



OMNI-ADN-KIT Series

OMNI-3105-ADN, OMNI-3155-ADN, OMNI-2155-ADN,
OMNI-2215-ADN, OMNI-3125-ADN

Modular Touch Panel Solutions

User's Manual 2nd Ed

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Packing List

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

Item	Quantity
● OMNI-ADN-KIT	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 on 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 WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4°F) OR ABOVE 50°C (122°F) TO PREVENT DAMAGE.**

System Notice

Please note:

1. The OMNI Series ADN Panel PC is designed for use in industrial environments
2. Please use a minimum 120W power supply for the OMNI Series ADN Panel PC

FCC Statement

Warning!



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.

China RoHS Requirements (CN)

产品中有毒有害物质或元素名称及含量

AAEON System

QO4-381 Rev.A2

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。 环保使用期限(EFUP (Environmental Friendly Use Period))：10 年 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)

Name and content of hazardous substances in product

AAEON System

QO4-381 Rev.A2

Part Name	Hazardous Substances					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
PCB Assemblies	×	○	○	○	○	○
Connector and Cable	×	○	○	○	○	○
Chassis	○	○	○	○	○	○
CPU and Memory	×	○	○	○	○	○
Hard Disk	×	○	○	○	○	○
LCD Modules	×	○	○	○	○	○
CD-ROM/DVD-ROM	×	○	○	○	○	○
Touch Modules	×	○	○	○	○	○
Power	×	○	○	○	○	○
Battery	×	○	○	○	○	○
The table is prepared in accordance with the provisions of SJ/T 11364. ○ : Indicates that said hazardous substance contained in all of the homogenous materials for this product is below the limit requirement of GB/T 26572. × : Indicates that said hazardous substance contained in at least one of the homogenous materials used for this part is above the limit requirement of GB/T 26572. But this product still be compliance with 2011/65/EU Directive (allowed with 2011/65/EU Annex III of RoHS exemption with number 6(c),7(a),7(c)-1). EFUP (Environment Friendly Use Period) value: 10 years. Notes: 1. This product defined period of use is under normal condition. 2. In above part, CPU/Memory/ Hard Disk/CD-ROM/DVD-ROM/ Power are optional. 3. In above part, LCD Modules/ Touch Modules are for all-in-one product model.						

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Chapter 1

Product Specifications

1.1 Specifications

1.1.1 OMNI-3105-ADN

System	
Processor	Intel® Processor N50 Intel® Processor N97
System Memory	DDR5 4800MHz SODIMM x 1, up to 16GB
LCD/CRT Controller	CPU Integrated
Ethernet	Intel® Ethernet Controller I226, 2.5GbE LAN x 3
I/O Port	USB 3.2 Gen 2 (Type-A) x 2 USB 2.0 x 2 DB-9 x 2 (RS-232/422/485, set by BIOS) HDMI 1.4b x 1 2.5GbE RJ-45 x 3 9V ~ 30V 3-pin DC Terminal Block Connector Power on/off Switch with LED Light x 1
Storage Disk Drive	2.5" SATA Drive Bay x 1 (SATA 6Gb/s) Full-size mPCIe (PCIe [x1]/SATA)
Expansion Slot	M.2 3052 B-Key x 1 with Nano SIM M.2 2230 E-Key x 1
OS Support	Windows® 10 IoT Enterprise LTSC 2021 Windows® 10/11
Mechanical	
Front Panel	Aluminum Front Bezel + Metal Chassis
Mounting	Panel Mount /VESA Mount (VESA 100)
Dimension	11" x 9.4" x 2.9" (280mm x 239.3mm x 72.8mm)

Mechanical

Carton Dimension	16.3" x 7.1" x 15.4" (415mm x 180mm x 392mm)
Gross Weight	6.4 lb. (2.9Kg)

Environmental

Operating Temperature	-4°F ~ 122°F (-20°C ~ 50°C) with 0.7m/s airflow
Storage Temperature	-4°F ~ 140°F (-20°C ~ 60°C)
Storage Humidity	90% @40°C; non-condensing
Vibration	1Grms /5~500Hz/ operation - with mSATA
Shock	15G peak acceleration (11 m sec. duration) with mSATA
EMC	CE/FCC Class A

Power Supply

DC Input	9V ~ 30V
----------	----------

LCD

Display Type	10.4" TFT LCD, LED
Max. Resolution	1024 (H) x 768 (V)
Max. Colors	16.7M (8 bit/color)
Luminance	500 cd/m ²
Viewing Angle	176° (H) x 176° (V)
Backlight	LED
Backlight MTBF (Hours)	50,000

Touchscreen

Type	Projected Capacitive Multi-Touch
Light Transmission	90%

1.1.2 OMNI-3155-ADN

System

Processor	Intel® Processor N50
	Intel® Processor N97
System Memory	DDR5 4800MHz SODIMM x 1, up to 16GB
LCD/CRT Controller	CPU Integrated
Ethernet	Intel® Ethernet Controller I226, 2.5GbE LAN x 3
I/O Port	USB 3.2 Gen 2 (Type-A) x 2
	USB 2.0 x 2 via Cables
	DB-9 x 2 (RS-232/422/485, set by BIOS)
	HDMI 1.4b x 1
	2.5GbE RJ-45 x 3
	9V ~ 30V 3-pin DC Terminal Block Connector
	Power on/off Switch with LED Light x 1
Storage Disk Drive	2.5" SATA Drive Bay x 1 (SATA 6Gb/s)
	Full-size mPCIe (PCIe [x1]/SATA)
Expansion Slot	M.2 3052 B-Key x 1 with Nano SIM
	M.2 2230 E-Key x 1
OS Support	Windows® 10 IoT Enterprise LTSC 2021
	Windows® 10/11

Mechanical

Front Panel	Aluminum Front Bezel + Metal Chassis
Mounting	Panel Mount/VESA Mount (VESA 100)
Dimension	14.5" x 12.4" x 2.8" (368.9mm x 313.7mm x 72mm)
Carton Dimension	20.1" x 9.8" x 18.1" (510mm x 250mm x 460mm)
Gross Weight	8.9 lb. (4.05Kg)

Environmental

Operating Temperature	-4°F ~ 122°F (-20°C ~ 50°C) with 0.7m/s airflow
Storage Temperature	-4°F ~ 140°F (-20°C ~ 60°C)
Storage Humidity	90% @40°C; non-condensing
Vibration	1Grms /5~500Hz/ operation - with mSATA
Shock	15G peak acceleration (11 m sec. duration) with mSATA
EMC	CE/FCC Class A

Power Supply

DC Input	9V ~ 30V
----------	----------

LCD

Display Type	15" TFT-LCD, LED
Max. Resolution	1024 (H) x 768 (V)
Max. Colors	16.2M (8 bit/color)
Luminance	300 cd/m ²
Viewing Angle	176° (H) x 176° (V)
Backlight	LED
Backlight MTBF (Hours)	70,000

Touchscreen

Type	Projected Capacitive Multi-Touch
Light Transmission	90%

1.1.3 OMNI-2155-ADN

System

Processor	Intel® Processor N50
	Intel® Processor N97
System Memory	DDR5 4800MHz SODIMM x 1, up to 16GB
LCD/CRT Controller	CPU Integrated
Ethernet	Intel® Ethernet Controller I226, 2.5GbE LAN x 3
I/O Port	USB 3.2 Gen 2 (Type-A) x 2
	USB 2.0 x 2 via Cables
	DB-9 x 2 (RS-232/422/485, set by BIOS)
	HDMI 1.4b x 1
	2.5GbE RJ-45 x 3
	9V ~ 30V 3-pin DC Terminal Block Connector
	Power on/off Switch with LED Light x 1
Storage Disk Drive	2.5" SATA Drive Bay x 1 (SATA 6Gb/s)
	Full-size mPCIe (PCIe [x1]/SATA)
Expansion Slot	M.2 3052 B-Key x 1 with Nano SIM
	M.2 2230 E-Key x 1
OS Support	Windows® 10 IoT Enterprise LTSC 2021
	Windows® 10/11

Mechanical

Front Panel	Aluminum Front Bezel + Metal Chassis
Mounting	Panel Mount/VESA Mount (VESA 100)
Dimension	16.5" x 10.4" x 2.9" (420.2mm x 264.5mm x 73.7mm)
Carton Dimension	20.9" x 17.5" x 7.9" (530mm x 445mm x 200mm)
Gross Weight	11.7 lb. (5.3Kg)

Environmental

Operating Temperature	-4°F ~ 122°F (-20°C ~ 50°C) with 0.7m/s airflow
Storage Temperature	-4°F ~ 140°F (-20°C ~ 60°C)
Storage Humidity	90% @40°C; non-condensing
Vibration	1Grms /5~500Hz/ operation - with mSATA
Shock	15G peak acceleration (11 m sec. duration) with mSATA
EMC	CE/FCC Class A

Power Supply

DC Input	9V ~ 30V
----------	----------

LCD

Display Type	15.6" TFT-LCD, LED
Max. Resolution	Regular 1366 (H) x 768 (V) Full HD 1920 (H) x 1080 (V)
Max. Colors	Regular :16.7M (8 bit/color) Full HD: 16.2M
Luminance	Regular: 400 cd/m2 Full HD: 450 cd/m2
Viewing Angle	Regular: 170° (H); 130° (V) Full HD: 178° (H); 178° (V)
Backlight	LED
Backlight MTBF (Hours)	50,000

Touchscreen

Type	Projected Capacitive Multi-Touch
Light Transmission	90%

1.1.4 OMNI-2215-ADN

System

Processor	Intel® Processor N50
	Intel® Processor N97
System Memory	DDR5 4800MHz SODIMM x 1, up to 16GB
LCD/CRT Controller	CPU Integrated
Ethernet	Intel® Ethernet Controller I226, 2.5GbE LAN x 3
I/O Port	USB 3.2 Gen 2 (Type-A) x 3
	USB 2.0 x 2 via Cables
	DB-9 x 2 (RS-232/422/485, set by BIOS)
	HDMI 1.4b x 1
	2.5GbE RJ-45 x 3
	9V ~ 30V 3-pin DC Terminal Block Connector
	Power on/off Switch with LED Light x 1
Storage Disk Drive	2.5" SATA Drive Bay x 1 (SATA 6Gb/s)
	Full-size mPCIe (PCIe [x1]/SATA)
Expansion Slot	M.2 3052 B-Key x 1 with Nano SIM
	M.2 2230 E-Key x 1
OS Support	Windows® 10 IoT Enterprise LTSC 2021
	Windows® 10/11

Mechanical

Front Panel	Aluminum Front Bezel + Metal Chassis
Mounting	Panel Mount/VESA Mount (VESA 100)
Dimension	21.6" x 14.7" x 2.6" (549.4mm x 372.4mm x 67mm)
Carton Dimension	26.4" x 7.9" x 20.7" (670mm x 200mm x 525mm)
Gross Weight	15.2 lb. (6.9Kg)

Environmental

Operating Temperature	-4°F ~ 122°F (-20°C ~ 50°C) with 0.7m/s airflow
Storage Temperature	-4°F ~ 140°F (-20°C ~ 60°C)
Storage Humidity	90% @40°C; non-condensing
Vibration	1Grms /5~500Hz/ operation - with mSATA
Shock	15G peak acceleration (11 m sec. duration) with mSATA
EMC	CE/FCC Class A

Power Supply

DC Input	9V ~ 30V
----------	----------

LCD

Display Type	21.5" TFT-LCD, LED
Max. Resolution	1920 (H) x 1080 (V)
Max. Colors	16.7M (8 bit/color)
Luminance	250 cd/m ²
Viewing Angle	178° (H); 178° (V)
Backlight	LED
Backlight MTBF (Hours)	50,000

Touchscreen

Type	Projected Capacitive Multi-Touch
Light Transmission	90%

1.1.5 OMNI-3125-ADN

System

Processor	Intel® Processor N50
	Intel® Processor N97
System Memory	DDR5 4800MHz SODIMM x 1, up to 16GB
LCD/CRT Controller	CPU Integrated
Ethernet	Intel® Ethernet Controller I226, 2.5GbE LAN x 3
I/O Port	USB 3.2 Gen 2 (Type-A) x 3
	USB 2.0 x 2
	DB-9 x 2 (RS-232/422/485, set by BIOS)
	HDMI 1.4b x 1
	2.5GbE RJ-45 x 3
	9V ~ 30V 3-pin DC Terminal Block Connector
	Power on/off Switch with LED Light x 1
Storage Disk Drive	2.5" SATA Drive Bay x 1 (SATA 6Gb/s)
	Full-size mPCIe (PCIe [x1]/SATA)
Expansion Slot	M.2 3052 B-Key x 1 with Nano SIM
	M.2 2230 E-Key x 1
OS Support	Windows® 10 IoT Enterprise LTSC 2021
	Windows® 10/11

Mechanical

Front Panel	Aluminum Front Bezel + Metal Chassis
Mounting	Panel Mount/VESA Mount (VESA 100)
Dimension	12.9" x 11.3" x 2.7" (328.5mm x 288mm x 69.7mm)
Carton Dimension	20.9" x 17.5" x 7.9" (530mm x 445mm x 200mm)
Gross Weight	10.7 lb. (4.84Kg)

Environmental

Operating Temperature	-4°F~122°F (-20°C~50°C) with airflow
Storage Temperature	-4°F ~ 140°F (-20°C ~ 60°C)
Storage Humidity	90% @40°C; non-condensing
Vibration	1Grms /5~500Hz/ operation - with mSATA
Shock	15G peak acceleration (11 m sec. duration) with mSATA
EMC	CE/FCC Class A

Power Supply

DC Input	9V ~ 30V
----------	----------

LCD

Display Type	12.1" TFT LCD, LED
Max. Resolution	1024 (H) x 768 (V)
Max. Colors	16.2M
Luminance	500 cd/m ²
Viewing Angle	160° (H); 160° (V)
Backlight	LED
Backlight MTBF (Hours)	50,000

Touchscreen

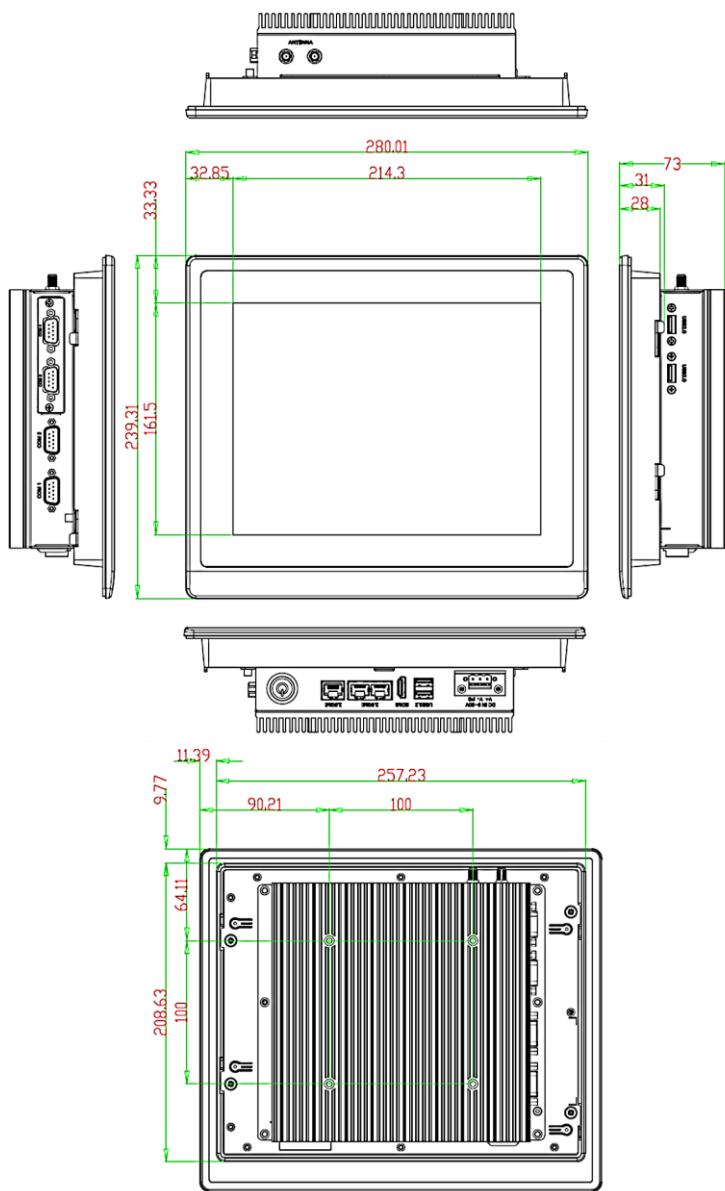
Type	P-CAP/ 5-wire resistive
Light Transmission	P-CAP (90% ± 3%), 5-wire Resistive (80% ± 3%)

