

# MVC-4246

## User's Manual



with Microsoft® Windows® 10  
Linux

# Table of Contents

<b>Chapter 1. About this Manual</b> .....	<b>1</b>
Manual version revision record .....	2
1.1 Copyright Statement .....	2
1.2 Disclaimer .....	2
1.3 Trademark .....	2
1.4 Warranty terms .....	3
<b>Chapter 2. Product Overview</b> .....	<b>4</b>
2.1 MVC-4246 Function Overview .....	5
<b>Chapter 3. Product Presentation</b> .....	<b>6</b>
3.1 Product appearance.....	7
3.2 Appearance size diagram .....	7
3.3 Product specification introduction.....	8
<b>Chapter 4. IO Panel Description</b> .....	<b>10</b>
4.1 The MVC-4246 panel is shown below .....	11
4.2 Serial communication port (simply "serial port") .....	11
4.3 DC port .....	12
4.4 Display Output (VGA).....	13
4.6 Ethernet Interface (LAN) .....	13
4.8 Audio Interface (Line-out, Mic-in) .....	14
<b>Chapter 5.Direction for Use</b> .....	<b>16</b>
5.1 OOBA .....	17
5.2 Note the following points when unpacking the equipment: .....	17
5.3 Work environment.....	17
5.3 Dead Work.....	18
5.4 Installation Steps.....	18
5.5 Gigabit Network Card Camera Configuration .....	18
<b>Chapter 6. Troubleshooting Guide</b> .....	<b>19</b>
6.1 Boot Abnormal Q&A.....	20
<b>Chapter 7. BIOS Programming</b> .....	<b>22</b>
7.1. BIOS refer.....	23
7.2 BIOS basic function settings .....	23
<b>Chapter 8. After-Sale Service</b> .....	<b>24</b>

# Chapter 1. About this Manual



# 1.About this Manual

## Manual version revision record

Date	Version number	Revise Content	Modifier
2024/6/11	V1.0.	Prepare the manual for the first time	LWT

### 1.1 Copyright Statement

This manual is the use manual of MVC-4246 series products. This manual products and their related documents are owned by Darveen Co., Ltd. (hereinafter referred to as "Darveen"), with all of the interpretation rights.

If the manual is different from the latest product, please contact our FAE. We will not be responsible for any direct, indirect, intentional or unintentional damage or hazards caused by improper installation or use.

This manual without the authorization of Darveen shall not, in any way, in any form to copy, copy, translation or transfer any commercial purposes, except for the non-commercial purposes or personal use of download or printing (prohibited to modify the manual, and must indicate the ownership of the manual).

### 1.2 Disclaimer

This manual only describes the use of embedded industrial computers manufactured by Darveen. If you use the product, unless otherwise mandatory by law, Darveen shall not bear any express or implied warranty or guarantee for the product for the use of this manual, including but not limited to the following:

- (1) This product will meet your needs or expectations;
- (2) The information contained in this product is real-time and correct;
- (3) This product does not infringe on the rights of any others

You clearly understand and agree that, in addition to the law, breach, its subsidiaries, agents, partners, relationships, managers, employees and authorized person need not be responsible for you any direct, indirect, special, derivative, incidental, punitive damage (including but not limited to the goodwill, profit, use data damage or other intangible loss).

With an extremely rigorous and scientific attitude, the manual is compiled, but the technology is constantly developing, and the speed of product upgrading is far beyond the speed of the preparation, so we reserve the right to modify it at any time without notification.

### 1.3 Trademark

The ownership of the trademark involved in this manual, Darveen Technology Limited , is owned by the holder of Darveen Technology Limited No one shall use it without their permission.

## 1.4 Warranty terms

The default product warranty period is 1 year. In case of special circumstances, the contract signed by both parties shall prevail

Safety guidance for installed and use

1. Please read carefully and keep this manual properly before use.
2. Keep the plate card dry and packed intact before installation, ensuring that the equipment is placed in a stable plane, and an accidental fall or flip may cause equipment failure or damage.
3. In order to avoid unnecessary damage caused by frequent turning to the product, wait at least 30 seconds before shutdown of the machine. If the equipment is not used for a long time, disconnect the power cord to avoid the equipment being damaged by instantaneous voltage.
4. The opening slot of the chassis is used for ventilation to avoid overheating of the parts in the chassis. Do not mask or block such openings.
5. Before connecting the product to the power supply, confirm the supply voltage and adjust the voltage to 220V.
6. Protect the power cord from trampling or other accidents that may cause sudden power failure, and do not stack anything on the power cord.
7. Unplug the power cord before unplugging any expansion card or module.
8. Note to all the notes and warnings mentioned in the manual.
9. Do not make any changes or modifications to this product. If there is any abnormal use of the equipment, please find a professional personnel for safety reasons.
10. Please do not place or store the product at an ambient temperature above 60°C (140F) as it will cause harm to the product.
11. If the battery is not replaced properly, it can cause a danger. Be sure to use the same model or equivalent battery as recommended by the manufacturer.

## Chapter 2. Product Overview



## 2. Product Overview

Industrial control machine (Industrial Personal Computer, IPC) is the industrial control computer, is a use of bus structure, the production process and electromechanical equipment, process equipment for detection and control of the tool general name.

Industrial control machine has important computer attributes and characteristics, such as computer CPU, hard disk, memory, peripherals and interfaces, and operating system, control network and protocols, computing power, friendly man-machine interface.

The industrial control machine often operates in a harsh environment, and the safety requirements for data are higher. Therefore, the industrial control machine is usually reinforced, dust proof, moisture proof, corrosion proof, radiation prevention and other special designs.

### 2.1 MVC-4246 Function Overview

MVC series are rugged vehicle computers launched by Darveen for mining and other industries. They are equipped with Intel J1900 or Core-I low-power processor and pre-installed Windows operating system. It can fully utilize Microsoft Windows data processing capabilities in mobile vehicle and improve application and network management capabilities, while maintaining the flexibility and ease of use of multi-tasking applications.

MVC series can be extended to 802.11a/b/g/n/ac, Bluetooth V4.0, full Netcom LTE, dedicated network 1.4G/1.8G LTE, GPS/GNSS/Beidou/RTK, CAN2.0B and other modules, 8~36V wide voltage DC input power management with Power ignition delay switch function, in addition, the whole series adopts high-strength and thickened metal shell, which meets the STD-MIL-810G anti-vibration and shock standard, and can still operate freely in the most severe environments.

\* Table 2.1-1 MVC-4246 Functional Overview table

Product Keywords	Industrial Modular Computer with Intel® Core-i processor, 3xLAN, 2xCOM(1xRS-232/485), 6x USB, 2 x PCI, 1 x PCIe X16 1 x PCIe X4, 1xDP, 1xVGA, 1xHDMI
Product Features	<ul style="list-style-type: none"> <li>▪ Intel Core I5-8265U/I7-8565U processor</li> <li>▪ Rugged and fanless design</li> <li>▪ 9~36V DC input, optional intelligent switch function</li> <li>▪ M12 Connector for front I/O standard interfaces reserved on the back</li> <li>▪ Optional WiFi, Bluetooth, LTE/5G, GPS, CAN2.0, POE, etc.</li> </ul>

