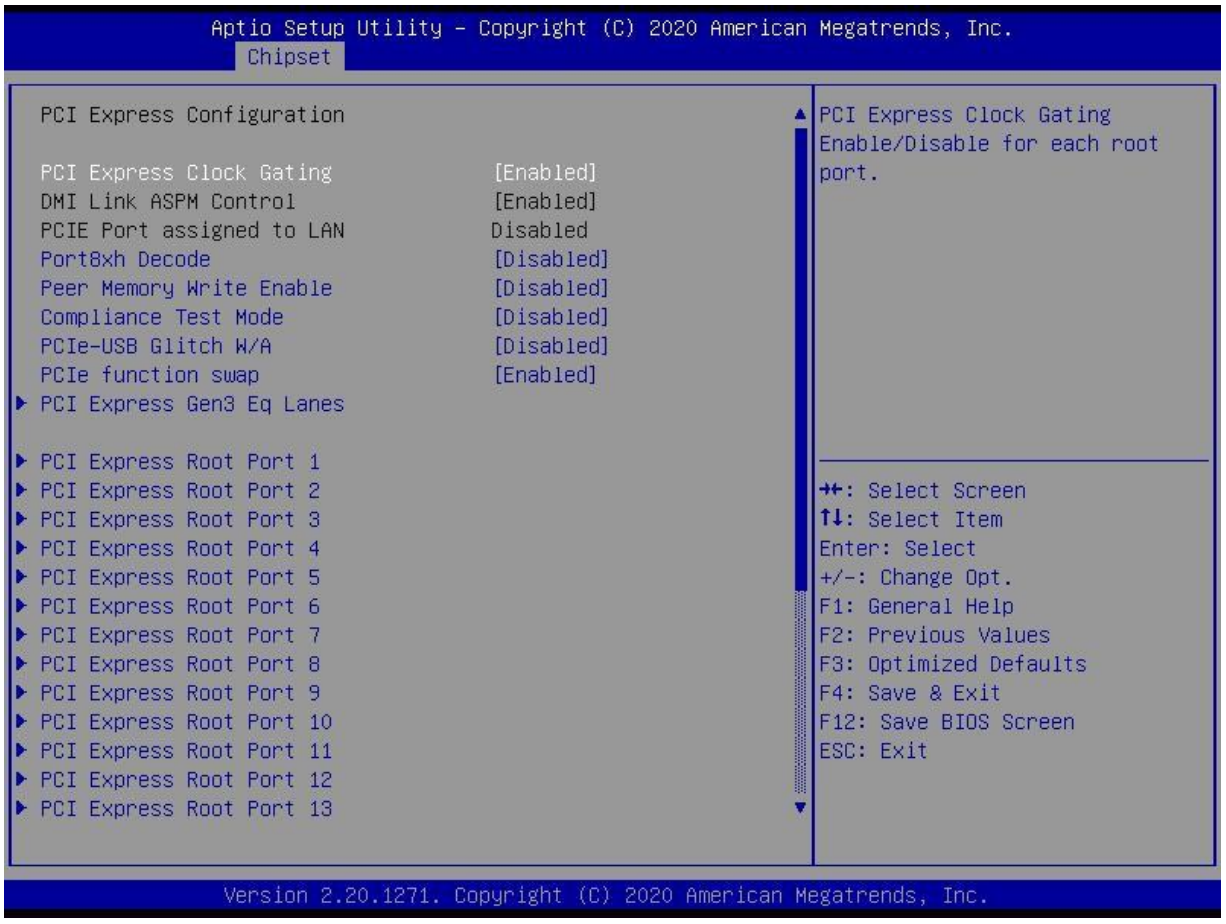


Figure 0- 5 BIOS-PCI Express Configuration

This interface is used to configurate LAN on carry board.