Chapter 2

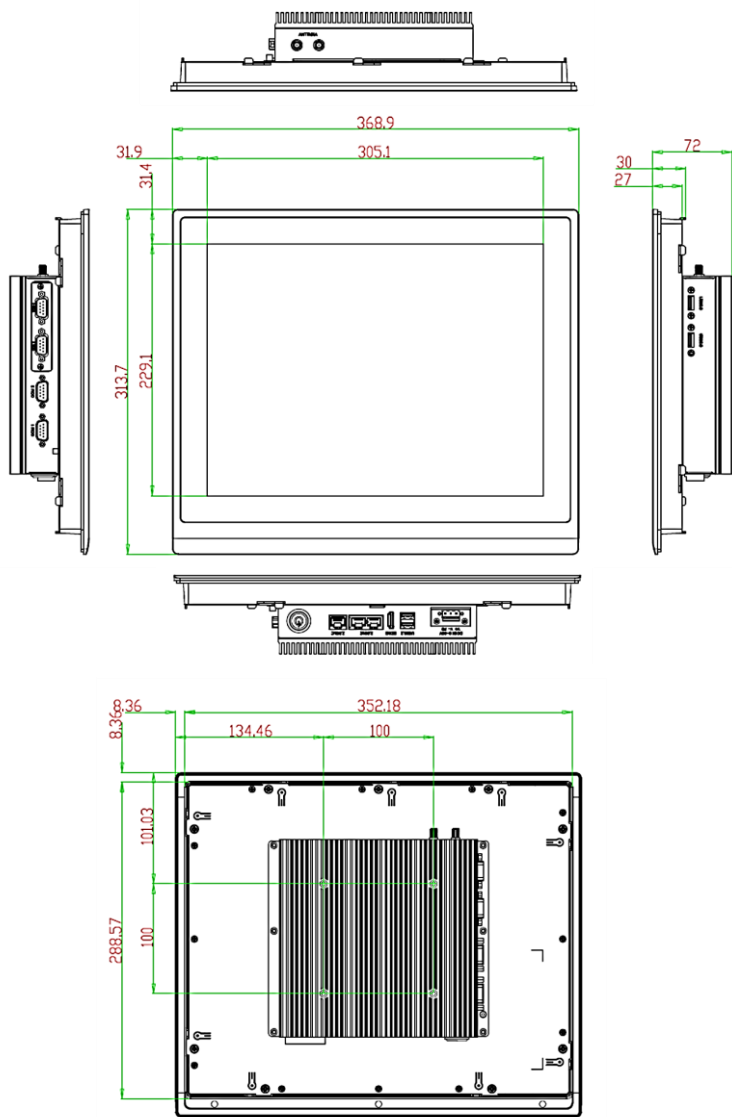
Hardware Information

2.1 Dimensions

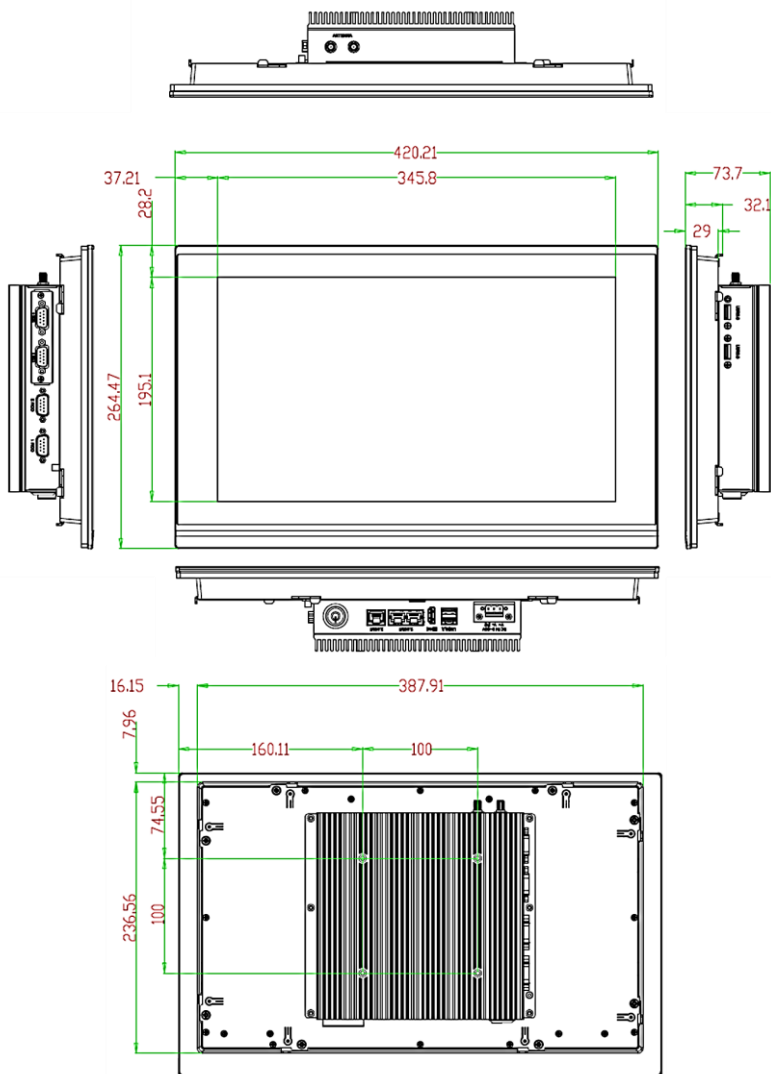
2.1.1 OMNI-3105-ADN



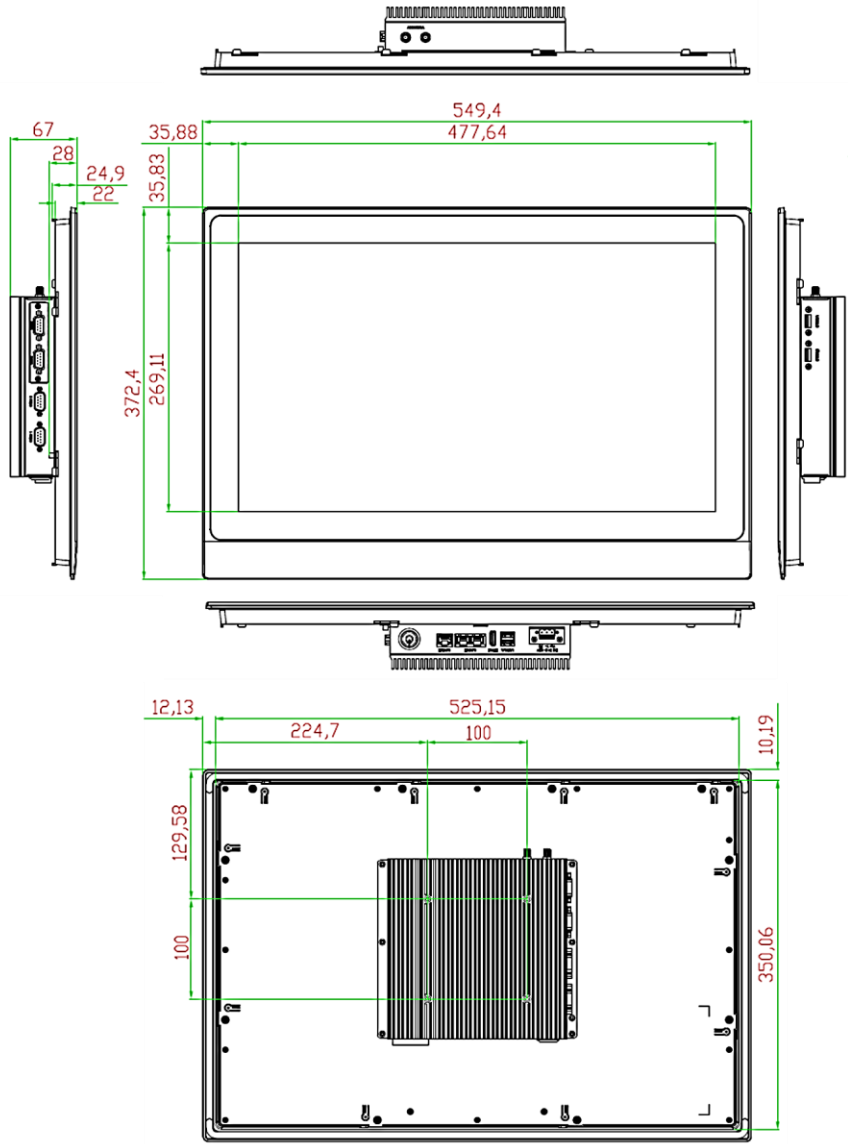
2.1.2 OMNI-3155-ADN



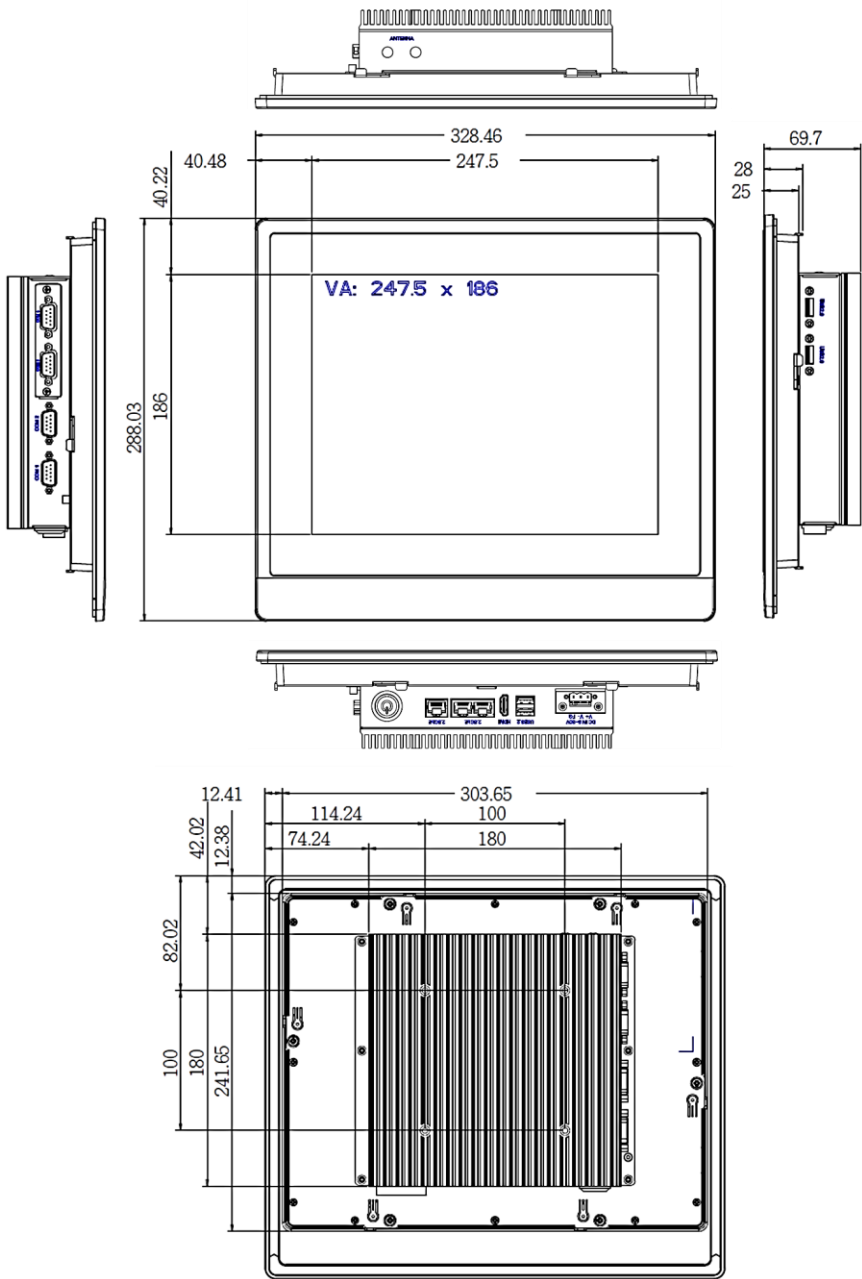
2.1.3 OMNI-2155-ADN



2.1.4 OMNI-2215-ADN

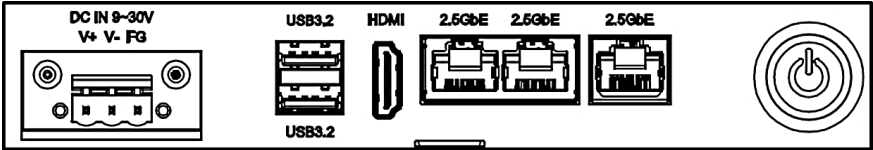


2.1.5 OMNI-3125-ADN



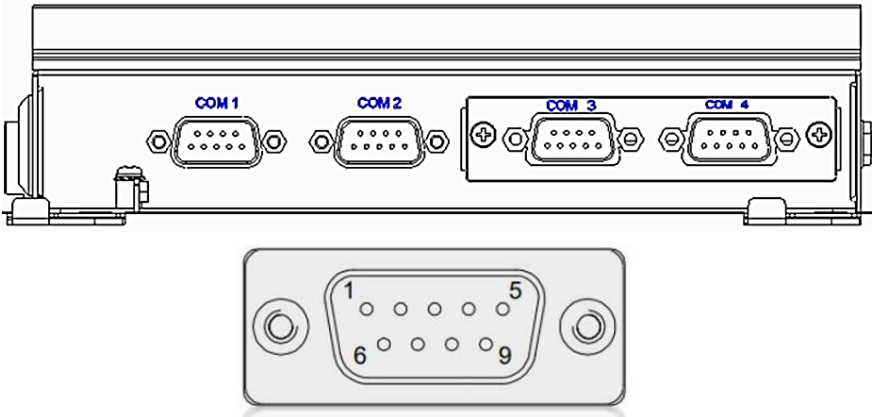
2.2 I/O Ports

2.2.1 Bottom Side I/O



Port	I/O Description
Power	Power On/Off
DC In	9V ~ 30V Phoenix Power Input Connector
USB 3.2	Dual USB Type-A
HDMI	HDMI
LAN	2.5GbE LAN

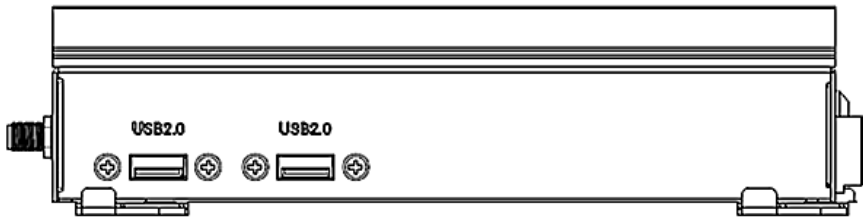
2.2.2 Left Side Panel I/O



Port	I/O Description
COM 1~2	DB-9 Port for RS-232/422/485
COM 3~4 (Optional)	DB-9 Port for RS-232

Note: For the Pin Definitions of COM Port 1~4, please refer to Section 2.6.28~2.6.31.

2.2.3 Right Side Panel I/O



Port	I/O Description
USB2.0	USB 2.0

2.3 Cable List

2.3.1 LVDS Cable

Model	LVDS Cable P/N
OMNI-3105-ADN	170X000817
OMNI-3125-ADN	170X000826
OMNI-3155-ADN	170430030Z
OMNI-2155-ADN	170X000426
OMNI-2155HDT-ADN	170X000721
OMNI-3175-ADN	170X000837
OMNI-3195-ADN	170X000824
OMNI-2215-ADN	170X000811

2.3.2 Backlight Cable

Model	Backlight Cable P/N
OMNI-3105-ADN	170X000816
OMNI-3125-ADN	170X000827
OMNI-3155-ADN	170X000716
OMNI-2155-ADN	170X000716
OMNI-2155HDT-ADN	Combined in LVDS Cable
OMNI-3175-ADN	170X000836
OMNI-3195-ADN	170X000825
OMNI-2215-ADN	170X000812

2.3.3 PCAP Touch Cable

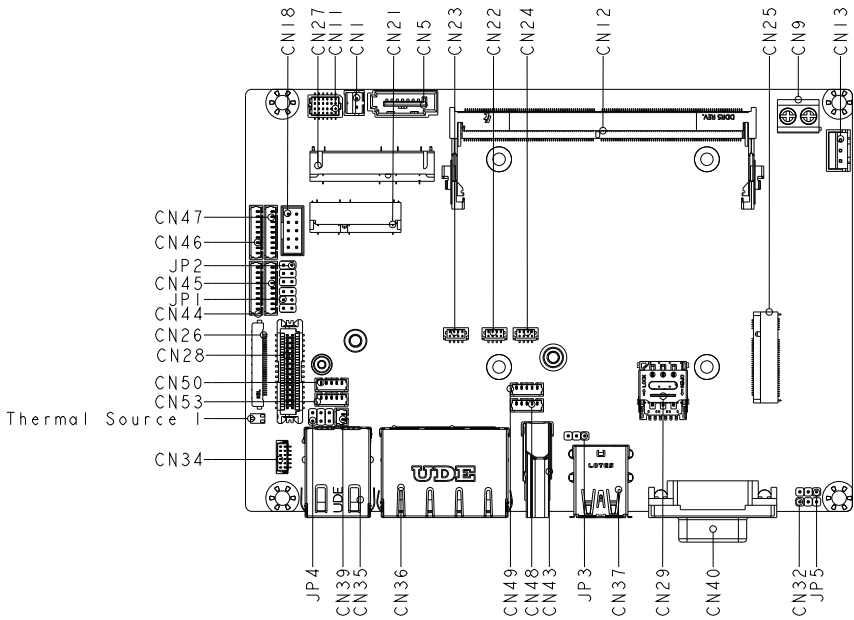
Model	Backlight Cable P/N
OMNI-3105-ADN	170X000988
OMNI-3125-ADN	170X000988
OMNI-3155-ADN	170X000989
OMNI-2155-ADN	170X000990
OMNI-2155HDT-ADN	170X000990
OMNI-3175-ADN	170X000989
OMNI-3195-ADN	170X000988
OMNI-2215-ADN	170X000990

2.3.4 Config Cable

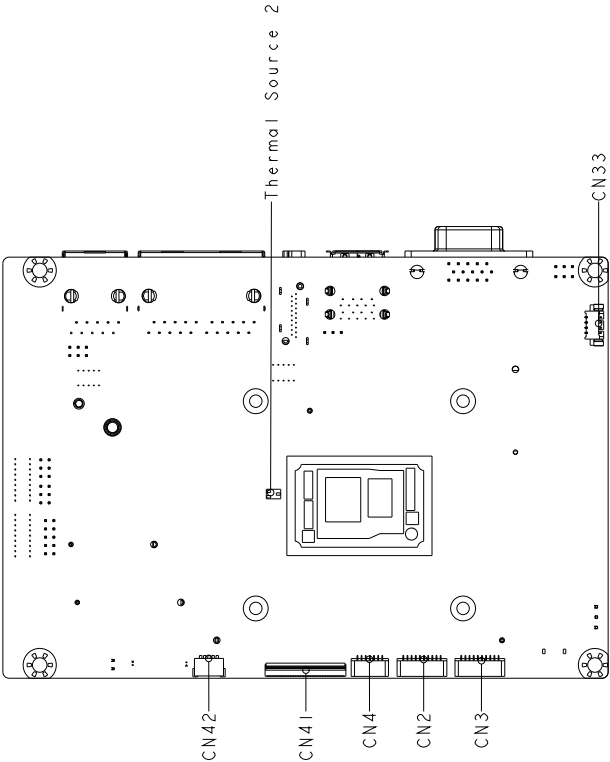
Model	PCAP Touch Cable P/N
OMNI-3105-ADN	170X000993
OMNI-3125-ADN	170X000994
OMNI-3155-ADN	170X000995
OMNI-2155-ADN	170X000996
OMNI-2155HDT-ADN	170X000997
OMNI-3175-ADN	170X000998
OMNI-3195-ADN	170X000999
OMNI-2215-ADN	170X001000

2.4 Jumpers and Connectors

Top



Bottom

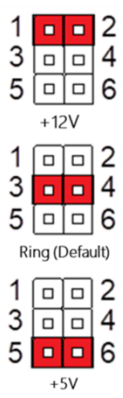
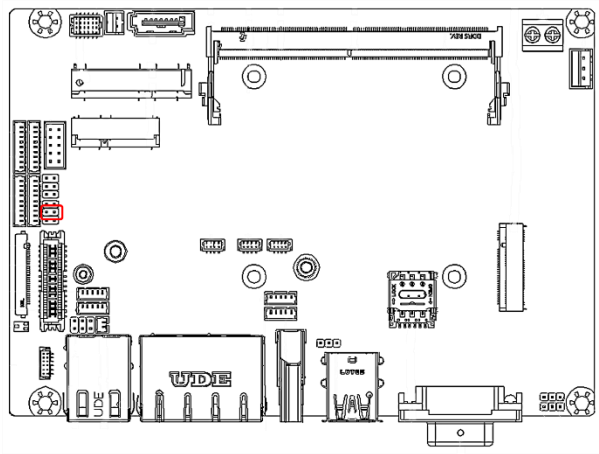


2.5 List of Jumpers

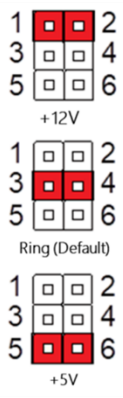
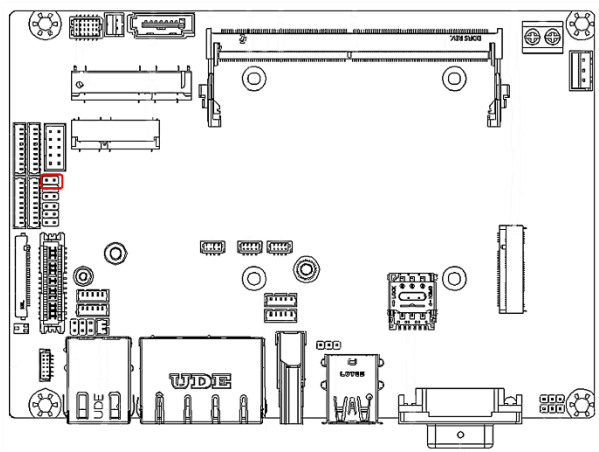
Please refer to the table below for all the system's jumpers that you can configure for your application.

