

JMTX-ADN8 Series

User's Manual

NO.: G03-MTX-ADN8-F

Revision: 2.0

Release date: August 1, 2024

Trademark:

- * Specifications and Information contained in this documentation are furnished for information use only, and are subject to change at any time without notice, and should not be construed as a commitment by manufacturer.**

Environmental Protection Announcement

Do not dispose this electronic device into the trash while discarding. To minimize pollution and ensure environment protection of mother earth, please recycle.



TABLE OF CONTENT

ENVIRONMENTAL SAFETY INSTRUCTION	iv
USER'S NOTICE	v
MANUAL REVISION INFORMATION	v
ITEM CHECKLIST	v
CHAPTER 1 INTRODUCTION OF THE MOTHERBOARD	
1-1 FEATURE OF MOTHERBOARD	1
1-2 SPECIFICATION	2
1-3 LAYOUT DIAGRAM	4
CHAPTER 2 HARDWARE INSTALLATION	
2-1 JUMPER SETTING	9
2-2 CONNECTORS , HEADERS & WAFERS	13
2-2-1 REAR I/O PANEL CONNECTORS	13
2-2-2 MOTHERBOARD INTERNAL CONNECTORS	16
2-2-3 PIN DEFINITION FOR HEADERS & WAFERS	17
2-3 MAXIMUM VOLTAGE & CURRENT LIMIT	24
CHAPTER 3 INTRODUCING BIOS	
3-1 ENTERING SETUP	25
3-2 BIOS MENU SCREEN	26
3-3 FUNCTION KEYS	27
3-4 GETTING HELP	27
3-5 MEMU BARS.....	28
3-6 MAIN MENU	28
3-7 ADVANCED MENU	29
3-8 CHIPSET MENU.....	47
3-9 SECURITY MENU	51
3-10 BOOT MENU	54
3-11 SAVE & EXIT MENU	55



Environmental Safety Instruction

- Avoid the dusty, humidity and temperature extremes. Do not place the product in any area where it may become wet.
- 0 to 60 centigrade is the suitable temperature. (The figure comes from the request of the main chipset)
- Generally speaking, dramatic changes in temperature may lead to contact malfunction and crackles due to constant thermal expansion and contraction from the 'welding spots' that connect components and PCB. Computer should go through an adaptive phase before it boots when it is moved from a cold environment to a warmer one to avoid condensation phenomenon. These water drops attached on PCB or the surface of the components can bring about phenomena as minor as computer instability resulted from corrosion and oxidation from components and PCB or as major as short circuit that can burn the components. Suggest starting the computer until the temperature goes up.
- The increasing temperature of the capacitor may decrease the life of computer. Using the close case may decrease the life of other device because the higher temperature in the inner of the case.
- Attention to the heat sink when you over-clocking. The higher temperature may decrease the life of the device and burned the capacitor.

USER'S NOTICE

COPYRIGHT OF THIS MANUAL BELONGS TO THE MANUFACTURER. NO PART OF THIS MANUAL, INCLUDING THE PRODUCTS AND SOFTWARE DESCRIBED IN IT MAY BE REPRODUCED, TRANSMITTED OR TRANSLATED INTO ANY LANGUAGE IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION OF THE MANUFACTURER.

THIS MANUAL CONTAINS ALL INFORMATION REQUIRED TO USE THIS MOTHER-BOARD SERIES AND WE DO ASSURE THIS MANUAL MEETS USER'S REQUIREMENT BUT WILL CHANGE, CORRECT ANY TIME WITHOUT NOTICE. MANUFACTURER PROVIDES THIS MANUAL "AS IS" WITHOUT WARRANTY OF ANY KIND, AND WILL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING DAMAGES FOR LOSS OF PROFIT, LOSS OF BUSINESS, LOSS OF USE OF DATA, INTERRUPTION OF BUSINESS AND THE LIKE).

PRODUCTS AND CORPORATE NAMES APPEARING IN THIS MANUAL MAY OR MAY NOT BE REGISTERED TRADEMARKS OR COPYRIGHTS OF THEIR RESPECTIVE COMPANIES, AND THEY ARE USED ONLY FOR IDENTIFICATION OR EXPLANATION AND TO THE OWNER'S BENEFIT, WITHOUT INTENT TO INFRINGE.

Manual Revision Information

Reversion	Revision History	Date
2.0	Second Edition	August 1, 2024

Item Checklist

- Motherboard
- Cable(s)

Chapter 1

Introduction of the Motherboard

1-1 Feature of Motherboard

- Onboard Intel® Processor N-series (TDP12W),with low power consumption never denies high performance
- Support 1* DDR5 4800MHz Single Channel SO-DIMM up to 32GB
- Integrated with 2* Realtek® RTL8111H 1GbE
- 1* HDMI2.0b, 1* VGA, 1* LVDS (co-lay 1-Lane eDP)
- Onboard 1* M.2 M-key slot, type-2242/2280 (SATA/PCIe 3.0 x1) supports NVMe
- Onboard 1* M.2 E-key slot, type-2230 (USB2.0/PCIe 3.0x1) for Wi-Fi / Bluetooth supports Intel CNVi technology
- Onboard 1* M.2 B-key slot, type-3042/3052 (USB3.1/USB2.0) support 4G/5G/LTE & 1* SIM card holder
- Onboard onboard eMMC and TPM2.0 (**Optional**)
- Support 1* SATAIII device
- Support 2* USB 3.2 Gen.1, 7* USB 2.0
- Support 6* COM (***COM1/2 support RS232/422/485**)
- Support ATX power
- Support Watchdog function
- Solution for Industrial Automation

1-2 Specification

Spec	Description
Design	<ul style="list-style-type: none"> ● Mini-ITX SBC; PCB size: 17x 17 cm
Embedded CPU	<ul style="list-style-type: none"> ● Integrated with Intel® Alder Lake-N series CPU (TDP 12W) <p><i>* Note: CPU model varies from different IPC options. Please consult your dealer for more information of onboard CPU. TDP varies depending on CPU.</i></p>
Memory Slot	<ul style="list-style-type: none"> ● 1* DDR5 SO-DIMM slot support 1* DDR5 4800MHz up to 32GB <p><i>*Note: Memory clock supporting range is decided by specific CPU of the model. For more memory compatibility information please consults your local dealer.</i></p>
Expansion Slot	<ul style="list-style-type: none"> ● M2E1: 1* M.2 E-key type-2230 (USB2.0/PCIe 3.0x1) slot supports CNVi ● M2B1: 1* M.2 B-key type-3042/3052 (USB3.2 Gen.1/USB2.0) slot supports 4G/5G/LTE Module ● *SIMCARD1: 1* Nano-SIM card slot; co-function with M2B1 slot
Storage	<ul style="list-style-type: none"> ● SATA1: 1* SATAIII 6Gb/s port ● M2M1: 1* M.2 M-key type-2242/2280 (SATA/PCIe 3.0x1) slot supports NVMe from CPU
LAN Chip	<ul style="list-style-type: none"> ● Integrated with 2* Realtek® RTL8111H 1GbE ● Support 10/100/1000Mbps Ethernet data transfer rate
Audio Chip	<ul style="list-style-type: none"> ● Integrated with Realtek HD audio chip
Graphics	<p>Intel® UHD Graphics, shared memory for:</p> <ul style="list-style-type: none"> ● 1* HDMI2.0b ● 1* VGA ● 1* LVDS/eDP <p><i>*Note: Support Triple Displays.</i></p>
BIOS	<ul style="list-style-type: none"> ● AMI 256Mb Flash ROM
Rear I/O	<ul style="list-style-type: none"> ● 2* 1GbE RJ-45 LAN port ● 2* USB3.2 Gen.1 port ● 4* USB2.0 ● 2* Serial ports (RS232/422/485, COM1 support 5V/12V selectable)

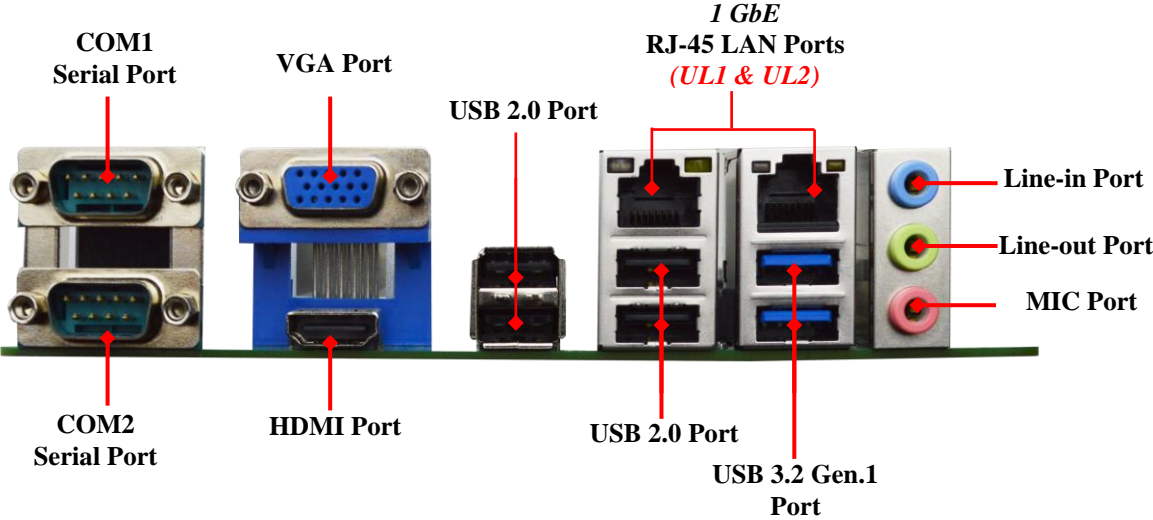
	<ul style="list-style-type: none"> ● 1* HDMI 2.0b ● 1* VGA
Internal I/O	<ul style="list-style-type: none"> ● 1* 24-pin internal ATX power connector ● 1* CPU FAN header, 1* System Fan header ● 1* 3W amplifier header (SPEAK1) ● 1* GPIO 8-bit/80 port header (selectable by JP80P1, default GPIO) ● 1* 9-pin USB 2.0 header (Expansible to 2* USB 2.0 ports) ● 1* 5-pin USB 2.0 header ● 1* 24-bit dual channel LVDS or 1-lane eDP header ● 1* LVDS/EDP inverter ● 4* RS232 Serial port header (COM3 supports 5V/12V selectable) ● 1* SMBUS header ● 1* I2C header ● 1* Front panel header ● 1* Chassis Intrusion ● 1* Buzzer ● 1* AT_ATX Mode
TPM 2.0	<ul style="list-style-type: none"> ● Optional for JMTX-ADN8-N97002 & JMTX-ADN8-N97008
OS Support	<ul style="list-style-type: none"> ● <i>for detailed OS support information please visit our website for latest update</i>