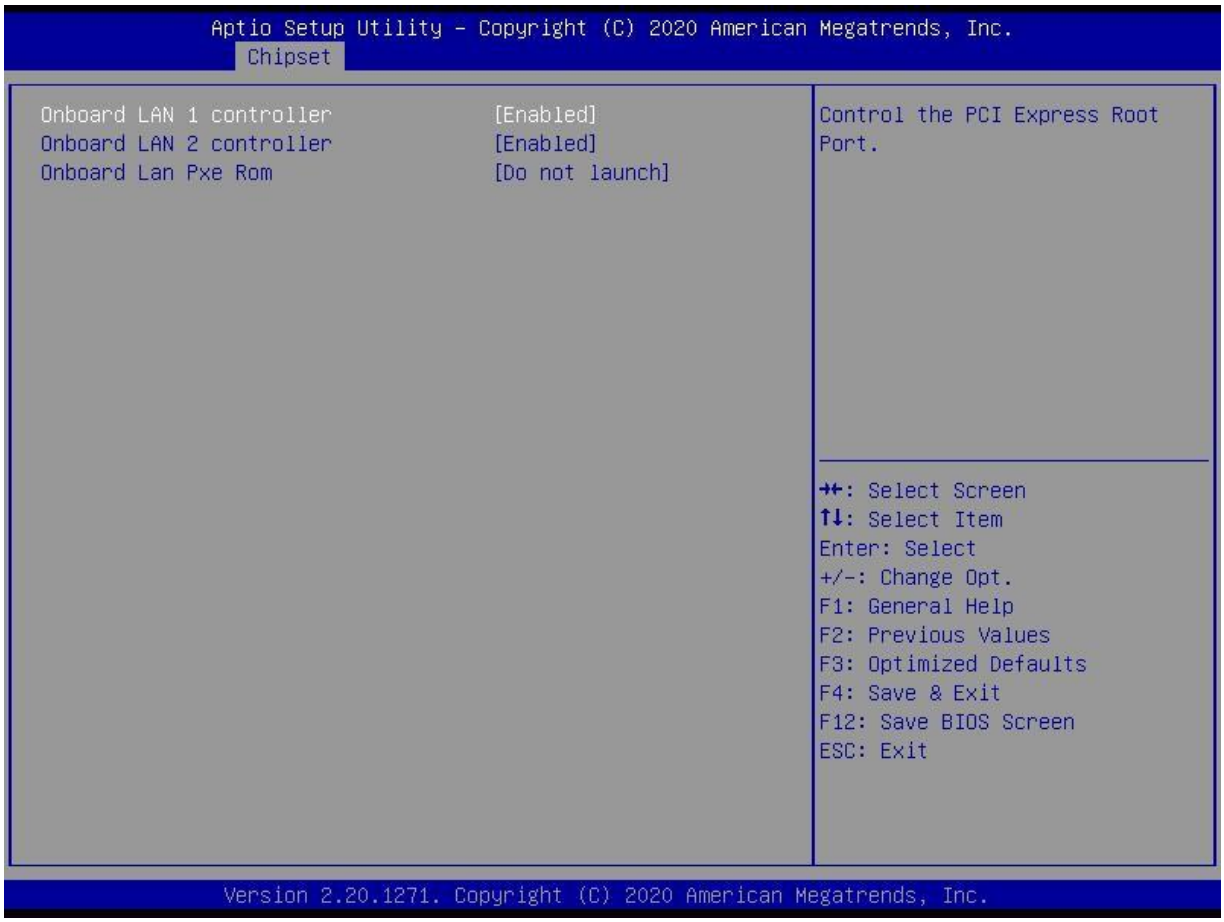


Figure 0- 6 BIOS-LAN Configuration

Items	Contents	Descripton
Onboard LAN 1 controller	Enabled / Disabled	Enable or disable LAN 1
Onboard LAN 2 controller	Enabled / Disabled	Enable or disable LAN 2
Onboard Lan Pxe Rom	Do not launch / UEFI / Legacy	Don’t change this setting

3.4.21 USB Configuration

This interface is used to configurate carry board USB

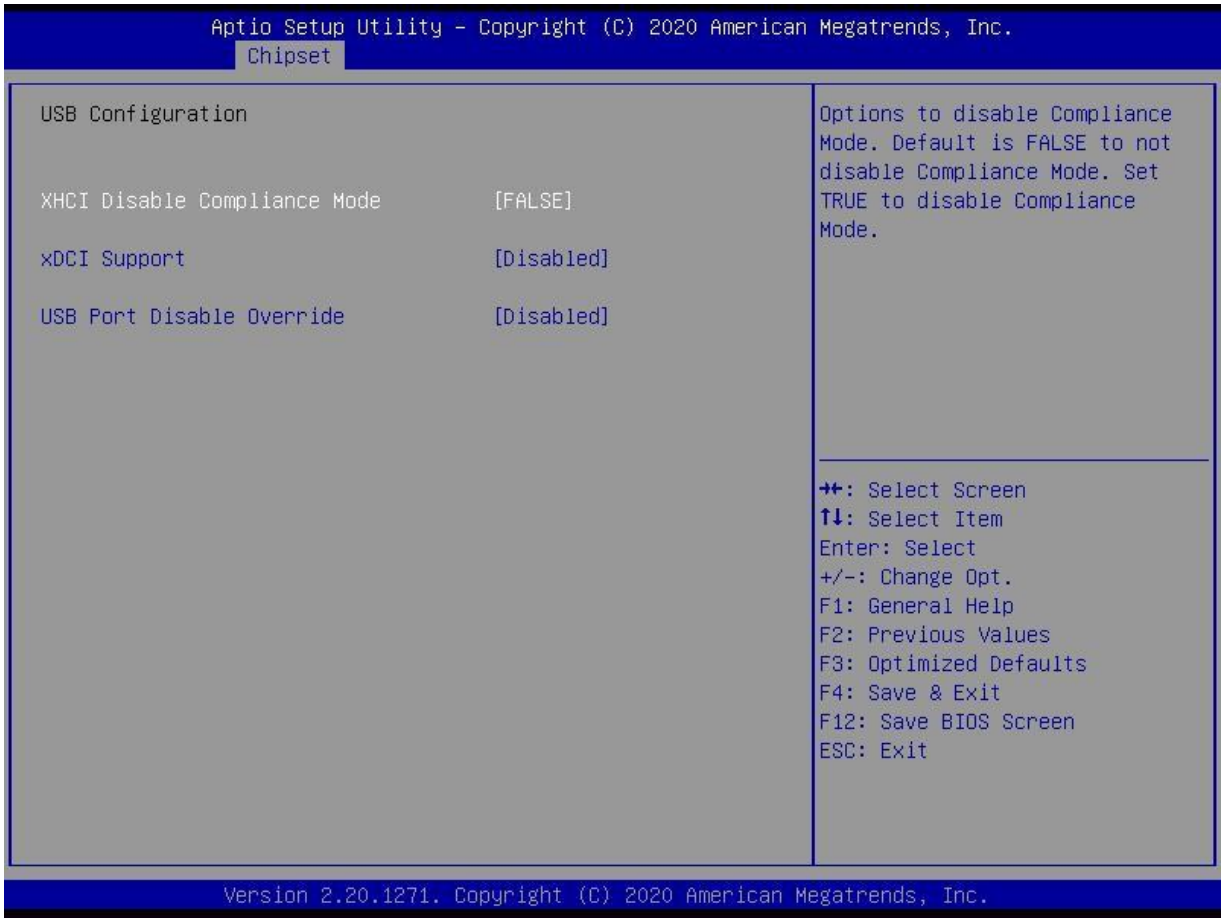


Figure 0- 7 BIOS-USB Configuration

Items	Contents	Description
XHCI Disable Compliance Mode	FALSE / TRUE	Disable XHCI compatibility mode. Don't change.
xDCI Support	Enabled / Disabled	Don't change this setting.
USB Port Disable Override	Enabled / Disabled	Don't change this setting.