Label	Function
JP1	COM 2 Pin 9 Function Selection
JP2	COM 1 Pin 9 Function Selection
JP3	Auto Power Button Enable/Disable Selection
JP4	LVDS 1 Operating Voltage Selection LVDS 1 Backlight Inverter Voltage Selection
JP5	Clear CMOS Jumper
JP6	LVDS Backlight Lightness Control Mode Selection

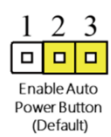
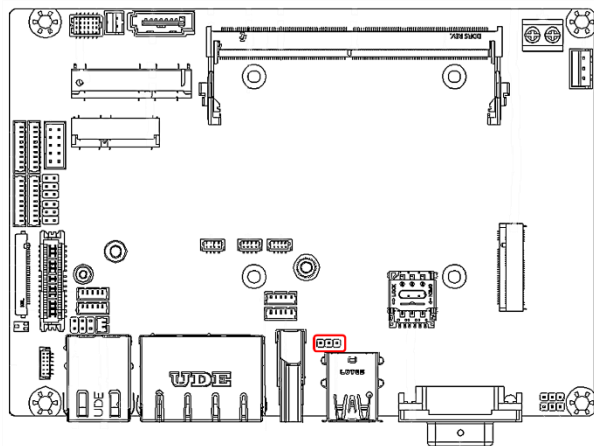
2.5.1 COM 2 Pin 9 Function Selection (JP1)



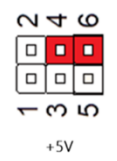
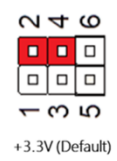
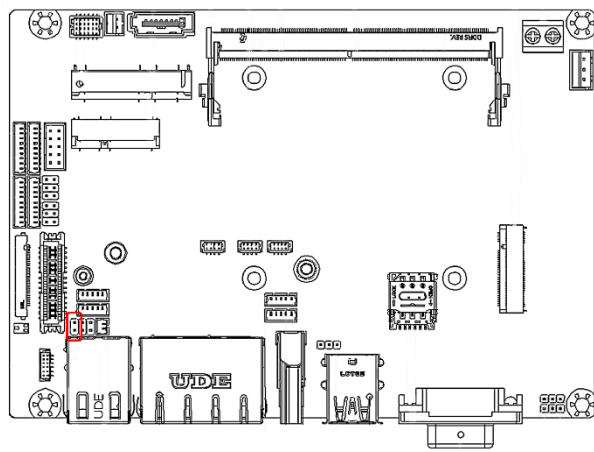
2.5.2 COM 1 Pin 9 Function Selection (JP2)



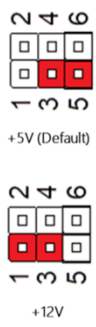
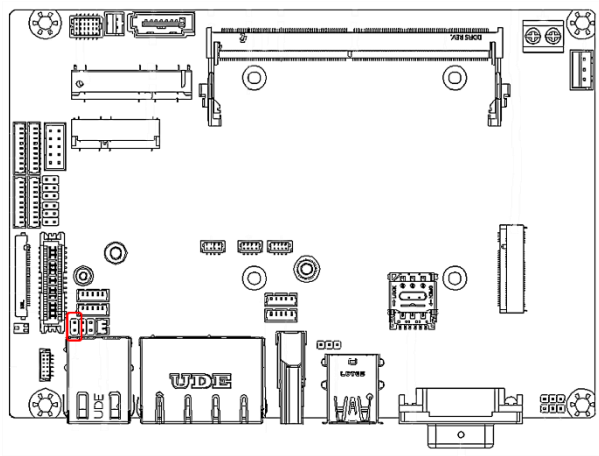
2.5.3 Auto Power Button Enable/Disable Selection (JP3)



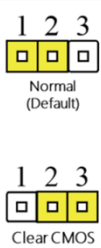
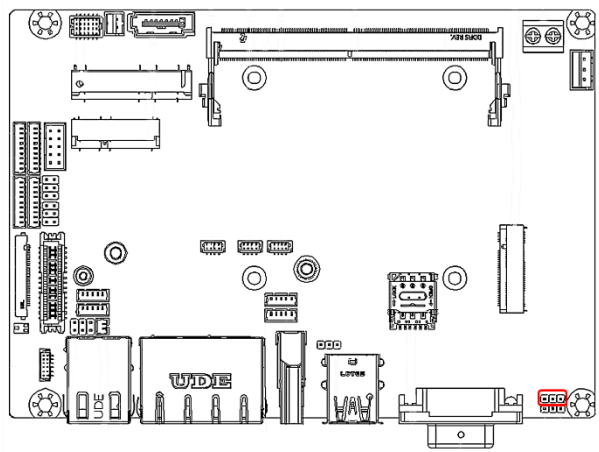
2.5.4 LVDS 1 Operating Voltage Selection (JP4)



2.5.5 LVDS 1 Backlight Inverter Voltage Selection (JP4)



2.5.6 Clear CMOS Jumper (JP5)



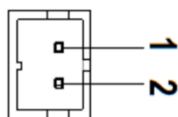
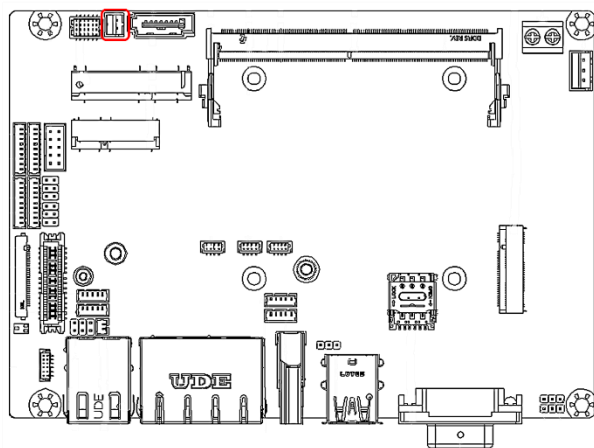
2.6 List of Connectors

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

Label	Function
CN1	+5V Output for SATA HDD
CN2	Front Panel
CN3	Port 80 Debug Port Connector
CN4	SPI Flash Programming Port
CN5	SATA Port
CN8	External +12V Input (Optional)
CN9	External Power Input
CN11	Audio I/O Port
CN12	DDR5 SODIMM
CN13	External +5VSB Input
CN18	GPIO Port
CN21	M.2 2230 E-Key
CN22	LAN Port 1 LED Connector
CN23	LAN Port 3 LED Connector
CN24	LAN Port 2 LED Connector
CN25	M.2 3052 B-Key
CN27	Full Size Mini Card Slot/mSATA
CN28	LVDS 1 Connector
CN29	Nano SIM Card Socket
CN33	4-pin FAN Connector
CN34	LVDS Inverter/Backlight Connector
CN35	RJ-45 LAN Port 3
CN36	RJ-45 LAN Port 1/Port 2
CN37	USB 3.2/USB 2.0 Port 1/Port 2
CN39	RTC Battery Connector
CN40	CRT Connector
CN42	I2C/SMBus Connector
CN43	HDMI Connector
CN44	COM Port 1
CN45	COM Port 2
CN46	COM Port 3
CN47	COM Port 4

Label	Function
CN48	USB 2.0 Port 3
CN49	USB 2.0 Port 4
CN50	USB 2.0 Port 5
CN53	USB 2.0 Port 6

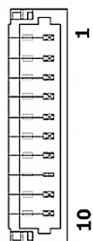
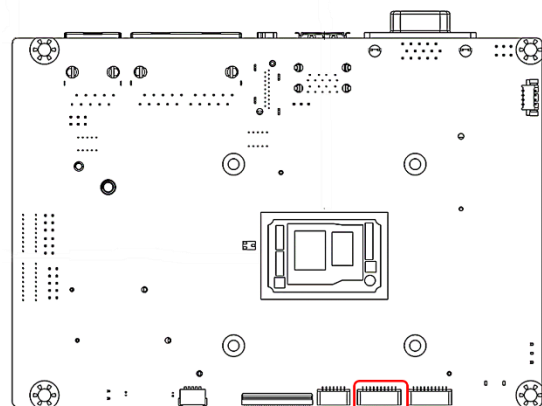
2.6.1 +5V Output for SATA HDD (CN1)



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

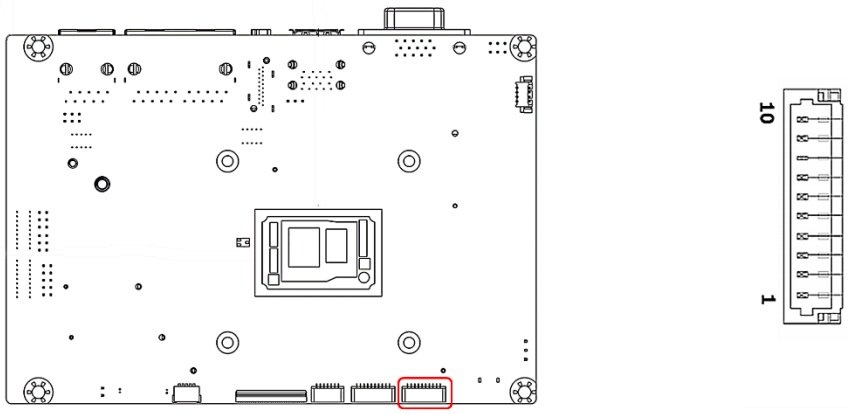
Note: The driving current of +V5S supports up to 2A.

2.6.2 Front Panel (CN2)



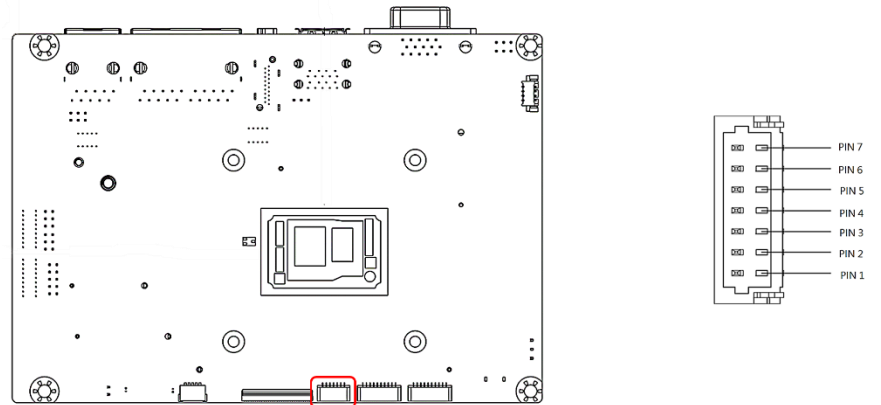
Pin	Pin Name	Signal Type	Signal Level
1	GND	GND	GND
2	EXT_PWRBTN#	IN	
3	SATA_LED-	OUT	
4	SATA_LED+	OUT	
5	BUZZER-	OUT	
6	BUZZER+	OUT	
7	GND	GND	GND
8	PWR_LED+	OUT	
9	GND	GND	GND
10	HWRST#	IN	

2.6.3 Port 80 Debug Port Connector (CN3)



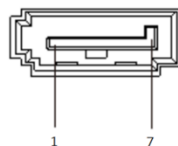
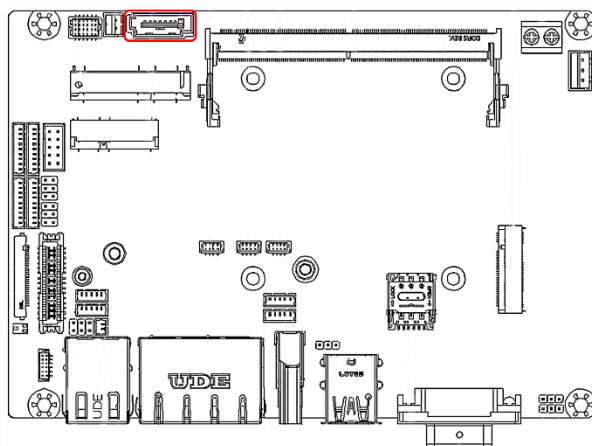
Pin	Pin Name	Signal Type	Signal Level
1	ESP_IO0	I/O	+1.8V
2	ESP_IO1	I/O	+1.8V
3	ESP_IO2	I/O	+1.8V
4	ESP_IO3	I/O	+1.8V
5	+V3P3S	PWR	+3.3V
6	ESPI_CS	IN	
7	ESPI_RST	OUT	+3.3V
8	GND	GND	GND
9	ESPI_CLK	OUT	+1.8V
10	+V3P3A	PWR	+3.3V

2.6.4 SPI Flash Programming Port (CN4)



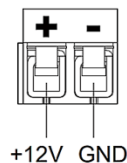
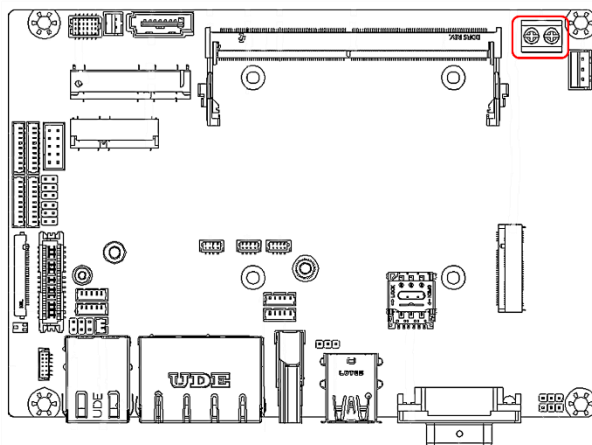
Pin	Pin Name	Signal Type	Signal Level
1	SPI_MISO	OUT	
2	GND	GND	GND
3	SPI_CLK	IN	
4	+V3P3A_SPI	PWR	+3.3V
5	SPI_MOSI	IN	
6	SPI_CS	IN	
7	NC		

2.6.5 SATA Port (CN5)



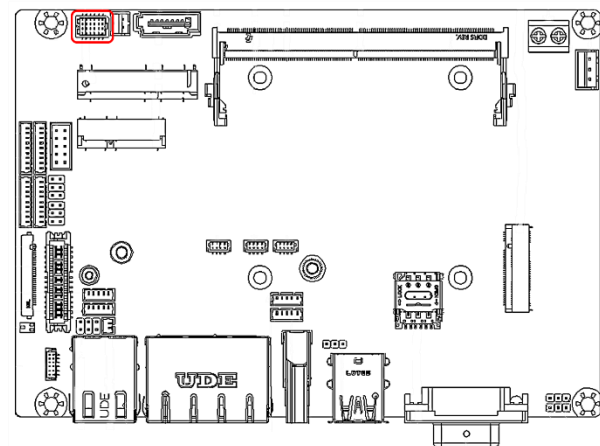
Pin	Pin Name	Signal Type	Signal Level
1	GND	GND	GND
2	GND	GND	GND
3	+12V	PWR	+12V
4	+12V	PWR	+12V

2.6.6 External Power Input (CN9)



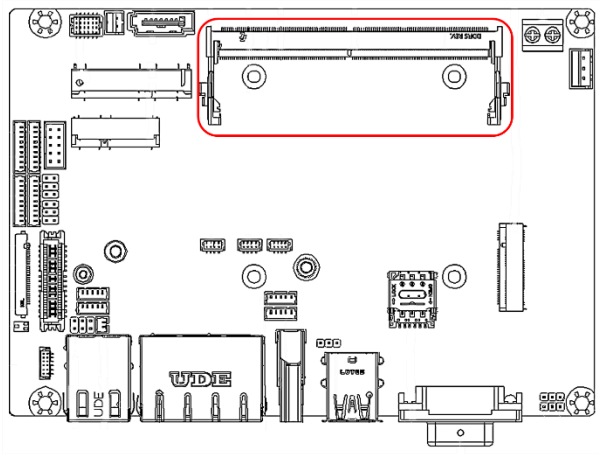
Pin	Pin Name	Signal Type	Signal Level
1	+12V	PWR	+12V
2	GND	GND	GND

2.6.7 Audio I/O Port (CN11)



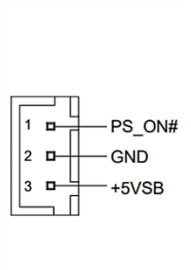
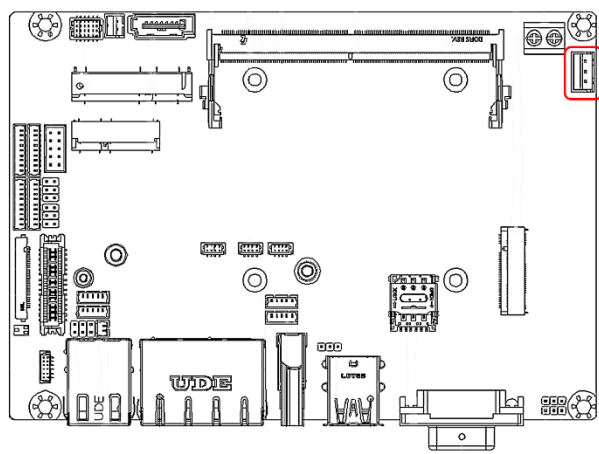
Pin	Pin Name	Signal Type	Signal Level
1	RIGHT_OUT	OUT	
2	MIC_R	IN	
3	LEFT_OUT	OUT	
4	MIC_L	IN	
5	JD_LOUT	IN	
6	JD_MIC	IN	
7	GND_AUDIO	GND	
8	GND_AUDIO	GND	
9	JD_LIN	IN	
10	LINE_R_IN	IN	
11	+5V_AUDIO	PWR	+5V
12	LINE_L_IN	IN	

2.6.8 DDR5 SO-DIMM Channel (CN12)



Standard Specifications.

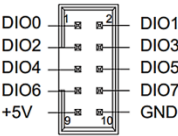
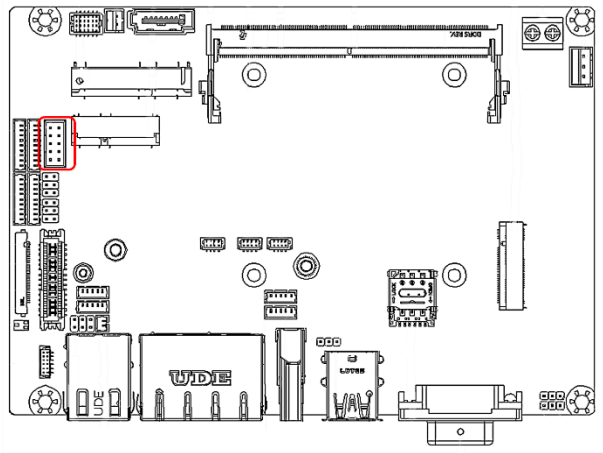
2.6.9 External +5VSB Input (CN13)



Pin	Pin Name	Signal Type	Signal Level
1	PS_ON#	OUT	+5V
2	GND	GND	

Pin	Pin Name	Signal Type	Signal Level
3	+5VSB	PWR	+5V at 2A

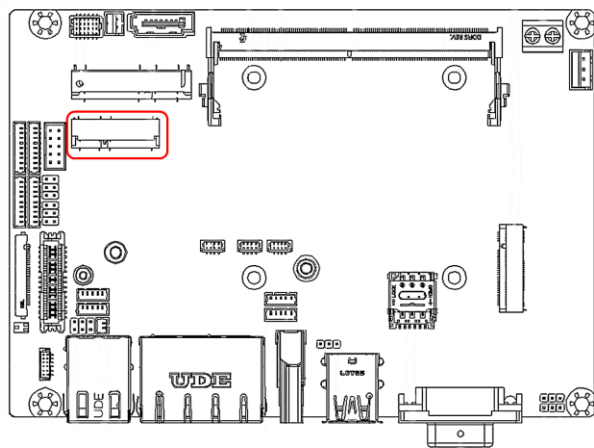
2.6.10 GPIO Port (CN18)



Pin	Pin Name	Signal Type	Signal Level
1	GPIO_0	IN/OUT	
2	GPIO_1	IN/OUT	
3	GPIO_2	IN/OUT	
4	GPIO_3	IN/OUT	
5	GPIO_4	IN/OUT	
6	GPIO_5	IN/OUT	
7	GPIO_6	IN/OUT	
8	GPIO_7	IN/OUT	
9	+V5S	PWR	+5V
10	GND	GND	GND

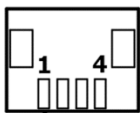
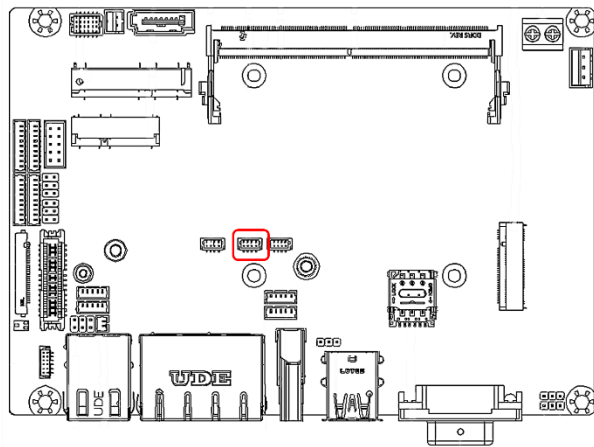
Note: The driving current of +V5S supports up to 0.5A.

2.6.11 M.2 2230 E-Key (CN21)



Note: Standard specifications.

