FWS-2370

Desktop Network Appliance

User Manual 1st Ed

Last Updated: October 22, 2024

Copyright Notice

Acknowledgement

Packing List

Before setting up your product, please make sure the following items have been shipped:

Item	Quantity
● FWS-2370	1
● Power Adapter	1
● SATA Cable	1
● Power Cable	1

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

About this Document

This User's Manual contains all the essential information, such as detailed descriptions and explanations on the product's hardware and software features (if any), its specifications, dimensions, jumper/connector settings/definitions, and driver installation instructions (if any), to facilitate users in setting up their product.

Users may refer to the product page at AAEON.com for the latest version of this document.

Safety Precautions

Please read the following safety instructions carefully. It is advised that you keep this manual for future references

1. All cautions and warnings on the device should be noted.
2. All cables and adapters supplied by AAEON are certified and in accordance with the material safety laws and regulations of the country of sale. Do not use any cables or adapters not supplied by AAEON to prevent system malfunction or fires.
3. Make sure the power source matches the power rating of the device.
4. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
5. Always completely disconnect the power before working on the system's hardware.
6. No connections should be made when the system is powered as a sudden rush of power may damage sensitive electronic components.
7. If the device is not to be used for a long time, disconnect it from the power supply to avoid damage by transient over-voltage.
8. Always disconnect this device from any AC supply before cleaning.
9. While cleaning, use a damp cloth instead of liquid or spray detergents.
10. Make sure the device is installed near a power outlet and is easily accessible.
11. Keep this device away from humidity.
12. Place the device on a solid surface during installation to prevent falls
13. Do not cover the openings on the device to ensure optimal heat dissipation.
14. Watch out for high temperatures when the system is running.
15. Do not touch the heat sink or heat spreader when the system is running
16. Never pour any liquid into the openings. This could cause fire or electric shock.

17. As most electronic components are sensitive to static electrical charge, be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and contain all electronic components in any static-shielded containers.

18. If any of the following situations arises, please the contact our service personnel:

    i. Damaged power cord or plug

    ii. Liquid intrusion to the device

    iii. Exposure to moisture

    iv. Device is not working as expected or in a manner as described in this manual

    v. The device is dropped or damaged

    vi. Any obvious signs of damage displayed on the device

19. DO NOT LEAVE THIS DEVICE IN AN UNCONTROLLED ENVIRONMENT WITH TEMPERATURES BEYOND THE DEVICE'S PERMITTED STORAGE TEMPERATURES (SEE CHAPTER 1) TO PREVENT DAMAGE.

FCC Statement

This device complies with Part 15 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.

Caution:

There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions and your local government's recycling or disposal directives.

Attention:

Il y a un risque d'explosion si la batterie est remplacée de façon incorrecte.
Ne la remplacer qu'avec le même modèle ou équivalent recommandé par le constructeur. Recycler les batteries usées en accord avec les instructions du fabricant et les directives gouvernementales de recyclage.

产品中有毒有害物质或元素名称及含量

AAEON System QO4-381 Rev.A0

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚(PBDE)
印刷电路板及其电子组件	×	○	○	○	○	○
外部信号连接器及线材	×	○	○	○	○	○
外壳	○	○	○	○	○	○
中央处理器与内存	×	○	○	○	○	○
硬盘	×	○	○	○	○	○
液晶模块	×	×	○	○	○	○
光驱	×	○	○	○	○	○
触控模块	×	○	○	○	○	○
电源	×	○	○	○	○	○
电池	×	○	○	○	○	○

本表格依据 SJ/T 11364 的规定编制。

○：表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572标准规定的限量要求以下。

×：表示该有害物质的某一均质材料超出了GB/T 26572的限量要求，然而该部件仍符合欧盟指令2011/65/EU 的规范。

备注：

一、此产品所标示之环保使用期限，系指在一般正常使用状况下。

二、上述部件物质中央处理器、内存、硬盘、光驱、电源为选购品。

三、上述部件物质液晶模块、触控模块仅一体机产品适用。

China RoHS Requirement (EN)

Hazardous and Toxic Materials List

AAEON System QO4-381 Rev.A0

Component Name	Hazardous or Toxic Materials or Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBBs)	Polybrominated diphenyl ethers (PBDEs)
PCB and Components	X	O	O	O	O	O
Wires & Connectors for Ext.Connections	X	O	O	O	O	O
Chassis	O	O	O	O	O	O
CPU & RAM	X	O	O	O	O	O
HDD Drive	X	O	O	O	O	O
LCD Module	X	X	O	O	O	O
Optical Drive	X	O	O	O	O	O
Touch Control Module	X	O	O	O	O	O
PSU	X	O	O	O	O	O
Battery	X	O	O	O	O	O

This form is prepared in compliance with the provisions of SJ/T 11364.

O: The level of toxic or hazardous materials present in this component and its parts is below the limit specified by GB/T 26572.

X: The level of toxic of hazardous materials present in the component exceed the limits specified by GB/T 26572, but is still in compliance with EU Directive 2011/65/EU (RoHS 2).

Notes:

1. The Environment Friendly Use Period indicated by labelling on this product is applicable only to use under normal conditions.
2. Individual components including the CPU, RAM/memory, HDD, optical drive, and PSU are optional.
3. LCD Module and Touch Control Module only applies to certain products which feature these components.

Table of Contents

Chapter 1

Product Specifications

1.1 Specifications

System	
Form Factor	Desktop Network Appliance
Processor	Intel Atom® C5000/P5300 Series (Default: Intel Atom® Processor C5315)
Chipset	SoC
System Memory	DDR4 SODIMM x 2, up to 64GB (ECC/Non-ECC)

Network	
Ethernet	Intel® Ethernet Controller I226-V, 2.5GbE x 4 1GbE Marvell® Alaska® 88E1543, 1GbE x 4 10G SFP+ x 4
Bypass	2 Pairs

Display	
Graphics Controller	Intel® Integrated
Connector	N/A

Storage	
HDD	SATA 6Gb/s x 2 (co-lay M.2 2242 M-Key x 1)
CF/CFast/mSATA	eMMC 32GB, up to 128GB

Expansion Interface

PCIe Slot	PCIe [x4] x 1 (PCIe [x1] x 2) for 2.5GbE Intel® Ethernet Controller I226-V Module x 2 (optional: PoE/PoE+)
Mini-PCIe Slot	M.2 2230 E-Key x 1 (PCIe) for Wi-Fi co-lay half-size Mini Card Slot x 1 (PCIe) M.2 3052 B-Key x 1 (USB 2.0) for 5G/LTE co-lay full-size Mini Card Slot with push-pin SIM Slot x 1 (PCIe + USB 2.0) M.2 3052 B-Key x 1 (USB 3.0 + USB 2.0) for 5G/LTE co-lay full-size Mini Card Slot with push-pin SIM Slot x 1 (USB 3.0 + USB 2.0)
USB	USB 3.0 x 2 (shared with PCIe Slot for PoE, default USB 2.0 x 2)

Miscellaneous

RTC	Internal RTC
Watchdog Timer	1~255 step by Software Programmable
Software Button	GPIO Programmable Push Button x 1
TPM	TPM 2.0
GPIO	Reserve Internal Pin Header 8-bit Digital I/O Interface (4-in/4-out)
Fan	Smart Fan x 1 (Default), Internal Smart Fan Pin Header x 1 (Reserve)
MTBF (Hours)	TBD
Color	Black

Environmental

Power Consumption	Dual in 12V 60W Adapter (w/o POE)
	Dual in 12V 90W Adapter (w/ POE)
Operating Temperature	32°F ~ 104°F (0°C ~ 40°C)
Storage Temperature	-4°F ~ 140°F (-20°C ~ 60°C)
Operating Humidity	10% ~ 80%
Storage Humidity	10% ~ 80% @40°C, non-condensing
Vibration	0.5G/5 ~ 500Hz/operation (2.5" HDD)
	1.5G/5 ~ 500Hz/non-operation
Shock	10G peak acceleration (11 m sec. duration), operation
	20G peak acceleration (11 m sec. duration), non-operation
Dimension (W x D x H)	10.2" x 7" x 1.7" (260mm x 178mm x 44mm)

I/O

Front Panel	Type-C Console x 1 (optional)
	Micro SIM x 2
	Main Board LAN LED x 24 (Active/Speed) Onboard
	Module LAN LED x 4 (Active/Speed) via Cable (optional)
	Bypass LED x 2 (LANE 6, 7, 9, 10)
	Storage LED x 1
	Status LED x 1
	Power LED x 2
	Antenna Hole x 5
	Antenna Hole x 2 (Right Panel)
	Antenna Hole x 1 (Left Panel)

I/O

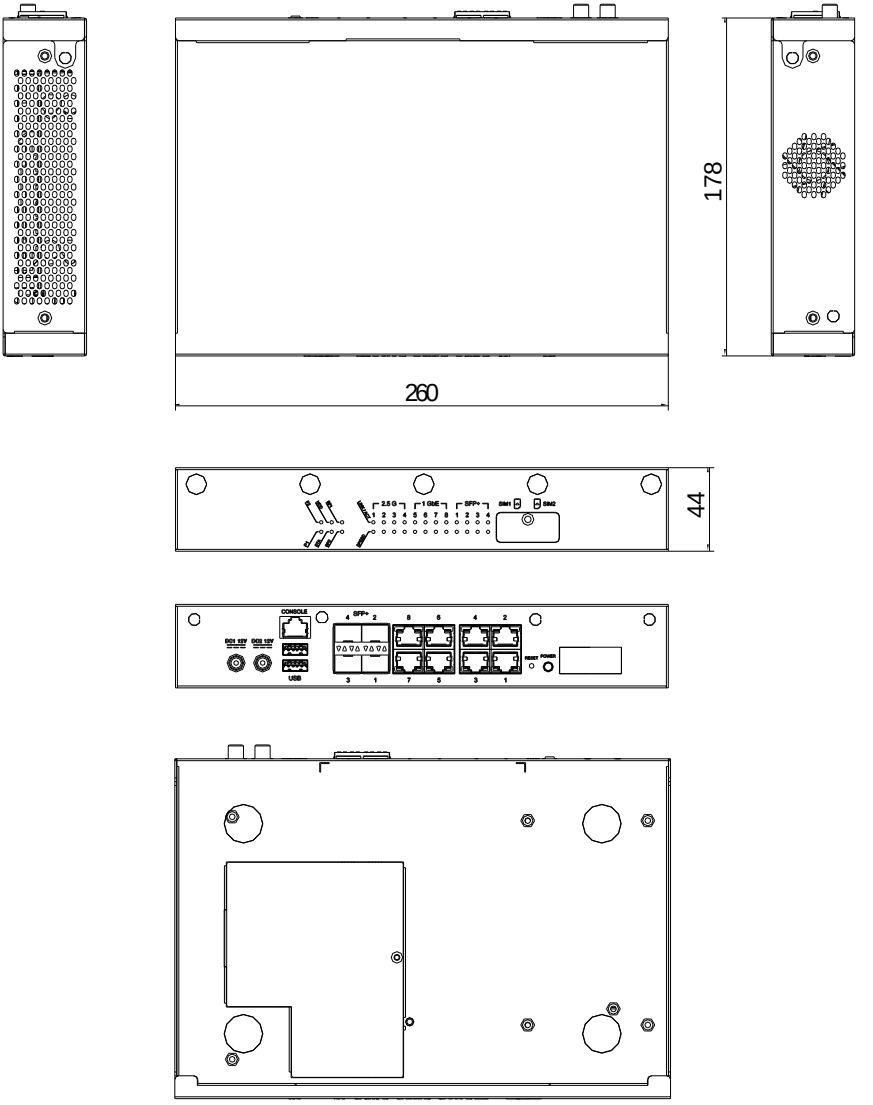
Rear Panel	Lockable DC Power Input Connector x 2
	RJ-45 Console x 1
	USB 3.0 Port x 2
	10G SFP+ x 4
	1GbE RJ-45 x 4
	2.5GbE RJ-45 x 4
	SW Reset Button x 1
	Power Button x 1
	Antenna Hole x 4
	Optional 2.5GbE LAN Module x 2 (optional with PoE af/at)