***Note:** The main differences among **JMTX-ADN8** series are listed as below:

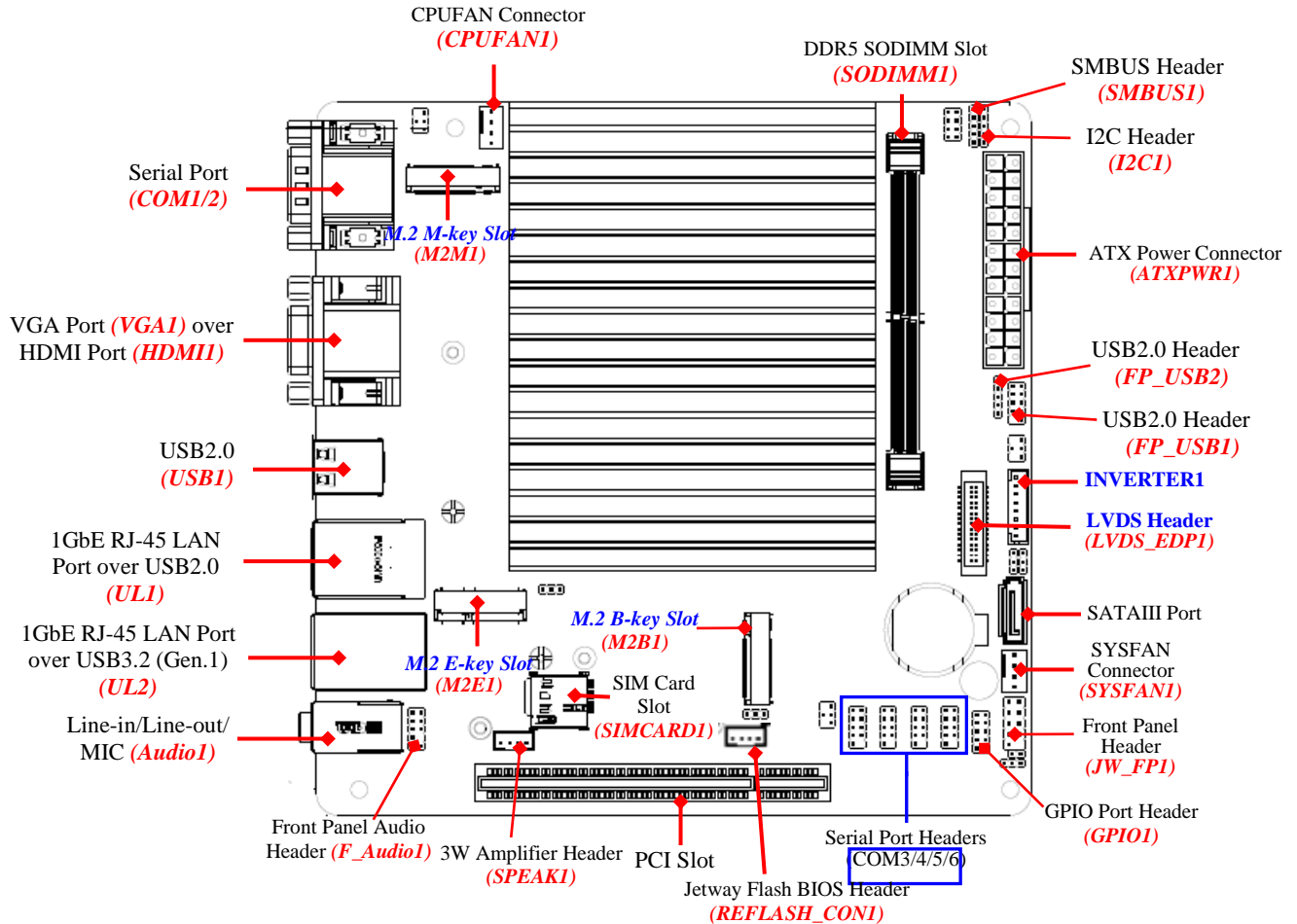
Model	TPM2.0	Onboard 64GB eMMC
JMTX-ADN8-N97000	N/A	N/A
JMTX-ADN8-N97002	Yes	N/A
JMTX-ADN8-N97004	N/A	Yes
JMTX-ADN8-N97008	Yes	Yes

1-3 Layout Diagram

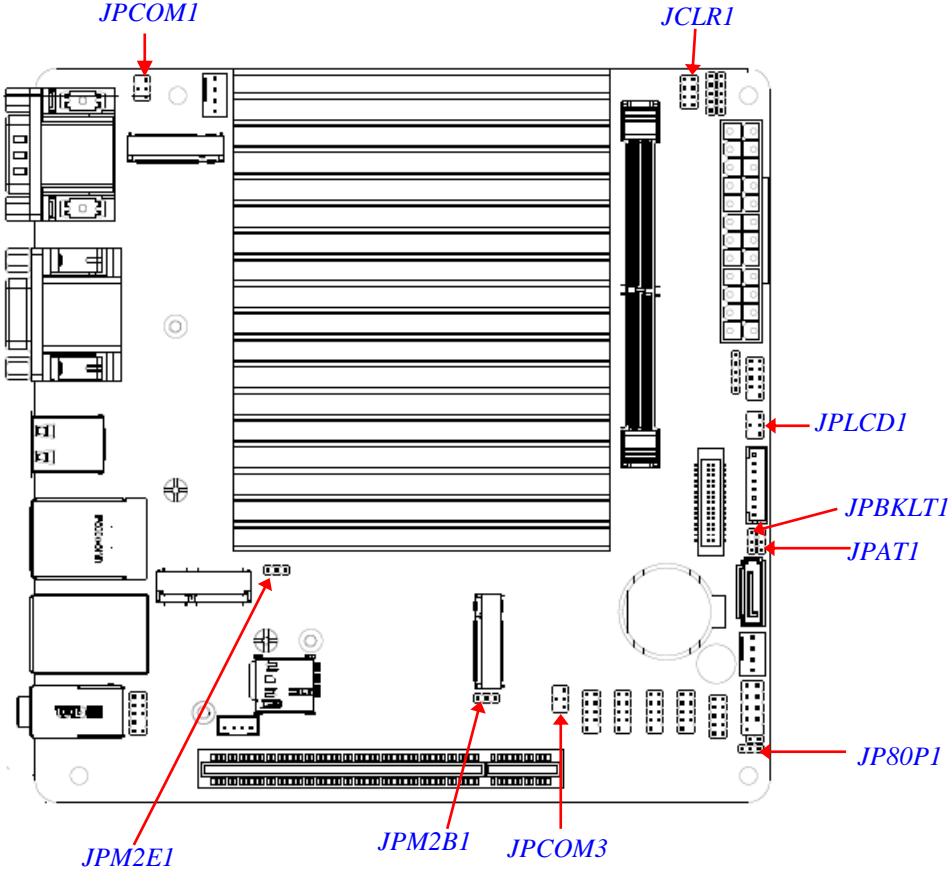
Rear IO Diagram:



Internal Diagram:



Jumper Positions:



Jumpers

Location	Name	Description	Pitch
JP80P1	Set GPIO	3-Pin Block	2.0mm
JPCOM1	COM1 Header Pin-9 Function Select	4-Pin Block	2.0mm
JPCOM3	COM2 Header Pin-9 Function Select	4-Pin Block	2.0mm
JPLCD1	LVDS Panel VCC Power Select	4-Pin Block	2.0mm
JPBKLT1	LCD BACKLIGHT VCC Power Select	3-Pin Block	2.0mm
JPM2B1	Power Select	3-Pin Block	2.0mm
JPM2E1	Power Select	3-Pin Block	2.0mm
JPAT1	ATX Mode/ AT Mode Select	3-Pin Block	2.0mm
JCLR1	Clear RTC/ Clear CMOS/ ME Disable/ Case Open	8-Pin Block	2.0mm

Connectors

Location	Name
ADUIO1	Audio Line In/ Line Out /MIC Combo Connector
UL1	Top: RTL8111H 1GbE RJ-45 LAN Port Connector Bottom: USB2.0 Port Connector
UL2	Top: RTL8111H 1GbE RJ-45 LAN Port Connector Bottom: USB3.2 Gen.1 Port Connector
USB1	USB2.0 Port Connector
VGA1	VGA Port Connector
HDMI1	HDMI Port Connector
COM1/COM2	RS232/422/485 Serial Port Connector

Headers & Wafers

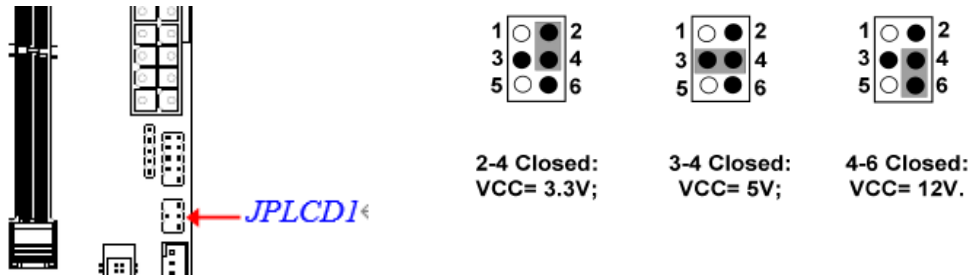
Location	Name	Description	Pitch
LVDS_EDP1	LVDS/eDP Port Header	30-pin Block	1.25mm
REFLASH_CO N1	Jetway Flash BIOS Header	20-pin Block	2.0mm
GPIO1	GPIO Port Header	10-pin Block	2.0mm
COM3~COM6	Serial Port Header	9-pin Block	2.0mm
FP_USB1	USB 2.0 Header	9-pin Block	2.0mm
FP_USB2	USB 2.0 Header	5-pin Block	2.0mm
F_AUDIO1	Front Panel Audio Header	9-pin Block	2.0mm
JW_FP1	Front Panel Header (PWR LED/ HDD LED/Power Button /Reset)	9-pin Block	2.54mm
INVERTER1	LVDS_EDP Inverter	8-pin Block	2.0mm
SMBUS1	SMBUS Header	5-pin Block	2.0mm
I2C1	I2C Header	5-pin Block	2.0mm
SPEAK1	3W Amplifier Header	4-pin Block	2.0mm

Chapter 2

Hardware Installation

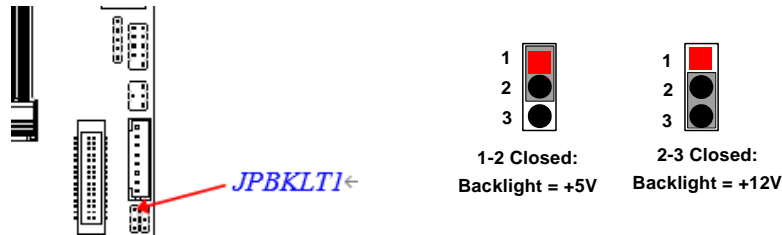
2-1 Jumper Settings

JPLCD1 (4-pin): LVDS Panel VCC Power Select (2.0mm pitch)



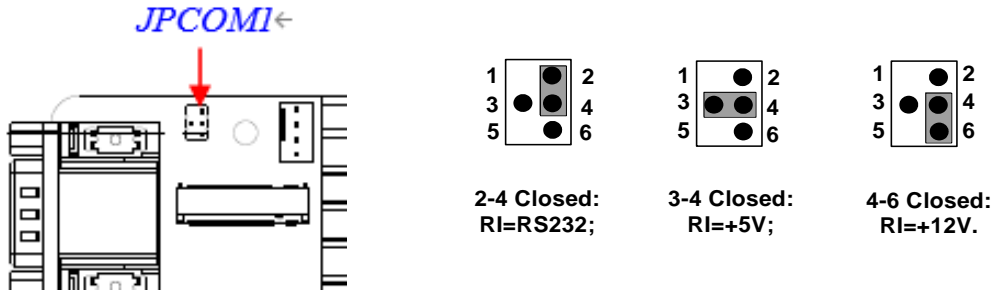
***Note:** Maximum current limit is **2A** while using 3.3V, 5V or 12V.

JPBKLT1 (3-pin): LCD BACKLIGHT VCC Power Select (2.0mm pitch)



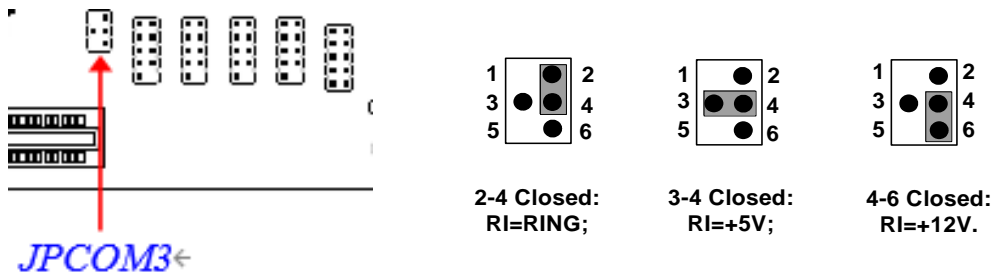
***Note:** Maximum current limit is **2A** while using 5V or 12V.

JPCOM1 (4-pin): COM Header Pin9 Select (2.0mm pitch)



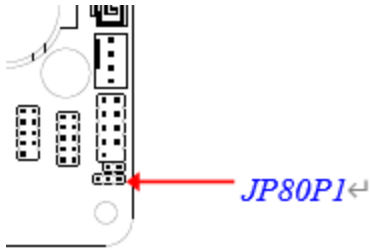
***Note:** Maximum current limit is **500mA** while using 5V or 12V.

JPCOM3 (4-pin): COM Header Pin9 Select (2.0mm pitch)



***Note:** Maximum current limit is **500mA** while using 5V or 12V.

JP80P1 (3-pin): Set GPIO (2.0mm pitch)



1 2 3

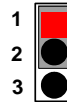
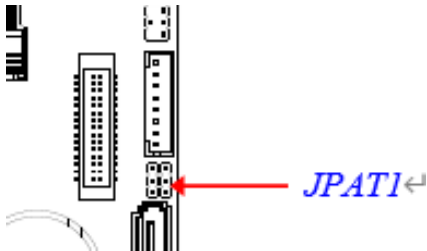
1-2 Closed:
80 Port



1 2 3

2-3 Closed:
GPIO

JPAT1 (3-pin): ATX Mode / AT Mode Select (2.0mm pitch)



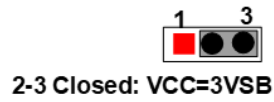
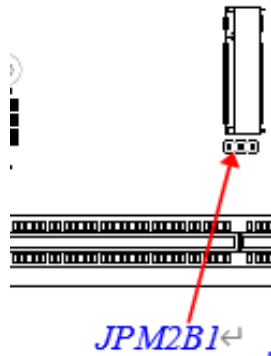
1-2 Closed:
ATX Mode



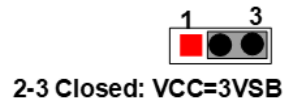
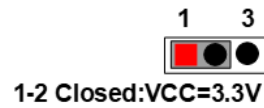
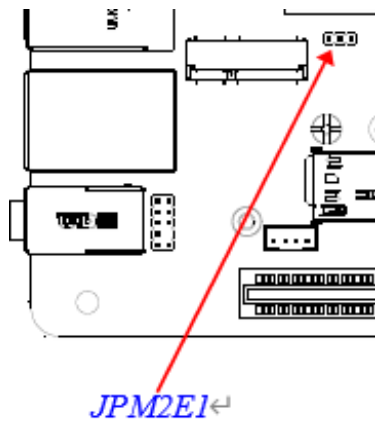
2-3 Closed:
AT Mode

***ATX Mode Selected:** Press power button to power on after power input ready;
AT Mode Selected: Directly power on as power input ready.