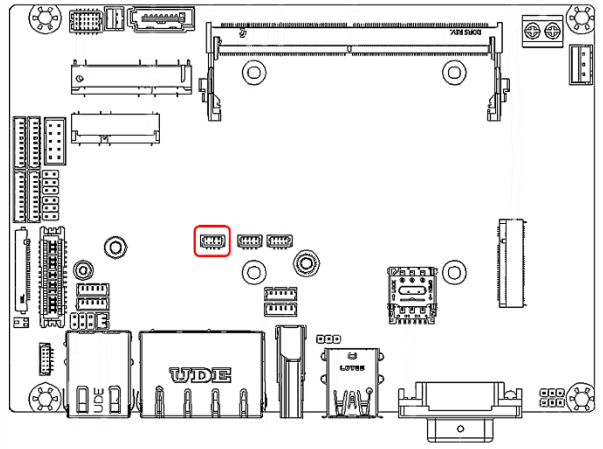
2.6.12 LAN Port 1 LED Connector (CN22)



Pin	Pin Name	Signal Type	Signal Level
1	+V3P3A	PWR	+3.3V
2	LAN1_1000#	I/O	

Pin	Pin Name	Signal Type	Signal Level
3	LAN1_ACT#	I/O	
4	LAN1_2500#	I/O	

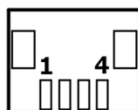
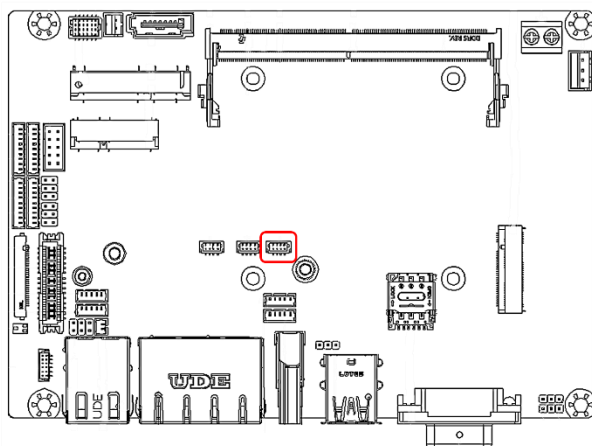
2.6.13 LAN Port 3 LED Connector (CN23)



Pin	Pin Name	Signal Type	Signal Level
1	+V3P3A	PWR	+3.3V
2	LAN3_1000#	I/O	
3	LAN3_ACT#	I/O	
4	LAN3_2500#	I/O	

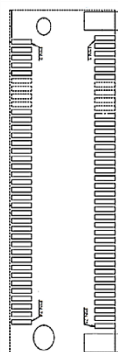
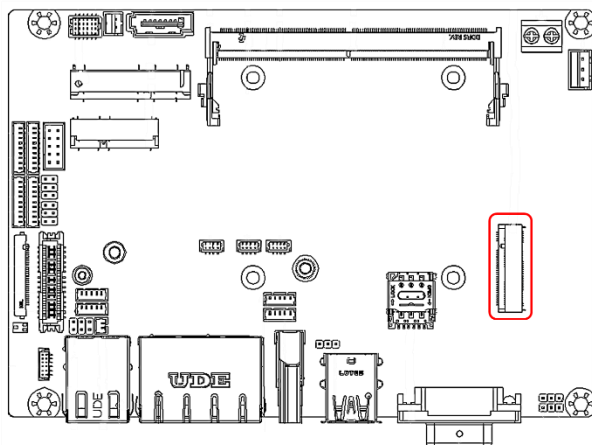
Note: The driving current of +V5S supports up to 0.5A.

2.6.14 LAN Port 2 LED Connector (CN24)



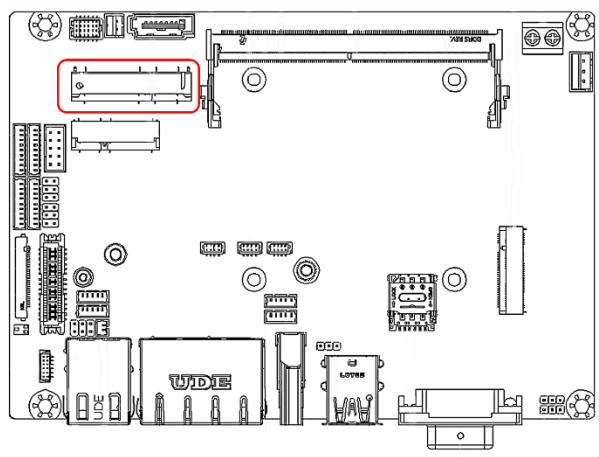
Pin	Pin Name	Signal Type	Signal Level
1	+V3P3A	PWR	+3.3V
2	LAN2_1000#	I/O	
3	LAN2_ACT#	I/O	
4	LAN2_2500#	I/O	

2.6.15 M.2 3052 B-Key (CN25)



Note: Standard specifications.

2.6.16 Full Size Mini Card Slot/mSATA (CN27)

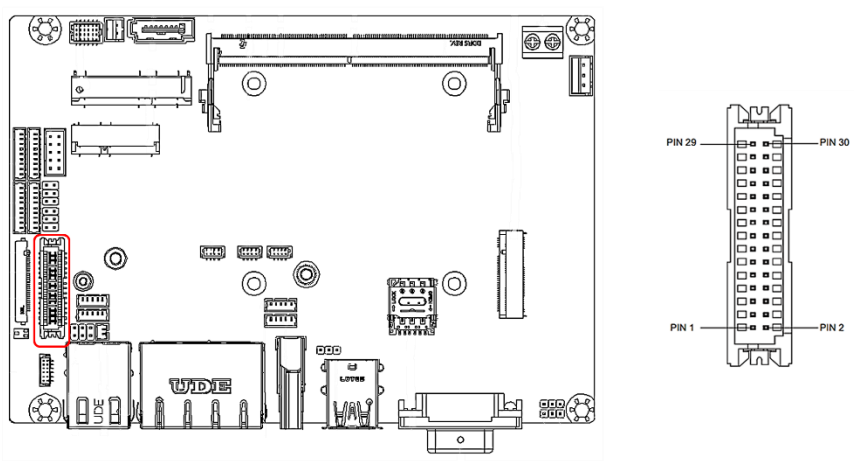


Pin	Pin Name	Signal Type	Signal Level
1	PCIE_WAKE#	IN	
2	+3.3V	PWR	+3.3V
3	NC	NC	NC
4	GND	GND	GND
5	NC	NC	NC
6	+1.5V	PWR	+1.5V
7	PCIE_CLK_REQ#	IN	
8	NC	NC	NC
9	GND	GND	GND
10	NC	NC	NC
11	PCIE_REF_CLK-	DIFF	
12	NC	NC	NC
13	PCIE_REF_CLK+	DIFF	
14	NC	NC	NC
15	GND	GND	GND
16	NC	NC	NC
17	NC	NC	NC
18	GND	GND	GND
19	NC	NC	NC

Pin	Pin Name	Signal Type	Signal Level
20	W_DISABLE#	OUT	+3.3V
21	GND	GND	GND
22	PCIE_RST#	OUT	+3.3V
23	PCIE_RX-/SATA_RX+	DIFF	GND
24	+3.3V	PWR	+3.3V
25	PCIE_RX+/SATA_RX-	DIFF	
26	GND	GND	GND
27	GND	GND	GND
28	+1.5V	PWR	+1.5V
29	GND	GND	GND
30	SMB_CLK	I/O	+3.3V
31	PCIE_TX-/SATA_TX-	DIFF	
32	SMB_DATA	I/O	+3.3V
33	PCIE_TX+/SATA_TX+	DIFF	
34	GND	GND	GND
35	GND	GND	GND
36	USB_D-	DIFF	
37	GND	GND	GND
38	USB_D+	DIFF	
39	+3.3V	PWR	+3.3V
40	GND	GND	GND
41	+3.3V	PWR	+3.3V
42	NC	NC	NC
43	GND	GND	GND
44	NC	NC	NC
45	NC	NC	NC
46	NC	NC	NC
47	NC	NC	NC
48	+1.5V	PWR	+1.5V
49	NC		
50	GND	GND	GND
51	NC	NC	NC
52	+3.3V	PWR	+3.3V

Note: Mini Card/mSATA function can be set by BIOS. Default is mSATA.

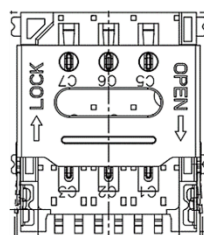
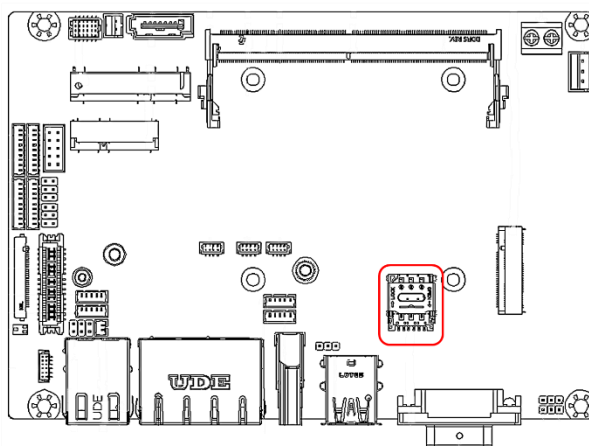
2.6.17 LVDS 1 Connector (CN28)



Pin	Pin Name	Signal Type	Signal Level
1	BKL1_ENABLE	OUT	
2	BKL1_CONTROL	OUT	
3	LCD1_PWR	PWR	+3.3V/+5V
4	GND	GND	
5	LVDS1_A_CLK-	DIFF	
6	LVDS1_A_CLK+	DIFF	
7	LCD1_PWR	PWR	+3.3V/+5V
8	GND	GND	
9	LVDS1_DA0-	DIFF	
10	LVDS1_DA0+	DIFF	
11	LVDS1_DA1-	DIFF	
12	LVDS1_DA1+	DIFF	
13	LVDS1_DA2-	DIFF	
14	LVDS1_DA2+	DIFF	
15	LVDS1_DA3-	DIFF	
16	LVDS1_DA3+	DIFF	
17	DDC1_DATA	I/O	+3.3V
18	DDC1_CLK	I/O	+3.3V
19	LVDS1_DB0-	DIFF	
20	LVDS1_DB0+	DIFF	
21	LVDS1_DB1-	DIFF	
22	LVDS1_DB1+	DIFF	

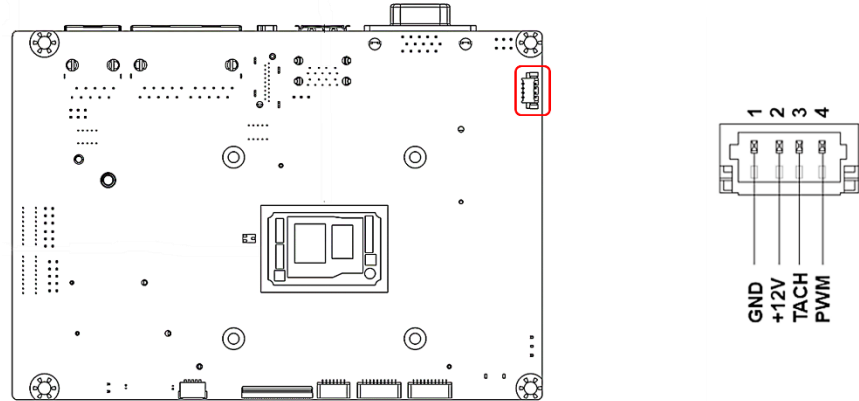
Pin	Pin Name	Signal Type	Signal Level
23	LVDS1_DB2-	DIFF	
24	LVDS1_DB2+	DIFF	
25	LVDS1_DB3-	DIFF	
26	LVDS1_DB3+	DIFF	
27	LCD1_PWR	PWR	+3.3V/+5V
28	GND	GND	
29	LVDS1_B_CLK-	DIFF	
30	LVDS1_B_CLK+	DIFF	

2.6.18 Nano SIM Card Socket (CN29)



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	N/A	N/A	
7	UIM_DATA	I/O	
8	N/A	N/A	

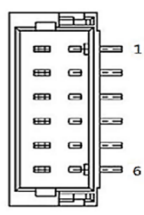
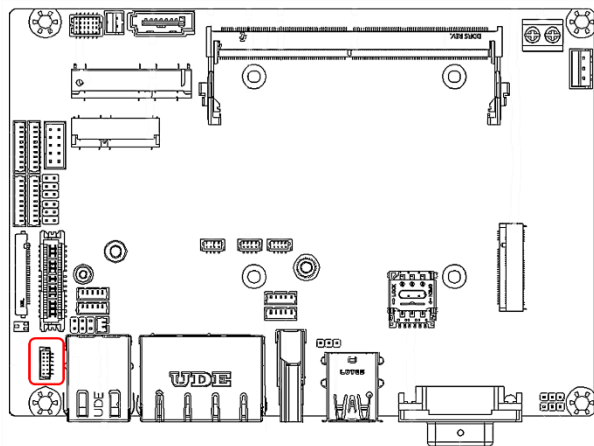
2.6.19 4-pin FAN Connector (CN33)



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.

2.6.20 LVDS Inverter/Backlight Connector (CN34)

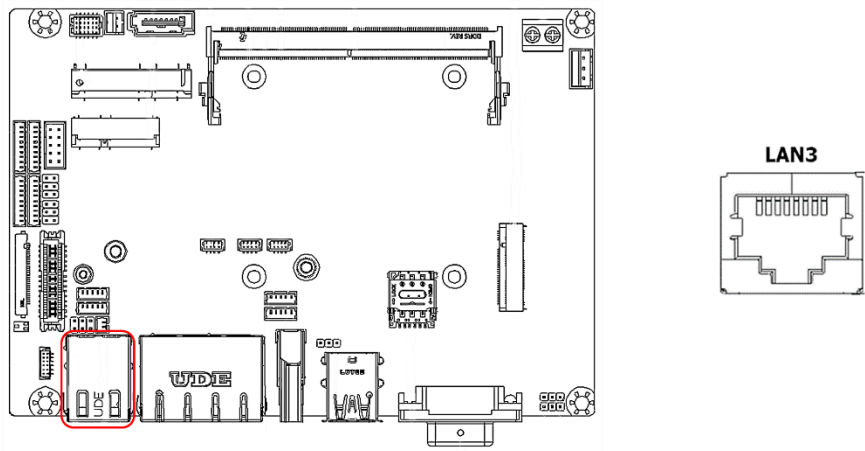


Pin	Pin Name	Signal Type	Signal Level
1	BKL1_PWR	PWR	+5V(Default)/+12V
2	BKL1_PWR	PWR	+5V(Default)/+12V
3	BK1L_CONTROL	OUT	
4	GND	GND	
5	GND	GND	
6	BKL1_ENABLE	OUT	+3.3V

Note: LVDS/BKL_PWR can be set to +12V or +5V by JP4.

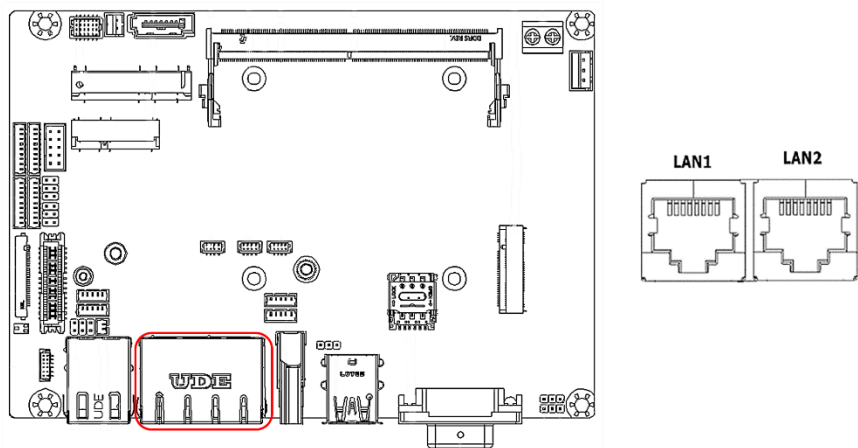
Note: The driving current of BKL_PWR supports up to 2A.

2.6.21 RJ-45 LAN Port 3 (CN35)



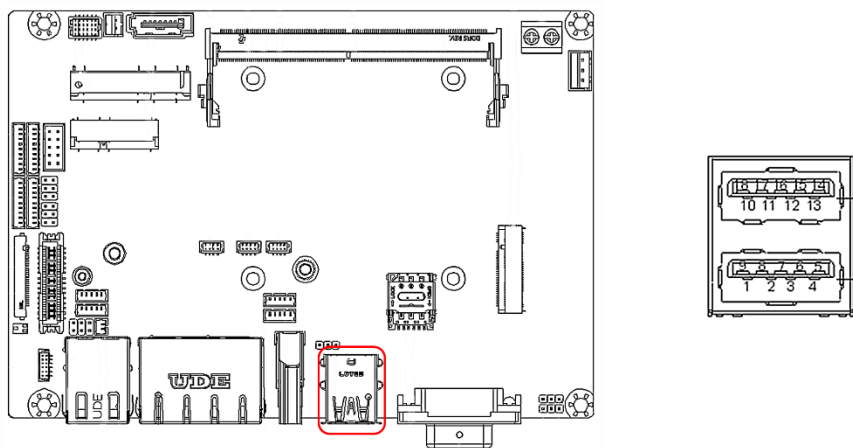
Pin	Pin Name	Signal Type	Signal Level
1	MDI0+	DIFF	
2	MDI0-	DIFF	
3	MDI1+	DIFF	
4	MDI2+	DIFF	
5	MDI2-	DIFF	
6	MDI1-	DIFF	
7	MDI3+	DIFF	
8	MDI3-	DIFF	

2.6.22 RJ-45 LAN Port 1/Port 2 (CN36)



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	

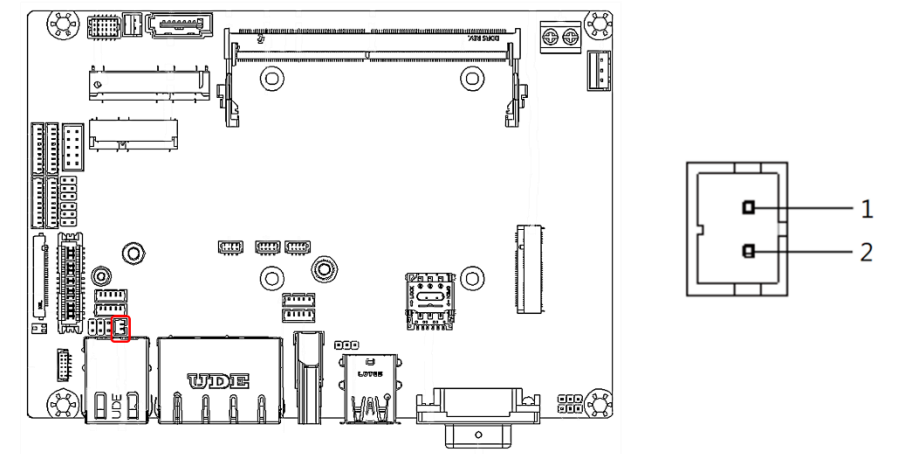
2.6.23 USB 3.2/USB 2.0 Port 1/Port 2 (CN37)



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	
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	

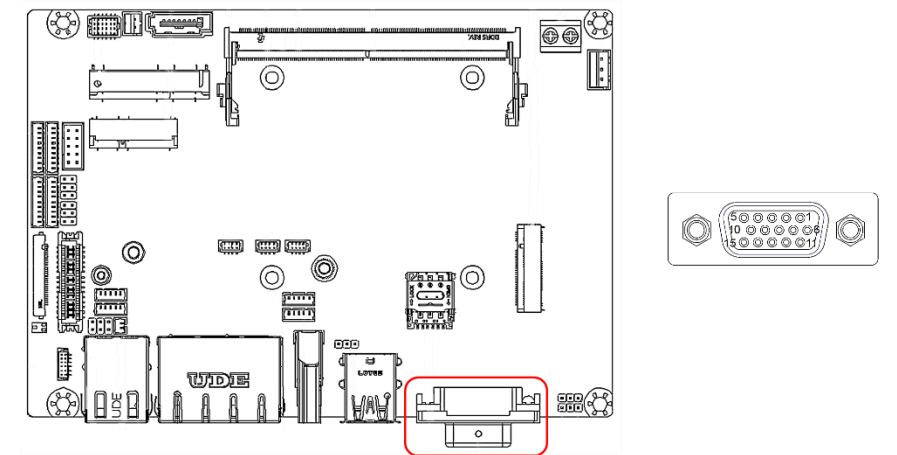
Note: The driving current of +5VSB supports up to 0.9A/Port.