Chapter 2

Hardware Information

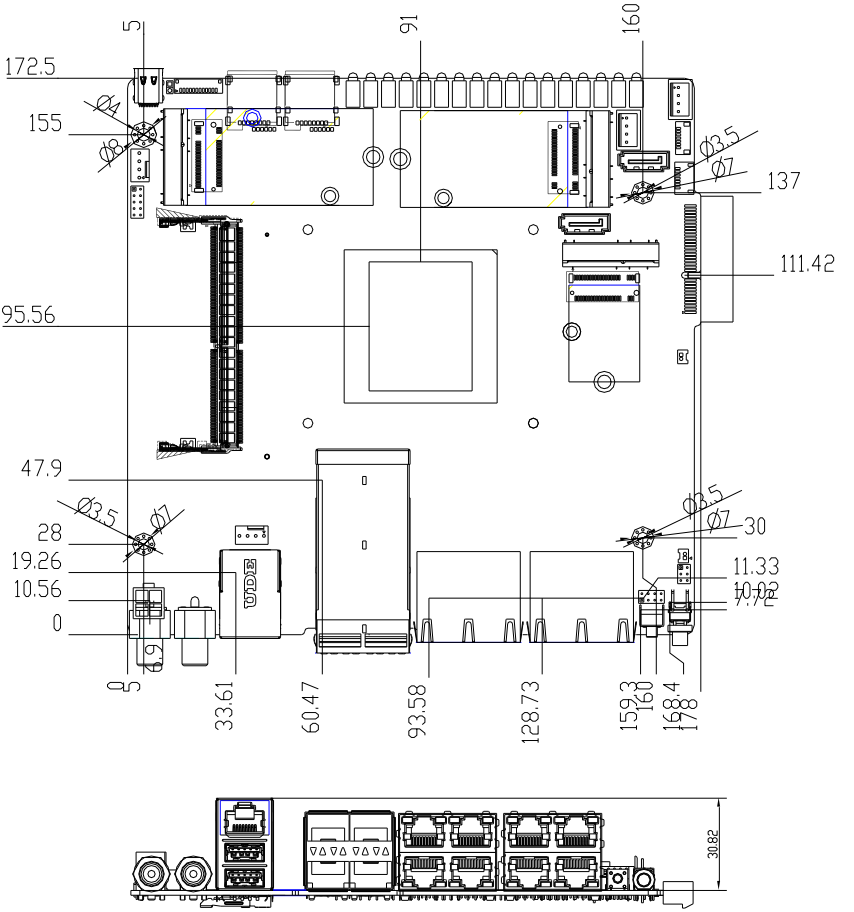
2.1 Dimensions

System

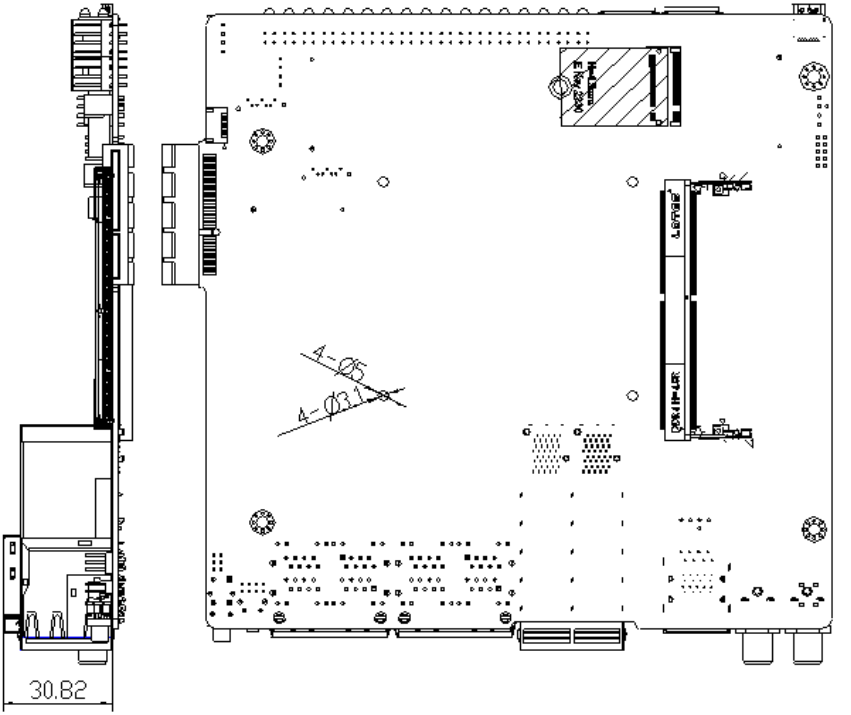


Board

Top


172.5
155
95.56
47.9
28
19.26
10.56
0
5
91
160
137
111.42
30
11.33
0
33.61
60.47
93.58
128.73
159.3
160
168.4
178
30.82

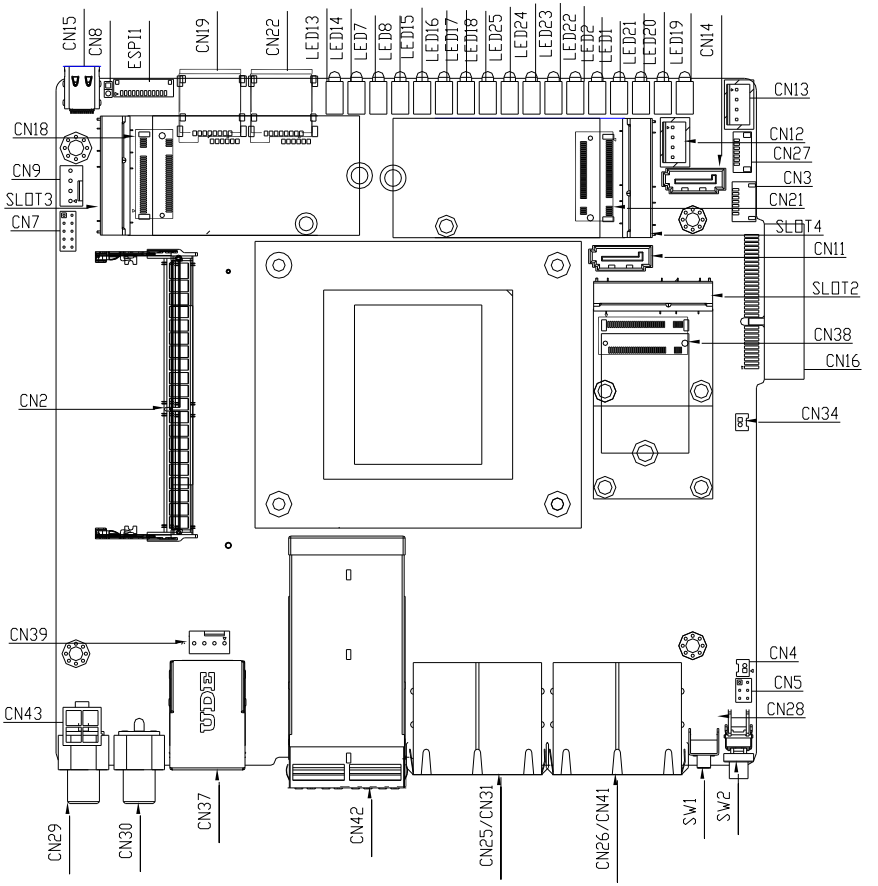
Bottom



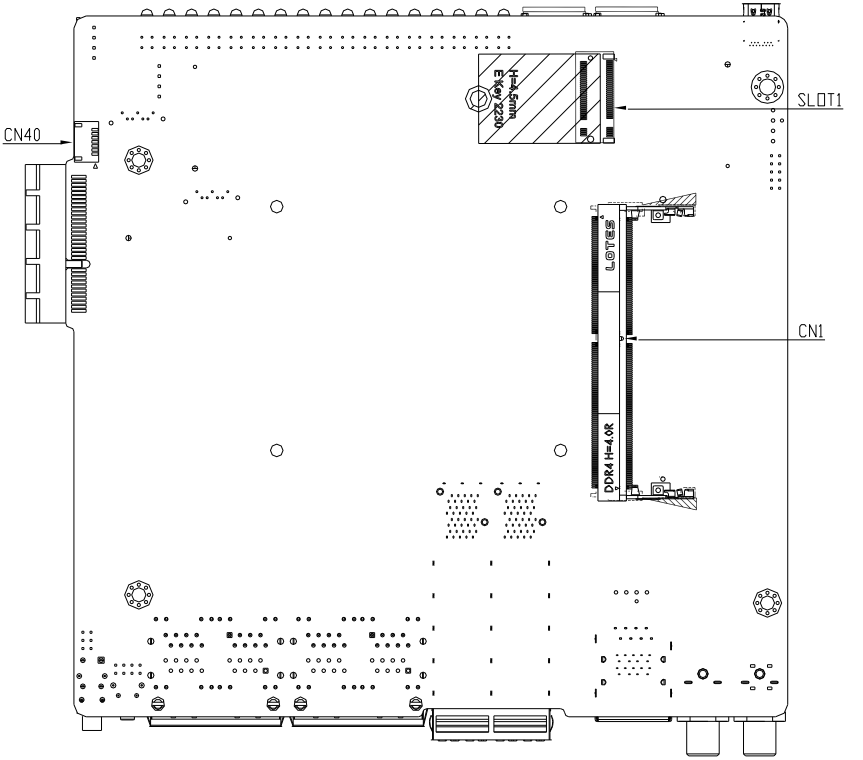
2.2 Jumpers and Connectors

Note: Components and their locations may vary depending upon which configuration was purchased. If you have questions about your FWS-2370, visit our website to contact an AAEON support representative.

