

Product Manual

CW-U2-1U 4L 4L+2S 8L
N100 N200 N305

Ver1.2

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Manual' s first edition:

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Version	Date	Description
V1.0	2023-08-23	V1.0
V1.1	2024-03-03	V1.1
V1.2	2024-06-19	V1.2

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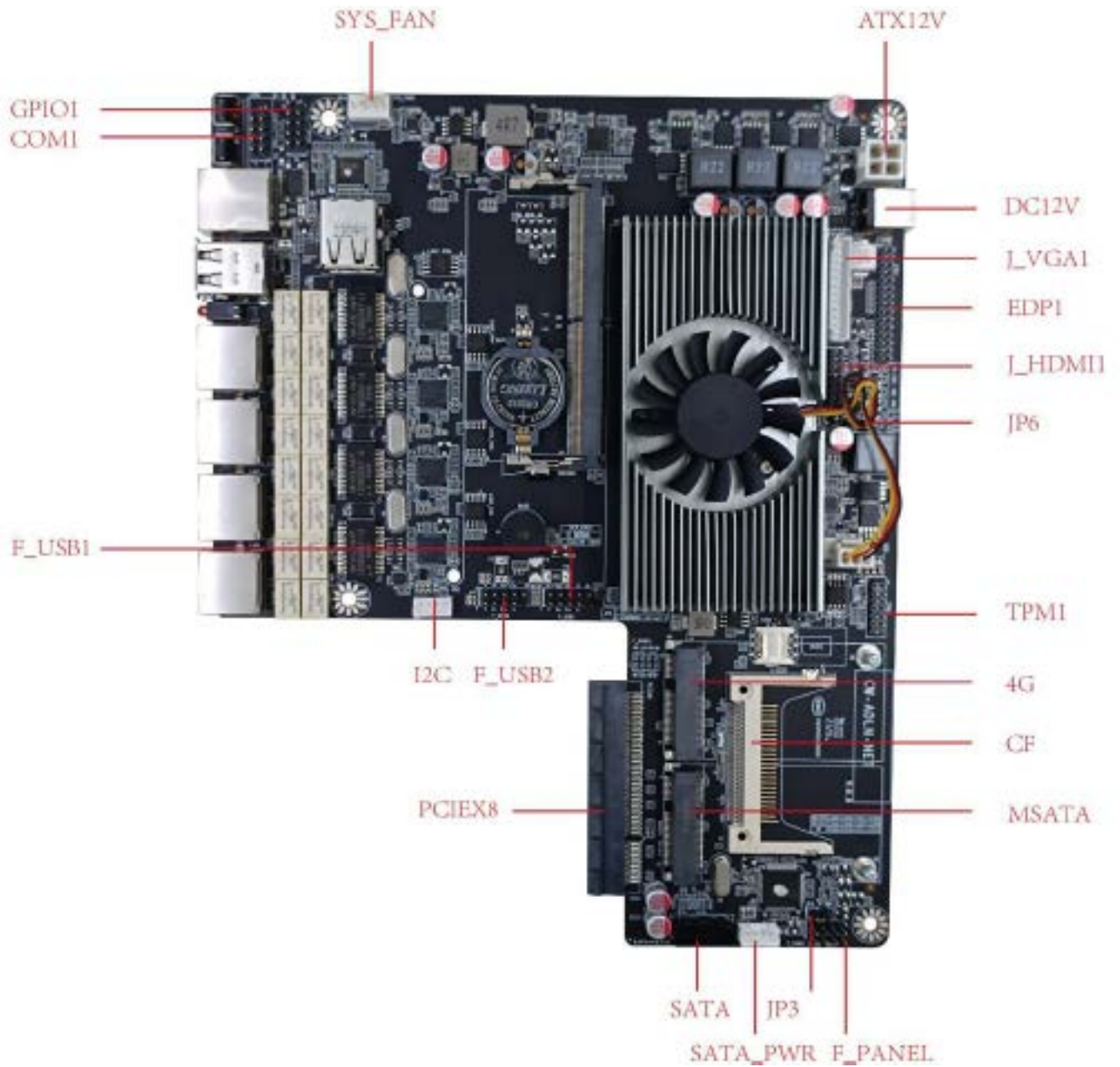
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Chapter 1: Introduction