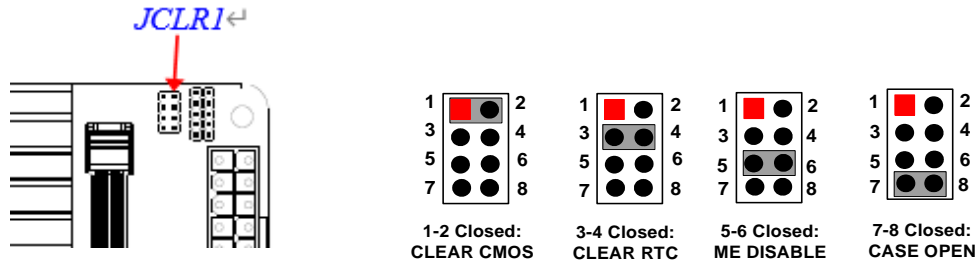
JPM2B1 (3-pin): Power Select (2.0mm pitch)



JPM2E1 (3-pin): Power Select (2.0mm pitch)









JCLR1 (8-pin): Clear RTC/ Clear CMOS/ ME Disable (2.0mm pitch)



2-2 Connectors, Headers and Wafers

2-2-1 Rear I/O Panel Connectors

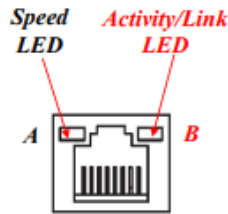
<i>Icon</i>	<i>Name</i>	<i>Function</i>
	Audio Line-In/ Line-Out /MIC Combo Connector	This audio jack can function as audio Line-in, Line-out & MIC-in combo connector with compatible cable connection.
	Top: 1Gbps RJ-45 LAN Port Bottom: Type-A USB2.0 Port	RJ-45 LAN Port: This connector is standard RJ-45 LAN jack for Network connection which supports 10/100/1000 Mbps Ethernet data transfer rate Type-A USB2.0 Port: to connect USB keyboard, mouse or other devices compatible with USB2.0 specification. Ports support up to 480Mbps data transfer rate. *Note: Maximum current limit is 500mA x 2 while using 5V working voltage

	<p>Top: 1Gbps RJ-45 LAN Port</p> <p>Bottom: Type-A USB3.2 Gen. 1 Port</p>	<p>RJ-45 LAN Port: This connector is standard RJ-45 LAN jack for Network connection which supports 10/100/1000 Mbps Ethernet data transfer rate</p> <p>Type-A USB3.2 Gen.1 Port: to connect USB keyboard, mouse or other devices compatible with USB3.2 Gen. 1 specification. Ports support up to 5Gbps data transfer rate.</p> <p>*Note: Maximum current limit is 900mA x 2 while using 5V working voltage</p>
	<p>Top: Type-A USB2.0 Port</p> <p>Bottom: Type-A USB2.0 Port</p>	<p>Type-A USB2.0 Port: to connect USB keyboard, mouse or other devices compatible with USB2.0 specification. Ports support up to 480Mbps data transfer rate.</p>
	<p>Top: VGA Port</p> <p>Bottom: HDMI Port</p>	<p>VGA Port: To connect display device that support VGA specification.</p> <p>HDMI Port: To connect display device that support HDMI specification.</p>
	<p>Top: Serial Port</p> <p>Bottom: Serial Port</p>	<p>Mainly for user to connect external MODEM or other devices that supports Serial Communications Interface.</p> <p>*Note: COM1/COM2 (Top/Bottom) supports RS232/422/485 function</p>

(1) RJ-45 Ethernet Connectors

** There are two LED next to the RJ-45 LAN port. Please refer to the table below for LAN port LED indications.

For UL1/UL2 (RTL8111H GbE) 1.0Gbps RJ-45 LAN port LED Signals:



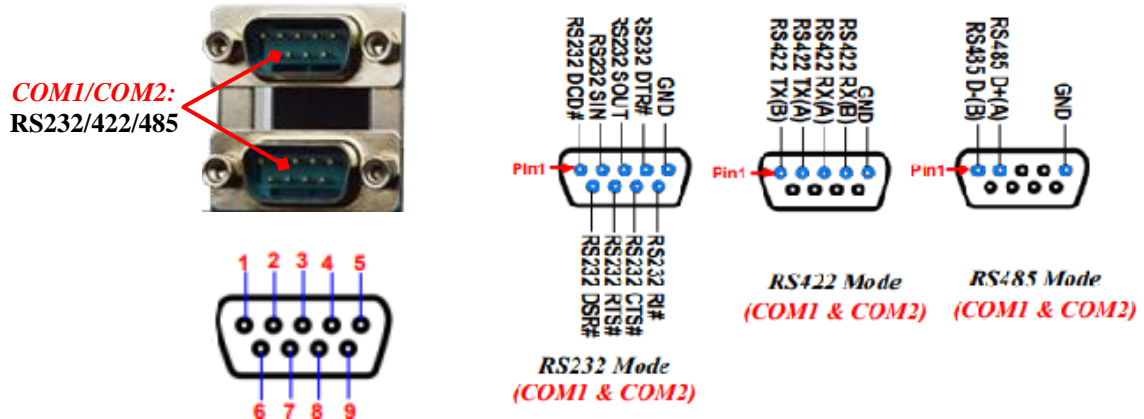
A: Speed LED

Status	Description
Off	10Mbps connection
Green	100Mbps connection
Orange	1Gbps connection

B: Activity/Link LED

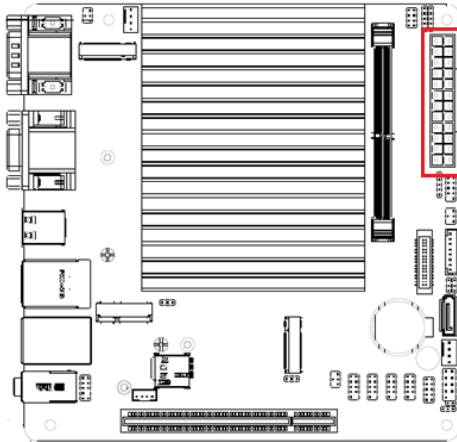
Status	Description
Off	No Link
Blinking	Data Activity
On	Link

(2) COM1_2 (9-pin Block): COM1 & COM2 Serial Port



2-2-2 Motherboard Internal Connector

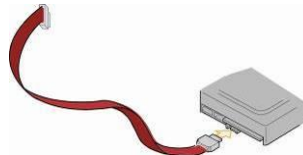
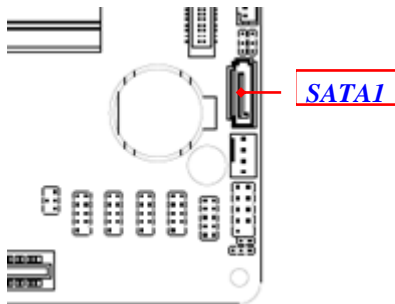
(1) ATXPWR(24-pin block): Main Power Connector



PIN	ROW1	ROW2
1	+3.3V	+3.3V
2	+3.3V	-12V
3	GND	GND
4	+5V	Soft Power on
5	GND	GND
6	+5V	GND
7	GND	GND
8	Power OK	-5V
9	+5V Stand by	+5V
10	+12V	+5V
11	+12V	+5V
12	+3.3V	GND

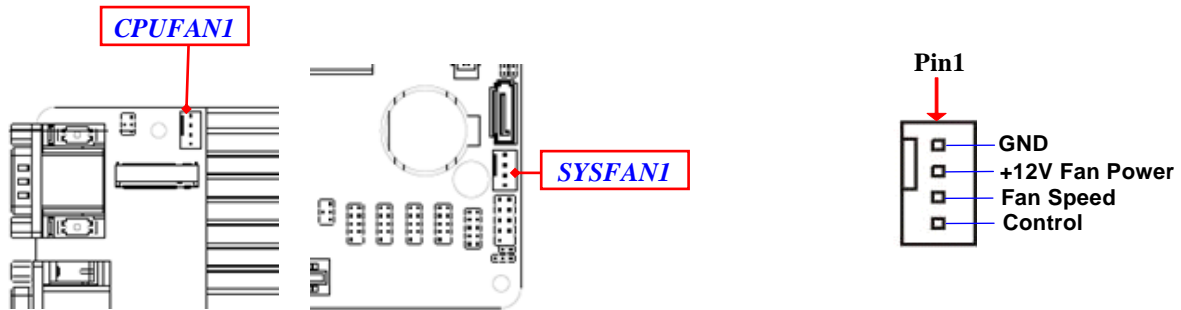
(2) SATA1 (7-pin): SATAIII Port connector

This is a high-speed SATAIII port that supports 6GB/s transfer rate.



Pin No.	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

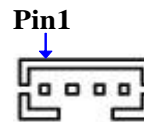
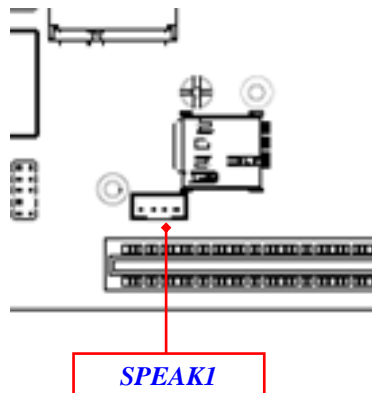
(3) CPUFAN1/SYSFAN1 (4-pin): CPU FAN and System FAN Connector



***Note:** Maximum current limit is **1.5A** while using 12V working voltage.

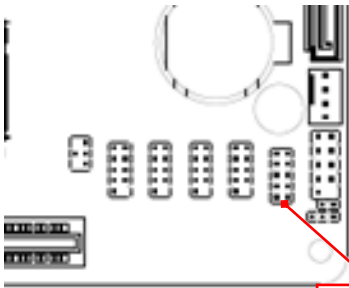
2-2-3 Pin Definition for Headers & Wafers

SPEAK1 (4-pin): 3W Amplifier Wafer (2.0mm pitch)

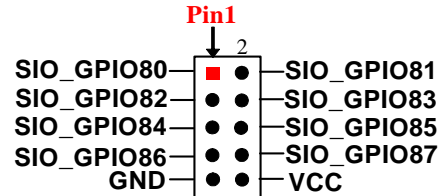


Pin No.	Definition
1	L-
2	L+
3	R+
4	R-

GPIO1 (10-pin): GPIO Header (2.0mm pitch)



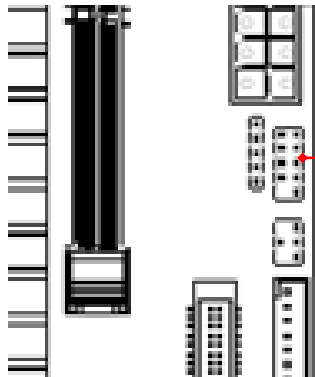
GPIO1



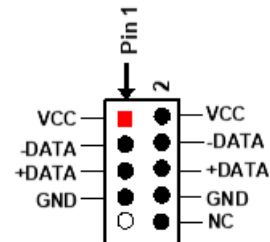
*JP80P1 Closed: Normal 8-bit GPIO;
JP80P1 Open: For 80Port Function.*

***Note:** 1. **Maximum** current limit is **1A** while using 5V working voltage; 2. Please refer to **Page-12** **JP80P1** jumper settings for **GPIO1 80Port** or **GPIO Port** function select.