3.4.22 Security

This interface is used to set keys related to system security protection.

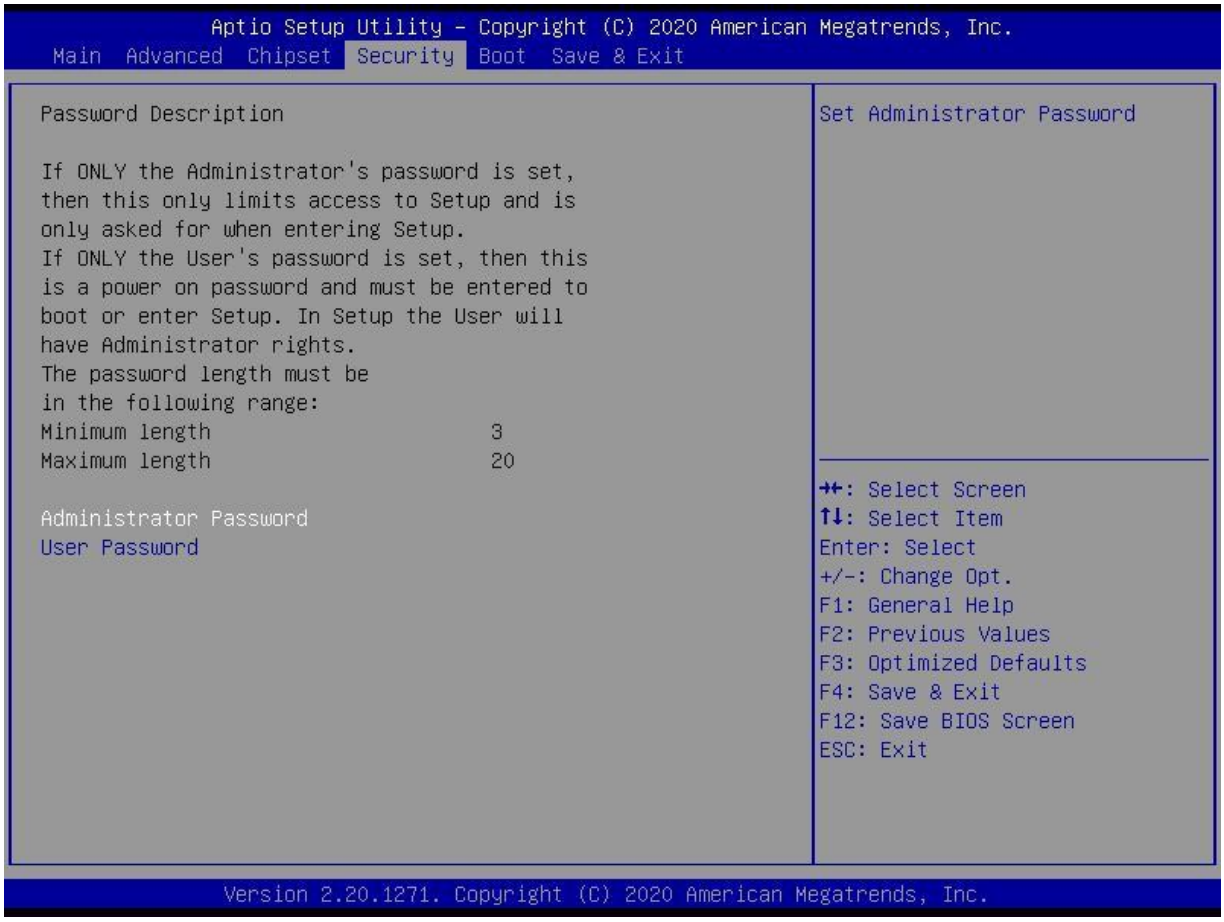


Figure 0- 8 BIOS-Security

- Administrator Password
-
- User Password

: Once the password is set, you need to remember the password, otherwise it will lead to no access to the system because there is no authority! Additional maintenance costs may be incurred.

3.4.23 Boot

This interface is used to set parameters related to BIOS startup and device loading sequence.