2.6.24 RTC Battery Connector (CN39)



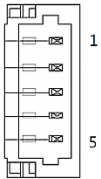
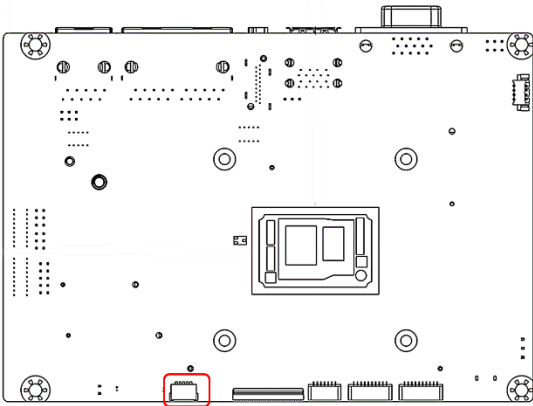
Pin	Pin Name	Signal Type	Signal Level
1	+3.3V	PWR	+3.3V
2	GND	GND	GND

2.6.25 CRT Connector (CN40)



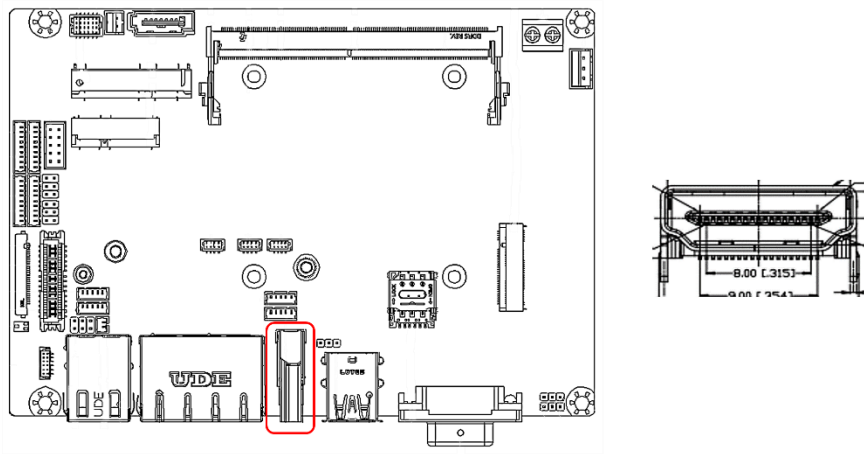
Pin	Pin Name	Signal Type	Signal Level
1	RED	OUT	
2	GREEN	OUT	
3	BLUE	OUT	
4	NC	NC	
5	GND	GND	
6	RED_GND_RTN	GND	
7	GREEN_GND_RTN	GND	
8	BLUE_GND_RTN	GND	
9	+5V	PWR	+5V
10	GND	GND	
11	NC	NC	
12	DDC_DATA	I/O	+5V
13	HSYNC	OUT	
14	VSYNC	OUT	
15	DDC_CLK	I/O	+5V

2.6.26 I2C/SMBus Connector (CN42)



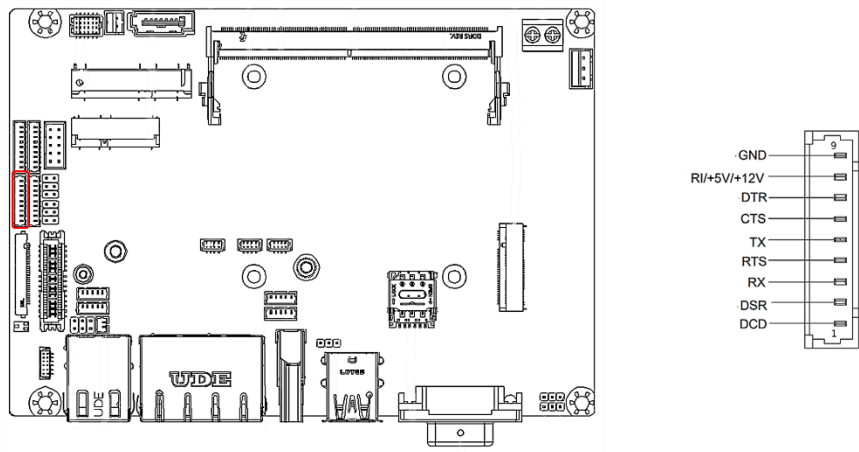
Pin	Pin Name	Signal Type	Signal Level
1	+V3P3A/ +V3P3S	PWR	+3.3V
2	SMB_CLK/I2C_CLK/TIME_SYNC0	OUT	
3	SMB_DAT/I2C_DAT/TIME_SYNC1	I/O	
4	SMB_ALERT/INT_SERIRQ/LAN_SDP	IN	
5	GND	GND	GND

2.6.27 HDMI Connector (CN43)

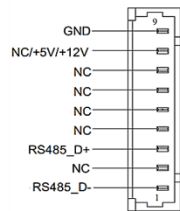
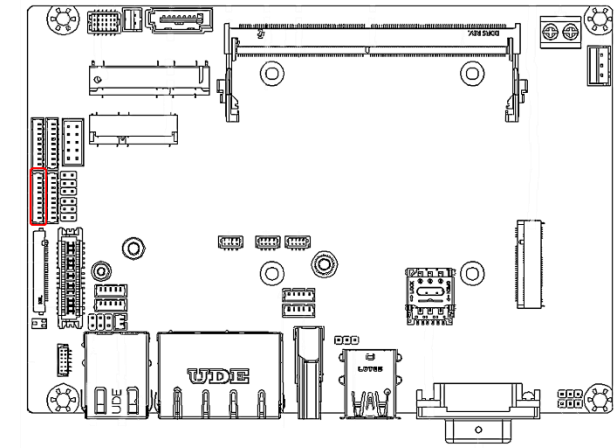


Pin	Pin Name	Signal Type	Signal Level
1	HDMI_TX2+	DIFF	
2	GND	GND	GND
3	HDMI_TX2-	DIFF	
4	HDMI_TX1+	DIFF	
5	GND	GND	GND
6	HDMI_TX1-	DIFF	
7	HDMI_TX0+	DIFF	
8	GND	GND	GND
9	HDMI_TX0-	DIFF	
10	HDMI_CLK+	DIFF	
11	GND	GND	GND
12	HDMI_CLK-	DIFF	
13	N/A	N/A	N/A
14	N/A	N/A	N/A
15	DDC_CLK	I/O	
16	DDC_DATA	I/O	
17	GND	GND	GND
18	+V5S	PWR	+5V
19	HDMI_HPD	IN	

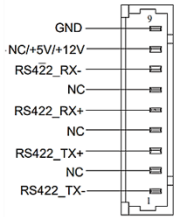
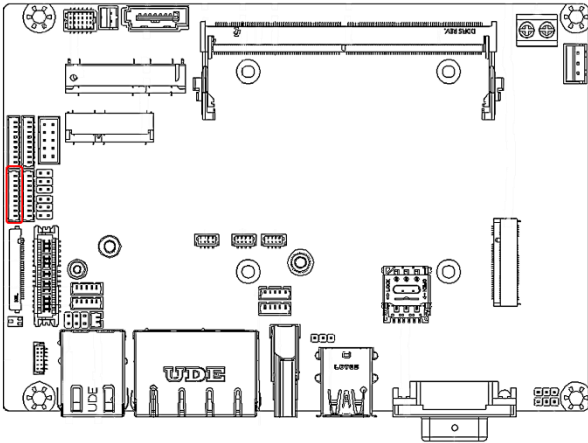
2.6.28 COM Port 1 (CN44)



RS-232			
Pin	Pin Name	Signal Type	Signal Level
1	DCD	IN	
2	DSR	IN	
3	RX	IN	
4	RTS	OUT	±9V
5	TX	OUT	±9V
6	CTS	IN	
7	DTR	OUT	±9V
8	RI/+5V/+12V	IN/ PWR	+5V/+12V
9	GND	GND	



RS-485			
Pin	Pin Name	Signal Type	Signal Level
1	RS485_D-	I/O	±5V
2	NC		
3	RS485_D+	I/O	±5V
4	NC		
5	NC		
6	NC		
7	NC		
8	NC/+5V/+12V	PWR	+5V/+12V
9	GND	GND	

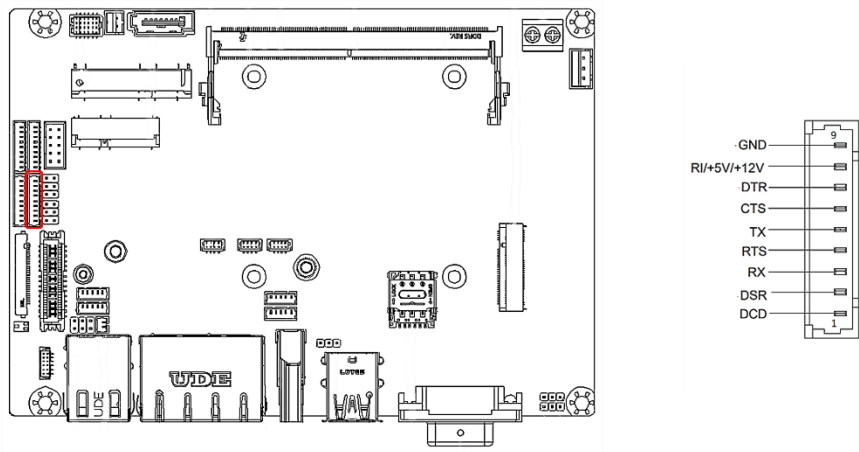


RS-422			
Pin	Pin Name	Signal Type	Signal Level
1	RS422_TX-	OUT	±5V
2	NC		
3	RS422_TX+	OUT	±5V
4	NC		
5	RS422_RX+	IN	
6	NC		
7	RS422_RX-	IN	
8	NC/+5V/+12V	PWR	+5V/+12V
9	GND	GND	

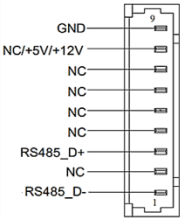
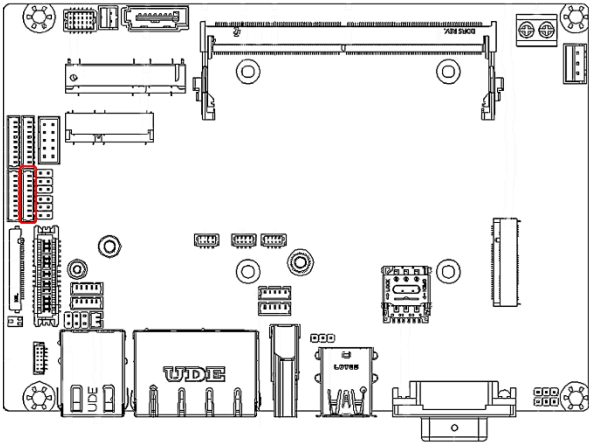
Note: COM1 RS-232/422/485 can be set by BIOS setting. Default is RS-232.

Note: Pin 8 function can be set by JP2.

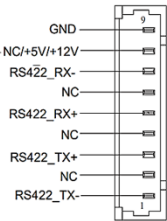
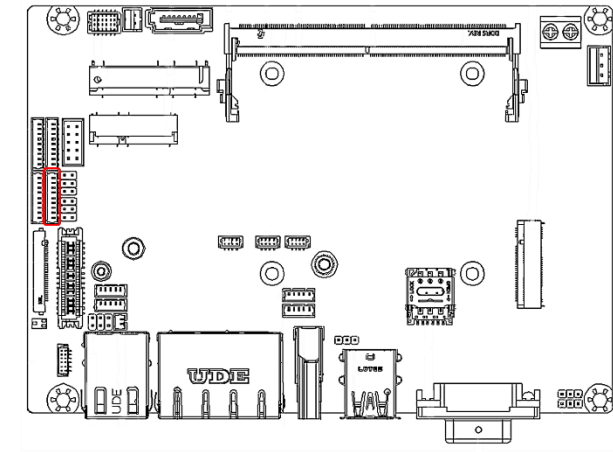
2.6.29 COM Port 2 (CN45)



RS-232				
Pin	Pin Name	Signal Type	Signal Level	
1	DCD	IN		
2	DSR	IN		
3	RX	IN		
4	RTS	OUT	±9V	
5	TX	OUT	±9V	
6	CTS	IN		
7	DTR	OUT	±9V	
8	RI/+5V/+12V	IN/ PWR	+5V/+12V	
9	GND	GND		



RS-485			
Pin	Pin Name	Signal Type	Signal Level
1	RS485_D-	I/O	±5V
2	NC		
3	RS485_D+	I/O	±5V
4	NC		
5	NC		
6	NC		
7	NC		
8	NC/+5V/+12V	PWR	+5V/+12V
9	GND	GND	

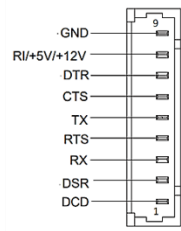
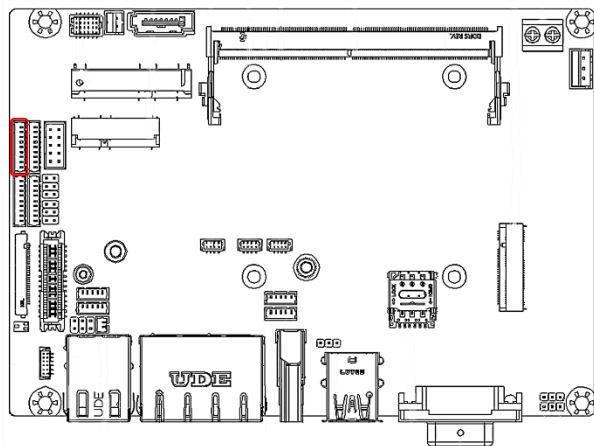


RS-422			
Pin	Pin Name	Signal Type	Signal Level
1	RS422_TX-	OUT	±5V
2	NC		
3	RS422_TX+	OUT	±5V
4	NC		
5	RS422_RX+	IN	
6	NC		
7	RS422_RX-	IN	
8	NC/+5V/+12V	PWR	+5V/+12V
9	GND	GND	

Note: COM2 RS-232/422/485 can be set by BIOS setting. Default is RS-232.

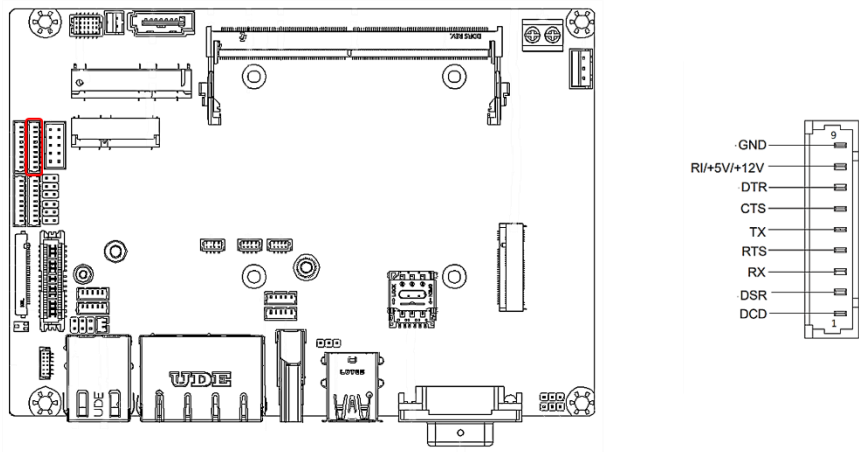
Note: Pin 8 function can be set by JP1.

2.6.30 COM Port 3 (CN46)



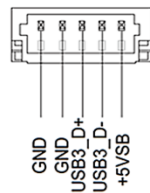
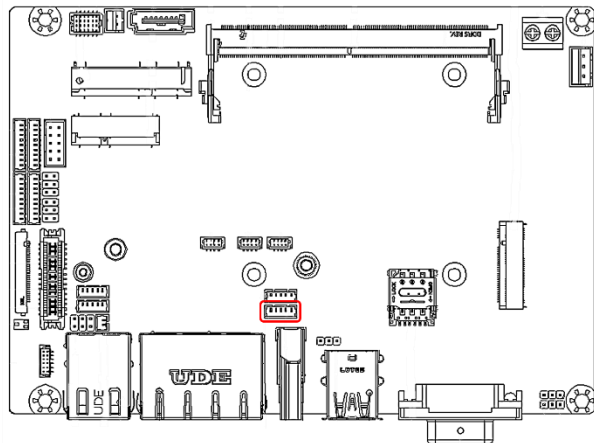
RS-232				
Pin	Pin Name	Signal Type	Signal Level	
1	DCD	IN		
2	DSR	IN		
3	RX	IN		
4	RTS	OUT	±9V	
5	TX	OUT	±9V	
6	CTS	IN		
7	DTR	OUT	±9V	
8	RI	IN		
9	GND	GND		

2.6.31 COM Port 4 (CN47)



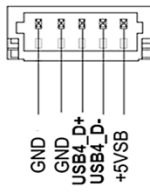
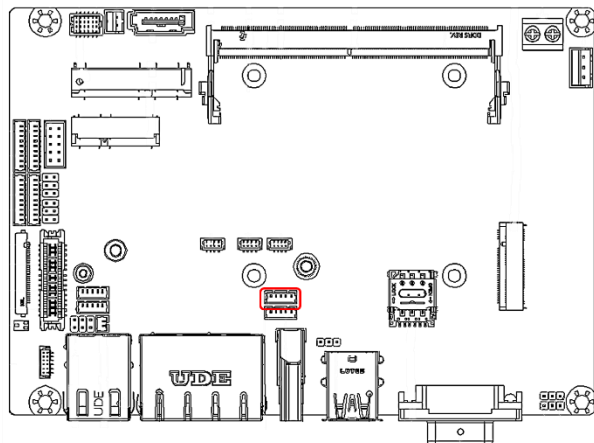
RS-232				
Pin	Pin Name	Signal Type	Signal Level	
1	DCD	IN		
2	DSR	IN		
3	RX	IN		
4	RTS	OUT	±9V	
5	TX	OUT	±9V	
6	CTS	IN		
7	DTR	OUT	±9V	
8	RI	IN		
9	GND	GND		

2.6.32 USB 2.0 Port 3 (CN48)



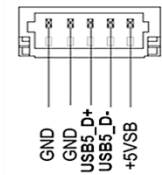
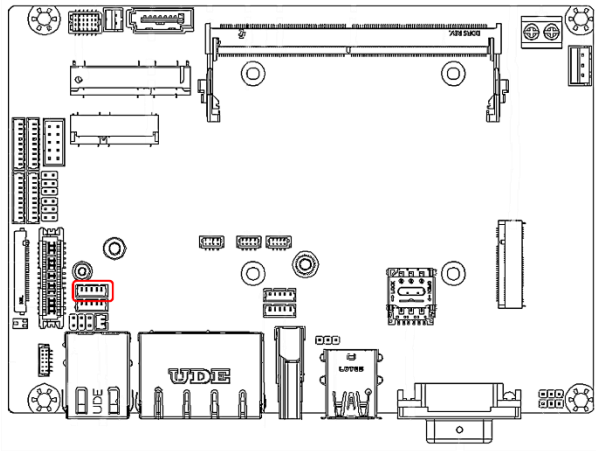
Pin	Pin Name	Signal Type	Signal Level
1	+5VSB	PWR	+5V
2	USB_D-	DIFF	
3	USB_D+	DIFF	
4	GND	GND	
5	GND	GND	

2.6.33 USB 2.0 Port 4 (CN49)



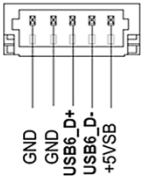
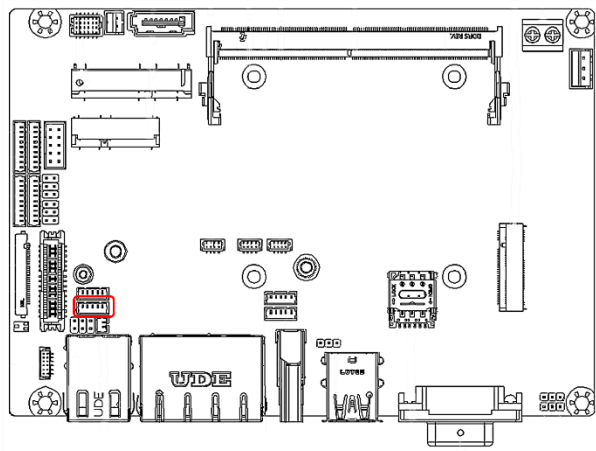
Pin	Pin Name	Signal Type	Signal Level
1	+5VSB	PWR	+5V
2	USB_D-	DIFF	
3	USB_D+	DIFF	
4	GND	GND	
5	GND	GND	

2.6.34 USB 2.0 Port 5 (CN50)



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

2.6.35 USB 2.0 Port 6 (CN51)

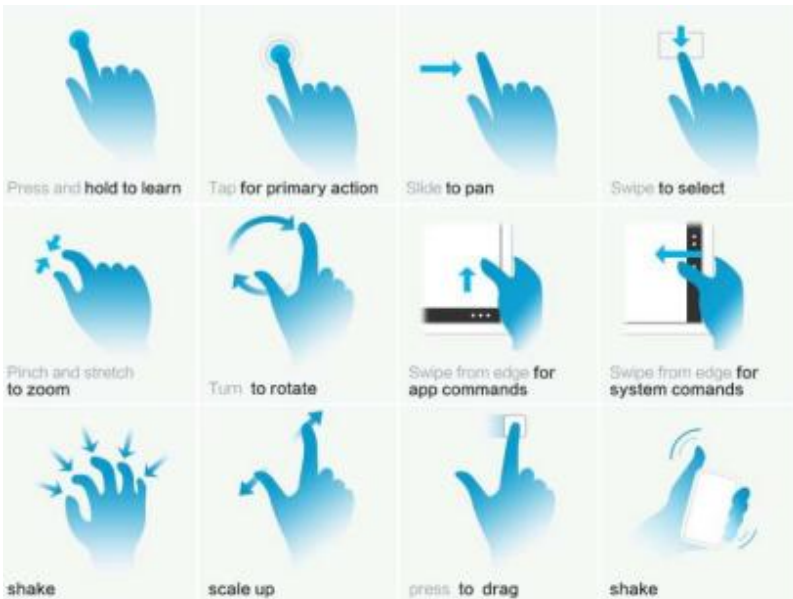


Pin	Pin Name	Signal Type	Signal Level
1	+5VSB	PWR	+5V
2	USB_D-	DIFF	
3	USB_D+	DIFF	
4	GND	GND	
5	GND	GND	

2.7 P-CAP Touch Screen Operation



1. Always wear finger pads when touching the screen.
2. The force applied should not exceed 10g.



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 an error message. The board 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. If they do not match, an error message will be output, and the BIOS setup program will need to be run to set the configuration information in memory.

