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# **SB-122-RPLU**

**SB-122-11315U**

**SB-122-11335U**

**Industrial Fanless PC w/Intel  
Raptor Lake Core i5/i3 processors**

## **User Manual**

**Version 1.0**

2026.02



The image shows the CE mark and the RoHS logo. The RoHS logo consists of the letters 'RoHS' in a green, sans-serif font, with a green leaf graphic to its left. Below the 'RoHS' text, the word 'VERIFIED' is written in a smaller, green, sans-serif font.

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## Revision History

Version	Release Time	Description
1.0	2026, 02	Initial release

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## Copyright Notice

All Rights Reserved.

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Under no circumstances will the manufacturer be liable for any direct, indirect, special, incidental, or consequential damages arising from the use or inability to use the product or documentation, even if advised of the possibility of such damages.

This document contains proprietary information protected by copyright. All rights are reserved. No part of this document may be reproduced by any mechanical, electronic, or other means in any form without prior written permission of the manufacturer.

## Declaration of Conformity

### CE

The CE symbol on the computer indicates that it is in compliance with the directives of the European Union (EU). A Certificate of Compliance is available by contacting Technical Support.

This product has passed the CE test for environmental specifications when shielded cables are used for external wiring. We recommend the use of shielded cables. This kind of cable is available from ARBOR. Please contact your local supplier for ordering information.

### Warning

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

## FCC Class A

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

### NOTE:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### RoHS

ARBOR Technology Corp. certifies that all components in its products are in compliance and conform to the European Union's Restriction of Use of Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive 2002/95/EC.

The above mentioned directive was published on 2/13/2003. The main purpose of the directive is to prohibit the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE) in electrical and electronic products. Member states of the EU are to enforce by 7/1/2006.

ARBOR Technology Corp. hereby states that the listed products do not contain unintentional additions of lead, mercury, hex chrome, PBB or PBDB that exceed a maximum concentration value of 0.1% by weight or for cadmium exceed 0.01% by weight, per homogenous material. Homogenous material is defined as a substance or mixture of substances with uniform composition (such as solders, resins, plating, etc.). Lead-free solder is used for all terminations (Sn(96-96.5%), Ag(3.0-3.5%) and Cu(0.5%)).

### SVHC / REACH

To minimize the environmental impact and take more responsibility to the earth we live, Arbor hereby confirms all products comply with the restriction of SVHC (Substances of Very High Concern) in (EC) 1907/2006 (REACH –Registration, Evaluation, Authorization, and Restriction of Chemicals) regulated by the European Union.

All substances listed in SVHC < 0.1 % by weight (1000 ppm)

## Important Safety Instructions

Read these safety instructions carefully

1. Read all cautions and warnings on the equipment.
2. Place this equipment on a reliable surface when installing. Dropping it or letting it fall may cause damage
3. Make sure the correct voltage is connected to the equipment.
4. For pluggable equipment, the socket outlet should be near the equipment and should be easily accessible.
5. Keep this equipment away from humidity.
6. The openings on the enclosure are for air convection and protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
7. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
8. Never pour any liquid into opening. This may cause fire or electrical shock.
9. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
10. If one of the following situations arises, get the equipment checked by service personnel:
  - a. The power cord or plug is damaged.
  - b. Liquid has penetrated into the equipment.
  - c. The equipment has been exposed to moisture.
  - d. The equipment does not work well, or you cannot get it to work according to the user manual.
  - e. The equipment has been dropped or damaged.
  - f. The equipment has obvious signs of breakage.
11. Keep this User Manual for later reference.

### **Warning**

The Box PC and its components contain very delicately Integrated Circuits (IC). To protect the Box PC and its components against damage caused by static electricity, you should always follow the precautions below when handling it:

1. Disconnect your Box PC from the power source when you want to work on the inside.
2. Use a grounded wrist strap when handling computer components.
3. Place components on a grounded antistatic pad or on the bag that came with the Box PC, whenever components are separated from the system.

### **Replacing Lithium Battery**

Incorrect replacement of the lithium battery may lead to a risk of explosion.

The lithium battery must be replaced with an identical battery or a battery type recommended by the manufacturer.

Do not throw lithium batteries into the trash can. It must be disposed of in accordance with local regulations concerning special waste.

### **Technical Support**

If you have any technical difficulties, please consult the user manual first at:

<https://www.arbor-technology.com>

Please do not hesitate to call or e-mail our customer service when you still cannot find out the answer.

<https://www.arbor-technology.com>

E-mail: [info@arbor.com.tw](mailto:info@arbor.com.tw)

## Warranty

This product is warranted to be in good working order for a period of one year from the date of purchase. Should this product fail to be in good working order at any time during this period, we will, at our option, replace or repair it at no additional charge except as set forth in the following terms. This warranty does not apply to products damaged by misuse, modifications, accident or disaster.