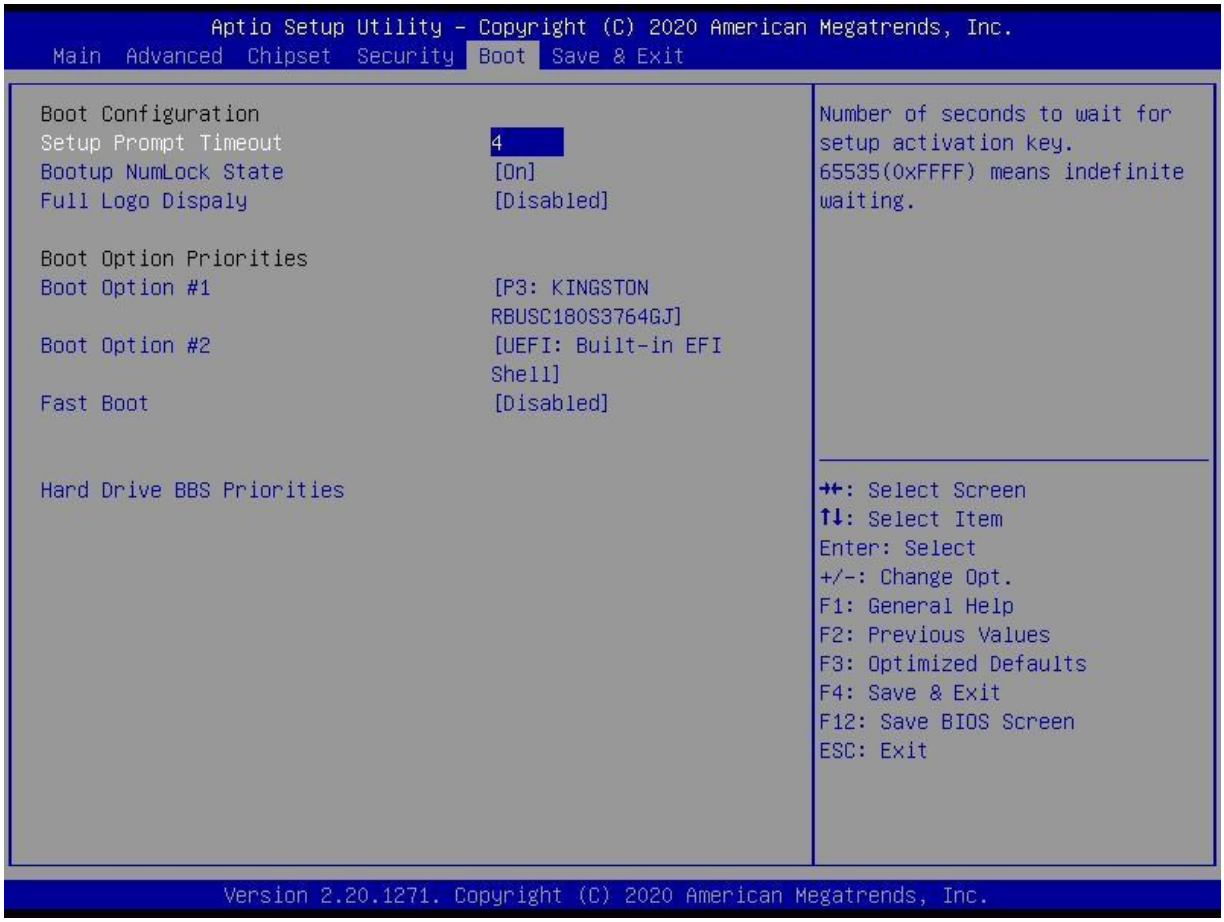


Figure 0- 9 BIOS-Boot

- **Boot Configuration:**

Items	Contents	Description
Setup Prompt Timeout	4	When start the system, the waiting time for BIOS setting (second) .
Boot up NumLock State	On / Off	When the system starts, the state of Numlock.
Full Logo Display	Enabled / Disabled	Don't set this.
Boot Option #1	XXXXXXXX	System first boot the system
Boot Option #2	XXXXXXXX	System second boot the system
Fastw Boot	Enabled / Disabled	Don't set this.
Hard Drive BBS Priorities	-	Set the loading sequence of the system boot storage media.

3.4.24 Save & Exit

This menu is used to save configuration items, load default configuration parameters, and exit BIOS Settings.