## Chapter 3. Product Presentation



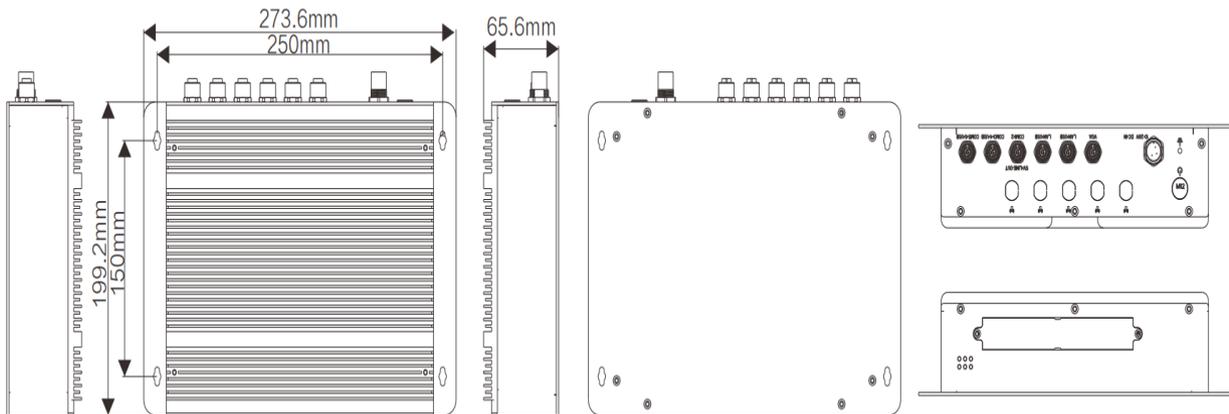
# 3. Product Presentation

## 3.1 Product appearance



\* Figure 3.1-1 Left top view of MVC-4246

## 3.2 Appearance size diagram



\* Figure 3.2-1 MVC-4246 dimensional drawing

### 3.3 Product specification introduction

\* Table 3.3-1 Product specification of MVC-4246 table

Model No.	MVC-4246
Short Description	Intel Whiskey lake-U I5-8265U/I7-8565U Embedded Vehicle Computer With All M12 Connectors
Features	Intel Core I5-8265U/I7-8565U processor
	Rugged and fanless design
	9~36V DC input, optional intelligent switch function
	M12 Connector for front I/O standard interfaces reserved on the back
	Optional WiFi, Bluetooth, LTE/5G, GPS, CAN2.0, POE, etc.
Overview	<p>MVC series are rugged vehicle computers launched by Darveen for mining and other industries. They are equipped with Intel J1900 or Core-I low-power processor and pre-installed Windows operating system. It can fully utilize Microsoft Windows data processing capabilities in mobile vehicle and improve application and network management capabilities, while maintaining the flexibility and ease of use of multi-tasking applications.</p> <p>MVC series can be extended to 802.11a/b/g/n/ac, Bluetooth V4.0, full Netcom LTE, dedicated network 1.4G/1.8G LTE, GPS/GNSS/Beidou/RTK, CAN2.0B and other modules, 8~36V wide voltage DC input power management with Power ignition delay switch function, in addition, the whole series adopts high-strength and thickened metal shell, which meets the STD-MIL-810G anti-vibration and shock standard, and can still operate freely in the most severe environments.</p>
<b>Specifications</b>	
<b>System</b>	
CPU	Intel Core I5-8265U/I7-8565U processor
CPU TDP	15W
Chipset	SOC
Memory	2 x DDR4 SO-DIMM up to 32GB
Storage	1 x mSATA
BIOS	64Mb Flash ROM
Watchdog Timer	Support hardware reset function (256 level, 0~255 seconds)
<b>I/O Ports</b>	
USB Port	4 x USB2.0 (M12) 4 x USB3.0 (Type A)
Serial Port	6 x RS-232/485 (M12, isolated, via Jumper switching mode)
Ethernet	2 x GbE LAN (M12) 2 x RJ45
Display Port	2 x VGA (M12+DB15)
CAN bus	2 x CAN2.0B (Optional, compatible CAN2.0A)
Others	2 x PoE/PoE+ (Optional, 802.3af/at)
Antenna Hole	5x SMA-type
<b>Expansion Slot</b>	
Mini-PCle	1 x Full-size Mini-PCle for mSATA
RF Communication	

WLAN	802.11a/b/g/n/ac/ax (Optional)
WWAN	4G LTE (Optional, LTE, HSPA+, EDGE, GSM/GPRS, 1.4G/1.8G private network)
Bluetooth	Bluetooth 4.0/5.0 (Optional)
GNSS	GPS/Beidou/Glonass (Optional, 2m accuracy)
<b>Audio</b>	
Audio	1 x Line-out, 1 x Mic-in
<b>Power</b>	
DC Input	12VDC
Input Type	M12-3P-F Connector
Power Consumption	Power supply must be at least 72W
Ignition	Optional, 5~32V DC-in, Vehicles need to have ACC signal Delay starting, default 5 seconds Delay shutdown, default 10 seconds(adjustable)
UPS	Optional, 10~28V DC-in, Built-in 3350mAH lithium battery Delay start, default 5 seconds Delay shutdown, default 10 seconds(Can be set)
Power Mode	AT/ATX
<b>Operating System</b>	
Windows	Windows 10
Linux	Ubuntu
<b>Mechanical</b>	
Dimensions (WxDxH)	273.6 x 250 x 65.6mm
Weight (N.W.)	3.1kg
Mounting	Wall-mount
Material	All metal structure
<b>Environment</b>	
Operating Temperature	-30 to 70°C
Relative Humidity	5%-90%, @ 40° C (non-condensing)
Vibration	Impact resistance: MIL-STD-810G Method 516.6 Procedure I Anti-vibration: MIL-STD-810G Method 514.6 Procedure I
Certification	CE, FCC

## Chapter 4. IO Panel Description



# 4.IO Panel Description

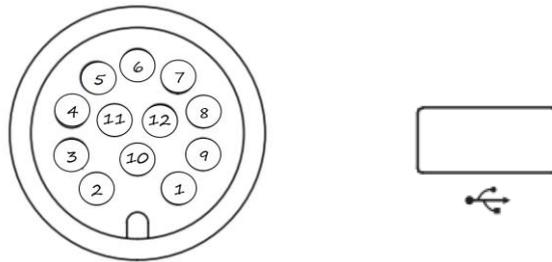
## 4.1 The MVC-4246 panel is shown below



\* Figure 4.1-1 MVC-4246 panel diagram

## 4.2 Serial communication port (simply "serial port")

Equipped with 3 M12-12 core aviation plug , COM1/2/3/4/5/6 can be switched to RS485/RS232.



\* Figure 4.2-1 M12-12 core aviation plug diagram

\* Table 4.2-1 serial port diagram of M12 table

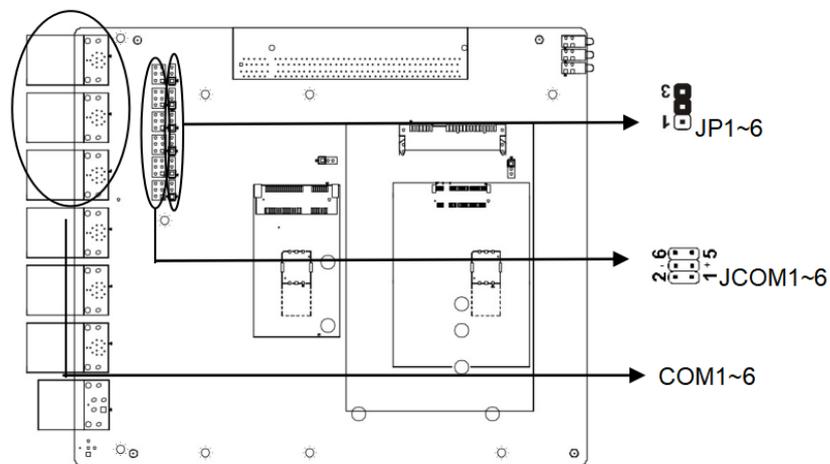
M12-12 core aviation plug	Defined declaration
1	RXD1(DATA-)
2	TXD1(DATA+)
3	GND1
4	RXD2(DATA-)
5	TXD2(DATA+)
6	GND2
7	5V
8	USB-
9	USB+
10	GND
11	
12	

Note that COM1/2 has no additional USB port, and the M12 pin is only 8P effective

\* Table 4.2-2 COM1~COM6 RS485/232 Install table

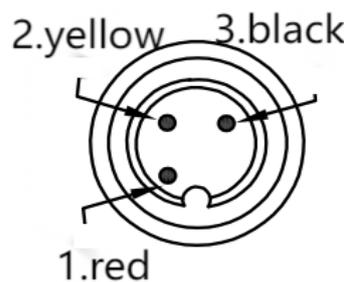
Install	JCOM1/2/3/4/5/6	Install	JP1/2/3/4/5/6
3-5short circuit 4-6short circuit	RS485	1-2short circuit	RS485
1-3short circuit 2-4short circuit	RS232	2-3short circuit	RS232

\* Figure 4.2-2 M/B diagram



### 4.3 DC port

Equipped with 12V, M12-3P-F Connector power supply terminal, as shown in Fig.