1.1 Mainboard Specifications

Mainboard Dimensions	- 180mmX222.7mm
Processor	Intel® Alder Lake-N Processor
Memory	- 1 x 262 Pin DDR5 SO-DIMM memory slot onboard - Maximum single memory support: 32GB
Expansion Slots	- 1*MSATA ; 1*4G; 1*CF卡; 1*SATAⅢ (MSATA/SATA III/CF card, one choice, default is MSATA)
Rear Panel Interfaces	- 1 x DCIN Interface - 4 x LAN Ports - 2 x USB 3.2 GEN1 Ports - RJ45_COM Interface
Internal Interfaces	- 2 x F_USB Pin headers - 1 x SATA_PWR Pin header - 2 x USB Interfaces - 1 x SATA Interface - 1 x F_PANEL Pin header - 1 x SYS_FAN Socket - 1 x JP3 Jumper - 1 x J_COM Pin header - 1 x EDP Pin header - 1 x I2C Socket - 1 x JP6 Jumper
BIOS	- AMI BIOS
Power Management	- Supports power-on, Wake-on-LAN, PXE boot, etc.
Display	- Supports HDMI/EDP/VGA
Network	- 4 x Intel I226 2.5G Network Cards
Power Supply	- PWIN_12V / DC 12V
Operating Environment	- Operating Temperature: -20°C ~ 60°C - Humidity: 0% ~ 90%
Operating System	Windows 10 / Windows 11

1.2 Mainboard Layout Diagram

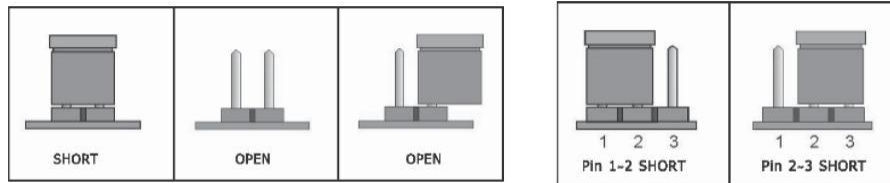


Chapter 2: Definitions

2.1 Jumper Description

2-pin Connector: Inserting the jumper cap into the two pins will close (short) them.

3-pin Connector: The jumper cap can be inserted into pins 1–2 or pins 2–3 to close (short) them.

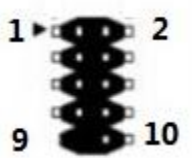


How to identify Pin 1 of the jumper?

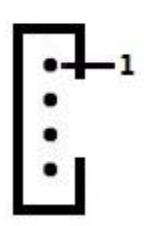
Carefully inspect the mainboard, and the pin marked "1" or the pin with a thick white line next to it indicates the position of Pin 1.

2.2 Pin Definitions

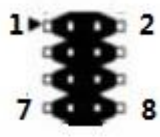
1. F_USB1

	PIN	Define	PIN	Define
	1	5V	2	5V
	3	USB1-	4	USB2-
	5	USB1+	6	USB2+
	7	GND	8	GND
	9		10	GND

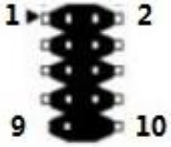
2. SATA_PWR

	PIN	Define
	1	5V
	2	GND
	3	GND
	4	12V

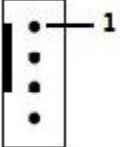
3. F_PANEL

	STATUS	Setting
	1-3	HD_LED
	2-4	PW_LED
	5-7	Reset
	6-8	PW_BN

4. J_COM

	PIN	Define	PIN	Define
	1	-NDCD	2	SIN
	3	SOUT	4	DTR
	5	GND	6	DSR
	7	RTS	8	CTS
	9	RI	10	N/A

5. SYS_FAN

	PIN	Define
	1	GND
	2	12V
	3	DET
	4	PWM

6. JP3

	STATUS	Setting
	1-2	AUTO POWER ON
	2-3	NORMAL(default)

