GENESYSM-ADP6

GENESYSM Compact Embedded System

User's Manual 1st Ed

Last Updated: December 29, 2022

Copyright Notice

Acknowledgements

Packing List

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

Item	Quantity
GENESYSM-ADP6	1
Memory Thermal Pad	2

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. Make sure the power source matches the power rating of the device.
3. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
4. Always completely disconnect the power before working on the system's hardware.
5. No connections should be made when the system is powered as a sudden rush of power may damage sensitive electronic components.
6. 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.
7. Always disconnect this device from any AC supply before cleaning.
8. While cleaning, use a damp cloth instead of liquid or spray detergents.
9. Make sure the device is installed near a power outlet and is easily accessible.
10. Keep this device away from humidity.
11. Place the device on a solid surface during installation to prevent falls
12. Do not cover the openings on the device to ensure optimal heat dissipation.
13. Watch out for high temperatures when the system is running.
14. Do not touch the heat sink or heat spreader when the system is running
15. Never pour any liquid into the openings. This could cause fire or electric shock.
16. 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.

17. 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
18. 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。

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 (CrVI)	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	O	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	3.5" SubCompact Board System
CPU	12th Generation Intel® Core™/Celeron® CPU i7-1270PE (12C/16T, 3.30GHz, up to 4.50GHz, TDP 28W, up to 64W) i5-1250PE (12C/16T, 3.20GHz, up to 4.40GHz, TDP 28W, up to 64W) i3-1220PE (8C/12T, 3.10GHz, up to 4.20GHz, TDP 28W, up to 64W)
Chipset	Integrated with Intel® SoC
Memory Type	DDR5 4800MHz, Dual Channel SODIMM x 2 (up to 64GB)
BIOS	UEFI
Wake On LAN	Yes
Watchdog Timer	255 Levels
Security	TPM 2.0 (NPCT750AABYX)
RTC Battery	Lithium Battery 3V/240mAh
Dimension	7.00" x 5.28" x 1.69" (178mm x 134.1mm x 43mm)
OS Support	Windows® 10, Windows® 11 (64bit) Linux Ubuntu 20.04/Kernel 5.15

Power

Power Requirement	+9~36V
Power Supply Type	ATX
Connector	DC Jack Connector
Power Consumption	Intel® Core™ i7-1270PE, DDR5 32GB x 2, 5.72A@ +12V (Typical) Intel® Core™ i7-1270 PE, DDR5 32GB x 2, 7.95A@ +12V (Max)

Display

Controller	Intel® Iris® Xe Graphics Intel® UHD Graphics
LVDS/eDP	—
Display Interface	HDMI 2.1 x 1, up to 8K x 4K @60Hz or 4K x 2K @120Hz DP1.4a x 1 (Supports DP++), up to 7680 x 4320 @60Hz 30bpp DP1.4a x 1 (via USB Type-C)
Multiple Display	Up to 3 Simultaneous Displays

Audio

Codec	Realtek ALC897
Audio Interface	Line-in/Line-out/MIC
Speaker	—

External I/O

Ethernet	Intel® i219, 10/100/1000Base
	Intel® i226,10/100/2500Base
USB	USB 3.2 Gen 2 x 3
	USB Type C x 1 (USB 4.0, DP1.4a, PD 5V/3A)
	USB 2.0 x 2
Serial Port	COM 1, COM 2 (RS-232/422/485,
	supports 5V/12V/RI)
Video	HDMI 2.1 x 1
	DP1.4a x 1

Internal I/O

USB	—
Serial Port	—
Video	—
SATA	SATA III x 1
	+5V SATA Power Connector x 1
Audio	Audio Header x 1
DIO/GPIO	8 Bits
SMBus/I2C	SMBus/I2C x 1 (Default: SMBus)
Touch	—
FAN	4-Pin Smart Fan x1
SIM	Nano SIM x 1
Front Panel	HDD LED, PWR LED, Power Button, Buzzer, Reset
Others	—

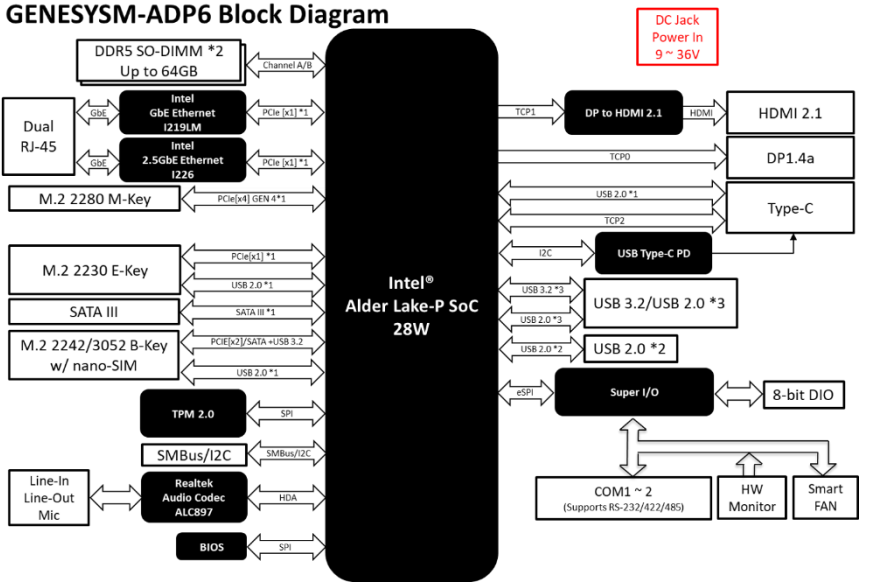
Expansion

Mini PCIe/mSATA	—
M.2	M.2 2280 M-Key x 1 (PCIe [x4] Gen 4) M.2 3052/3042/2242 B-Key x 1 (PCIe [x2], USB 3.2+SATA, USB 2.0, Default: USB 3.2+SATA) M.2 2230 E-Key x 1 (PCIe, USB 2.0)
Others	—

Environmental

Operating Temperature	32°F ~ 122°F (0°C ~ 50°C) 0.5 m/s air flow
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
MTBF (Hours)	344,735
EMC	CE/FCC Class A

1.2 Block Diagram

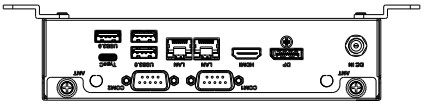


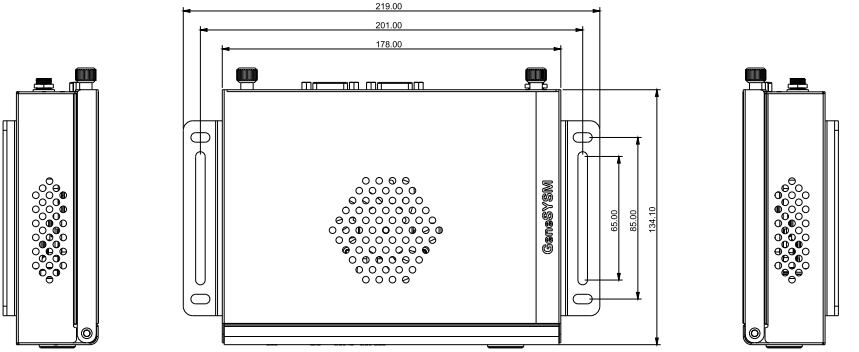
Chapter 2

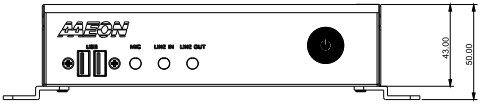
Hardware Information

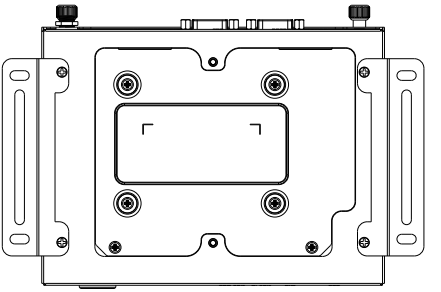
2.1 Dimensions

System

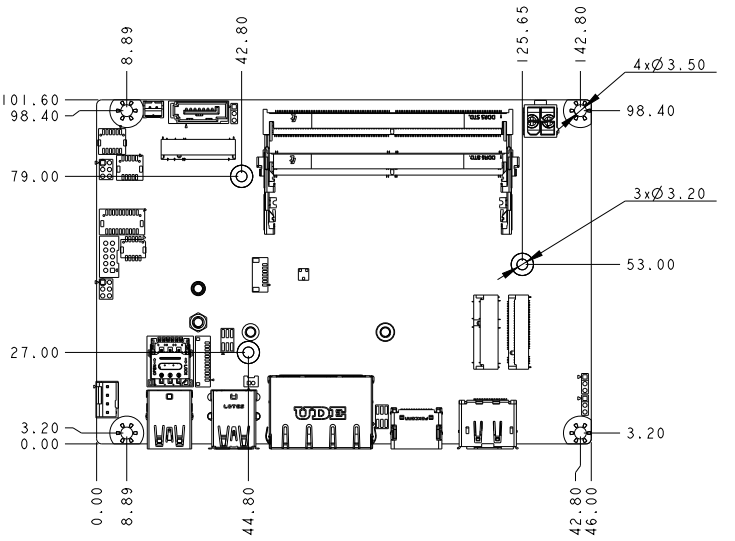


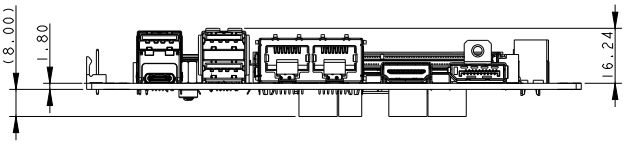


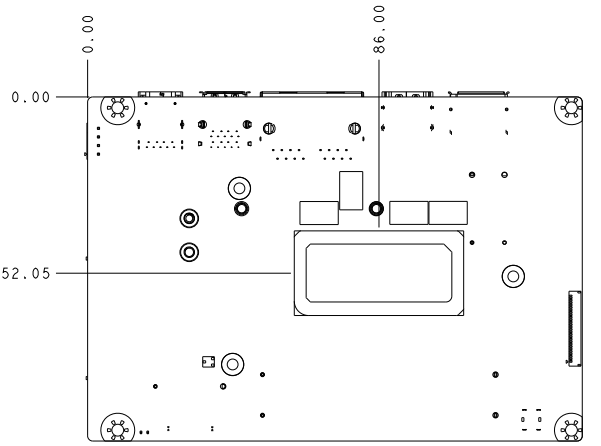




Board

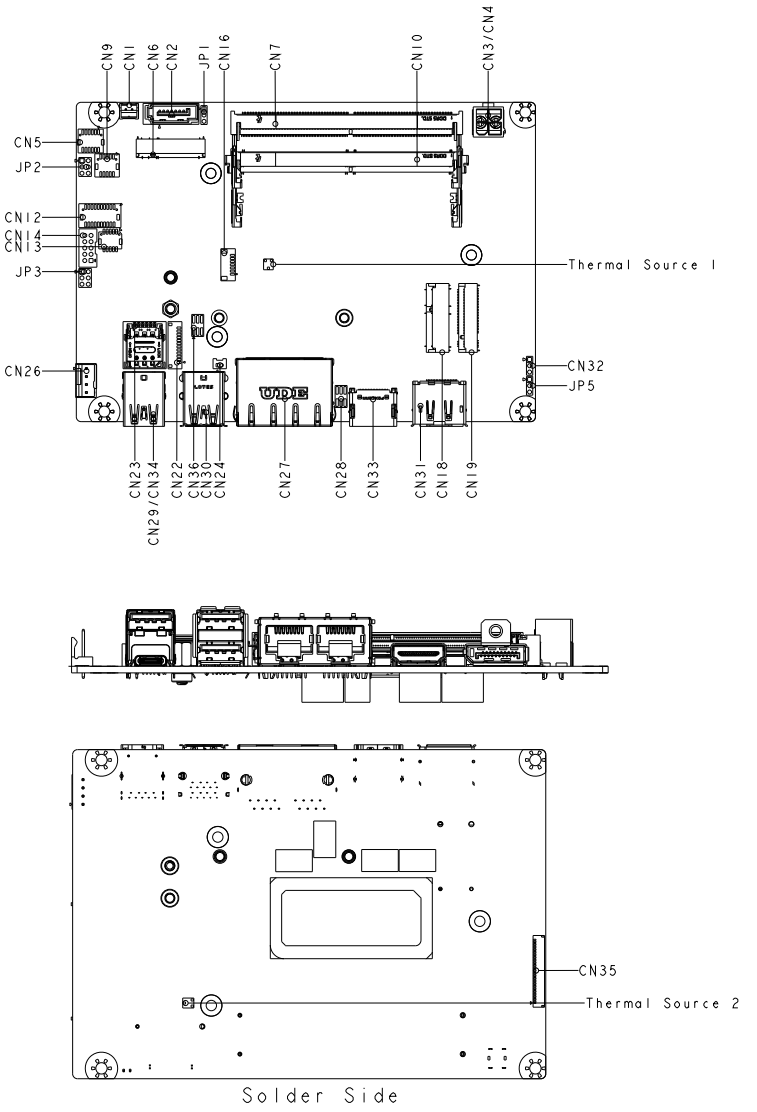






Solder Side

2.2 Jumpers and Connectors

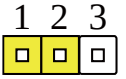


2.3 List of Jumpers

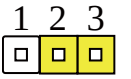
Please refer to the table below for all of the board's jumpers that you can configure for your application

Label	Function
JP1	Auto Power Button Enable/Disable Selection
JP2	COM 1 Pin 9 Function Selection
JP3	COM 2 Pin 9 Function Selection
JP5	Clear CMOS Jumper

2.3.1 Auto Power Button Enable/Disable Selection (JP1)

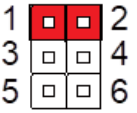


Disable Auto Power Button (**Default**)

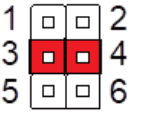


Enable Auto Power Button

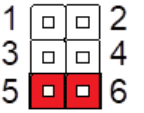
2.3.2 COM 1 Pin 9 Function Selection (JP2)



+12V

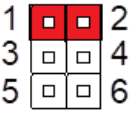


Ring (**Default**)

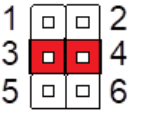


+5V

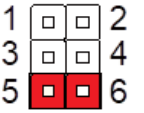
2.3.3 COM 2 Pin 9 Function Selection (JP3)



+12V

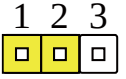


Ring (**Default**)

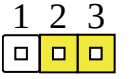


+5V

2.3.4 Clear CMOS Jumper (JP5)



Normal (**Default**)



Clear CMOS

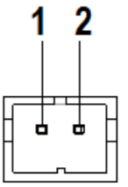
2.4 List of Connectors

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

Label	Function
CN1	+5V Output for SATA HDD
CN2	SATA Port
CN3	External +12V Input (Optional)
CN4	External Power Input
CN5	Audio I/O Port
CN6	M.2 3052/3042/2242 B-Key Connector
CN7	DDR5 SO-DIMM Channel 1
CN9	Front Panel
CN10	SO-DIMM Channel 2
CN12	COM Port 1/Port 2
CN13	USB 2.0 Port 5/Port6
CN14	Digital IO Port
CN16	SPI Flash Programming Port
CN18	M.2 2230 E-Key Connector
CN19	M.2 2280 M-Key Connector
CN22	eSPI Connector
CN23	Nano SIM Card Socket
CN24	RTC Battery Connector
CN25	3-Pin FAN Connector (Optional)
CN26	4-Pin FAN Connector
CN27	LAN (RJ-45) Port 1/Port 2
CN28	LAN Port 1 LED Connector
CN29	USB 3.2/USB 2.0 Port 3

Label	Function
CN30	USB 3.2/USB 2.0 Port 1/Port 2
CN31	DP Connector
CN33	HDMI Connector
CN34	USB Type-C
CN36	LAN Port 2 LED Connector

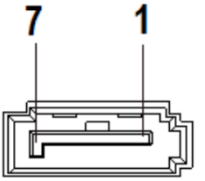
2.4.1 +5V Output for SATA HDD (CN1)



Pin	Pin Name	Signal Type	Signal Level
1	+V5S	PWR	+5V
2	GND	GND	-

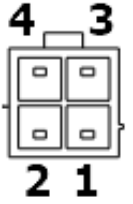
Note: The driving current of +V5S supports up to 2A.

2.4.2 SATA Port (CN2)



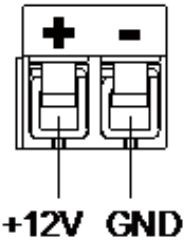
Pin	Pin Name	Signal Type	Signal Level
1	GND	GND	GND
2	SATA_TX+	DIFF	-
3	SATA_TX-	DIFF	-
4	GND	GND	GND
5	SATA_RX-	DIFF	-
6	SATA_RX+	DIFF	-
7	GND	GND	GND

2.4.3 External +12V Input (Optional) (CN3)



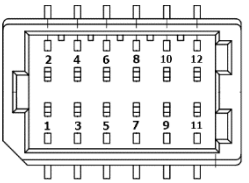
Pin	Pin Name	Signal Type	Signal Level
1	GND	GND	GND
2	GND	GND	GND
3	+12V	PWR	+12V
4	+12V	PWR	+12V

2.4.4 External Power Input (CN4)



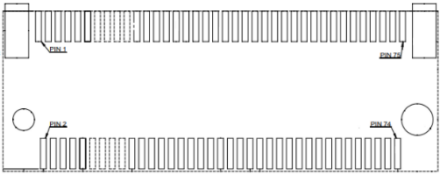
Pin	Pin Name	Signal Type	Signal Level
1	+12V	PWR	+12V
2	GND	GND	GND

2.4.5 Audio I/O Port (CN5)



Pin	Pin Name	Signal Type	Signal Level
1	RIGHT_OUT	OUT	-
2	MIC_R	IN	-
3	LEFT_OUT	OUT	-
4	MIC_L	IN	-
5	JD_LOUT	IN	-
6	JD_MIC	IN	-
7	GND_AUDIO	GND	-
8	GND_AUDIO	GND	-
9	JD_LIN	IN	-
10	LINE_R_IN	IN	-
11	+5V_AUDIO	PWR	+5V
12	LINE_L_IN	IN	-

2.4.6 M.2 3052/3042/2242 B-Key Connector (CN6)

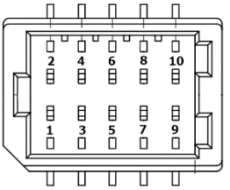


Standard specifications.