Component Side



Solder Side

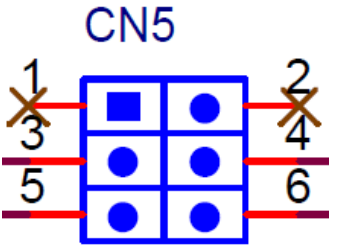


2.3 List of Jumpers

Please refer to the table below for all of the board's jumpers that you can configure for your application

Label	Function
CN5	Clear CMOS

2.3.1 Clear CMOS (CN5)



Clear CMOS	
Normal (Default)	2-4
Clear CMOS	4-6

Clear RTC	
Normal (Default)	1-3
Clear RTC	3-5

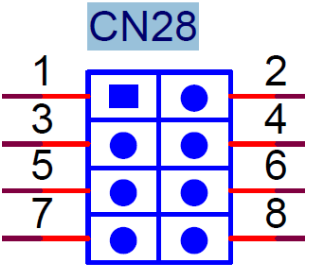
2.4 List of Connectors

Please refer to the table below for all of the board's connectors that you can configure for your application. (Optional) denotes a component that is not included on the standard configuration. Some optional components may replace standard components. Contact AAEON support if you have any questions about the configuration of your FWS-2370 system.

Label	Function
CN1	DDR4 SODIMM
CN11	SATA Connector
CN12	SATA Power
CN13	SATA Power
CN14	SATA Connector (co-lay M.2 SSD Slot 1)
CN15	USB Type-C (USB 2.0) for Console (BOM Optional)
CN16	GF for POE0 Card
CN18	M.2 3052 B-Key
CN19	Push-Push Micro SIM Card for CN18 or Mini Card Slot 3
CN2	DDR4 SODIMM
CN21	M.2 3052 B-Key
CN22	Push-Push Micro SIM Card for CN21 or Mini Card Slot 4
CN24	10G FSP+
CN25	1GbE RJ-45
CN26	2.5GbE RJ-45
CN27	PIC Debug Port
CN28	Power Switch/HW Reset Header
CN29	+12Vin 1
CN3	BIOS Flash Header
CN30	+12Vin 2
CN34	SMBus Header
CN37	RJ-45 Console Port + USB 3.0 x 2 (Default: Only USB 2.0 if using PoE Module)
CN38	M.2 2230 E-Key for Wi-Fi (PCIe)
CN39	CPU Fan (BOM SKU)

Label	Function
CN4	Battery Header
CN40	LED Signal Header for PoE
CN5	Clear CMOS
CN7	Digital IO Header
CN8	Case-Open Connector
CN9	CPU Fan
ESPI1	eSPI Debug Port
LED1	PoE LAN (I226) Green: ACT/Green: 2.5GbE, Orange: 1GbE
LED13	LAN 8 (SFP+) Green: ACT/Blue: 10G, Green: 1GbE
LED14	LAN 7 (SFP+) Green: ACT/ Blue: 10G, Green: 1GbE
LED15	LAN 12 (MVL) Green: ACT/ Green: 100M, Orange: 1GbE
LED16	LAN 11 (MVL) Green: ACT/ Green: 100M, Orange: 1GbE
LED17	LAN 10 (MVL) Green: ACT/Green: 100M, Orange: 1GbE
LED18	LAN 9 (MVL) Green: ACT/Green: 100M, Orange: 1GbE
LED19	Redundant LED
LED2	PoE LAN (I226) Green: ACT/Green: 2.5GbE, Orange: 1GbE
LED20	Status LED/HDD LED
LED21	Bypass LED
LED22	LAN 1 (I226) Green: ACT/Green: 2.5GbE, Orange: 1GbE
LED23	LAN 2 (I226) Green: ACT/Green: 2.5GbE, Orange: 1GbE
LED24	LAN 3 (I226) Green: ACT/Green: 2.5GbE, Orange: 1GbE
LED25	LAN 4 (I226) Green: ACT/Green: 2.5GbE, Orange: 1GbE
LED7	LAN 6 (SFP+) Green: ACT/Blue: 10G, Green: 1GbE
LED8	LAN 5 (SFP+) Green: ACT/Blue: 10G, Green: 1GbE
Slot1	M.2 2242 M-Key (SATA for SSD)
Slot2	Mini PCIe Connector (PCIe)
Slot3	Mini PCIe Connector (Full-size USB 3.0 + USB 2.0) for 5G/LTE
Slot4	Mini PCIe Connector (Full-size, PCIe + USB 2.0) for 5G/LTE
SW1	Reset Button
SW2	Power Button

2.4.1 Power Switch/HW Reset Header (CN28)

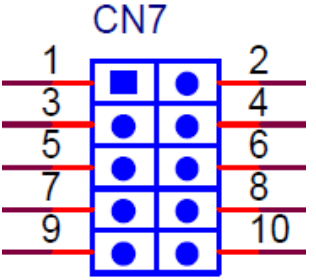


Pin	Signal	Pin	Signal
1	Power Swich	2	GND
3	HW Reset	4	GND
5	PWR external LED+	6	GND
7	SATA external LED+	8	SATA external LED-

2.4.2 Case-Open Connector (CN8)

Pin	Signal
1	GND
2	SIO_Case Open

2.4.3 Digital IO Header (CN7)



Pin	Signal	Pin	Signal
1	DIO1	2	DIO2
3	DIO3	4	DIO4
5	DIO5	6	DIO6
7	DIO7	8	DIO8
9	+V5S	10	GND

Chapter 3

AMI BIOS Setup

3.1 System Test and Initialization

The system uses certain routines to perform testing and initialization during the boot up sequence. If an error, fatal or non-fatal, is encountered, the system will output a few short beeps or display an error message. The system can usually continue the boot up sequence with non-fatal errors.

The system configuration verification routines check the current system configuration against the values stored in the CMOS memory and BIOS NVRAM. If a system configuration is not found or an error is detected, the system will load the default configuration and reboot automatically.

There are three situations in which the CMOS settings will need to be set or changed:

- Starting the system for the first time
- The system hardware has been changed
- The system configuration was reset by the Clear CMOS jumper
- The CMOS memory has lost power and the configuration information is erased

The system's CMOS memory uses a backup battery for data retention. The battery must be replaced when it runs down.

3.2 AMI BIOS Setup

The AMI BIOS ROM has a pre-installed Setup program that allows users to modify basic system configurations, which is stored in the battery-backed CMOS RAM and BIOS NVRAM so that the information is retained when the power is turned off.

To enter BIOS Setup, press <Del> or <Esc> immediately while your computer is powering up.

The function for each interface can be found below.

Main

Basic information and set Date & Time.

Advanced

Major feature configuration (e.g.: Super IO, Hardware Monitor, Digital I/O, etc.).

Platform Configuration

For PCH and Server ME configuration

Socket Configuration

Configures processor settings

Security

Set BIOS Administrator/User password.

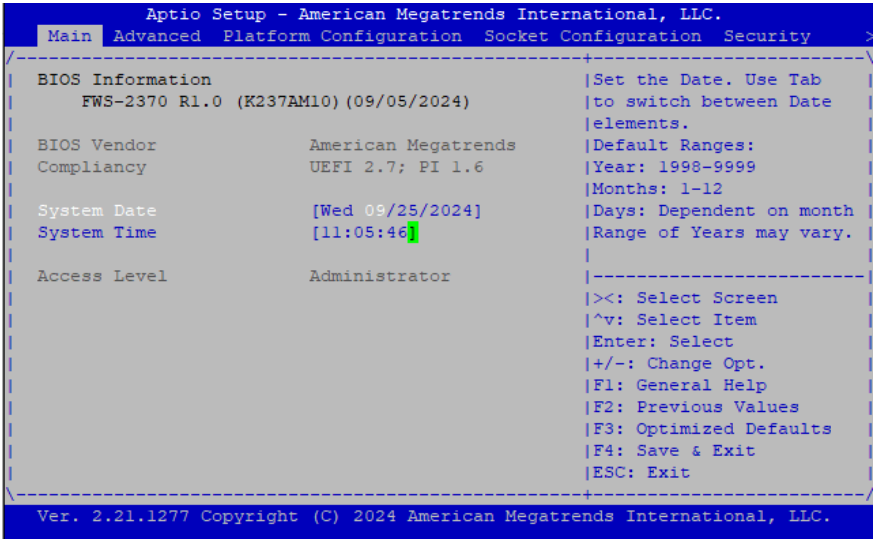
Boot

Adjust Boot configuration/priorities.

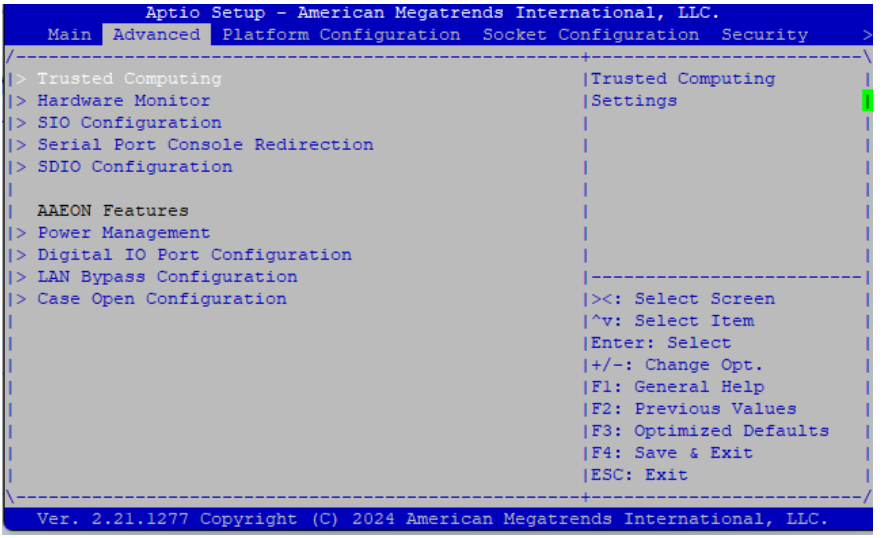
Save & Exit

Save changes/restore defaults and exit system setup.