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 or <ESC> immediately while your computer is powering up.

The function for each interface can be found below.

Main – Date and time can be set here. Press <Tab> to switch between date elements

Advanced – Enable/ Disable platform configuration and AAEON features

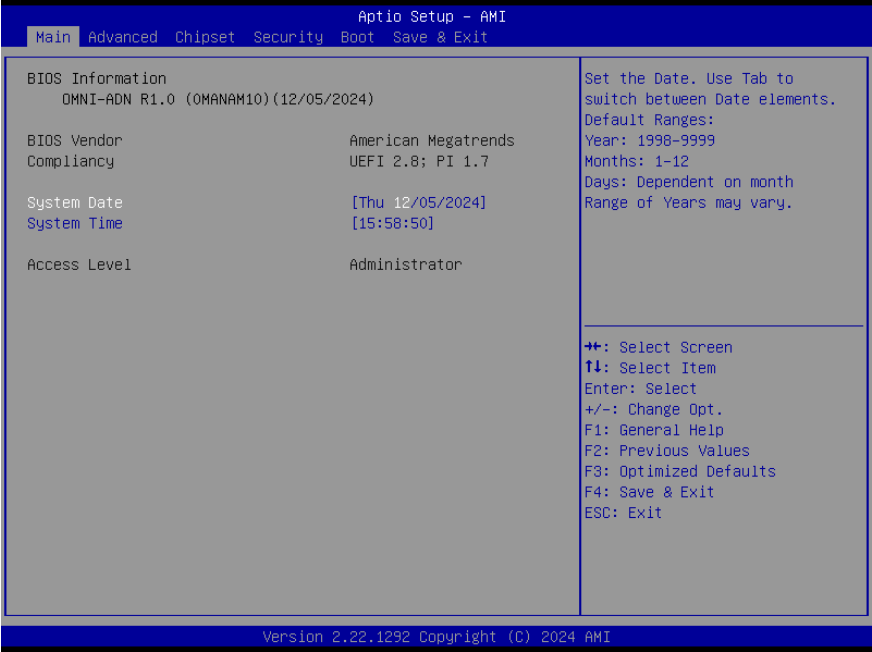
Chipset – For hosting bridge parameters

Security – The setup administrator password can be set here

Boot – Enable/ Disable quiet Boot Option

Save & Exit – Save your changes and exit the program

3.3 Setup Submenu: Main



3.4 Setup Submenu: Advanced



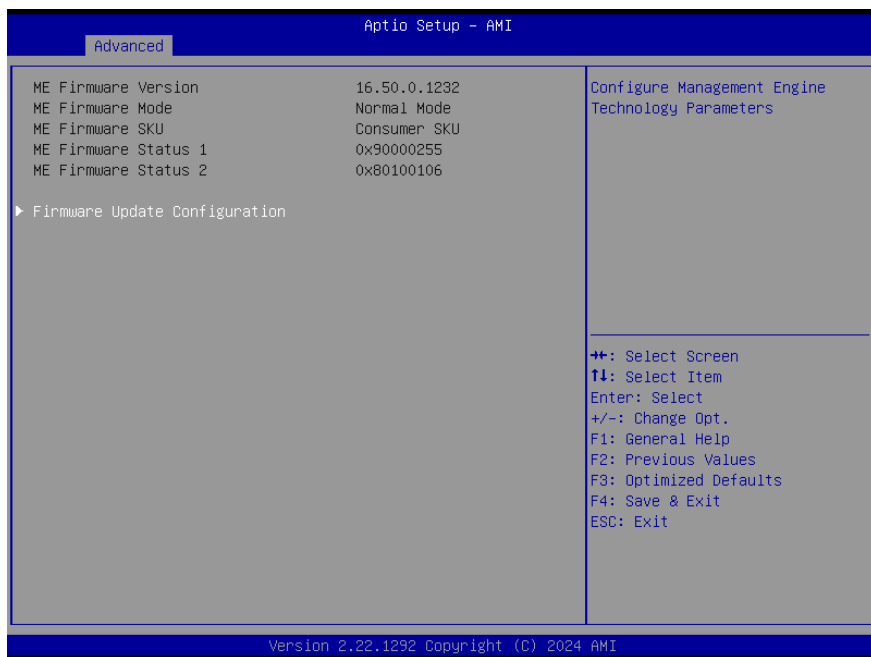
3.4.1 CPU Configuration

Aptio Setup - AMI		
Advanced		
CPU Configuration		When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.
Type	Intel(R) N50	
ID	0xB06E0	
Microcode Revision	18	
Speed	1000 MHz	
VMX	Supported	
SMX/TXT	Not Supported	
L1 Data Cache	N/A	
L1 Instruction Cache	N/A	
L2 Cache	N/A	
L3 Cache	N/A	
Intel (VMX) Virtualization Technology	[Enabled]	++: Select Screen T1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Intel(R) SpeedStep(tm)	[Enabled]	
Turbo Mode	[Enabled]	
C states	[Enabled]	
Version 2.22.1292 Copyright (C) 2024 AMI		

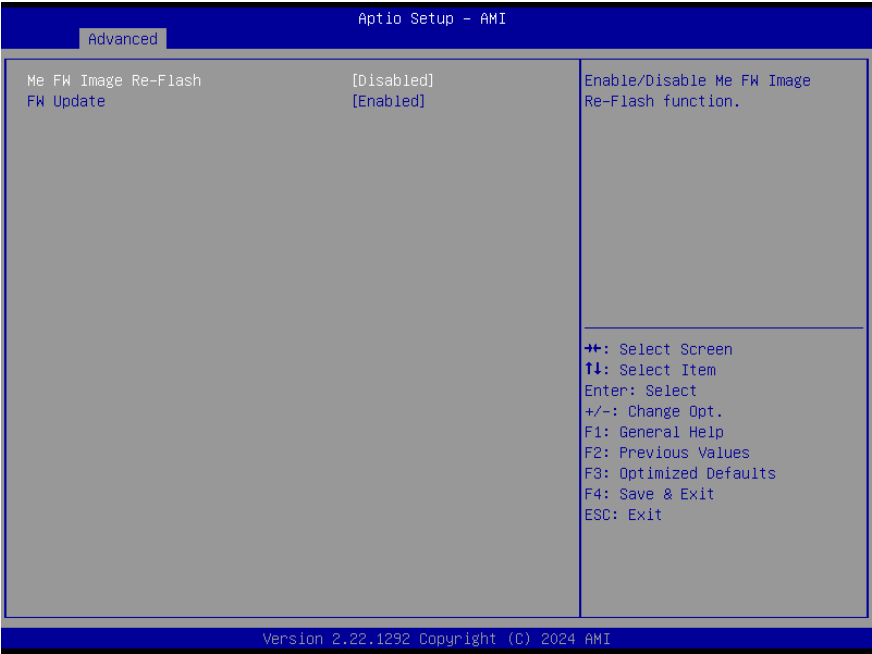
Options Summary		
Intel (VMX) Virtualization Technology	Disabled	
	Enabled	Optimal Default, Failsafe Default
When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.		
Intel® SpeedStep™	Disabled	
	Enabled	Optimal Default, Failsafe Default
Allows more than two frequency ranges to be supported.		
Turbo Mode	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable/Disable processor Turbo Mode (requires EMTTM enabled too).		
C states	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable/Disable CPU Power Management. Allows CPU to go to C states when it's not 100% utilized.		
C states	Disabled	
	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



3.4.2.1 Firmware Update Configuration



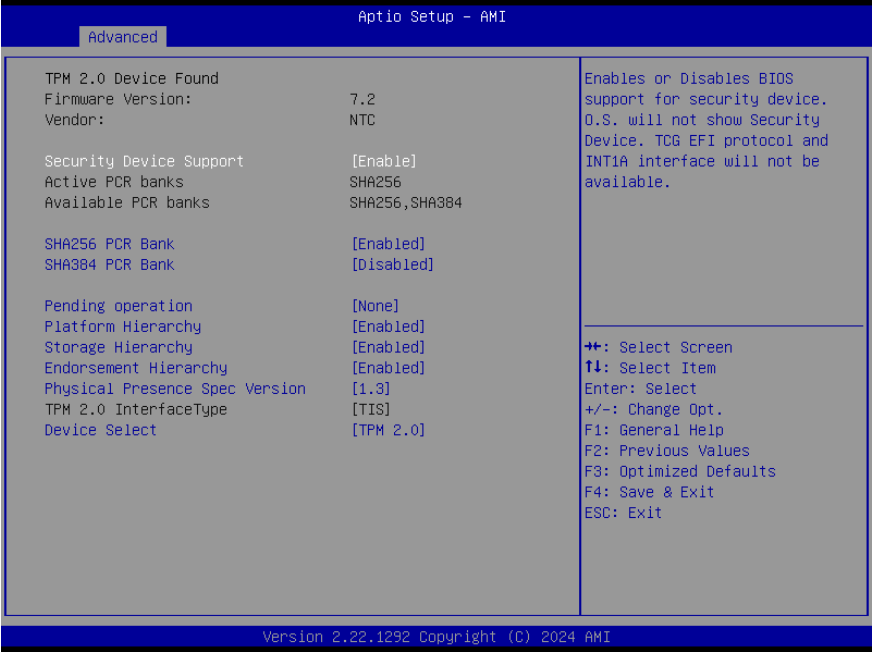
Options Summary		
Me FW Image Re-Flash	Disabled	Optimal Default, Failsafe Default
	Enabled	
Enable/Disable ME FW Image Re-Flash function.		
FW Update	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable/Disable ME FW Update function.		

3.4.3 PTT Configuration



Options Summary		
TPM Device Selection	dTPM	Optimal Default, Failsafe Default
	PTT	
Selects TPM device: PTT or dTPM. PTT – Enables in SkuMgr. dTPM 1.2 – Disables PTT in SkuMgr. Warning! PTT/dTPM will be disabled and all data saved on it will be lost.		

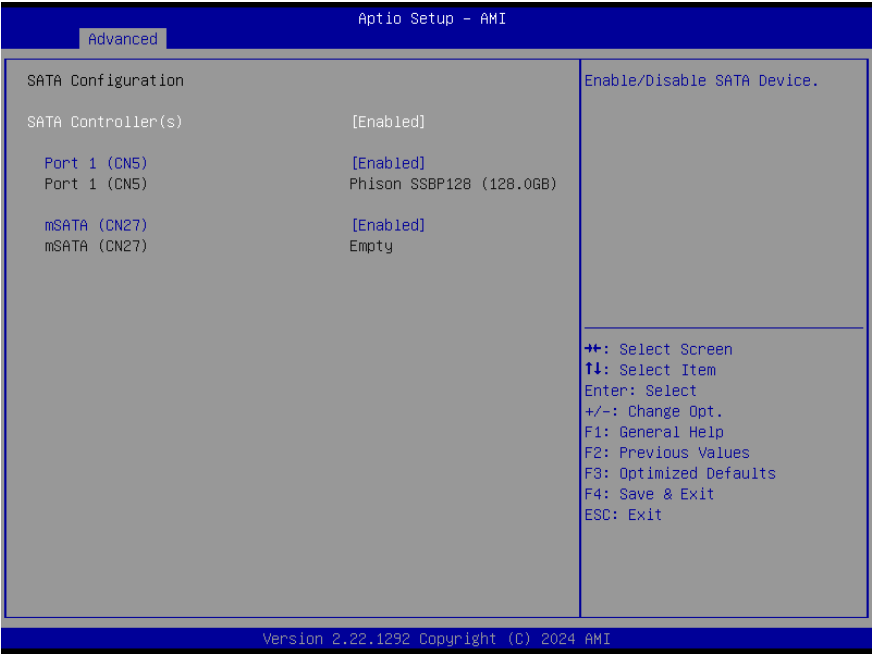
3.4.4 Trusted Computing



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	Optimal Default, Failsafe Default
	Enabled	
Enable or Disable SHA-1 PCR Bank.		
SHA256 PCR Bank	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable SHA-256 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.		

Options Summary		
Platform Hierarchy	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable Platform Hierarchy.		
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 device, 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 device will be enumerated.		

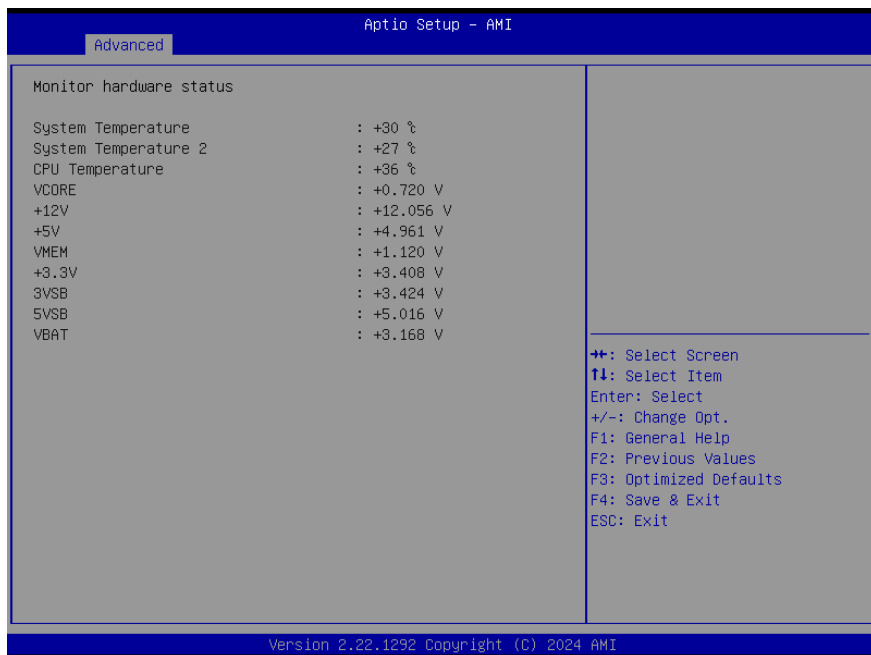
3.4.5 SATA Configuration



Options Summary		
SATA Controller	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable SATA Device.		
Port 1 (CN5)	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable SATA Port.		
mSATA (CN27)	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable SATA Port.		

Choose the device to be configured.

3.4.6 Hardware Monitor



3.4.7 SIO Configuration

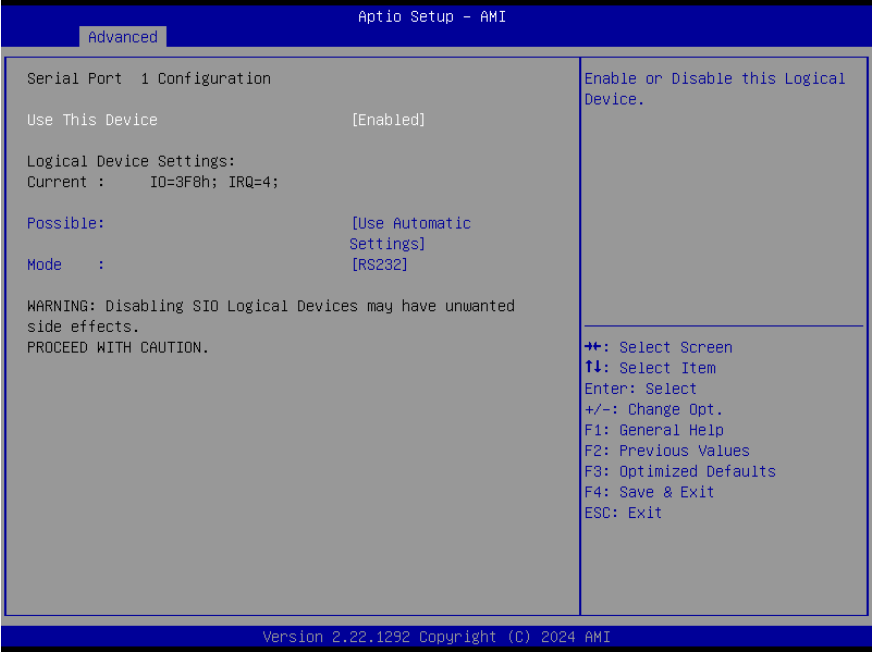


Options Summary

[*Active*] Serial Port N

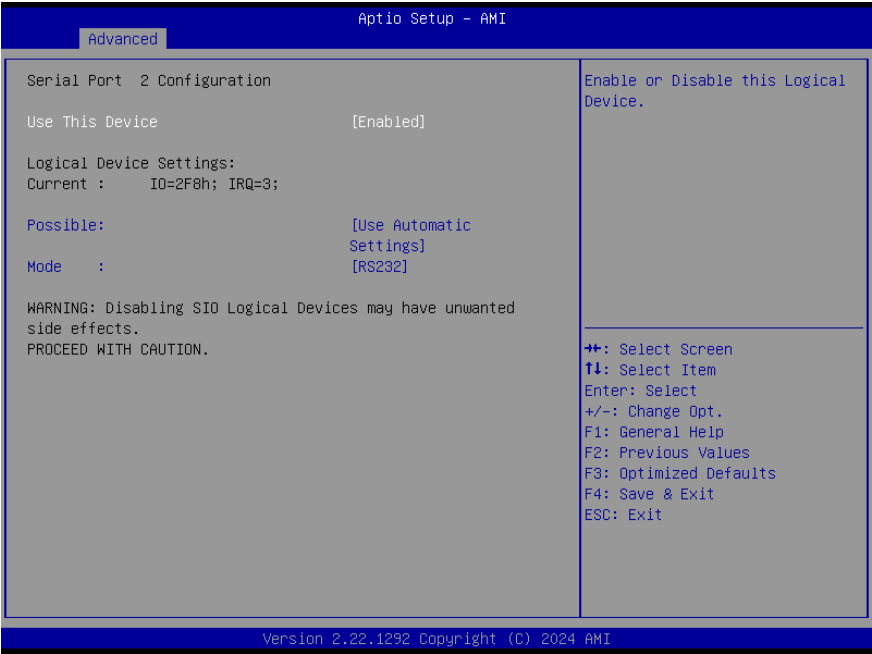
View and Set Basic properties of the SIO Logical device. Like IO Base, IRQ Range, DMA Channel and Device Mode.