2.4.7 DDR5 SO-DIMM Channel (CN7)

Standard specifications.

2.4.8 Front Panel (CN9)

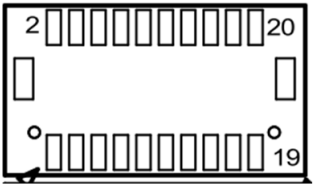


Pin	Pin Name	Signal Type	Signal Level
1	GND	GND	GND
2	EXT_PWRBTN#	IN	-
3	SATA_LED-	OUT	-
4	SATA_LED+	OUT	-
5	BUZZER-	OUT	-
6	BUZZER+	OUT	-
7	GND	GND	GND
8	PWR_LED+	OUT	-
9	GND	GND	GND
10	HWRST#	IN	-

2.4.9 DDR5 SO-DIMM Channel 2 (CN10)

Standard Specifications.

2.4.10 COM Port 1/Port 2 (CN12)



COM Port 1/ Port 2 RS-232 (Default)			
Pin	Pin Name	Signal Type	Signal Level
1	DCD1	IN	-
2	DCD2	IN	-
3	RX1	IN	-
4	RX2	IN	-
5	TX1	OUT	+9V
6	TX2	OUT	+9V
7	DTR1	OUT	+9V
8	DTR2	OUT	+9V
9	GND	GND	GND
10	GND	GND	GND
11	DSR1	IN	-
12	DSR2	IN	-
13	RTS1	OUT	+9V
14	RTS2	OUT	+9V
15	CTS1	IN	-
16	CTS2	IN	-
17	RI1/ +5V/ +12V	IN/ PWR	+5V/+12V
18	RI2/ +5V/ +12V	IN/ PWR	+5V/+12V

COM Port 1/ Port 2 RS-232 (Default)			
Pin	Pin Name	Signal Type	Signal Level
19	NC	NC	NC
20	NC	NC	NC

2.4.10.1 COM Port 1 RS-422/RS-485

COM Port 1 RS-422			
Pin	Pin Name	Signal Type	Signal Level
9	GND	GND	GND
1	RS422_TX-	OUT	+9V
3	RS422_TX+	OUT	+9V
5	RS422_RX+	IN	-
7	RS422_RX-	IN	-

COM Port 1 RS-485			
Pin	Pin Name	Signal Type	Signal Level
9	GND	GND	GND
1	RS485_D-	I/O	+9V
3	RS485_D+	I/O	+9V

Note: COM 1 RS-232/422/485 can be set by BIOS setting. Default is RS-232.

Note: Pin 17 function can be set by JP2.

2.4.10.2 COM Port 2 RS-422/RS-485

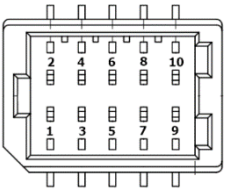
COM Port 2 RS-422			
Pin	Pin Name	Signal Type	Signal Level
10	GND	GND	GND
2	RS422_TX-	OUT	+9V
4	RS422_TX+	OUT	+9V
6	RS422_RX+	IN	
8	RS422_RX-	IN	

COM Port 2 RS-485			
Pin	Pin Name	Signal Type	Signal Level
10	GND	GND	GND
2	RS485_D-	I/O	+9V
4	RS485_D+	I/O	+9V

Note: COM 2 RS-232/422/485 can be set by BIOS setting. Default is RS-232.

Note: Pin 18 function can be set by JP3.

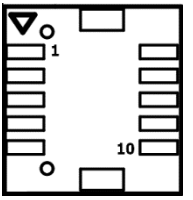
2.4.11 USB 2.0 Port 5/Port 6 (CN13)



Pin	Pin Name	Signal Type	Signal Level
1	+5VSB	PWR	+5V
2	+5VSB	PWR	+5V
3	USB2_5_DN	DIFF	-
4	USB2_6_DN	DIFF	-
5	USB2_5_DP	DIFF	-
6	USB2_6_DP	DIFF	-
7	GND	GND	GND
8	GND	GND	GND
9	GND	GND	GND
10	GND	GND	GND

Note: The driving current of +5VSB supports up to 0.5A/Port.

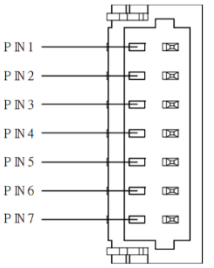
2.4.12 Digital IO Port (CN14)



Pin	Pin Name	Signal Type	Signal Level
1	DIO_0	IN/OUT	-
2	DIO_1	IN/OUT	-
3	DIO_2	IN/OUT	-
4	DIO_3	IN/OUT	-
5	DIO_4	IN/OUT	-
6	DIO_5	IN/OUT	-
7	DIO_6	IN/OUT	-
8	DIO_7	IN/OUT	-
9	+V5S	PWR	+5V
10	GND	GND	GND

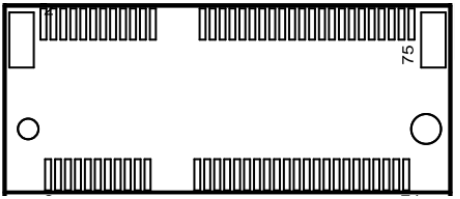
Note: The driving current of +V5S supports up to 0.5A.

2.4.13 SPI Flash Programming Port (CN16)



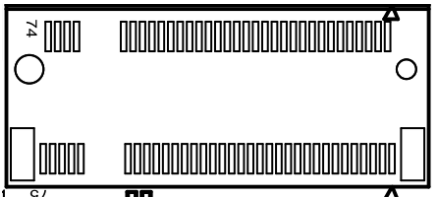
Pin	Pin Name	Signal Type	Signal Level
1	SPI_MISO	OUT	-
2	GND	GND	GND
3	SPI_CLK	IN	-
4	+V3P3A_SPI	PWR	+3.3V
5	SPI_MOSI	IN	-
6	SPI_CS	IN	-
7	NC	-	-

2.4.14 M.2 2230 E-Key Connector (CN18)



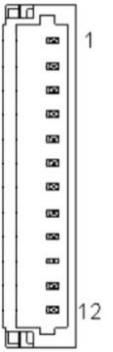
Standard specifications.

2.4.15 M.2 2280 M-Key Connector (CN19)



Standard specifications.

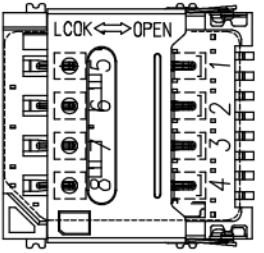
2.4.16 eSPI Connector (CN22)



Pin	Pin Name	Signal Type	Signal Level
1	ESP_IO0	I/O	+1.8V
2	ESP_IO1	I/O	+1.8V
3	ESP_IO2	I/O	+1.8V
4	ESP_IO3	I/O	+1.8V
5	+V3P3S	PWR	+3.3V
6	ESPI_CS	IN	-
7	ESPI_RST	OUT	+3.3V

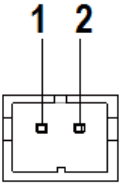
Pin	Pin Name	Signal Type	Signal Level
8	GND	GND	GND
9	ESPI_CLK	OUT	+1.8V
10	SMB_DATA/ I2C_SDA	I/O	+3.3V
11	SMB_CLK/ I2C_CLK	OUT	+3.3V
12	SMB_ALERT/ INT_SERIRQ	IN	+3.3V

2.4.17 Nano SIM Card Socket (CN23)



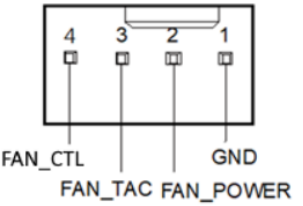
Pin	Pin Name	Signal Type	Signal Level
1	UIM_PWR	PWR	-
2	UIM_RST	IN	-
3	UIM_CLK	IN	-
4	N/A	N/A	-
5	GND	GND	GND
6	UIM_VPP	PWR	-
7	UIM_DATA	I/O	-
8	N/A	N/A	-

2.4.18 RTC Battery Connector (CN24)



Pin	Pin Name	Signal Type	Signal Level
1	+3.3V	PWR	+3.3V
2	GND	GND	GND

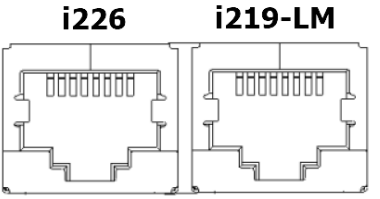
2.4.19 4-Pin Fan Connector (CN26)



Pin	Pin Name	Signal Type	Signal Level
1	GND	GND	GND
2	FAN_POWER	PWR	+12V
3	FAN_TAC	IN	-
4	FAN_CTL	-	-

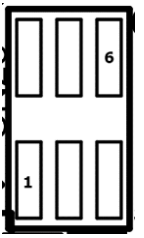
Note: The driving current of FAN_POWER supports up to 1A.

2.4.20 LAN (RJ-45) Port 1/Port 2 (CN27)



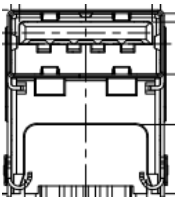
Pin	Pin Name	Signal Type	Signal Level
1P1	LAN2_MDI0_P	DIFF	-
1P2	LAN2_MDI0_N	DIFF	-
1P3	LAN2_MDI1_P	DIFF	-
1P4	LAN2_MDI1_N	DIFF	-
1P7	LAN2_MDI2_P	DIFF	-
1P8	LAN2_MDI2_N	DIFF	-
1P9	LAN2_MDI3_P	DIFF	-
1P10	LAN2_MDI3_N	DIFF	-
2P1	LAN1_MDI0_P	DIFF	-
2P2	LAN1_MDI0_N	DIFF	-
2P3	LAN1_MDI1_P	DIFF	-
2P4	LAN1_MDI1_N	DIFF	-
2P7	LAN1_MDI2_P	DIFF	-
2P8	LAN1_MDI2_N	DIFF	-
2P9	LAN1_MDI3_P	DIFF	-
2P10	LAN1_MDI3_N	DIFF	-

2.4.21 LAN Port 1 LED Connector (CN28)



Pin	Pin Name	Signal Type	Signal Level
1	LINK1_ACT#	I/O	-
2	+V3P3A	PWR	+3.3V
3	LAN1_1000#	I/O	-
4	LAN1_100#	I/O	-
5	LAN1_100#	I/O	-
6	LAN1_1000#	I/O	-

2.4.22 USB 3.2/USB 2.0 Port 3 (CN29)

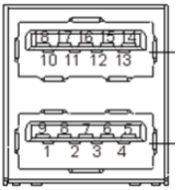


Pin	Pin Name	Signal Type	Signal Level
1	+5VSB	PWR	+5V
2	USB2_3_DN	DIFF	-
3	USB2_3_DP	DIFF	-
4	GND	GND	GND
5	USB3_3_RXN	DIFF	-

Pin	Pin Name	Signal Type	Signal Level
6	USB3_3_RXP	DIFF	-
7	GND	GND	GND
8	USB3_3_TXN	DIFF	-
9	USB3_3_TXP	DIFF	-

Note: The driving current of +5VSB supports up to 0.9A.

2.4.23 USB 3.2/USB 2.0 Port1/Port2 (CN30)

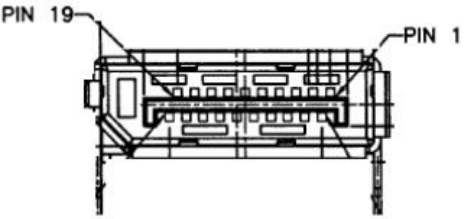


Pin	Pin Name	Signal Type	Signal Level
1	+5VSB	PWR	+5V
2	USB2_1_DN	DIFF	-
3	USB2_1_DP	DIFF	-
4	GND	GND	GND
5	USB3_1_RXN	DIFF	-
6	USB3_1_RXP	DIFF	-
7	GND	GND	GND
8	USB3_1_TXN	DIFF	-
9	USB3_1_TXP	DIFF	-
10	+5VSB	PWR	+5V
11	USB2_2_DN	DIFF	-
12	USB2_2_DP	DIFF	-

Pin	Pin Name	Signal Type	Signal Level
13	GND	GND	GND
14	USB3_2_RXN	DIFF	-
15	USB3_2_RXP	DIFF	-
16	GND	GND	GND
17	USB3_2_TXN	DIFF	-
18	USB3_2_TXP	DIFF	-

Note: The driving current of +5VSB supports up to 0.9A/Port.

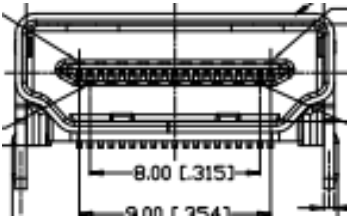
2.4.24 DP Connector (CN31)



Pin	Pin Name	Signal Type	Signal Level
1	DP_TX0_DP	DIFF	-
2	GND	GND	GND
3	DP_TX0_DN	DIFF	-
4	DP_TX1_DP	DIFF	-
5	GND	GND	GND
6	DP_TX1_DN	DIFF	-
7	DP_TX2_DP	DIFF	-
8	GND	GND	GND
9	DP_TX2_DN	DIFF	-

Pin	Pin Name	Signal Type	Signal Level
10	DP_TX3_DP	DIFF	-
11	GND	GND	GND
12	DP_TX3_DN	DIFF	-
13	DP_OB_AUX_EN	IN	-
14	GND	GND	GND
15	DP_AUX_DP	I/O	-
16	GND	GND	GND
17	DP_AUX_DN	I/O	-
18	DP_HPD	I/O	-
19	GND	GND	GND
20	+3.3V	PWR	+3.3V

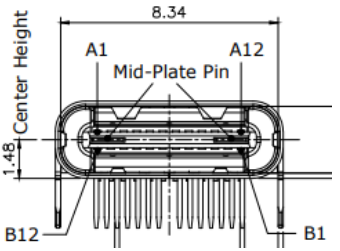
2.4.25 HDMI Connector (CN33)



Pin	Pin Name	Signal Type	Signal Level
1	HDMI_TX2+	DIFF	-
2	GND	GND	GND
3	HDMI_TX2-	DIFF	-
4	HDMI_TX1+	DIFF	-
5	GND	GND	GND
6	HDMI_TX1-	DIFF	-

Pin	Pin Name	Signal Type	Signal Level
7	HDMI_TX0+	DIFF	-
8	GND	GND	GND
9	HDMI_TX0-	DIFF	-
10	HDMI_CLK+	DIFF	-
11	GND	GND	GND
12	HDMI_CLK-	DIFF	-
13	N/A	N/A	N/A
14	N/A	N/A	N/A
15	DDC_CLK	I/O	-
16	DDC_DATA	I/O	-
17	GND	GND	GND
18	+V5S	PWR	+5V
19	HDMI_HPD	IN	-

2.4.26 USB Type C (CN34)

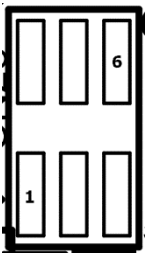


Pin	Pin Name	Signal Type	Signal Level
A1	GND	GND	GND
A2	TCP2_TX0_DP	DIFF	-
A3	TCP2_TX0_DN	DIFF	-
A4	+5VSB	PWR	+5V

Pin	Pin Name	Signal Type	Signal Level
A5	CON_CC1	IN	-
A6	USB2_10_DP	DIFF	-
A7	USB2_10_DN	DIFF	-
A8	CONN_TYPEC1_SBU1	DIFF	-
A9	+5VSB	PWR	+5V
A10	TCP2_TXRX1_DN	DIFF	-
A11	TCP2_TXRX1_DP	DIFF	-
A12	GND	GND	GND
B1	GND	GND	GND
B2	TCP2_TX1_DP	DIFF	-
B3	TCP2_TX1_DN	DIFF	-
B4	+5VSB	PWR	+5V
B5	CONN_TYPEC1_CC2	IN	-
B6	USB2_10_DP	DIFF	-
B7	USB2_10_DN	DIFF	-
B8	CONN_TYPEC1_SBU2	DIFF	-
B9	+5VSB	PWR	+5V
B10	TCP2_TXRX0_DN	DIFF	-
B11	TCP2_TXRX0_DP	DIFF	-
B12	GND	GND	GND

Note: The driving current of +5VSB supports up to 3A.

2.4.27 LAN Port 2 LED Connector (CN36)



Pin	Pin Name	Signal Type	Signal Level
1	LINK2_ACT#	I/O	-
2	+V3P3A	PWR	+3.3V
3	LAN2_1000#	I/O	-
4	LAN2_2500#	I/O	-
5	LAN2_2500#	I/O	-
6	LAN2_1000#	I/O	-

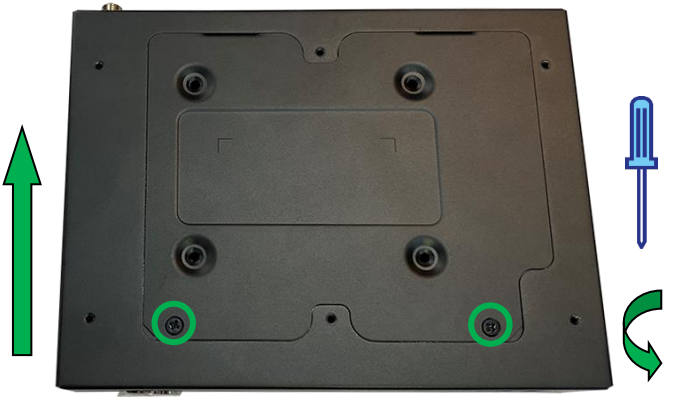
2.5 Hardware Installation

This section details the steps needed to install various hardware components for the GENESYSM-ADP6. It is recommended that you read through each step before beginning installation and to make sure you have all necessary tools and components.

