

OMNI-BT Series

Industrial Modular Touch Panel PC
With Intel[®] Bay Trail Platform

User's Manual 3rd Ed

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Packing List

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

Item	Quantity
● OMNI-BT Series Panel PC (panel size from 10.4 – 21.5")	1
● Product DVD	1
● Phoenix Power connector	1

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

About this Document

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

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

Safety Precautions

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

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

17. As most electronic components are sensitive to static electrical charge, be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and contain all electronic components in any static-shielded containers.
18. If any of the following situations arises, please the contact our service personnel:
 - i. Damaged power cord or plug
 - ii. Liquid intrusion to the device
 - iii. Exposure to moisture
 - iv. Device is not working as expected or in a manner as described in this manual
 - v. The device is dropped or damaged
 - vi. Any obvious signs of damage displayed on the device
19. **DO NOT LEAVE THIS DEVICE IN AN UNCONTROLLED ENVIRONMENT WITH TEMPERATURES BEYOND THE DEVICE'S PERMITTED STORAGE TEMPERATURES (SEE CHAPTER 1) TO PREVENT DAMAGE.**

FCC Statement

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 Panel PC/ Workstation

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	○	○	○	○	○	○

O: 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
SJ/T 11363-2006 标准规定的限量要求以下。

X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出
SJ/T 11363-2006 标准规定的限量要求。

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、触控模块为选购品。

China RoHS Requirement (EN)

Poisonous or Hazardous Substances or Elements in Products
 AAEON Panel PC/ Workstation

Component	Poisonous or Hazardous Substances or Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
PCB & Other Components	○	○	○	○	○	○
Wires & Connectors for External Connections	○	○	○	○	○	○
Chassis	○	○	○	○	○	○
CPU & RAM	○	○	○	○	○	○
Hard Disk	○	○	○	○	○	○
LCD	○	○	○	○	○	○
Optical Drive	○	○	○	○	○	○
Touchscreen	○	○	○	○	○	○
PSU	○	○	○	○	○	○
<p>O: The quantity of poisonous or hazardous substances or elements found in each of the component's parts is below the SJ/T 11363-2006-stipulated requirement.</p> <p>X: The quantity of poisonous or hazardous substances or elements found in at least one of the component's parts is beyond the SJ/T 11363-2006-stipulated requirement.</p> <p>Note: The Environment Friendly Use Period as labeled on this product is applicable under normal usage only</p>						

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Chapter 1

Product Specifications

1.1 Specifications

Specifications for System and Power Supply are same for all models/SKUs of OMNI-BT series. All other specifications are listed by SKU in the following sub-sections.

System

Processor	Intel® Celeron® J1900, 2.0 GHz Intel® N2807, 1.58 GHz
System Memory	204-pin DDR3L 1333MHz SODIMM x 1 Up to 8 GB (J1900); Up to 4 GB (N2807)
LCD/CRT Controller	Integrated in Processor
Ethernet	10/100/1000Base-TX, RJ-45 x 2
I/O Port	USB Type A x 1 for USB 3.0 USB Type A x 3 for USB 2.0 SMA antenna hole x 1 HDMI x 1 CFast™ x 1 DB-9 for RS-232/422/485 x 1 RJ-45 x 2 for 10/100/1000Base-TX DB-15 x 1 for VGA 3-pin terminal block x 1 for 9~30 V DC power input LED Power On/Off Switch x 1 (Power on = orange, Power off =N/A)
Storage Disk Drive	CFast™ socket x 1 SATA 2.5" HDD bay x 1

System

Expansion Slot	Full Size Mini-Card x 2 OMNI I/O Connector x 1 SIM x 2
OS support	Windows® 7, Windows® 8, Windows® 10, Linux kernel 2.6.x or higher

Power Supply

DC Input	DC 9 (min.) ~ 30 (max.) V w/ 3-pin terminal block, ATX Power function
-----------------	--

1.1.1 OMNI-3105-BT

Mechanical

Construction	Aluminum design (IP65 Front Frame)
Mounting	VESA 100 / Panel Mount
Dimension	11.02" x 9.41" x 2.32" (280 mm x 239 mm x 59 mm)
Carton Dimension	16.34" x 7.05" x 15.39" (415mm x 179mm x 391mm)
Gross Weight	7.92 lbs. (3.6 kg)

Environmental

Operating Temperature	14°F ~ 131°F (-10°C ~ 55°C) (J1900), 14°F ~ 140°F (-10°C ~ 60°C) (N2807) with 0.5 m/s airflow (CF & HDD)
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Storage Humidity	90% @ 40°C; non-condensing
Vibration	1 Grms/ 5~ 500Hz/ operation – with HDD
Shock	15 G peak acceleration (11 msec. duration) – with HDD
EMC	CE/FCC class A

LCD

Display Type	10.4" TFT-LCD, LED
Max Resolution	800 (H) x 600 (V)
Max. Colors	16.2M colors
Luminance	230 cd/m ²
Viewing Angle	120° (H), 100° (V)
Back Light	LED
Back Light MTBF (Hours)	50,000

Touchscreen

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

1.1.2 OMNI-3125-BT

Mechanical

Construction	Aluminum design (IP65 Front Frame)
Mounting	VESA 100 / Panel Mount
Dimension	12.95" x 11.34" x 2.2" (329 mm x 288 mm x 56 mm)
Carton Dimension	20.87" x 17.52" x 7.87" (530mm x 445mm x 200mm)
Gross Weight	11 lbs. (5.0 kg)

Environmental

Operating Temperature	14°F ~ 131°F (-10°C ~ 55°C) (J1900), 14°F ~ 140°F (-10°C ~ 60°C) (N2807) with 0.5 m/s airflow (CF & HDD)
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Storage Humidity	90% @ 40°C; non-condensing
Vibration	1 Grms/ 5~ 500Hz/ operation – with HDD
Shock	15 G peak acceleration (11 msec. duration) – with HDD
EMC	CE/FCC class A

LCD

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

Touchscreen

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

1.1.3 OMNI-3155-BT

Mechanical

Construction	Aluminum design (IP65 Front Frame)
Mounting	VESA 100 / Panel Mount
Dimension	14.53" x 12.36" x 2.28" (369 mm x 314 mm x 58 mm)
Carton Dimension	20.08" x 9.84" x 18.11" (510mm x 250mm x 460mm)
Gross Weight	13.97 lbs. (6.35 kg)

Environmental

Operating Temperature	14°F ~ 131°F (-10°C ~ 55°C) (J1900), 14°F ~ 140°F (-10°C ~ 60°C) (N2807) with 0.5 m/s airflow (CF & HDD)
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Storage Humidity	90% @40°C; non-condensing
Vibration	1 Grms/ 5~ 500Hz/ operation – with HDD
Shock	15 G peak acceleration (11 msec. duration) – with HDD
EMC	CE/FCC class A

LCD

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

Touchscreen

Type	P-CAP/ 5-wire resistive
Light Transmission	P-CAP (90%± 2%), 5-wire Resistive (80% ± 2%)

1.1.4 OMNI-2155-BT

Mechanical

Construction	Aluminum front bezel + metal chassis
Mounting	VESA 100 / Panel mount
Dimension	16.54" x 10.43" x 2.36" (420mm x 265mm x 60mm)
Carton Dimension	20.87" x 17.52" x 7.87" (530mm x 445mm x 200mm)
Gross Weight	14.1 lbs. (6.4 kg)

Environmental

Operating Temperature	-20°C~60°C with industrial grade device (with 0.5 m/s air flow, according to IEC68-2-14, CPU: N2807) -20°C~55°C with industrial grade device (with 0.5 m/s air flow, according to IEC68-2-14, CPU: J1900)
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Storage Humidity	90% @40°C, non-condensing
Vibration	1 Grms/ 5 ~ 500 Hz/ Operation (HDD)
Shock	15 G peak acceleration (11 msec. duration)
EMC	CE/FCC class A

LCD

Display Type	15.6" TFT-LCD, LED backlight
Max Resolution	1366 x 768
Max. Colors	16.7M colors (RGB 8-bit)
Luminance	400 cd/m ²
Viewing Angle	160°(H), 140°(V)
Back Light	LED
Back Light MTBF (Hours)	50,000

Touchscreen

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

1.1.5 OMNI-3175-BT

Mechanical

Construction	Aluminum design (IP65 Front Frame)
Mounting	VESA 100/Panel Mount
Dimension	16.14" x 14.57" x 2.32" (410mm x 370mm x 59mm)
Carton Dimension	20.55" x 10.31" x 19.29"(522mm x 262mm x 490mm)
Gross Weight	15.84 lbs. (7.2 kg)

Environmental

Operating Temperature	14°F ~ 131°F (-10°C ~ 55°C) (J1900), 14°F ~ 140°F (-10°C ~ 60°C) (N2807) with 0.5 m/s airflow (CF & HDD)
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Storage Humidity	90% @40°C; non-condensing
Vibration	1 Grms/ 5~ 500Hz/ operation – with HDD
Shock	15 G peak acceleration (11 msec. duration) – with HDD
EMC	CE/FCC class A

LCD

Display Type	17" TFT-LCD, LED
Max Resolution	1280(H) x 1024(V)
Max. Colors	16.7M colors (RGB 6-bits + Hi-FRC data)
Luminance	350 cd/m ²
Viewing Angle	170°(H), 160°(V)
Back Light	LED
Back Light MTBF (Hours)	50,000

Touchscreen

Type	P-CAP/ 5-wire resistive
Light Transmission	P-CAP (≥85%), 5-wire Resistive (80% ± 5%)

1.1.6 OMNI-3195-BT

Mechanical

Construction	Aluminum design (IP65 Front Frame)
Mounting	VESA 100/Panel mount
Dimension	18.15" x 16.14" x 2.32" (461 mm x 410 mm x 59 mm)
Carton Dimension	26.02" x 8.11" x 19.53" (661mm x 206mm x 496mm)
Gross Weight	19.36 lbs. (8.8 kg)

Environmental

Operating Temperature	14°F ~ 131°F (-10°C ~ 55°C) (J1900), 14°F ~ 140°F (-10°C ~ 60°C) (N2807) with 0.5 m/s airflow (CF & HDD)
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Storage Humidity	90% @40°C; non-condensing
Vibration	1 Grms/ 5~ 500Hz/ operation – with HDD
Shock	15 G peak acceleration (11 msec. duration) – with HDD
EMC	CE/FCC class A

LCD

Display Type	19" TFT-LCD, LED
Max Resolution	1280(H) x 1024(V)
Max. Colors	16.7M colors
Luminance	350 cd/m ²
Viewing Angle	170°(H), 160°(V)
Back Light	LED
Back Light MTBF (Hours)	50,000

Touchscreen

Type	P-CAP/ 5-wire resistive
Light Transmission	P-CAP (≥85%), 5-wire Resistive (80% ± 5%)