Vendor assumes no liability for any damages, lost profits, lost savings or any other incidental or consequential damage resulting from the use, misuse of, or inability to use this product. Vendor will not be liable for any claim made by any other related party.

Vendors disclaim all other warranties, either expressed or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose, with respect to the hardware, the accompanying product's manual(s) and written materials, and any accompanying hardware. This limited warranty gives you specific legal rights.

Return authorization must be obtained from the vendor before returned merchandise will be accepted. Authorization can be obtained by calling or faxing the vendor and requesting a Return Merchandise Authorization (RMA) number. Returned goods should always be accompanied by a clear problem description.

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# Chapter 1

## Introduction

## 1.1. Specifications

<b>System</b>	
CPU	Intel® Core i3-1315U (1.2 GHz/4.5GHz), 6 cores (Threads: 8) Intel® Core i5-1335U (1.3 GHz/4.6GHz), 10 cores (Threads: 12)
Memory	1 x DDR5-5200 SO-DIMM socket, support up to 48GB
Graphics	Intel UHD Graphics for 13th Gen Intel® Processors
LAN Chipset	1 x Intel I210-AT 1 x Intel I219-LM
Watchdog Timer	Programmable 255 levels timer interval, from 1~255 sec/min
<b>Storage</b>	
Device	1 x M.2 B key 2242 slot (SATA signal) 1 x M.2 M Key 2280 slot (PCIe x 4 signal[NVMe])
<b>External I/O</b>	
Serial Port	2 x RS-232/422/485(default RS-232)
USB Port	4 x USB3.0
SIM card slot	Micro SIM card up to 5G module
LAN Port	2 x RJ45
Video Port	1 x DP up to 4096 x 2304 @ 60Hz 1 x HDMI up to 4096 x 2304 @ 60Hz
Remote	1 x SW
Indicators	1 x Power LED
<b>Internal I/O</b>	
Expansion	1 x M.2 E key 2230 (for Wi-Fi & Bluetooth) 1 x 8bit Programmable GPIO pin header
<b>Audio</b>	
Type	1 x Audio (Line-out & Mic-in) (Chipset ALC888S)
<b>Mechanical</b>	
Chassis	Aluminum Alloy
Mounting	Wall-mount
Dimension	166 x 140 x 57.9 mm
Weight	2.5kg
<b>Environmental</b>	
Operating Temp.	-20°C ~ 50°C
Storage Temp.	-40°C ~ 85°C
Operating Humidity	5% ~ 95% @ 40°C (non-condensing)

Random Vibration	5 ~ 500Hz, 2Grms operation
Shock	Operation: 10G@11ms Non-operation: 30G@11ms
<b>Qualification</b>	
Certification	CE, FCC
<b>Power System</b>	
Power Input	12-24VDC, 2-pin Phoenix connector
<b>OS Support</b>	
Operating System	Windows® 10 / Windows® 11 / Linux Ubuntu 22.04

## 1.2. Inside the Package

Upon opening the package, carefully inspect the contents. If any of the items is missing or appears damaged, contact your local dealer or distributor. The package should contain the following items:

Product	Description	Q'ty
SB-122-11335U SB-122-11315U	Industrial PC x 1	1
Accessory Box	Thermal PAD for Memory x 1 Phoenix connector 2Pin 5mm for DC-IN x 1 Phoenix connector 2Pin 3.5mm for Remote SW x 1 Wall-mount bracket x 2 Screw Package x 1	1

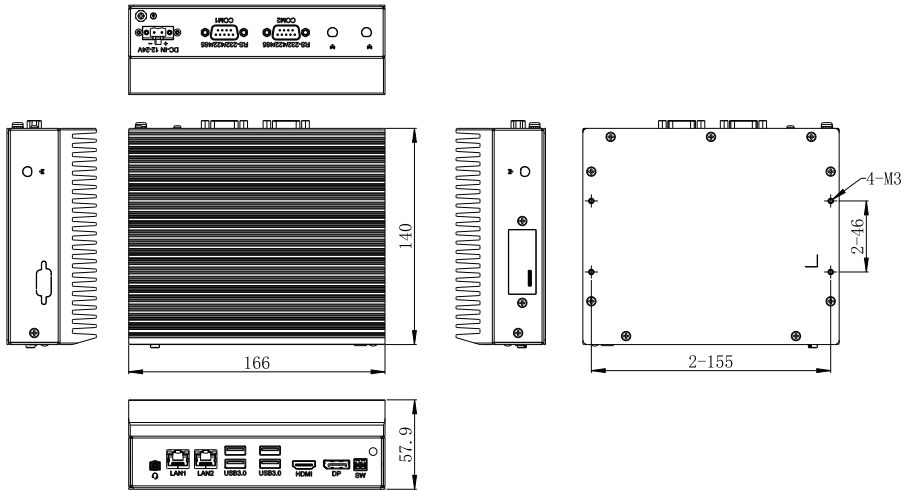
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# Chapter 2