2.5.1 Accessing the Bottom Panel

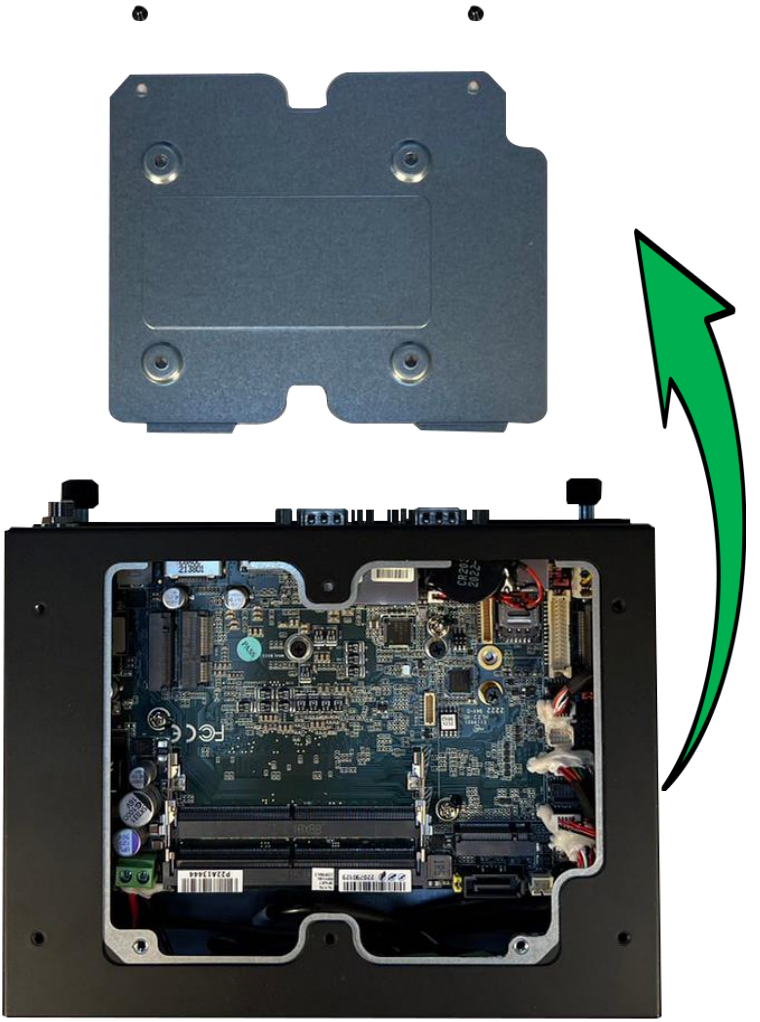
For this process you will need a Phillips head screwdriver.

Step 1: Remove the two black screws securing the bottom panel.



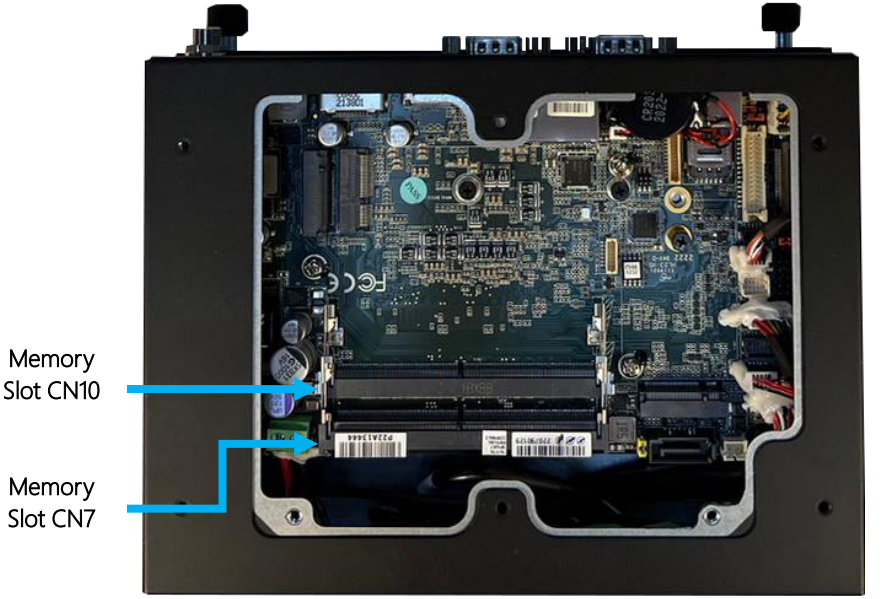
Step 2: The bottom panel will lift up and swing toward the rear panel of the system, then can be removed.

Note: Be careful when opening if you have previously installed a 2.5" SATA Drive.

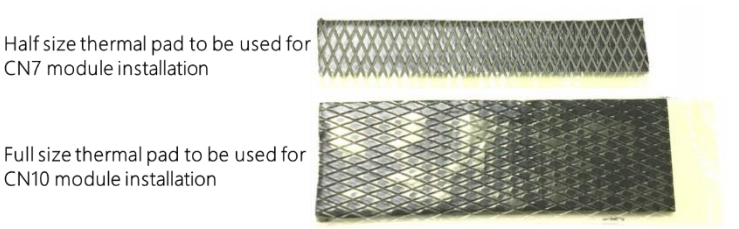


2.5.2 RAM Module Installation

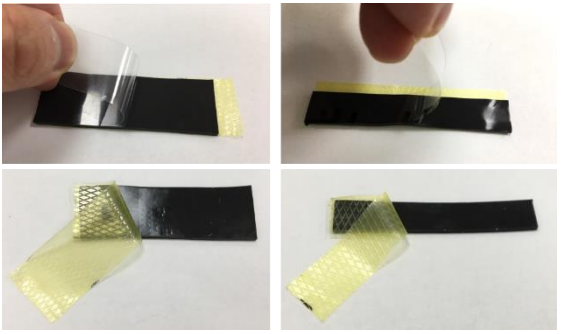
Before you begin, make sure you have the RAM module(s) you wish to install, along with thermal pads for each.



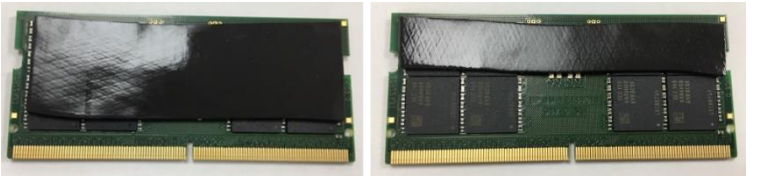
Note: Prior to RAM module installation, please ensure a thermal pad of the appropriate type (half size/full size) is applied to the module, as shown.



Step 1: Remove the protective film of the upper and lower layers of the thermal pad.



Step 2: Apply thermal pad to RAM module.



Step 3: Insert the RAM module with the full size thermal pad affixed into the DDR SO-DIMM Slot (CN10) at approximately a 45° angle, then gently press down until it is secured by the tabs.

Step 4: Repeat for the second DDR module in Slot CN7, ensuring the half size thermal pad is applied to the module prior to insertion.

RAM module installation is complete.

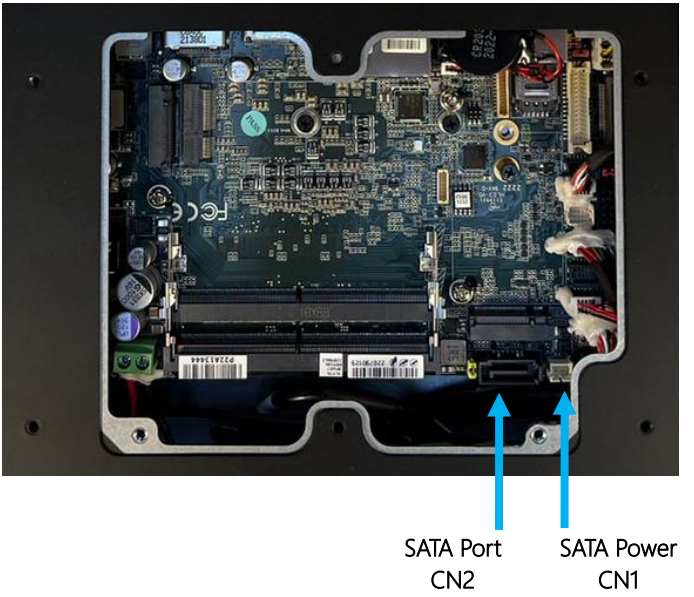
2.5.3 2.5" SATA Drive Installation

Before beginning, make sure you have the following prepared:

- SATA Drive x 1
- Black Screws x 4 (to mount 2.5" drive)
- SATA Cable x 1
- SATA Power Cable x 1
- Phillips head screwdriver

Note: To avoid mechanical interference, only use SSD with 7mm thickness, do not use SSD with 9.5mm thickness.

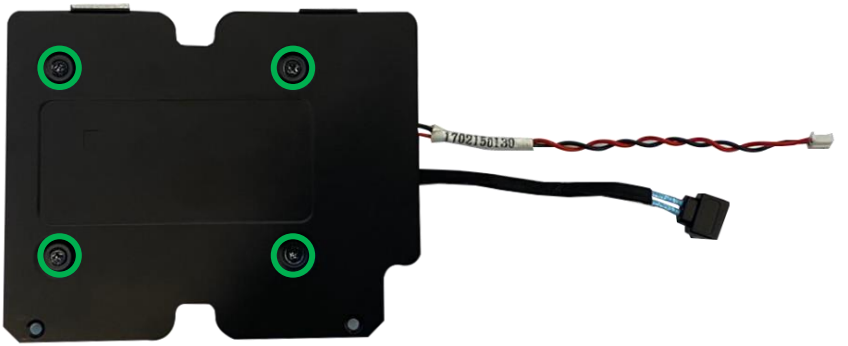
Please note the location of the SATA Port (CN2) and SATA Power Connector (CN1)



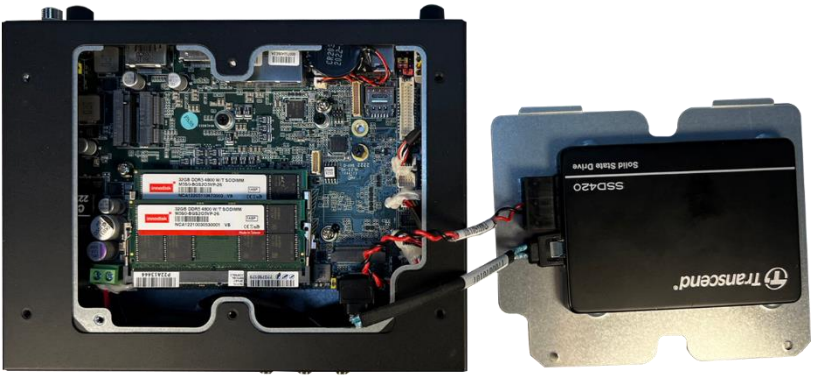
Step 1: Connect the SATA and SATA Power cables to the 2.5" drive.

Step 2: Line up the mounting holes on the SATA drive with the four mounting points on the bottom panel. Note the orientation of the cables.

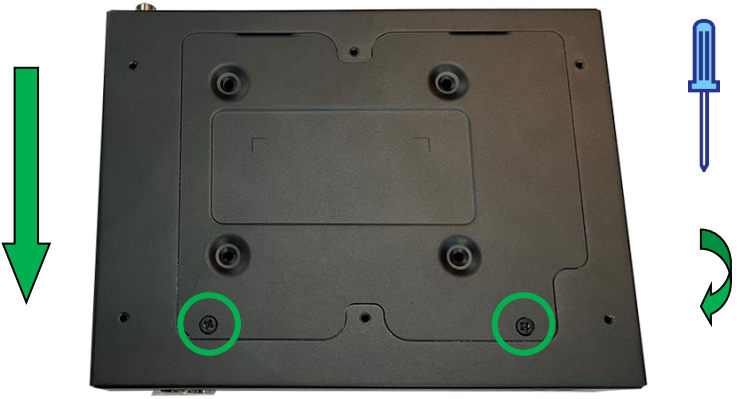
Step 3: Secure the drive with four black mounting screws.



Step 4: Insert the SATA Cable into CN2 and SATA Power Cable into CN1.



If you are finished with hardware installation, replace the back panel and secure with two black screws.

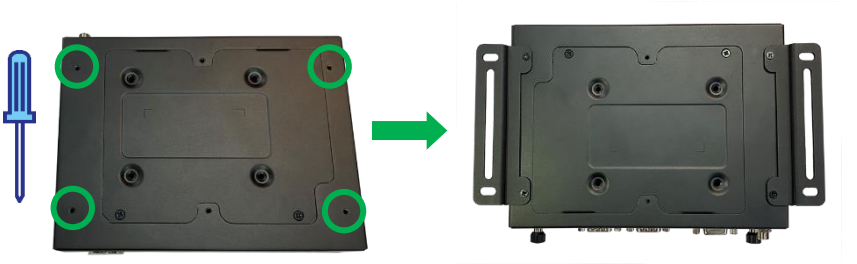


2.5.4 Wallmount Assembly

Before beginning, ensure all panels on the system are secured. Then make sure you have to following components ready:

- Wallmount brackets x 2
- Black screws x 4 (two for each bracket)
- Phillips head screwdriver

Line up the brackets with the four open holes on the bottom panel of the system as shown, then secure brackets with the four screws.

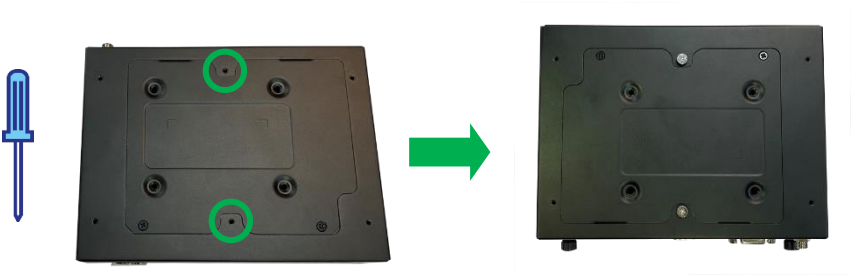


2.5.5 VESA Mount Installation

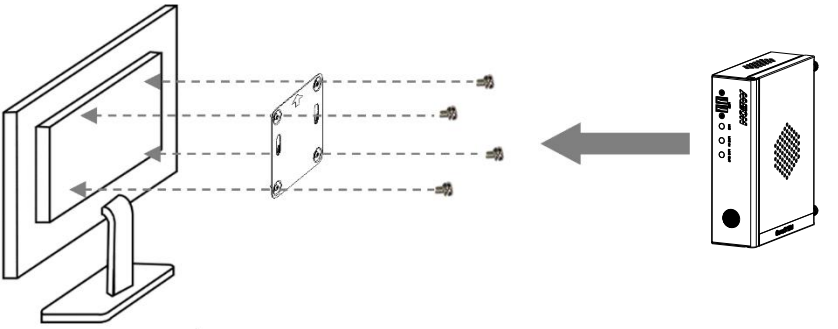
Before beginning, ensure all panels on the system are secured. Then make sure you have to following components ready:

- Silver screws with washers x 4 (rounded head)
- VESA Mount screws x 2 (head is flat)
- VESA Mount x 1
- Phillips head screwdriver

Insert VESA mount screws into the two empty holes on the bottom panel of the system as shown.



The system can now be attached to the VESA bracket. Mount the bracket to a surface or the back of a display/monitor with VESA attachment points. Use the four silver screws with washers to secure the bracket to the back of the monitor with the arrow pointing up. Then, attach the system to the VESA mount.



Chapter 3

AMI BIOS Setup

3.1 System Test and Initialization

These routines test and initialize board hardware. If the routines encounter an error during the tests, you will either hear a few short beeps or see an error message on the screen. There are two kinds of errors: fatal and non-fatal. The system can usually continue the boot up sequence with non-fatal errors.

System configuration verification

These routines check the current system configuration stored in the CMOS memory and BIOS NVRAM. If system configuration is not found or system configuration data error is detected, system will load optimized default and re-boot with this default system configuration automatically.

There are four situations in which you will need to setup system configuration:

1. You are starting your system for the first time
2. You have changed the hardware attached to your system
3. The system configuration is reset by Clear-CMOS jumper
4. The CMOS memory has lost power and the configuration information has been erased.

The GENESYSM-ADP6 CMOS memory has an integral lithium battery backup for data retention. However, you will need to replace the complete unit when it finally runs down.

3.2 AMI BIOS Setup

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

Entering Setup

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

Main

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

Advanced

Enable disable boot option for legacy network devices.

Chipset

Host bridge parameters.

Security

Set setup administrator password.

Boot

Enables/disable quiet boot option.