3.4.7.1 SIO Configuration: Serial Port 1



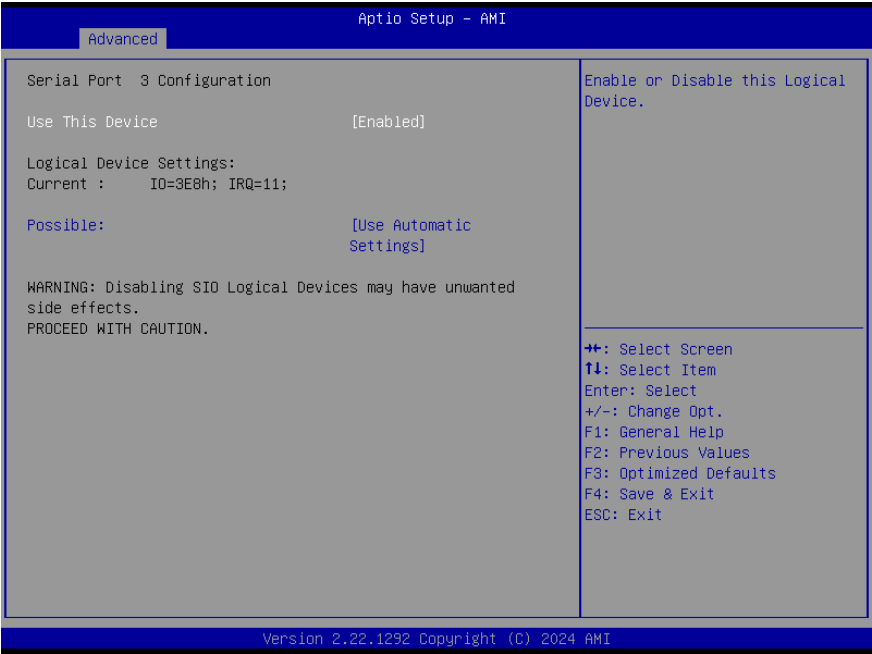
Options Summary		
Use This Device	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable this Logical Device.		
Possible	Use Automatic Settings	Optimal Default, Failsafe Default
	IO=3F8h; IRQ=4;	
	IO=2F8h; IRQ=3;	
Allows the user to change the device resource settings. New settings will be reflected on this setup page after system restarts.		
Mode	RS232	Optimal Default, Failsafe Default
	RS422	
	RS485	
UART RS232, 422 ,485 selection		

3.4.7.2 SIO Configuration: Serial Port 2



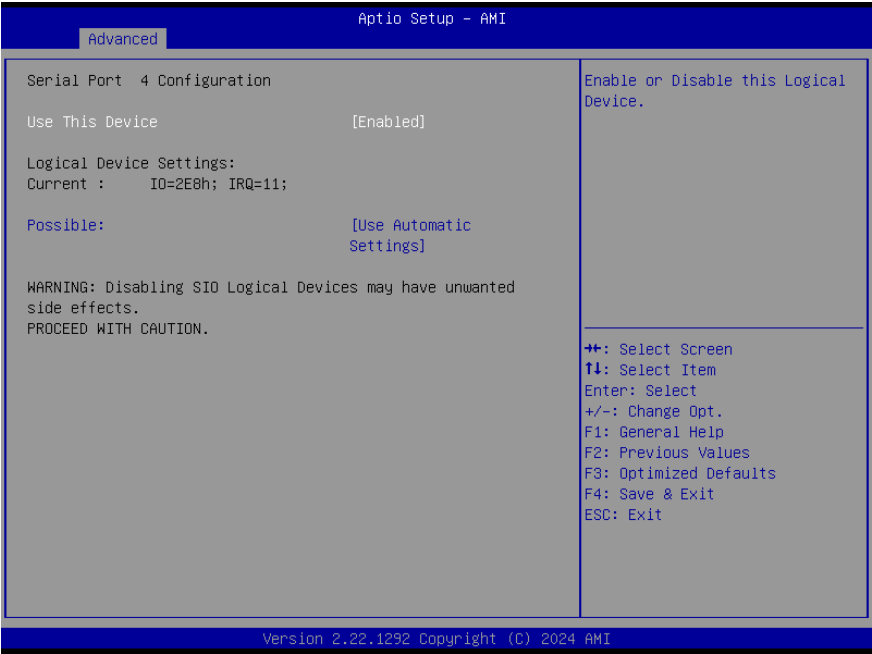
Options Summary		
Use This Device	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable this Logical Device.		
Possible	Use Automatic Settings	Optimal Default, Failsafe Default
	IO=2F8h; IRQ=3;	
	IO=3F8h; IRQ=4;	
Allows the user to change the device resource settings. New settings will be reflected on this setup page after system restarts.		
Mode	RS232	Optimal Default, Failsafe Default
	RS422	
	RS485	
UART RS232, 422 ,485 selection		

3.4.7.3 SIO Configuration: Serial Port 3



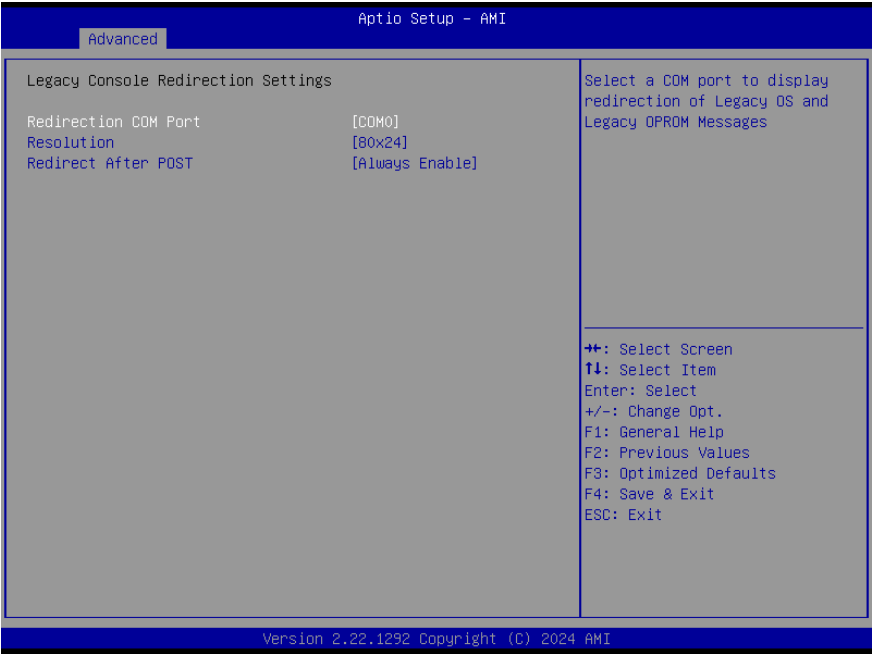
Options Summary		
Use This Device	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable this Logical Device.		
Possible	Use Automatic Settings	Optimal Default, Failsafe Default
	IO=3E8h; IRQ=11;	
	IO=2E8h; IRQ=11;	
Allows the user to change the device resource settings. New settings will be reflected on this setup page after system restarts.		

3.4.7.4 SIO Configuration: Serial Port 4



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=3E8h; IRQ=11;	
	IO=2E8h; IRQ=11;	
Allows the user to change the device resource settings. New settings will be reflected on this setup page after system restarts.		

3.4.8 Serial Port Console Redirection



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.		

3.4.9 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. And 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.\n\n 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	

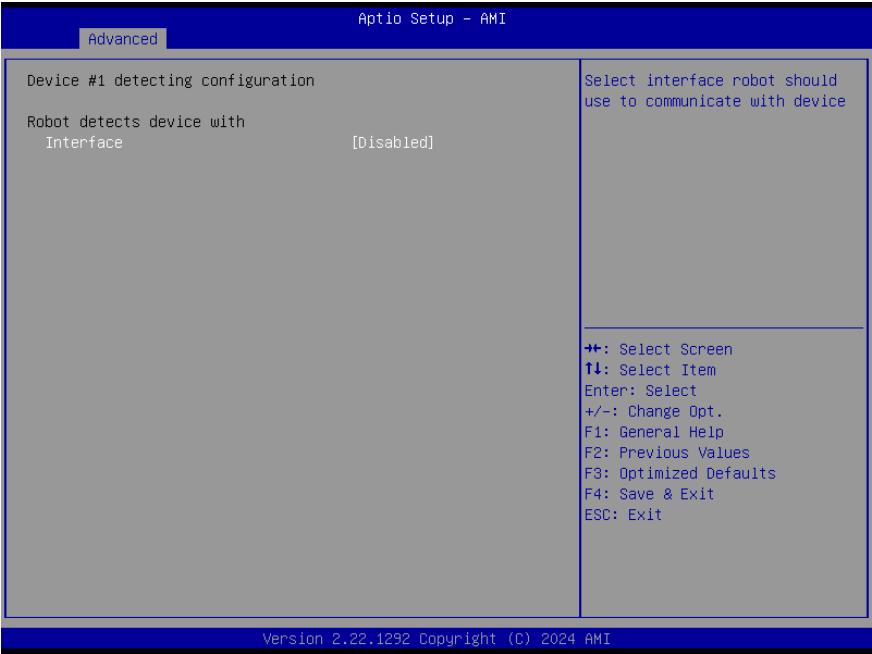
Options Summary		
Enabled – Robot set Watch Dog Timer(WDT) after POST completion, before BIOS transfer control to OS. WARNING: Before enabling this function, a program in OS must be in responsible for clearing WDT. Also, this function should be disabled if OS is going to update itself.		
OS Timer (minute)	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 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.		

3.4.9.1 Device Detecting Configuration



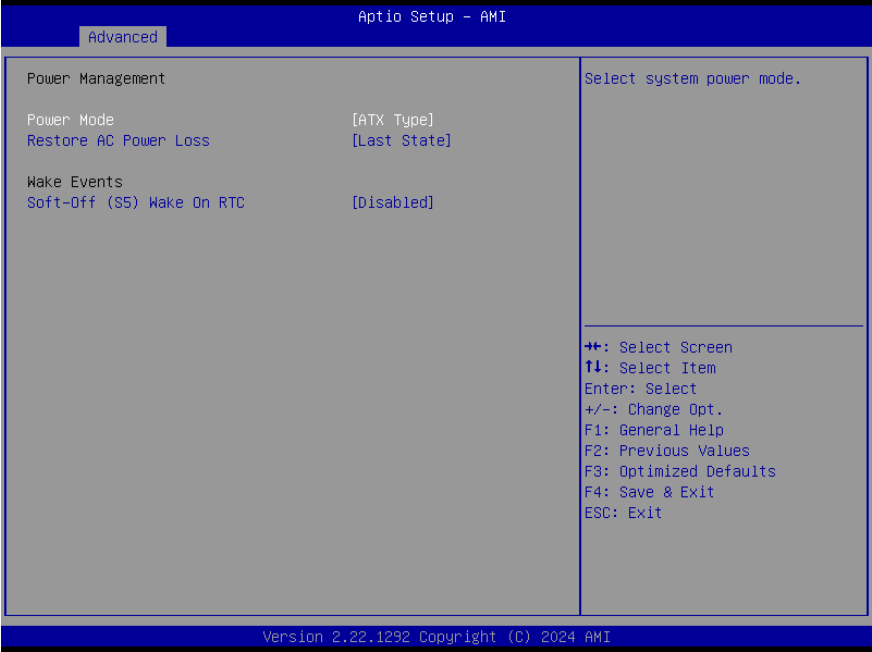
Options Summary		
Action	Reset System	Optimal Default, Failsafe Default
	Hold System	
Select action that robot should do.		
Soft or hard reset	Soft	Optimal Default, Failsafe Default
	Hard	
Select reset type robot should send on each boot.		
Retry-Count	30	Optimal Default, Failsafe Default
Fill retry counter here. Robot will reset system at most counter times, and then let system continue its POST.		
At time	After show logo	Optimal Default, Failsafe Default
	Before show logo	
Select robot action time:		
After show logo –		
Robot will do action after logo is displayed. System devices are almost ready.		
Before show logo –		
Robot will do action earlier before logo, but some devices may not be ready.		

3.4.9.2 Device #1 - #5 Detecting Configuration



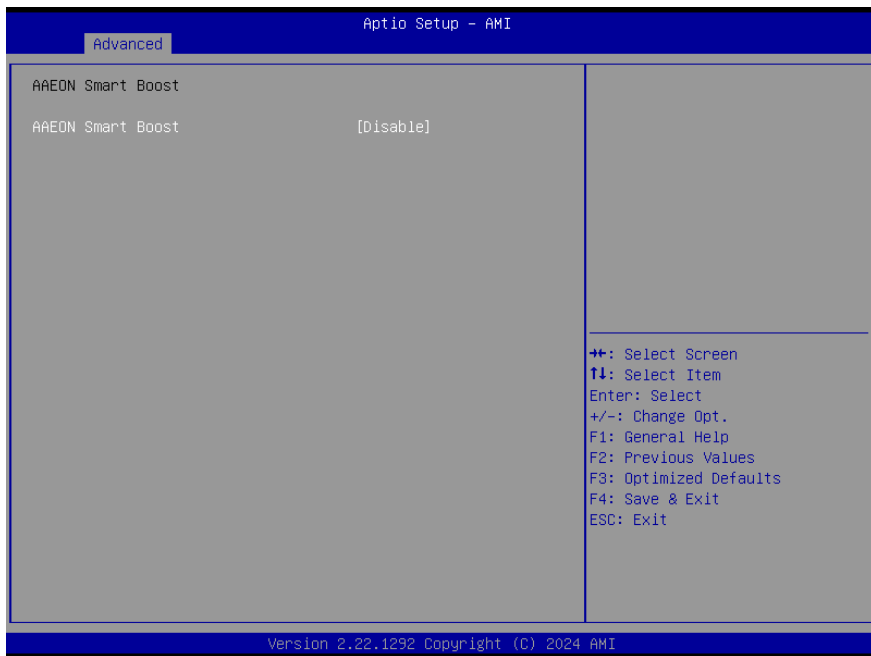
Options Summary		
Interface	Disable	Optimal Default, Failsafe Default
	PCI	
	DIO	
	SMBUS	
	Legacy I/O	
	Super I/O	
	MMIO	
Select interface robot should use to communicate with device.		

3.4.10 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	Disabled	Optimal Default, Failsafe Default
	Fixed Time	
	Dynamic Time	
	Bypass	
Fixed Time: System will wake on the hr :: min :: sec specified.		
Dynamic Time: System will wake on the current time + Increase minutes(s).		
Bypass: BIOS will not control RTC wake function during system shutdown.		

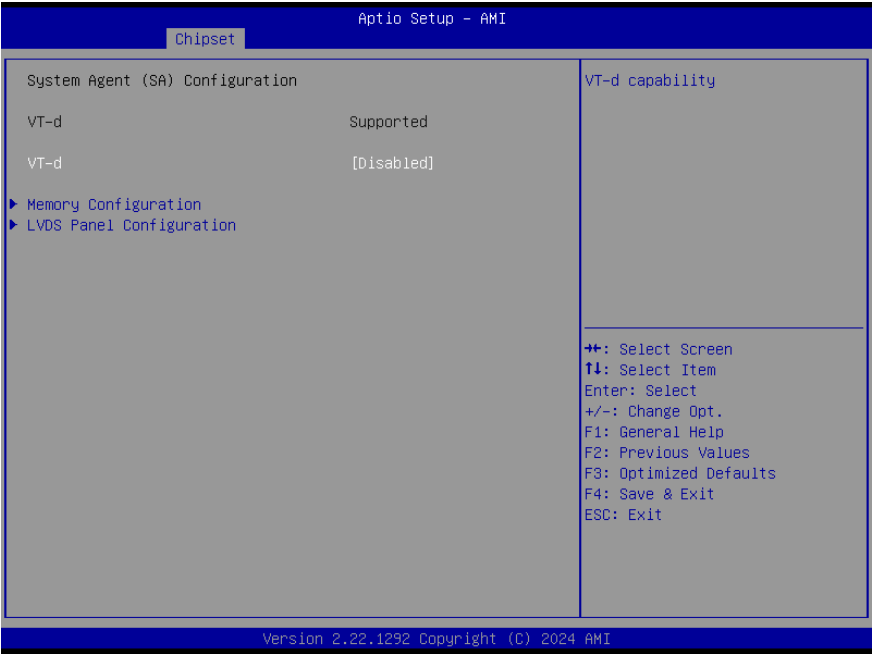
3.4.11 AAEON Smart Boost



3.5 Setup Submenu: Chipset

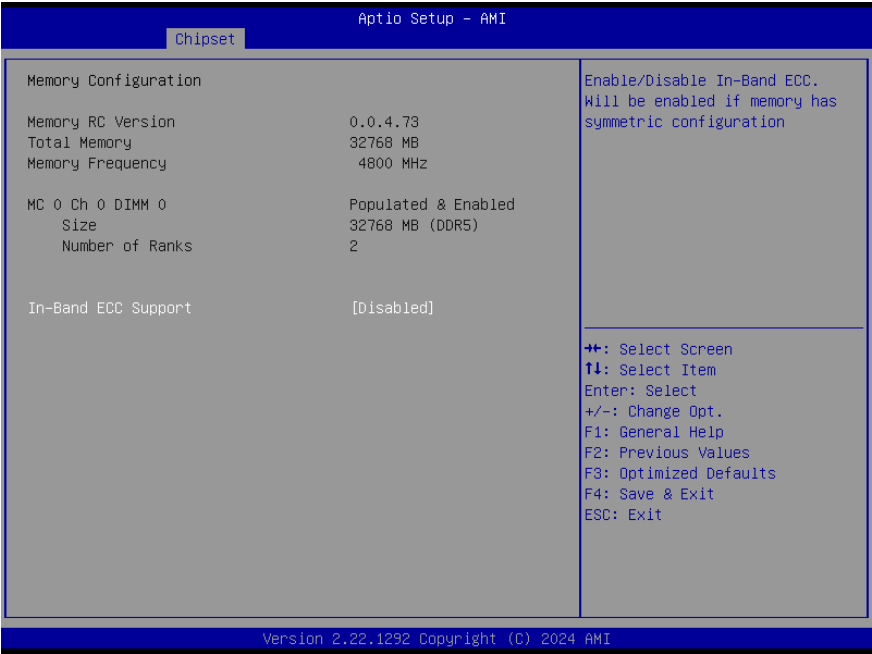


3.5.1 System Agent (SA) Configuration



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

3.5.1.1 Memory Configuration



Options Summary

In-Band ECC Support	Disabled	Optimal Default, Failsafe Default
	Enabled	

Enable/Disable In-Band ECC. Will be enabled if memory has symmetric configuration

3.5.1.2 LVDS Panel Configuration



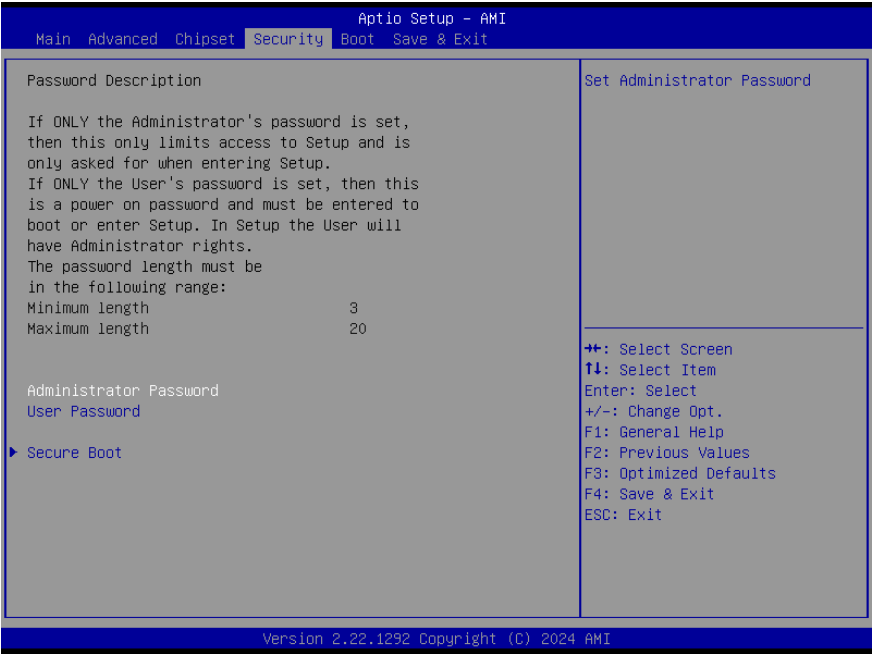
Options Summary		
Panel Type Selection	Auto	Optimal Default, Failsafe Default
	Manual	
Select LCD panel type by OMNI panel ID.		
Backlight Mode	Windows Slider	Optimal Default, Failsafe Default
	BIOS & Application	
Select backlight control signal type		

3.5.2 PCH-IO Configuration



Options Summary		
HD Audio	Disabled	Optimal Default, Failsafe Default
	Enabled	
Control Detection of the HD-Audio device. Disabled = HDA will be unconditionally disabled Enabled = HDA will be unconditionally enabled.		
Full-Mini Card Slot Function (CN27)	PCIe	
	mSATA	Optimal Default, Failsafe Default
Select mSATA or PCIe function for Mini-Card.		

3.6 Setup Submenu: Security



Change User/Administrator Password

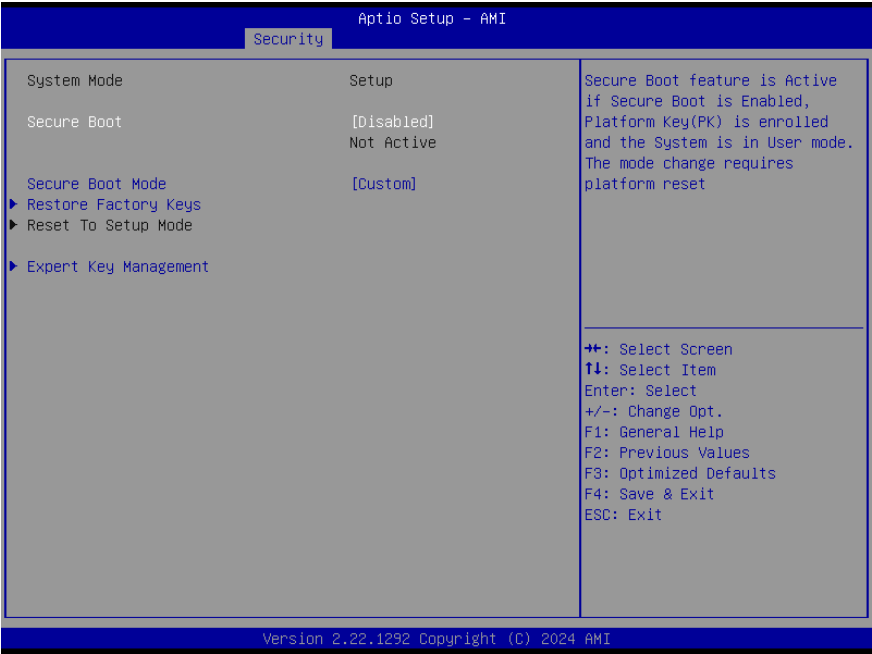
You can set an Administrator Password or User Password. An Administrator Password must be set before you can set a User Password. The password will be required during boot up, or when the user enters the Setup utility. A User Password does not provide access to many of the features in the Setup utility.

