

# TVP-310

## User's Manual



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# Chapter 1. About this Manual



## 1.1 Introduction

This is a user manual about TVP-310, which mainly includes introduction, application environment of the product, description of appearance, product characteristics, technical parameters, setting of common functions, machine installation, matters needing attention and after-sales common problem diagnosis. This manual is designed to help users solve problems encountered in the process of use, please be sure to read this manual in detail, so as to better use the TVP-310.

## 1.2 User and Product Safety

- Never use strong pressure onto the screen or subject it to severe impact, as the LCD panel could become cracked and possibility cause personal injury. If the LCD panel is broken, never touch the liquid inside because the liquid irritates the skin.
- Although the TVP has passed the test of IP65 standard for water and dust resistance, avoid prolonged exposure to rain or other concentrated moisture. Such condition exceeds the IP65 standard, and could result in water or other contaminants entering into the TVP.
- Use only the original approved AC/DC Adapter with the TVP. Use of an unapproved AC/DC Adapter could result in electrical problems, or even cause a fire or electrical shock to the user.
- Do not disassemble the TVP. Servicing should be done by supplier only. If the TVP or accessories gets damaged due to wrong handling or unauthorized repair, warranty is void. In case the warranty seals are broken, warranty is void too.
- Make regularly back-up of all important data.
- Under no circumstance will supplier be liable for any direct, indirect, consequential or incidental damages baring out of the use or inability to use the hardware and software and/or any data loss, even if supplier has been informed about the possibility of such damages.

## 1.3 Recycling & disposal instructions



Do not throw this product in the home waste bin.



## 1.4 Regulatory information



For CE, FCC, RoHS and other Document of Conformities, consult the Contact Window of Darveen Computer.

## 1.5 Product application scenario

The TVP-310 is a rugged railway panel PC powered by the Intel® Atom® x7433RE processor. It features a 10.4-inch industrial touch screen, Wi-Fi 6E, Bluetooth 5.3, 5G/4G, GNSS, a wide-range DC input, and an extended operating temperature range of -40°C to 70°C, making it ideal for railway applications. It complies with MIL-STD-810H standards for shock and vibration resistance and offers an IP65-rated front panel, ensuring durability and reliable operation in demanding environments.

## Chapter 2. Getting Started



## 2.1 Overview

The TVP-310 is a rugged railway panel PC powered by the Intel® Atom® x7433RE processor. It features a 10.4-inch industrial touch screen, Wi-Fi 6E, Bluetooth 5.3, 5G/4G, GNSS, a wide-range DC input, and an extended operating temperature range of -40°C to 70°C, making it ideal for railway applications. It complies with MIL-STD-810H standards for shock and vibration resistance and offers an IP65-rated front panel, ensuring durability and reliable operation in demanding environments. These features as:

- Intel® Atom® x7433RE processor
- M12 aviation-grade connectors
- UIC612-01 compliant keyboard layout
- IP65-rated front panel and fanless design
- Compliant with MIL-STD-810H vibration standards
- Supports 8–36 VDC input or 40–160 VDC input (by request)
- Wide operating temperature range: -40°C to 70°C

## 2.2 General Information

### 2.2.1 General View



### 2.2.2 I/O Ports

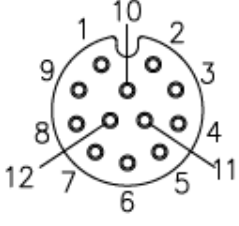


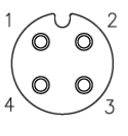
CAN	Pin Number	Definition	Female
M12-A-5P-F	1	CAN_H1	
	2	CAN_L1	
	3	CAN_GND	
	4	CAN_H2	
	5	CAN_L2	

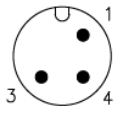
GPIO	Pin Number	Definition	Female
M12-A-6P-F	1	+5V	
	2	GPIO_0	
	3	GPIO_1	
	4	GPIO_2	
	6	GPIO_3	
	7	GND	

USB	Pin Number	Definition	Female
M12-A-8P-F	1	USB1_VCC	
	2	USB1_D-	
	3	USB1_D+	
	4	USB1_GND	
	5	USB2_VCC	
	6	USB2_D-	
	7	USB2_D+	
	8	USB2_GND	

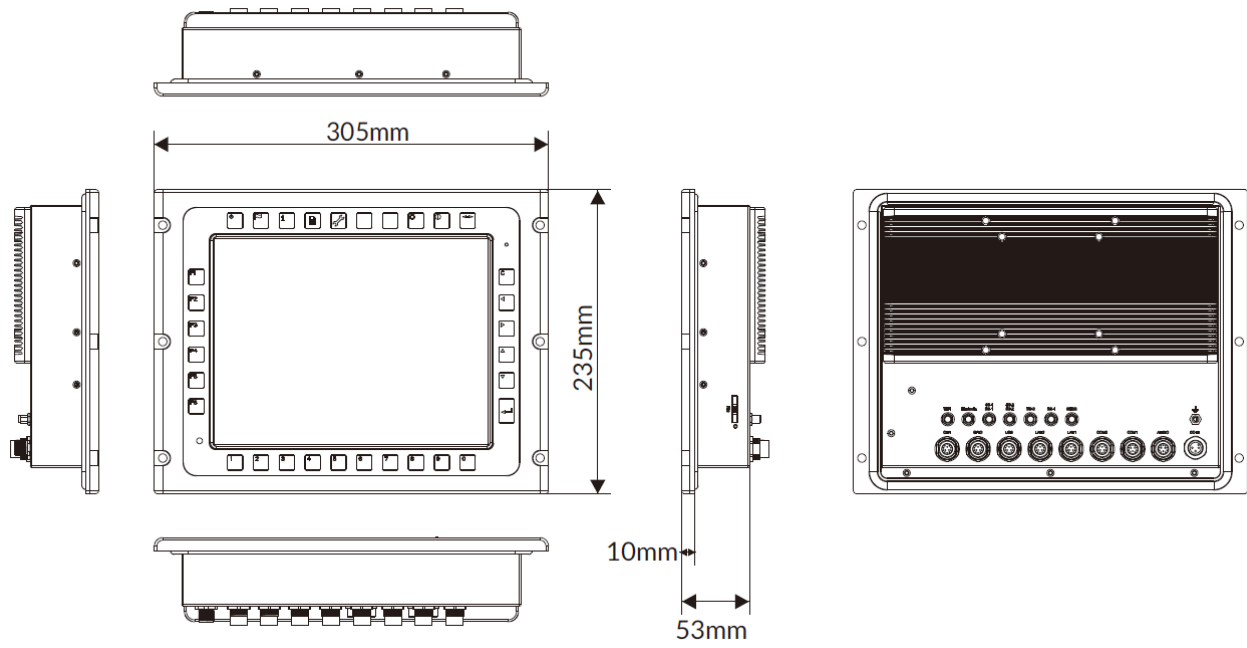
LAN	Pin Number	Definition	Female
M12-X-8P-F	1	TX_D1+	
	2	TX_D1-	
	3	RX_D1+	
	4	BI_D3+	
	5	BI_D3-	
	6	RX_D1-	
	7	BI_D4+	
	8	BI_D4-	

COM1/COM2	Pin Number	Definition	Female
M12-A-12P-F	1	RS232_DCD/ RS422_TX-/ RS485_D-	
	2	RS232_RXD/ RS422_TX+/ RS485_D+	
	3	RS232_TXD/ RS422_RX+	
	4	RS232_DTR/ RS422_RX-	
	5	RS232_GND	
	6	RS232_DSR	
	7	RS232_RTS	
	8	RS232_CTS	
	9	RS232_RI	
	10	NC	
	11	NC	
	12	NC	

AUDIO	Pin Number	Definition	Female
M12-A-4P-F	1	LOUT_R	
	2	AUD_GND	
	3	LOUT_L	
	4	AUD_GND	

DC-IN	Pin Number	Definition	Female
M12-A-3P-M	1	DC+	
	3	DC-	
	4	NC	

## 2.2.3 Dimensions



## 2.4 Specifications

The TVP-310 detailed specifications as follows. Unless otherwise noted, all the specifications are subject to change without prior notification.

<b>Display</b>	
Size	10.4 inch (4:3)
Touch Type	Projected capacitive multi touch
Display Type	TFT LCD
Resolution	1024 x 768
Luminance	1000 nits
Contrast Ratio	1000: 1
View Angles	88 (left), 88 (right), 88 (up), 88 (down)
Color	16.7M
<b>System</b>	
CPU	Intel® Atom® x7433RE, quad core (1.5GHz)
Chipset	Intel® Amston Lake Platform
Memory	8GB DDR5-4800 SO-DIMM (up to 16GB)
Storage	128GB mSATA SSD (up to 512GB)
Graphics	Intel® UHD Graphics
BIOS	AMI UEFI BIOS
<b>Keypad &amp; Keyboard</b>	
Keypad	32 keys (See the manual for the definition)
<b>I/O Ports</b>	
USB	2x USB 2.0 (M12, 8P-A)
Serial	2x RS-232/422/485 (M12, 12P-A)
Ethernet	2x GbE LAN (M12, 8P-X)
Audio	1x Audio out (M12, 4P-A)
CAN bus	2x CAN2.0B (M12, 5P-A)
GPIO	1x 4bit GPIO (M12, 6P-A)
SIM Card Slot	1x SIM Socket
Antenna	7x SMA connector for external antenna (Optional)
<b>RF Communication</b>	
Wi-Fi	Wi-Fi 6E: 802.11a/b/g/n/ac/ax, 2.4G/5G/6G (optional)
Cellular	4G, LTE (optional) 5G, NSA/SA (optional)
Bluetooth	Bluetooth 5.3 (Depends on Wi-Fi 6E, optional)
GNSS	GPS, GLONASS, Galileo, BeiDou (optional, Ublox NEO M8N)
<b>Power</b>	

DC Input	8 to 36VDC 40 to 160VDC (by request)
Power Consumption	18W (Typ.)
Power Mode	ATX (default), AT
<b>Operating System</b>	
Windows	Windows 11 IoT Enterprise LTSC Windows 10 IoT Enterprise LTSC Windows 11 Pro Ubuntu
<b>Mechanical</b>	
Dimensions (W x D x H)	305 x 235 x 65 mm (12.01 x 9.25 x 2.56 inches)
Weight (N.W.)	3.6 kg (7.94 lbs)
Mounting Mode	Panel mount, VESA
Material	Aluminum + SGCC

## 2.5 Environment and Certification

<b>Environment</b>	
Operating Temperature	-40-70°C (-40-158°F)
Storage Temperature	-40-70°C (-40-158°F)
Relative Humidity	95% @ 70°C (158°F), non-condensing
Shock	MIL-STD-810H Method 514.8 Procedure I
Vibration	MIL-STD-810H Method 516.8 Procedure I
IP Rating	IP65 compliant (front panel)
<b>Certification</b>	
EMC	CE, FCC, EN50155

## Chapter3. Configuration



### 3.1 Button Operation Usage


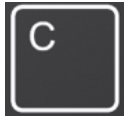




#### 3.1.1 Turn on the TVP-310

























Press the power button to turn on the TVP-310. If the TVP-310 does not power on, check the power supply has been connected normally and you should try again.



When the TVP-310 is powered on, it's operating system starts up. A splash screen of Darveen logo appears for a short period of time followed by the Windows 11 desktop window.



#### 3.1.2 Bezel key mapping

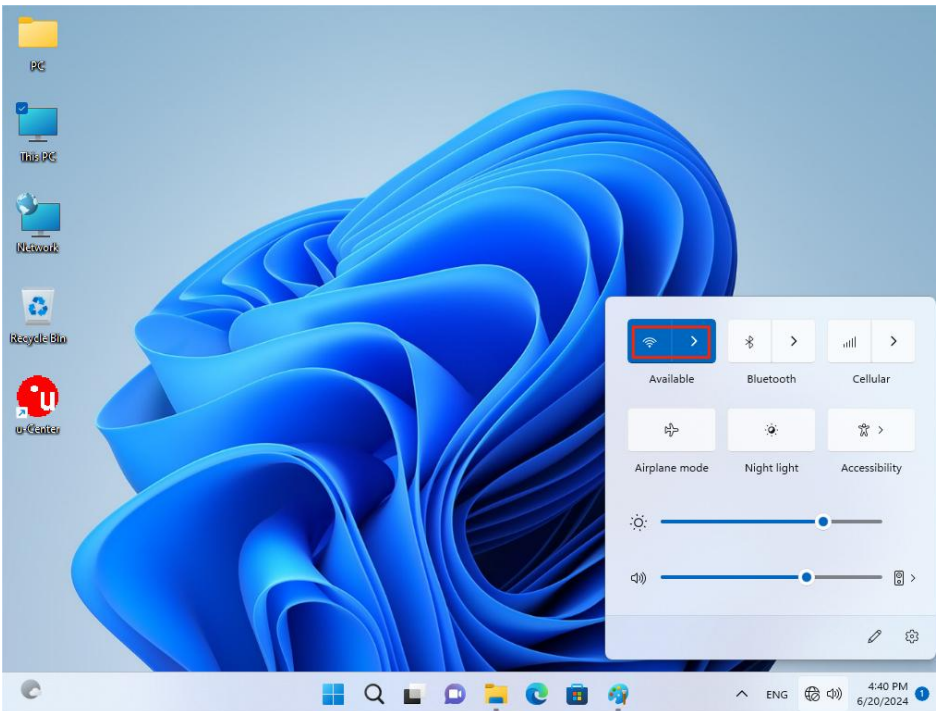
Image	Key	Image	Key
	On/Off		ESC
	SHIFT F2		LEFT
	SHIFT F3		RIGHT

	SHIFT F4		UP
	SHIFT F5		DOWN
	SHIFT F6		ENTER
	SHIFT F7		1
	SHIFT F8		2
	SHIFT F9		3
	SHIFT F10		4
	F1		5
	F2		6
	F3		7
	F4		8
	F5		9

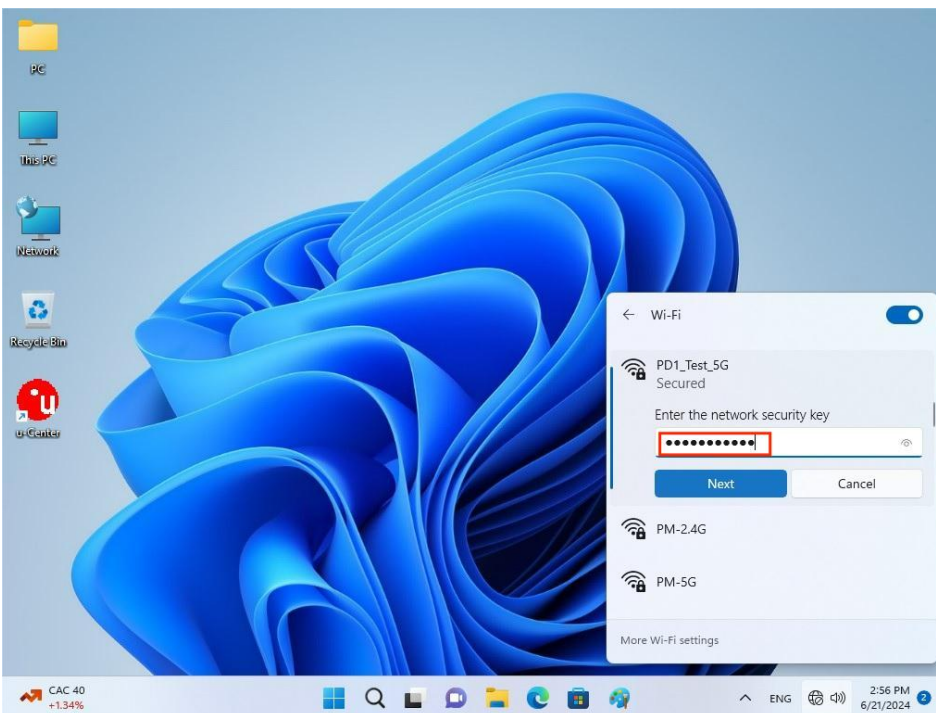
	F6		0
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### 3.2 WiFi (Optional)