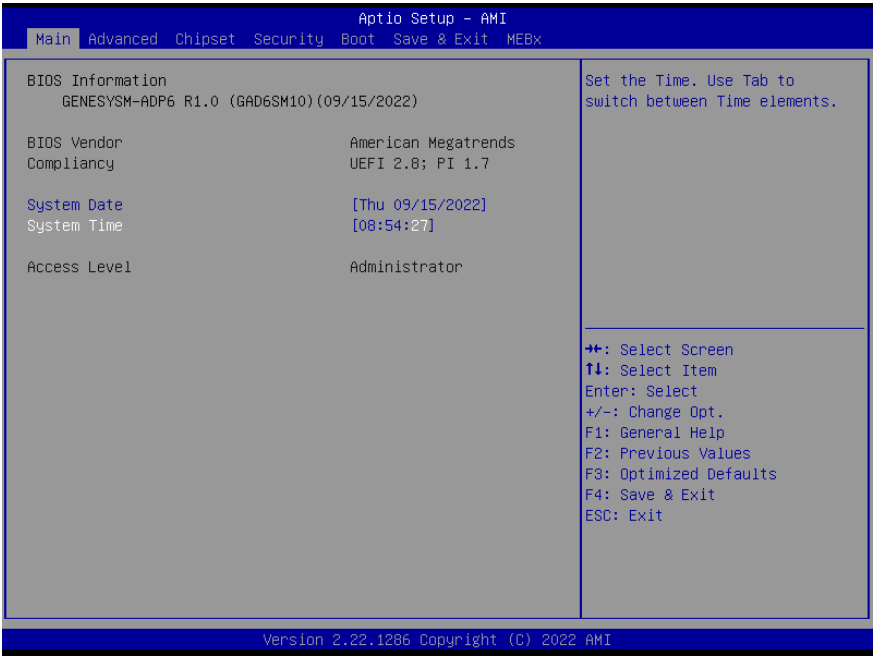
Save & Exit

Exit system setup after saving the changes.

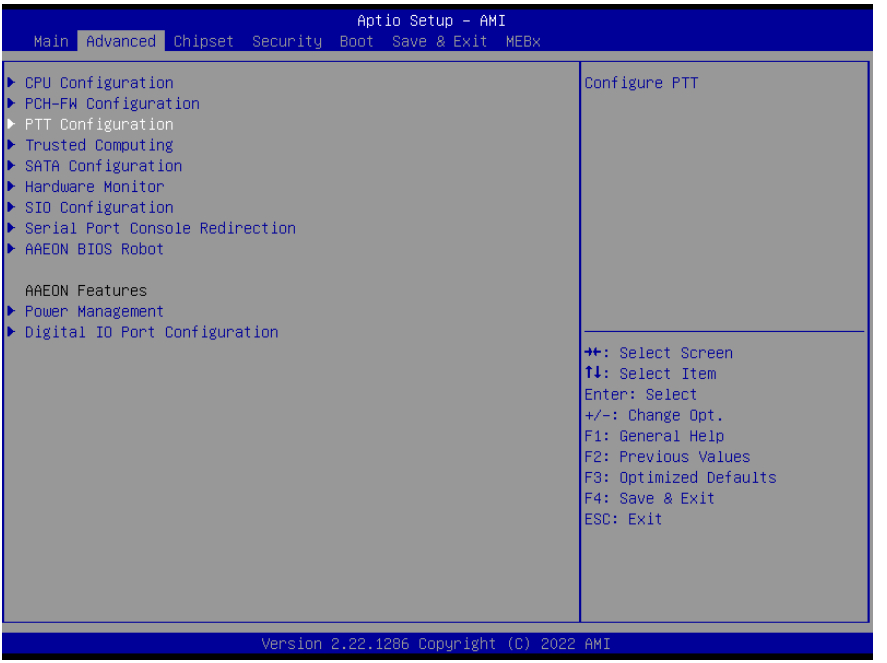
Intel® AMT Configuration

Configure user content preferences.

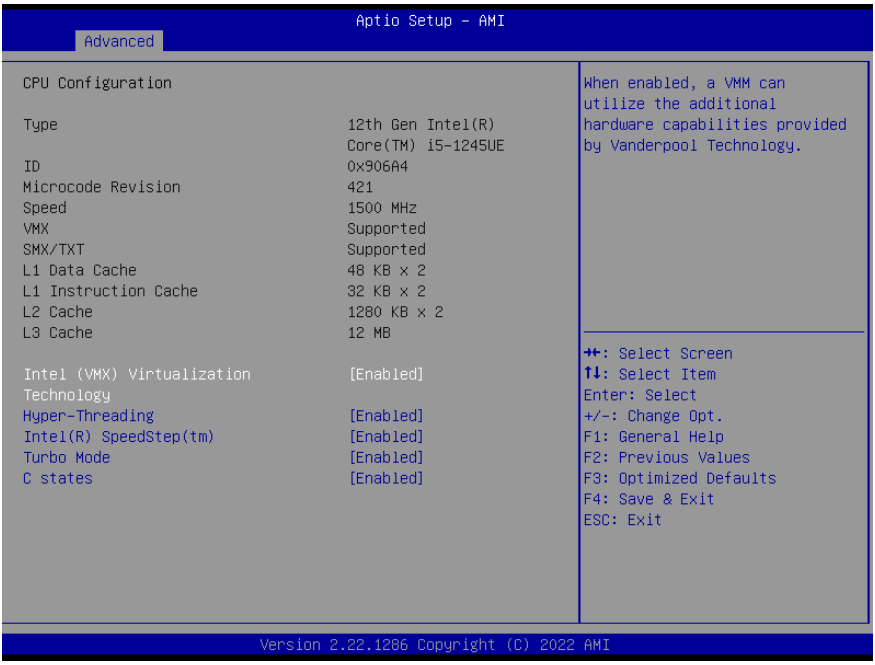
3.3 Setup Submenu: Main



3.4 Setup Submenu: Advanced



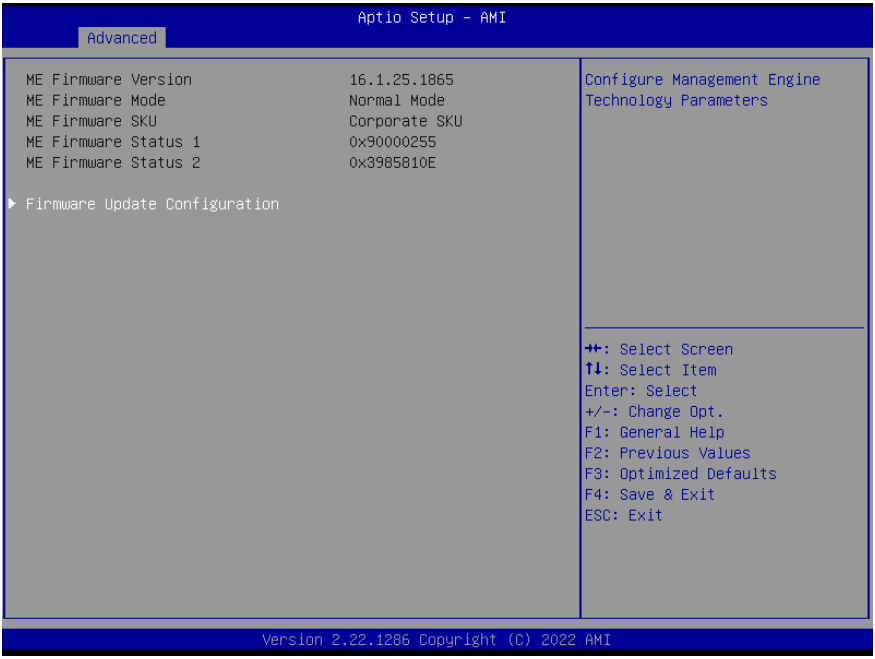
3.4.1 CPU Configuration



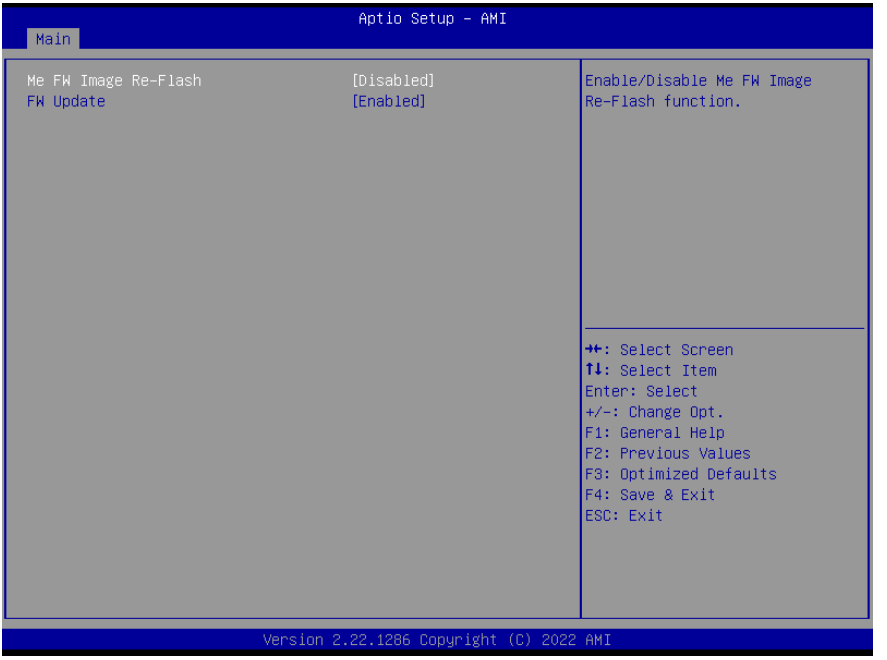
Options Summary		
Intel (VMX) Virtualization Technology	Disabled	
	Enabled	Optimal Default, Failsafe Default
When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.		
Hyper-Threading	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable Hyper-Threading Technology.		
Intel® SpeedStep™	Disabled	
	Enabled	Optimal Default, Failsafe Default
Allows more than two frequency ranges to be supported.		
Turbo Mode	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable processor Turbo Mode (requires EMTTM enable too). AUTO means enabled		
C states	Disabled	

Options Summary		
	Enabled	Optimal Default, Failsafe Default
Enable/Disable CPU Power Management. Allows CPU to go to C states when it's not 100 utilized.		

3.4.2 PCH-FW Configuration

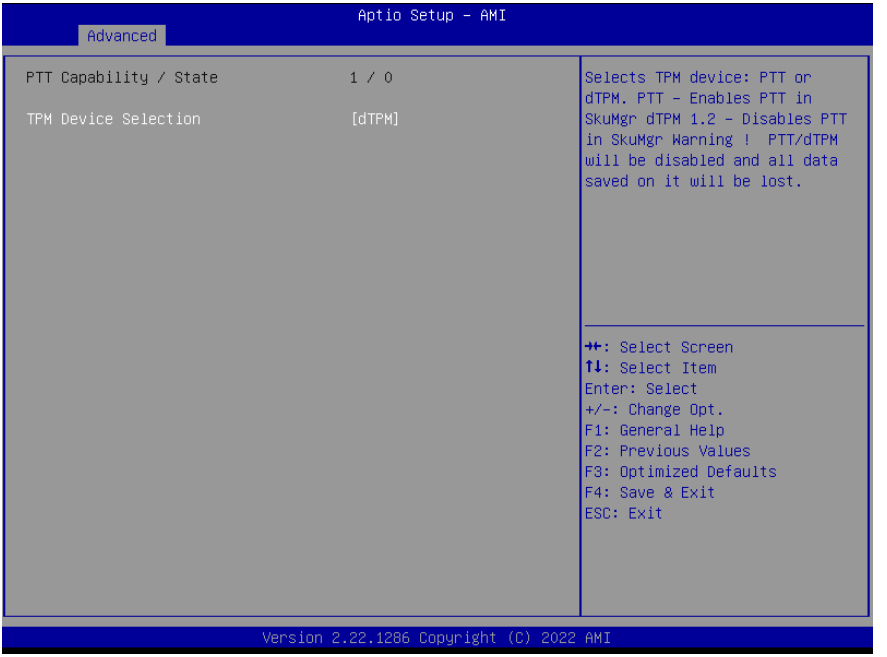


3.4.3 Firmware Update Configuration



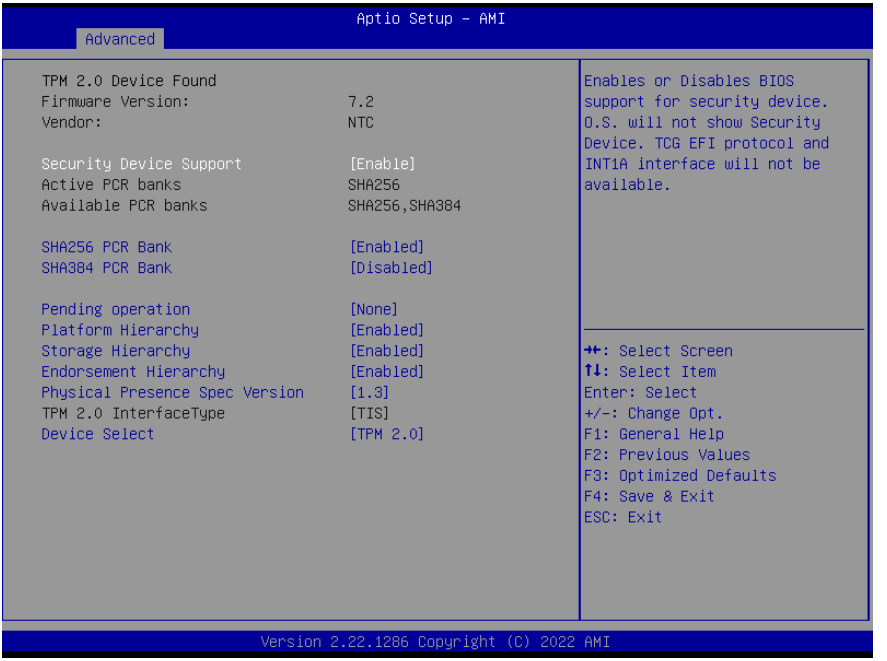
Options Summary		
Me FW Image Re-Flash	Enabled	
	Disabled	Optimal Default, Failsafe Default
Enable/Disable Me FW Image Re-Flash function.		
FW Update	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable/Disable ME FW Update function.		

3.4.4 PTT Configuration



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

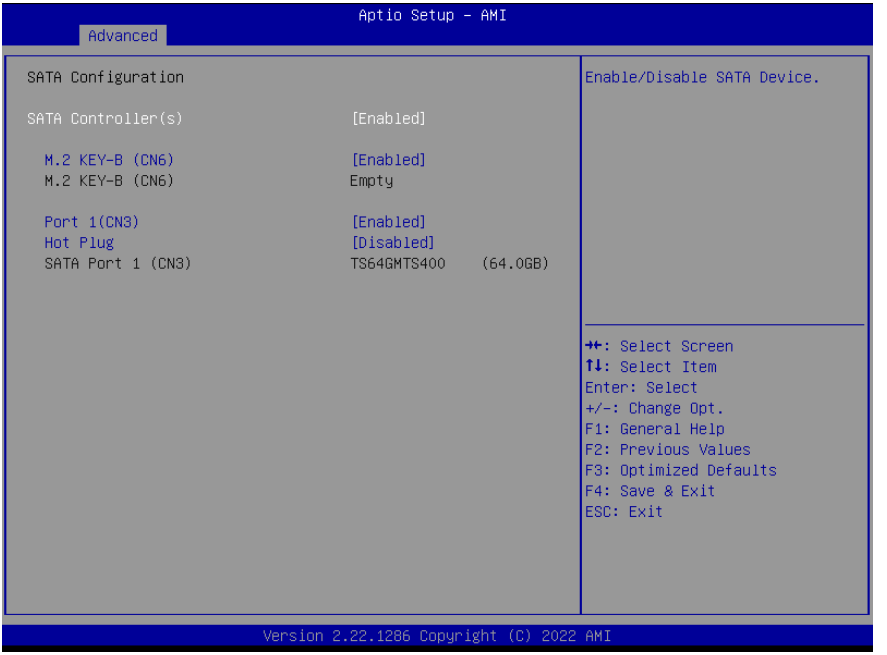
3.4.5 Trusted Computing



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

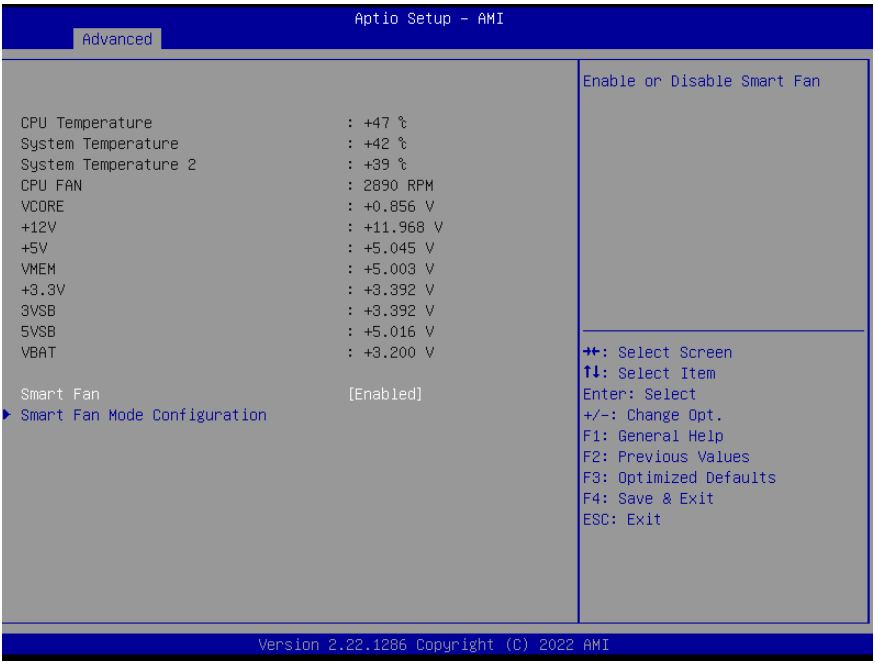
Options Summary		
Enable or Disable Platform Hierarchy		
Storage Hierarchy	Enabled	Optimal Default, Failsafe Default
	Disabled	
Enable or Disable Storage Hierarchy		
Endorsement Hierarchy	Enabled	Optimal Default, Failsafe Default
	Disabled	
Enable or Disable Endorsement Hierarchy		
Physical Presence Spec Version	1.3	Optimal Default, Failsafe Default
	1.2	
Select to Tell O.S. to support PPI Spec Version 1.2 or 1.3. Note some HCK tests might not support 1.3		
Device Select	Auto	
	TPM 1.2	
	TPM 2.0	Optimal Default, Failsafe Default
TPM 1.2 will restrict support to TPM 1.2 devices, TPM 2.0 will restrict support to TPM 2.0 devices, Auto will support both with the default set to TPM 2.0 devices if not found, TPM 1.2 devices will be enumerated.		