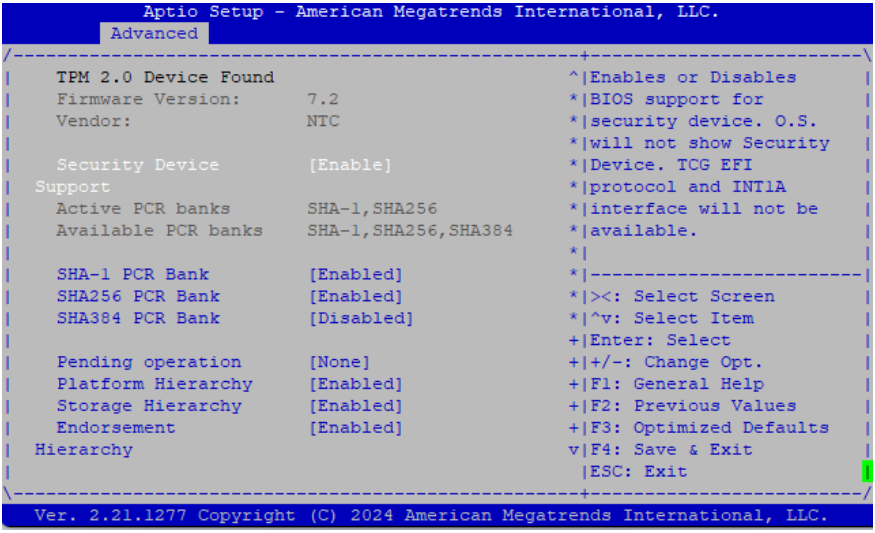
3.3 Setup Submenu: Main



3.4 Setup Submenu: Advanced



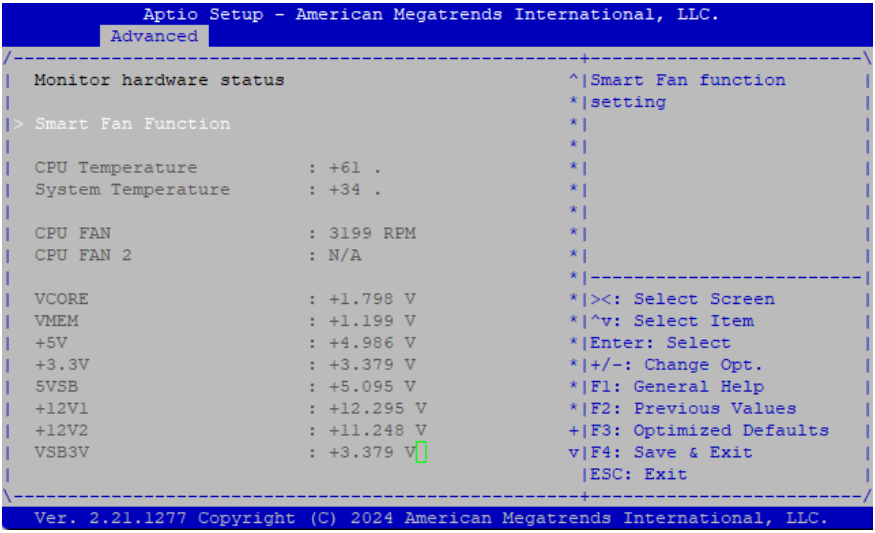
3.4.1 Trusted Computing



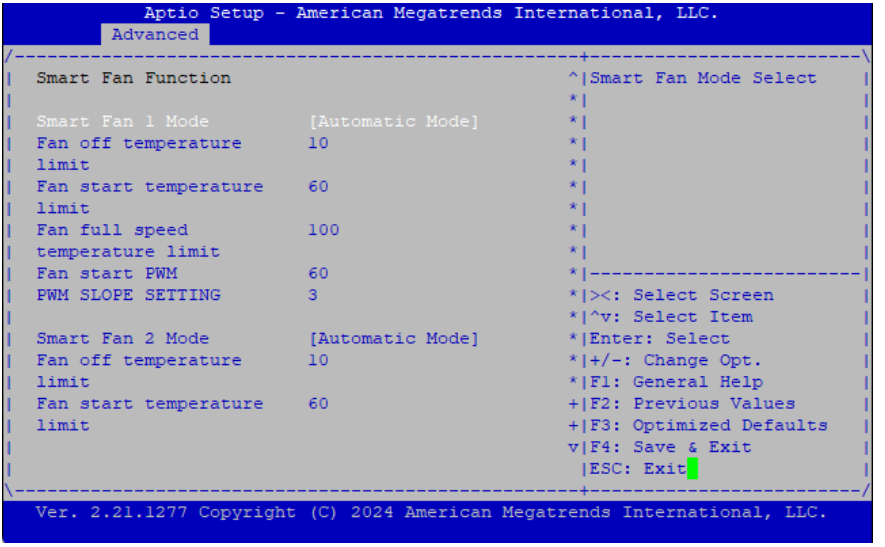
Options Summary		
Security Device Support	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.		
SHA-1 PCR Bank	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable SHA-1 PCR Bank		
SHA256 PCR Bank	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable SHA256 PCR Bank.		
SHA384 PCR Bank	**Disabled**	Optimal Default, Failsafe Default
	Enabled	
Enable or Disable SHA384 PCR Bank.		
Pending operation	**None**	Optimal Default, Failsafe Default
	TPM Clear	
Schedule an Operation for the Security Device. NOTE: Your Computer will reboot during restart in order to change State of Security Device.		
Platform Hierarchy	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable Platform Hierarchy		

Options Summary		
Storage Hierarchy	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable Storage Hierarchy		
Endorsement Hierarchy	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable Endorsement Hierarchy		
TPM2.0 UEFI Spec Version	TCG_1_2	
	TCG_2	Optimal Default, Failsafe Default
Select the TCG2 Spec Version Support, TCG_1_2: The Compatible mode for Win8/Win10, TCG_2: Support new TCG2 protocol and event format for Win10 or later		
Physical Presence Spec Version	1.2	
	1.3	Optimal Default, Failsafe Default
Select to Tell O.S. to support PPI Spec Version 1.2 or 1.3. Note some HCK tests might not support 1.3		
Device Select	TPM 1.2	
	TPM 2.0	
	Auto	Optimal Default, Failsafe Default
TPM 1.2 will restrict support to TPM 1.2 devices, TPM 2.0 will restrict support to TPM 2.0 devices, Auto will support both with the default set to TPM 2.0 devices if not found, TPM 1.2 devices will be enumerated		
Disable Block Sid	**Disabled**	Optimal Default, Failsafe Default
	Enabled	
Override to allow SID authentication in TCG Storage device		

3.4.2 Hardware Monitor

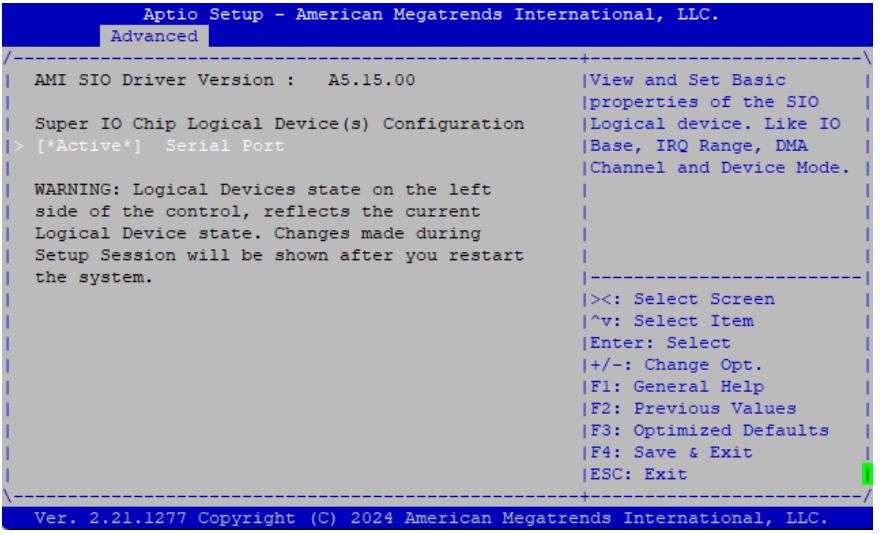


3.4.3 Smart Fan Function

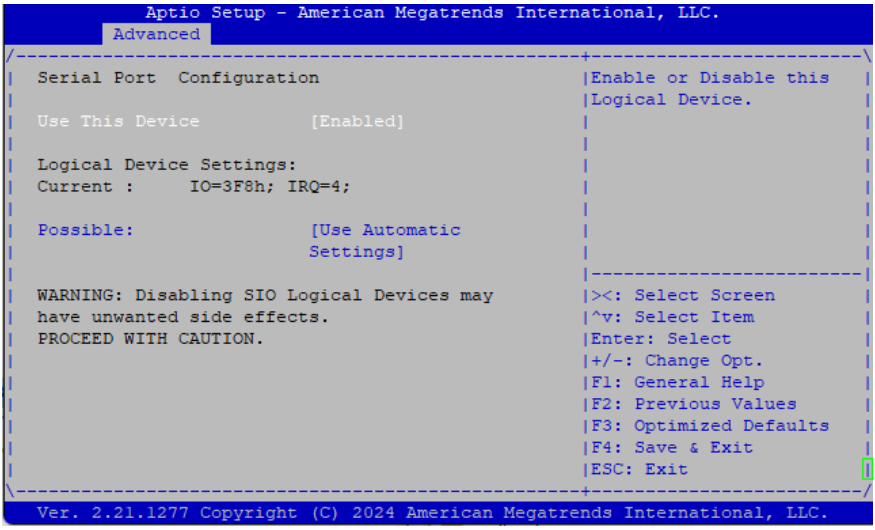


Options Summary		
Smart Fan Mode	Software Mode	
	Automatic Mode	Optimal Default, Failsafe Default
Smart Fan Mode Select		
Manual PWM Setting	127	Optimal Default, Failsafe Default
Manual Mode Fan will work with this Manual PWM value		
Fan off temperature limit	10	Optimal Default, Failsafe Default
Fan will off when temperature lower than this limit		
Fan start temperature limit	60	Optimal Default, Failsafe Default
Fan will work when temperature higher than this limit		
Fan full temperature limit	100	Optimal Default, Failsafe Default
Fan will full speed when temperature higher than this limit		
Fan start PWM	60	Optimal Default, Failsafe Default
Fan will start with this PWM value		
Fan slope setting	3	Optimal Default, Failsafe Default
PWM SLOPE Selection Slope = PWM value/℃		