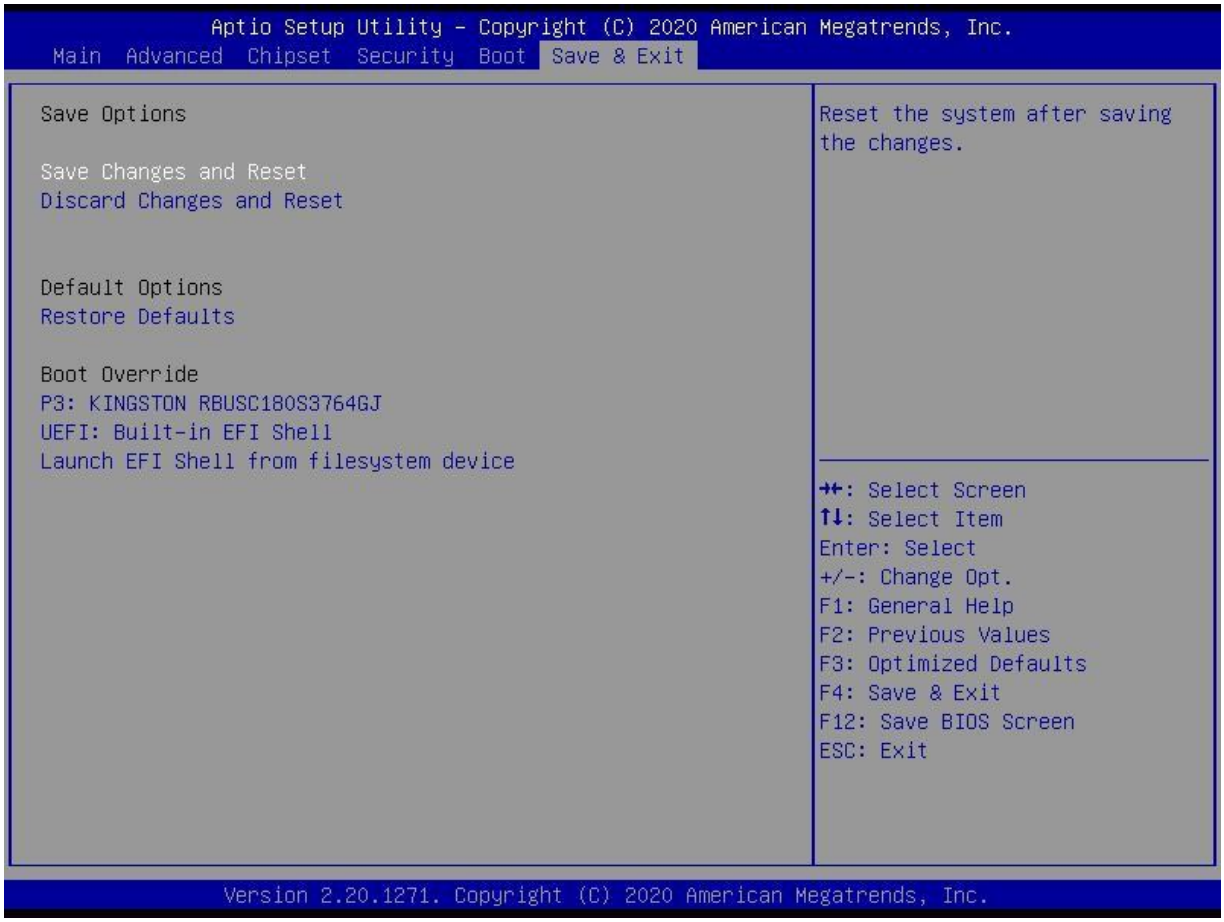


Figure 0- 1 0 BIOS-Save&Exit

- Save Changes and Reset
- Discard Changes and Reset
- Restore Defaults
- Boot Override

Select the appropriate system storage media here when the system needs to be temporarily loaded from another connected system storage medium. However, the system boot sequence set in the Boot menu is not affected. When the system restarts, the system starts in the system disk Boot sequence specified in the Boot menu.

Chapter 4 System Installation

This chapter mainly introduce the system hardware installation and related drive software installation.