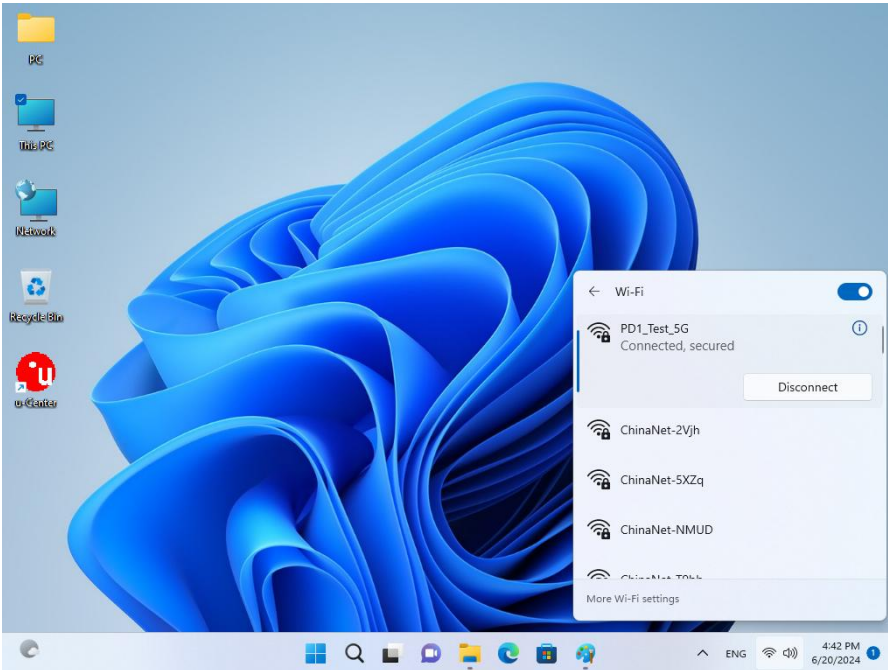
1. Click the network signal icon in the lower right corner of the desktop, select the Expand button and view the list of wireless signals.



2. Select the WiFi signal you want to connect to and enter the correct password.



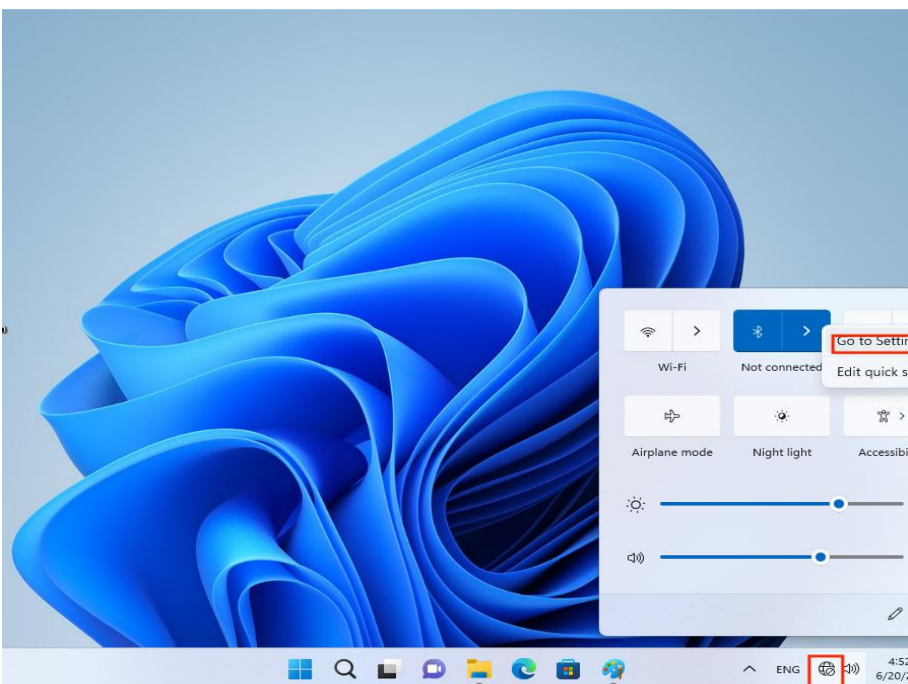
3.The wireless network is properly connected and you can use the wireless network to surf the Internet.



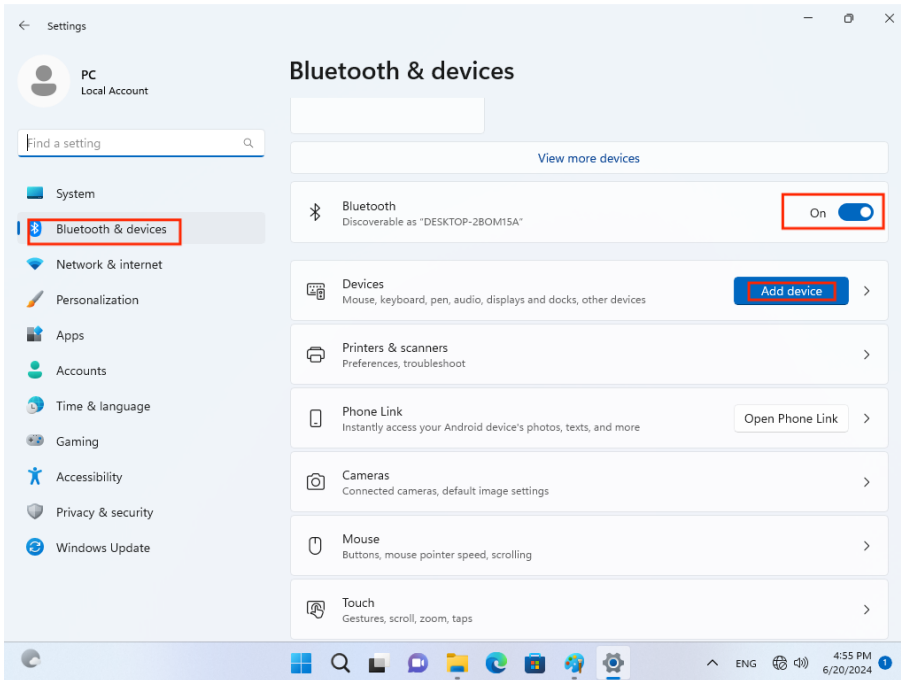
### 3.3 Bluetooth (Optional)

#### 3.3.1 Turn on the Bluetooth

1.Tap the network signal icon in the lower right corner of the screen,Click the right mouse button on the Bluetooth icon to enter the Bluetooth setting interface.

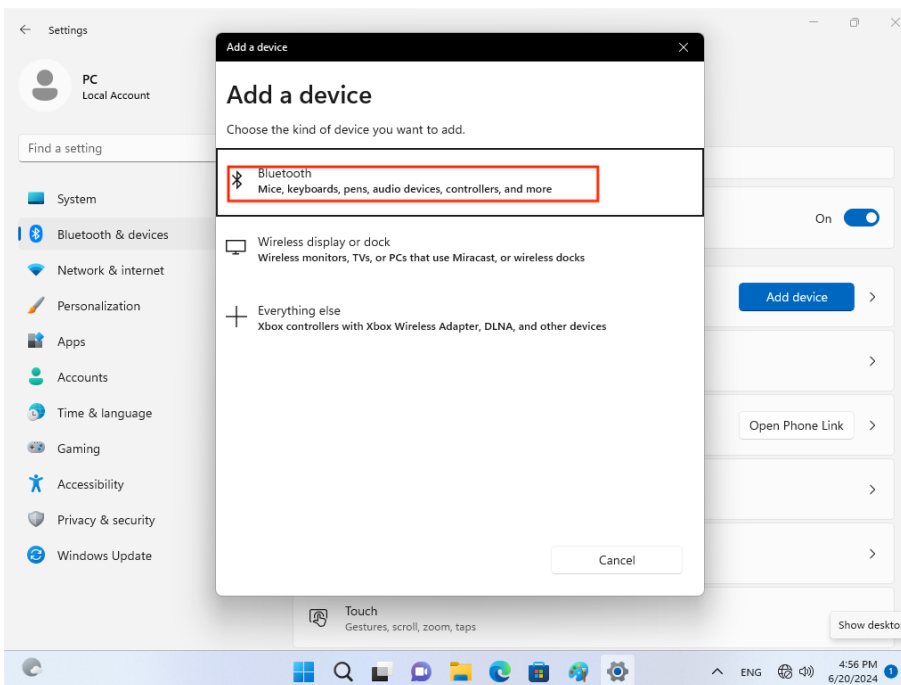


2. In the "Bluetooth & devices", Turn on the "Bluetooth".

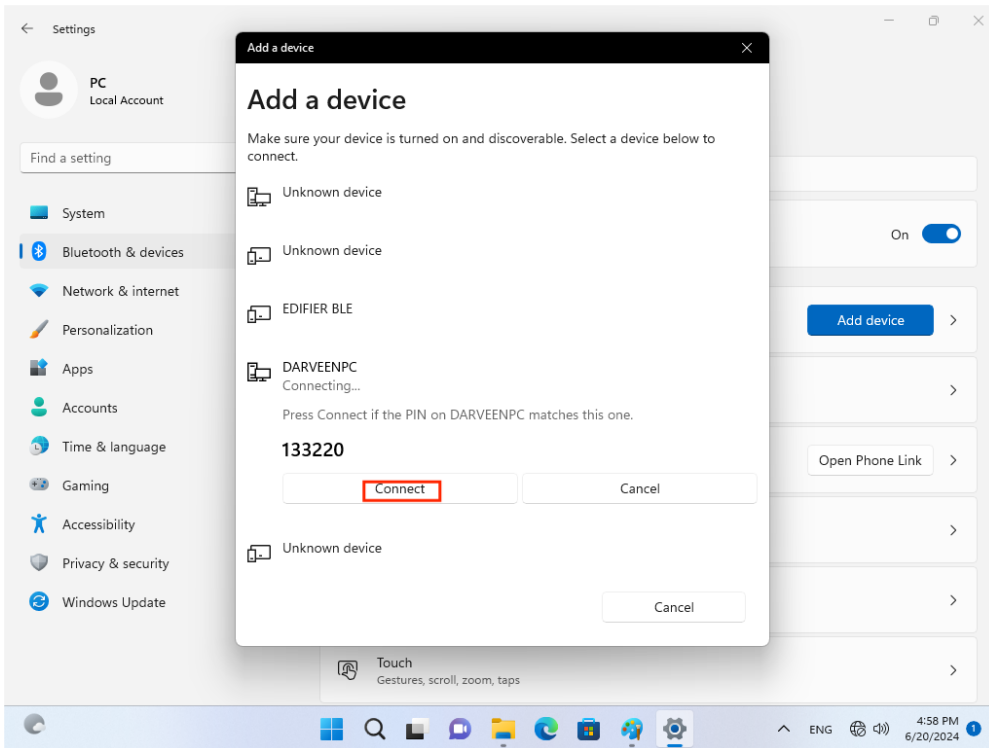


### 3.3.2 Connect to the Bluetooth

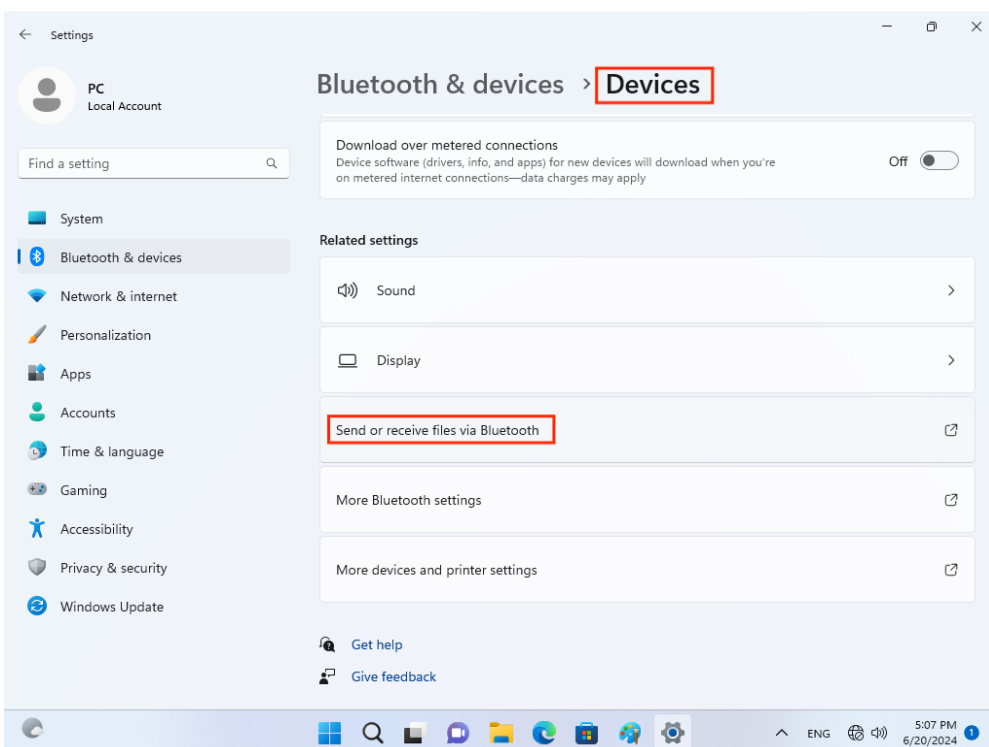
1. Click "Add device" and select the type of the Bluetooth device to be added.