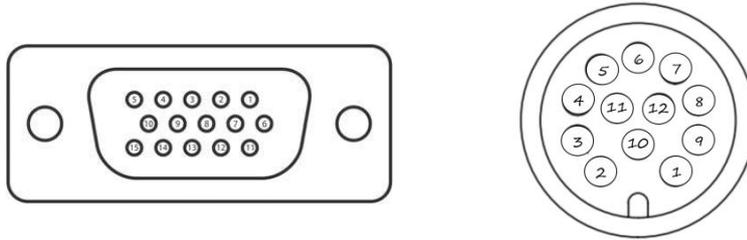
\* Figure 4.3-1 DC port diagram



Note: Use the adapter or switch power supply supporting the equipment. Do not connect more than 12V power supply, otherwise it will cause the motherboard over voltage to burn!!!  
If you use the power supply wide platen, you can input 9-36V voltage

### 4.4 Display Output (VGA)

Equipped with two VGA display interface, One is DP15 interface and the other is M12 aviation interface.as shown in the figure.



\* Figure 4.4-1 VGA interface diagram

\* Table 4.4-1 Display Output (VGA) Wire table

Wire Diagram			
M12-12 core aviation plug	wire color	DB15 male head	
1	Effervescent red	1	
2	Effervescent green	2	
3	Blistering blue	3	
4	28#red	4	
5	Braid Shied	5	And the shell is conductive
6		6	
7		7	
8		8	
9	28#blue	12	
10	28#yellow	13	
11	28#brown	14	
12	28#grey	15	
shell	Braid Shied	shell	

### 4.6 Ethernet Interface (LAN)

With 3 Ethernet interfaces, as shown in the figure, and supports 1000Mbps. The port uses the standard RJ-45 jack. See the chart below for the indicator light representation and the machine status.



\* Figure 4.6-1 Ethernet interface diagram

\* Table 4.6-1 LED indicator light definitions table

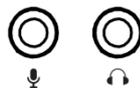
M12-12 core aviation plug	Definition Description	RJ45-Female Seat	Definition Description	USB-TypeA Female Seat	Definition Description
1	Orange White	1	Orange White		
2	Orange	2	Orange		
3	Green White	3	Green White		
4	Blue	4	blue		
5	Blue white	5	Blue white		
6	green	6	green		
7	Brown white	7	Brown white		
8	brown	8	Brown		
9	5V			1	5V
10	D-			2	D-
11	D+			3	D+
12	GND			4	GND

Table 4.6-1 LED indicator light definitions table

LED pilot lamp			
left side LED			offside LED
close	orange	green	green
10Link	100Link	1000Link	transfer

### 4.8 Audio Interface (Line-out, Mic-in)

With 23.5 stereo audio interfaces, which support line output and line input. The audio chip controller is ALC662, and the interface is shown in the chart



\* Figure 4.8-1 Audio interface diagram

Table 4.8-1 Audio interface definition table

icon	description
	Line-out
	Mic-in

## Chapter 5. Direction for Use



## 5.Direction for Use

This section provides a simple operation description for the normal use of MVC-4246 series products, introducing the working environment, installation steps and the basic operation of the system protection functions of industrial computers.

### 5.1 OOBA

Before opening the package, please check whether the product model indicated on the outer package is consistent with the product model ordered. After opening the package, carefully check whether the accessories are complete according to the packing list or the order contract. If the surface of the industrial computer is damaged, or the product content is not consistent, please do not use it, and contact the dealer immediately.

 **Note:**

In order to prevent electrostatic damage to industrial computers, please touch the effective grounded metal object to release the electrostatic charge carried by the body, and wear anti-static gloves.

### 5.2 Note the following points when unpacking the equipment:

1. It is recommended that you do not discard the original packaging materials. Please keep the original packaging materials for use when transporting the equipment again.
2. Check the delivered equipment for any obvious damage caused during transit.
3. Confirm whether the received goods include complete equipment and accessories. refer to the packing list. If there is any discrepancy or transportation damage, please contact the relevant business or customer service personnel.

Table 5.2-1 Machine packing list table

List of binning		
order number	type	quantity
1	The MVC-4246 series of industrial computers	A
2	Adapter, power supply cord	A set
3	Wall hanging kit	A set
4	Install wall screw	Four
5	IO terminal (with antenna rod if configured with antenna)	Group 1

### 5.3 Work environment

1. Industrial computers need to be far away from the high-power and strong electromagnetic interference of electrical appliances and the environment;
2. The working environment temperature should be between 0 degrees and 55 degrees Celsius;
3. The power supply voltage shall be kept between 200 V and 240 V.

## 5.3 Dead Work

Before installation, please prepare the relevant items, such as:

1. MVC-4246 series of industrial computers, and related power supply and cables;
2. Display, and the display cable between the display and the industrial controller;
- 3.USB mouse and keyboard;
4. Power supply.

## 5.4 Installation Steps

Hardware connection:

- 1.Connect the equipped display to the industrial computer display interface;
- 2.Connect keyboard, mouse and other to industrial computer USB interface;
- 3.Connect other hardware, such as PLC and camera, according to the corresponding interface;
- 4.Power adapter access 220V voltage, power on.

## 5.5 Gigabit Network Card Camera Configuration

1. Confirm that the camera is connected to the power supply and that the camera is connected to the industrial computer.
2. Close the firewall, control panel-> Windows Defender-> Set-> Implement protection-> Remove hook and administrator-> Enable Windows Defender-> Remove hook.
3. Turn on camera software.

## Chapter 6. Troubleshooting Guide



## 6. Troubleshooting Guide

### 6.1 Boot Abnormal Q&A

Q1: After pressing the power button to start on, the power indicator is not on

1. Answer A: Check whether the industrial computer is connected correctly, and whether the power socket is charged;
2. Answer B: Check the industrial computer power adapter, plug and unplug the power cord, display data cable and keyboard mouse cable, confirm that the display and host connection is correct;
3. Answer C: Check whether the positive and negative electrodes of the power plug are reversed.
- 4.

Q2: The power indicator is on and the display is not displayed

1. Answer A: Check the display power supply and switch;
2. Answer B: Check whether the display data line is in bad contact;
3. Answer C: If using DisplayPort or VGA converter, replace other brand converters;
4. Answer D: Observe the keyboard and mouse indicator, if the keyboard indicator, mouse indicator is on, replace the monitor screen.

Q3: After the boot of the motherboard can not self-check success

1. Answer: Press [Del], key to reset CMOS, or clear CMOS.

Q4: The mouse and keyboard cannot be used after the boot

1. Answer A: To see whether the keyboard lock is locked, remove the keyboard lock;
2. Answer B: If not, check whether the connection with the main board and the keyboard and mouse are connected correctly;
3. Answer C: Check whether there is a keyboard mouse one two turn joint, if there is the keyboard, mouse reverse use;
4. Answer D: Replace one joint and two joints;
5. Answer E. Replace the mouse and keyboard.