FP_USB1 (9-pin): USB2.0 Header (2.0mm pitch)

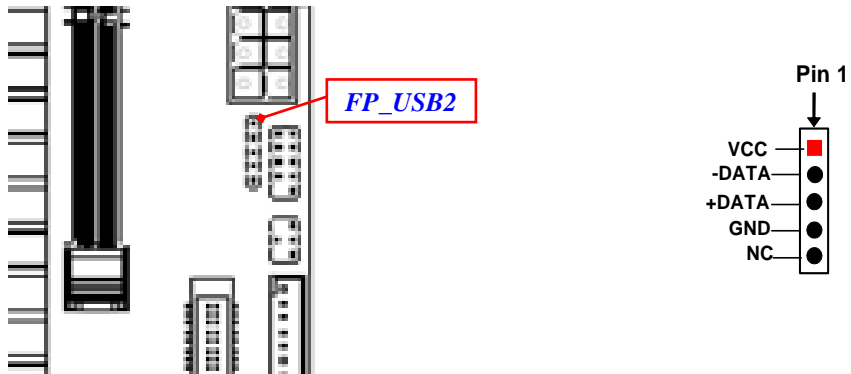


FP_USB1



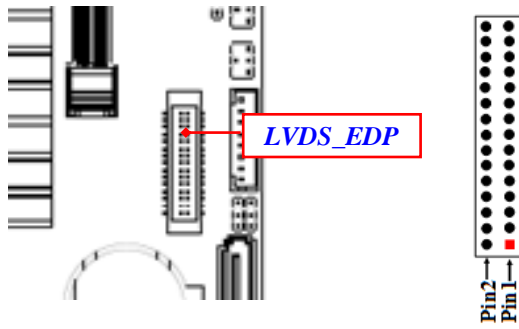
***Note:** Maximum current limit is **500mA x 2** in total while using 5V working voltage.

FP_USB2 (5-pin): USB2.0 Header (2.0mm pitch)



***Note:** Maximum current limit is **500mA x 1** in total while using 5V working voltage

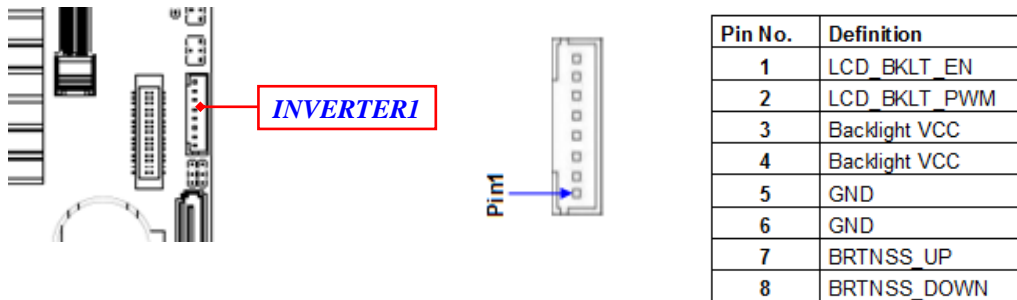
LVDS_EDP1 (30-pin): 24-bit Dual Channel LVDS or 2-Lane eDP Header (1.25mm pitch)



Pin Define	Pin No.	Pin No.	Pin Define
LVDSB_DATAN3	Pin 1	Pin 2	LVDSB_DATAP3
LVDS_CLKBN	Pin 3	Pin 4	LVDS_CLKBP
LVDSB_DATAN2	Pin 5	Pin 6	LVDSB_DATAP2
LVDSB_DATAN1	Pin 7	Pin 8	LVDSB_DATAP1
LVDSB_DATAN0	Pin 9	Pin 10	LVDSB_DATAP0
LVDS_DDC_DAT	Pin 11	Pin 12	LVDS_DDC_CLK
GND	Pin 13	Pin 14	GND
GND	Pin 15	Pin 16	GND
LVDSA_DATAP3	Pin 17	Pin 18	LVDSA_DATAN3
LVDS_CLKAP/EDP_AUXP	Pin 19	Pin 20	LVDS_CLKAN_EDP_AUXN
LVDSA_DATAP2/EDP_TX0P	Pin 21	Pin 22	LVDSA_DATAN2_EDP_TX0N
LVDSA_DATAP1/EDP_TX1P	Pin 23	Pin 24	LVDSA_DATAN1_EDP_TX1N
LVDSA_DATAP0	Pin 25	Pin 26	LVDSA_DATAN0
LCD_VCC	Pin 27	Pin 28	LCD_VCC
LCD_VCC	Pin 29	Pin 30	LCD_VCC

***Note:** Please follow the settings of jumper **JPLCD1** for LVDS panel power VCC.

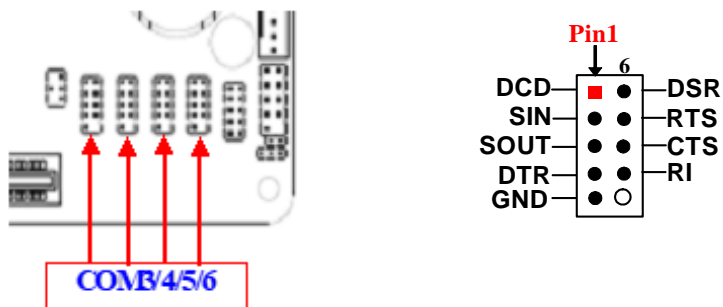
INVERTER1 (8-pin): LVDS Inverter Connector (2.0mm pitch)



Warning! Find **Pin-1** location of the inverter and make sure that the installation direction is correct! Otherwise serious harm will occur to the board/display panel!!

***Note:** Maximum current limit is **2A** while using 5V or 12V.

COM3/4/5/6 (9-pin): RS232 Serial Port Headers (2.0mm pitch)

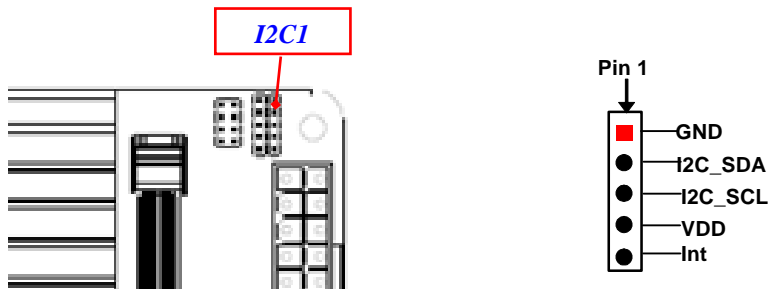


SMBUS1 (5-Pin): SMBUS Header (2.0mm pitch)



***Note:** Maximum current limit is **500mA** while using **3V** working voltage.

I2C1 (5-pin): I2C Header (2.0mm pitch)



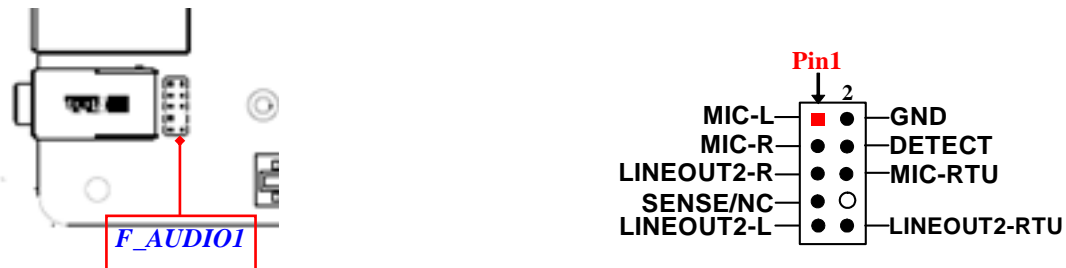
***Note:** Maximum current limit is **500mA** while using **3.3V** working voltage.

JW_FP1 (9-pin): Front Panel Header (2.54mm pitch)

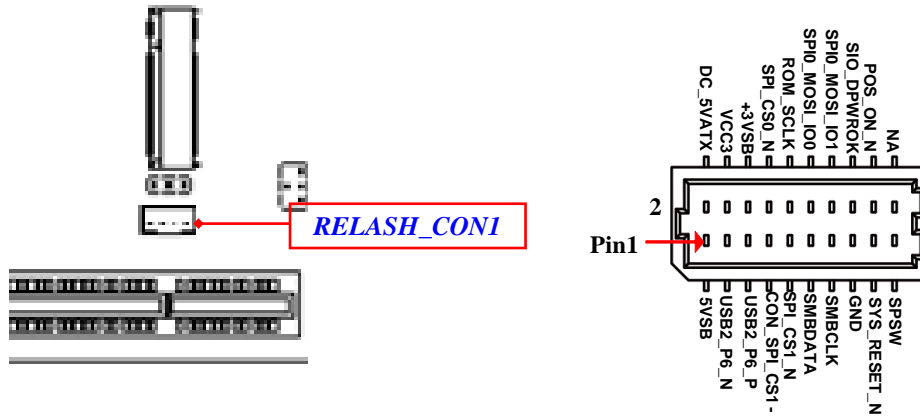


***Note:** Maximum current limit is **1A** while using 5V working voltage.

F_Audio1 (9-pin): Front Panel Audio Header (2.00mm pitch)



REFLASH_CON1 (20-pin): BIOS Update (2.00mm pitch)



2-3 Maximum Voltage & Current Limit

Below is a list of maximum voltage & Current Limit specification for motherboard interface (including but not limited to slots, connectors and headers) for setup reference:

Parts		Working Voltage	Current Support
USB Ports from	<i>UL1(Down)/ UL2(Down)</i>	5V	UI1= 500mA x2 UI2= 900mA x2
	<i>USB1</i>	5V	500mA x2
	<i>FP_USB1/ FP_USB 2</i>	5V	500mA x3
<i>JPCOM1 / JPCOM3</i>		5V/12V	500mA x2
<i>CPUFAN1/SYSFAN1</i>		12V	1.5A x2
<i>JW_FP1</i>		5V	1A
<i>GPIO1</i>		5V	1A
<i>SMBUS1</i>		3.3V	500mA
<i>I2C1</i>		3.3V	500mA
<i>LVDS_EDP</i>		3.3V/5V/12V	2A
<i>INVERTER1</i>		5V/12V	2A

Chapter 3

Introducing BIOS

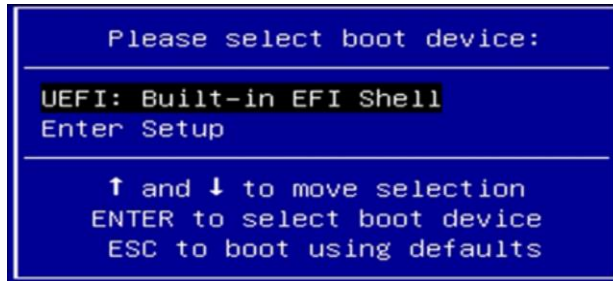
Notice! The BIOS options in this manual are for reference only. Different configurations may lead to difference in BIOS screen and BIOS screens in manuals are usually the first BIOS version when the board is released and may be different from your purchased motherboard. Users are welcome to download the latest BIOS version form our official website.

The BIOS is a program located on a Flash Memory on the motherboard. This program is a bridge between motherboard and operating system. When you start the computer, the BIOS program will gain control. The BIOS first operates an auto-diagnostic test called POST (power on self test) for all the necessary hardware, it detects the entire hardware device and configures the parameters of the hardware synchronization. Only when these tasks are completed done it gives up control of the computer to operating system (OS). Since the BIOS is the only channel for hardware and software to communicate, it is the key factor for system stability, and in ensuring that your system performance as its best.

3-1 Entering Setup

Power on the computer and by pressing immediately allows you to enter Setup. If the message disappears before your respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the “RESET” button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt> and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to

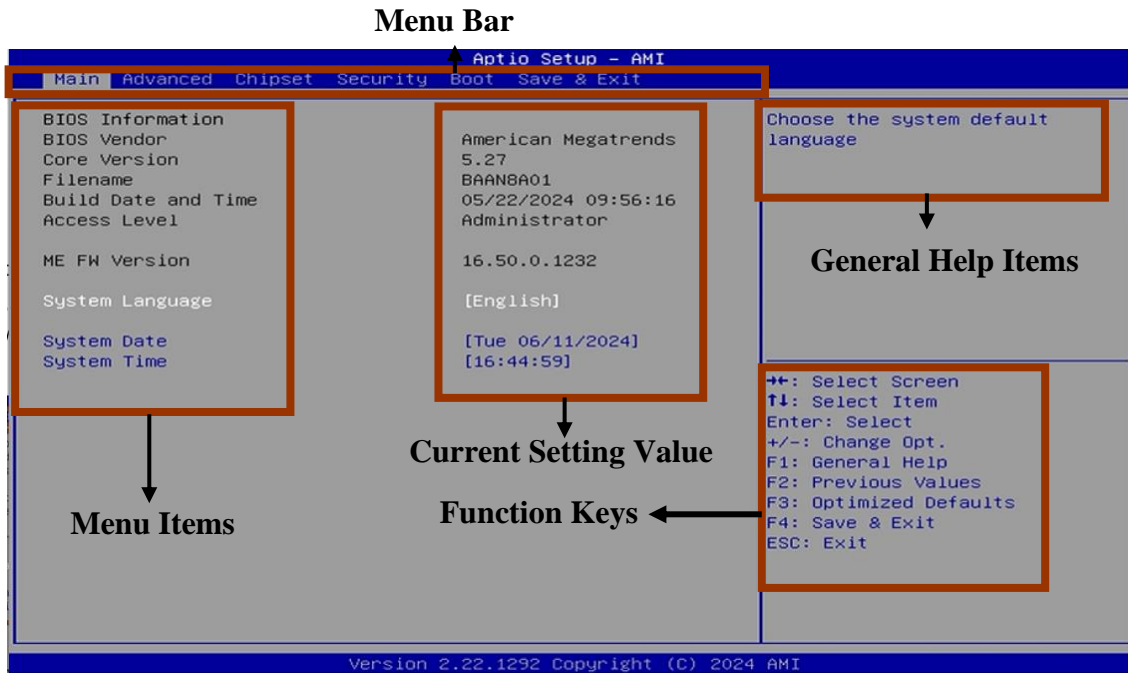
Press **** to enter Setup; press **< F7>** to enter pop-up Boot menu.