4.1 Hardware Installation

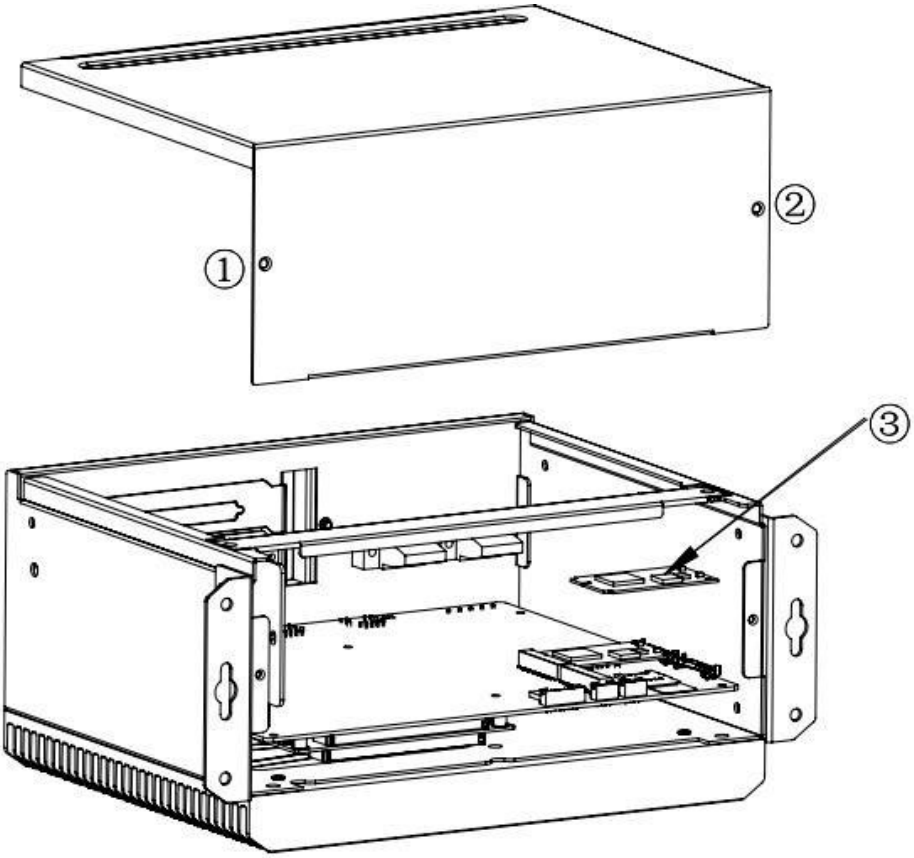
4.1.1 SSD and Wifi module installation

Step1. Remove screws ①, ②

Step2. Install SSD card in the SSD hard disk slot ③

Step3. Install wifi module in the SIM card holder on the miniPCle slot

Step4 Install screws ①, ②



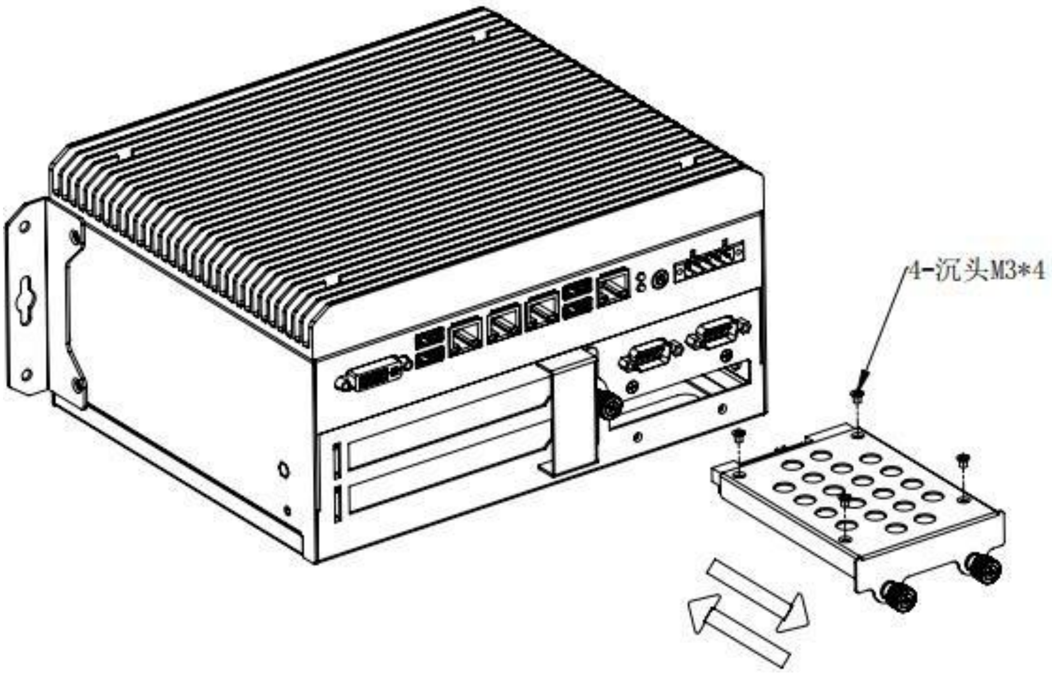
.

Figure 0- 1 miniPCIE / msata installation

: 1. Disconnect the power before disassembly. Do not operate with power on.
2. Pay attention to electrostatic discharge.

4.1.2 2.5" SATA installation

- unscrew the hard disk box by 1/2, and pull out the hard disk box
- Secure the hard disk inside the hard disk box. Note the direction of the hard disk interface (M3*4 is recommended).
- Place the hard disk box in its original position and secure screws



: 1. Disconnect the power before disassembly. Do not operate with power on.
2. Pay attention to electrostatic discharge.

4.1.3 PCIe expansion card installation

Step1. Remove screws (1-2);

Step2. Remove the cover

Step3. installation expansion card（3）

For installing card , please reverse the steps.

For installing fan, please reverse the steps.

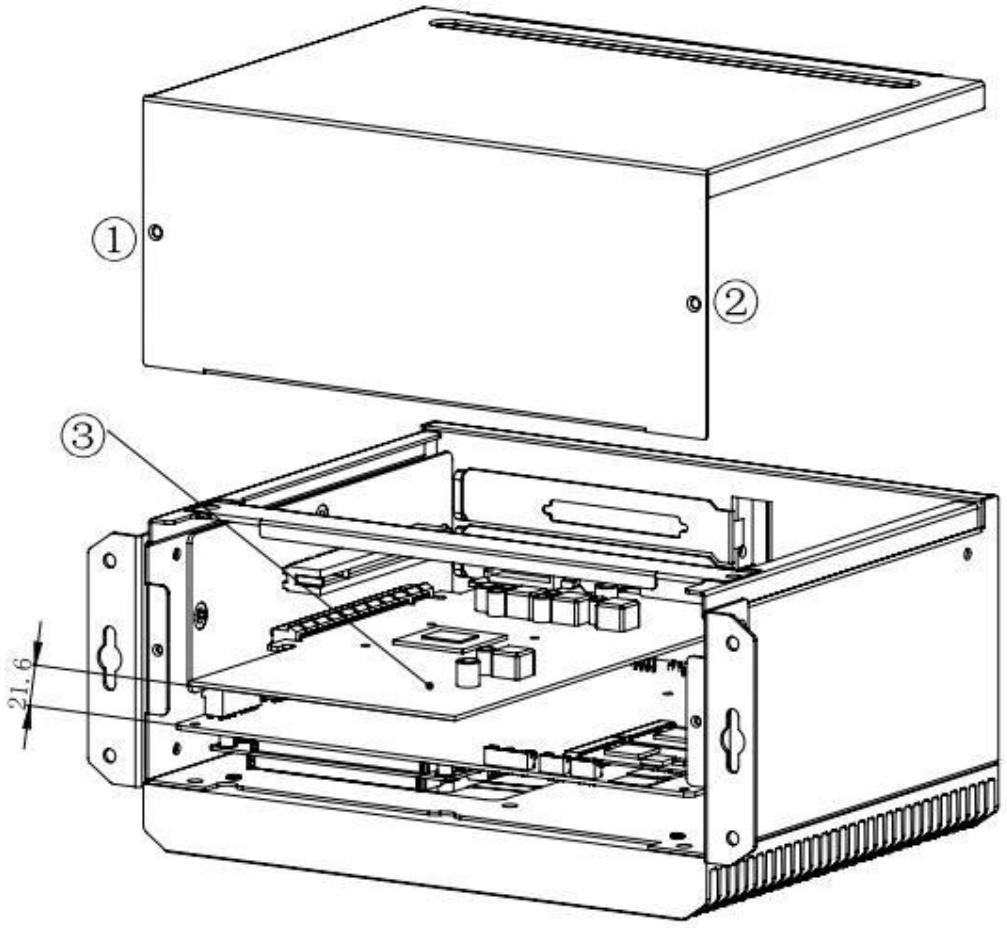


Figure 0- 2 PCIe expanion card installation

:
1. Disconnect the power before disassembly. Do not operate with power on.
2. Pay attention to electrostatic discharge.