3.4.4 SIO Configuration

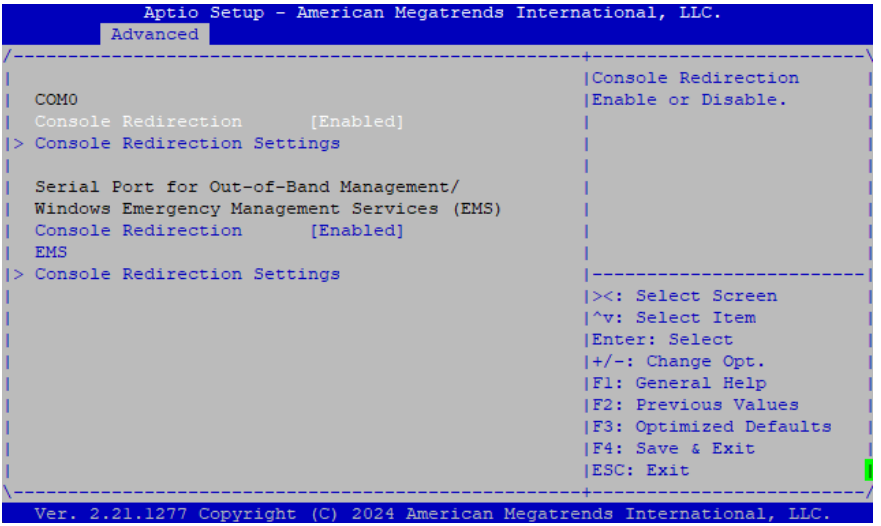


3.4.5 Serial Port Configuration



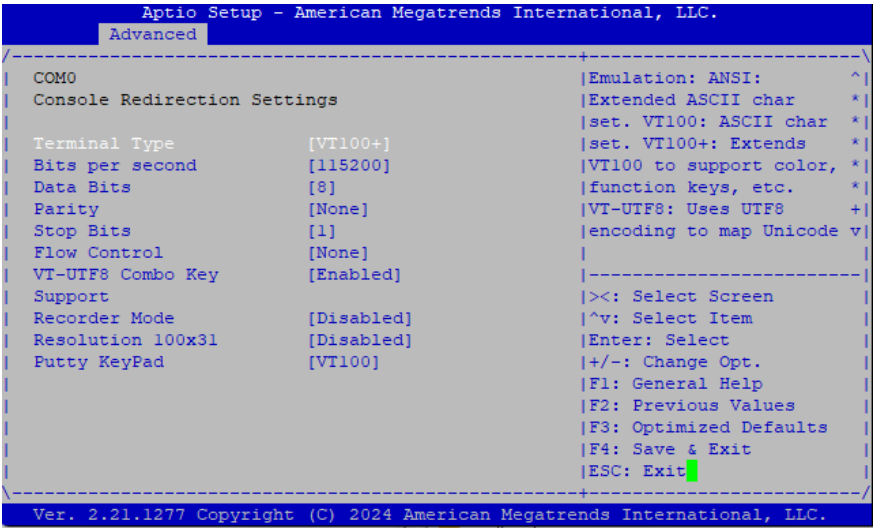
Options Summary		
Use This Device	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable this Logical Device.		
Possible:	Use Automatic Settings	Optimal Default, Failsafe Default
	IO=2F8h; IRQ=3;	
	IO=3F8h; IRQ=4;	
Allows the user to change the device resource settings. New settings will be reflected on this setup page after system restarts.		

3.4.6 Serial Port Console Redirection



Options Summary		
Console Redirection	Disabled	
	Enabled	Optimal Default, Failsafe Default
Console Redirection Enable or Disable		
Console Redirection	Disabled	
	Enabled	Optimal Default, Failsafe Default
Console Redirection Enable or Disable		

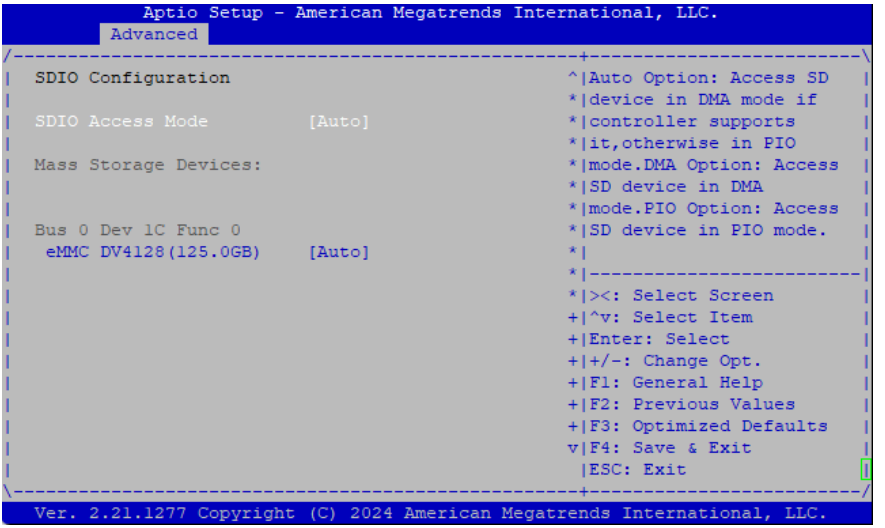
3.4.7 Console Redirection Settings



Options Summary		
Terminal Type	VT100	
	VT100+	Optimal Default, Failsafe Default
	VT-UTF8	
	ANSI	
Emulation: 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		
Bits per Second	9600	
	19200	
	38200	
	57600	
	115200	Optimal Default, Failsafe Default
Selects serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.		
Data Bits	7	
	8	Optimal Default, Failsafe Default
Data Bits		

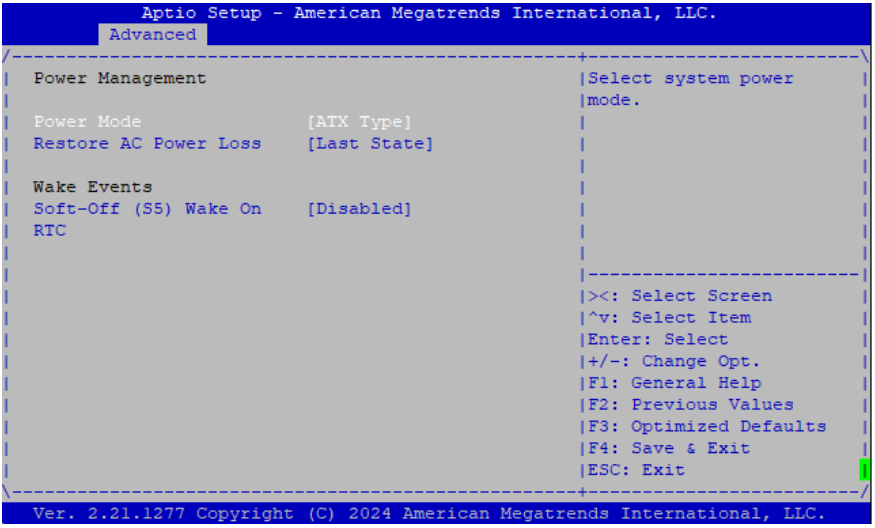
Options Summary		
Parity	None	Optimal Default, Failsafe Default
	Even	
	Odd	
	Mark	
	Space	
A Parity bit can be sent with the data bits to detect some transmission errors. Even: parity bit is 0 if the num of 1's in the data bits is even. Odd: parity bit is 0 if the num of 1's in the data bits is odd. Mark: parity bit is always 1. Space: Parity bit is always 0 Mark and Space Parity do not allow for error detection. They can be used as an additional data bit.		
Stop Bits	0	
	1	Optimal Default, Failsafe Default
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.		
Flow control	None	Optimal Default, Failsafe Default
	Hardware RTS / CTS	
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.		
VT-Combo Key Support	Disable	
	Enable	Optimal Default, Failsafe Default
Enable VT-UTF8 Combination Key Support for ANSI/VT100 terminals.		
Recorder Mode	Disable	Optimal Default, Failsafe Default
	Enable	
With this mode enabled only text will be sent. This is to capture Terminal data		
Resolution 100x31	Disable	Optimal Default, Failsafe Default
	Enable	
Enables or disables extended terminal resolution.		
Resolution 100x31	VT100	Optimal Default, Failsafe Default
	LINUX	
	XTERMR6	
	SCO	
	ESCN	
	VT400	
Select FunctionKey and KeyPad on Putty.		

3.4.8 SDIO Configuration



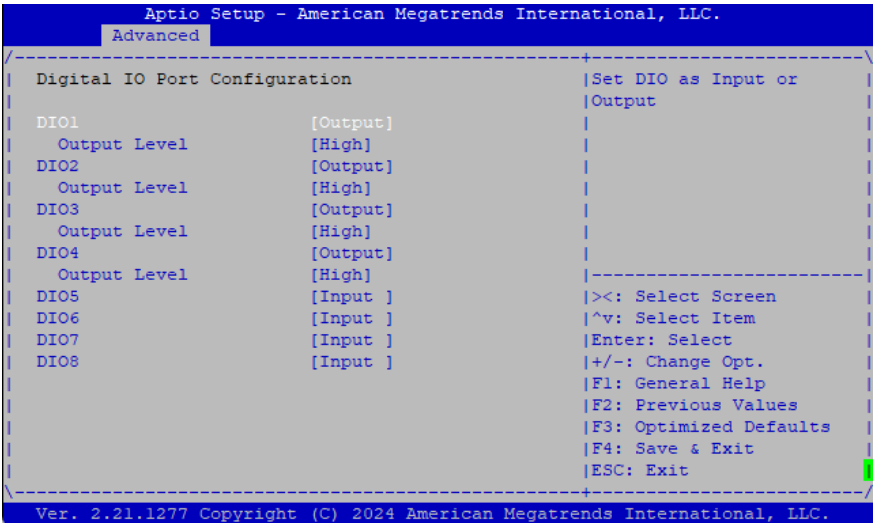
Options Summary		
SDIO Access Mode	Auto	Optimal Default, Failsafe Default
	ADMA	
	SDMA	
	PIO	
Auto Option: Access SD device in DMA mode if controller supports it, otherwise in PIO mode. DMA Option: Access SD device in DMA mode. PIO Option: Access SD device in PIO mode		

3.4.9 Power Management



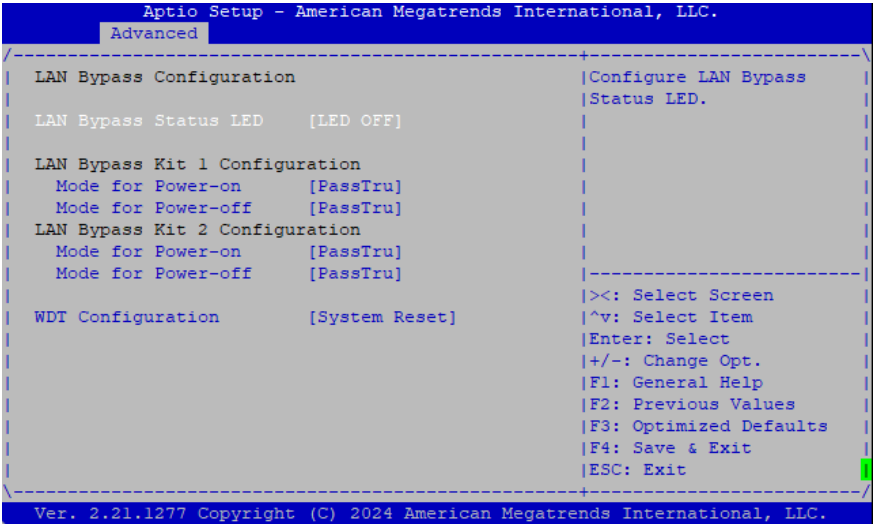
Options Summary		
Power Mode	ATX Type	Optimal Default, Failsafe Default
	AT Type	
Select Power Supply Mode.		
Restore AC Power Loss	Power Off	
	Power On	
	Last State	Optimal Default, Failsafe Default
Select AC power state when power is re-applied after a power failure.		
RTC wake system from S5	Disabled	Optimal Default, Failsafe Default
	Fixed Time	
	Dynamic Time	
Enable or disable System wake on alarm event. When enabled, System will wake on the hr::min::sec specified		