BIOS Boot Menu Screen (boot device options please refer to actual configuration)

3-2 BIOS Menu Screen

The following diagram show a general BIOS menu screen:



3-3 Function Keys

In the above BIOS Setup main menu of, you can see several options. We will explain these options step by step in the following pages of this chapter, but let us first see a short description of the function keys you may use here:

- Press ←→ (left, right) to select screen.
- Press ↑↓ (up, down) to choose, in the main menu, the option you want to confirm or to modify.
- Press <Enter> to select.
- Press <+>/<-> keys when you want to modify the BIOS parameters for the active option.
- [F1]: General help.
- [F2]: Previous values.
- [F3]: Optimized defaults.
- [F4]: Save & Exit.
- Press <Esc> to exit from BIOS Setup.

3-4 Getting Help

Main Menu

The on-line description of the highlighted setup function is displayed at the top right corner the screen.

Status Page Setup Menu/Option Page Setup Menu

Press **[F1]** to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window, press **<Esc>**.

3-5 Menu Bars

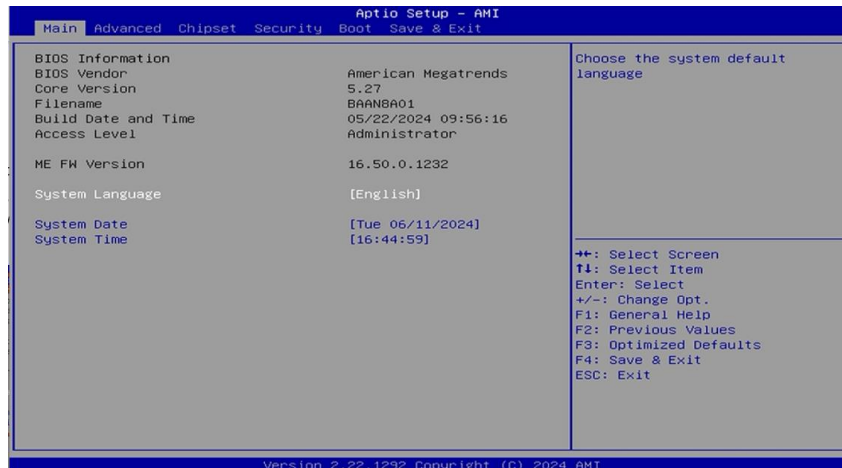
There are six menu bars on top of BIOS screen:

Main	To change system basic configuration
Advanced	To change system advanced configuration
Chipset	To change chipset configuration
Security	Password settings
Boot	To change boot settings
Save & Exit	Save setting, loading and exit options.

User can press the right or left arrow key on the keyboard to switch from menu bar. The selected one is highlighted.

3-6 Main Menu

Main menu screen includes some basic system information. Highlight the item and then use the <+> or <-> and numerical keyboard keys to select the value you want in each item.



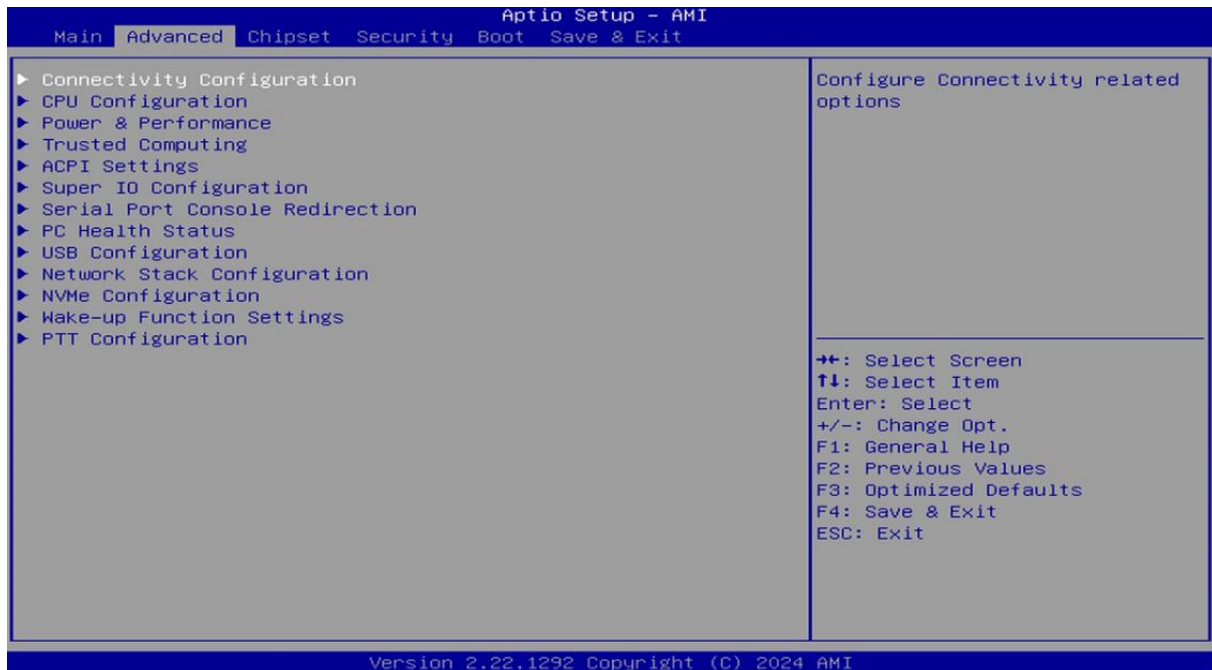
System Date

Set the date. Please use [Tab] to switch between date elements.

System Time

Set the time. Please use [Tab] to switch between time elements.

3-7 Advanced Menu



▶ **Connectivity Configuration**

Use this item to configure Connectivity related options. Press [Enter] to make settings for the following sub-items:

CNVi CRF Present

CNVi Mode

This option configures Connectivity.

CNVi Mode Set the default value to: [Auto Detection]

The optional settings: [Disabled Integrated]; [Auto Detection].

[Auto Detection] means that if Discrete solution is discovered it will be enabled by default. Otherwise Integrated solution (CNVi) will be enabled;

[Disabled Integrated] disables Integrated Solution.

▶ **CPU Configuration**

Press [Enter] to view current CPU configuration and make settings for the following sub-items:

▶ **Efficient-Core Information**

Use this item to displays the E-Core information.

Press [Enter] to make settings for the following sub-items:

L1 Date Cache/L1 Instruction Cache/L2 Cache/L3 Cache

▶ **Performance-Core Information**

Use this item to displays the P-Core information.

Press [Enter] to make settings for the following sub-items:

L1 Date Cache/L1 Instruction Cache/L2 Cache/L3 Cache

Boot Performance Mode

Use this item to select the performance state that the BIOS will set starting from reset vector.

Boot Performance Mode Set the default value to: [Turbo Performance]

The optional settings: [Min Non-Turbo Performance]; [Max Non-Turbo Performance]; [Turbo Performance].

Intel(R) SpeedStep(tm)

This item allows more than two frequency ranges to be supported.

Intel(R) SpeedStep(tm) Set the default value to: [Enabled]

The optional settings: [Disabled]; [Enabled].

Turbo Mode

Use this item to enable or disable processor Turbo Mode (requires Intel Speed Step or Intel Speed Shift to be available and enabled).

Turbo Mode Set the default value to: [Enabled]

The optional settings: [Disabled]; [Enabled]; [Customized]

***Note:** *‘Turbo Mode’ is only for JMTX-ADN8 single board model; Disabled only for Barebone model used).*

C states

Use this item to enable or disable CPU Power Management. When set as [Enabled], it allows CPU to go to C states when it's not 100% utilized.

C states Set the default value to: [Enabled]

The optional settings: [Disabled]; [Enabled].

Enhanced C-states

Use this item to Enable/Disable C1E. When enabled, CPU will switch to minimum speed when all cores enter C-State.

Enhanced C-states Set the default value to: [Enabled]

The optional settings: [Disabled]; [Enabled].

Package C State Limit

Use this item to maximum package C State Limit setting. CPU default: leaves to factory default value. Auto: initializes to deepest available package C State Limit.

Package C State Limit Set the default value to: [Auto]

The optional settings: [C0/C1]; [C2]; [C3]; [C6]; [C7]; [C7S]; [C8]; [C9]; [C10]; [CPU Default]; [Auto].

▶ **Power & Performance**

Press [Enter] to make settings for the following sub-items:

Power & Performance

▶ **CPU – Power Management Control**

CPU-Power Management Control Options.

Press [Enter] to make settings for the following sub-items:

Power Limit 1 Override

Use this item to set Enable/Disable Power Limit 1 override. If this option is disabled, BIOS will program the default values for Power Limit 1 and Power Limit 1 Time Window.

Power Limit 1 Override Set the default value to: [Enabled]

The optional settings: [Disabled]; [Enabled].

When set as [Enabled], user can make further settings in the following items:

Power Limit 1

Use this item to set Power Limit 1 in Milli Watts. BIOS will round to the nearest 1/8W when programming.

0 = no custom override. For 12.50W, enter 12500.

Overclocking SKU: Value must be between Max and Min Power Limits (specified by PACKAGE_POWER_SKU_MSR).

Other SKUs: This value must be between Min Power Limit and Processor Base Power (TDP) Limit. If value is 0, BIOS will program Processor Base Power (TDP) value.

Power Limit 1 Set the default value to: [0]

Power Limit 1 Time Window

Use this item to set Power Limit 1 Time Window value in seconds. The value may vary from 0 to 128. 0 = default value (28 sec for Mobile and 8 sec for Desktop). Defines time window which Processor Base Power (TDP) value should be maintained.

Power Limit 1 Time Window Set the default value to: [0]

The optional settings are: [0]; [1]; [2]; [3]; [4]; [5]; [6]; [7]; [8]; [10]; [12]; [14]; [16]; [20]; [24]; [28]; [32]; [40]; [48]; [56]; [64]; [80]; [96]; [112]; [128].

Power Limit 2 Override

Use this item to enabled/disable power Limit 2 override. If this option is disabled, BIOS will program the default values for Power Limit 2.

Power Limit 2 Override Set the default value to: [Disabled]

The optional settings: [Disabled]; [Enabled].

When set as [Enabled], user can make further settings in the following items:

Power Limit 2

Use this item to set Power Limit 2 Value in Milli Watts. BIOS will round to the nearest 1/8W when programming.

0=no custom override. For 12.50w, enter 12500. Processor applies control policies such that the package power does not exceed this limit.

Power Limit 2 Set the default value to: [0]

▶ **GT-Power Management Control**

Press [Enter] to make settings for the following sub-items:

RC6(Render Standby)

Use this item to check to enable render standby support.

RC6(Render Standby) Set the default value to: [Enabled]

The optional settings: [Disabled]; [Enabled].

Maximum GT frequency

Use this item to Maximum GT frequency limited by the user. Choose between 200MHZ (RPN) and 1200MHZ (RP0). Value beyond the range will be clipped to min/max supported by SKU.

Maximum GT frequency Set the default value to: [Default Max Frequency]

The optional settings: [Default Max Frequency]; [100Mhz] ; [150Mhz] ; [200Mhz] ; [250Mhz] ; [300Mhz] ; [350Mhz] ; [400Mhz] ; [450Mhz] ; [500Mhz] ; [550Mhz] ; [600Mhz] ; [650Mhz] ; [700Mhz] ; [750Mhz] ; [800Mhz] ; [850Mhz] ; [900Mhz] ; [950Mhz] ; [1000Mhz] ; [1050Mhz] ; [1100Mhz] ; [1150Mhz] ; [1200Mhz].