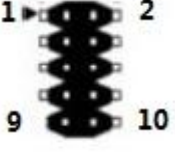
7. JP6

	STATUS	Setting
	1-2	3.3V
	2-3	5V

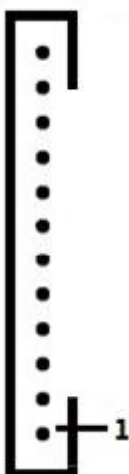
8. EDP

	PIN	Define	PIN	Define
	1	VCC	2	VCC
	3	NC	4	NC
	5	EDP1_DATA0P	6	EDP1_DATA0N
	7	GND	8	GND
	9	EDP1_DATA1P	10	EDP1_DATA1N
	11	GND	12	GND
	13	EDP1_DATA2P	14	EDP1_DATA2N
	15	GND	16	GND
	17	NCEDP1_DATA3P	18	EDP1_DATA3N
	19	GND	20	GND
	21	EDP1_AUXP	22	EDP1_AUXN
	23	GND	24	EDP1_HPD
	25	EDP1_BKLCTL	26	EDP1_BKLEN
	27	GND	28	GND
	29	VLED1	30	VLED1

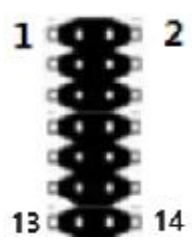
9. J_HDMI

	PIN	Define	PIN	Define
	1	DDI1_TXP2L	2	DDI1_SCLDDC
	3	DDI1_TXN2L	4	DDI1_DALDDC
	5	DDI1_TXP1L	6	N/A
	7	DDI1_TXN1L	8	HDMI-B_PLUG
	9	DDI1_TXP0L	10	5V_HDMI
	11	DDI1_TXN0L	12	GND
	13	DDI1_TXCPL	14	GND
	15	DDI1_TXCNL	16	GND

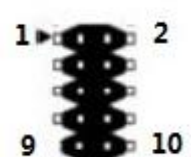
10. J_VGA

	PIN	Define
	1	GND
	2	VSYNC
	3	HSYNC
	4	GND
	5	R
	6	GND
	7	G
	8	GND
	9	B
	10	GND
	11	SDA
	12	SCL

11. TPM

	PIN	Define	PIN	Define
	1	3.3V	2	SPI_IRQ
	3	PLTRST	4	SPI_CS
	5	NA	6	SPI_WP
	7	3.3V	8	GND
	9	NA	10	SPI_CLOCK
	11	SPI_MISO	12	SPI_MOSI
	13	SPI_HOLD	14	

12. GPIO

	PIN	Define	PIN	Define
	1	SIO_PD0	2	SIO_PD4
	3	SIO_PD1	4	SIO_PD5
	5	SIO_PD2	6	SIO_PD6
	7	SIO_PD3	8	SIO_PD7
	9	GND	10	VCC

Chapter 3: BIOS Settings

3.1 BIOS Description

This mainboard uses AMI BIOS. BIOS stands for Basic Input Output System. It is a set of programs stored on a ROM chip on the computer's motherboard. It saves the most important basic input/output programs, the power-on self-test (POST) program, and the system boot program. It can read and write system configuration information from the CMOS. Its main function is to provide the lowest-level, most direct hardware setup and control for the computer.

Note:

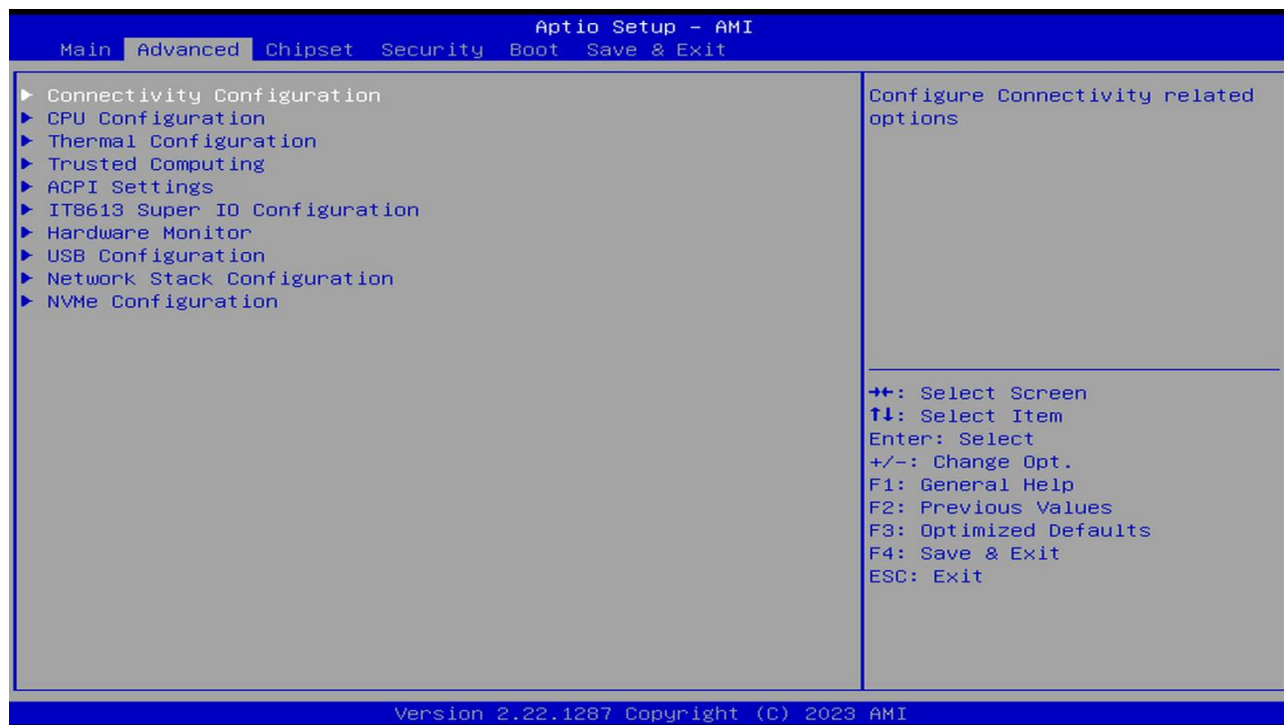
Due to continuous BIOS updates on the mainboard, the BIOS information in this manual is for reference only. Therefore, it does not guarantee that the BIOS information in this manual matches the actual BIOS on the mainboard.

Steps to Enter the BIOS Setup:

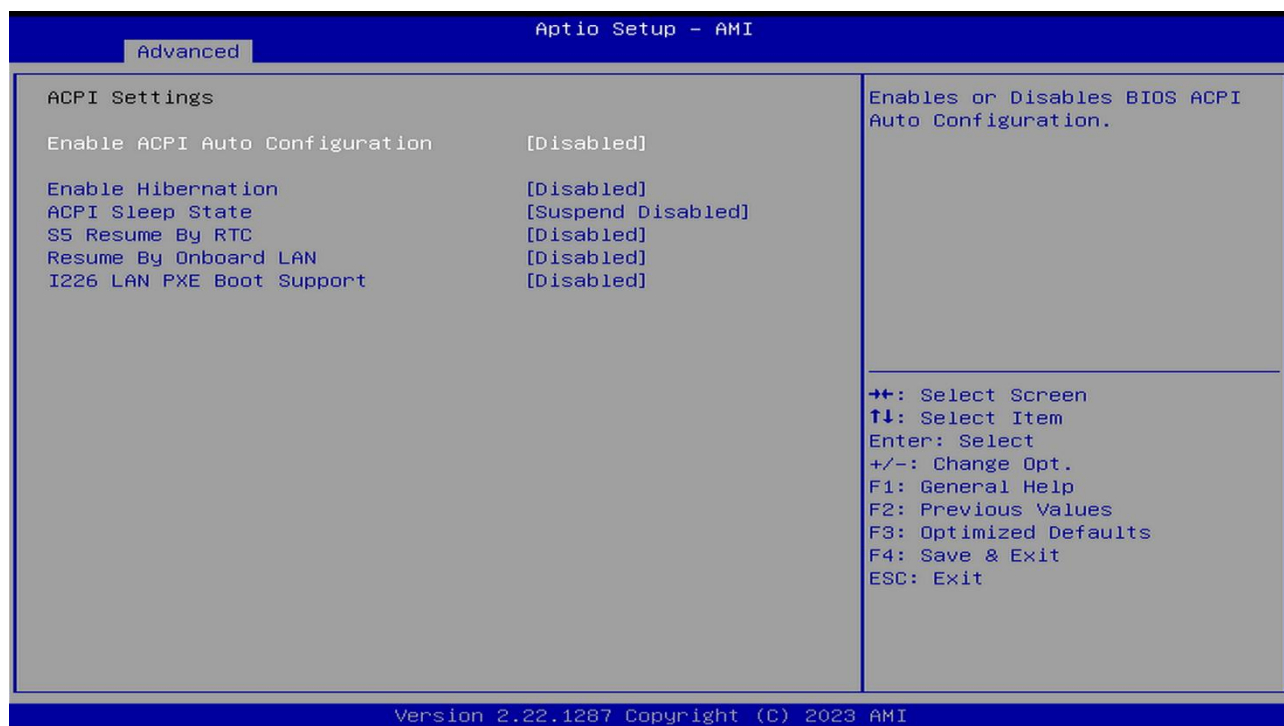
1. Power on the system. The POST screen will appear. Press the or <ESC> key to enter the BIOS setup program.
2. Use the arrow keys <↑> <↓> <←> <→> to navigate to the options you need to modify or view. Press <Enter> to enter the submenu of the selected option.
3. Use the <Enter> key to modify the content of the selected item, and press <Enter> to confirm the modification.
4. <Page Up/ + > to increase the numerical value or change the setting.
<Page Down/ - > to decrease the numerical value or change the setting.
<F1> to open the help for the submenu.
<F3> to restore to default values (optimized to factory settings).
<F4> to save BIOS settings.