1.1.7 OMNI-2215-BT

Mechanical

Construction	Aluminum front bezel + metal chassis
Mounting	VESA 100 / Panel mount
Dimension	21.65" x 14.69" x 2.1" (550mm x 373mm x 53mm)
Carton Dimension	26.38" x 7.87" x 20.67" (670mm x 200mm x 525mm)
Gross Weight	19.6 lbs. (8.9 kg)

Environmental

Operating Temperature	-20°C~60°C with industrial grade device (with 0.5 m/s air flow, according to IEC68-2-14, CPU: N2807) -20°C~55°C with industrial grade device (with 0.5 m/s air flow, according to IEC68-2-14, CPU: J1900)
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Storage Humidity	90% @40°C, non-condensing
Vibration	1 Grms/ 5~ 500Hz/ operation – with HDD
Shock	—
EMC	CE/FCC class A

LCD

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

Touchscreen

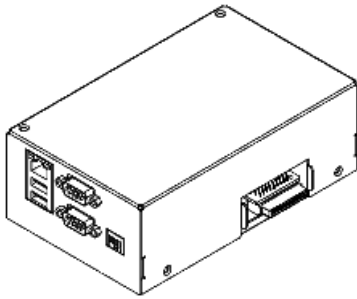
Type	P-CAP/ 5-wire resistive
Light Transmission	P-CAP (90% ± 3%), 5-wire Resistive (80% ± 3%)

1.2 OMNI Modules

Featuring a modular designed, the OMNI-BT Series Panel PC can be fitted with a number of modules to expand its base capabilities. Please refer to the sections below for their features.

Note: The interface between the CPU box and the module is through PCIe signal.

1.2.1 USB/ COM/ LAN Module

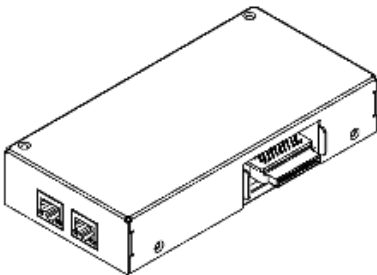


Features

- USB 2.0 x 2
- RS-232/422/485 x 2 (Selectable by external switch)
- Intel 10/100/1000 Giga LAN x 1

Note: You need to install the COM Port driver from the DVD

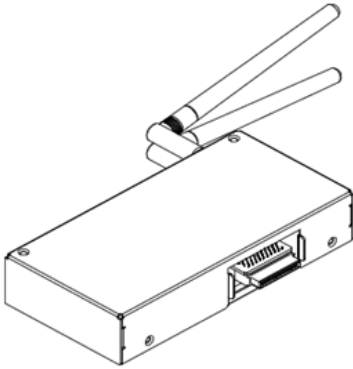
1.2.2 Dual LAN Module



Features

- Intel 10/100/1000 Giga LAN x 2

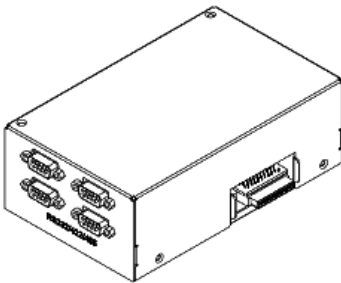
1.2.3 MiniCard and SIM Card Module



Features

- MiniCard x 2
- SIM Card x 2

1.2.4 RS-232/422/485 Module



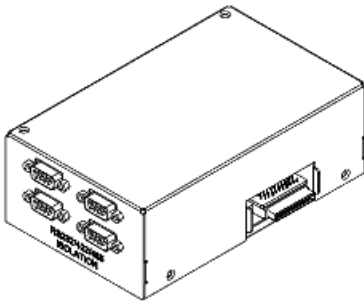
Features

- RS-232/422/485 x 4
(Selectable by jumper)

Note: You need to install the COM Port driver

1.2.5

Isolated RS-232/422/485 Module



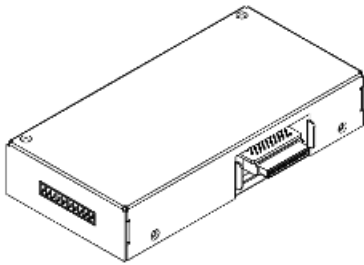
Features

- Isolated RS-232/422/485 x 4
(Selectable by jumper)
- 2k Vdc Isolation

Note: You need to install the COM Port driver

1.2.6

Digital I/O Module

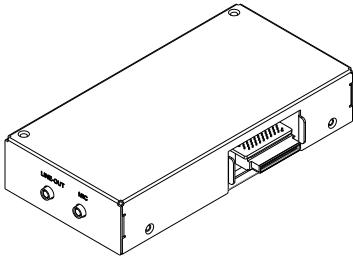


Features

- Digital I/O x 8

Note: You could use an AAEON Hi-Safe Software tool to adjust input or output

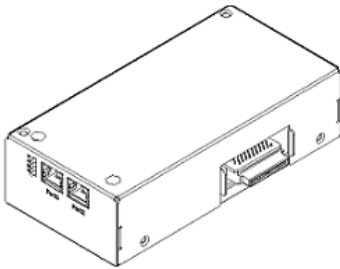
1.2.8 Audio Module



Features

- Mic-in
- Line-out
- Support plug and play after installing driver&reboot

1.2.9 HMS Module



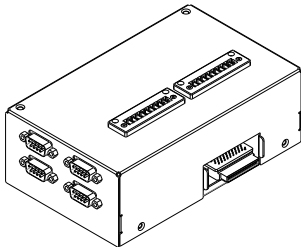
Features

- 10/100 Ethernet x 2

Note:

- Not include HMS I/O card
- Europe Limitation

1.2.10 COM x 4 + DIO x 16 Module

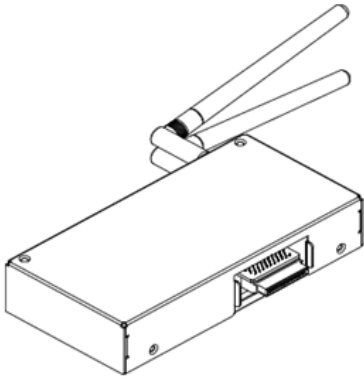


Features

- Isolated RS-232/422/485 x 4
- Digital I/O x8

Note: You could use an AAeon Hi-Safe Software tool to adjust input or output

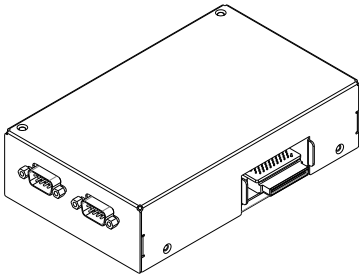
1.2.11 Wi-Fi 802.11 b/g/n Module



Features

- Support 802.11 b/g/n
- Support BT 3.0

1.2.12 RS-485/422/232 x 2 Module



Features

- RS-485/422/232 x 2
- Selection by jumper

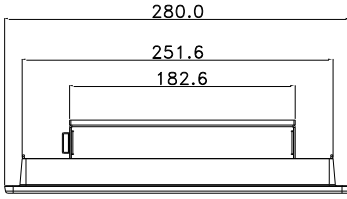
Chapter 2

Hardware Information

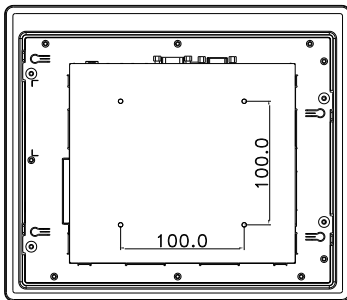
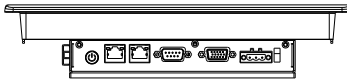
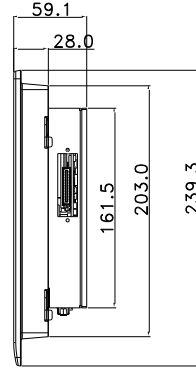
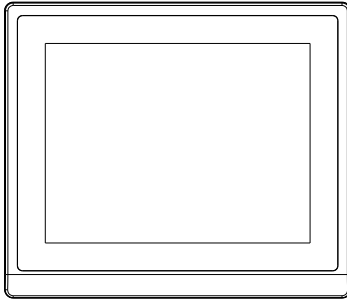
2.1 Dimensions

2.1.1 Dimensions: Main Panels

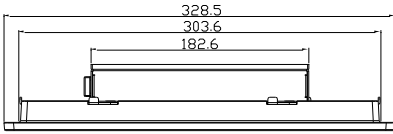
OMNI-3105-BT



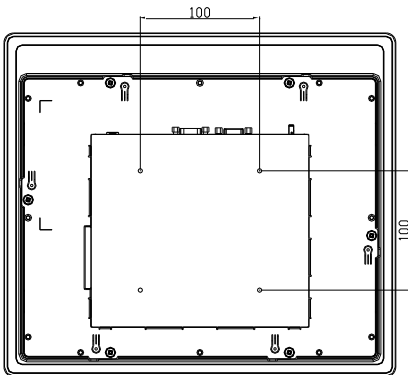
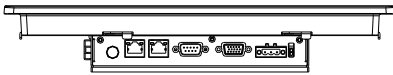
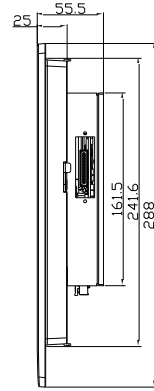
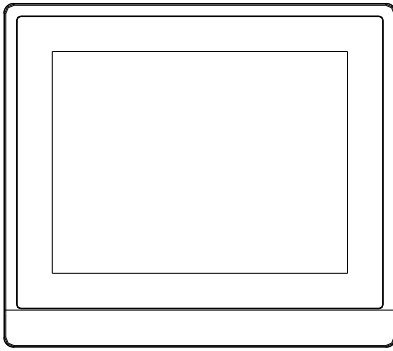
OMNI-3105-BT



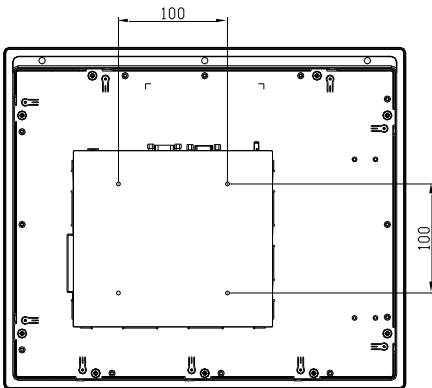
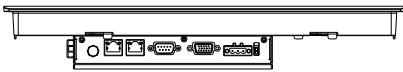
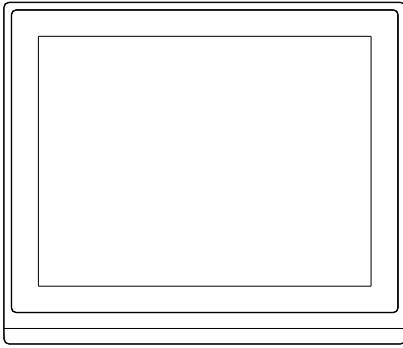
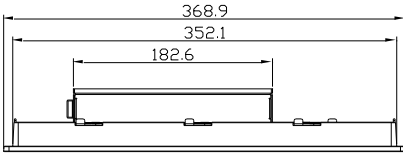
OMNI-3125-BT