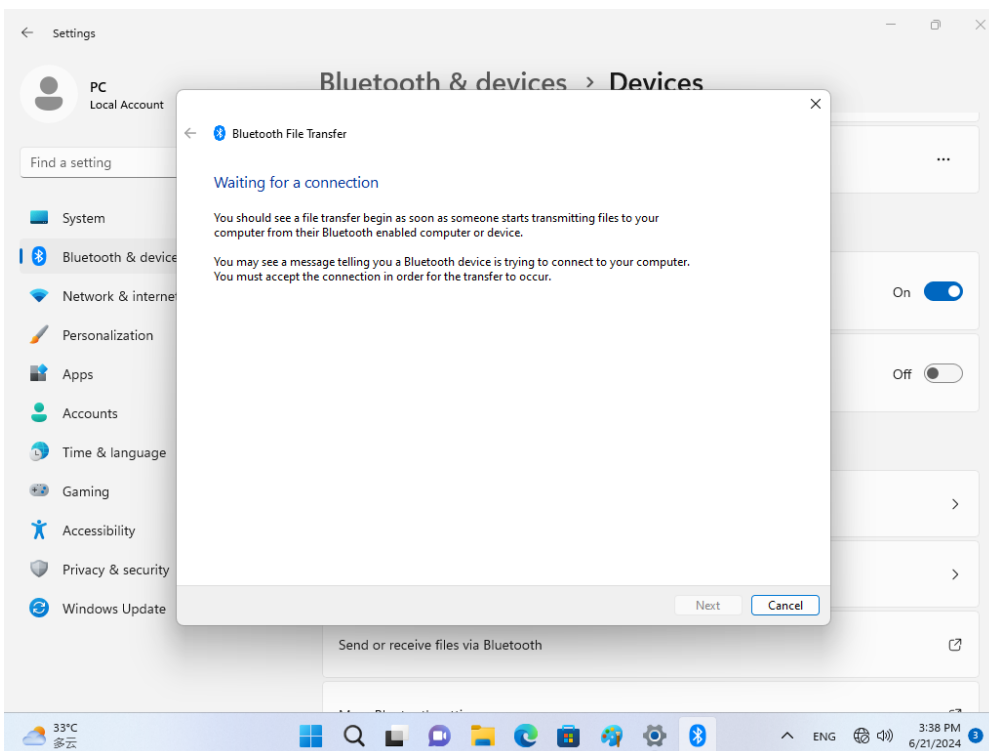
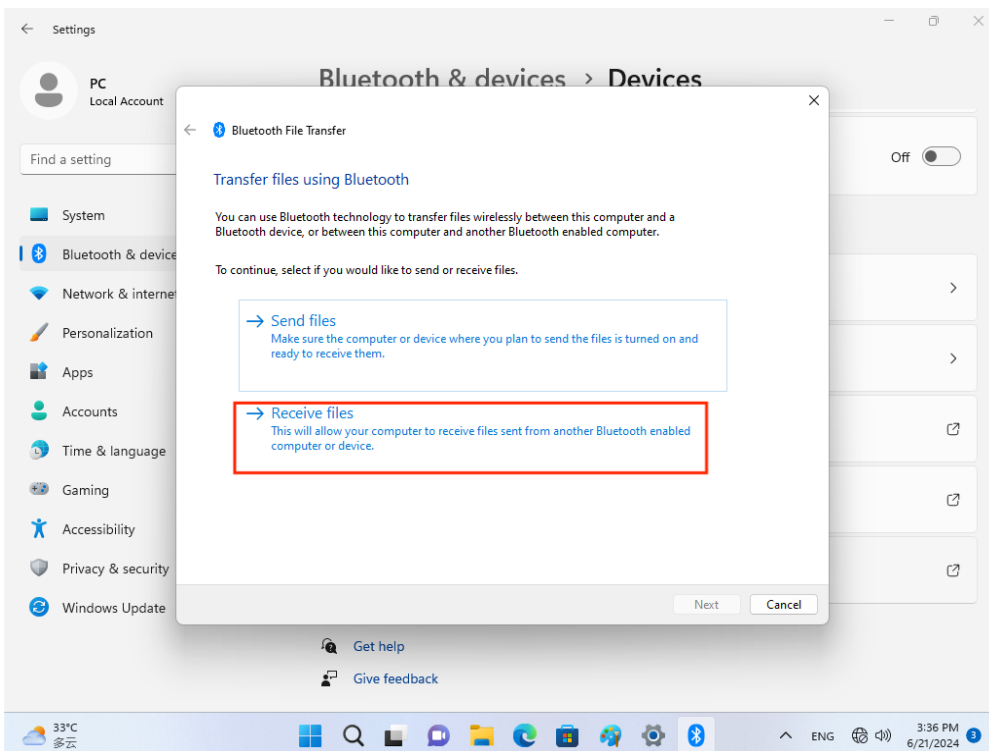
2. Click the Bluetooth device to be connected, and you will see a matching PIN pop up. After confirming that TVP-310 is the same as the matching PIN on the device to be connected, click **"Connect"** to match successfully, and then you can start to use Bluetooth to send and receive files.



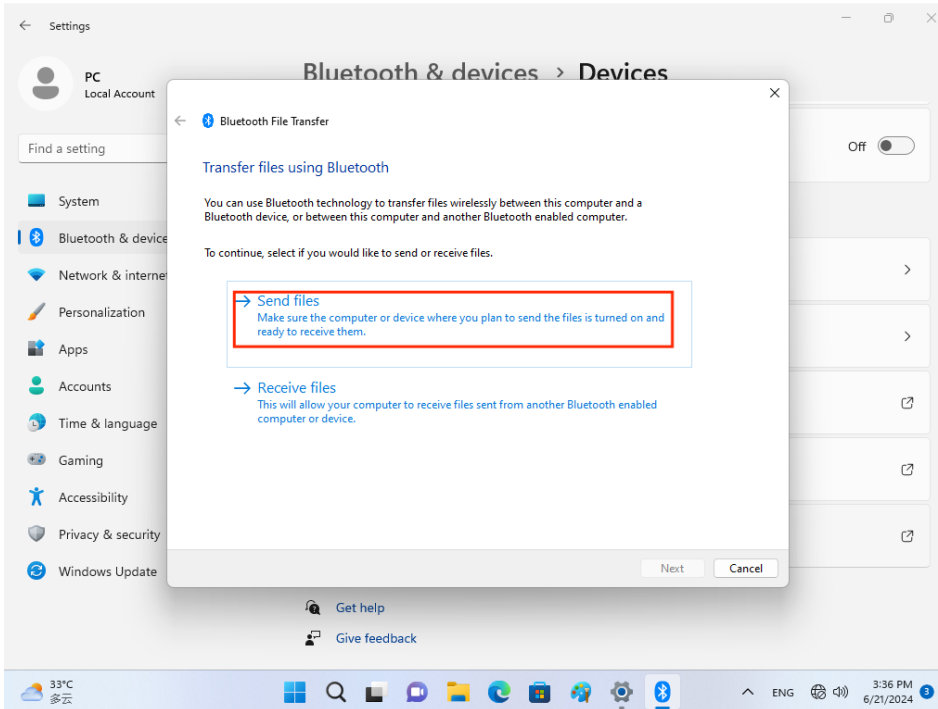
3. In the **"Bluetooth & devices"** interface, click **"Send or receive files via Bluetooth"** to open the Bluetooth file transfer interface.



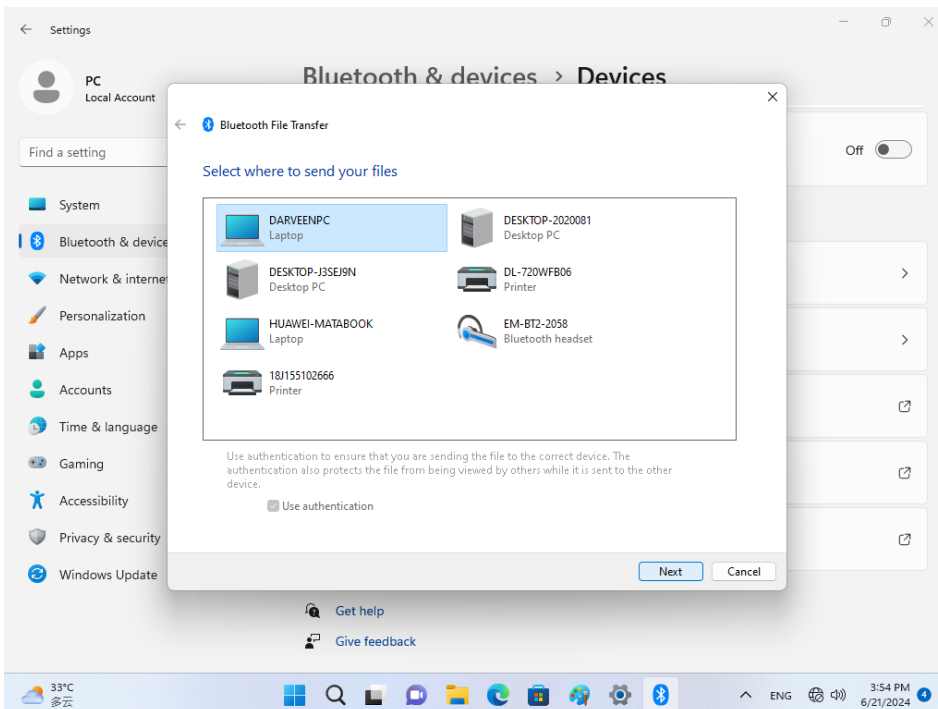
4. Receive the files. Before other devices send files to TVP-310, click **"Receive File"** below to wait for the files to be received.



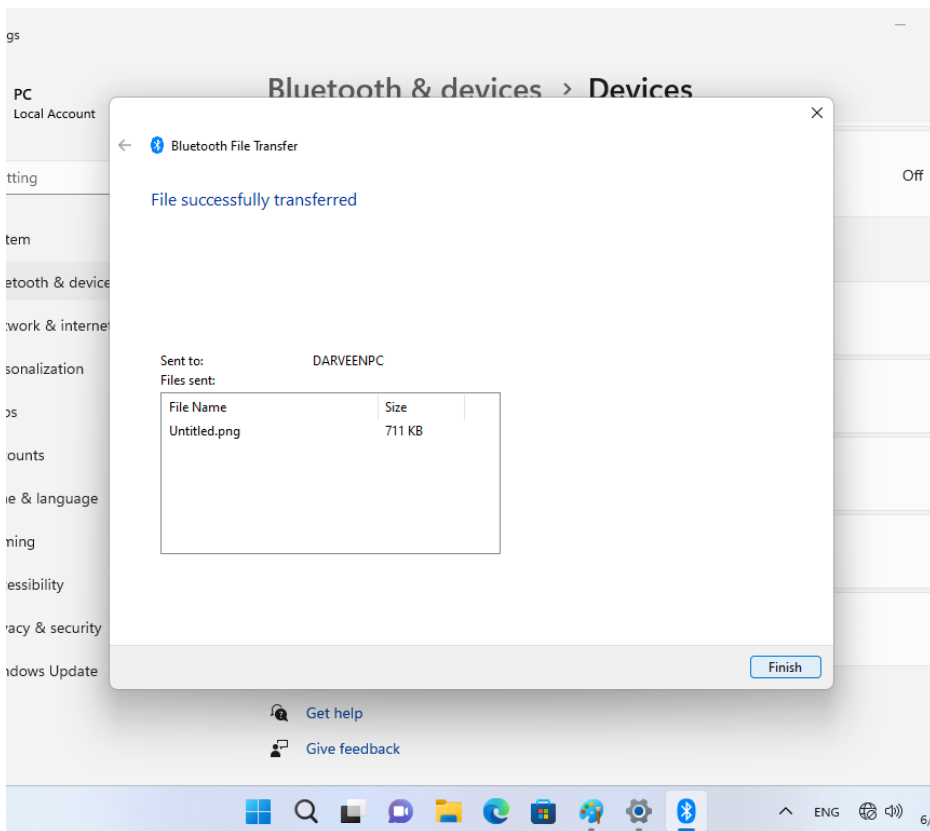
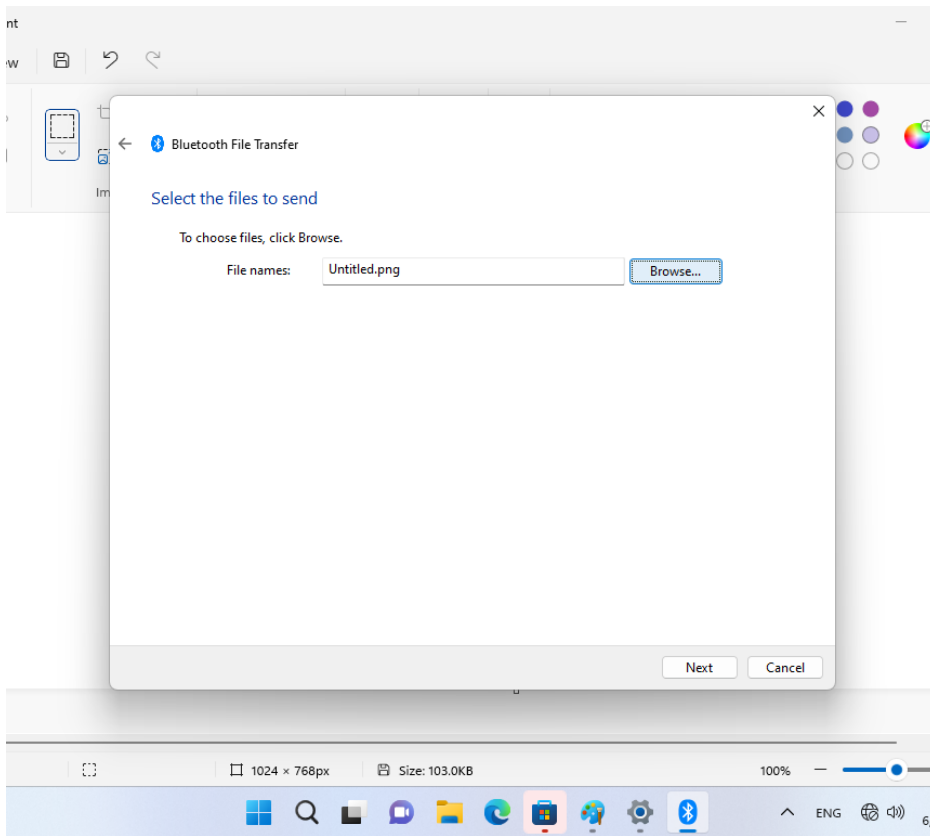
5. Send files. Before sending the file of TVP-310 to other devices, please click **"Send File"** .



6. Select the device you want to send to and click **"Next"**.



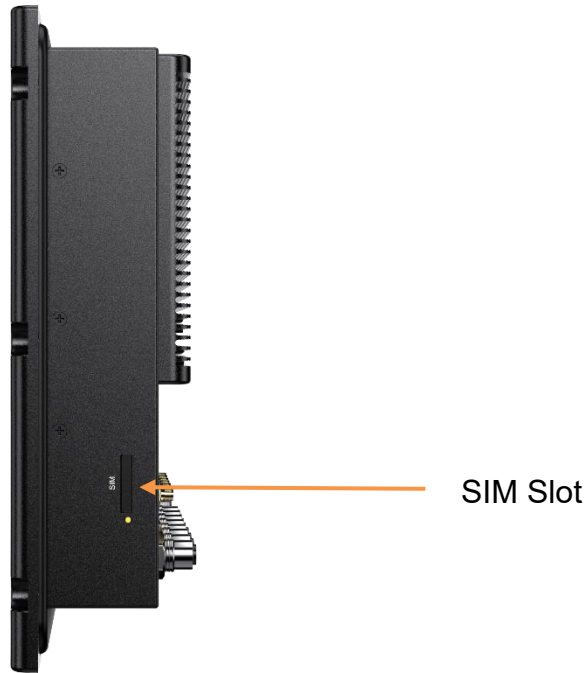
7. Click "**Browse**" and select the file to be sent, and wait for the file to be sent.