Q5: Unable cannot boot the system from the hard drive after boot

1. Answer A: Press the "Del" key to enter the CMOS hard disk parameter setting and boot order are correct;
2. Answer B: After using the optical drive or floppy drive boot, check whether the hard disk has a boot system or the hard disk is normal partition and has activated the boot partition;
3. Answer C: Press F8 at startup and select the last correct configuration to start the operating system;
4. Answer D: Replace the new hard drive and reinstall the system.

Q6: The system dies or has a blue screen during operation

1. Answer A: Check whether the industrial computer temperature is too high;
2. Answer B: Check whether the incorrect or expired drivers are installed;
3. Answer C: Check whether the system is infected with the virus;
4. Answer D: Whether the system file or application and disk are damaged.

Q7: Unable to install the device driver correctly

1. Answer A: Check whether the driver is correct and the latest;
2. Answer B: Whether the driver needs the patch support of the operating system;

3. Answer C: Whether the resources occupied by other equipment are in conflict with the resources occupied by the equipment that need to be driven;
4. Answer D: If the peripheral equipment, change a slot and reinstall the drive;
5. Answer E: Replace the equipment and reinstall the driver program.

Q8: BIOS Upgrade method

1. Prepare a UEFI start U disk, if not, you need to make one;
2. Please copy the required refresh BIOS file and batch to the U disk root directory;
3. Press F7, select the made UEFI U disk, return, and enter the Shell;
4. Enter FS0: return (if no other storage devices, fs0:);
5. Run the flash. The nsh, brush BIOS, the middle of no power off;
6. After brushing the BIOS, power off, then power on, restart the industrial computer, enter the BIOS setting, F3 load the BIOS optimization value (Load optimized defaults return car selection Y).

Q9: Precautions The following conditions may lead to a refresh failure and no boot up.

1. Power interruption during the refresh process;
2. Virus exists in the U disk;
3. BIOS files;
4. Non-UEFI system.

If it cannot be started after refresh, you can empty the BIOS and try it. If the situation is still the same, please return to the factory for repair.

## Chapter 7. BIOS Programming



# 7. BIOS Programming

## 7.1. BIOS refer

BIOS (Basic Input and Output System) records the setting parameters of various hardware devices in the system through the CMOS chip on the motherboard. BIOS includes the BIOS settings program, allowing users to set system parameters as needed to enable the motherboard to function properly or perform specific functions.

The relevant settings modified through the BIOS Setup program (except for date and time) are saved in the flash memory of the system. The power required to memorize CMOS data is supplied by the battery on the motherboard. Therefore, when the system power is turned off, these data will not be lost. When the power is turned on again, the system can read these set data. When unable to enter the Setup interface due to misoperation, if you need to restore factory settings, please short circuit JBAT1 pins 2 and 3 to clear CMOS content.

Attention! The setting of BIOS directly affects the performance of the computer. Setting incorrect parameters can cause damage to the computer and even prevent it from turning on. Please use the built-in default values in BIOS to restore normal system operation.

Due to different products of our company, the settings interface may vary slightly. The following screen is for your reference and may not be exactly the same as the BIOS settings program you are currently using.

## 7.2 BIOS basic function settings

### 7.2.1 Enter BIOS interface

Follow these steps to enter the BIOS interface

1. Turn on the power and the display screen will display a POST interface.

When the prompt "Press<DEL>or<ESC>to enter setup" appears on the screen, press the<DEL>or<ESC>key to enter the BIOS setup program.

Use the arrow keys< ↑ >< ↓ >< ← >< → >to move to the option you want to modify, and press the<Enter>key to enter the sub screen of that option.

4. Use the arrow keys and<Enter>key to modify the value of the selected item, press Enter to select BIOS options and make changes.

5. Use<Esc>to exit the main menu without saving changes, exit the current page from the submenu and return to the main menu

6. <Page Up/+>Add numerical values or change

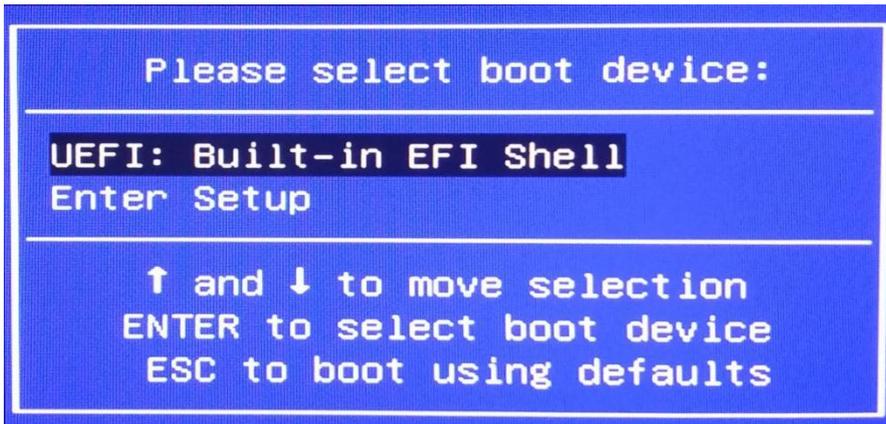
<Page Down/->Reduce numerical values or change

<F1>Set submenu help

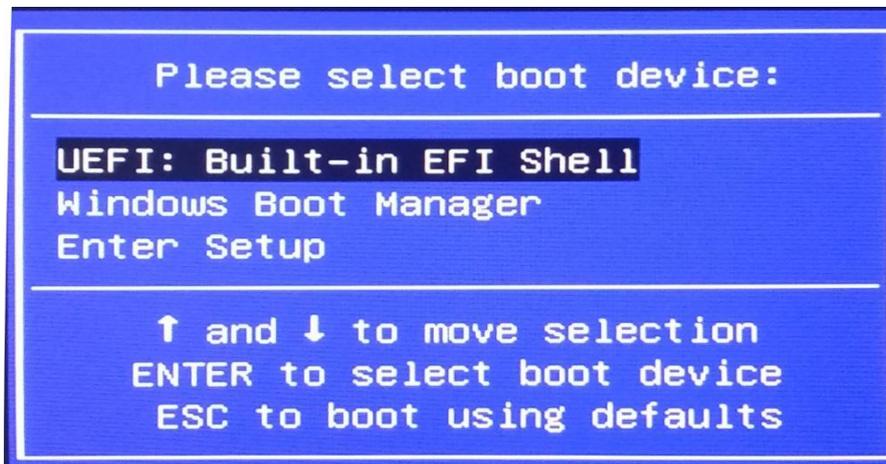
Set to default value (optimized to factory settings)

<F10>Save BIOS settings

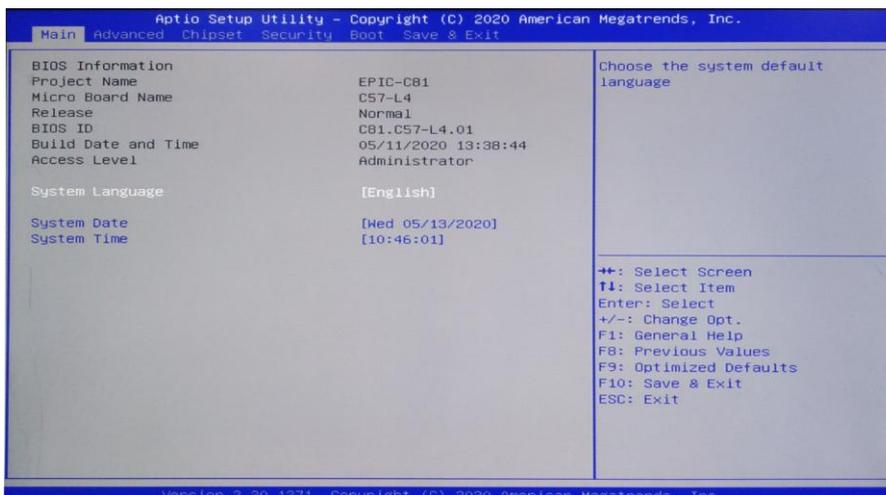
Note: 1. For BIOS that supports hard disk UEFI mode, the hard disk information cannot be seen in BBS, but the information about accessing the hard disk can be viewed in SATA Configure in BIOS. The following is the information:



After installing the UEFI system, you can view the system boot information in BBS. ex: Windows Boot Manager (hard disk information)



### 7.2.2 Main menu (BIOS information and time date)



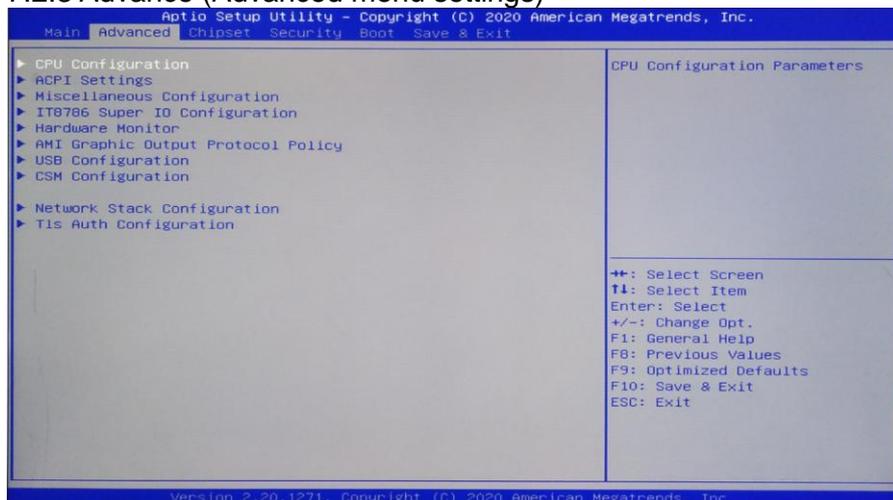
BIOS ID: BIOS version  
 Build Date and Time: BIOS time date  
 Access Level: Access Level  
 System Date :

Set the current date. Represent in month/day/year format. Its setting range is: Month/Month (Jan. Dec.), Date/Day (01-31), Year/Year (up to 2099), Week/Week (Mon. to Sun.).

System Time :

Set the current time. Represented in hours/minutes/seconds format. Its setting range is: Hour/hour (00-23), Minute/minute (00-59), Second/second (00-59).

### 7.2.3 Advance (Advanced menu settings)



ACPI Settings: Advanced configuration and power management interface settings.

IT8786 Super IO Configuration: Super IO configuration information, including COM port interrupt number and address settings.

Hardware Monitor: System monitoring, hardware monitoring, hardware monitor

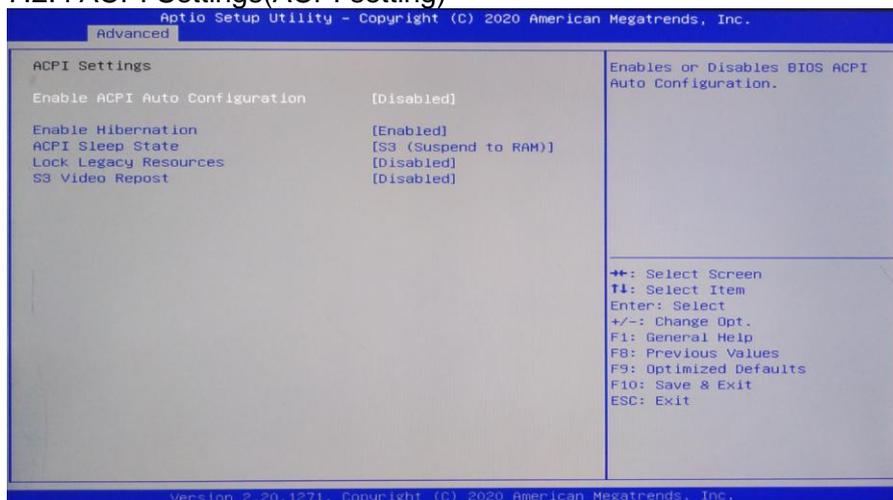
Miscellaneous Configuration: Miscellaneous configuration that can be configured for power on, timed power on, watchdog, etc

CPU Configuration: CPU parameter information and common settings options.

CSM Configuration: CSM Configuration

USB Configuration: USB information and control options.

### 7.2.4 ACPI Settings(ACPI setting)



Enable ACPI Auto Configuration: This is ACPI Auto Configuration. Enable or disable ACPI automatic configuration of BIOS. The default is disabled.

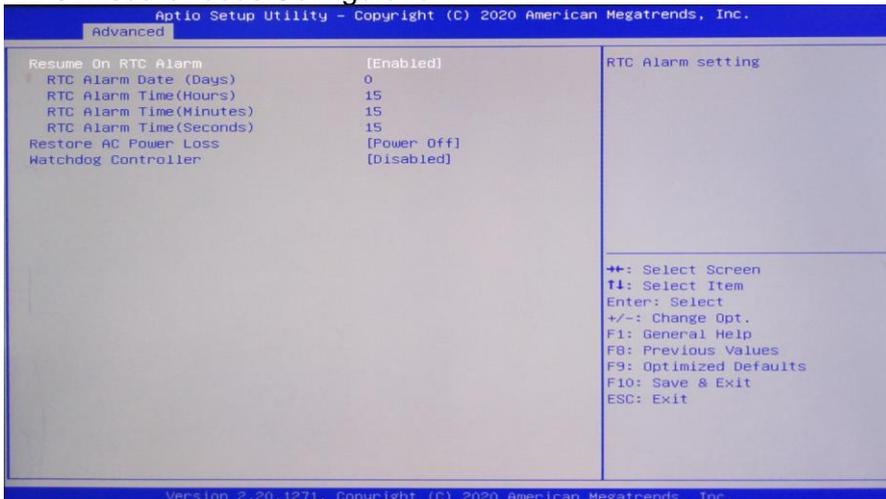
Enable Hibernation: This option is for starting hibernation support. Enable or disable the system

sleep function (OS/S4 sleep state). This option does not work in some OSes. The default is enabled.

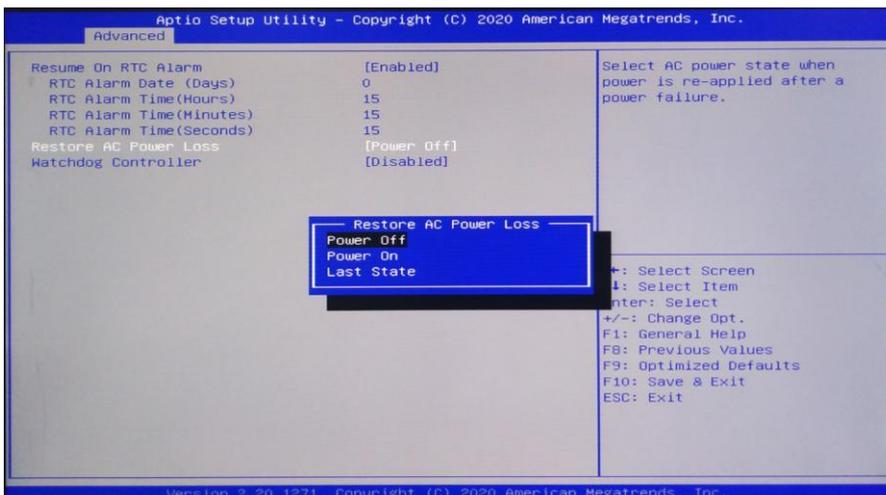
ACPI Sleep State: This option is used to select the power-saving mode that the system enters during sleep. If the mode is different, the power consumption level of the system will also vary. Suspend Disabled; Turn off sleep mode: S1 (CPU Stop Clock): The CPU stops working, and other devices are still powered on normally; S3 (Suspend to Ram): Suspend to memory.