3.2 BIOS Settings

3.2.1 Advanced BIOS Features



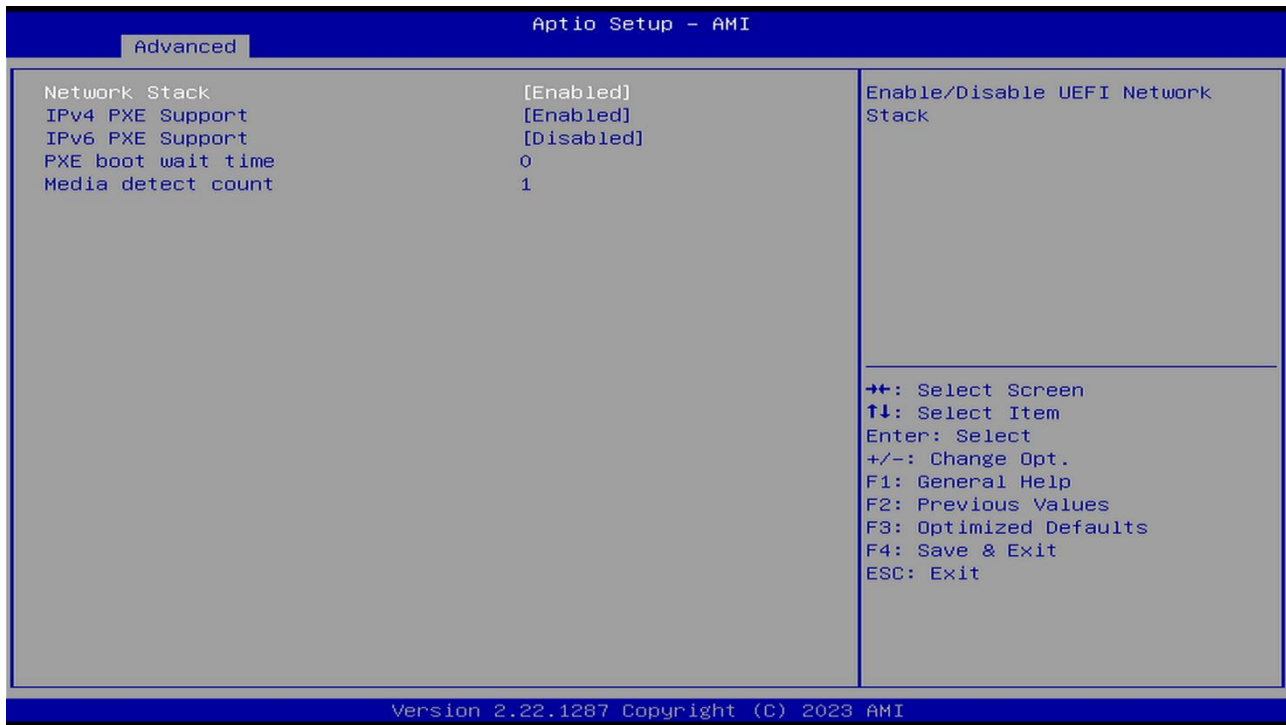
3.2.2 ACPI Settings



- **Resume By onboard LAN**

This option is used to enable Wake-on-LAN.