## 3.4 4G/5G (Optional)

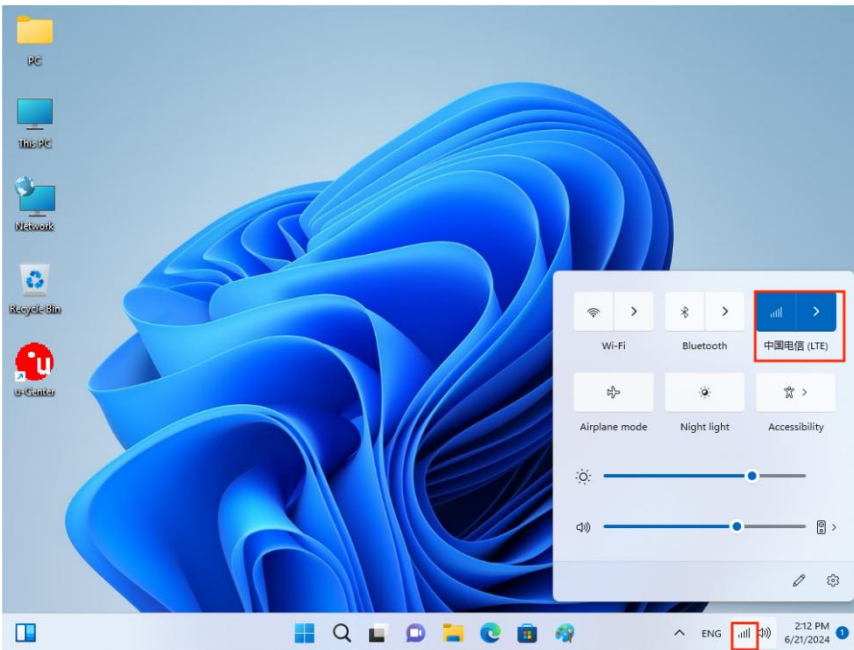
### 3.4.1 Installation of SIM Card

1. Insert the SIM card into the TVP-310. The SIM card slot is flip style. The SIM card slot position is as follows.



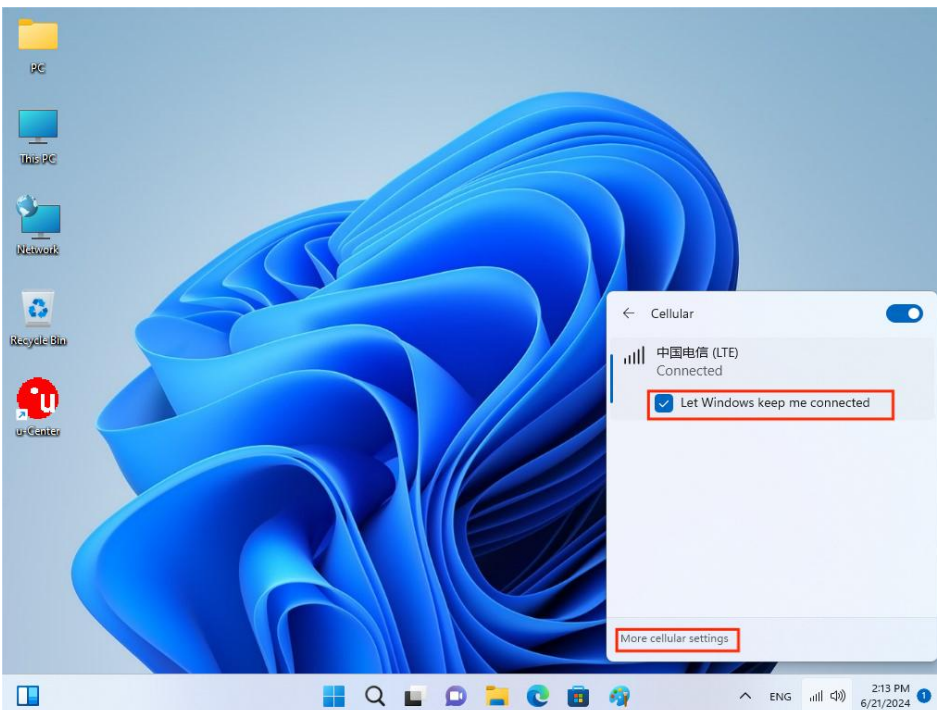
**Note: Please ensure that the machine is completely powered off before inserting and removing the SIM card.**

2. Click the network icon in the lower right corner of the desktop, and left click the mobile network icon to enable the mobile network connection function.

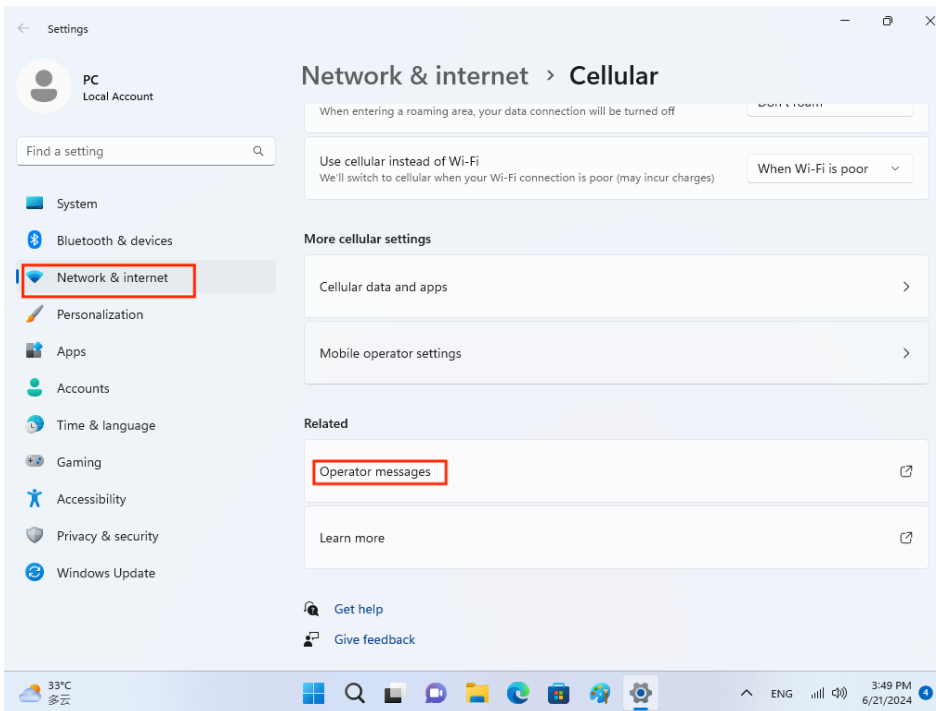


### 3.4.2 4G/5G setting

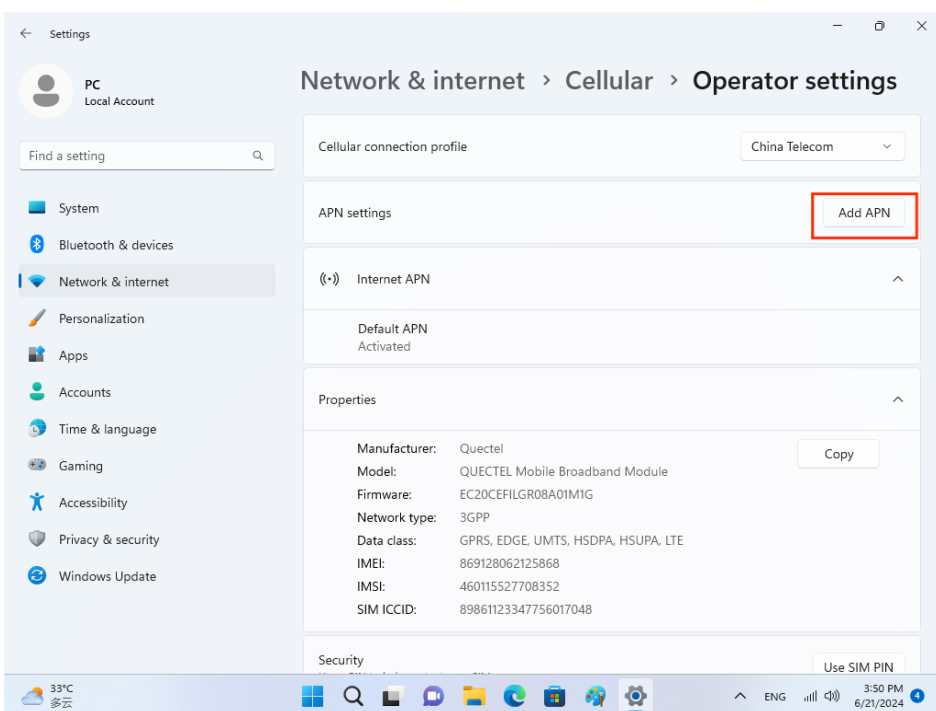
1. If the network connection is normal after the SIM card is installed, select “**Allow Windows to keep me connected**” to complete the connection.

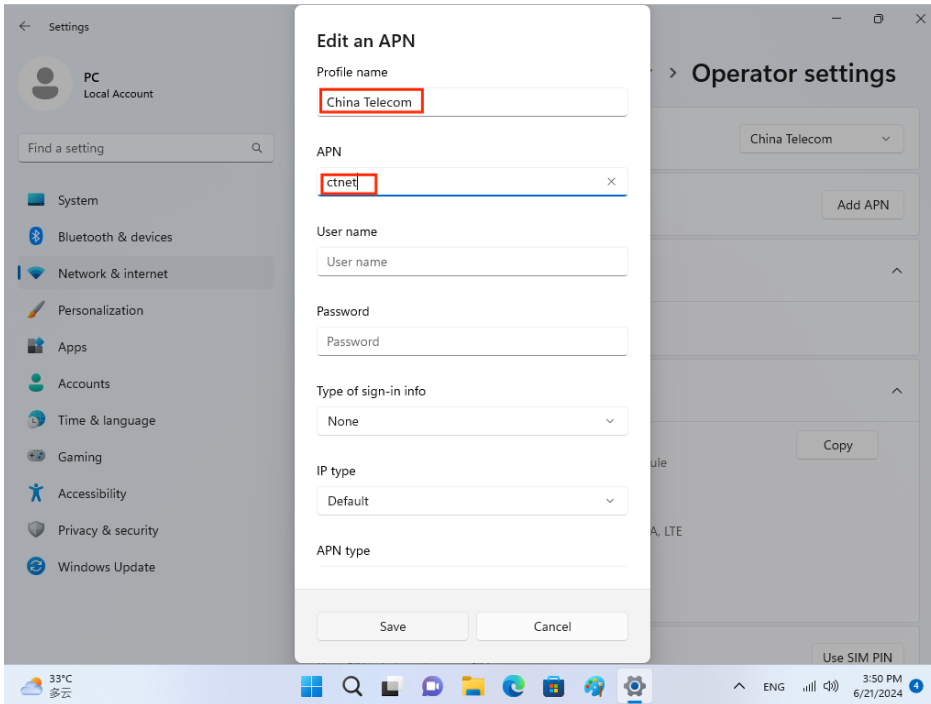


2.If the connection is not successful, click "**More operator settings**" in the figure below to enter the "**Network &Internet**" .

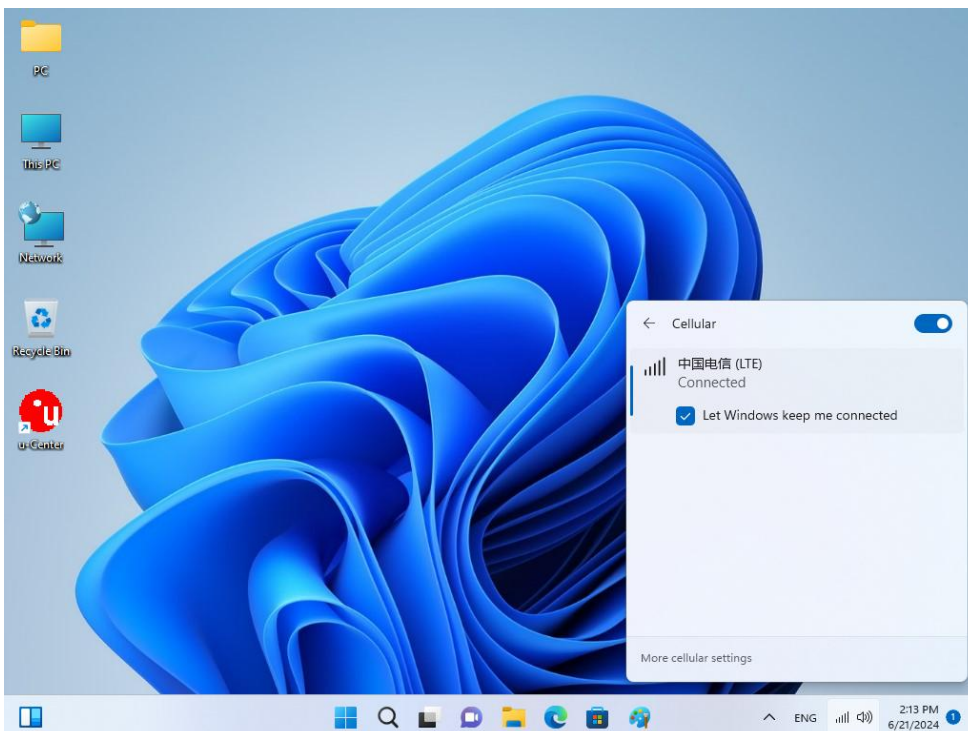


3.Select "**Add APN**", enter the APN corresponding to the SIM card of each operator in the interface of editing access point, and save the APN of each operator is different. The APN of China Mobile is generally "**cmnet**", China Unicom is "**3gnet**", and China Telecom is "**ctnet**". After the APN is set, the power off and restart, You can connect to your mobile network and surf the Internet normally.





4. If the connection is successful, the following information is displayed.



## 3.5 GPS (Optional)

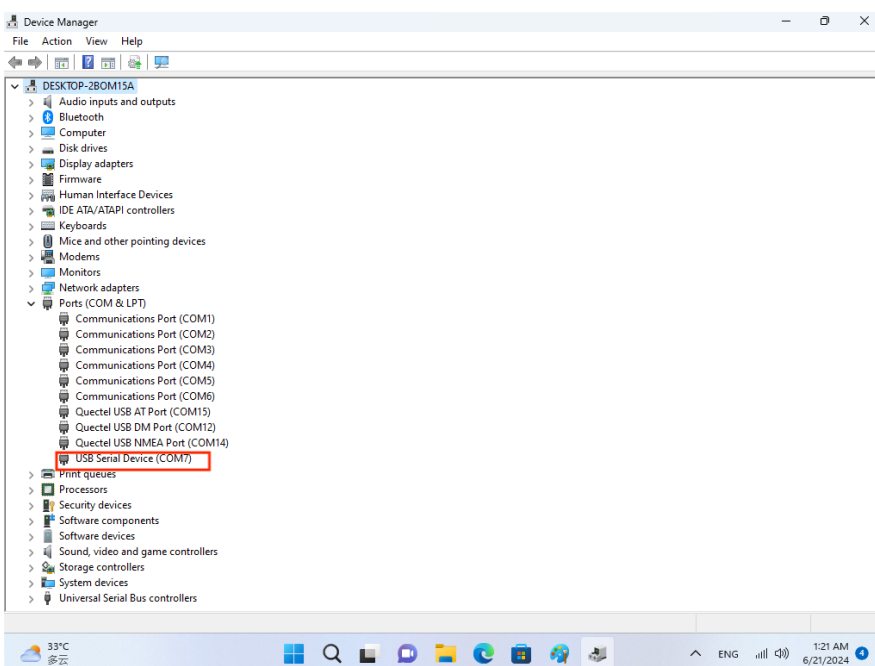
### 3.5.1 Guidelines for the Use of GPS

1. Install GPS antenna on antenna interface (GPS label) of TVP-310. You can buy antennas with better signals. Install those on the antenna interface.