3.4.6 SATA Configuration



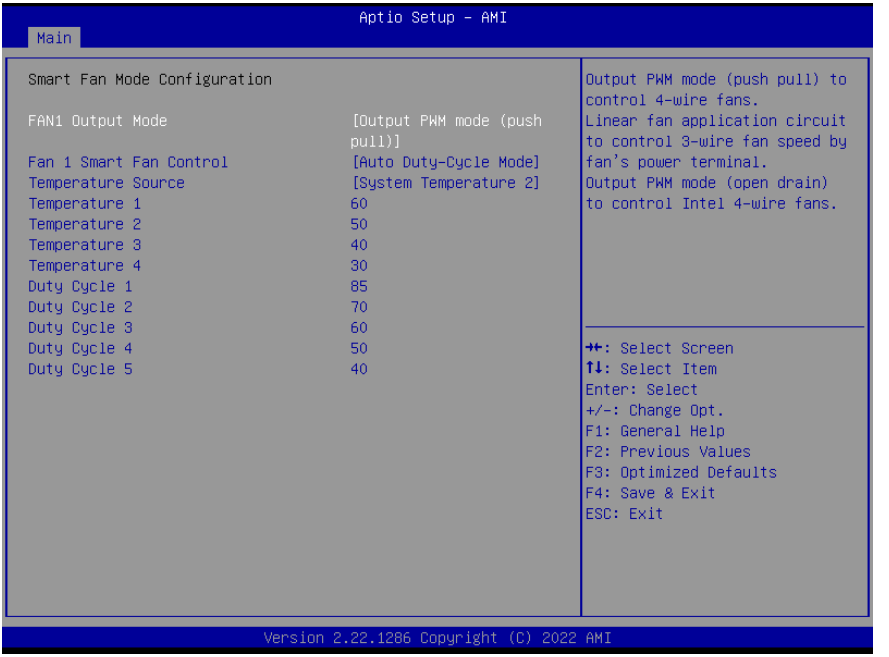
Options Summary		
SATA Controller(s)	Enabled	Optimal Default, Failsafe Default
	Disabled	
Enable/Disable SATA Device.		
M.2 KEY-B(CN6)	Enabled	Optimal Default, Failsafe Default
	Disabled	
Enable or Disable SATA Port.		
Port 1(CN3)	Enabled	Optimal Default, Failsafe Default
	Disabled	
Enable or Disable SATA Port.		
Hot Plug	Disabled	Optimal Default, Failsafe Default
	Enabled	
Designates this port as Hot Pluggable.		

3.4.7 Hardware Monitor



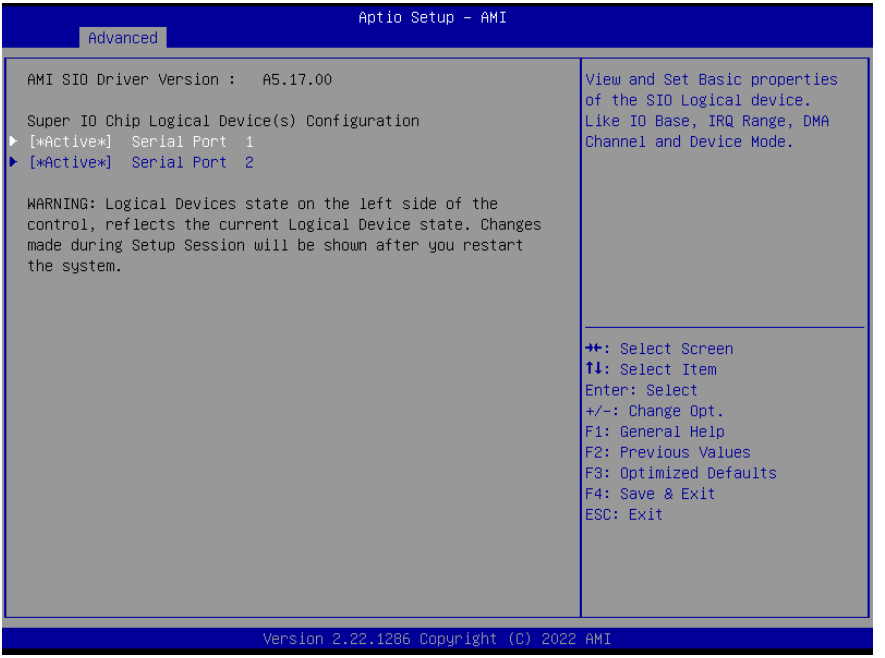
Options Summary		
Smart Fan	Disable	
	Enable	Optimal Default, Failsafe Default
Enables or Disables Smart Fan.		

3.4.7.1 Smart Fan Mode Configuration

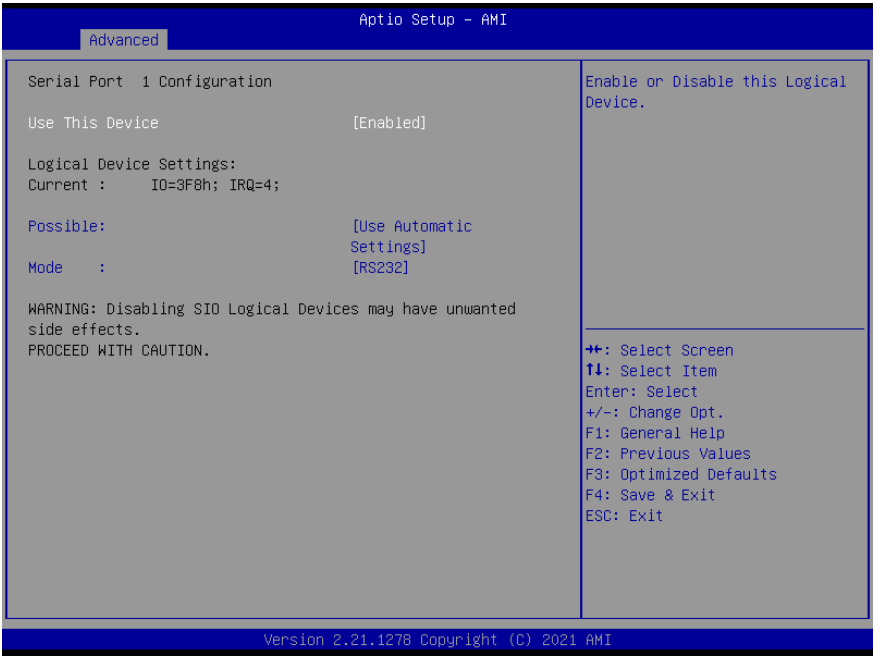


Options Summary		
FAN1 Output Mode	Output PWM mode (open drain)	
	Linear Fan Application	
	Output PWM mode (push pull)	Optimal Default, Failsafe Default
Fan 1 Smart Fan Control	Manual Duty Mode	
	Auto Duty-Cycle Mode	Optimal Default, Failsafe Default
Smart Fan Mode Select.		
Temperature Source	CPU Temperature	
	System Temperature	
	System Temperature 2	Optimal Default, Failsafe Default
Select the monitored temperature source for this fan.		
Temperature 1	60	
Duty Cycle 1	85	
Auto fan speed control. Fan speed will follow different temperature by different duty cycle 1-100.		

3.4.8 SIO Configuration

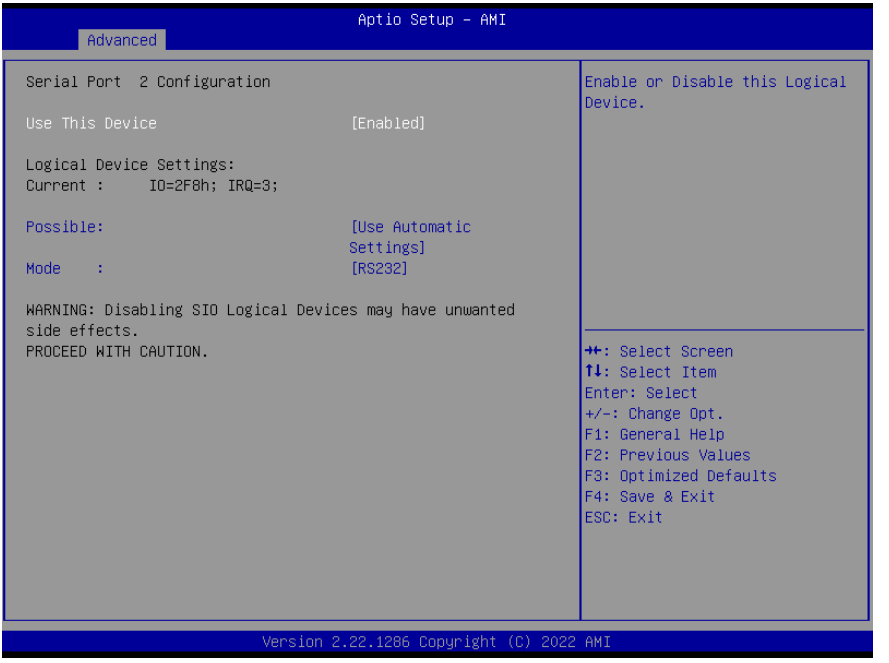


3.4.8.1 Serial Port 1 Configuration



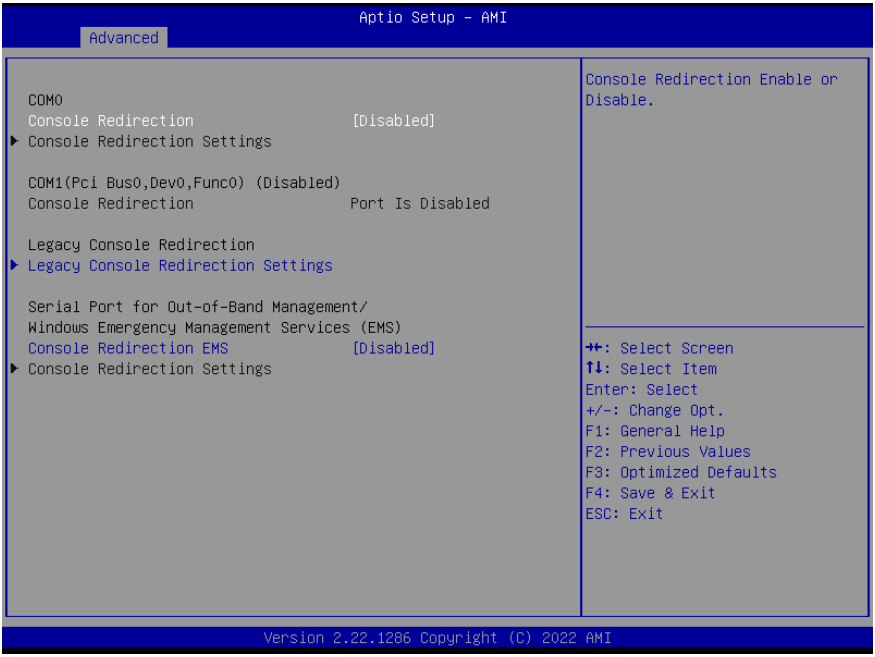
Options Summary		
Use This Device	Disable	
	Enable	Optimal Default, Failsafe Default
Enable or Disable this Logical Device.		
Possible:	Use Automatic Settings	Optimal Default, Failsafe Default
	IO=3F8h; IRQ=4	
	IO=2F8h; IRQ=3	
Allows user to change Device's Resource settings. New settings will be reflected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

3.4.8.2 Serial Port 2 Configuration



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

3.4.9 Serial Port Console Redirection

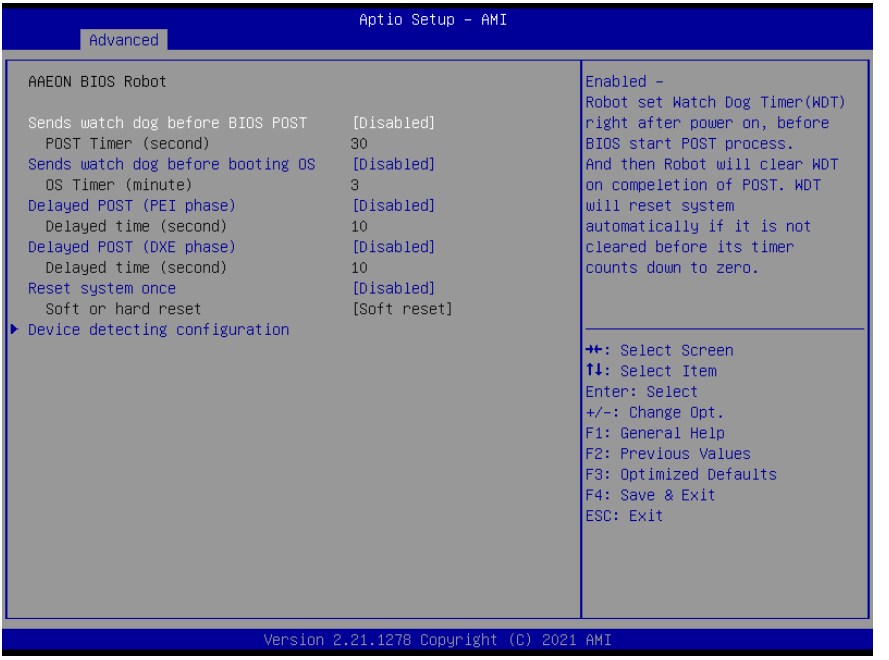


Options Summary		
Console Redirection	Disabled	Optimal Default, Failsafe Default
	Enabled	
Console Redirection Enable or Disable.		
Console Redirection EMS	Disabled	Optimal Default, Failsafe Default
	Enabled	
Console Redirection Enable or Disable.		

3.4.10 Legacy Console Redirection Settings

Options Summary		
Redirection COM Port	COM0	Optimal Default, Failsafe Default
	COM1(Pci Bus0, Dev0, Func0) (Disabled)	
Select a COM Port to display redirection of Legacy OS and Legacy OPROM message.		
Resolution	80x24	Optimal Default, Failsafe Default
	80x25	
On Legacy OS, the number of Rows and Columns supported redirection.		
Redirect After POST	Always Enable	Optimal Default, Failsafe Default
	BootLoader	
When Bootloader is selected, then Legacy Console Redirection is disabled before booting to legacy OS. When Always Enable is selected, then Legacy Console Redirection is enabled for legacy OS. Default setting for this option is set to Always Enable.		

3.4.11 AAEON BIOS Robot



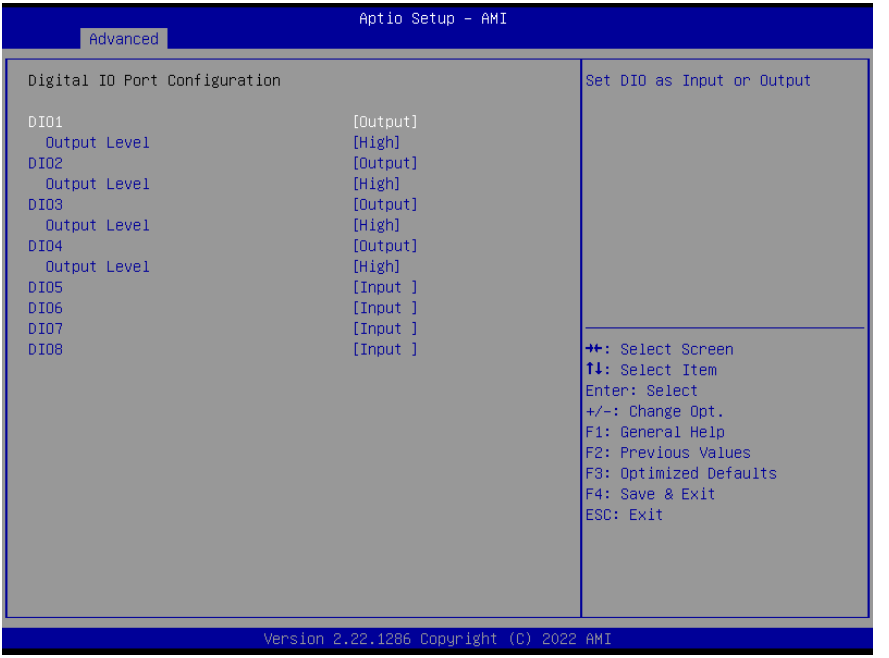
Options Summary		
Sends watch dog before BIOS POST	Disabled	Optimal Default, Failsafe Default
	Enabled	
Enabled - Robot set Watch Dog Timer (WDT) right after power on, before BIOS start POST process. Then Robot will clear WDT on completion of POST. WDT will reset system automatically if it is not cleared before its timer counts down to zero.		
POST Timer (second)	30	Optimal Default, Failsafe Default
Timer count set to Watch Dog Timer for POST. WARNING: Do not set to a value equal or shorter than normal POST time, otherwise system may never complete POST unless clearing BIOS settings. More than 2x normal POST time is suggested.		
Sends watch dog before booting OS	Disabled	Optimal Default, Failsafe Default
	Enabled	
Enabled - Robot set Watch Dog Timer (WDT) after POST completion, before BIOS transfer control to OS. WARNING: Before enabling this function, a program in OS must be in responsible for clearing WDT. Also, this function should be disabled if OS is going to update itself.		