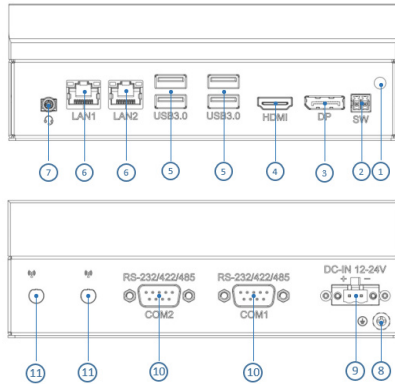
## Getting Started

## 2.1. Dimensions

The following illustration shows the dimensions of the computer, with the measurements in width, depth, and height called out. (Unit: mm)



## 2.2. External I/O ports & Overview

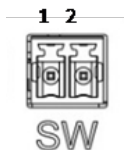


Item	Description	Item	Description
①	Power LED	⑦	Audio
②	Remote on/off SW	⑧	GND
③	DP	⑨	DC-IN
④	HDMI	⑩	Serial port
⑤	USB3.0	⑪	Antenna reserved hole
⑥	LAN		

### 2.2.1. Power LED

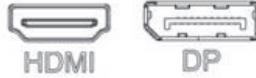
Definition	State
Power state indicator	Off: System is Powered off Green on: System is powered on Green flashing: S3 sleep

### 2.2.2. Remote on/off SW



Definition	State
Power state indicator	Off: System is Powered off Green on: System is powered on Green flashing: S3 sleep

### 2.2.3. DP++ / HDMI



Video Port	Maximum resolution
HDMI	4096(H) x 2304(V)
DP	4096(H) x 2304(V)

### 2.2.4. USB3.0



USB Version	Theoretical maximum speed	Name	Maximum voltage/ current
USB3.0	5Gbps	Super-Speed USB	5V/900mA

### 2.2.5. LAN



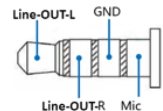
LED Indicator	Definition	State
L	Working indicator	non-Working: off Working: Green
R	Transferring indicator	10 Mbps: off 100 Mbps: Green 1000 Mbps: Orange

### 2.2.6. Audio Connector

**Function:** For external microphone, headphones or speakers.

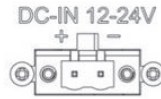
**Connector Type:** 3.5mm audio port interface

**Pin Assignment:** Support a 2-in-1 audio I/O interface with a 3.5mm holediameter for external microphones, headphones, or speakers on a 4-segment devices.



Note: The microphone and GND of the Android version are opposite to those of the iPhone version, and cannot be shared

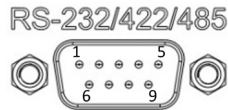
### 2.2.7. DC-IN



Pin	Definition	Pin	Definition
1	+12~24VDC	2	GND

### 2.2.8. Serial Port

The product COM1 and COM2 supports RS232/422/485 mode. Under default settings, COM1 is in RS232 mode. COM1 can be switched to RS422/485 mode through BIOS settings. COM2 can be switched to RS485 mode through jumper settings. For specific setting methods as chapter 4.2.1.



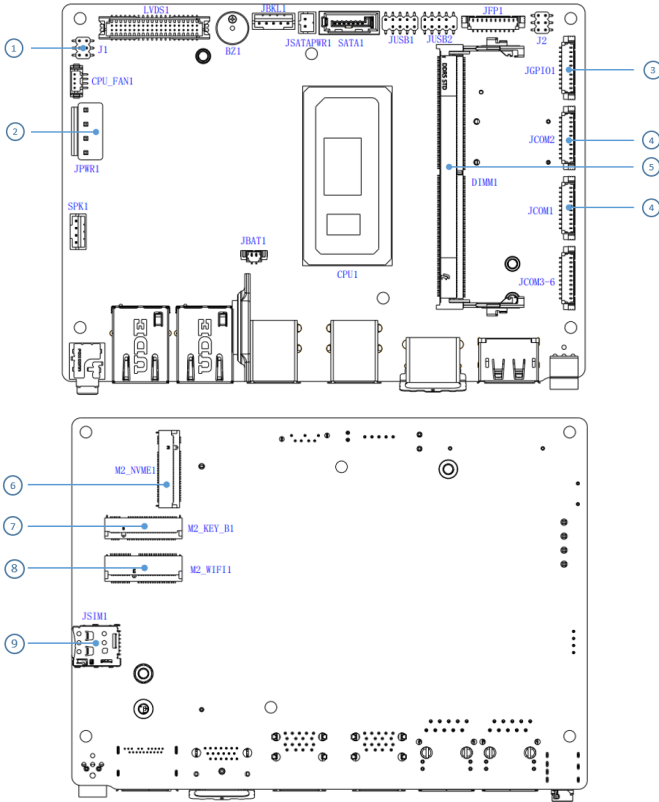
Item	RS232 Signal	RS422 Signal	RS485 Signal
1	DCD	Tx-	DATA-
2	SIN	Tx+	DATA+
3	SOUT	Rx+	-
4	DTR	Rx-	-
5	GND	GND	GND
6	DSR	-	-
7	RTS	-	-
8	CTS	-	-
9	RIS	-	-