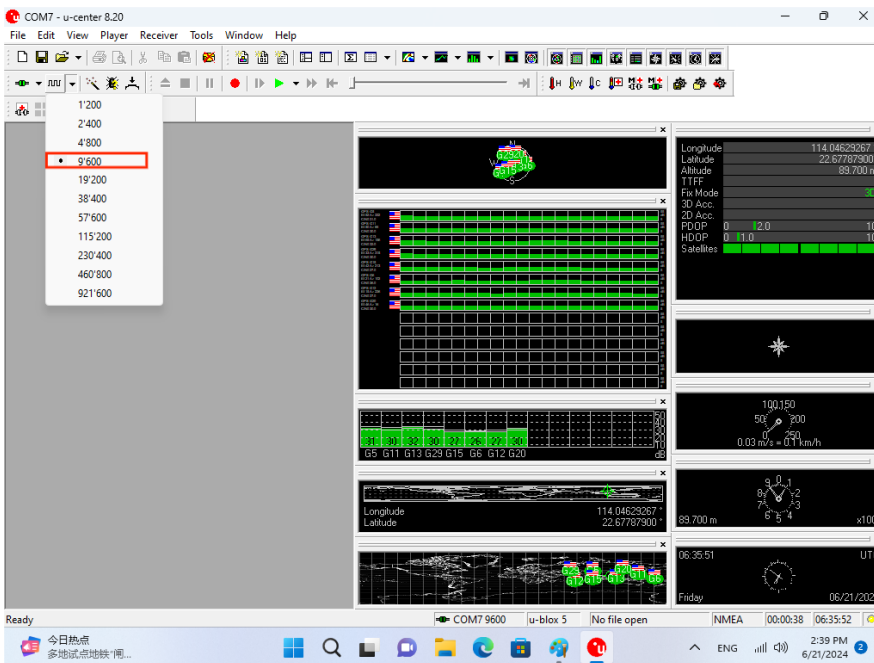
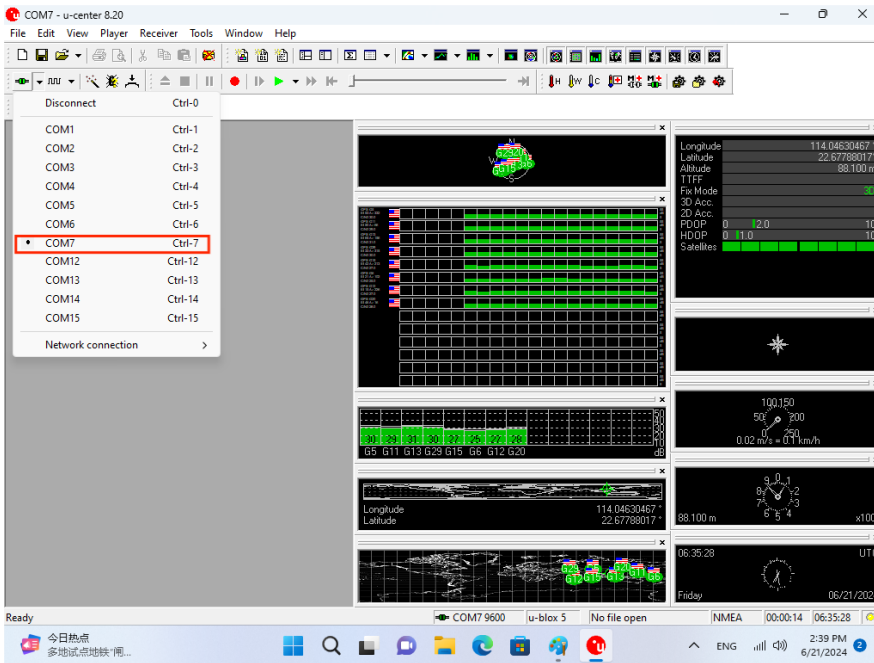


### 3.5.2 GPS Connection

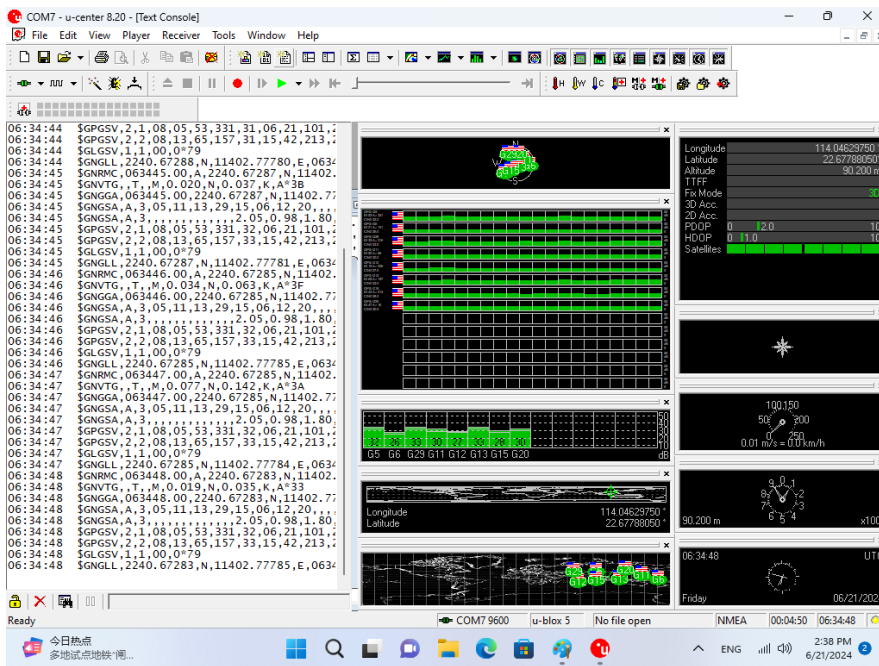
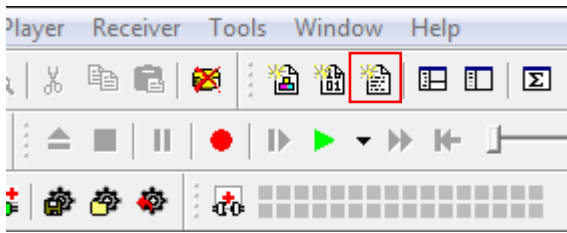
1. You can get GPS information by this serial port. Select the COM, which you can view the virtual COM number of the GPS module in the “**Device Manager**”.



2.The GPS module receives the signal and transmits it to the windows system by COM port. The baud rate is **9600bps**.



3.If the device is working correctly, the display will show information about the satellite constellation, signal to noise ratio, time.




## Chapter4. Accessories










## 4.1 Check the package

Open the package and check all the parts are inside without shortage and damage.

Different configuration include different accessories.

Part Number	Name	Description	Quantity	Image
A.01.001.001191	TVP-310-D00A-A01 Main Unit	TVP-310, 10.4"(1000nits), P-cap, Intel x7433RE, 8GB RAM, 128GB mSATA	1	
A.02.002.000096	DC Power cord	0P to 3P, M12-3P-Female, 2.0meters, RBY, 90°, 3CZ01029316	1	
A.03.004.001534	M12-CAN cable	500mm, M12/5P(M) to Open, 3CZ01029354	1	
A.03.004.001533	M12-GPIO cable	500mm, M12/6P(M) to Open, 3CZ01029353	1	
A.03.004.000270	M12-USB(A) cable	500mm, M12/8P(M) to USB(F)x2, CZ0102945	1	
A.03.004.001380	M12-LAN(RJ45) cable	500mm, M12-8P(X-Code(M)) to RJ45(F), 3CZ01029306	2	
A.03.004.001381	M12-COM(DB9) cable	500mm, M12/12P(M) to DB9(M) Connector, 3CZ01029305	2	
A.03.004.001535	M12-AUDIO cable	500mm, M12/4P(M) to Open, 3CZ01029355	1	

## 4.2 Optional accessories

Part Number	Name	Description	Quantity	Picture
C.02.099.000231	AC-DC Adapter	AC-DC Adapter, FSP, 12V/5A, M12-3P-F	1	
C.02.099.000007	AC Power Cord (GB)	AC Power cord, 1.5M (China)	1	
C.02.099.000008	AC Power Cord (US)	AC Power cord, 1.5M (USA)	1	
C.02.099.000009	AC Power Cord (UK)	AC Power cord, 1.5M (UK)	1	
C.02.099.000010	AC Power Cord (EU)	AC Power cord, 1.5M (Europe)	1	
A.02.004.000061	Rod antenna	SMA(Male), 3dB, for Wi-Fi, Bluetooth, 4G	3	
A.02.004.000031	GPS antenna	SMA(Male), 3.0 meters, for GPS/Beidou	1	

## Chapter5. BIOS Setup



## 5.1 Operations after POST Screen

After CMOS discharge or BIOS flashing operation, press [Delete] key to enter CMOS Setup.



After optimizing and exiting CMOS Setup, the POST screen displayed for the first time is as follows and includes basic information on BIOS, CPU, memory, and storage devices.

## 5.2 BIOS Setup Utility

AMI BIOS ROM has a built in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery backed CMOS RAM and BIOS NVRAM so that it retains the Setup information when the power is turned off.

Entering Setup

Power on the computer and press <Del> or <ESC> immediately. This will allow you to enter Setup.

### Main

Set the date, use tab to switch between date elements.

### Advanced

Enable/disable feature configurations.

### Chipset

Host bridge parameters.

### Boot

Enables/disable quiet boot option.

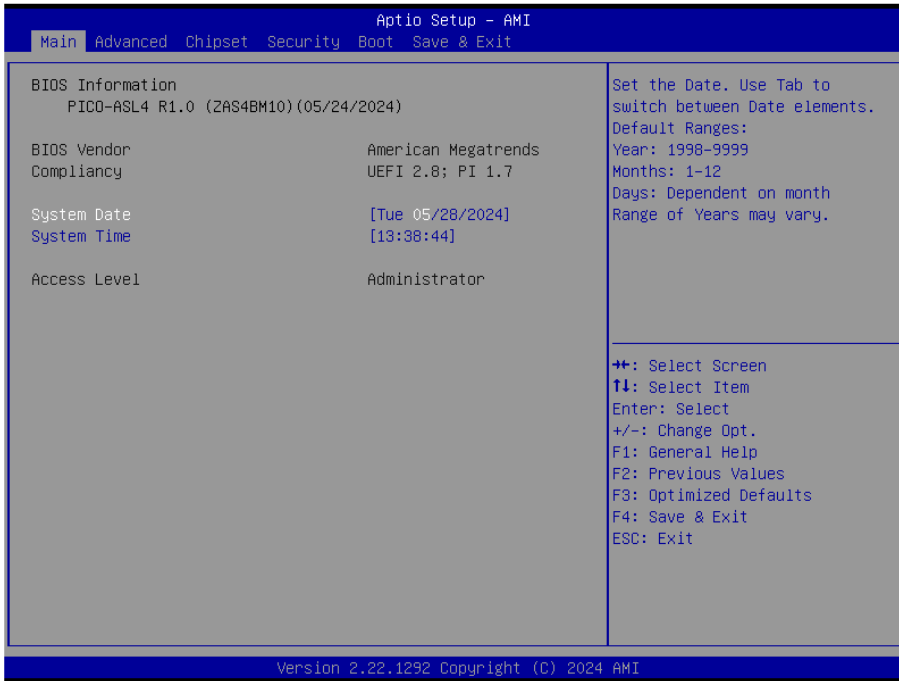
### Security

Set setup administrator password.

### Save & Exit

Exit system setup after saving the changes.

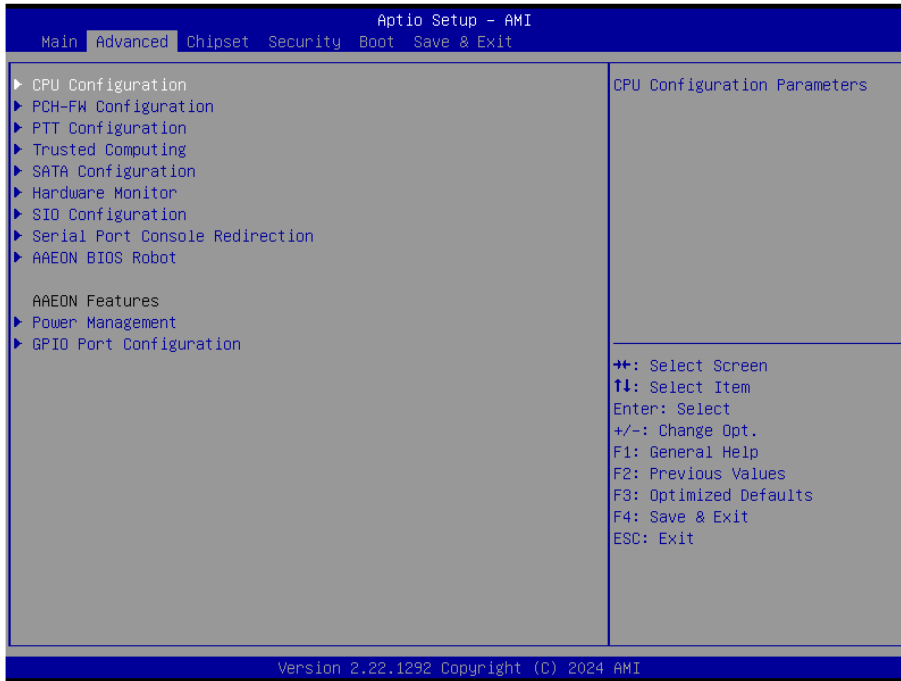
## 5.3 Main Settings



This menu contains the following information:

- **BIOS Version**  
Display BIOS version information.
- **Build Date and Time**  
Display BIOS date and time.
- **System Date**  
Set the date. Use Tab to switch between date elements. Default ranges:  
Year: 1998-9999  
Months: 1-12  
Days: dependent on month  
Range of years may vary.
- **System Time**  
Set the time. Use Tab to switch between time elements.
- **Access Level**  
Display the current access level to BIOS Setup Utility.