3.4.10 Digital IO Port Configuration



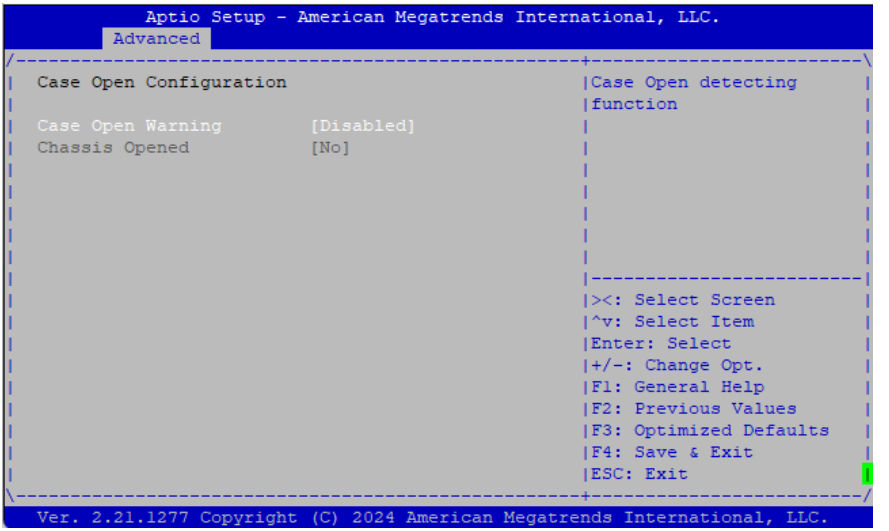
Options Summary		
DIO Port 1 ~ 4	**Output**	Optimal Default, Failsafe Default
	Input	
Set DIO as Input or Output		
Output Level	**High**	Optimal Default, Failsafe Default
	Low	
Set output level when DIO pin is output		
DIO Port 5 ~ 8	Output	
	Input	Optimal Default, Failsafe Default
Set DIO as Input or Output		

3.4.11 LAN Bypass Configuration



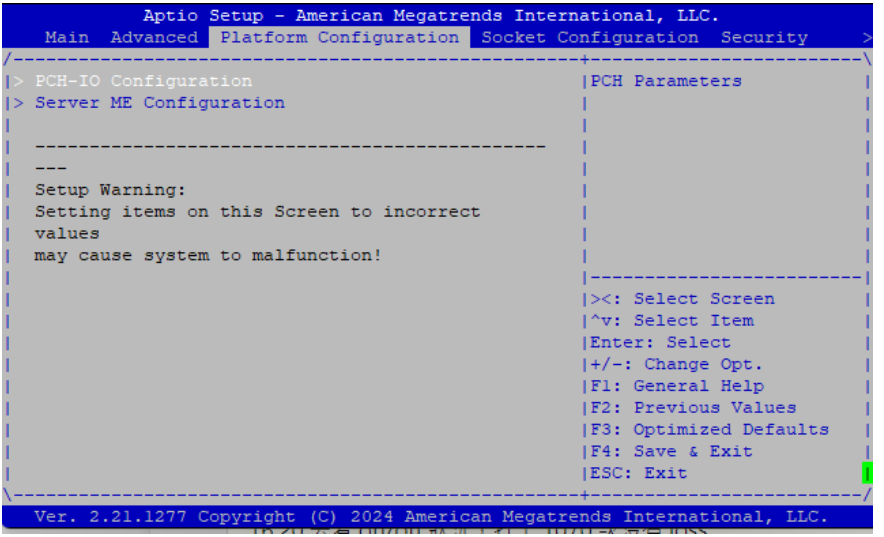
Options Summary		
LAN Bypass Status LED	LED OFF	Optimal Default, Failsafe Default
	RED LED ON	
	RED LED BLINK	
	RED LED FAST BLINK	
	GREEN LED ON	
	GREEN LED BLINK	
	GREEN LED FAST BLINK	
Configure LAN Bypass Status LED.		
Mode for Power-on	PassTru	Optimal Default, Failsafe Default
	ByPass	
Configure LAN kit behavior when system in power-on state. (Bypass/Pass Through)		
Mode for Power-off	PassTru	Optimal Default, Failsafe Default
	ByPass	
Configure LAN kit behavior when system in power-off state. (Bypass/Pass Through)		
WDT Configuration	System Reset	Optimal Default, Failsafe Default
	Force ByPass	
Configure WDT behavior, System Reset or Force Bypass		

3.4.12 Case Open Configuration

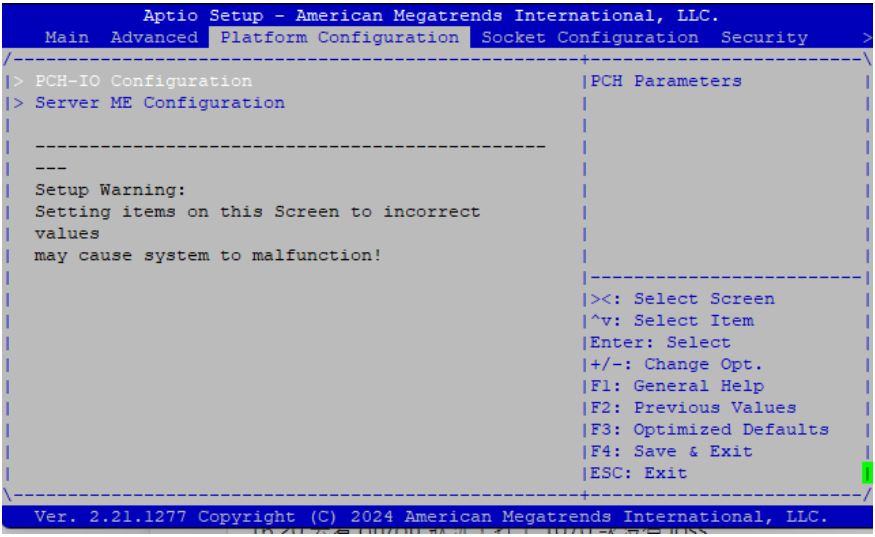


Options Summary		
Case Open Waring	Disable	Optimal Default, Failsafe Default
	Enable	
	Clear	
Case Open detecting function.		

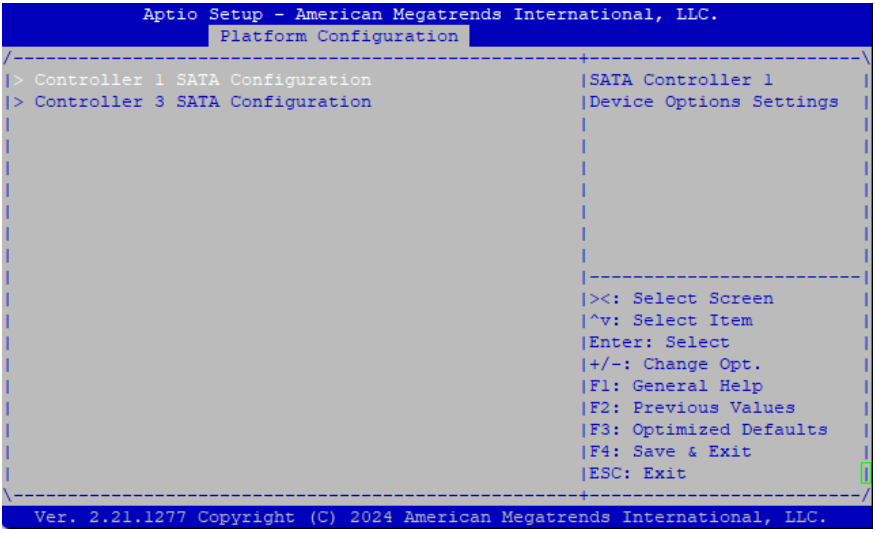
3.5 Setup Submenu: Platform Configuration