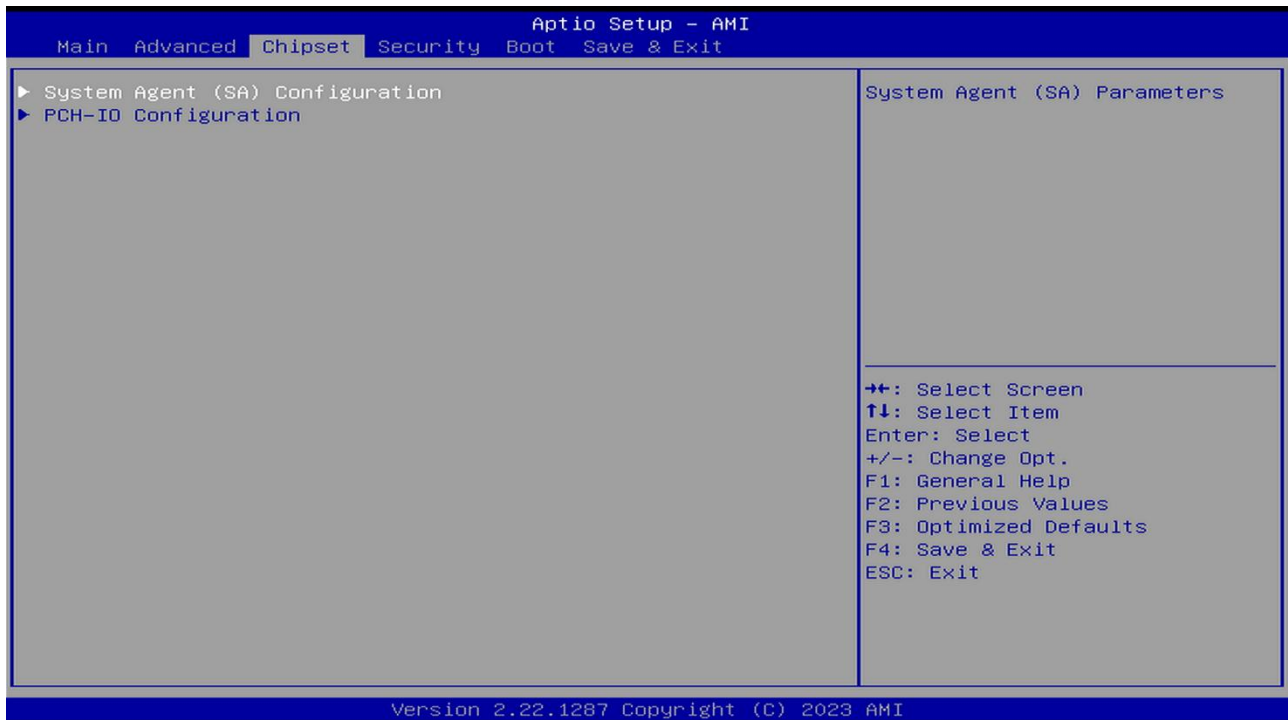
3.2.3 Network Stack



- **IPv4 PXE Support**

This option is used to enable network boot (PXE).