### 2.2.9. Antenna reserved hole

There are two antenna reserved holes on the upper rear baffle of the product to facilitate users to install the antenna of the wireless module.

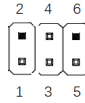


### 2.3. Internal Overview



Item	Description	Silkscreen
①	GPIO Voltage Selection Pin-header	J1
②	Power Connector	JPWR1
③	8bit GPIO Connector	JGPIO1
④	COM2 / COM1 Connector	JCOM2 / JCOM1
⑤	DDR5 SO-DIMM Slot	DIMM1
⑥	M.2 2280 M Key Slot	M2_NVME1
⑦	M.2 2242 B Key Slot	M2_KEY_B1
⑧	M.2 2230 E Key Slot	M2_WIFI1
⑨	Micro SIM Card Slot	JSIM1

### 2.3.1. GPIO Voltage Selection Pin header (J1)



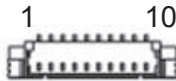
Silkscreen	Jumper	Function
J1	1-3	5V
	3-5(default)	3V

### 2.3.2. Power connector (JPWR1)



Pin	Definition	Pin	Definition
1	DC_IN	2	DC_IN
3	GND	4	GND

### 2.3.3. 8bit GPIO connector (JGPIO1)



Pin	Definition	Pin	Definition
1	JGPWR	2	GND
3	JGPIO1	4	JGPIO2
5	JGPIO3	6	JGPIO4
7	JGPIO5	8	JGPIO6
9	JGPIO7	10	JGPIO8

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# Chapter 3

## Installation and Maintenance

### 3.1. Key Parts Installation

#### 3.1.1. Assembly step

1. Remove the 9 screws and remove the bottom cover, as shown in Figure 3-1-1.

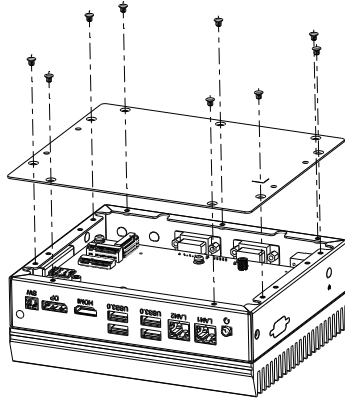


Figure 3-1-1

2. Remove the 6 screws from 3 sides and 2 screws from the motherboard, as shown in Figure 3-1-2.

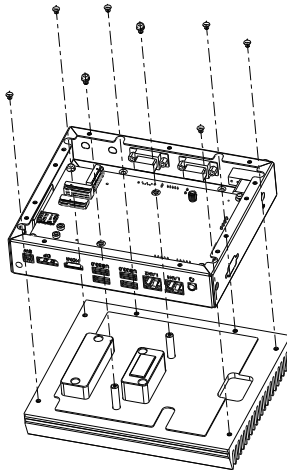


Figure 3-1-2

### 3.2.1. DDR5 Memory Module Installation

This product comes with one 262-pin DDR5 SO-DIMM slot as shown in Figure 3-2-1. When installing the memory module, please note the following two points:

1. Ensure that the memory module matches the specifications of this product.
2. During installation, align the notch on the memory module with the notch on the slot before firmly inserting it, as shown in Figure 3-2-1