Select the password you wish to set, and press Enter. In the dialog box, enter your password (must be between 3 and 20 letters or numbers). Press Enter and retype your password to confirm. Press Enter again to set the password.

Removing the Password

Select the password you want to remove and enter 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	Standard	
	Custom	Optimal Default, Failsafe Default
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.	

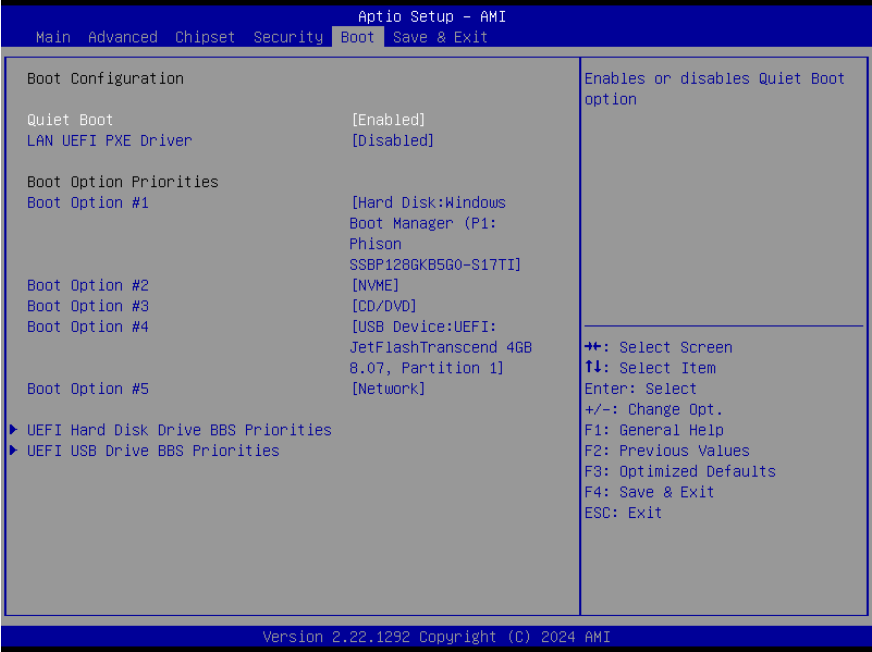
3.6.1.1 Key Management



Options Summary		
Factory Key Provision	Disabled	Optimal Default, Failsafe Default
	Enabled	
Install factory default Secure Boot keys after the platform reset and while the System is in Setup mode.		
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 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 Signature database (db)	
Restore DB defaults	Restore DB variable to factory defaults.	

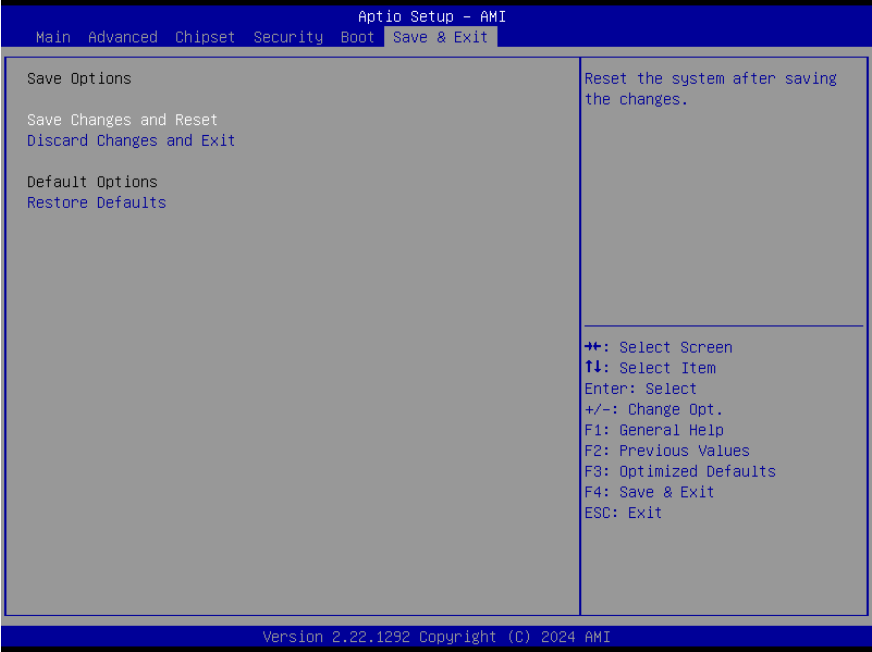
Options Summary	
Save all Secure Boot Variables.	Save NVRAM content of Secure Boot policy variables to the files (EFI_SIGNATURE_LIST data format) in root folder on a target file system device.
Secure Boot Variables Enroll Factory Defaults or load certificates from a file: 1. Public Key Certificate in: 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: Default, External, Mixed, Test	

3.7 Setup Submenu: Boot



Options Summary		
Quiet Boot	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable / Disable Quiet Boot option.		
LAN UEFI PXE Driver	Enabled	
	Disabled	Optimal Default, Failsafe Default
Enable/Disable UEFI Network Stack.		
Boot Option Priorities	Sets the system boot order.	

3.8 Setup Submenu: Save & Exit



Chapter 4

Driver Installation

4.1 Driver Download/Installation

Drivers for the OMNI-ADN-KIT 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.

Chipset Driver

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

1. Open the **Graphics Driver** folder
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

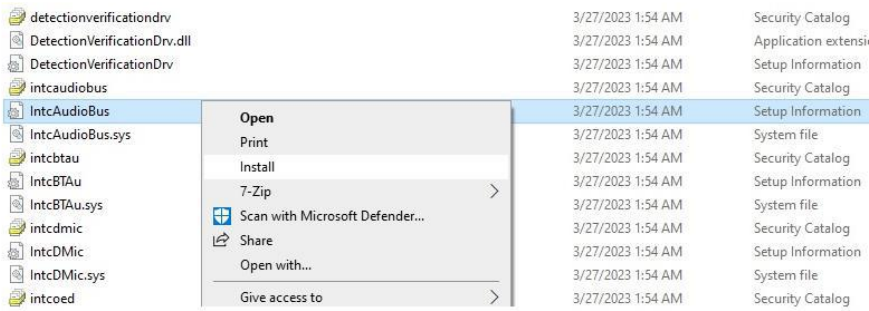
1. Open the **LAN** folder
2. Open the **.exe** file in the folder
3. Follow the instructions
4. Drivers will be installed automatically.

Intel Smart Sound Driver

- 1. Open the **Intel Smart Sound** folder
- 2. Navigate the folder as follows: **Production** > **Driver**, then follow the below instructions to install the BUS Driver (IntcAudioBus.inf) and OED Driver (IntcOED.inf).

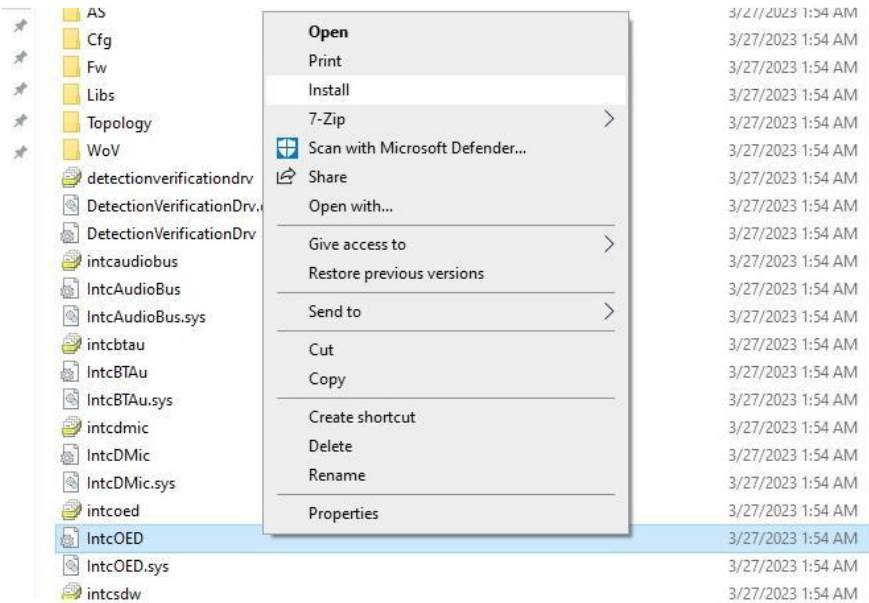
Install BUS driver (IntcAudioBus.inf)

- a. Press Right Key -> Install



Install OED driver (IntcOED.inf)

- b. Press Right Key -> Install



Install Windows Audio Driver

1. Open the **Windows Audio** folder followed by **Setup.exe**
2. Follow the instructions
3. Drivers will be installed automatically.

Install Peripheral Driver

1. Open the **Peripheral Driver** folder
2. Open the **SetupSerialIO.exe** file
3. Follow the instructions
4. Drivers will be installed automatically.

Install SIO Driver

1. Open the **SIO** folder and select your OS
2. Open the **FintekSerial.exe** file
3. Follow the instructions
4. Drivers will be installed automatically.

Install Intel CSME Driver

1. Open the **Intel CSME** folder and select your OS
2. Open the **SetupME.exe** file
3. Follow the instructions
4. Drivers will be installed automatically

Appendix A

Watchdog Timer Programming

A.1 Watchdog Timer Initial Program

Table 1: Super I/O Relative Register Table

	Default Value	Note
Index	0x4E(Note1)	SIO MB PnP Mode Index Register 0x2E or 0x4E
Data	0x4F(Note2)	SIO MB PnP Mode Data Register 0x2F or 0x4F

Table 2: Watchdog Relative Register Table

	LDN	Register	BitNum	Value	Note
Timer Counter	0x07(Note3)	0xF6(Note4)		(Note24)	Time of watchdog timer (0~255) This register is byte access
Counting Unit	0x07(Note5)	0xF5(Note6)	3(Note7)	0(Note8)	Select time unit. 0: second 1: minute
Watchdog Enable	0x07(Note9)	0xF5(Note10)	5(Note11)	1(Note12)	0: Disable 1: Enable
Timeout Status	0x07(Note13)	0xF5(Note14)	6(Note15)	1	1: Clear timeout status
Output Mode	0x07(Note16)	0xF5(Note17)	4(Note18)	1(Note19)	Select WDTRST# output mode 0: level 1: pulse
WDTRST output	0x07(Note20)	0xFA(Note21)	0(Note22)	1(Note23)	Enable/Disable time out output via WDTRST# 0: Disable 1: Enable

```

*****
*
// SuperIO relative definition (Please reference to Table 1)
#define byte   SIOIndex   //This parameter is represented from Note1
#define byte   SIOData    //This parameter is represented from Note2
#define void   IOWriteByte(byte IOPort, byte Value);
#define byte   IOReadByte(byte IOPort);
// Watch Dog relative definition (Please reference to Table 2)
#define byte   TimerLDN   //This parameter is represented from Note3
#define byte   TimerReg   //This parameter is represented from Note4
#define byte   TimerVal   // This parameter is represented from Note24
#define byte   UnitLDN    //This parameter is represented from Note5
#define byte   UnitReg    //This parameter is represented from Note6
#define byte   UnitBit    //This parameter is represented from Note7
#define byte   UnitVal    //This parameter is represented from Note8
#define byte   EnableLDN  //This parameter is represented from Note9
#define byte   EnableReg  //This parameter is represented from Note10
#define byte   EnableBit  //This parameter is represented from Note11
#define byte   EnableVal  //This parameter is represented from Note12
#define byte   StatusLDN  // This parameter is represented from Note13
#define byte   StatusReg  // This parameter is represented from Note14
#define byte   StatusBit  // This parameter is represented from Note15
#define byte   ModeLDN    // This parameter is represented from Note16
#define byte   ModeReg    // This parameter is represented from Note17
#define byte   ModeBit    // This parameter is represented from Note18
#define byte   ModeVal    // This parameter is represented from Note19
#define byte   WDTRstLDN  // This parameter is represented from Note20
#define byte   WDTRstReg  // This parameter is represented from Note21
#define byte   WDTRstBit  // This parameter is represented from Note22
#define byte   WDTRstVal  // This parameter is represented from Note23
*****
*

```

Appendix B

I/O Information

B.1 I/O Address Map

▼		Input/output (I/O)
	[0000000000000000 - 000000000000CF7]	PCI Express Root Complex
	[0000000000000020 - 0000000000000021]	Programmable interrupt controller
	[0000000000000024 - 0000000000000025]	Programmable interrupt controller
	[0000000000000028 - 0000000000000029]	Programmable interrupt controller
	[000000000000002C - 000000000000002D]	Programmable interrupt controller
	[000000000000002E - 000000000000002F]	Motherboard resources
	[0000000000000030 - 0000000000000031]	Programmable interrupt controller
	[0000000000000034 - 0000000000000035]	Programmable interrupt controller
	[0000000000000038 - 0000000000000039]	Programmable interrupt controller
	[000000000000003C - 000000000000003D]	Programmable interrupt controller
	[0000000000000040 - 0000000000000043]	System timer
	[000000000000004E - 000000000000004F]	Motherboard resources
	[0000000000000050 - 0000000000000053]	System timer
	[0000000000000061 - 0000000000000061]	Motherboard resources
	[0000000000000063 - 0000000000000063]	Motherboard resources
	[0000000000000065 - 0000000000000065]	Motherboard resources
	[0000000000000067 - 0000000000000067]	Motherboard resources
	[0000000000000070 - 0000000000000070]	Motherboard resources
	[0000000000000080 - 0000000000000080]	Motherboard resources
	[0000000000000092 - 0000000000000092]	Motherboard resources
	[00000000000000A0 - 00000000000000A1]	Programmable interrupt controller
	[00000000000000A4 - 00000000000000A5]	Programmable interrupt controller
	[00000000000000A8 - 00000000000000A9]	Programmable interrupt controller
	[00000000000000AC - 00000000000000AD]	Programmable interrupt controller
	[00000000000000B0 - 00000000000000B1]	Programmable interrupt controller
	[00000000000000B2 - 00000000000000B3]	Motherboard resources
	[00000000000000B4 - 00000000000000B5]	Programmable interrupt controller
	[00000000000000B8 - 00000000000000B9]	Programmable interrupt controller
	[00000000000000BC - 00000000000000BD]	Programmable interrupt controller

	[0000000000002E8 - 0000000000002EF]	Communications Port (COM4)
	[0000000000002F8 - 0000000000002FF]	Communications Port (COM2)
	[0000000000003E8 - 0000000000003EF]	Communications Port (COM3)
	[0000000000003F8 - 0000000000003FF]	Communications Port (COM1)
	[0000000000004D0 - 0000000000004D1]	Programmable interrupt controller
	[000000000000680 - 00000000000069F]	Motherboard resources
	[000000000000A00 - 000000000000A0F]	Motherboard resources
	[000000000000A10 - 000000000000A1F]	Motherboard resources
	[000000000000A20 - 000000000000A2F]	Motherboard resources
	[000000000000D00 - 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
	[000000000000EFA0 - 000000000000EFBF]	SMBus - 54A3

B.2 Memory Address Map

Memory	
	[0000000000A0000 - 0000000000BFFFF] PCI Express Root Complex
	[000000008040000 - 00000000805FFFF] PCI Express Root Port #10 - 54B1
	[000000008040000 - 00000000BFFFFFF] PCI Express Root Complex
	[00000000804FC00 - 00000000804FFFF] Intel(R) Ethernet Controller I226-V #2
	[000000008050000 - 00000000805FFFF] Intel(R) Ethernet Controller I226-V #2
	[000000008060000 - 00000000806FFFF] Intel(R) Ethernet Controller I226-V
	[000000008060000 - 00000000807FFFF] PCI Express Root Port #7 - 54BE
	[000000008070000 - 0000000080703FFF] Intel(R) Ethernet Controller I226-V
	[000000008080000 - 00000000808FFFF] Intel(R) Ethernet Controller I226-V #3
	[000000008080000 - 00000000809FFFF] PCI Express Root Port #4 - 54BB
	[000000008090000 - 0000000080903FFF] Intel(R) Ethernet Controller I226-V #3
	[0000000080A0000 - 0000000080A01FFF] Standard SATA AHCI Controller
	[0000000080A0200 - 0000000080A027FF] Standard SATA AHCI Controller
	[0000000080A0300 - 0000000080A030FF] Standard SATA AHCI Controller
	[00000000C000000 - 00000000CFFFFFF] Motherboard resources
	[00000000FD69000 - 00000000FD69FFFF] Intel(R) Serial IO GPIO Host Controller - INTC1057
	[00000000FD6A000 - 00000000FD6AFFFF] Intel(R) Serial IO GPIO Host Controller - INTC1057
	[00000000FD6D000 - 00000000FD6DFFFF] Intel(R) Serial IO GPIO Host Controller - INTC1057
	[00000000FD6E000 - 00000000FD6EFFFF] Intel(R) Serial IO GPIO Host Controller - INTC1057
	[00000000FE01000 - 00000000FE010FFF] SPI (flash) Controller - 54A4
	[00000000FED0000 - 00000000FED003FF] High precision event timer
	[00000000FED2000 - 00000000FED7FFFF] Motherboard resources
	[00000000FED4000 - 00000000FED44FFF] Trusted Platform Module 2.0
	[00000000FED4500 - 00000000FED8FFFF] Motherboard resources
	[00000000FED9000 - 00000000FED93FFF] Motherboard resources
	[00000000FEDA000 - 00000000FEDA0FFF] Motherboard resources
	[00000000FEDA100 - 00000000FEDA1FFF] Motherboard resources
	[00000000FEDC000 - 00000000FEDC7FFF] Motherboard resources
	[00000000FEE0000 - 00000000FEEFFFFF] Motherboard resources
	[000000400000000 - 000000400FFFFFFF] Intel(R) UHD Graphics
	[000000600000000 - 000000600FFFFFFF] Intel(R) UHD Graphics

	[0000006000000000 - 0000006000FFFFFF] Intel(R) UHD Graphics
	[0000006001000000 - 000000600100FFFF] Intel(R) USB 3.10 eXtensible Host Controller - 1.20 (Microsoft)
	[0000006001010000 - 0000006001017FFF] Performance Monitor
	[0000006001024000 - 00000060010240FF] SMBus - 54A3
	[0000007FFFFFFB000 - 0000007FFFFFFBFFF] Intel(R) Serial IO I2C Host Controller - 54C6
	[0000007FFFFFFC000 - 0000007FFFFFFCFFF] Intel(R) Serial IO I2C Host Controller - 54C5
	[0000007FFFFFFD000 - 0000007FFFFFFDFFF] Intel(R) Management Engine Interface #1
	[0000007FFFFFE000 - 0000007FFFFFEFFF] Intel(R) Serial IO I2C Host Controller - 54E8
	[0000007FFFFFFF000 - 0000007FFFFFFF7FFF] Intel(R) Serial IO UART Host Controller - 54A8

B.3 IRQ Mapping Chart

	(ISA) 0x00000000 (00)	System timer
	(ISA) 0x00000003 (03)	Communications Port (COM2)
	(ISA) 0x00000004 (04)	Communications Port (COM1)
	(ISA) 0x0000000B (11)	Communications Port (COM3)
	(ISA) 0x0000000B (11)	Communications Port (COM4)
	(ISA) 0x0000000E (14)	Intel(R) Serial IO GPIO Host Controller - INTC1057
	(ISA) 0x00000037 (55)	Microsoft ACPI-Compliant System
	(ISA) 0x00000038 (56)	Microsoft ACPI-Compliant System
	(ISA) 0x00000039 (57)	Microsoft ACPI-Compliant System
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