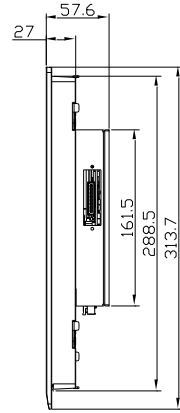
OMNI-3125BT



OMNI-3155-BT

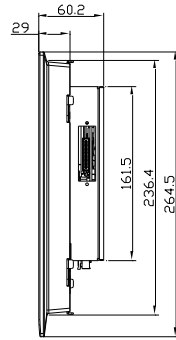
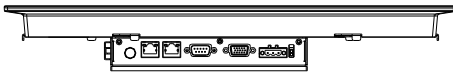
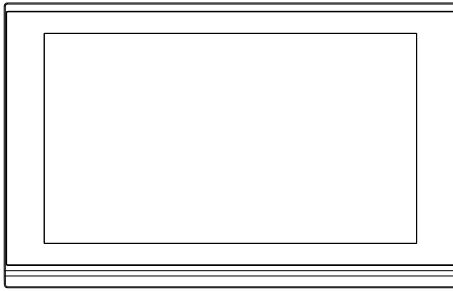
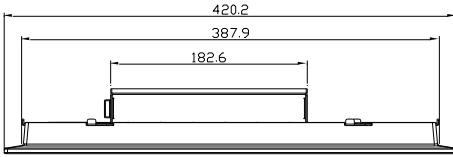


OMNI-3155BT

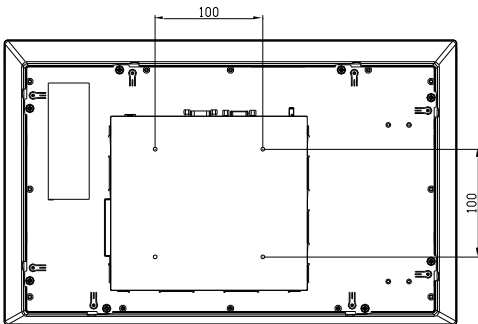


OMNI-2155-BT

OMNI-2155BT

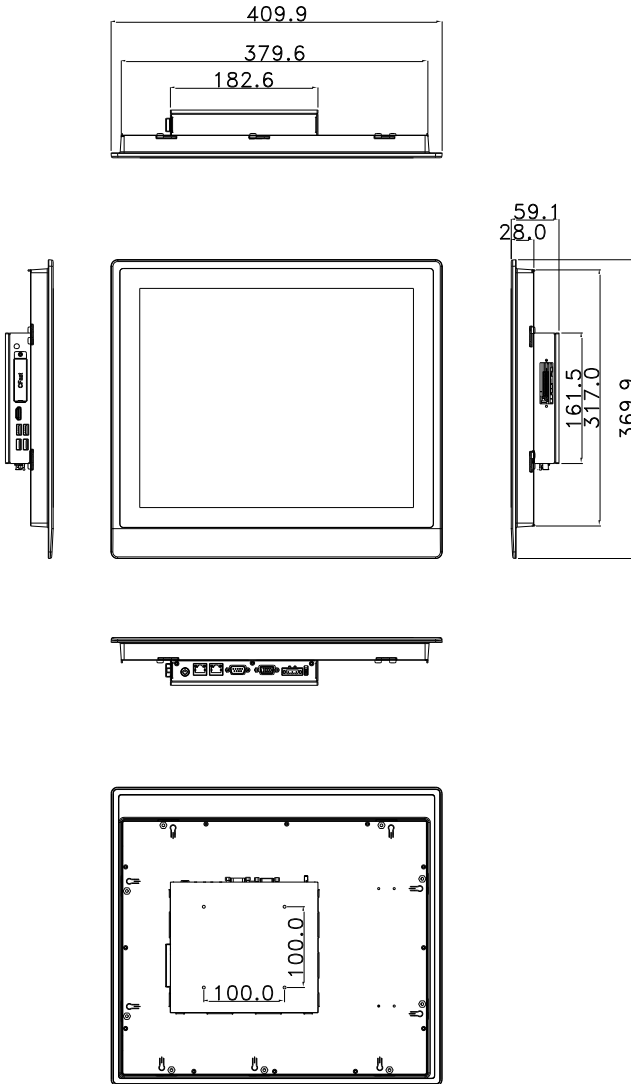


SCALE 3:5

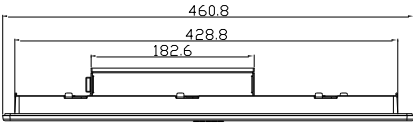


OMNI-3175-BT

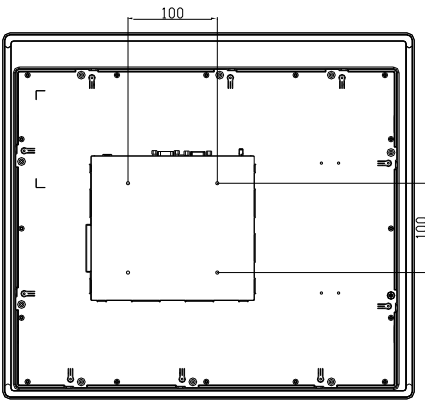
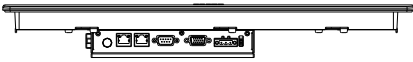
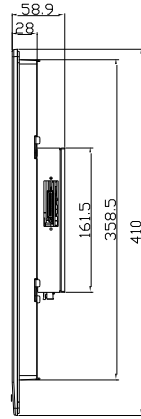
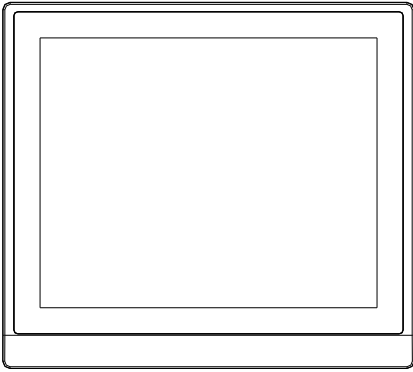
OMNI-3175-BT



OMNI-3195-BT

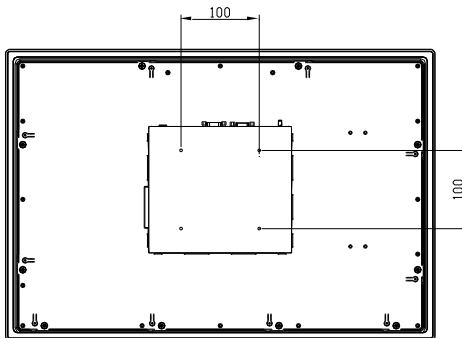
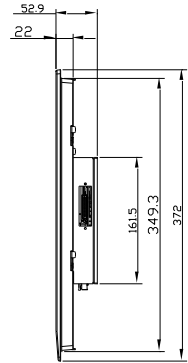
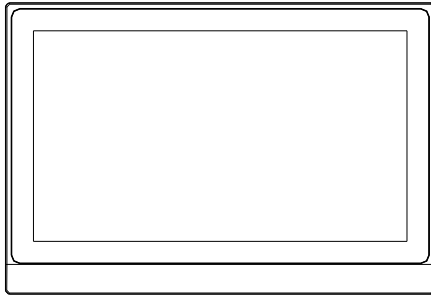
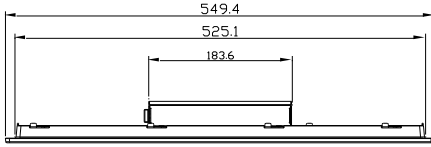


OMNI-3195BT



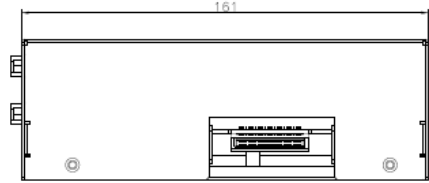
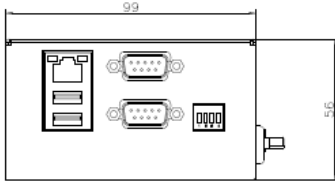
OMNI-2215-BT

OMNI-2215BT

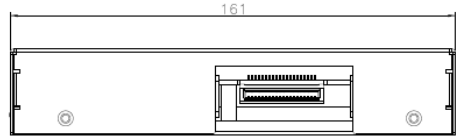
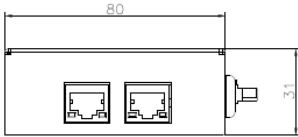


2.1.2 Dimensions: OMNI Modules

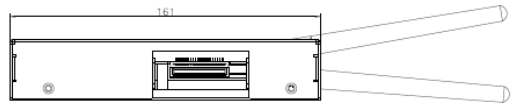
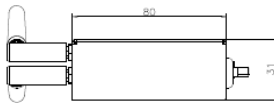
USB/ CAN/ LAN Module



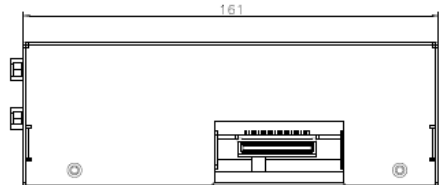
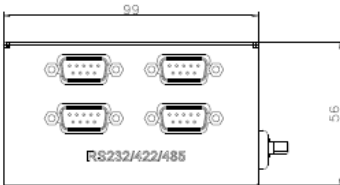
Dual LAN Module



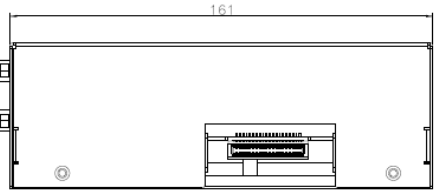
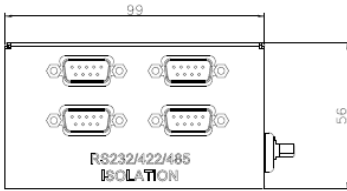
MiniCard & SIM Card Module



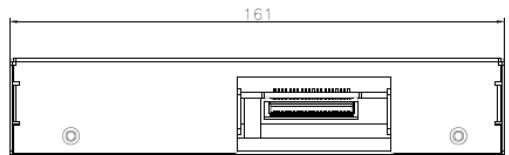
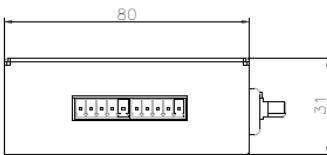
RS-232/422/485 Module