Options Summary		
OS Timer (minute)	3	Optimal Default, Failsafe Default
Timer count set to Watch Dog Timer for OS loading.		
Delayed POST (PEI phase)	Disabled	Optimal Default, Failsafe Default
	Enabled	
Enabled - Robot holds BIOS from starting POST, right after power on. This allows BIOS POST to start with stable power or start after system is physically warmed-up. Note: Robot does this before 'Sends watch dog'.		
Delayed time (second)	10	Optimal Default, Failsafe Default
Period of time for Robot to hold BIOS from POST.		
Delayed POST (DXE phase)	Disabled	Optimal Default, Failsafe Default
	Enabled	
Enabled - Robot holds BIOS before POST completion. This allows BIOS POST to start with stable power or start after system is physically warmed-up. Note: Robot does this after 'Sends watch dog before BIOS POST'.		
Delayed time (second)	10	Optimal Default, Failsafe Default
Period of time for Robot to hold BIOS from POST.		
Reset system once	Disabled	Optimal Default, Failsafe Default
	Enabled	
Enabled - Robot resets system for one time on each boot. This will send a soft or hard reset to onboard devices, thus puts devices to more stable state.		
Soft or hard reset	Soft reset	Optimal Default, Failsafe Default
	Hard reset"	
Select reset type robot should send on each boot.		

3.4.12 Power Management

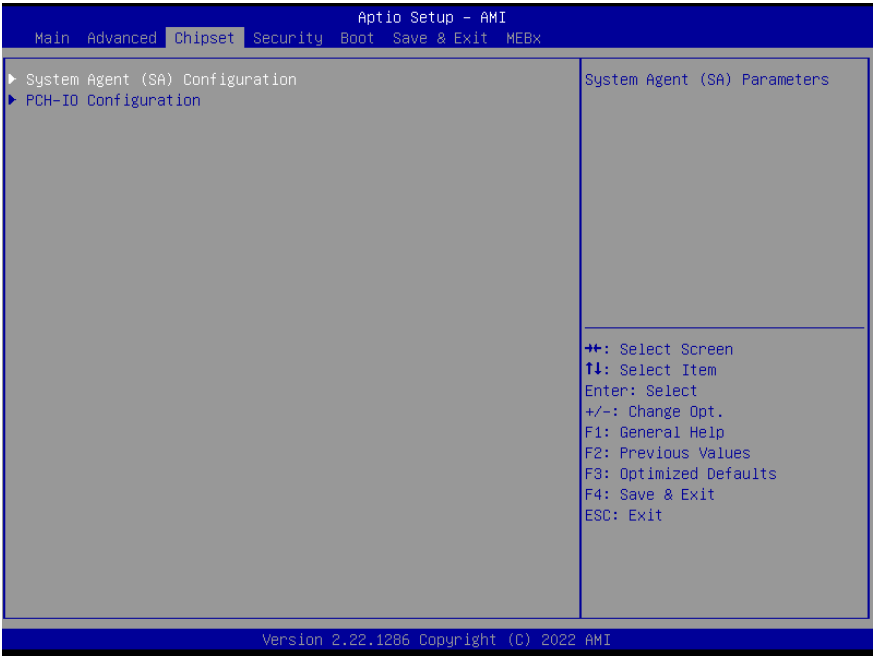
Options Summary		
Power Mode	ATX Type	Optimal Default, Failsafe Default
	AT Type	
Select power supply mode.		
Restore AC Power Loss	Last State	Optimal Default, Failsafe Default
	Always On	
	Always Off	
Select power state when power is re-applied after a power failure.		
RTC wake system from S5	Disable	Optimal Default, Failsafe Default
	Fixed Time	
	Bypass	
Fixed Time: System will wake on the hr::min::sec specified. Bypass: BIOS will not control RTC wake function during system shutdown.		

3.4.13 Digital IO Port Configuration

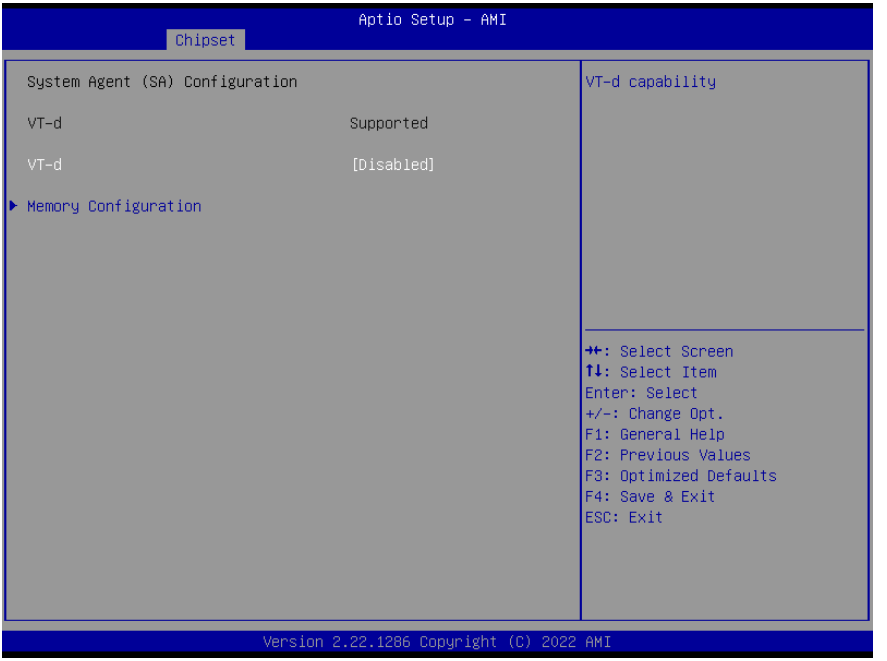


Options Summary		
DIO Port*	Output	
	Input	
Set DIO as Input or Output.		
Output Level	High	
	Low	
Set output level when DIO pin is output.		

3.5 Setup Submenu: Chipset

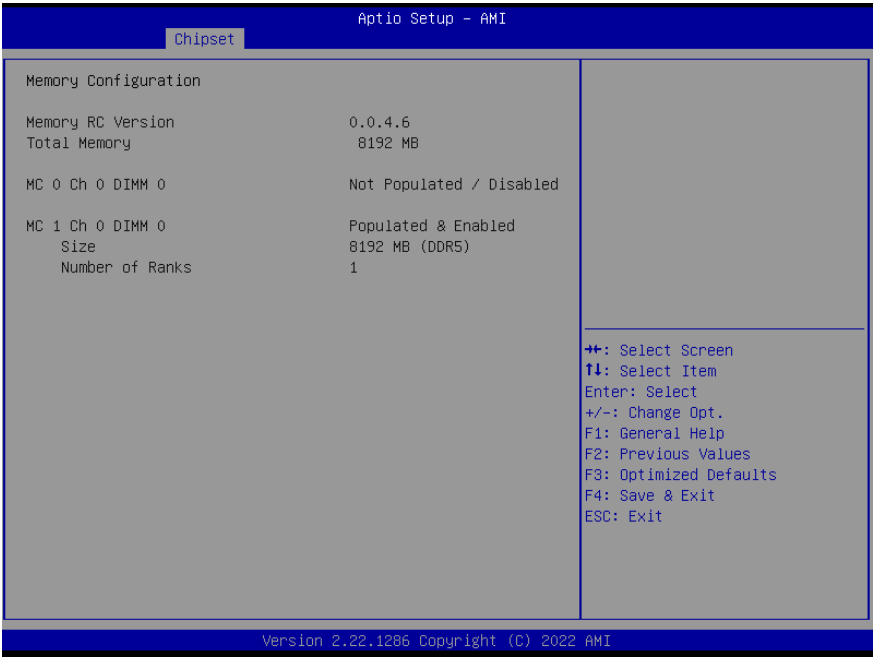


3.5.1 System Agent (SA) Configuration

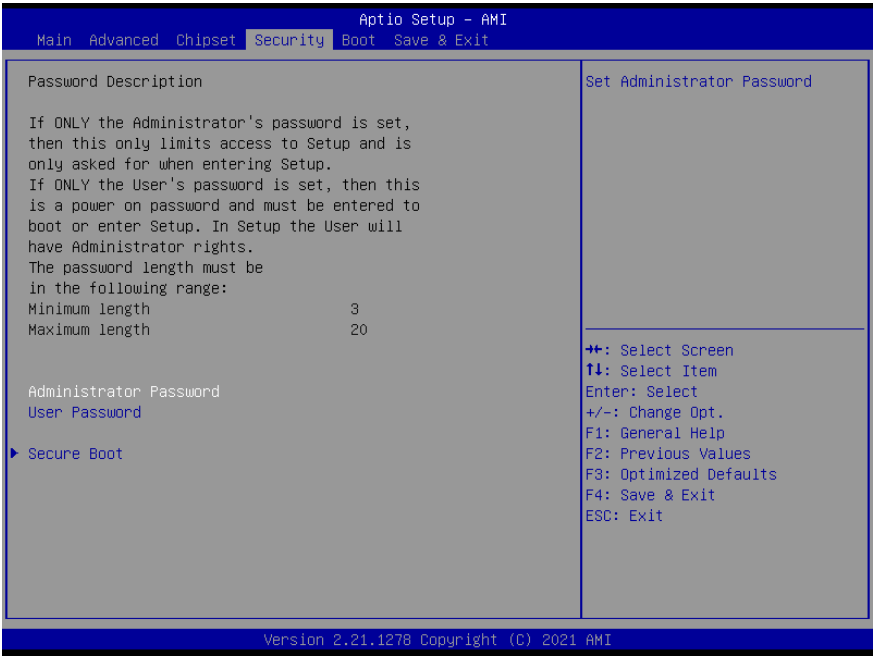


Options Summary		
VT-d	Disabled	Optimal Default, Failsafe Default
	Enabled	
VT-d capability.		

3.5.2 Memory Configuration



3.6 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.

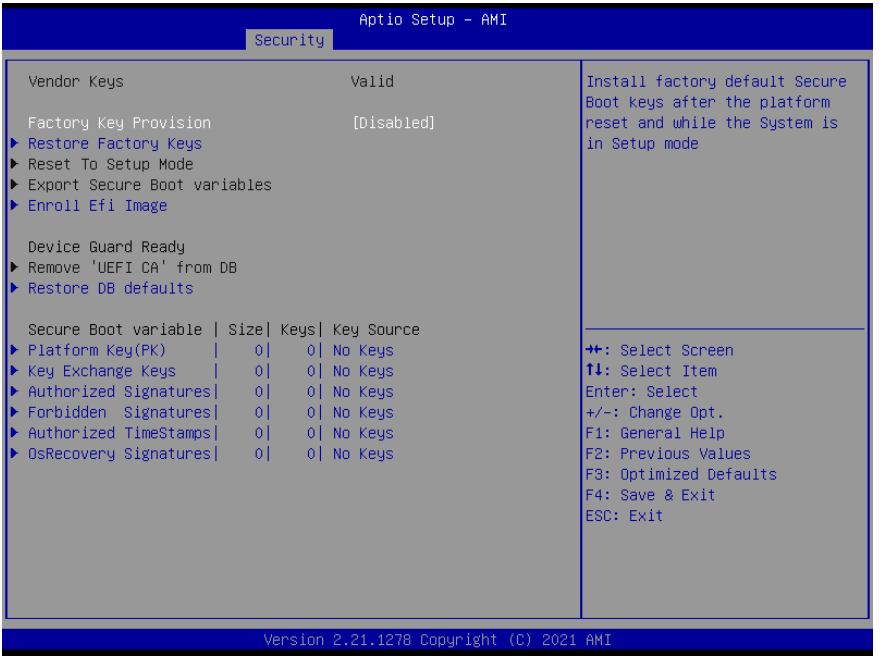
Removing the Password

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

3.6.1 Secure Boot

Options Summary		
Secure Boot	Disabled	Optimal Default, Failsafe Default
	Enabled	
Secure Boot feature is Active if Secure Boot is Enabled, Platform Key (PK) is enrolled and the System is in User mode. The mode change requires platform reset		
Secure Boot Mode	Custom	Optimal Default, Failsafe Default
	Standard	
Secure Boot mode options: Standard or Custom. In Custom mode, Secure Boot Policy variables can be configured by a physically present user without full authentication		
Restore Factory Keys		
Force System to User Mode. Install factory default Secure Boot key databases		
Reset to Setup Mode		
Delete all Secure Boot key databases from NVRAM		

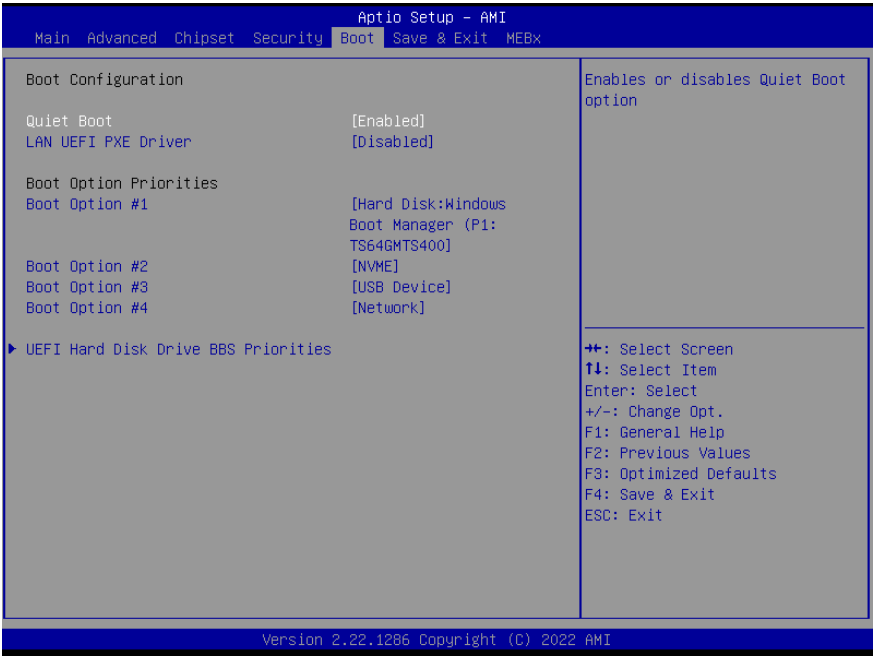
3.6.2 Key Management



Options Summary		
Factory Key Provision	Disabled	Optimal Default, Failsafe Default
	Enabled	
Secure Boot feature is Active if Secure Boot is Enabled, Platform Key (PK) is enrolled and the System is in User mode. The mode change requires platform reset.		
Restore Factory Keys		
Force System to User Mode. Install factory default Secure Boot key databases.		
Reset to Setup Mode		
Delete all Secure Boot key databases from NVRAM.		
Export Secure Boot variables		
Copy NVRAM content of Secure Boot variables to files in a root folder on a file system device.		
Enroll Efi Image		
Allow the image to run in Secure Boot mode. Enroll SHA256 Hash certificate of a PE image into Authorized Signature Database (db).		
Remove 'UEFI CA' from DB		
Device Guard ready system must not list 'Microsoft UEFI CA' Certificate in Authorized		

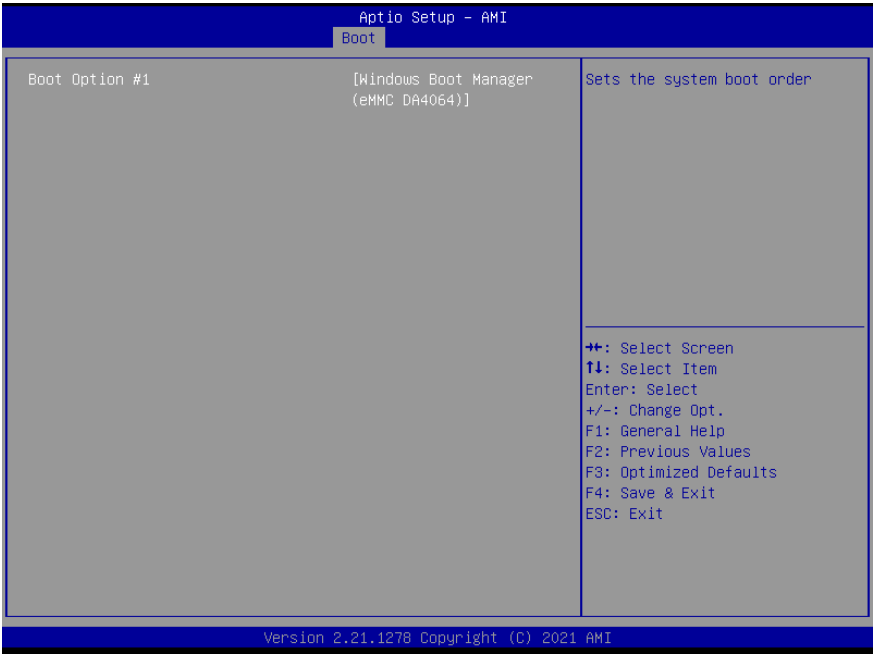
Options Summary	
Signature database (db).	
Restore DB defaults	
Restore DB variable to factory defaults.	
Platform Key (PK)	Details
	Export
	Update
	Delete
Key Exchange Keys	Details
	Export
	Update
	Append
	Delete
Authorized Signatures	Details
	Export
	Update
	Append
	Delete
Forbidden Signatures	Details
	Export
	Update
	Append
	Delete
Authorized TimeStamps	Update
	Append
OsRecovery Signatures	Update
	Append
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, External, Mixed	

3.7 Setup Submenu: Boot

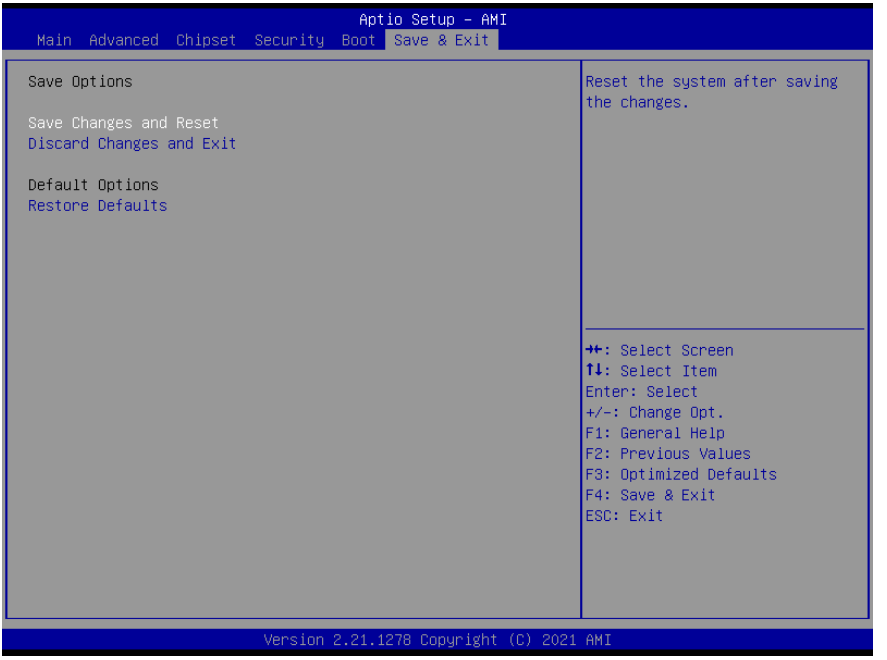


Options Summary		
Quiet Boot	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable Quiet Boot option.		
UEFI PXE Support	Disabled	Optimal Default, Failsafe Default
	Enabled	
Enable/Disable UEFI Network Stack.		
FIXED BOOT ORDER Priorities		
Sets the system boot order.		