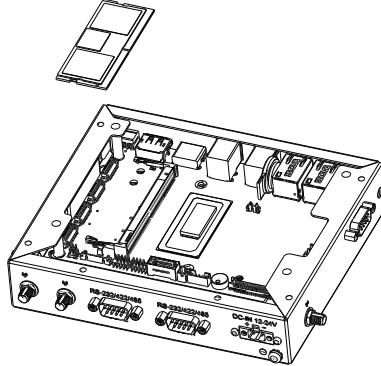


Figure 3-2-1

### 3.3.1. M.2 / Wireless Module with Antenna Installation

1. The installation methods for wireless module, M.2 2280 NVMe module, and M.2 2242 modules as shown in Figure 3-3-1:

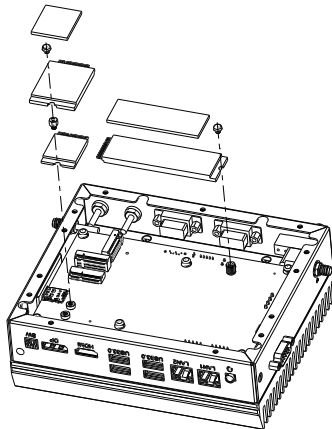


Figure 3-3-1

2. The installation method for 4G/5G antennas and GPIO is shown in Figure 3-3-2.

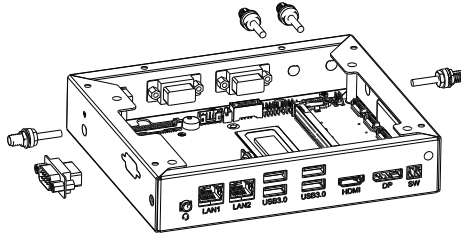


Figure 3-3-2

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# Chapter 4

## BIOS

# BIOS

The BIOS Setup utility for the computer is featured by American Megatrends Inc to configure the system settings stored in the system's BIOS ROM. The BIOS is activated once the computer powers on. When the computer is off, the battery on the main board supplies power to BIOS RAM.

To enter the BIOS Setup utility, keep hitting the "Delete" key upon powering on the computer.



## Key Commands

The BIOS Setup utility relies on a keyboard to receive user's instructions. Hit the following keys to navigate within the utility and configure the utility.

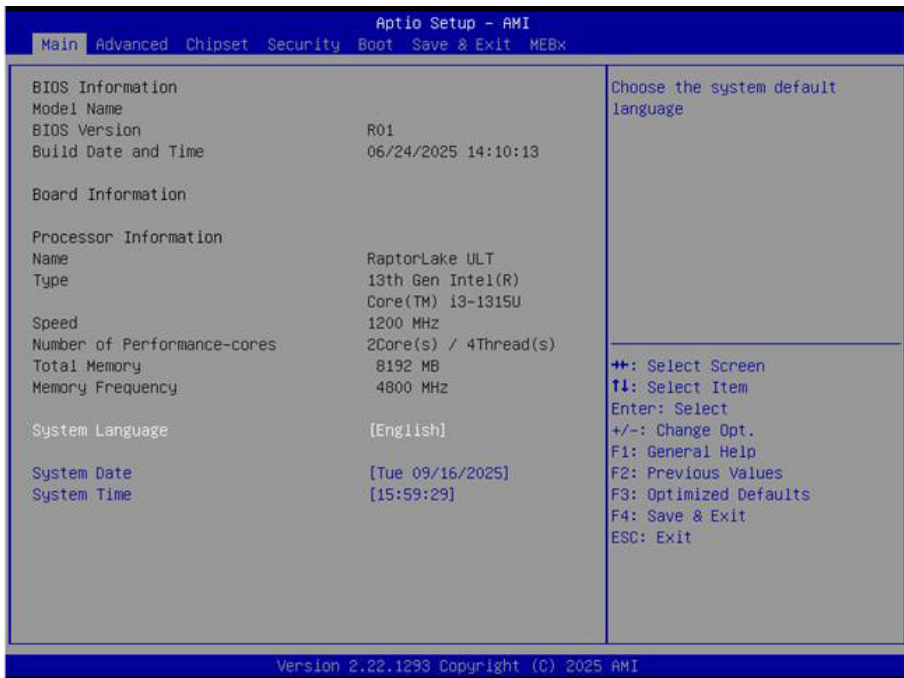
Keystroke	Function
← →	Moves left/right between the top menus.
↓ ↑	Moves up/down between highlight items.
<b>Enter</b>	Selects an highlighted item/field.
<b>Esc</b>	<ul style="list-style-type: none"> <li>▶ On the top menus: Use <b>Esc</b> to quit the utility without saving changes to CMOS. (The screen will prompt a message asking you to select <b>OK</b> or <b>Cancel</b> to exit discarding changes.)</li> <li>▶ On the submenus: Use <b>Esc</b> to quit current screen and return to the top menu.</li> </ul>
<b>Page Up / +</b>	Increases current value to the next higher value or switches between available options.
<b>Page Down / -</b>	Decreases current value to the next lower value or switches between available options.
<b>F1</b>	Opens the <b>Help</b> of the BIOS Setup utility.
<b>F2</b>	Previous values.
<b>F3</b>	Load Optimized Defaults (The screen then prompts a message asking you to select <b>Yes</b> or <b>No</b> to restore to default.)
<b>F4</b>	Exits the utility saving the changes that have been made. (The screen then prompts a message asking you to select <b>Yes</b> or <b>No</b> to exit saving changes.)