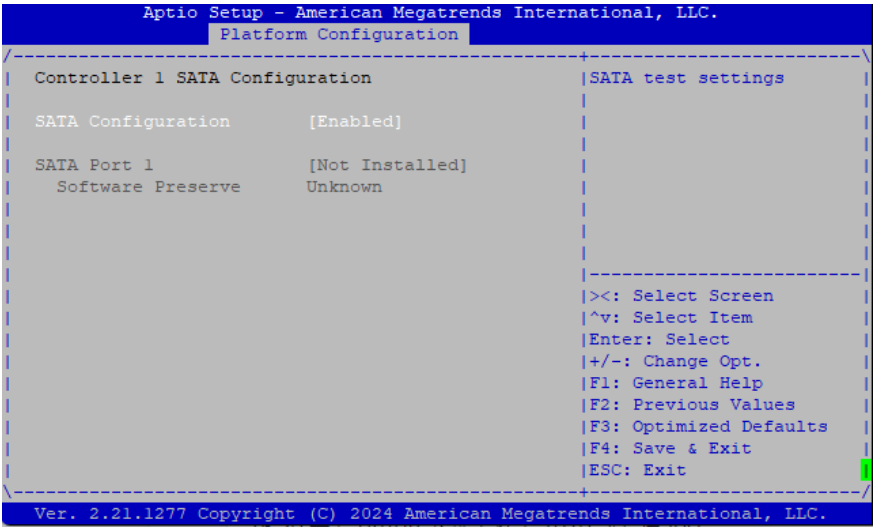
3.5.1 PCH-IO Configuration



3.5.2 SATA Configuration

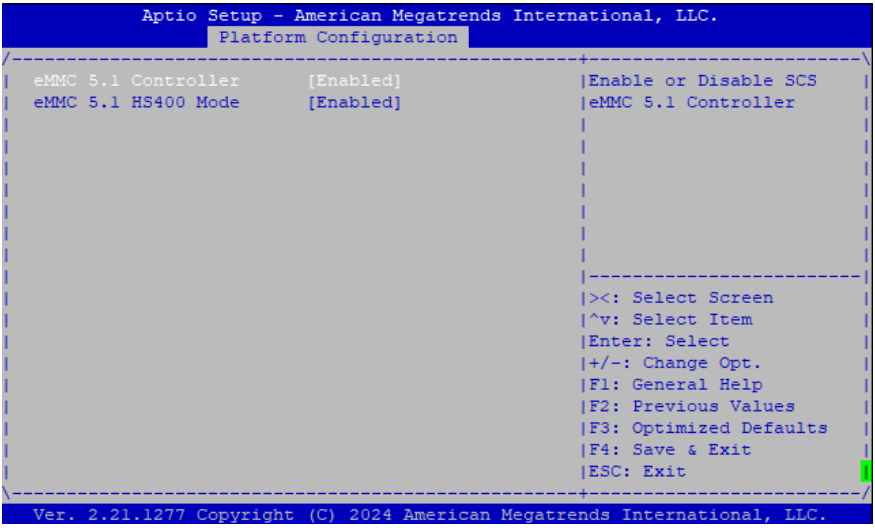


3.5.3 Controller SATA Configuration



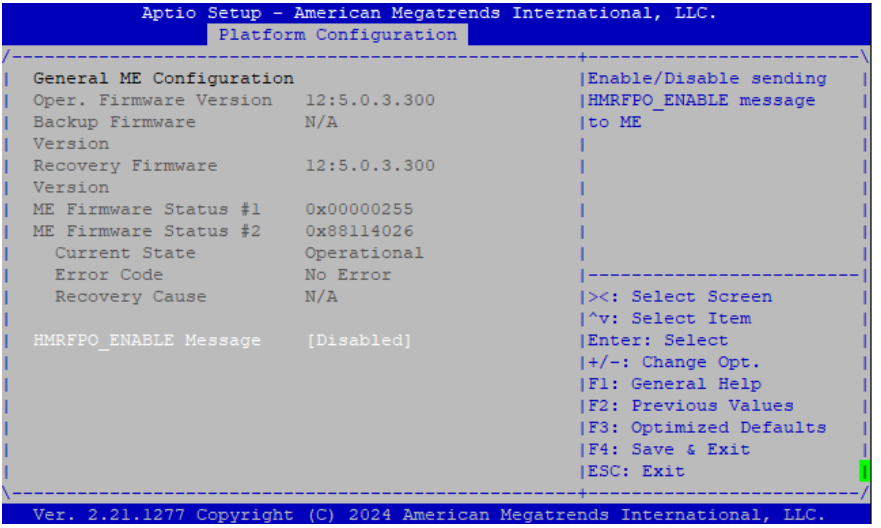
Options Summary		
Case Open Waring	Enable	Optimal Default, Failsafe Default
	Disable	
SATA test settings		

3.5.4 SCS Configuration



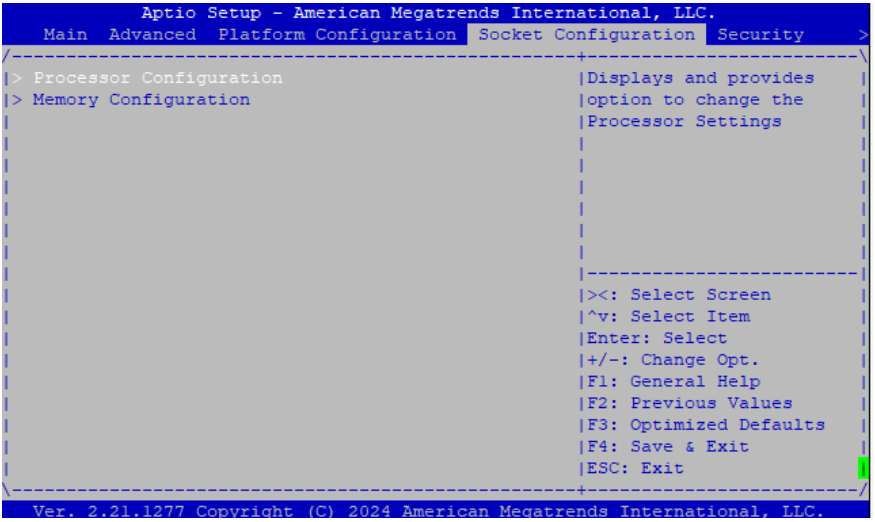
Options Summary		
eMMC 5.1 Controller	Enable	Optimal Default, Failsafe Default
	Disable	
Enable or Disable SCS eMMC 5.1 Controller		
eMMC 5.1 HS400 Mode	Enable	Optimal Default, Failsafe Default
	Disable	
Enable or Disable SCS eMMC 5.1 HS400 Mode		

3.5.5 Server ME Configuration

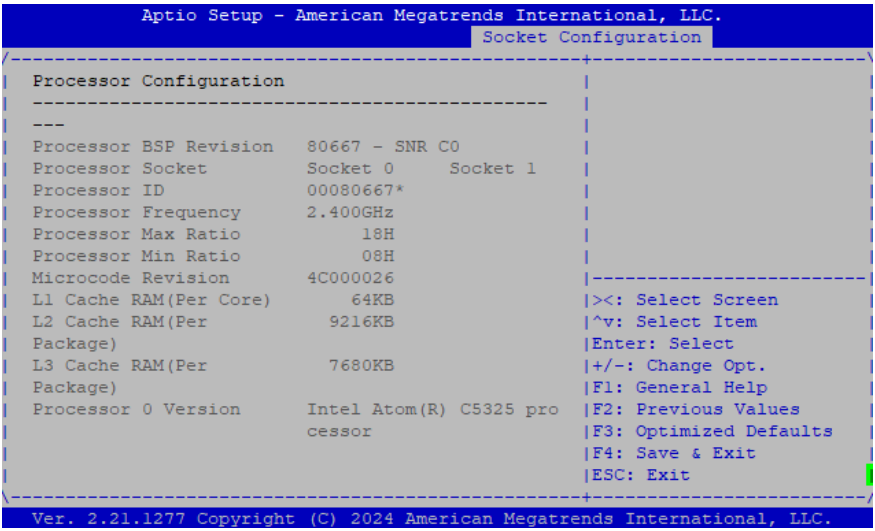


Options Summary		
HMRFPO_ENABLE Message	Enable	
	Disable	Optimal Default, Failsafe Default
Enable / Disable sending HMRFPO_ENABLE message to ME		