Disable Turbo GT frequency

Use this item to enabled: disables turbo GT frequency. Disabled: GT frequency is not limited.

Disable Turbo GT frequency Set the default value to: [Disabled]

The optional settings: [Disabled]; [Enabled].

▶ **Trusted Computing**

Press [Enter] to make settings in the following sub-items:

Security Device Support

Use this item to 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.

The optional settings: [Disabled]; [Enabled].

Security Device Support Set the default value to: [Enabled]

When set as [Enabled], user can make setting in the following items that appear:

SHA256 PCR Bank

Use this item to enable or disable SHA256 PCR Bank.

The optional settings: [Disabled]; [Enabled].

SHA256 PCR Bank Set the default value to: [Enabled]

SHA384 PCR Bank

Use this item to enable or disable SHA384 PCR Bank.

The optional settings: [Disabled]; [Enabled].

SHA384 PCR Bank Set the default value to: [Disabled]

Pending Operation

Use this item to schedule an operation for security device.

The optional settings: [None]; [TPM Clear].

Pending Operation Set the default value to: [None]

****Note: Your computer will reboot during restart in order to change State of Security Device.**

▶ **ACPI Settings**

Press [Enter] to make settings for the following sub-items:

ACPI Settings

ACPI Sleep State

Use this item to select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.

The optional settings are: [Suspend Disabled]; [S3 (Suspend to RAM)].

ACPI Sleep State Set the default value to: [S3 (Suspend to RAM)]

▶ **Super IO Configuration**

Press [Enter] to make settings for the following sub-items:

Super IO Configuration

▶ **Serial Port 1 Configuration**

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

The optional settings: [Disabled]; [Enabled].

Serial Port Set the default value to: [Enabled]

When set as [Enabled], user can make settings in the following items that appear:

Change Settings

Use this item to select an optimal settings for super IO device.

The optional settings are: [Auto]; [IO=3F8h; IRQ=4]; [IO=2F8h; IRQ=3]; [IO=3E8h; IRQ=4]; [IO=2E8h; IRQ=3].

Change Settings Set the default value to: [Auto]

Transmission Mode Select

The optional settings are: [RS422]; [RS232]; [[RS485].

Transmission Mode Select Set the default value to: [RS232]

Mode Speed Select

Use this item to RS232/RS422/RS485 Speed Select.

The optional settings are: [RS232/RS422/RS485=250Kbps]; [RS232=1Mbps, RS422/RS485=10Mbps].

Mode Speed Select Set the default value to: [RS232=1Mbps, RS422/RS485=10Mbps]

▶ **Serial Port 2 Configuration**

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

The optional settings: [Disabled]; [Enabled].

Serial Port Select Set the default value to: [Enabled]

When set as [Enabled], user can make settings in the following items that appear:

Change Settings

Use this item to select an optimal setting for super IO device.

The optional settings are: [Auto]; [IO=3F8h; IRQ=4]; [IO=2F8h; IRQ=3]; [IO=3E8h; IRQ=4]; [IO=2E8h; IRQ=3].

Change Settings Set the default value to: [Auto]

Transmission Mode Select

The optional settings are: [RS422]; [RS232]; [[RS485].

Transmission Mode Select Set the default value to: [RS232]

Mode Speed Select

Use this item to RS232/RS422/RS485 Speed Select.

The optional settings are: [RS232/RS422/RS485=250Kbps]; [RS232=1Mbps, RS422/RS485=10Mbps].

Mode Speed Select Set the default value to: [RS232=1Mbps, RS422/RS485=10Mbps]

▶ **Serial Port 3 Configuration**

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

The optional settings: [Disabled]; [Enabled].

Serial Port Select Set the default value to: [Enabled]

When set as [Enabled], user can make settings in the following items that appear:

Change Settings

Use this item to select an optimal setting for super IO device.

The optional settings are: [Auto]; [IO=3F8h; IRQ=10]; [IO=2F8h; IRQ=10]; [IO=3E8h; IRQ=10]; [IO=2E8h; IRQ=10]; [IO=2F0h; IRQ=10]; [IO=2E0h; IRQ=10].

Change Settings Set the default value to: [Auto]

▶ **Serial Port 4 Configuration**

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

The optional settings: [Disabled]; [Enabled].

Serial Port Select Set the default value to: [Enabled]

When set as [Enabled], user can make settings in the following items that appear:

Change Settings

Use this item to select an optimal setting for super IO device.

The optional settings are: [Auto]; [IO=3F8h; IRQ=10]; [IO=2F8h; IRQ=10]; [IO=3E8h; IRQ=10]; [IO=2E8h; IRQ=10]; [IO=2F0h; IRQ=10]; [IO=2E0h; IRQ=10].

Change Settings Set the default value to: [Auto]

▶ **Serial Port 5 Configuration**

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

The optional settings: [Disabled]; [Enabled].

Serial Port Select Set the default value to: [Enabled]

When set as [Enabled], user can make settings in the following items that appear:

Change Settings

Use this item to select an optimal setting for super IO device.

The optional settings are: [Auto]; [IO=3F8h; IRQ=11]; [IO=2F8h; IRQ=11]; [IO=3E8h; IRQ=11]; [IO=2E8h; IRQ=11]; [IO=2F0h; IRQ=11]; [IO=2E0h; IRQ=11].

Change Settings Set the default value to: [Auto]

▶ **Serial Port 6 Configuration**

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

The optional settings: [Disabled]; [Enabled].

Serial Port Select Set the default value to: [Enabled]

When set as [Enabled], user can make settings in the following items that appear:

Change Settings

Use this item to select an optimal setting for super IO device.

The optional settings are: [Auto]; [IO=3F8h; IRQ=11]; [IO=2F8h; IRQ=11]; [IO=3E8h; IRQ=11]; [IO=2E8h; IRQ=11]; [IO=2F0h; IRQ=11]; [IO=2E0h; IRQ=11].

Change Settings Set the default value to: [Auto]

ERP Support

Use this item to make setting for energy-related products function. Disable ERP to active all wake-up function.

The optional settings: [Disabled]; [Enabled].

ERP Support Set the default value to: [Disabled]

Case Open Detect

Use this item to detect if case have ever been opened. Show message in POST.

The optional settings: [Disabled]; [Enabled].

Case Open Detect Set the default value to: [Disabled]

When set as [Enabled], system will detect if COPEN has been short or not (*refer to*

JCLR1 jumper setting for Case Open Detection); if Pin 7&8 of **JCLR1** are short, system will show Case Open Message during POST.

WatchDog Reset Timer

Use this item to support WDT reset function.

The optional settings: [Disabled]; [Enabled].

WatchDog Reset Timer Set the default value to: [Disabled]

When set as [Enabled], user can make settings in the following items that appear:

WatchDog Reset Timer Value

User can set a value in the range of [10] to [255] seconds or [1] to [255] minutes.

WatchDog Reset Timer Value Set the default value to: [10]

WatchDog Reset Timer Unit

The optional settings are: [Sec.]; [Min.].

WatchDog Reset Timer Unit Set the default value to: [Sec]

WatchDog Wake-up Timer

Use this item to support WDT Wake-up.

The optional settings are: [Disabled]; [Enabled].

WatchDog Wake-up Timer Set the default value to: [Disabled]

When set as [Enabled], user can make settings in the following items that appear:

WatchDog Wake-up Timer Value

User can set a value in the range of [10]~[4095] seconds, or [1]~[4095] minutes.

WatchDog Reset Timer Value Set the default value to: [10]

WatchDog Wake-up Timer Unit

The optional settings are: [Sec.]; [Min.].

WatchDog Reset Timer Unit Set the default value to: [Sec]

ATX Power Emulate AT Power

This item support Emulate AT power function, MB power On/Off control by power supply. Use needs to select 'AT or ATX Mode' on MB jumper at first (refer to **JPAT1** jumper setting Pin 1&2 of for **ATX Mode** & Pin 2&3 of **AT Mode Select**).

▶ **Serial Port Console Redirection**

Press [Enter] to make settings for the following sub-items:

COM1

Console Redirection

Console Redirection enable or disable.

The optional settings: [Disabled]; [Enabled].

Console Redirection Set the default value to: [Disabled]

When set as **[Enabled]**, user can make further settings in the '**Console Redirection Settings**' screen:

▶ **Console Redirection Settings**

The settings specify how the host computer and the remote computer (which the user is using) will exchange data. Both computers should have the same or compatible settings.

Press [Enter] to make settings for the following sub-items:

Terminal Type

The optional settings: [VT100]; [VT100Plus]; [VT-UTF8]; [ANSI].

[ANSI]: Extended ASCII char set;

[VT100]: ASCII char set;

[VT100Plus]: Extends VT100 to support color, function keys, etc.

[VT-UTF8]: Uses UTF8 encoding to map Unicode chars onto 1 or more bytes.

Terminal Type Set the default value to: [ANSI]

Bits per second

Use this item to select serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.

The optional settings: [9600]; [19200]; [38400]; [57600]; [115200].

Bits per second Set the default value to: [115200]

Data Bits

The optional settings: [7]; [8].

Data Bits Set the default value to: [8]

Parity

A parity bit can be sent with the data bits to detect some transmission errors.

The optional settings: [None]; [Even]; [Odd]; [Mark]; [Space].

[Even]: parity bit is 0 if the num of 1's in the data bits is even;

[Odd]: parity bit is 0 if num of 1's in the data bits is odd;

[Mark]: parity bit is always 1;

[Space]: parity bit is always 0;

Parity Set the default value to: [None]

[Mark] and **[Space]:** parity do not allow for error detection. They can be used as an additional data bit.

Stop Bits

Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning). The standard setting is 1 stop bit. Communication with slow devices may require more than 1 stop bit.

The optional settings: [1]; [2].

Stop Bits Set the default value to: [1]

Flow Control

Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a “stop” signal can be sent to stop the data flow. Once the buffers are empty, a “start” signal can be sent to re-start the flow. Hardware flow control uses two wires to send start/stop signals.

The optional settings: [None]; [Hardware RTS/CTS].

Flow Control Set the default value to: [None]

VT-UTF8 Combo Key Support

Use this item to enable VT-UTF8 Combination Key Support for ANSI/VT100 terminals.

The optional settings: [Disabled]; [Enabled].

VT-UTF8 Combo Key Support Set the default value to: [Enabled]

Recorder Mode

With this mode enabled only text will be sent. This is to capture Terminal data.

The optional settings: [Disabled]; [Enabled].

Recorder Mode Set the default value to: [Disabled]

Resolution 100x31

Use this item to enable or disable extended terminal resolution.

The optional settings: [Disabled]; [Enabled].

Resolution 100x31 Set the default value to: [Disabled]

Putty KeyPad

Use this item to select FunctionKey and KeyPad on Putty.

The optional settings: [VT100]; [LINUX]; [XTERMR6]; [SCO]; [ESCN]; [VT400].

Putty KeyPad Set the default value to: [VT100]

Serial Port for Out-of-Band Management/ Windows Emergency Management Services (EMS)

Console Redirection EMS

Use this item to enable or disable console redirection.

The optional settings: [Disabled]; [Enabled].

Console Redirection EMS Set the default value to: [Disabled]

When set as **[Enabled]**, user can make further settings in '**Console Redirection Settings**' screen:

▶ Console Redirection Settings

The settings specify how the host computer and the remote computer (which the user is using) will exchange data. Both computers should have the same or compatible settings.

Press [Enter] to make settings for the following sub-items.

Terminal Type EMS

The optional settings: [VT100]; [VT100Plus]; [VT-UTF8]; [ANSI].

[VT-UTF8] is the preferred terminal type for out-of-band management. The next best choice is **[VT100+]** and then **[VT100]**. See above, in Console Redirection Settings page, for more help with Terminal Type/Emulation.

Terminal Type EMS Set the default value to: [VT-UTF8]

Bits per second EMS

Use this item to select serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.

The optional settings: [9600]; [19200]; [57600]; [115200].

Bits per second EMS Set the default value to: [115200]

Flow Control EMS

Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a "stop" signal can be sent to stop the data flow. Once

the buffers are empty, a “start” signal can be sent to re-start the flow. Hardware flow control uses two wires to send start/stop signals.

The optional settings: [None]; [Hardware RTS/CTS]; [Software Xon/Xoff].

Flow Control EMS Set the default value to: [None]

Data Bits EMS

The default setting is: [8].

**This item may or may not show up, depending on different configuration.*

Parity EMS

The default setting is: [None].

**This item may or may not show up, depending on different configuration.*

Stop Bits EMS

The default setting is: [1].

**This item may or may not show up, depending on different configuration.*

▶ **PC Health Status**

Press [Enter] to view current hardware health status, make further settings in ‘**SmartFAN Configuration**’ and set value in ‘**Shutdown Temperature**’.