### Note:

This BIOS Setup utility is updated from time to time to improve system performance and hence the screenshots hereinafter may not fully comply with what you actually have onscreen.

## 4.1. Main

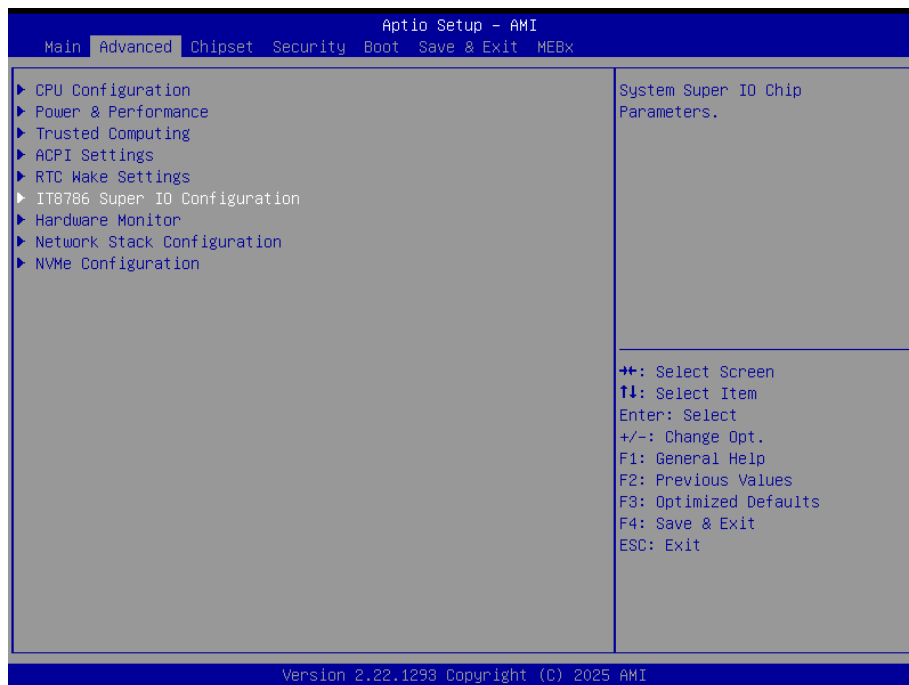
The **Main** menu features the settings of **System Date** and **System Time** and displays some BIOS and system information.



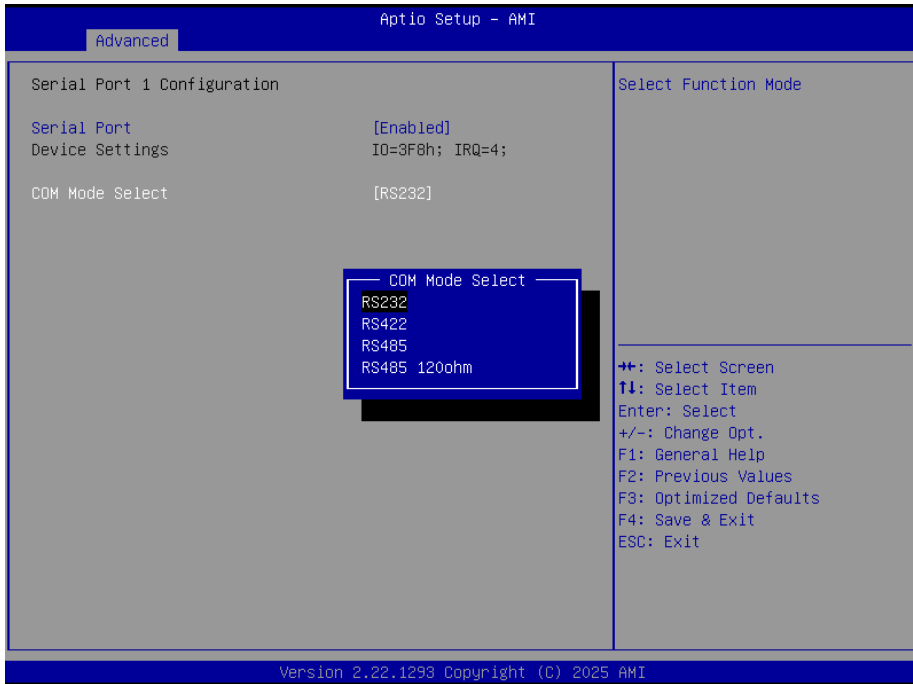
The feature settings are:

Setting	Description
<b>System Date</b>	<p>Set the system date. Use Tab to switch between Date elements. Note that the 'Day' automatically changes when you set the date.</p> <ul style="list-style-type: none"> <li>▶ The date format is:                             <ul style="list-style-type: none"> <li><b>Day:</b> Sun to Sat</li> <li><b>Month:</b> 1 to 12</li> <li><b>Date:</b> 1 to 31</li> <li><b>Year:</b> 1998 to 9999</li> </ul> </li> </ul>
<b>System Time</b>	<p>Set the system time. Use Tab to switch between Time elements.</p> <ul style="list-style-type: none"> <li>▶ The time format is:                             <ul style="list-style-type: none"> <li><b>Hour:</b> 00 to 23</li> <li><b>Minute:</b> 00 to 59</li> <li><b>Second:</b> 00 to 59</li> </ul> </li> </ul>

## 4.2. Advanced



## 4.2.1. COM mode setting



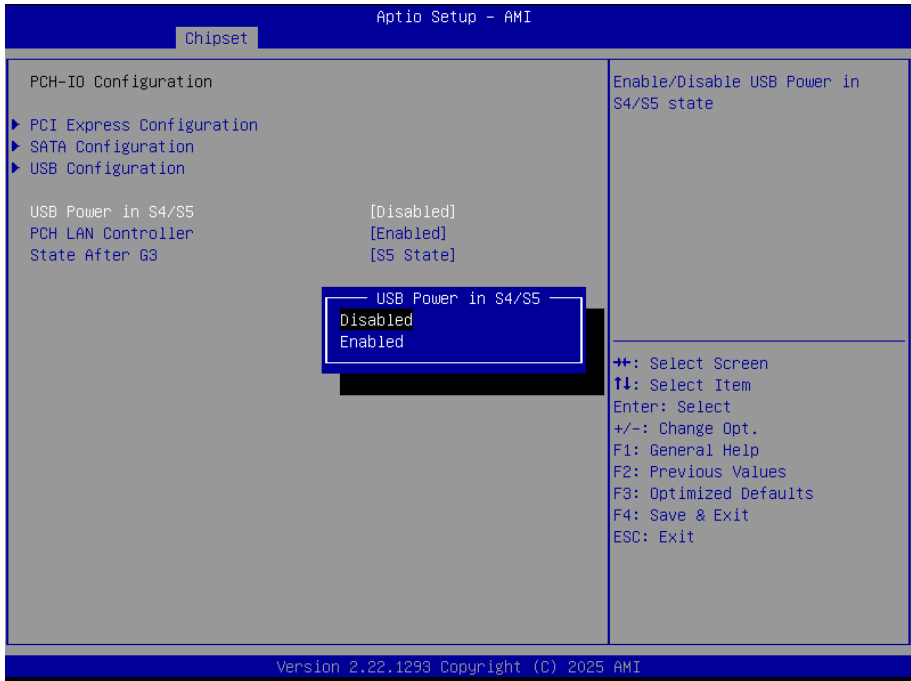
Under the Advanced menu, select **"IT8786 Super IO Configuration"** -> **"Serial Port X Configuration"** -> **"COM Mode Select"**. Users can select RS232, RS422 and RS485 for COM mode setting. After setting, press F4 to save and exit, the system will take effect after reboot.

## 4.2.2. RTC Wake Settings



Enter the Advanced interface, select **RTC Wake Settings->Wake system with Fixed Time**, and select Enabled to set a fixed date/time to boot.