3.7.1 BBS Priorities



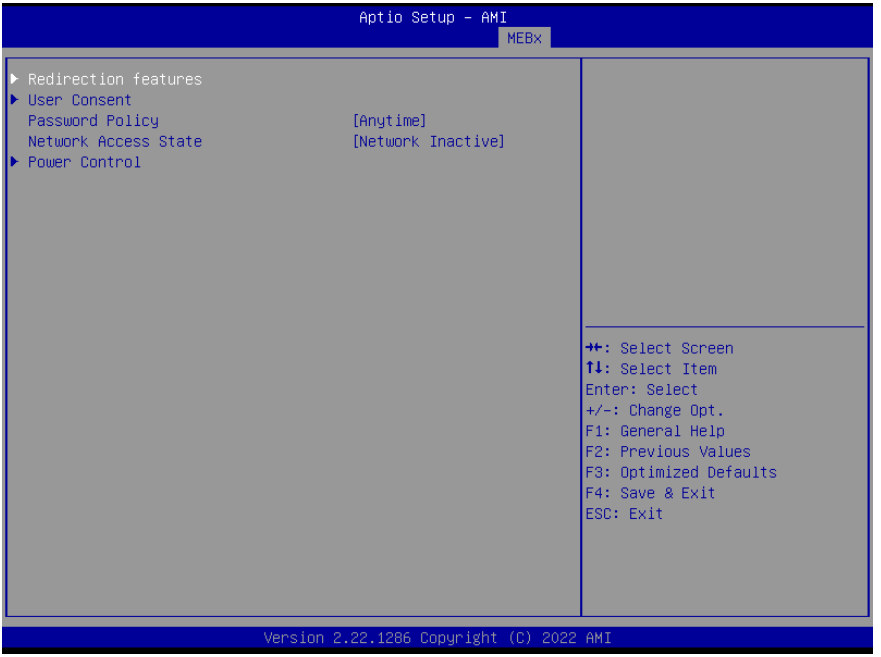
3.8 Setup Submenu: Save & Exit



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.

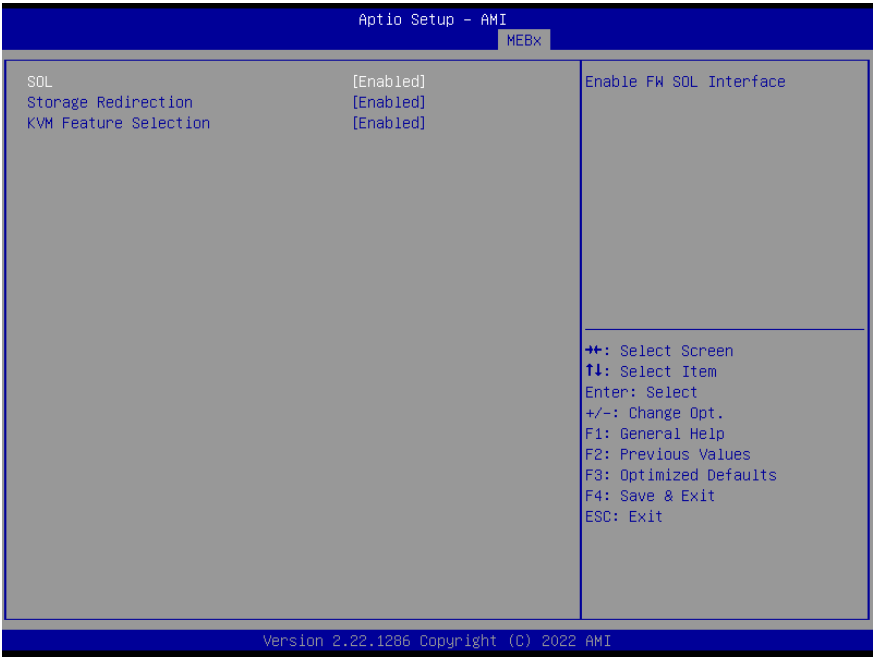
3.9 Setup Submenu: MEBx

3.9.1 Intel® AMT Configuration



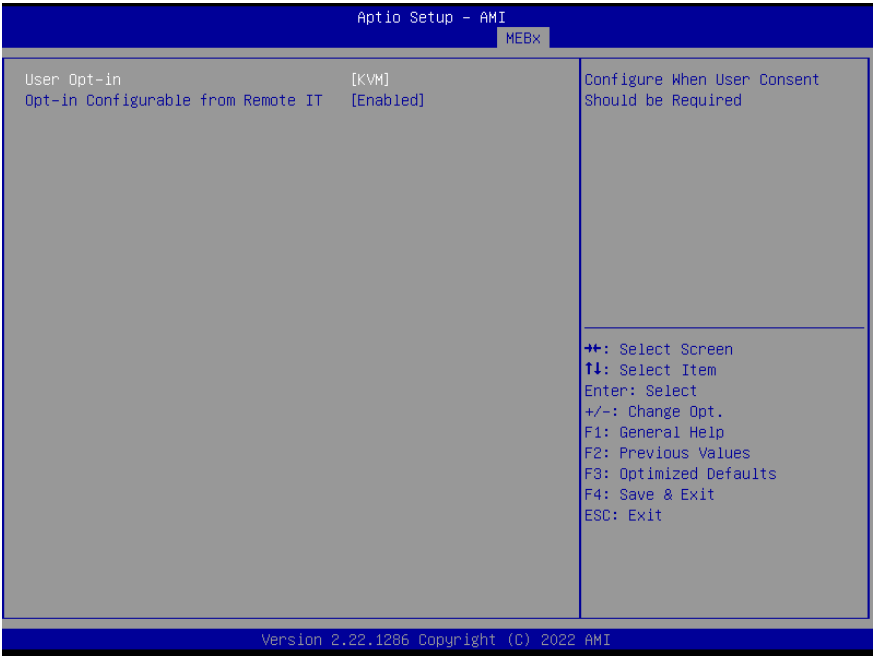
Options Summary		
Password Policy	Default Password Only	
	During Setup and Configuration	
	Anytime	Optimal Default, Failsafe Default
Network Access State	Network Active	
	Network Inactive	Optimal Default, Failsafe Default
	Full Unprovision	
Changes network state of ME. When disabling, it will also clear some other settings.		

3.9.2 Redirection Features



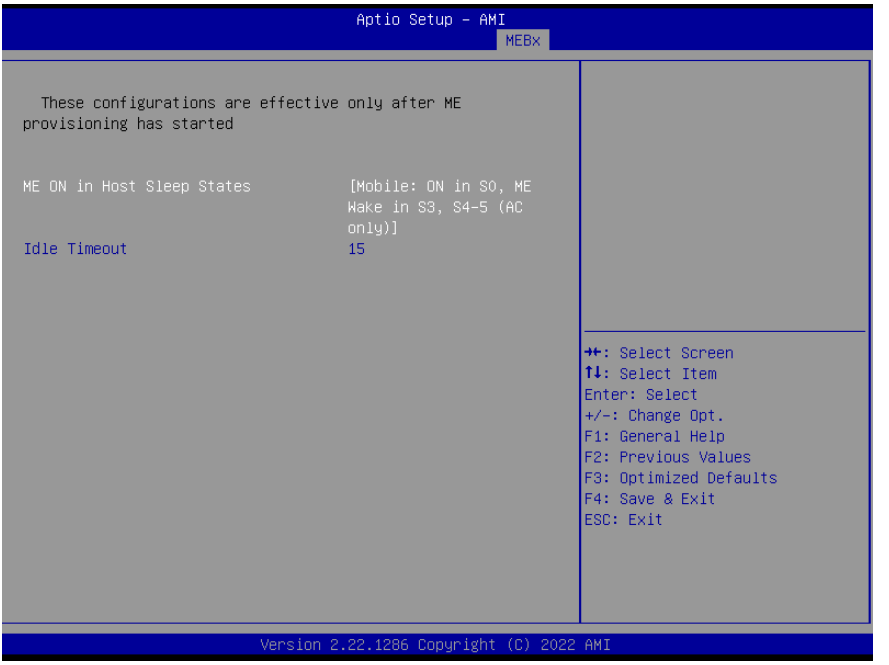
Options Summary		
SOL	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable FW SOL Interface.		
Storage Redirection	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable FW Remote – Storage Redirection.		
KVM Features Selection	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable FW KVM Feature.		

3.9.3 User Consent



Options Summary		
User Opt-in	None	
	KVM	Optimal Default, Failsafe Default
	ALL	
Configure When User Consent Should be Required.		
Opt-in Configurable from Remote IT	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable/Disable Remote Change Capability of User Consent Feature.		

3.9.4 Power Control



Options Summary		
ME ON in Host Sleep States	Mobile: ON in S0	Optimal Default, Failsafe Default
	Mobile: ON in S0, ME Wake in S3, S4-5(AC only)	
Idle Timeout	15	
Timeout Value (1-65536).		

Chapter 4

Driver Installation

4.1 Driver Download/Installation

Drivers for the GENESYSM-ADP6 can be downloaded from the product page on the AAEON website by following this link:

https://www.aaeon.com/en/

Download the driver(s) you need and follow the steps below to install them.

Audio Driver (Windows 10)

1. Open the folder where you unzipped the **Audio Drivers.**
2. Run the **Setup.exe** in the folder.
3. Follow the instructions.
4. Drivers will be installed automatically.

Chipset Driver (Windows 10/11)

1. Open the folder where you unzipped the **Chipset Drivers.**
2. Run the **SetupChipset.exe** file in the folder.
3. Follow the instructions.
4. Drivers will be installed automatically.

Graphics Driver (Windows 10/11)

1. Open the folder where you unzipped the **Graphics Drivers.**
2. Run the **Installer.exe** file in the folder.
3. Follow the instructions.
4. Drivers will be installed automatically.
5. Refer to the ReadMe.txt for any assistance.

LAN Drivers (Windows 10/11)

1. Open the folder where you unzipped the **LAN Drivers.**
2. Run the **Autorun.exe** file in the folder.
3. Follow the instructions.
4. Drivers will be installed automatically.

Peripheral Driver (Windows 10/11)

1. Open the folder where you unzipped the **Peripheral Drivers.**
2. Run the **SetupSeriallO.exe** file in the folder.
3. Follow the instructions.
4. Drivers will be installed automatically.

ME & TXE Drivers (Windows 10/11)

1. Open the folder where you unzipped the **ME & TXE Drivers.**
2. Run the **SetupME.exe** file in the folder.
3. Follow the instructions.
4. Drivers will be installed automatically.

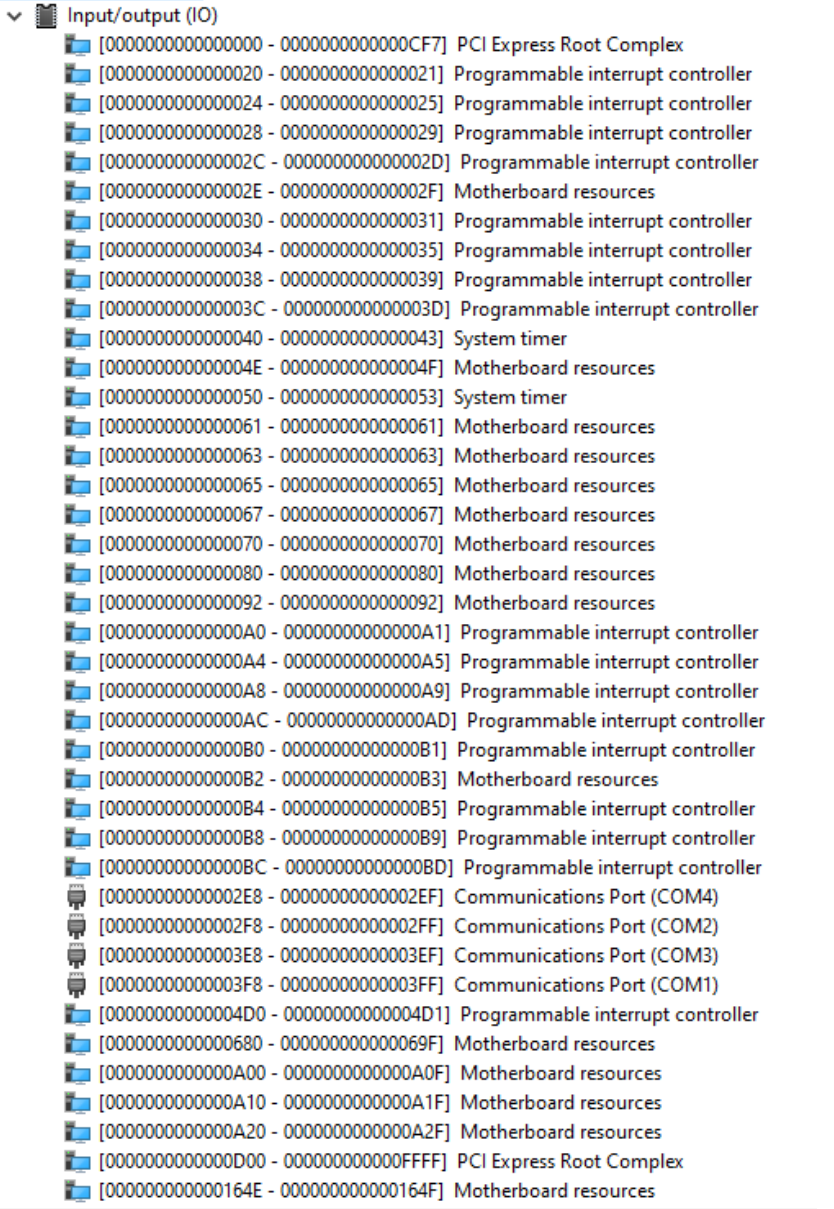
SST Drivers (Windows 10/11)

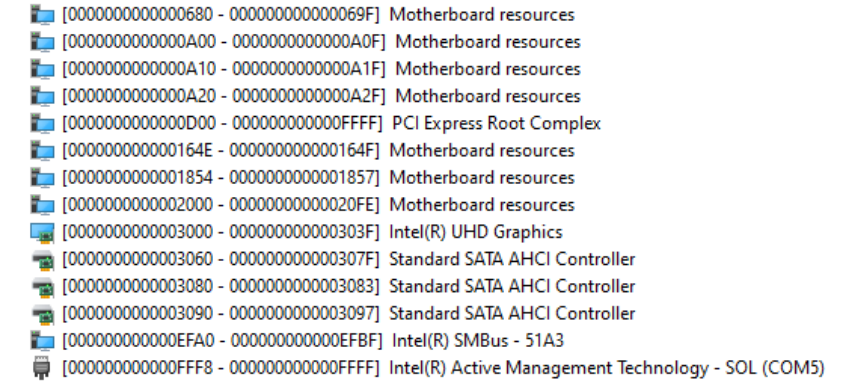
1. Open the folder where you unzipped the **SST Drivers.**
2. Follow the instructions contained within the user guides.