▶ **SmartFAN Configuration**

Press [Enter] to make settings for SmartFAN Configuration:

SmartFAN Configuration

CPUFAN Smart Mode

The optional settings: [Disabled]; [Enabled].

CPUFAN Smart Mode Set the default value to: [Enabled]

When set as [Enabled], the following sub-items shall appear:

CPUFAN Full-Speed Temperature

Use this item to set CPUFAN full speed temperature. Fan will run at full speed when above this pre-set temperature.

CPUFAN Full-Speed Temperature Set the default value to: [75]

CPUFAN Full-Speed Duty

Use this item to set CPUFAN full-speed duty. Fan will run at full speed when above this pre-set duty.

CPUFAN Full-Speed Duty Set the default value to: [100]

CPUFAN Idle-Speed Temperature

Use this item to set CPUFAN idle speed temperature. Fan will run at idle speed when below this pre-set temperature.

CPUFAN Idle-Speed Temperature Set the default value to: [40]

CPUFAN Idle-Speed Duty

Use this item to set CPUFAN idle speed duty. Fan will run at idle speed when below this pre-set duty.

CPUFAN Idle-Speed Duty Set the default value to: [40]

SYSFAN Smart Mode

The optional settings: [Disabled]; [Enabled].

SYSFAN Smart Mode Set the default value to: [Enabled]

When set as [Enabled], the following sub-items shall appear:

SYSFAN Full-Speed Temperature

Use this item to set SYSFAN full speed temperature. Fan will run at full speed when above this pre-set temperature.

SYSFAN Full-Speed Temperature Set the default value to: [75]

SYSFAN Full-Speed Duty

Use this item to set SYSFAN full-speed duty. Fan will run at full speed when above this pre-set duty.

SYSFAN Full-Speed Duty Set the default value to: [100]

SYSFAN Idle-Speed Temperature

Use this item to set SYSFAN idle speed temperature. Fan will run at idle speed when below this pre-set temperature.

SYSFAN Idle-Speed Temperature Set the default value to: [40]

SYSFAN Idle-Speed Duty

Use this item to set SYSFAN idle speed duty. Fan will run at idle speed when below this pre-set duty.

SYSFAN Idle-Speed Duty Set the default value to: [40]

▶ **USB Configuration**

Press [Enter] to make settings for the following sub-items:

USB Configuration

XHCI Hand-off

This is a workaround for OSeS without XHCI hand-off support. The XHCI ownership change should be claimed by XHCI driver.

The optional settings: [Enabled]; [Disabled].

XHCI Hand-off Set the default value to: [Enabled]

USB Mass Storage Driver Support

Use this item to enable or disable USB Mass storage driver support.

The optional settings: [Disabled]; [Enabled].

USB Mass Storage Driver Support Set the default value to: [Enabled]

USB hardware delay and time-out

USB Transfer time-out

Use this item to set the time-out value for control, bulk, and interrupt transfers.

The optional settings: [1 sec]; [5 sec]; [10 sec]; [20 sec].

USB Transfer time-out Set the default value to: [20 sec]

Device reset time-out

Use this item to set USB mass storage device start unit command time-out.

The optional settings: [10 sec]; [20 sec]; [30 sec]; [40 sec].

Device reset time-out Set the default value to: [20 sec]

Device power-up delay

Use this item to set maximum time the device will take before it properly reports itself to the host controller. 'Auto' uses default value: for a root port it is 100 ms, for a hub port the delay is taken from hub descriptor.

The optional settings: [Auto]; [Manual].

Device power-up delay Set the default value to: [Auto]

Select [**Manual**] you can set value for the following sub-item: '**Device power-up delay in seconds**', the delay range is 1 .. 40 seconds, in one second increments.

▶ **Network Stack Configuration**

Press [Enter] to go to '**Network Stack**' screen to make further settings.

Network Stack

Use this item to enable or disable UEFI Network Stack.

The optional settings: [Disabled]; [Enabled].

Network Stack Set the default value to: [Disabled]

When set as **[Enabled]**, the following sub-items shall appear:

IPv4 PXE Support

Use this item to enable/disable IPv4 PXE Boot Support. When set as [Disabled], IPv4 PXE boot support will not be available.

The optional settings: [Disabled]; [Enabled].

IPv4 PXE Support Set the default value to: [Enabled]

IPv6 PXE Support

Use this item to enable/disable IPv6 PXE Boot Support. When set as [Disabled], IPv6 PXE boot support will not be available.

The optional settings: [Disabled]; [Enabled].

IPv6 PXE Support Set the default value to: [Disabled]

PXE boot wait time

Wait time in seconds to press [ESC] key to abort the PXE boot.

Use either [+]/[-] or numeric keys to set the value.

PXE boot wait time Set the default value to: [5]

Media detect count

Use this item to set number of times presence of media will be checked.

Use either [+]/[-] or numeric keys to set the value.

Media detect count Set the default value to: [2]

▶ **NVMe Configuration**

Use this item to set NVMe Device options settings.

NVMe Configuration

▶ **Wake-up Function Settings**

Wake-up System With Fixed Time

**This item will only show when 'Wake-up System with Dynamic Time' is set as [Disabled].*

Use this item to enable or disable system wake-up by RTC alarm. When this function is enabled, system will wake on the time (hr::min::sec) specified.

The optional settings: [Disabled]; [Enabled].

Wake-up System With Fixed Time Set the default value to: [Disabled]

When set as [Enabled], user can make settings in the following items that appear:

Wake-up Hour

Use this item to select 0-23 for example enter 3 for 3am and 15 for 3pm.

Wake-up Hour Set the default value to: [0]

Wake-up Minute

Use this item to select 0-59.

Wake-up Minute Set the default value to: [0]

Wake-up Second

Use this item to select 0-59.

Wake-up Second Set the default value to: [0]

Wake-up System with Dynamic Time

**This item will only show when 'Wake-up System with Fixed Time' is set as [Disabled].*

Use this item to enable or disable system wake-up by RTC alarm. When enabled, system will wake on the current time + Increase minute(s).

Wake-up System with Dynamic Time Set the default value to: [Disabled]

When set as [Enabled], user can make settings in the following items that appear:

Wake-up Minute Increase

Use this item to select 1-60 minute(s).

Wake-up Minute Increase Set the default value to: [1]

USB Power Gating S4-S5

USB Wake-up is affected by ERP function in S4. Please disable ERP before activating this function in S4.

The optional settings: [Disabled]; [Enabled].

USB Power Gating S4-S5 Set the default value to: [Enabled]

PCIE Wake-up from S3-S5

The optional settings: [Disabled]; [Enabled].

PCIE Wake-up from S3-S5 Set the default value to: [Disabled]

▶ **PTT Configuration**

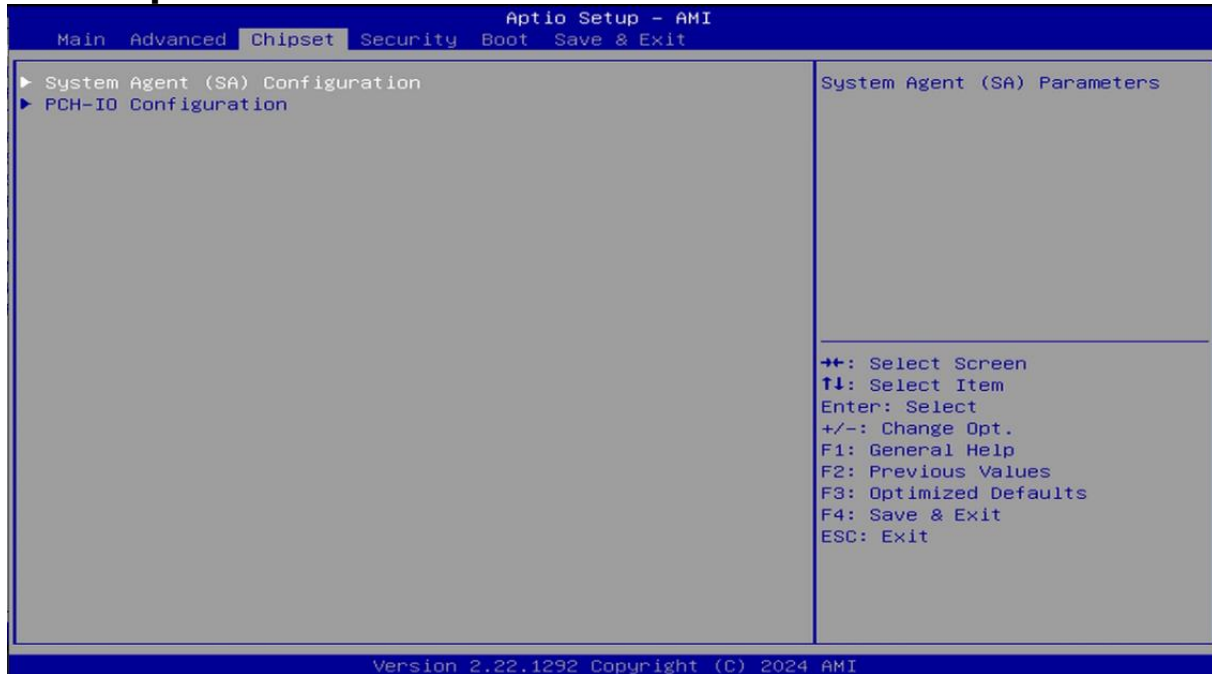
Press [Enter] to make settings for the following sub-items:

PTT Capability/state

TPM Device Selection

TPM Device Selection Set the default value to: [dTPM]

3-8 Chipset Menu



▶ **System Agent (SA) Configuration**

Press [Enter] to make settings for the following sub-items:

System Agent (SA) Configuration

GTT Size

Use this item to select GTT Size.

The optional settings are: [2MB]; [4MB]; [8MB].

GTT Size Set the default value to: [8MB]

DVMT Pre-Allocated

Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.

The optional settings: [32M]; [64M]; [96M]; [128M]; [160M]; [8M]; [12M]; [16M]; [20M]; [24M]; [28M]; [32M/F7]; [36M]; [40M]; [44M]; [48M]; [52M]; [56M]; [60M].

DVMT Pre-Allocated Set the default value to: [128M]

Active LFP

Use this item to select the Active LFP Configuration.

The optional settings: [Disabled]; [Enabled].

Active LFP Set the default value to: [Disabled]

When set as [Enabled], the following sub-item shall appear:

Panel Type

The optional settings are: [800x480 1ch 18-bit]; [800x600 1ch 18-bit]; [800x600 1ch 24-bit]; [1024x600 1ch 18-bit]; [1024x768 1ch 18-bit]; [1024x768 1ch 24-bit]; [1280x800 1ch 18-bit]; [1280x800 1ch 24-bit]; [1366x768 1ch 18-bit]; [1366x768 1ch 24-bit]; [1440x900 2ch 18-bit]; [1440x900 2ch 24-bit]; [1280x1024 2ch 24-bit]; [1680x1050 2ch 24-bit]; [1920x1080 2ch 24-bit]; [eDP].

Panel Type Set the default value to: [eDP]

Backlight Control

Use this item to make back light control setting.

The optional settings are: [PWM Inverted]; [PWM Normal].

Backlight Control Set the default value to: [PWM Normal]

Maximum Memory Frequency

Use this item to Maximum Memory Frequency selections in Mhz.

Maximum Memory Frequency Set the default value to: [Auto]

The optional settings: [Auto]; [2133]; [2200]; [2400]; [2600]; [2667]; [2800]; [2933]; [3000]; [3200].

Maximum Memory Frequency Set the default value to: [Auto]

▶ PCH-IO Configuration

Press [Enter] to make settings for the following sub-items:

PCH-IO Configuration

▶ **SATA Configuration**

SATA Device Options Settings.

SATA Configuration

SATA Controller(s)

Use this item to enable/disable SATA Device.

The optional settings are: [Enabled]; [Disabled].

SATA Controller(s) Set the default value to: [Enabled]

When set as [Enabled], the following sub-items shall appear:

SATA Mode Selection

Use this item to determines how SATA controller(s) operate.

The optional settings are: [AHCI].

SATA Mode Selection Set the default value to: [AHCI]

SATA Port

Port

Use this item to enable or disable SATA Port.

The optional settings are: [Disabled]; [Enabled].

Port Set the default value to: [Enabled]

M.2

Port

Use this item to enable or disable SATA Port.

The optional settings are: [Disabled]; [Enabled].

Port Set the default value to: [Enabled]

HD Audio

Use this item to control detection of the HD-Audio device.

Disabled= HDA will be unconditionally disabled.

Enabled= HDA will be unconditionally enabled.

The optional settings: [Disabled]; [Enabled].

HD Audio Set the default value to: [Enabled]

eMMC Controller

eMMC Controller Set the default value to: [Enabled]

***Note:** *"eMMC mode" is only applicable to specific models (64GB For JMTX-ADN8-N97004/JMTX-ADN8-N97008)*

The optional settings: [Disabled]; [Enabled].