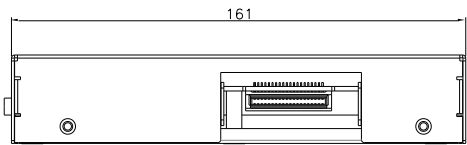
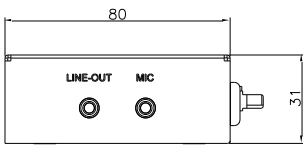
Isolated RS-232/422/485 Module



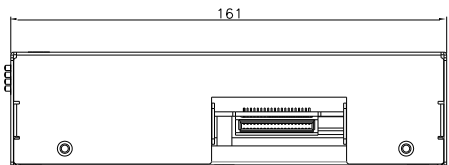
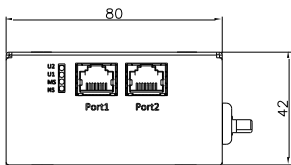
Digital I/O Module



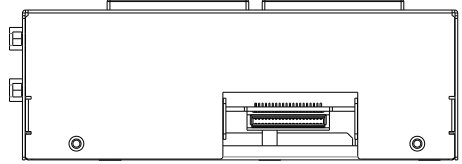
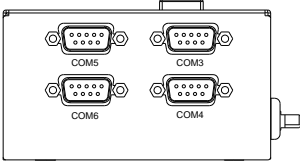
Audio Module



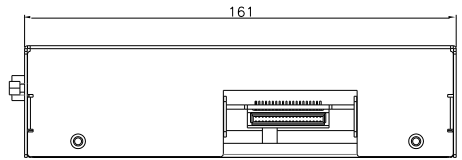
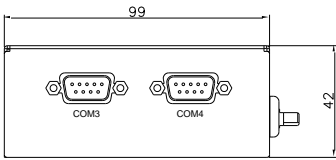
HMS Module



COM x 4 + DIO x 16 Module

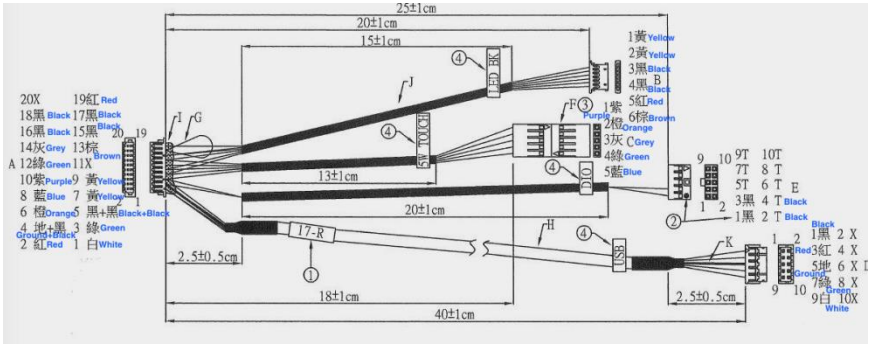


COM x 2 Module

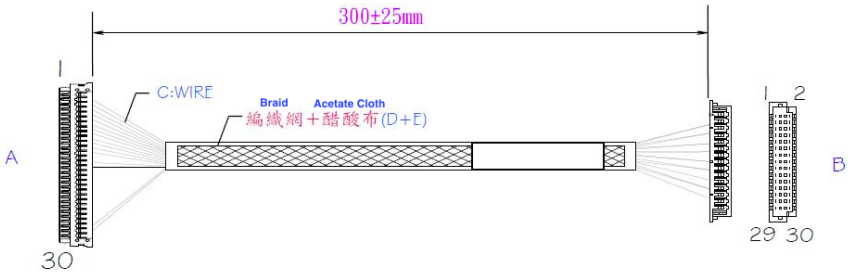


2.1.3 Dimensions: Cables

Touch and Panel Select Cable



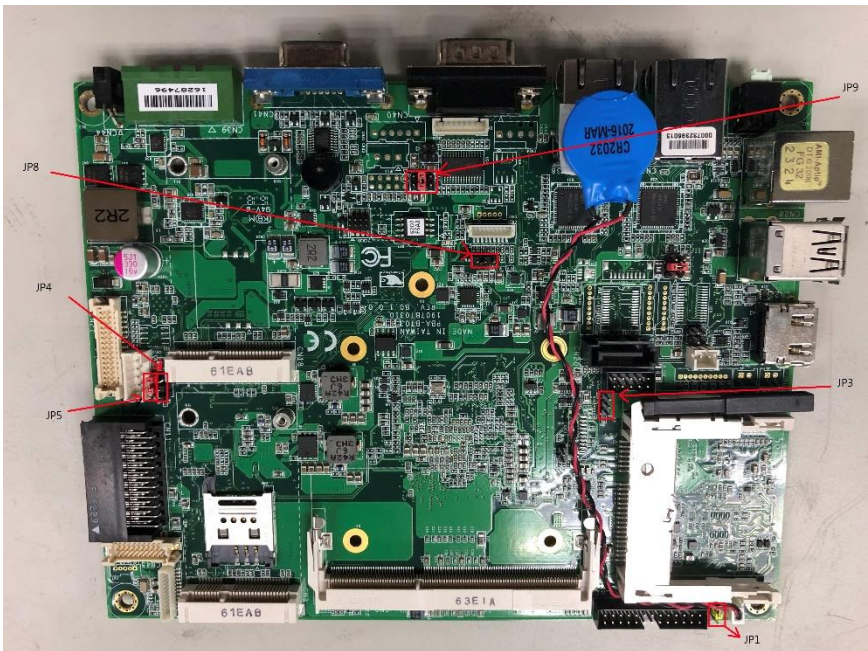
LVDS Cable



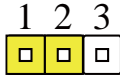
2.2 List of Jumpers

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

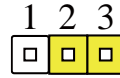
Label	Function
JP1	Clear CMOS
JP3	AT/ATX mode selection
JP4	LVDS Port Backlight Lightness Control Mode Selection
JP5	LVDS inverter Voltage Selection
JP8	Touch Selection
JP9	COM2 +12V/+5V/RING Selection



2.2.1 Clear CMOS (JP1)

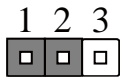


Normal (Default)

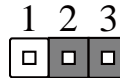


Clear CMOS

2.2.2 AT/ATX Mode Selection (JP3)

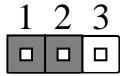


ATX (Default)

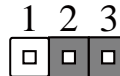


AT

2.2.3 LVDS Port Backlight Lightness Control Mode Selection (JP4)



VR Mode



PWM Mode (Default)

2.2.4 LVDS Inverter Voltage Selection (JP5)

Pin	Function
1-2	+12 V (Default)
2-3	+5 V

2.2.5 Touch Selection (JP8)

Pin	Function
1-2	4, 8 wire
2-3	5 wire (Default)

2.2.6 COM2 +12V/+5V/Ring Selection (JP9)

Pin	Function
1-2	+12 V
3-4	Ring (Default)
5-6	+5 V

2.3 List of Connectors

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

Label	Function
CN3	MiniCard Connector with on-board SIM
CN4	LPC debug port
CN6	Battery connector
CN9	SIM socket
CN10	CFast connector
CN11	Board to board connector
CN15	Panel size select
CN17	LVDS backlight connector
CN18	Mini PCIe slot (mSATA select)
CN19	SATA power connector (+5V)
CN20	SATA connector
CN21	LVDS connector
CN22	HDMI connector
CN28	Dual stack USB connector(3.0/2.0)
CN29	Touchscreen connector
CN30	SPI Connector
CN32	Dual stack USB connector(2.0)
CN37	LAN1 connector
CN38	LAN2 connector
CN39	DC-IN
CN40	COM2 connector
CN41	VGA connector
CN43	Remote switch connector

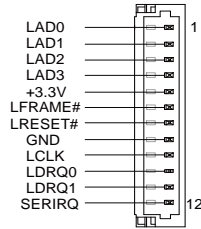
CN45Combo connector

2.3.1 MiniCard Connector with On-board SIM (CN3)

Pin	Signal	Pin	Signal
1	PCIE_WAKE#	2	+V3.3A
3	NC	4	GND
5	NC	6	+1.5V
7	PCIE_CLK_REQ#	8	UIM_PWR
9	GND	10	UIM_DATA
11	PCIE_REF_CLK-	12	UIM_CLK
13	PCIE_REF_CLK+	14	UIM_RST
15	GND	16	UIM_VPP
17	NC	18	GND
19	NC	20	W_DISABLE#
21	GND	22	PCIE_RST#
23	PCIE_RX-	24	+V3.3A
25	PCIE_RX+	26	GND
27	GND	28	+1.5V
29	GND	30	SMB_CLK
31	PCIE_TX-	32	SMB_DATA
33	PCIE_TX+	34	GND
35	GND	36	USB_D-
37	GND	38	USB_D+
39	+V3.3A	40	GND
41	+V3.3A	42	NC
43	GND	44	NC
45	NC	46	NC

47	NC	48	+1.5V
49	NC	50	GND
51	NC	52	+V3.3A

2.3.2 LPC Debug Port (CN4)



Pin	Pin Name	Signal Type	Signal Level
1	LAD0	I/O	+3.3V
2	LAD1	I/O	+3.3V
3	LAD2	I/O	+3.3V
4	LAD3	I/O	+3.3V
5	+3.3V	PWR	+3.3V
6	LFRAME#	IN	
7	LRESET#	OUT	+3.3V
8	GND	GND	
9	LCLK	OUT	
10	LDRQ0	IN	
11	LDRQ1	IN	
12	SERIRQ	I/O	+3.3V

2.3.3 Battery Connector (CN6)

Pin	Signal
1	RTC
2	GND

2.3.4 Cfast Connector (CN10)

Pin	Pin Name	Signal Type	Signal Level
S1	GND	GND	
S2	SATA_TX+	DIFF	
S3	SATA_TX-	DIFF	
S4	GND	GND	
S5	SATA_RX-	DIFF	
S6	SATA_RX+	DIFF	
S7	GND	GND	
PC1	NC		
PC2	GND	GND	
PC3	NC		
PC4	NC		
PC5	NC		
PC6	NC		
PC7	GND	GND	
PC8	NC		
PC9	NC		
PC10	NC		
PC11	NC		