Appendix A

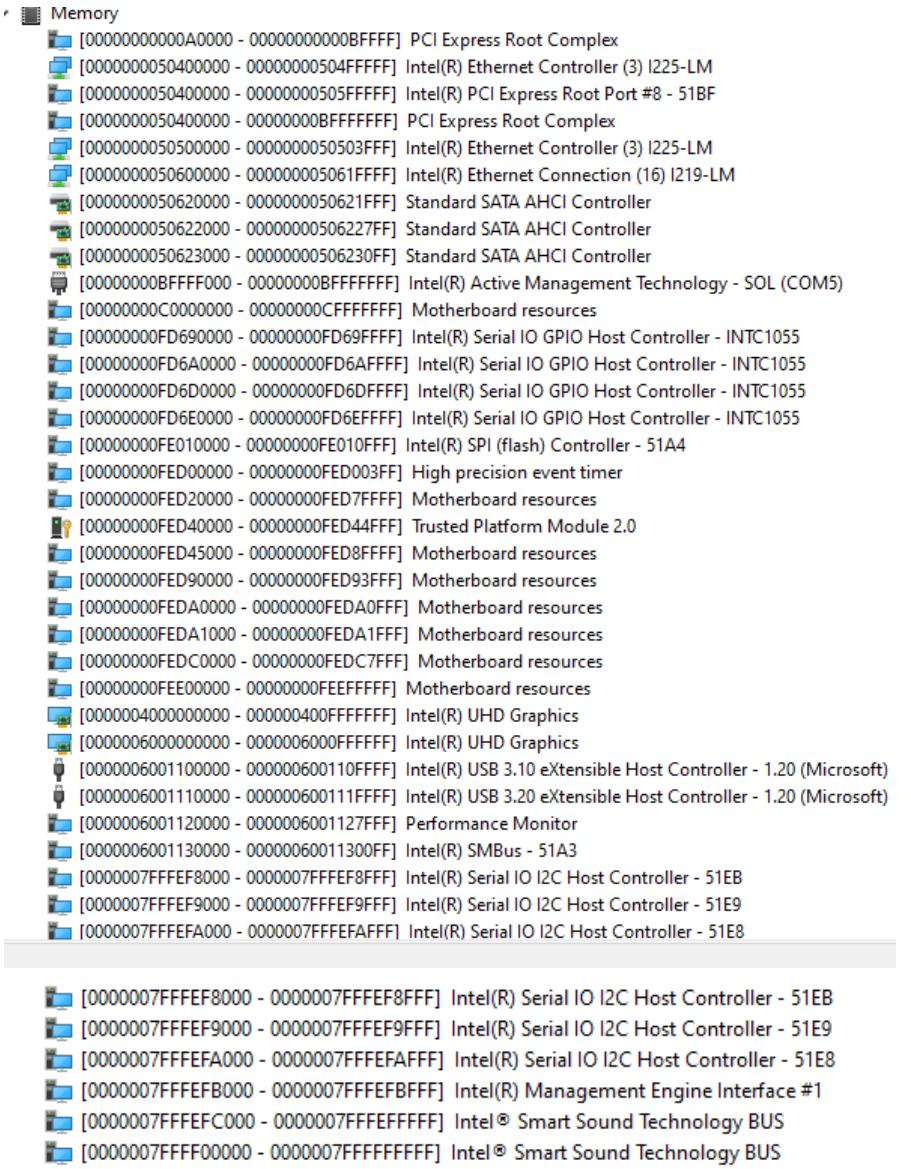
I/O Information

A.1 I/O Address Map

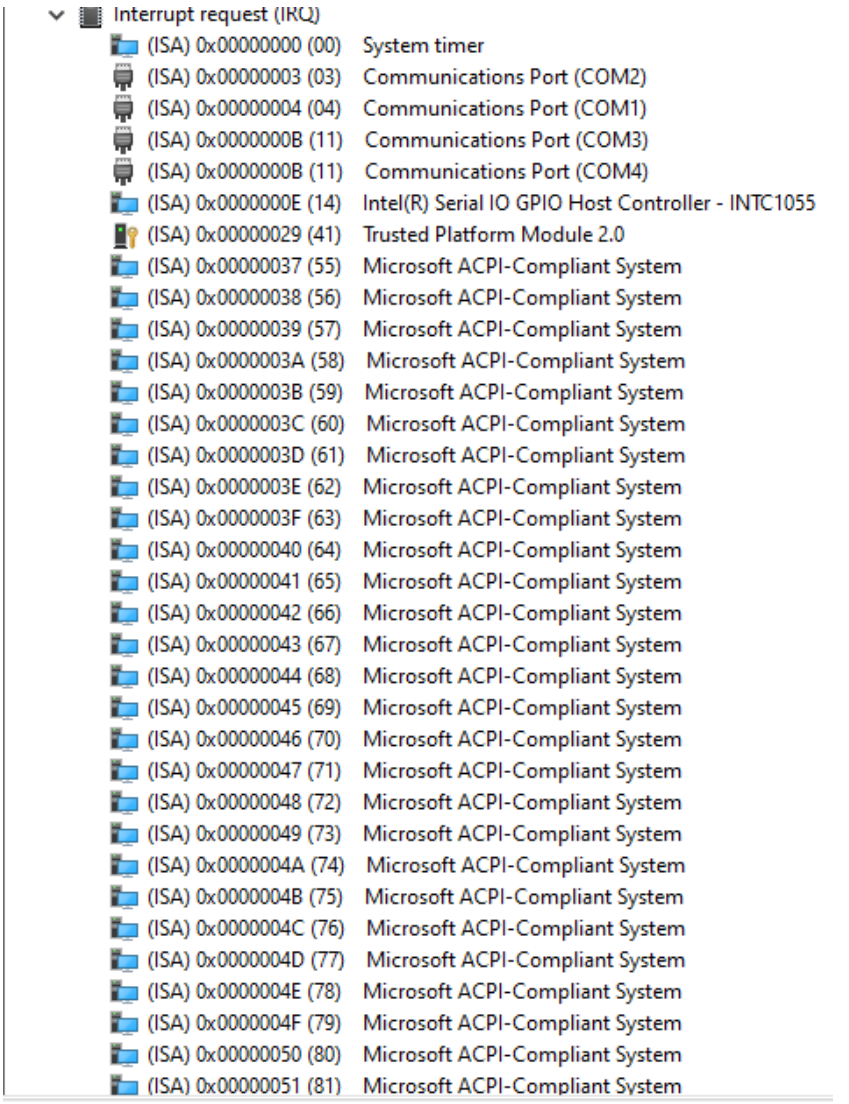


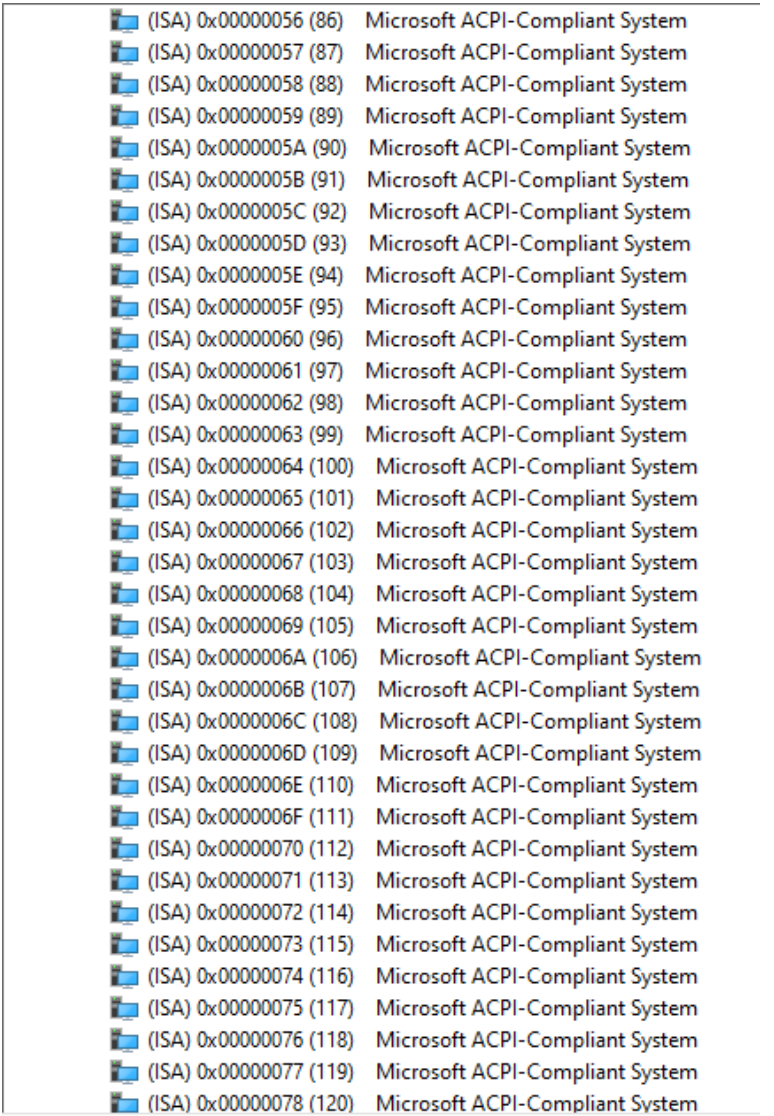

[0000000000000680 - 000000000000069F] Motherboard resources
[0000000000000A00 - 0000000000000A0F] Motherboard resources
[0000000000000A10 - 0000000000000A1F] Motherboard resources
[0000000000000A20 - 0000000000000A2F] Motherboard resources
[0000000000000D00 - 000000000000FFFF] PCI Express Root Complex
[000000000000164E - 000000000000164F] Motherboard resources
[0000000000001854 - 0000000000001857] Motherboard resources
[0000000000002000 - 00000000000020FE] Motherboard resources
[0000000000003000 - 000000000000303F] Intel(R) UHD Graphics
[0000000000003060 - 000000000000307F] Standard SATA AHCI Controller
[0000000000003080 - 0000000000003083] Standard SATA AHCI Controller
[0000000000003090 - 0000000000003097] Standard SATA AHCI Controller
[0000000000000EFA0 - 000000000000EFBF] Intel(R) SMBus - 51A3
[000000000000FFF8 - 000000000000FFFF] Intel(R) Active Management Technology - SOL (COM5)

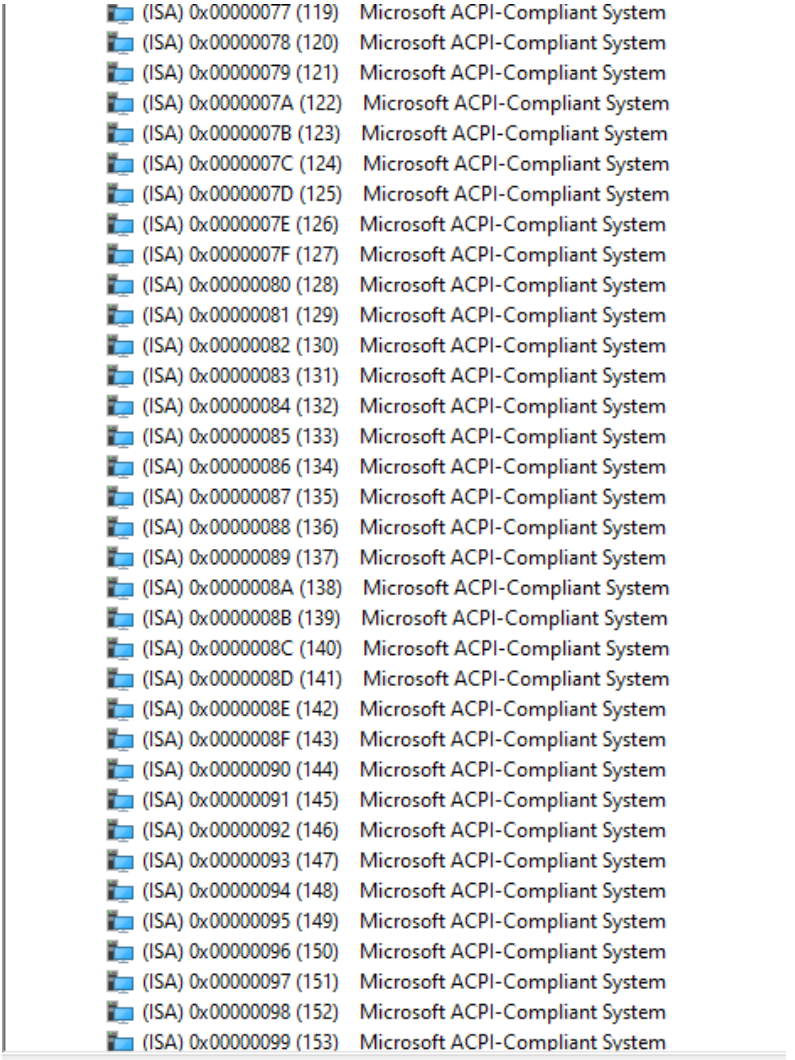
A.2 Memory Address Map



A.3 IRQ Mapping Chart




(ISA) 0x00000056 (86) Microsoft ACPI-Compliant System
(ISA) 0x00000057 (87) Microsoft ACPI-Compliant System
(ISA) 0x00000058 (88) Microsoft ACPI-Compliant System
(ISA) 0x00000059 (89) Microsoft ACPI-Compliant System
(ISA) 0x0000005A (90) Microsoft ACPI-Compliant System
(ISA) 0x0000005B (91) Microsoft ACPI-Compliant System
(ISA) 0x0000005C (92) Microsoft ACPI-Compliant System
(ISA) 0x0000005D (93) Microsoft ACPI-Compliant System
(ISA) 0x0000005E (94) Microsoft ACPI-Compliant System
(ISA) 0x0000005F (95) Microsoft ACPI-Compliant System
(ISA) 0x00000060 (96) Microsoft ACPI-Compliant System
(ISA) 0x00000061 (97) Microsoft ACPI-Compliant System
(ISA) 0x00000062 (98) Microsoft ACPI-Compliant System
(ISA) 0x00000063 (99) Microsoft ACPI-Compliant System
(ISA) 0x00000064 (100) Microsoft ACPI-Compliant System
(ISA) 0x00000065 (101) Microsoft ACPI-Compliant System
(ISA) 0x00000066 (102) Microsoft ACPI-Compliant System
(ISA) 0x00000067 (103) Microsoft ACPI-Compliant System
(ISA) 0x00000068 (104) Microsoft ACPI-Compliant System
(ISA) 0x00000069 (105) Microsoft ACPI-Compliant System
(ISA) 0x0000006A (106) Microsoft ACPI-Compliant System
(ISA) 0x0000006B (107) Microsoft ACPI-Compliant System
(ISA) 0x0000006C (108) Microsoft ACPI-Compliant System
(ISA) 0x0000006D (109) Microsoft ACPI-Compliant System
(ISA) 0x0000006E (110) Microsoft ACPI-Compliant System
(ISA) 0x0000006F (111) Microsoft ACPI-Compliant System
(ISA) 0x00000070 (112) Microsoft ACPI-Compliant System
(ISA) 0x00000071 (113) Microsoft ACPI-Compliant System
(ISA) 0x00000072 (114) Microsoft ACPI-Compliant System
(ISA) 0x00000073 (115) Microsoft ACPI-Compliant System
(ISA) 0x00000074 (116) Microsoft ACPI-Compliant System
(ISA) 0x00000075 (117) Microsoft ACPI-Compliant System
(ISA) 0x00000076 (118) Microsoft ACPI-Compliant System
(ISA) 0x00000077 (119) Microsoft ACPI-Compliant System
(ISA) 0x00000078 (120) Microsoft ACPI-Compliant System


(ISA) 0x00000077 (119) Microsoft ACPI-Compliant System
(ISA) 0x00000078 (120) Microsoft ACPI-Compliant System
(ISA) 0x00000079 (121) Microsoft ACPI-Compliant System
(ISA) 0x0000007A (122) Microsoft ACPI-Compliant System
(ISA) 0x0000007B (123) Microsoft ACPI-Compliant System
(ISA) 0x0000007C (124) Microsoft ACPI-Compliant System
(ISA) 0x0000007D (125) Microsoft ACPI-Compliant System
(ISA) 0x0000007E (126) Microsoft ACPI-Compliant System
(ISA) 0x0000007F (127) Microsoft ACPI-Compliant System
(ISA) 0x00000080 (128) Microsoft ACPI-Compliant System
(ISA) 0x00000081 (129) Microsoft ACPI-Compliant System
(ISA) 0x00000082 (130) Microsoft ACPI-Compliant System
(ISA) 0x00000083 (131) Microsoft ACPI-Compliant System
(ISA) 0x00000084 (132) Microsoft ACPI-Compliant System
(ISA) 0x00000085 (133) Microsoft ACPI-Compliant System
(ISA) 0x00000086 (134) Microsoft ACPI-Compliant System
(ISA) 0x00000087 (135) Microsoft ACPI-Compliant System
(ISA) 0x00000088 (136) Microsoft ACPI-Compliant System
(ISA) 0x00000089 (137) Microsoft ACPI-Compliant System
(ISA) 0x0000008A (138) Microsoft ACPI-Compliant System
(ISA) 0x0000008B (139) Microsoft ACPI-Compliant System
(ISA) 0x0000008C (140) Microsoft ACPI-Compliant System
(ISA) 0x0000008D (141) Microsoft ACPI-Compliant System
(ISA) 0x0000008E (142) Microsoft ACPI-Compliant System
(ISA) 0x0000008F (143) Microsoft ACPI-Compliant System
(ISA) 0x00000090 (144) Microsoft ACPI-Compliant System
(ISA) 0x00000091 (145) Microsoft ACPI-Compliant System
(ISA) 0x00000092 (146) Microsoft ACPI-Compliant System
(ISA) 0x00000093 (147) Microsoft ACPI-Compliant System
(ISA) 0x00000094 (148) Microsoft ACPI-Compliant System
(ISA) 0x00000095 (149) Microsoft ACPI-Compliant System
(ISA) 0x00000096 (150) Microsoft ACPI-Compliant System
(ISA) 0x00000097 (151) Microsoft ACPI-Compliant System
(ISA) 0x00000098 (152) Microsoft ACPI-Compliant System
(ISA) 0x00000099 (153) Microsoft ACPI-Compliant System

Appendix B

Mating Connectors and Cables

B.1 Mating Connectors and Cables

Connector Label	Function	Mating Connector		Cable P/N
		Vendor	Model no	
CN1	SATA Power	JST	PHR-2	1702150155
CN2	SATA	Molex	887505318	N/A
CN4	Power	N/A	N/A	170204010R
CN5	Audio with detect	Aces	50247-012H0H0-001	170X000517
CN9	Front Panel	ACES	50247-010H0H0-001	170010020T
CN12	COM Port 1/2	ACES	50247-020H0H0-001	170X000508
CN13	USB Port 1/2	ACES	50247-010H0H0-001	170010010D
CN14	Digital I/O	MOLEX	51110-1050	N/A
CN22	I2C/SMBUS/Debug	JST	SHR-12V-S-B	1703120130
CN24	External RTC	Molex	51021-0200	175011301K
CN26	CPU FAN	Molex	22-01-2035	N/A
CN28	LAN1 LED	Harwin	M50-3000345	N/A
CN36	LAN2 LED	Harwin	M50-3000345	N/A