I2C0 Controller

Use this item to enables/disables Seriallo Controller If given device is function 0 PSF disabling is skipped. PSF default will remain and device PCI CFG Space will still be visible. This is needed to allow PCI enumerator access functions above 0 in a multifunction device. The following devices depend on each other: I2C0 and I2C1,2,3 UART0 and UART1, SPI0,1 UART2 and I2C4,5 UART 0 (00:30:00) cannot be disabled when: 1. Child device is enabled like CNVi Bluetooth(_SB.PC00.UA00.BTH0) UART 0 (00:30:00) cannot be enabled when: 1. I2S Audio codec is enabled(_SB.PC00.I2C0.HDAC).

I2C0 Controller Set the default value to: [Disabled]

The optional settings: [Disabled]; [Enabled].

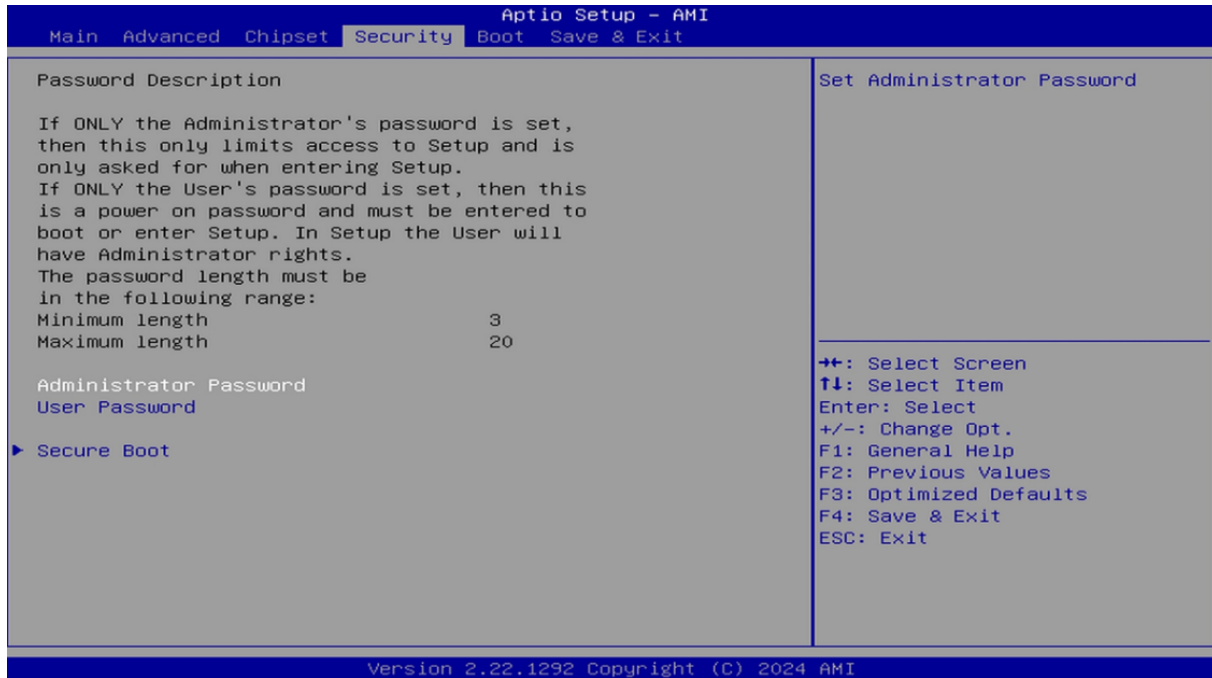
System State after Power Failure

Use this item to specify what state to go to when power is re-applied after a power failure.

The optional settings: [Always On]; [Always Off]; [Former State].

System State after Power Failure Set the default value to: [Always Off]

3-9 Security Menu



Security menu allow users to change administrator password and user password settings.

Administrator Password

If there is no password present on system, please press [Enter] to create new administrator password. If password is present on system, please press [Enter] to verify old password then to clear/change password. Press again to confirm the new administrator password.

User Password

If there is no password present on system, please press [Enter] to create new administrator password. If password is present on system, please press [Enter] to verify old password then to clear/change password. Press again to confirm the new administrator password.

▶ **Secure Boot**

Press [Enter] to make customized secure settings:

System Mode

Secure Boot

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.

The optional settings: [Disabled]; [Enabled].

Secure Boot Set the default value to: [Enabled]

Secure Boot Mode

Set UEFI Secure Boot Mode to Standard mode or Custom mode. This change is effective after save. After reset, this mode will return to Standard mode.

In Custom mode, Secure Boot Policy variables can be configured by a physically present user without full authentication.

The optional settings: [Standard]; [Custom].

Secure Boot Mode Set the default value to: [Standard]

When set as [**Custom**], user can make further settings in the following items that show up:

▶ **Restore Factory Keys**

Use this item to force system to User Mode, to install factory default Secure Boot key databases.

▶ **Reset To Setup Mode**

Use this item to Delete all secure boot key databases from NVRAM.

▶ **Key Management**

This item enables expert users to modify Secure Boot Policy variables without full authentication, which includes the following items:

Vendor Keys

Factory Key Provision

This item is for user to install factory default Secure Boot keys after the platform reset and while the System is in Setup mode.

The optional settings: [Disabled]; [Enabled].

Factory Key Provision Set the default value to: [Disabled]

▶ **Restore Factory Keys**

Use this item to force system into User Mode. Install factory default Secure Boot key databases.

▶ **Reset To Setup Mode**

Use this item to Delete all Secure Boot key databases from NVRAM.

▶ **Enroll Efi Image**

This item allows the image to run in Secure Boot mode.

Enroll SHA256 Hash certificate of a PE image into Authorized Signature Database (db).

▶ **Export Secure Boot variables**

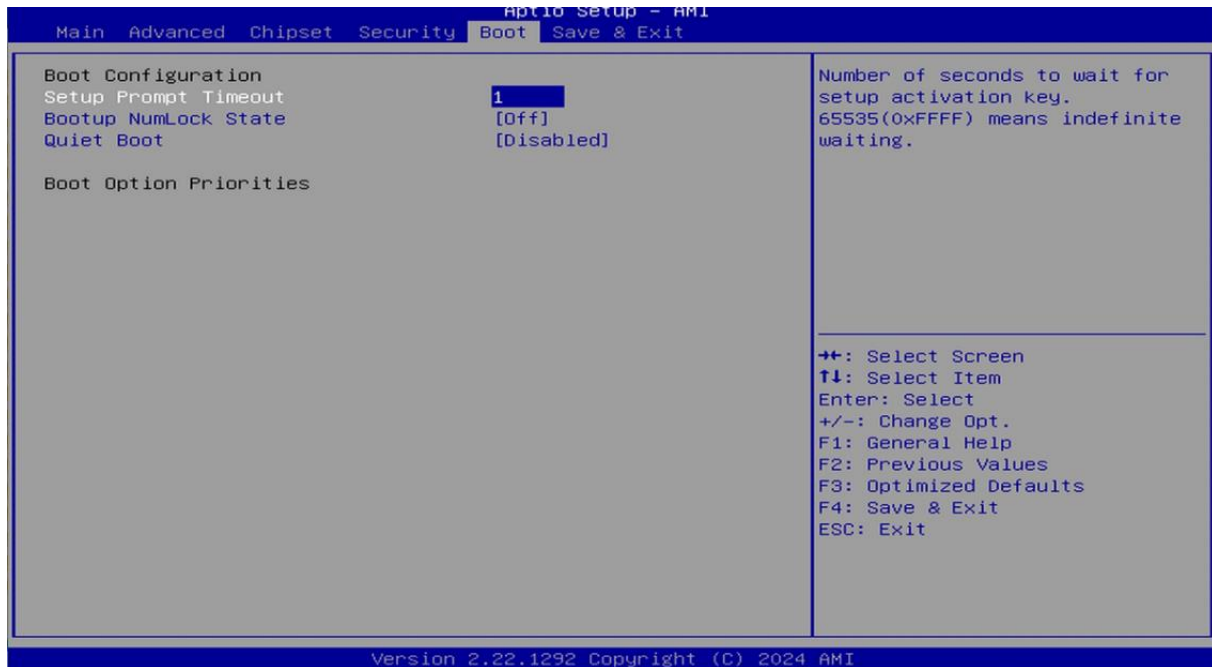
Use this item to save NVRAM content of Secure Boot variables to a file.

▶ **Platform Key(PK)/Key Exchange Keys(KEK)/Authorized Signatures(db)/Forbidden Signatures(dbx)/ Authorized TimeStamps(dbt)/OsRecovery Signatures(dbr)**

Use this item to enroll Factory Defaults or load certificates from a file:

1. Public Key Certificate:
 - a) EFI_SIGNATURE_LIST
 - b) EFI_CERT_X509 (DER)
 - c) EFI_CERT_RSA2048 (bin)
 - d) EFI_CERT_SHAXXX
 2. Authenticated UEFI Variable
 3. EFI PE/COFF Image (SHA256)
- Key Source: Factory, Modified, Mixed

3-10 Boot Menu



Boot Configuration

Setup Prompt Timeout

Use this item to set number of seconds to wait for setup activation key. 65535 (0xFFFF) means indefinite waiting.

Setup Prompt Timeout Set the default value to: [1]

Bootup NumLock State

Use this item to select keyboard NumLock state.

The optional settings: [On]; [Off].

Bootup NumLock State Set the default value to: [Off]

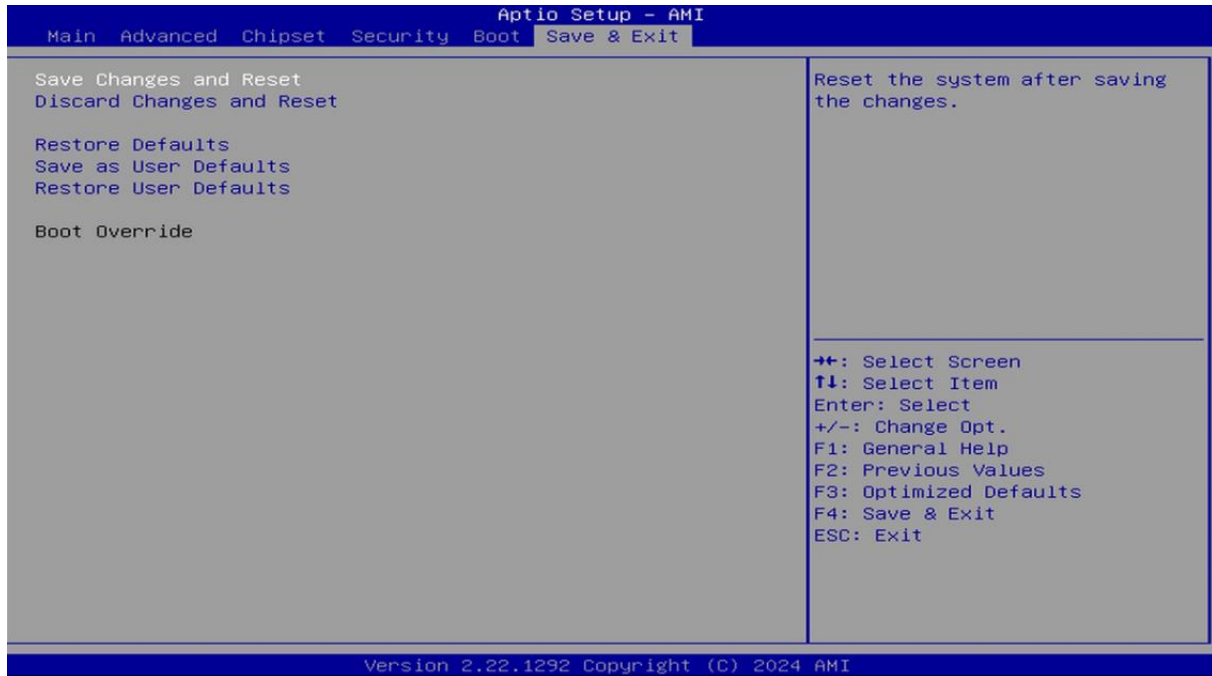
Quiet Boot

The optional settings: [Disabled]; [Enabled].

Quiet Boot Set the default value to: [Disabled]

Boot Option Priorities

3-11 Save & Exit Menu



Save Changes and Reset

This item allows user to reset the system after saving the changes.

Discard Changes and Reset

This item allows user to reset the system setup without saving any changes.

Restore Defaults

Use this item to restore /load default values for all the setup options.

Save as User Defaults

Use this item to save the changes done so far as user defaults.

Restore User Defaults

Use this item to restore the user defaults to all the setup options.

Boot Override