PC12	NC		
PC13	+3.3V	PWR	+3.3V
PC14	+3.3V	PWR	+3.3V
PC15	GND	GND	
PC16	GND	GND	
PC17	NC		

2.3.5 Board to Board Connector (CN11)

Pin	Pin Name	Signal Type	Signal Level
1	+V5A	PWR	+5V
2	+V5A	PWR	+5V
3	+V5A	PWR	+5V
4	+V5A	PWR	+5V
5	+V3.3A	PWR	+3.3V
6	+V3.3A	PWR	+3.3V
7	+V3.3A	PWR	+3.3V
8	EX_PLT_RST#	out	
9	+V12S	PWR	+12V
10	W_DISABLE0#	out	
11	CLK_LPC_25M_EXT	out	
12	LPC_FRAME#	out	
13	INT_SERIRQ_3P3	out	
14	LPC_AD3	out	
15	LPC_AD2	out	
16	LPC_AD1	out	
17	LPC_AD0	out	
18	Wake#	out	

19	SMBUS_DATA	BI
20	USB_DN2	DIFF
21	SMBUS_CLK	BI
22	USB_DP2	DIFF
23	GND	GND
24	GND	GND
25	P2_REFCLKN	DIFF
26	P2_RXN	DIFF
27	P2_REFCLKP	DIFF
28	P2_RXP	DIFF
29	GND	GND
30	GND	GND
31	P2_TXN	DIFF
32	CLK_PCIE_EXIO_N	DIFF
33	P2_TXP	DIFF
34	CLK_PCIE_EXIO_P	DIFF
35	GND	GND
36	GND	GND
37	PCIE_RXN3	DIFF
38	PCIE_TXN3	DIFF
39	PCIE_RXP3	DIFF
40	PCIE_TXP3	DIFF

2.3.6 Panel Size Select (CN15) 17 inch LCD

Pin	Signal	Pin	Signal
1	DIO0(GND)	2	DIO1(GND)
3	DIO2(5V)	4	DIO3
5	DIO4	6	DIO5
7	DIO6	8	DIO7
9	+5V	10	GND

2.3.7 LVDS Backlight Connector (CN17)

Pin	Signal	Pin	Signal
1	VDD	2	BKL_CTL
3	GND	4	GND
5	BKL_EN		

2.3.8 Mini PCIe Slot (CN18)

Pin	Pin Name	Signal Type	Signal Level
1	PCIE_WAKE#	IN	
2	+3.3VSB	PWR	+3.3V
3	NC		
4	GND	GND	
5	NC		
6	+1.5V	PWR	+1.5V
7	PCIE_CLK_REQ#	IN	
8	NC	PWR	

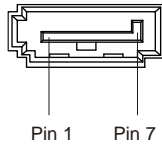
9	GND	GND	
10	NC	I/O	
11	PCIE_REF_CLK-	DIFF	
12	NC	IN	
13	PCIE_REF_CLK+	DIFF	
14	NC		
15	GND	GND	
16	NC	PWR	
17	NC		
18	GND	GND	
19	NC		
20	W_DISABLE#	OUT	+3.3V
21	GND	GND	
22	PCIE_RST#	OUT	+3.3V
23	PCIE_RX-/MSATA_RX+	DIFF	
24	+3.3VSB	PWR	+3.3V
25	PCIE_RX+/MSATA_RX-	DIFF	
26	GND	GND	
27	GND	GND	
28	+1.5V	PWR	+1.5V
29	GND	GND	
30	SMB_CLK	I/O	+3.3V
31	PCIE_TX-/MSATA_TX-	DIFF	
32	SMB_DATA	I/O	+3.3V
33	PCIE_TX+/MSATA_TX+	DIFF	
34	GND	GND	
35	GND	GND	
36	USB_D-	DIFF	

37	GND	GND	
38	USB_D+	DIFF	
39	+3.3VSB	PWR	+3.3V
40	GND	GND	
41	+3.3VSB	PWR	+3.3V
42	NC		
43	GND	GND	
44	NC		
45	NC		
46	NC		
47	NC		
48	+1.5V	PWR	+1.5V
49	NC		
50	GND	GND	
51	NC		
52	+3.3VSB	PWR	+3.3V

2.3.9 SATA Power Connector (CN19)

Pin	Signal
1	+ V5S
2	GND

2.3.10 SATA Connector (CN20)



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

2.3.11 LVDS Connector (CN21)

Pin	Signal	Pin	Signal
1	BKL_EN	2	BKL_CTL
3	NA	4	GND
5	NA	6	+V1.5S
7	NA	8	UIM_PWR2
9	GND	10	UIM_DAT2
11	REFCLK-	12	UIM_CLK2
13	REFCLK+	14	UIM_RST2
15	LVDSA_DATA3#	16	UIM_VPP2
17	LVDS_DDC_DATA	18	LVDS_DDC_CLK

19	LVDSB_DATA0#	20	LVDSB_DATA0
21	LVDSB_DATA1#	22	LVDSB_DATA1
23	LVDSB_DATA2#	24	LVDSB_DATA2
25	LVDSB_DATA3#	26	LVDSB_DATA3
27	LVDSVCC	28	GND
29	LVDSB_CLK#	30	LVDSB_CLK

2.3.12 HDMI Connector (CN22)

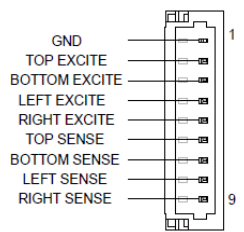


Pin	Pin Name	Signal Type	Signal Level
1	TMDS_DAT2+	DIFF	
2	GND	GND	
3	TMDS_DAT2-	DIFF	
4	TMDS_DAT1+	DIFF	
5	GND		
6	TMDS_DAT1-	DIFF	
7	TMDS_DAT0+	DIFF	
8	GND	GND	
9	TMDS_DAT0-	DIFF	
10	TMDS_CLK+	DIFF	
11	GND	DIFF	
12	TMDS_CLK-	DIFF	
13	NC		
14	NC		
15	DDC_CLK	I/O	+5V
16	DDC_DATA	I/O	+5V

17	GND	GND	
18	+5V	PWR	+5V
19	HPLG_DETECT	IN	

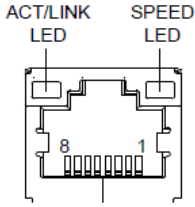
2.3.13 Touchscreen Connector (CN29)

8 Wires



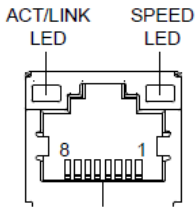
Pin	Signal	Pin	Signal
1	GND	2	TOP EXCITE
3	BOTTOM EXCITE	4	LEFT EXCITE
5	RIGHT EXCITE	6	TOP SENSE
7	BOTTOM SENSE	8	LEFT SENSE
9	RIGHT SENSE		

2.3.14 LAN1 Connector (CN37)



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

2.3.15 LAN2 Connector (CN38)



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

2.3.16 DC-in (CN39)

Pin	Signal	Pin	Signal
1	9-30V	2	GND
3	EARTH_GND		

2.3.17 COM2 Connector (CN40)

RS-232			
Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

RS-422			
Pin	Signal	Pin	Signal
1	TXD-	2	TXD+
3	RXD+	4	RXD-
5	GND	6	N/C
7	N/C	8	N/C
9	N/C		

RS-485

Pin	Signal	Pin	Signal
1	D-	2	D+
3	N/C	4	N/C
5	GND	6	N/C
7	N/C	8	N/C
9	N/C		

2.3.18 Remote Switch Connector (CN43)

Pin	Signal	Pin	Signal
1	EXT_PWRBTN#	2	GND

2.3.19 Combo connector (CN45)

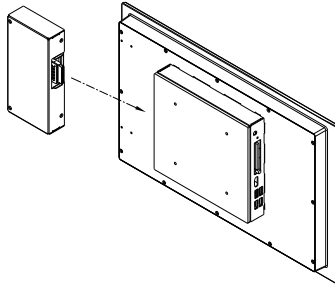
Pin	Signal	Pin	Signal
1	USB_CM_P7-	2	+V5_TOUCH
3	USB_CM_P7+	4	GND
5	GND	6	Y-
7	+VCC_LVDS_BKLT	8	Y+
9	+VCC_LVDS_BKLT	10	X-
11	+VCC_LVDS_BKLT	12	X+
13	L_BKLTNESS_R	14	SENSE
15	GND	16	GND
17	GND	18	ID1#
19	LVDS_BKLTEN	20	ID2#
21	NC	22	NC

Pin	Signal	Pin	Signal
23	NC	24	NC

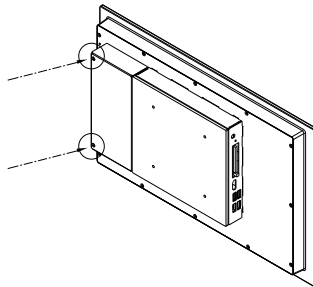
2.4 Assembling Modules

To install a module:

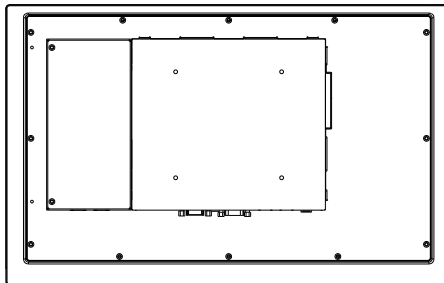
Step 1 - Insert the connector to the OMNI slot by the side of the PCB box



Step 2 - Secure with the screws provided.

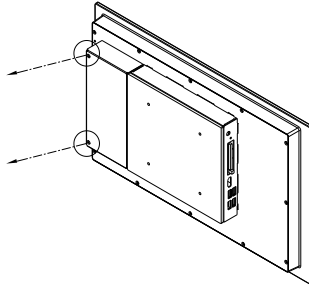


The module is installed as the image shown below.

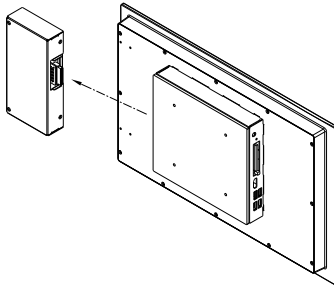


To detach a module:

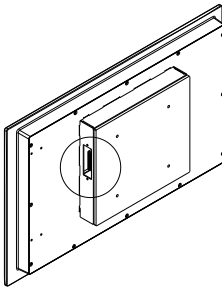
Step 1 – Remove the screws from the module



Step 2 – Remove the module



The module is detached from the main panel.