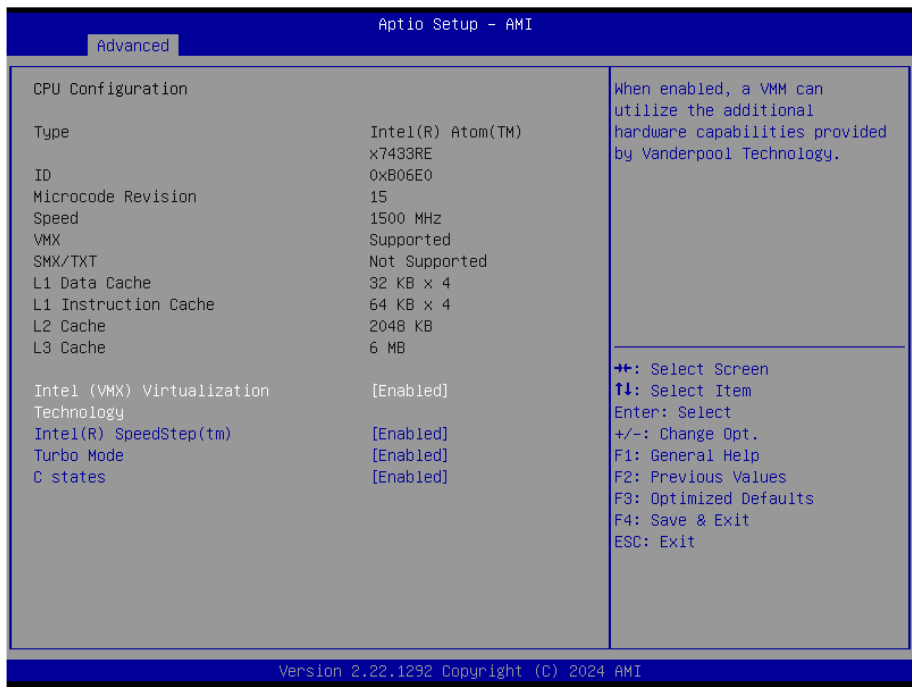
## 5.4 Advanced Settings



This menu contains the following information:

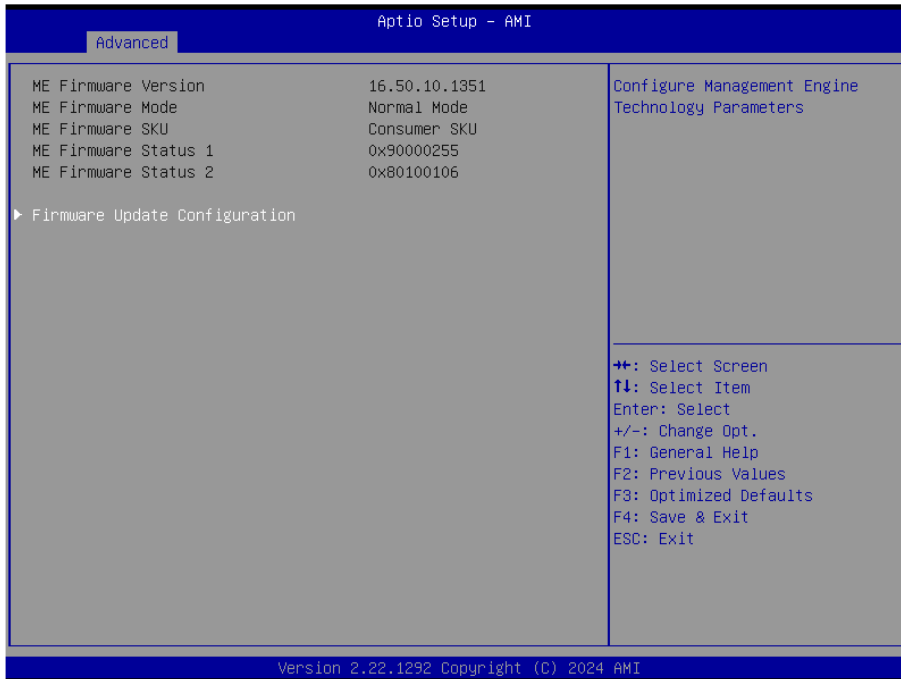
- CPU Configuration  
CPU configuration parameters.
- PCH-FW Configuration  
Configure Management Engine Technology Parameters.
- Trusted Computing  
Trusted Computing Settings.
- SIO Configuration  
System Super IO Chip Parameters.
- Hardware Monitor  
Monitor hardware status.
- Display Configuration  
Display Configuration Parameters.
- Power Control  
Power Button Control Settings.

### 5.4.1 CPU Configuration



Options Summary		
Intel (VMX) Virtualization Technology	Disabled	
	Enabled	Optimal Default, Failsafe Default
When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.		
Intel® SpeedStep™	Disabled	
	Enabled	Optimal Default, Failsafe Default
Allows more than two frequency ranges to be supported.		
Turbo Mode	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable processor Turbo Mode (requires EMTTM enable too). AUTO means enabled.		
C states	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable/Disable CPU Power Management. Allows CPU to go to C states when it's not 100 utilized.		

## 5.4.2 PCH-FW Configuration



The menu contains the following information:

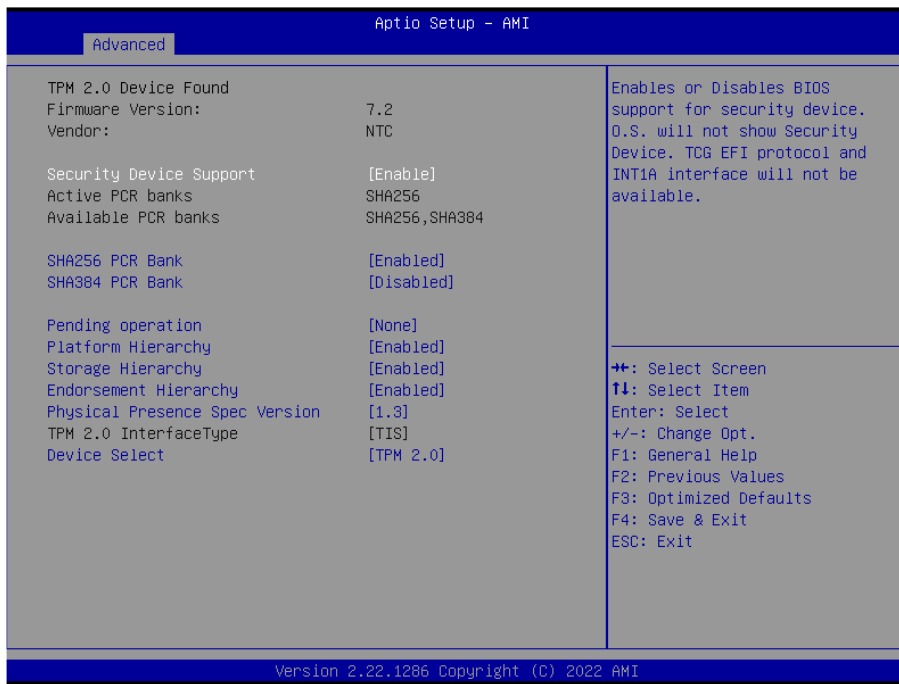
- ME Firmware  
Display the ME Firmware information.

### 5.4.3 PTT Configuration



Options Summary		
TPM Device Selection	dTPM	
	PTT	Optimal Default, Failsafe Default
Selects TPM device: PTT or discrete TPM. PTT - enables PTT in SkuMgr. dTPM - disables PTT in SkuMgr. <b>Warning!</b> PTT/dTPM will be disabled and all data saved on it will be lost.		

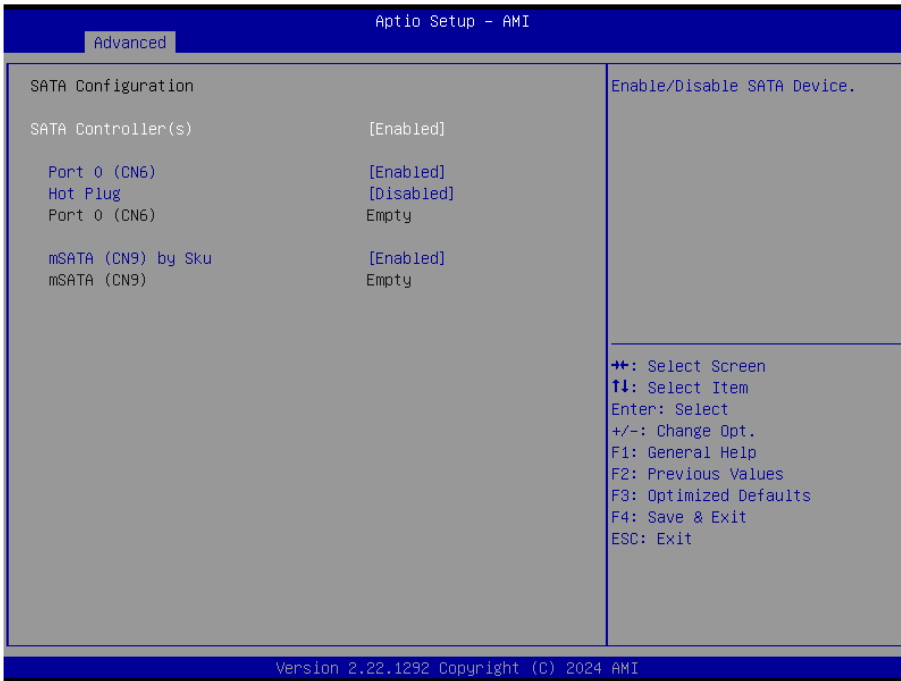
### 5.4.4 Trusted Computing



Options Summary		
Security Device Support	Enable	Optimal Default, Failsafe Default
	Disable	
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	Enabled	Optimal Default, Failsafe Default
	Disabled	
Enable or Disable SHA256 PCR Bank.		
SHA384 PCR Bank	Enabled	Optimal Default, Failsafe Default
	Disabled	
Enable or Disable SHA384 PCR Bank.		
Pending operation	None	Optimal Default, Failsafe Default
	TPM Clear	
Schedule an Operation for the Security Device. NOTE: Your Computer will reboot during restart in order to change State of Security Device.		
Platform Hierarchy	Enabled	Optimal Default, Failsafe Default
	Disabled	
Enable or Disable Platform Hierarchy.		

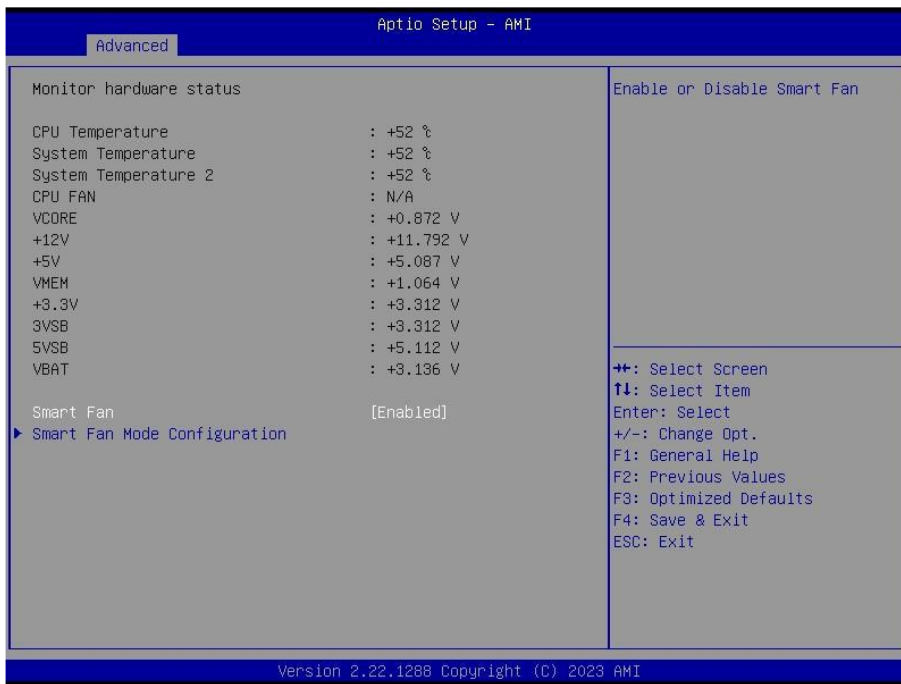
Options Summary		
Storage Hierarchy	Enabled	Optimal Default, Failsafe Default
	Disabled	
Enable or Disable Storage Hierarchy.		
Endorsement Hierarchy	Enabled	Optimal Default, Failsafe Default
	Disabled	
Enable or Disable Endorsement Hierarchy.		
Physical Presence Spec Version	1.3	Optimal Default, Failsafe Default
	1.2	
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	Auto	
	TPM 1.2	
	TPM 2.0	Optimal Default, Failsafe Default
TPM 1.2 will restrict support to TPM 1.2 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.		

## 5.4.5 SATA Configuration



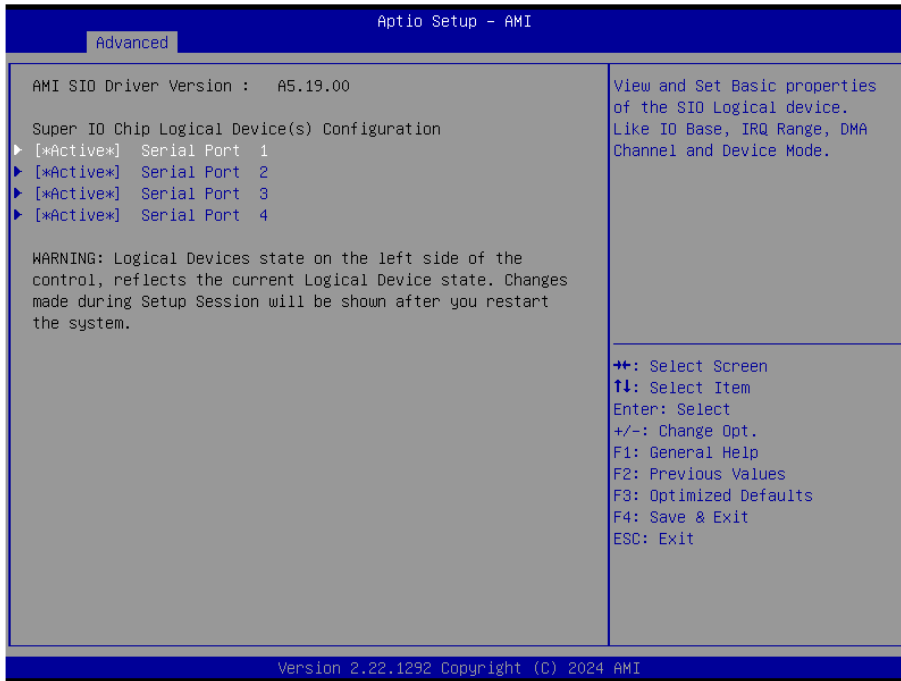
Options Summary		
SATA Controller(s)	Enabled	Optimal Default, Failsafe Default
	Disabled	
Enable/Disable SATA Device.		
Port 0 (CN10)	Enabled	Optimal Default, Failsafe Default
	Disabled	
Enable or Disable SATA Port.		
Port1(CN11)/mSATA (CN8)	Enabled	Optimal Default, Failsafe Default
	Disabled	
Enable or Disable SATA Port.		