4.1.4 PCI expansion card installation

Step1. Remove screws (1-2);

Step2. Remove the cover

Step3. installation expansion card（3）

For installing card , please reverse the steps.

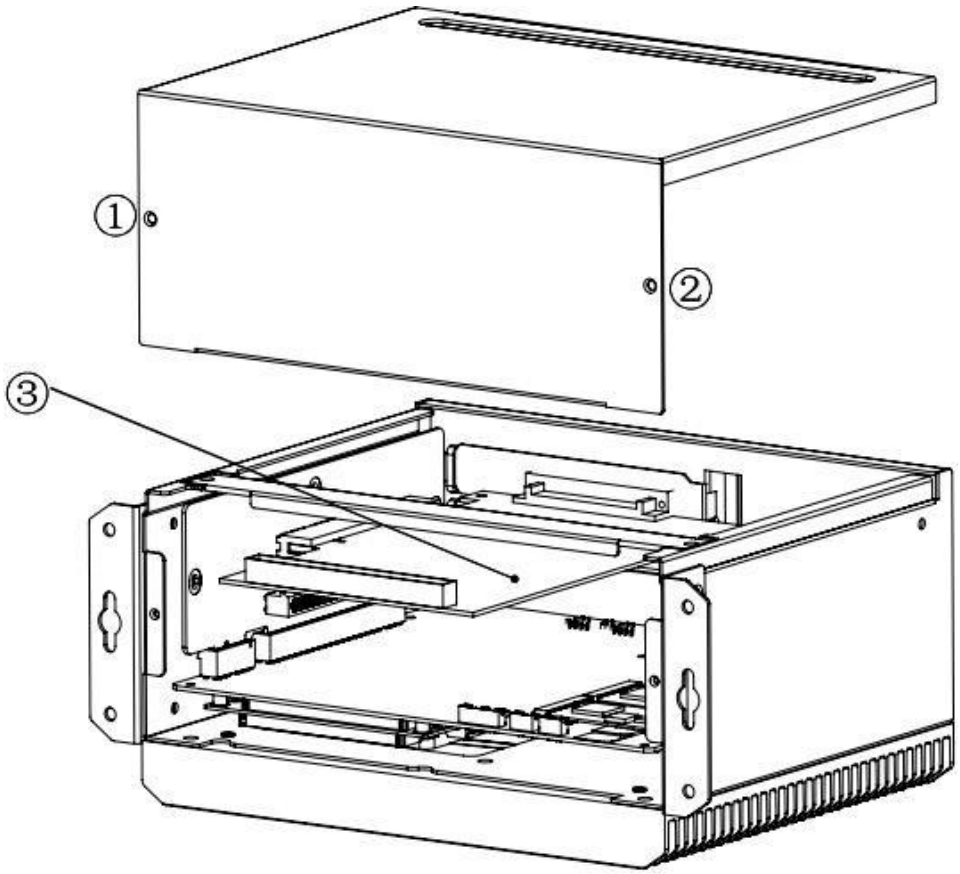


Figure 0-3 PCI expanion card installation

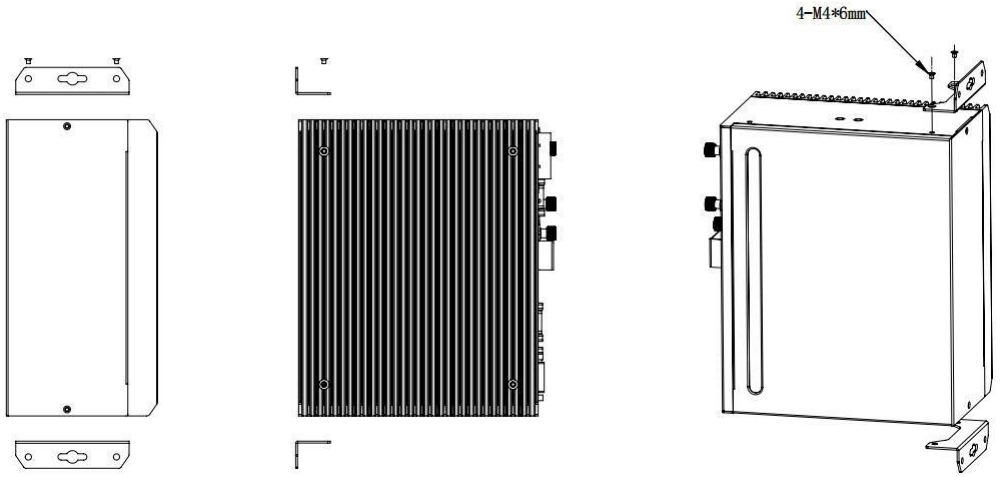
: 1. Disconnect the power before disassembly. Do not operate with power on.
2. Pay attention to electrostatic discharge.

4.1.5 Mounting of hanging plate

The AS56BOX-3625 series products support wall-mounted mounting, and the mounting plate is fixed to the housing of the product through four screws, which only need to be removed during installation or replacement.