2.5 Installing the Hard Disk Drive

1. Put the rubber provided onto the holes of the bracket.



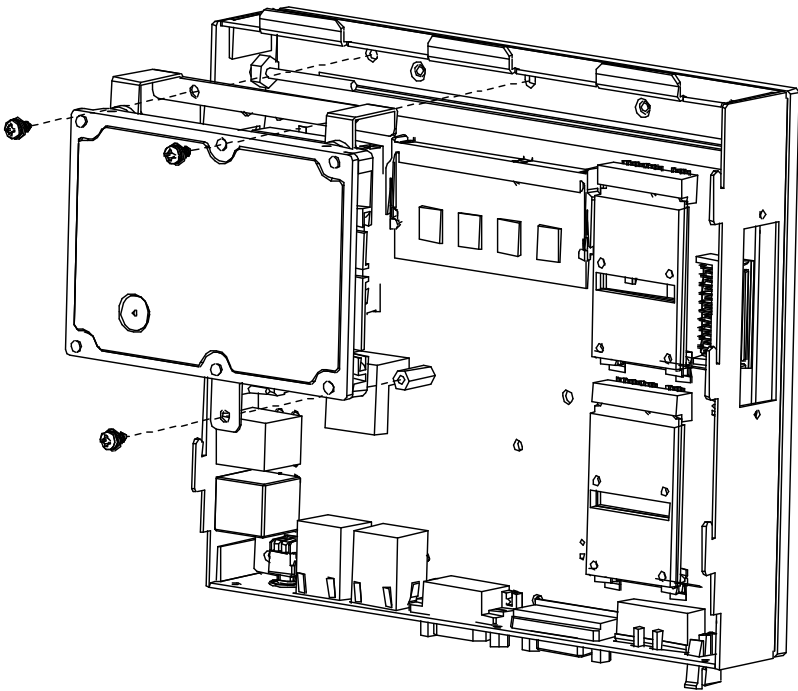
2. Place the HDD onto the bracket and secure with the screws provided



2.6 Installing DRAM

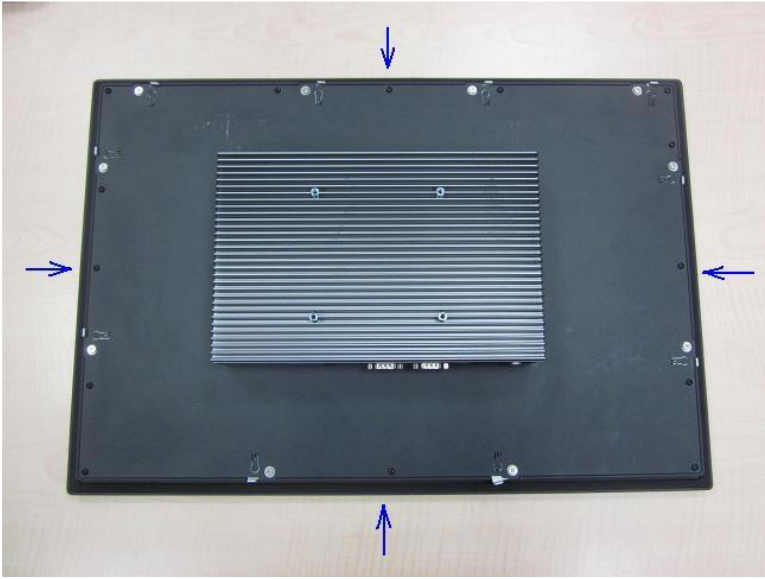
To install DRAM, remove the HDD and HDD bracket and insert the RAM module as shown below.

* Users are advised to use DRAM modules provided and installed by AAEON.

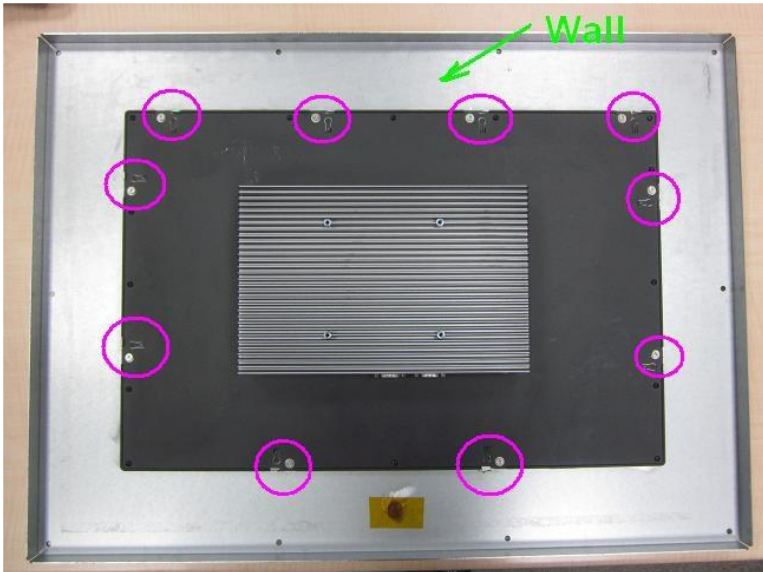


2.7 Mount the OMNI onto the wall

Step 1 - Glue the waterproof rubber along back side of the panel



Step 2 - Screw the provided mounting brackets into the back of the panel



Step 3 – use screws to secure the panel onto the wall with the wall-mount brackets

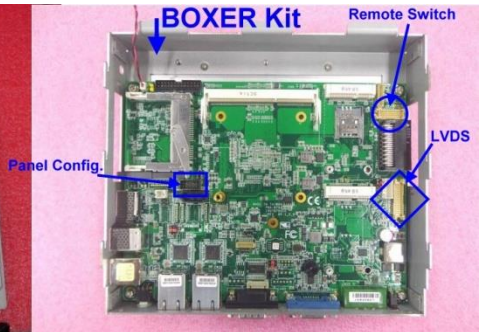
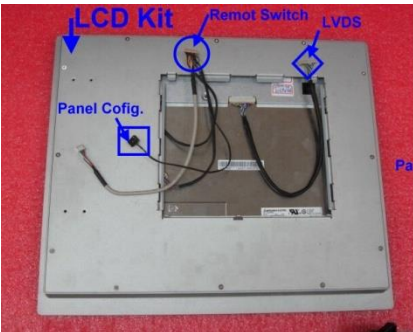
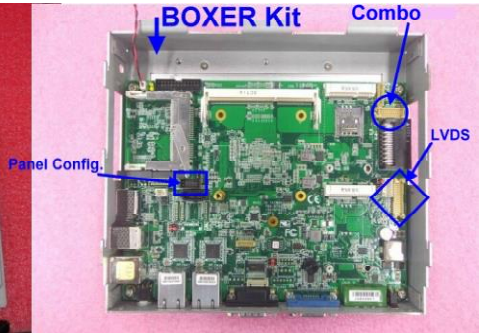


2.8 Assemble the OMNI panel and the CPU Box

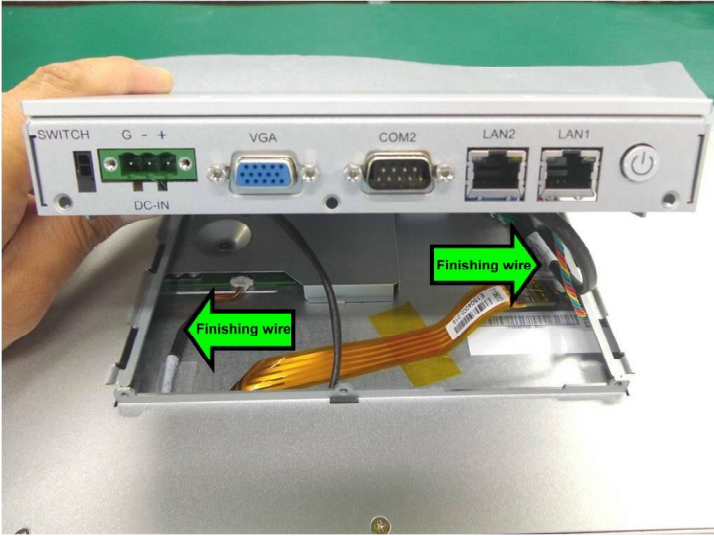
The left photo shows the LCD Kit and the right photo shows BOXER Kit



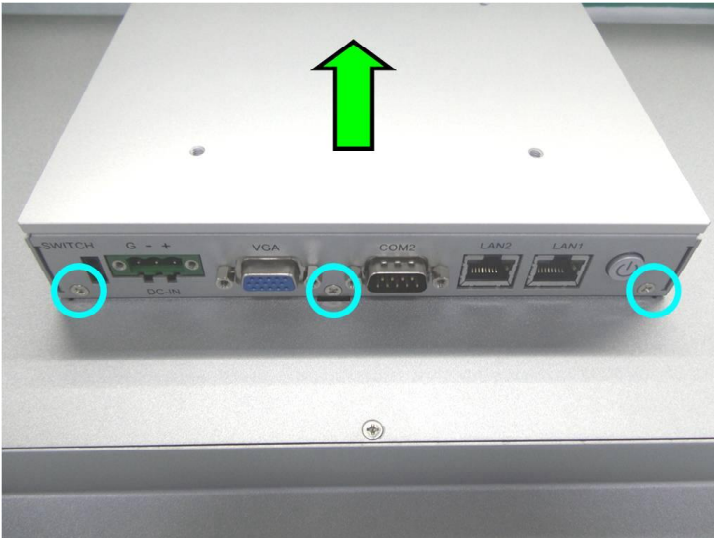
Step 1 - Plug connectors into connector sockets accordingly



Step 2 - Assemble the panel and CPU Box



Step 3 – Slide the CPU Box into the panel and tighten them with screws



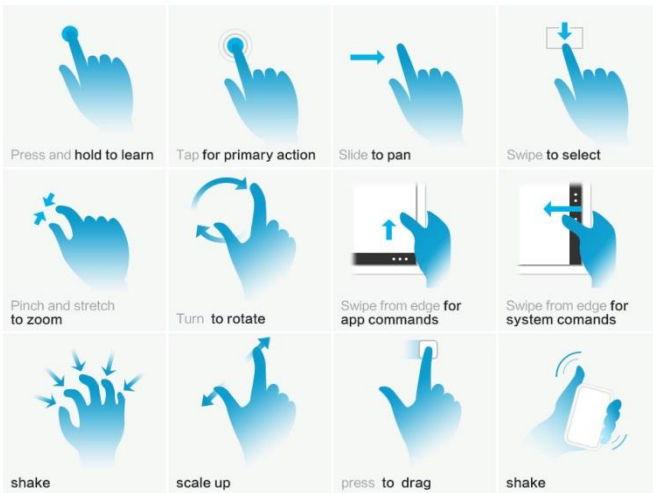
The assembling process is completed



2.9 P-CAP Touch Screen Operating



1. Always touch the screen with finger pads.
2. The force of finger should be lower than 10g.



Chapter 3

AMI BIOS Setup

3.1 System Test and Initialization

The system uses certain routines to perform testing and initialization. If an error, fatal or non-fatal, is encountered, a few short beeps or an error message will be outputted. 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 outputted, in which case you will need to run the BIOS setup program to set the configuration information in memory.

There are three situations in which you will need to change the CMOS settings:

- You are starting your system for the first time
- You have changed your system's hardware
- The CMOS memory has lost power and the configuration information is erased

The system's CMOS memory uses a backup battery for data retention, which is to be replaced once emptied.