## 5.4.6 Hardware Monitor



Options Summary		
Smart Fan	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enables or Disables Smart Fan.		

## 5.4.7 SIO Configuration

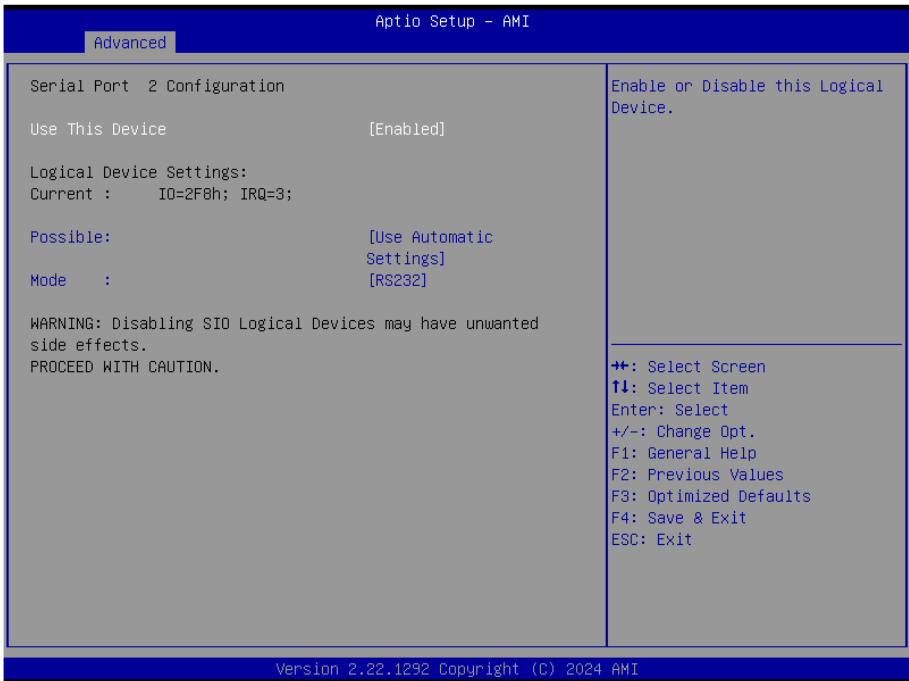


### 5.4.7.1 Serial Port 1 Configuration



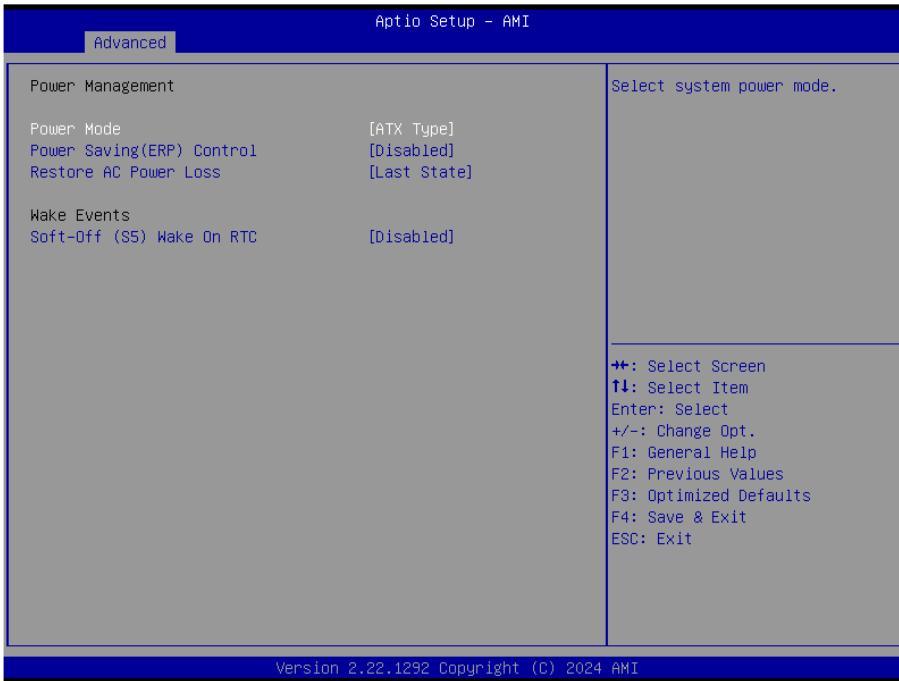
Options Summary		
Use This Device	Disable	
	Enable	Optimal Default, Failsafe Default
Enable or Disable this Logical Device.		
Possible:	Use Automatic Settings	Optimal Default, Failsafe Default
	IO=3F8h; IRQ=4	
	IO=2F8h; IRQ=3	
Allows user to change Device's Resource settings. New settings will be reflected on This Setup Page after System restarts.		
Mode:	RS232	Optimal Default, Failsafe Default
	RS422	
	RS485	
UART RS232, 422, 485 selection.		

### 5.4.7.2 Serial Port 2 Configuration



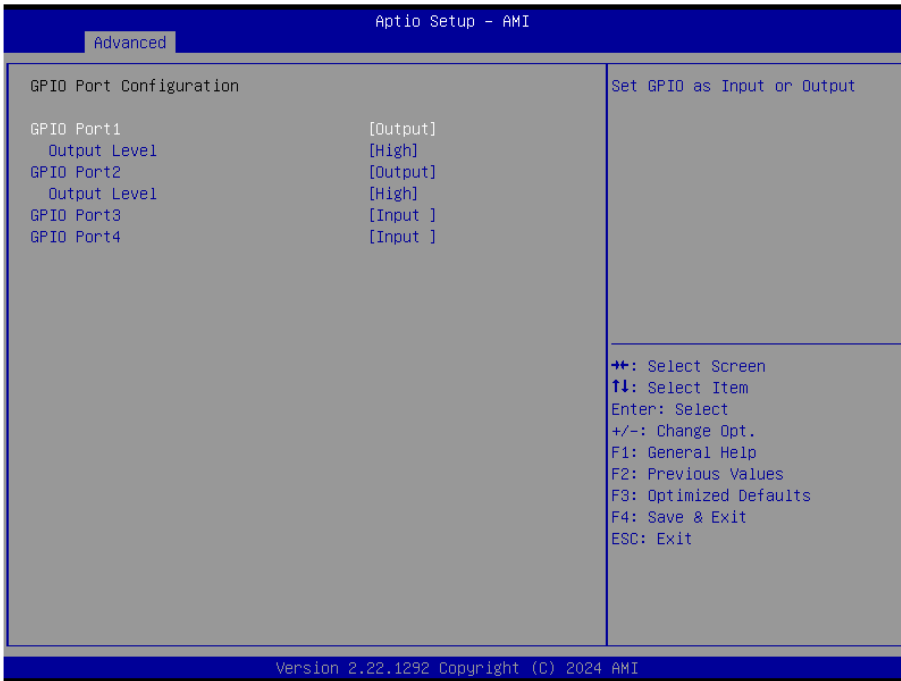
Options Summary		
Use This Device	Disable	
	Enable	Optimal Default, Failsafe Default
Enable or Disable this Logical Device.		
Possible:	Use Automatic Settings	Optimal Default, Failsafe Default
	IO=2F8h; IRQ=3	
	IO=3F8h; IRQ=4	
Allows user to change Device's Resource settings. New settings will be reflected on This Setup Page after System restarts.		
Mode:	RS232	Optimal Default, Failsafe Default
	RS422	
	RS485	
UART RS232, 422, 485 selection.		

## 5.4.8 Power Management



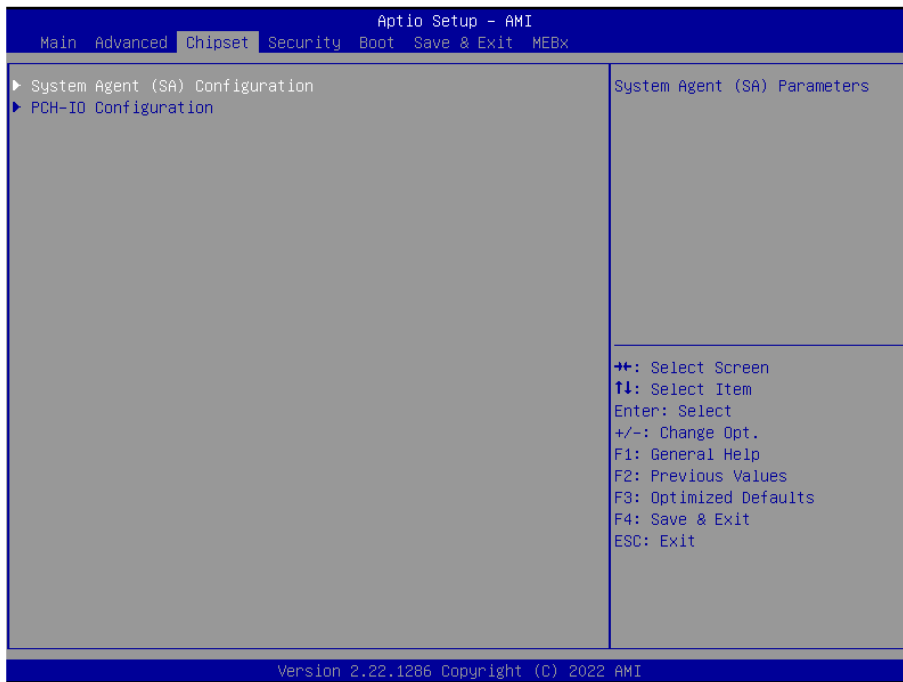
Options Summary		
Power Mode	ATX Type AT Type	Optimal Default, Failsafe Default
Select power supply mode.		
Power Saving (ERP) Control	Disabled Enabled	Optimal Default, Failsafe Default
Select Power saving control.		
Restore AC Power Loss	Last State Always On Always Off	Optimal Default, Failsafe Default
Select power state when power is re-applied after a power failure.		
Soft-Off (S5) Wake On RTC	Disable By Date By Weekday Bypass	Optimal Default, Failsafe Default
By Date: System will wake on the with hr::min::sec specified. By Weekday: System will wake on the enabled weekday with hr::min::sec specified. Bypass: BIOS will not control RTC wake function.		

## 5.4.9 GPIO Port Configuration



Options Summary		
GPIO Port*	Output	
	Input	
Set GPIO as Input or Output.		
Output Level	High	
	Low	
Set output level when GPIO pin is output.		

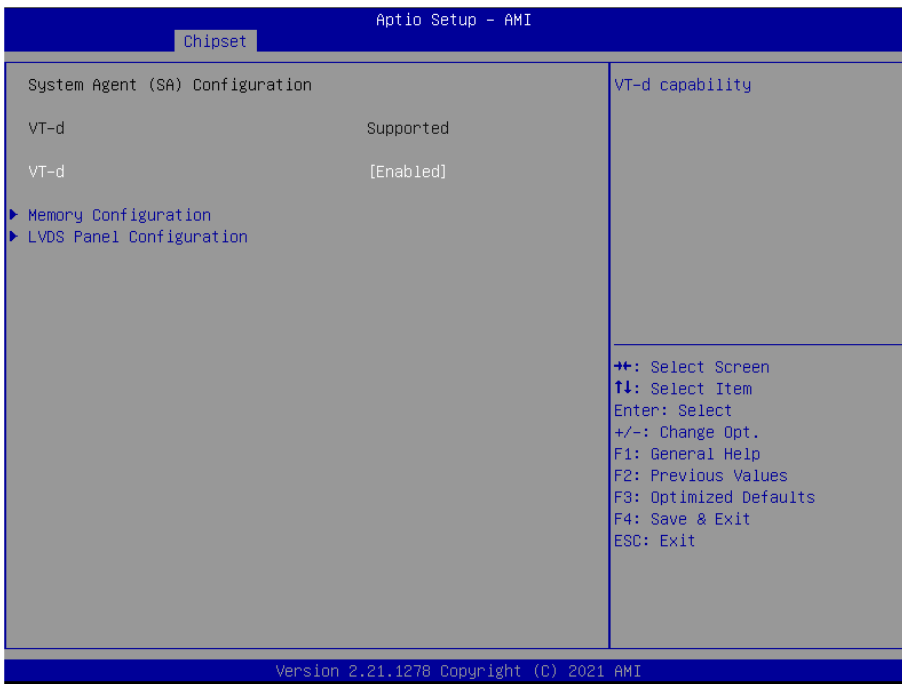
## 5.5 Chipset



This menu contains the following information:

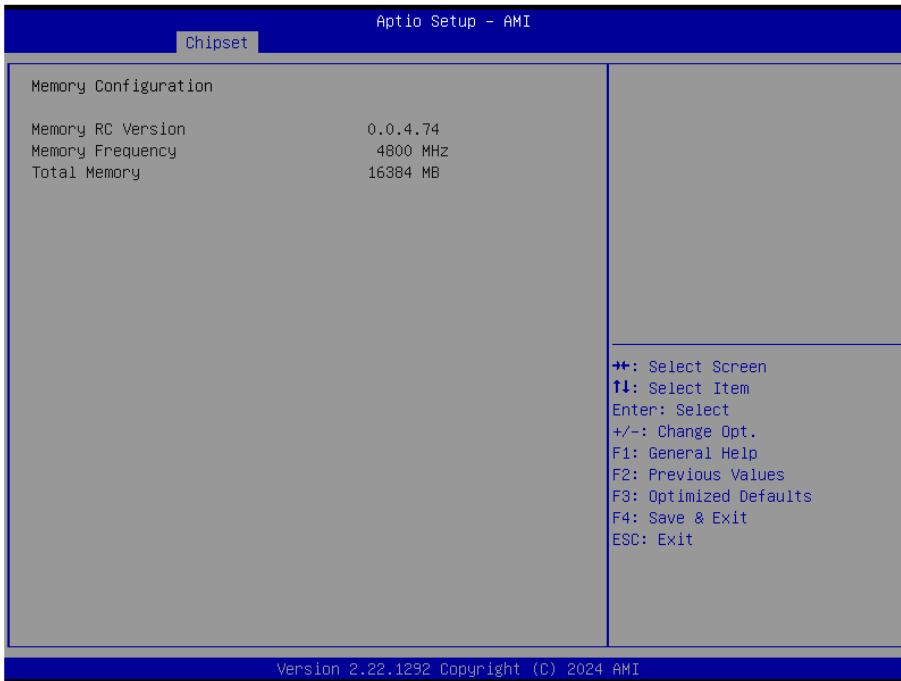
- System Agent (SA) Configuration
  - System Agent (SA) Parameters.
- PCH-IO Configuration
  - PCH Parameters.