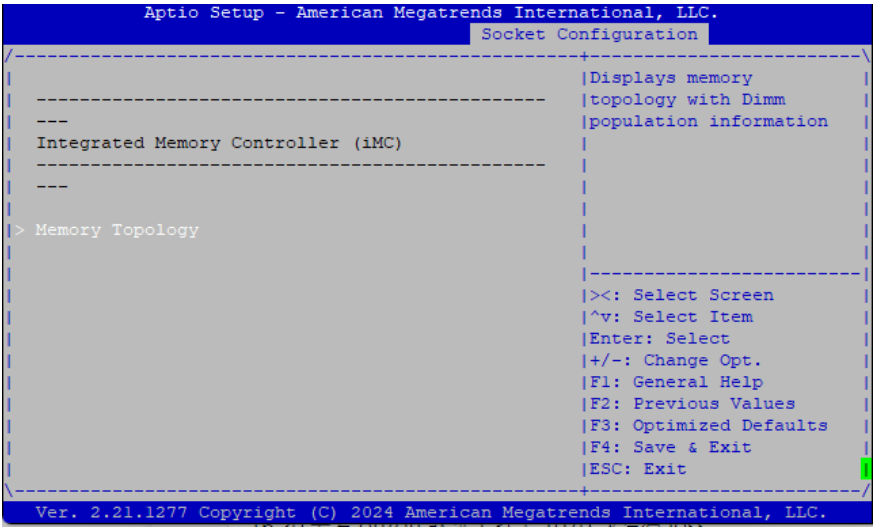
3.6 Setup Submenu: Socket Configuration

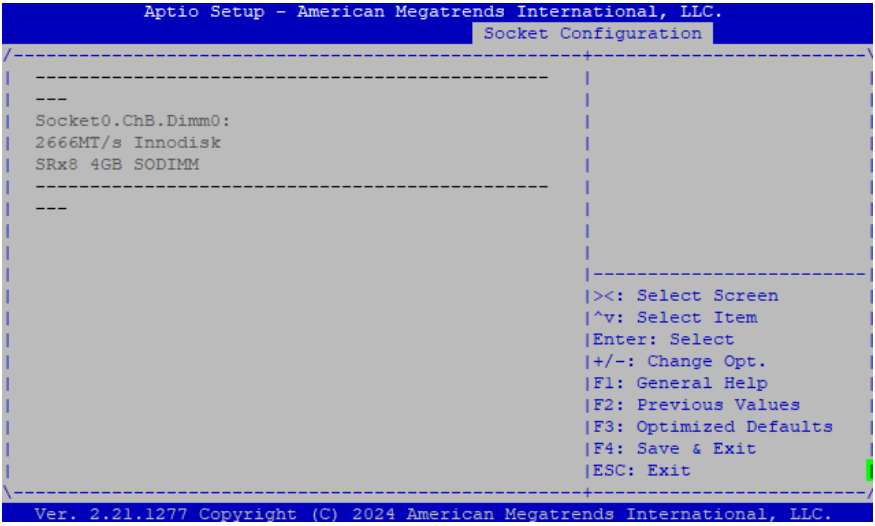


3.6.1 Processor Configuration

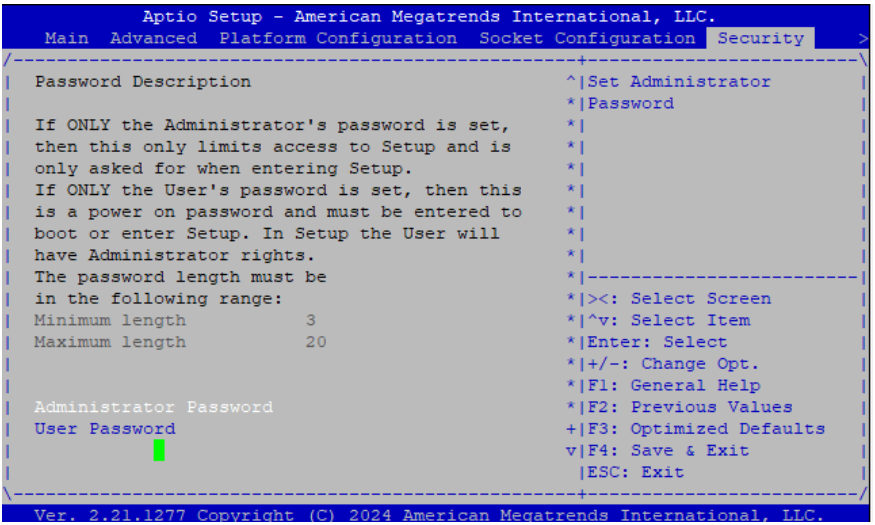


3.6.2 Memory Configuration





3.7 Setup Submenu: Security



Change User/Supervisor Password

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

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

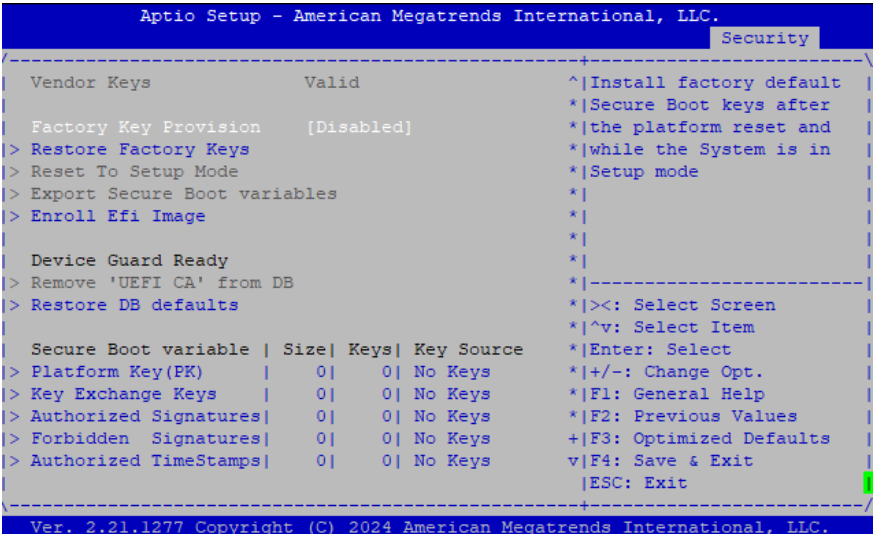
Removing the Password

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

3.7.1 Secure Boot

Options Summary		
Secure Boot	Disabled	Optimal Default, Failsafe Default
	Enabled	
Secure Boot activated when: Secure Boot is enabled Platform Key (PK) is enrolled, System mode is User/Deployed, and CSM is disabled		
Secure Boot Customization	Custom	Optimal Default, Failsafe Default
	Standard	
Customizable Secure Boot mode: In Custom mode Secure Boot Policy variables can be configured by a physically present user without full authentication		
Restore Factory Keys	Yes	Optimal Default, Failsafe Default
	No	
Force System to User Mode. Configure NVRAM to contain OEM-defined factory default Secure Boot keys		
Reset to Setup Mode	Yes	Optimal Default, Failsafe Default
	No	
Delete NVRAM content of all UEFI Secure Boot key databases		

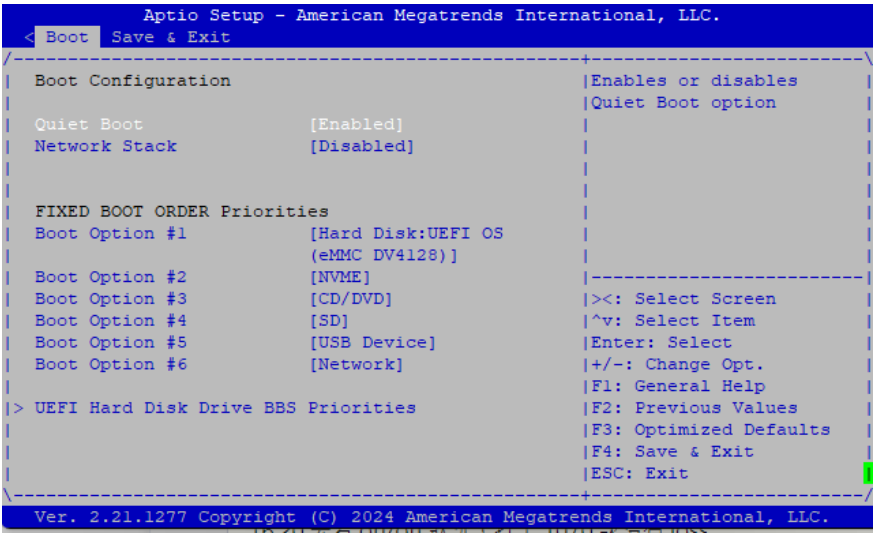
3.7.2 Key Management



Options Summary		
Factory Key Provision	Disabled	Optimal Default, Failsafe Default
	Enabled	
Provision factory default keys on next re-boot only when System in Setup Mode		
Restore Factory Keys	Yes	Optimal Default, Failsafe Default
	No	
Force System to User Mode. Configure NVRAM to contain OEM-defined factory default Secure Boot keys		
Reset To Setup Mode	Yes	Optimal Default, Failsafe Default
	No	
Delete NVRAM content of all UEFI Secure Boot key databases		
Export Secure Boot variables	OK	Optimal Default, Failsafe Default
Copy NVRAM content of Secure Boot variables to files in a root folder on a file system device		
Enroll Efi Image	OK	Optimal Default, Failsafe Default
Copy NVRAM content of Secure Boot variables to files in a root folder on a file system device.		

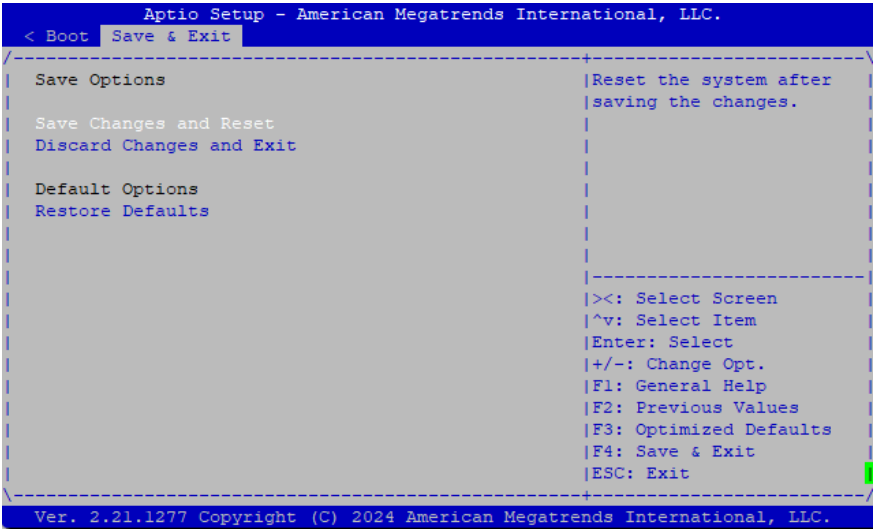
Options Summary		
Remove 'UEFI CA' from DB	Yes	Optimal Default, Failsafe Default
	No	
Device Guard ready system must not list 'Microsoft UEFI CA' Certificate in Authorized Signature database (db)		
Restore DB defaults	Yes	Optimal Default, Failsafe Default
	No	
Restore DB variable to factory defaults		
Secure Boot variable | Size| Keys| Key Source		
Enroll Factory Defaults or load certificates from a file: 1.Public Key Certificate in: a) EFI_SIGNATURE_LIST b) EFI_CERT_X509 (DER encoded) c) EFI_CERT_RSA2048 (bin) d) EFI_CERT_SHA256,384,512 2.Authenticated UEFI Variable 3.EFI PE/COFF Image (SHA256) Key Source: Factory, External, Mixed		

3.7.3 Boot



Options Summary		
Quiet Boot	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enables or disables Quiet Boot option.		
Network Stack	Disabled	Optimal Default, Failsafe Default
	Enabled	
Enable/Disable UEFI Network Stack		
Fixed Boot order Priorities	Sets the system boot order	

3.8 Setup Submenu: Save & Exit



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

Appendix A

Software Development Kit Information

A.1 Software Development Kit Support List

The FWS-2370 is available with a software development kit (SDK) supporting a range of additional functions and interfaces.

Function	SDK Support
Watchdog Timer	Yes
Software Programming Button	Yes
Status LED	Yes
LAN Bypass	Yes
DIO	Yes
HW Monitor	Yes
Smart PoE	Yes

For more information regarding the above SDK support list, please contact your AAEON or visit https://www.aaeon.com/en/contacts/ for more information.

Appendix B

Glue Removal Procedure

B.1 Removing Glue from Your System

To protect components from damage and ensure proper operation out of the box, glue may have been applied to some cables or connectors to keep them in place during shipping. This glue must be removed before attempting to swap components or perform maintenance. This section details the steps needed to remove the glue.

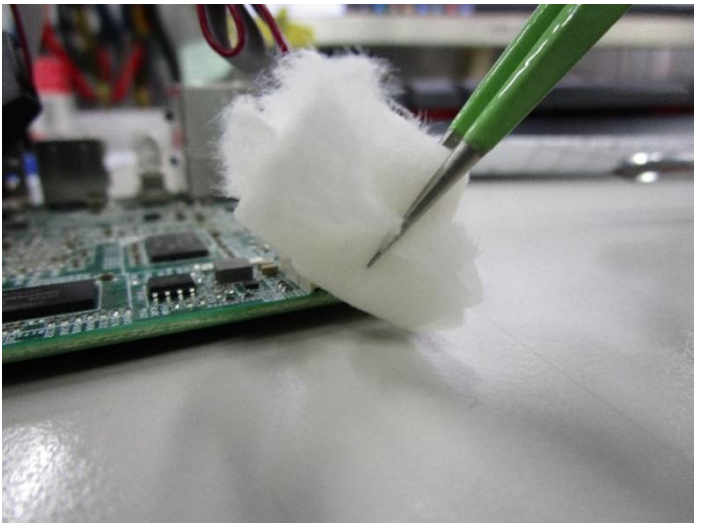
Before performing any kind of system maintenance, ensure the system is shut down (not in sleep or hibernate mode) and the power cable has been removed. Follow steps in Chapter 2 to access the components inside.

You will need the following items for this step:

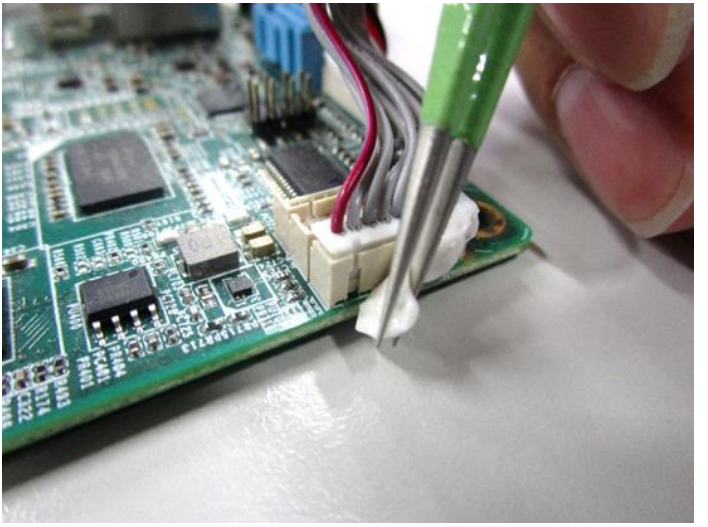
- Cotton or cotton swab
- Anti-static tweezers
- An alcohol solution that is at least 99.5% alcohol (ethanol solution or denatured alcohol). AAEON recommends using an eye dropper or a bottle with a nozzle as in the picture below:

Step 1: Using an eyedropper or bottle as shown above, apply a few drops of alcohol to the glue.

Step 2: Allow the alcohol to soak for 10 seconds, then use a cotton swab or cotton with anti-static tweezers to evenly rub the alcohol over the glue.



Step 3: Let soak for 10 more seconds, then use anti-static tweezers to remove the glue.



If you encounter any issues or need support, please contact your AAEON representative or visit our Support Page at AAEON.com