Lock Legacy Resources: Resource locking, allowing (enabled) or disabling (disabled) resource locking functionality.

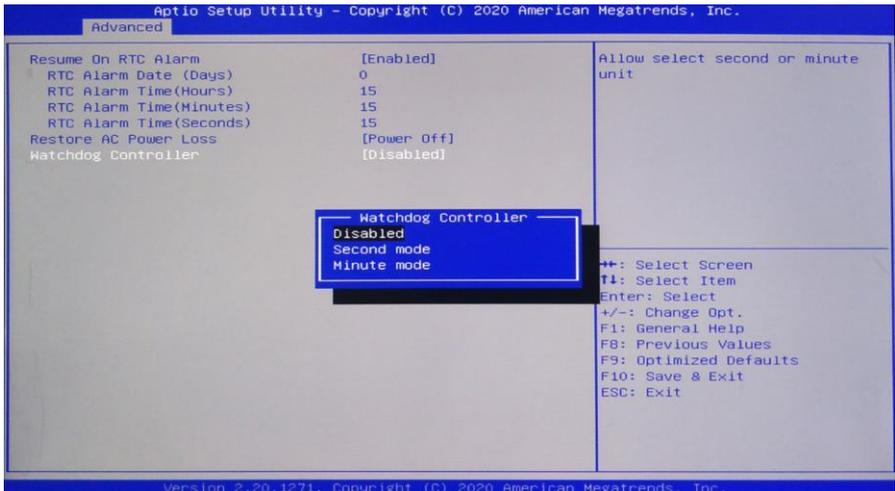
### 7.2.5 Miscellaneous Configuration



- Resume On RTC Alarm: Set timed power on
- RTC Alarm Date (Days): Set the scheduled startup date
- RTC Alarm Time (Hours): Set timed startup hours
- RTC Alarm Time (Minutes): Set timed startup minutes
- RTC Alarm Time (Seconds): Set the timed boot time in seconds

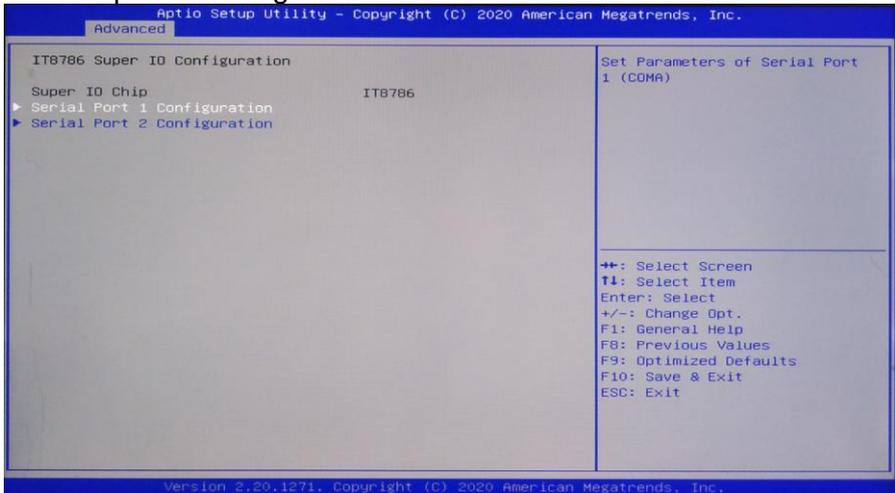


Restore AC Power Loss: This item is used to set the startup status after power on. If you select Power Off, you need to press the power button to start up after power on. If you select Power On, you can start up directly after power on,



Watch dog controller: [Disabled] Turn off the watchdog, [Second mode] set the watchdog to second mode, [Minute mode] set the watchdog to minute mode.

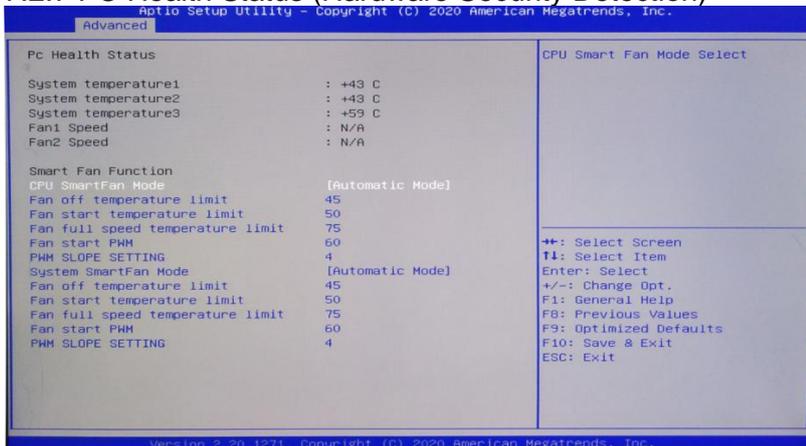
### 7.2.6 Super IO Configuration



Serial Port 1 Configuration: This is an option for setting serial port 1, including Super IO configuration information, including COM port interrupt number and address settings.

Serial Port 2 Configuration: This is an option for setting serial port 2, including Super IO configuration information, including COM port interrupt number and address settings.

### 7.2.7 PC Health Status (Hardware Security Detection)



**PC Health Status :**

Hardware security detection, displaying current system temperature, CPU temperature, fan speed, and other related voltage values. The above parameters have a certain range, and the system cannot operate beyond these ranges.

Smart Fan 1 Mode: Does this option enable the CPU automatic fan control function, which is used to automatically adjust the CPU fan speed based on real-time detected CPU temperature, in order to achieve the goal of power-saving and energy-saving.

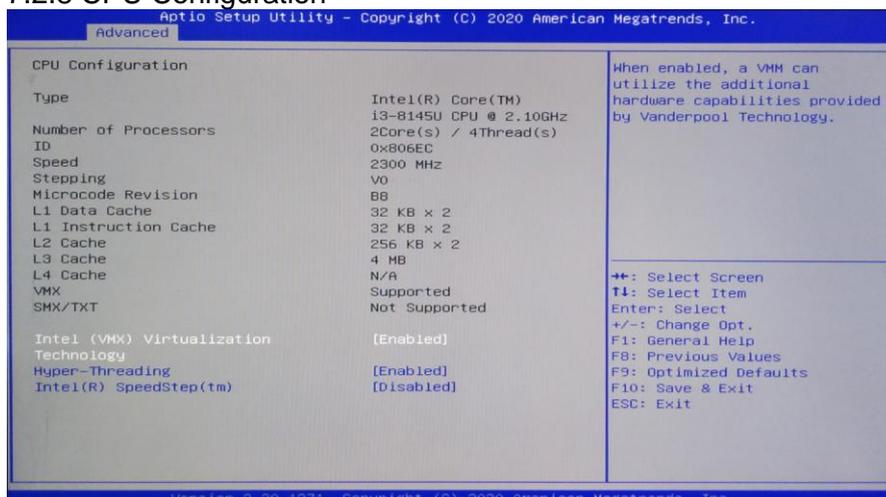
Fan off temperature limit: Set the minimum temperature value at which the fan is turned off.

Fan start temperature limit: Set the minimum temperature value at which the fan is turned on.

Fan start PWM: Set the starting PWM value of the fan.

Pwm slope setting: The linear value of Pwm.