### 5.5.1 System Agent (SA) Configuration

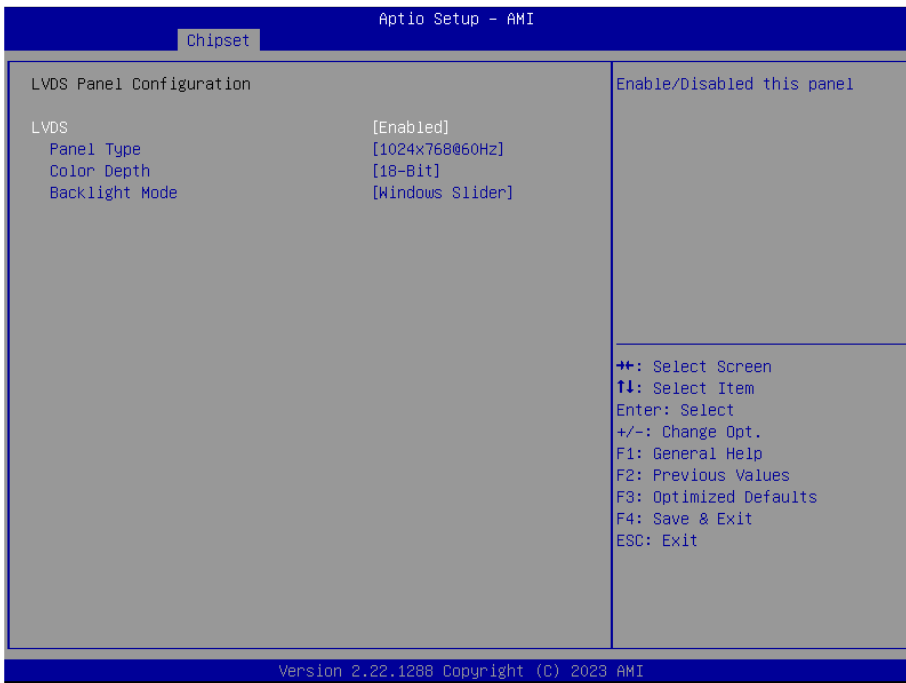


Options Summary		
VT-d	Disabled	Optimal Default, Failsafe Default
	Enabled	
VT-d capability.		

### 5.5.1.1 Memory Configuration



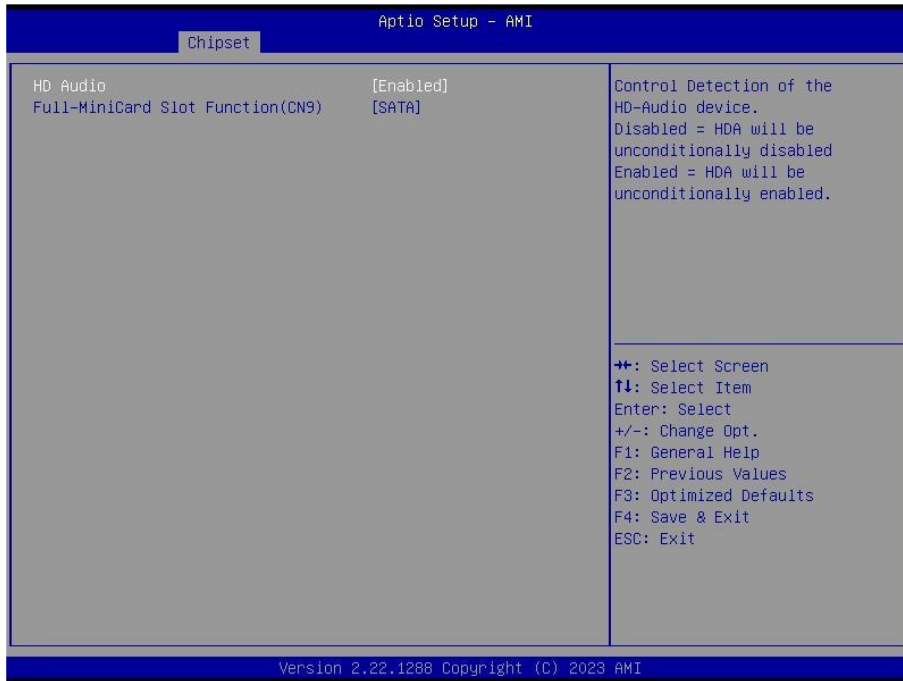
### 5.5.1.2 LVDS Panel Configuration



Options Summary		
LVDS	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable/Disable this panel.		
LVDS Panel Type	640x480,18bit,60Hz	
	800x480,18bit,60Hz	
	800x600,18bit,60Hz	
	1024x600,18bit,60Hz	
	1024x768,18bit,60Hz	
	1024x768,24bit,60Hz	Optimal Default, Failsafe Default
	1280x768,24bit,60Hz	
	1280x1024,48bit,60Hz	
	1366x768,24bit,60Hz	
	1440x900,48bit,60Hz	
	1600x1200,48bit,60Hz	
	1920x1080,48bit,60Hz	
	1920x1200,48bit,60Hz	
Select LCD panel used by Internal Graphics Device by selecting the appropriate setup item.		

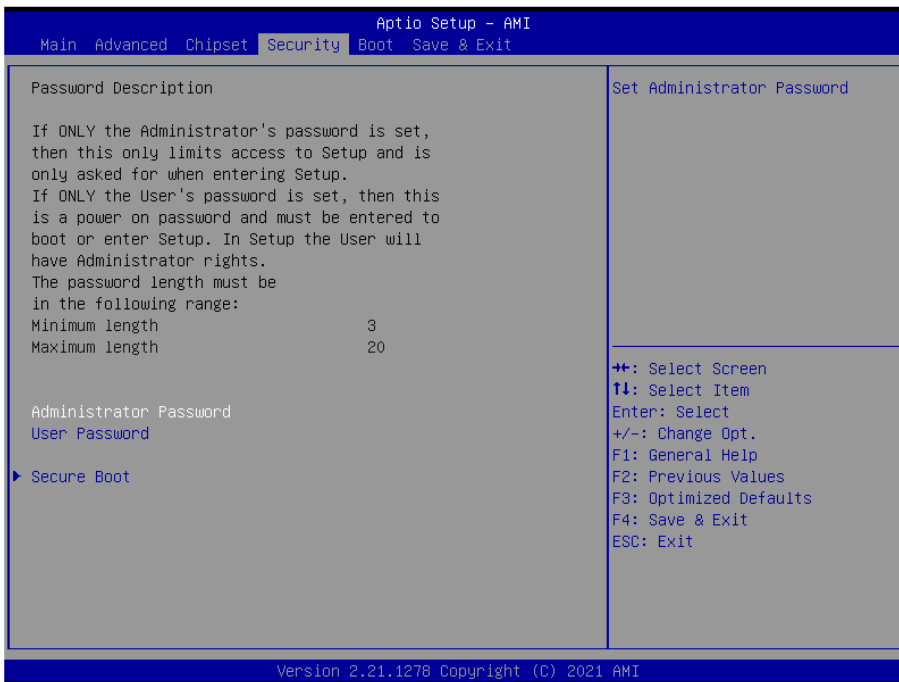
Options Summary		
Color Depth	18-bit	Optimal Default, Failsafe Default
	24-bit	
	36-bit	
	48-bit	
Select panel type.		
Backlight Mode	BIOS & Application	
	Windows Slider	Optimal Default, Failsafe Default
Select backlight control signal type.		

## 5.5.2 PCH-IO Configuration



Options Summary		
HD Audio	Disabled	
	Enabled	Optimal Default, Failsafe Default
Control Detection of the HD-Audio device. Disable = HAD will be unconditionally disabled. Enable = HAD will be unconditionally enabled.		
Full-MiniCard Slot Function (CN9)	SATA	Optimal Default, Failsafe Default
	PCIe	
Select function enabled for Full-MiniCard (CN9) slot.		

## 5.6 Security



### Change User/Supervisor Password

You can install a Supervisor password, and if you install a supervisor password, you can then install a user password. A user password does not provide access to many of the features in the Setup utility.

If you highlight these items and press Enter, a dialog box appears which lets you enter a password. You can enter no more than six letters or numbers. Press Enter after you have typed in the password. A second dialog box asks you to retype the password for confirmation. Press Enter after you have retyped it correctly. The password is required at boot time, or when the user enters the Setup utility.

### Removing the Password

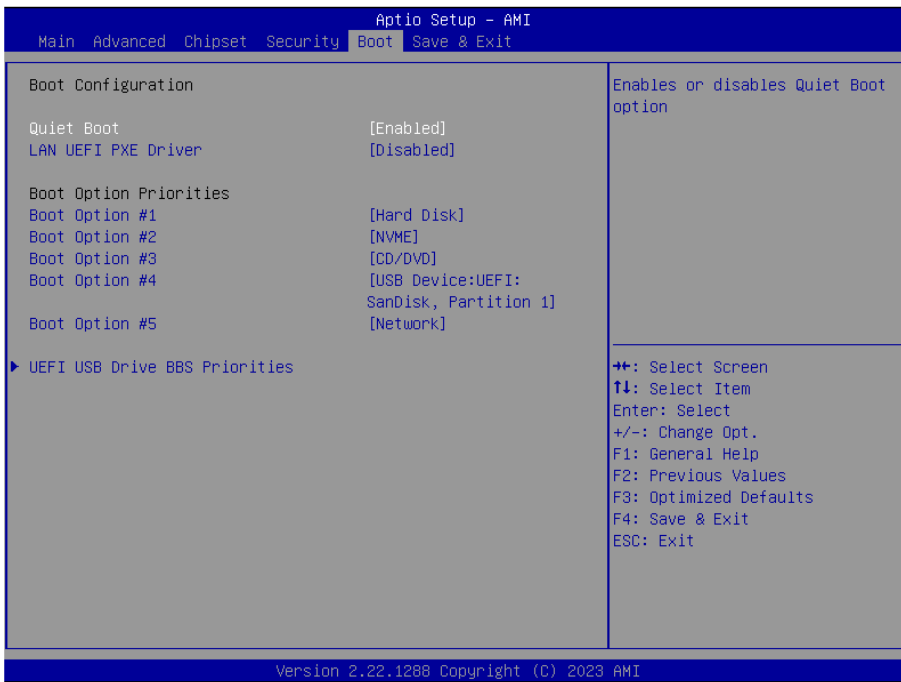
Highlight this item and type in the current password. At the next dialog box press Enter to disable password protection.

## 5.6.1 Secure Boot



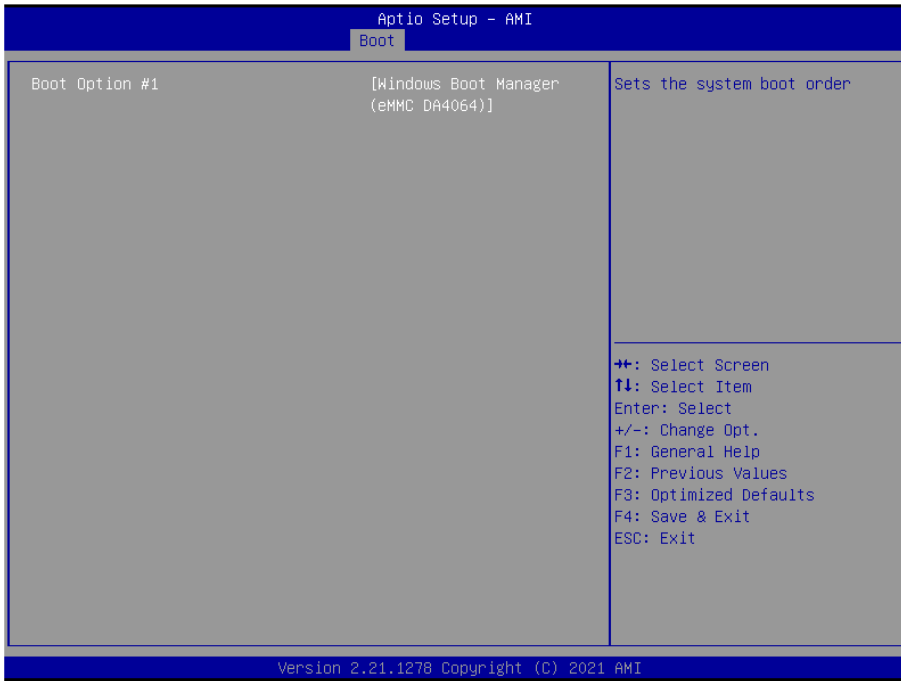
Options Summary		
Secure Boot	Disabled	Optimal Default, Failsafe Default
	Enabled	
Secure Boot feature is Active if Secure Boot is Enabled, Platform Key (PK) is enrolled and the System is in User mode. The mode change requires platform reset.		
Secure Boot Mode	Custom	Optimal Default, Failsafe Default
	Standard	
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.		
<b>Restore Factory Keys</b>		
Force System to User Mode. Install factory default Secure Boot key databases.		
<b>Reset to Setup Mode</b>		
Delete all Secure Boot key databases from NVRAM.		

## 5.7 Boot

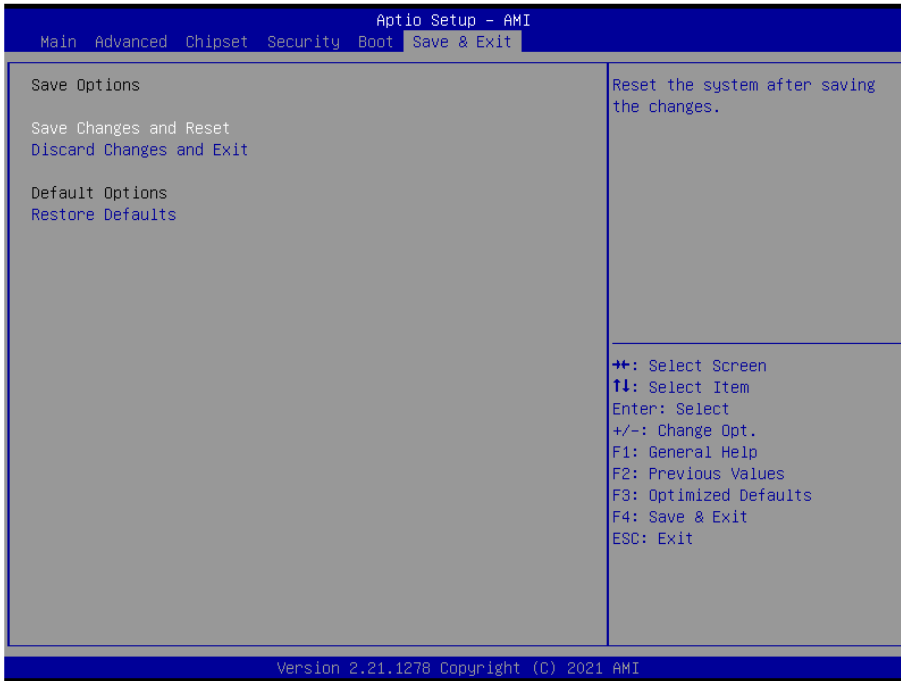


Options Summary		
Quiet Boot	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable Quiet Boot option.		
UEFI PXE Support	Disabled	Optimal Default, Failsafe Default
	Enabled	
Enable/Disable UEFI Network Stack.		
FIXED BOOT ORDER Priorities		
Sets the system boot order.		

## 5.7.1 BBS Priorities



## 5.8 Save & Exit



Options Summary	
Save Changes and Reset	Reset the system after saving the changes.
Discard Changes and Exit	Exit system setup without saving any changes.
Restore Defaults	Restore/Load Default values for all the setup options.





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