## 4.2.3. USB Power Settings



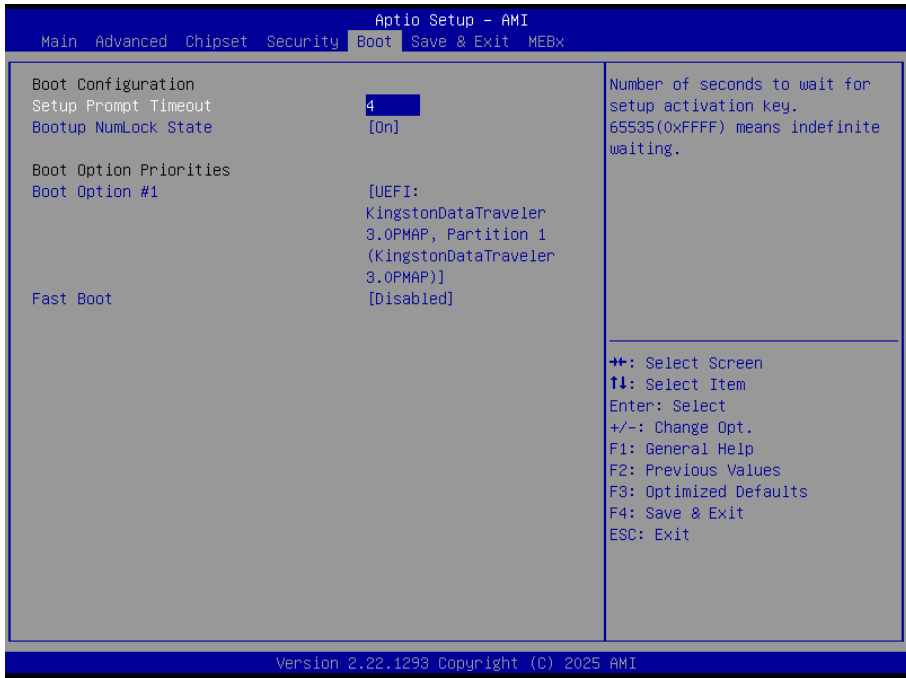
Select **"Chipset"** menu-> **"PCH-IO Configuration"**-> **"USB Power in S4/S5"**. You can configure the USB power settings for power off/sleep states according to your application needs. Select Enabled or Disabled to turn it on or off accordingly. After setting, press F4 to save and exit. The settings will take effect after a system restart.

### Note:

If set to Disabled, USB wake-up from S4 (sleep) and S5 (power off) states will not be supported.

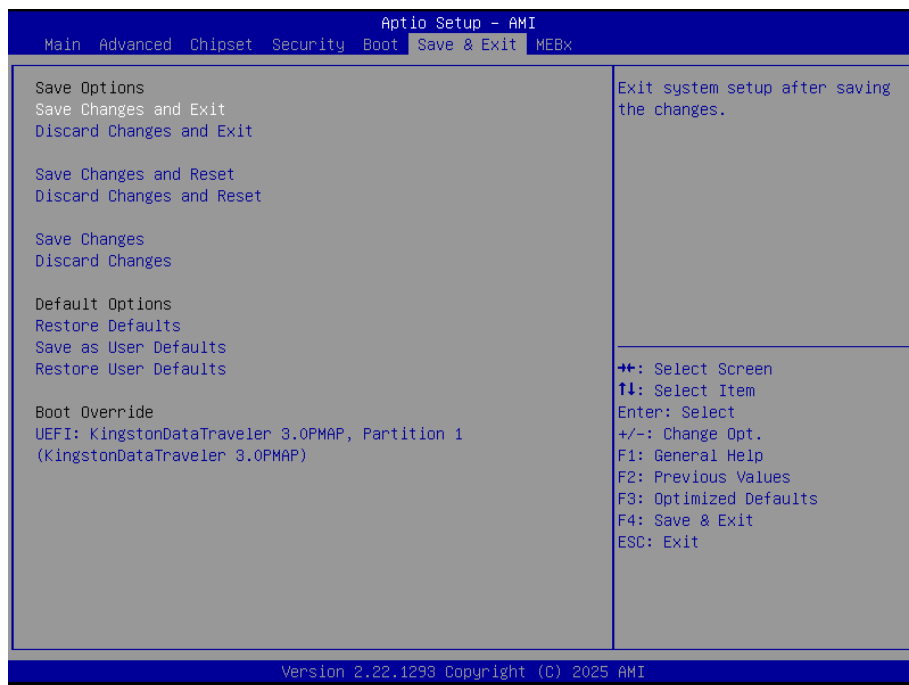


### 4.4. Boot



Setting	Description
<b>Setup Prompt Timeout</b>	Set how long to wait for the prompt to show for entering BIOS Setup. ► The default setting is <b>1</b> (sec). ► Set it to <b>65535</b> to wait indefinitely.
<b>Bootup NumLock State</b>	Sets whether to enable or disable the keyboard's NumLock state when the system starts up. ► Options available are <b>On</b> (default) and <b>Off</b> .
<b>Boot Option Priority</b>	Set the system boot priorities.
<b>Fast Boot</b>	Enables or disables boot with initialization of a minimal set of devices required to launch active boot option. ► Options available are <b>Enabled</b> and <b>Disabled</b> (default).

## 4.5. Save & Exit



The Save & Exit menu displays the way to exit the BIOS setup utility. When users have completed the setup, users must save and exit for the changes to take effect.

Setting	Description
<b>Save Changes and Exit</b>	Saves the changes and quits the BIOS Setup utility.
<b>Discard Changes and Exit</b>	Discard the changes and restart the system.
<b>Restore Defaults</b>	Restores all settings to default values.
<b>Boot Override</b>	Set boot device priority.