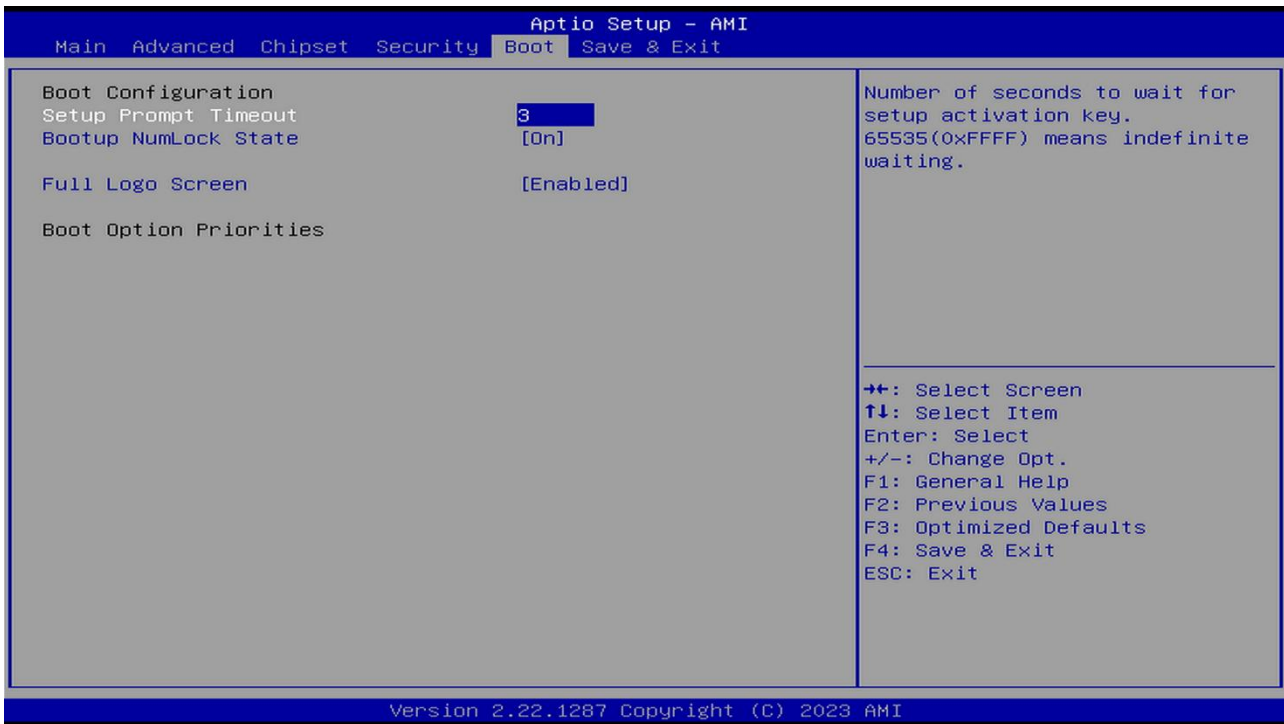
3.2.4 Chipset Settings



3.2.5 Security Settings

Aptio Setup - AMI									
Main	Advanced	Chipset	Security	Boot	Save & Exit				
Password Description If ONLY the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup. If ONLY the User's password is set, then this is a power on password and must be entered to boot or enter Setup. In Setup the User will have Administrator rights. The password length must be in the following range: <table><tr><td>Minimum length</td><td>3</td></tr><tr><td>Maximum length</td><td>20</td></tr></table> Administrator Password User Password ► Secure Boot			Minimum length	3	Maximum length	20	Set Administrator Password ←→: Select Screen ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit		
Minimum length	3								
Maximum length	20								
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3.2.6 Boot Settings



- **Setup Prompt Timeout**

This option is used to set the duration of the POST screen display time.

- **Bootup Numlock State**

This setting determines the state of NumLock after the system starts. When set to On, NumLock will be enabled after booting, and the numeric keypad will be active. When set to Off, NumLock will be disabled after booting, and the arrow keys on the numeric keypad will be active.

3.2.7 Save & Exit



- **Save Changes and Exit**
Save the changes made and exit the BIOS program.
- **Discard Changes and Exit**
Exit the BIOS program without saving changes.
- **Save Changes and Reset**
Save the changes and reset the mainboard.
- **Discard Changes and Reset**
Exit without saving changes and reset the BIOS program.
- **Save Changes**
Save changes.
- **Discard Changes**
Discard changes.
- **Restore Defaults**
Restore default settings.
- **Save as User Defaults**
Save the current settings as user defaults.
- **Restore User Defaults**
Restore the user default settings.