**7.2.8 CPU Configuration**

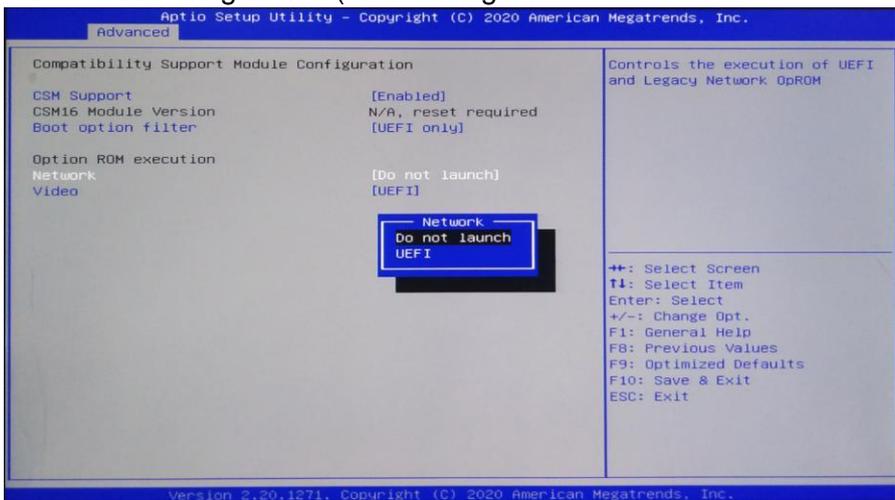


The read-only item contains detailed information about the CPU, including CPU manufacturer, model, frequency, primary cache size, secondary cache size, and other information.

**Intel Virtualization Technology :**

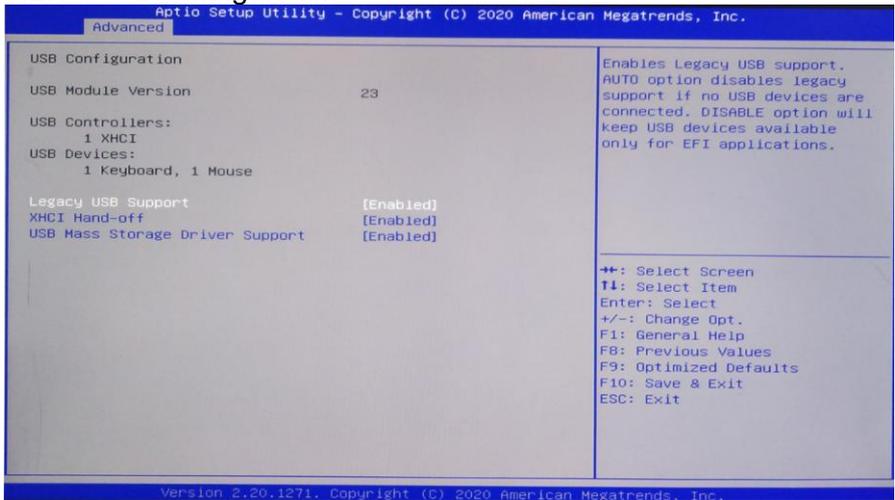
Intel Virtualization Technology is a system virtualization technology used in Intel's CPUs. It enables multiple OSs to run on one PC, and VT technology will play a very important role in various types of processors (including dual core processors). This technology enables processors to have and/or virtualization technology, and using Vanderpool Technology, we can run two operating systems simultaneously on the same machine. One processor runs one operating system, while the other processor runs another operating system.

### 7.2.9 CSM Configuration (CSM configuration)



Launch Network PXE OpRom: Set diskless boot, Do not launch: Turn off diskless boot, UEFI sets diskless boot mode to UEFI, Legacy: Set diskless boot mode to Legacy mode

### 7.2.10 USB Configuration



#### Legacy USB Support :

This item is used for setting up old versions of USB. If you need to support USB devices such as USB drives, USB keyboards, etc. under DOS, you need to set this item to [enabled] or [Auto]. Otherwise, select [Disabled].

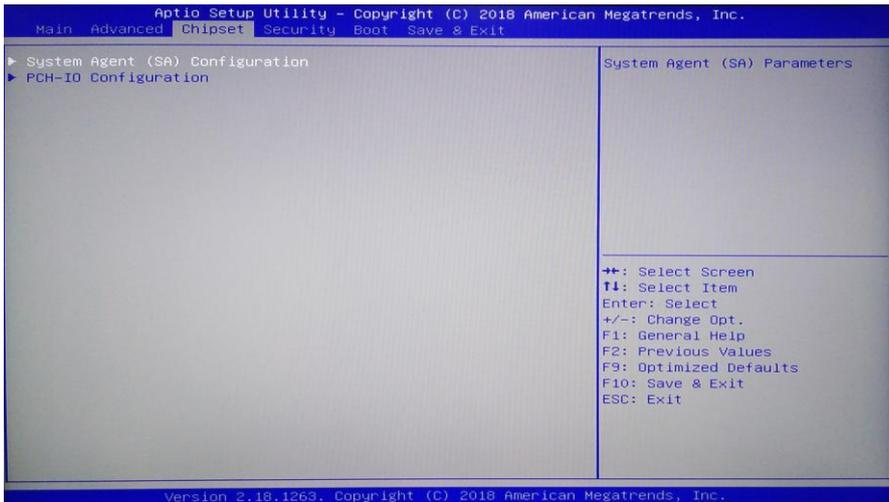
#### XHCI Hand-off :

When the operating system does not support XHCI, should the BIOS take over XHCI control

#### USB Mass Storage Driver Support :

USB mass storage devices support switches.

### 7.2.11 Chipset Menu (Chipset Settings)

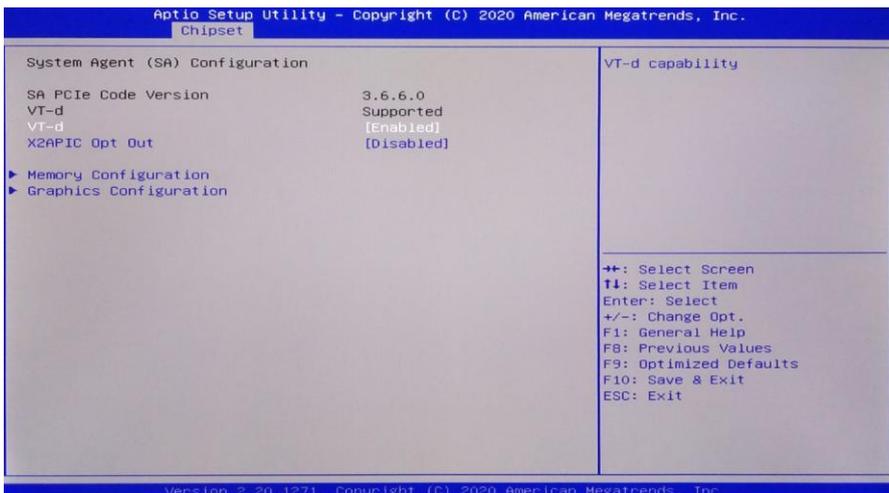


**PCH-IO Configuration :**

South Bridge Configuration Options. Including options such as sound card and network card

System Agent (SA) Configuration:

North Bridge Configuration Options. Including options such as graphics memory, display devices, LVDS, etc.