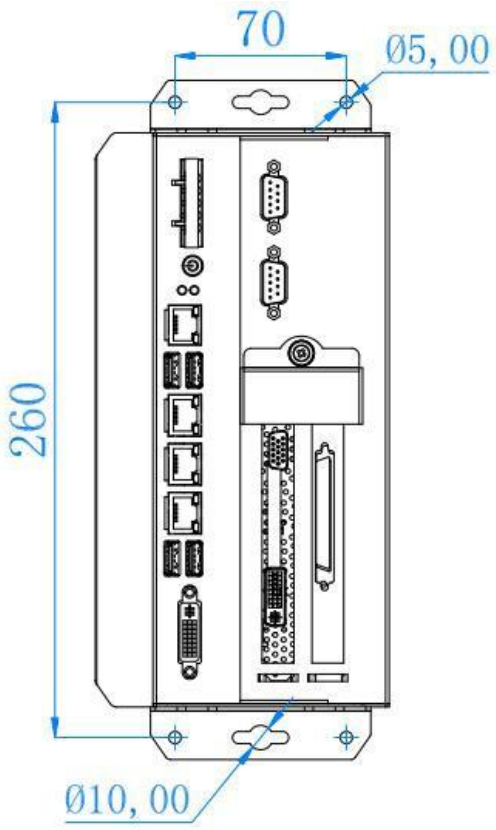
Mounting bracket to the housing

Use 4 M4*6 mm gauge screws



complete engine set installation

Four 5mm through holes are provided on the mounting plate. Make the holes according to the provided size



1. Do not operate with power on. Disconnect the power supply.
2. handle it gently, put it away; otherwise, hardware damage may occur

4.1.6 Drive installation

1. Please download the drivers from https://www.astor.com.pl/wsparcie/dokumentacja-techniczna.html

2. Select the correct diver corresponding with the model of your product

Chapter 6 Safety Precautions and Maintenance

 ：The precautions outlined in this chapter should be strictly followed. Failure to follow such precautions may result in serious damage to the PANEL PC.

6.1 Safety precaution

Follow the safety precautions outlined as below.

6.1.1 General Safety Precaution

Please read the following safety precautions carefully. Make sure you always follow the precautions.

- Always follow the **Anti-static precautions (A.2)** when the product is opened.
- **Make sure the power is turned off and the power cord is disconnected** when the PRODUCT is being installed, moved or modified.
- Do not apply voltage levels beyond the specified voltage range. Otherwise it could lead to fire or electric shock.
- When the PRODUCT is running, **electric shocks may occur if the chassis of product is open**.
- Do not drop or insert any object into the ventilation opening of the machine.
- If amounts of dust, water, or fluids enter the product, please immediately **turn off the power supply and pull out the plug**, then contact the vendor.

The following activities are prohibited：

- Do not drop the machine on the hard ground.
- Do not strike the machine or exert excessive force on it
- Do not use the machine in the place where the ambient temperature exceeds the rated temperature.

6.1.2 Anti Static Precautions

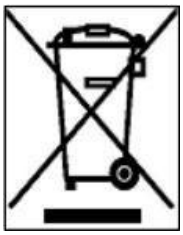
：Electrostatic discharge (ESD) may cause severe damage to electronic components of product, especially during dry weather. Therefore, please strictly observe the anti-static precautions when opens the product to handle any electrical components inside.

- Wear an anti-static wristband to prevent ESD from damaging any electrical components.
- Before and during handling the electrical components, please frequently touch grounded conducting materials to ground yourself.

- When configuring or working with an electrical component, please put the component on an anti-static pad in order to reduce the possibility of ESD damage.
- Only touch the edges of the electrical component, when handling it.

8.1.3 Disposing the Equipment

 ：If the battery of the wrong type is replaced, there may be explosion risk. Only certified engineers can replace the onboard battery. Dispose of used batteries in accordance with relevant instructions and local laws and regulations.



EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your display products, please follow the guidance of your local authority, or ask the shop where you purchased the product. The mark on electrical and electronic products only applies to the current European Union Member States. Please follow the national guidelines for electrical and electronic product disposal.

8.1.4 Maintenance and Cleaning Precaution

Please follow the guides as below to maintenance and clean the machine.

8.1.4.1 Maintance and Clean

Prior to cleaning any part or component of the product, please read the details below. Never spray or squirt liquids directly onto any other components. There is no need to clean inner part. Avoid letting liquids in.

- Be careful not to damage the small, removable components inside.
- Turn off before cleaning.
- Never drop any objects or liquids through the openings.
- Be cautious of any possible allergic reactions to solvents or chemicals used when cleaning.
- Avoid eating, drinking and smoking nearby.
- Dust should be cleaned regularly from fans and surrounding areas.

8.1.4.2 Clean Tools

Some components may only be cleaned using a product specifically designed for the purpose. In such case, the product will be explicitly mentioned in the cleaning tips. Below is a list of items to use for cleaning.

1. **Cloth** – Although paper towels or tissues can be used, a soft, clean piece of cloth is recommended.

2. **Water or rubbing alcohol** – A cloth moistened with water or rubbing alcohol should be used.

3. **Using solvents** – The use of solvents is not recommended as they may damage the plastic parts.

4. **Vacuum cleaner** – Using a vacuum specifically designed for computers is one of the best methods of cleaning. Dust and dirt can restrict the airflow and cause circuitry to corrode.

5. **Cotton swabs** - Cotton swaps moistened with rubbing alcohol or water are excellent tools for wiping hard to reach areas.

Foam swabs - Whenever possible, it is best to use lint free swabs such as foam swabs for cleaning