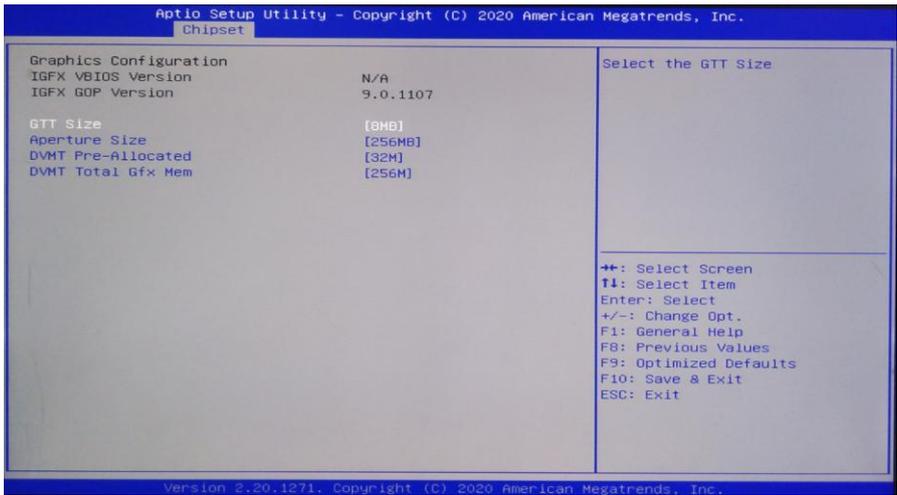


**VT-d :**

Intel's I/O virtualization technology requires chipset support, so some chipsets support it while others do not. BIOS will display or hide this option based on different chipsets, please enable it when installing virtual machines.

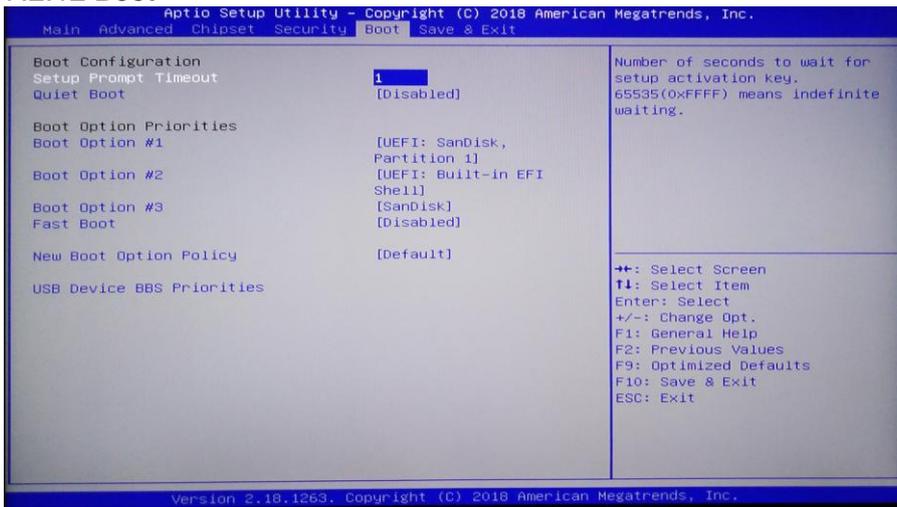
Memory Configuration: Memory Configuration

Graphics Configuration: Graphics Card Configuration



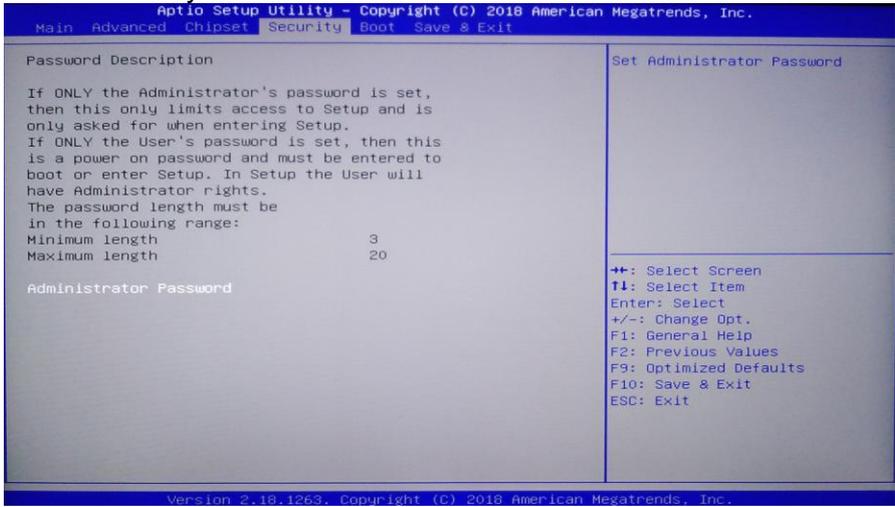
DVMT Pre Allocated: Dynamically allocate the value of graphics memory.  
 DVMT Total Gfx Mem: Dynamically allocate the total value of the graphics card.  
 Aperture Size: displays the size of the card's shared main memory.  
 GTT Size: Graphics Memory Size  
 Primary IGFX Boot Display: Selection of Vbios and configuration of graphics card boot options.

7.2.12 Boot



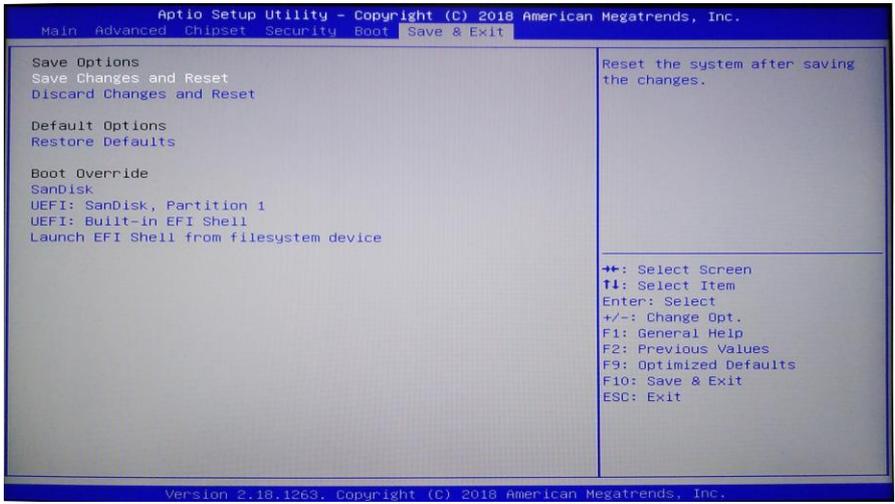
Setup Prompt timeout: Set the timeout time for prompts and the waiting time for pressing the Setup shortcut key. If the setup shortcut key is not pressed within the set time, the startup will continue.  
 Quiet Boot: Silent start (off, enable on).  
 Fast Boot: Quick start (disabled off, enabled on).  
 Boot Option Priorities: The system will detect devices in the set order until a bootable device is found, and then boot from that device. # 1 is the most prioritized boot device among the boot options.

### 7.2.13 Security



Password character length prompt: The minimum length is 3 and the maximum length is 20.  
 Administrator Password :  
 This prompt line is used to set the super user password.

### 7.2.14 Save&Exit



Save Changes and Reset: Save BIOS settings and exit the settings interface to continue booting the computer.  
 Discard Changes and Reset: Discard changes and exit the settings interface, restart the computer.  
 Restore Default: Load optimization settings. If selected, the system will set them according to the factory optimization values  
 Boot Override: Select the specified boot device, such as SATA hard drive, USB flash drive, EFI Shell, PXE, etc., boot directly without saving and exit. Press F11 to select the specified device boot.

## **Chapter 8. After-Sale Service**



## 8. After-Sale Service

Please visit the official website of Darveen ([www.darveen.com](http://www.darveen.com)), Get the latest information on the product.

If users need technical support, please contact the local distributor, seller or the customer service department. Before the technical consultation, please collect the following information:

1. Product model and production serial number (normally, bar code on the body)
2. Software used (operating system, version, application software, etc.)
3. Additional equipment situation of product docking (such as power supply situation, resistance and other basic information)
4. Complete description of the problem (video and photo)
5. Full content of each error message (video recording and photo taking)



Darveen Co., Ltd.  
Email: [sales@darveen.com](mailto:sales@darveen.com)  
[www.darveen.com](http://www.darveen.com)  
Darveen Co., Ltd. All Rights Reserved