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 <F2> 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 boot option for legacy network devices

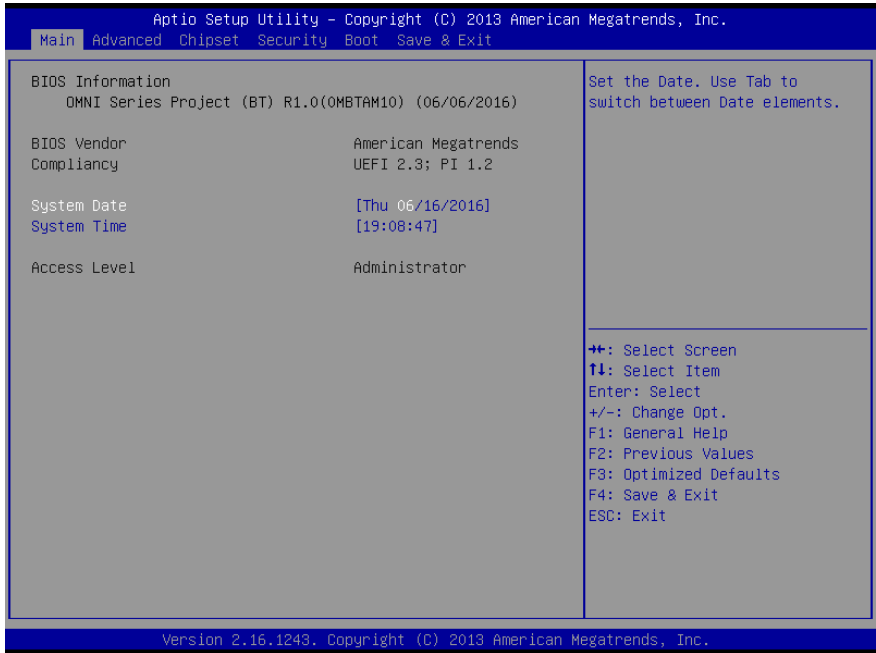
Chipset – For hosting bridge parameters

Boot – Enable/ Disable quiet Boot Option

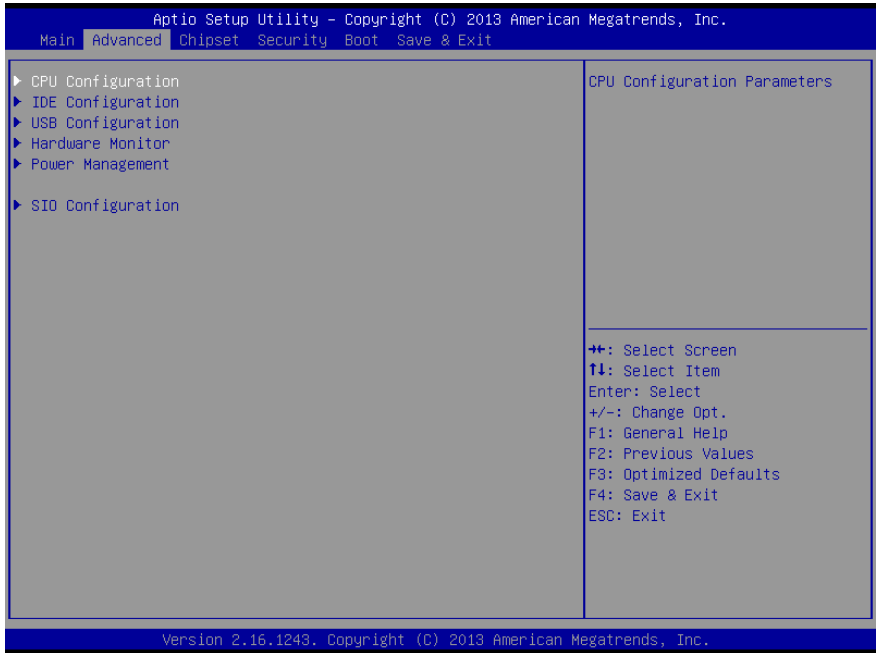
Security – The setup administrator password can be set here

Save & Exit – Save your changes and exit the program

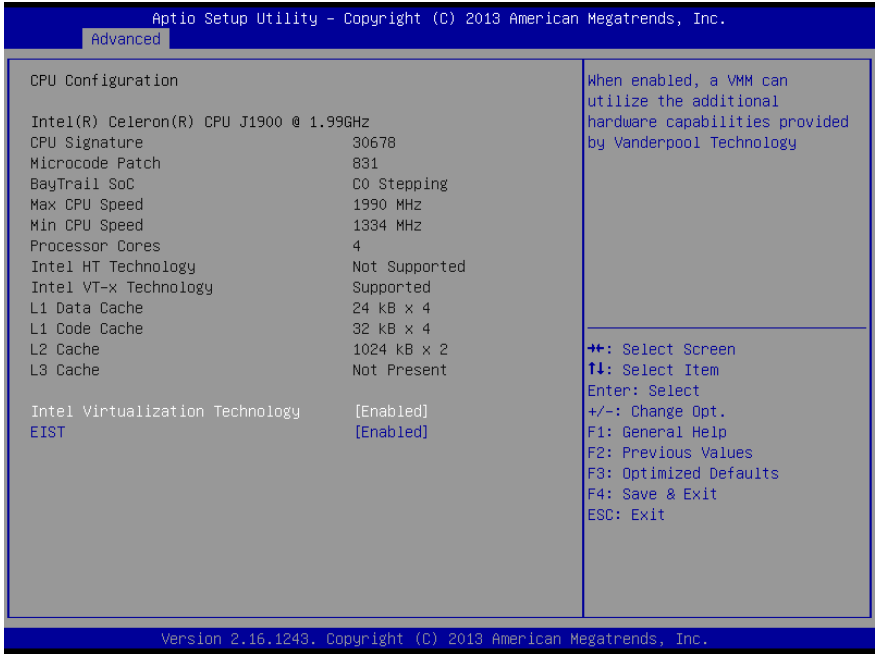
3.3 Setup Submenu: Main



3.4 Setup Submenu: Advanced



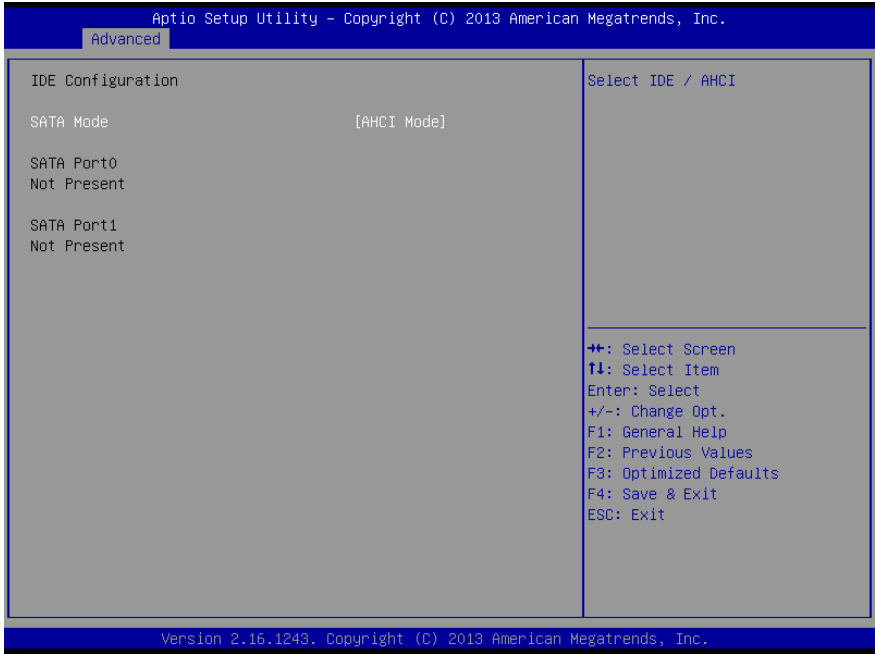
3.4.1 Advanced: CPU Configuration



Options summary:

Intel Virtualization Technology	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable Intel Virtualization Technology		
EIST	Disabled	
	Enabled	Optimal Default, Failsafe Default
Enable or Disable EIST		

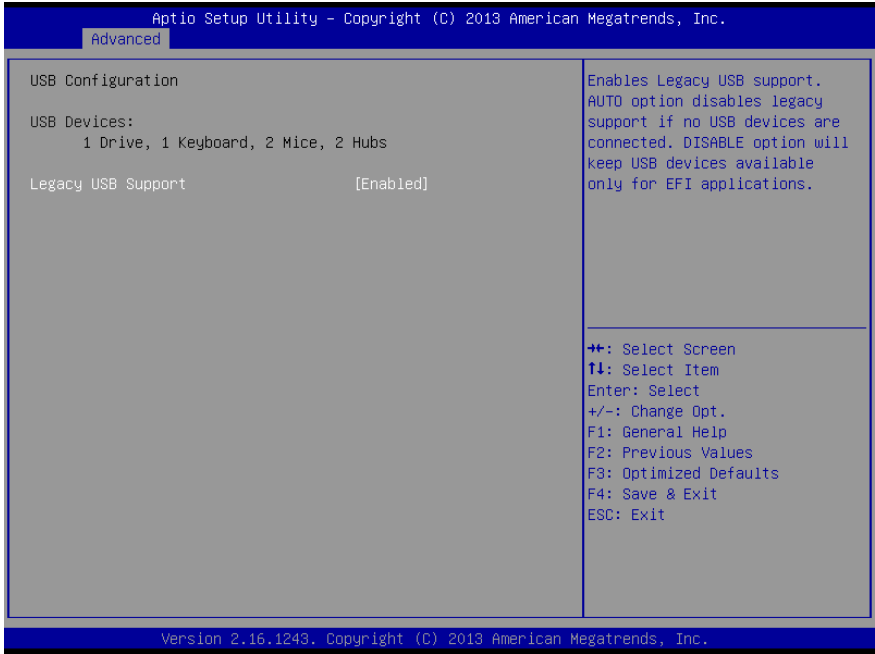
3.4.2 Advanced: IDE Configuration



Options summary:

SATA Mode	IDE Mode	Optimal Default, Failsafe Default
	AHCI Mode	

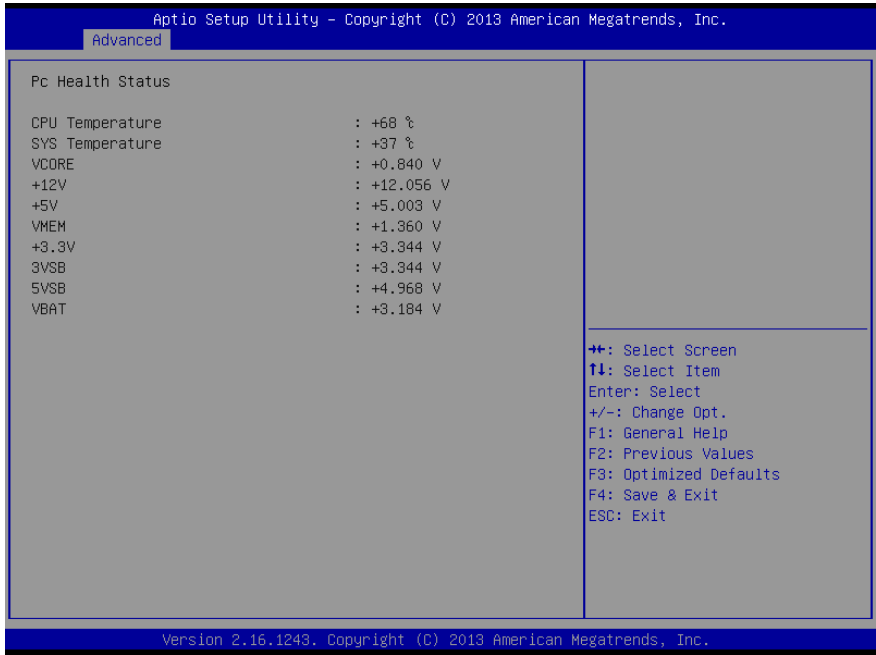
3.4.3 Advanced: USB Configuration



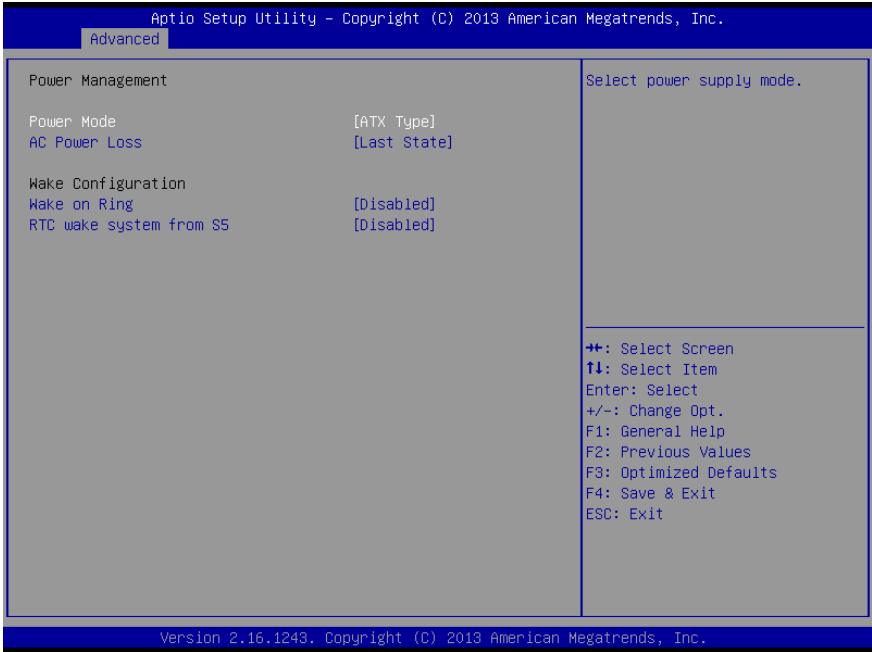
Options summary:

Legacy USB Support	Enabled	Optimal Default, Failsafe Default
	Disabled	
	Auto	
<p>Enables BIOS Support for Legacy USB Support. When enabled, USB can be functional in legacy environment like DOS. AUTO option disables legacy support if no USB devices are connected</p>		

3.4.4 Advanced: Hardware Monitor



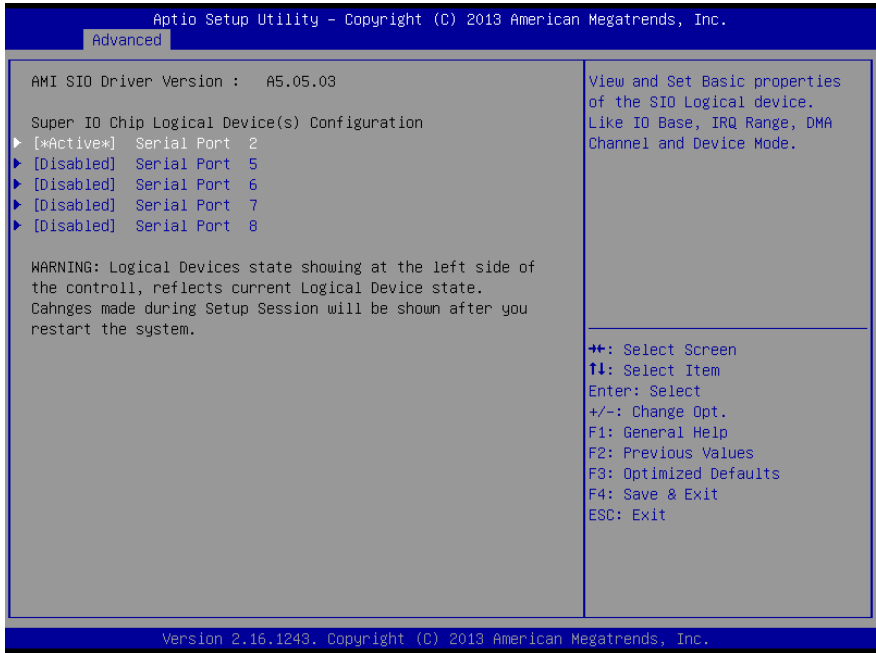
3.4.5 Advanced: Power Management



Options summary:

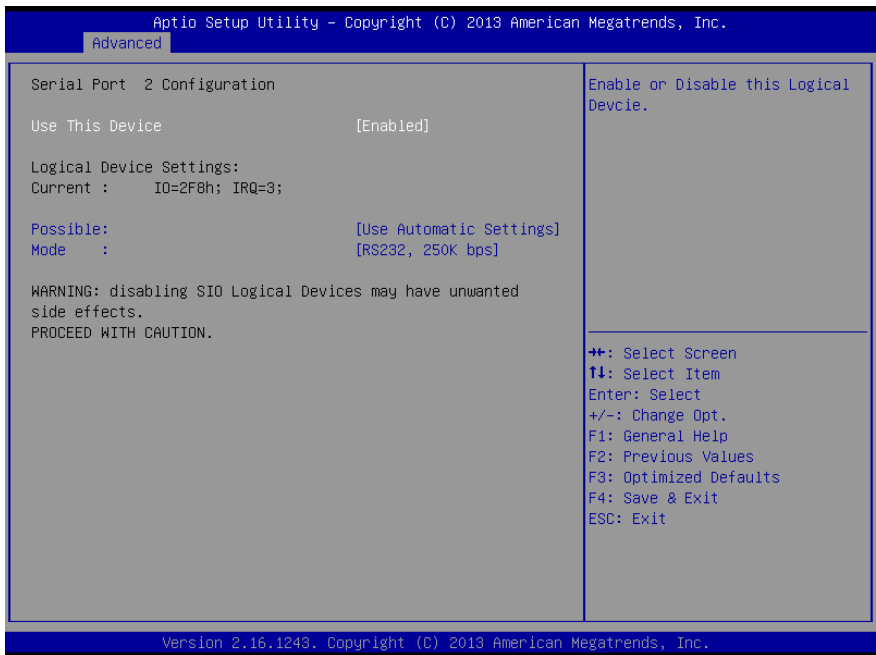
Power Mode	ATX Type	Optimal Default, Failsafe Default
	AT Type	
Select power supply mode.		
AC Power Loss	Last State	Optimal Default, Failsafe Default
	Power On	
	Power Off	
Select power state when power is re-applied after a power failure.		
Wake on Ring	Enable	Optimal Default, Failsafe Default
	Disable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

3.4.6 Advanced: Super IO Management



Note: Serial Port 5 ~ 8 are activated with OMNI Module

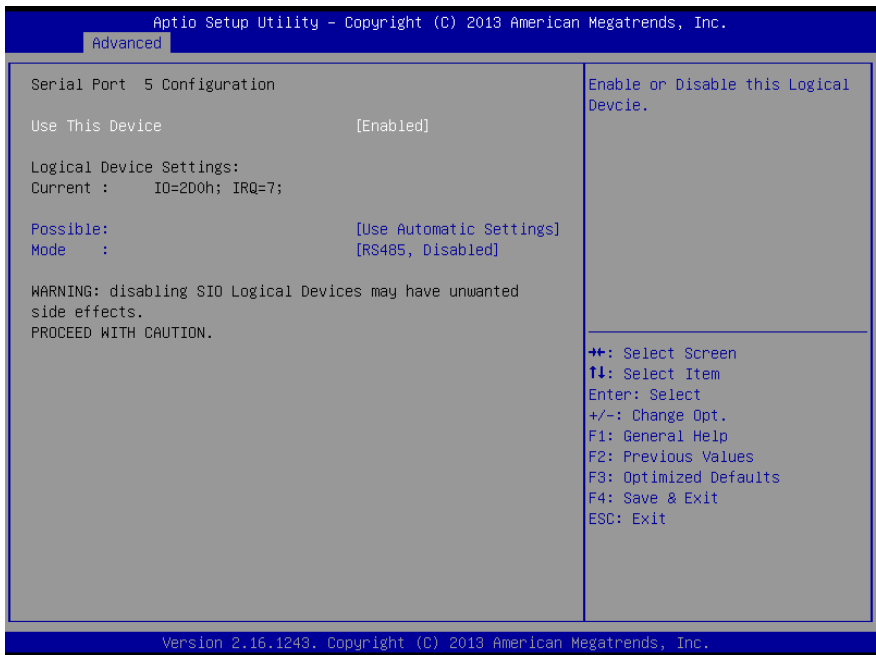
3.4.6.1 Super IO Management: Serial Port 2 Configuration



Options summary:

Use This Device	Disabled	Optimal Default, Failsafe Default
	Enabled	
Enable or Disable Serial Port (COM)		
Possible:	Use Automatic Settings	Optimal Default, Failsafe Default
	IO=2F8; IRQ=3;	
	IO=3F8; IRQ=4;	
Select an optimal setting for IO device		
Mode:	RS232, 250K bps	Optimal Default, Failsafe Default
	RS232, 1M bps	
	RS422, 250K bps	
	RS422, 10M bps	
	RS485, Driver Half Duplex, 250K bps	
	RS485, Receiver Half Duplex, 250K bps	
	RS485, Driver Half Duplex, 10M bps	
	RS485, Receiver Half Duplex, 10M bps	
	Shut Down Mode	

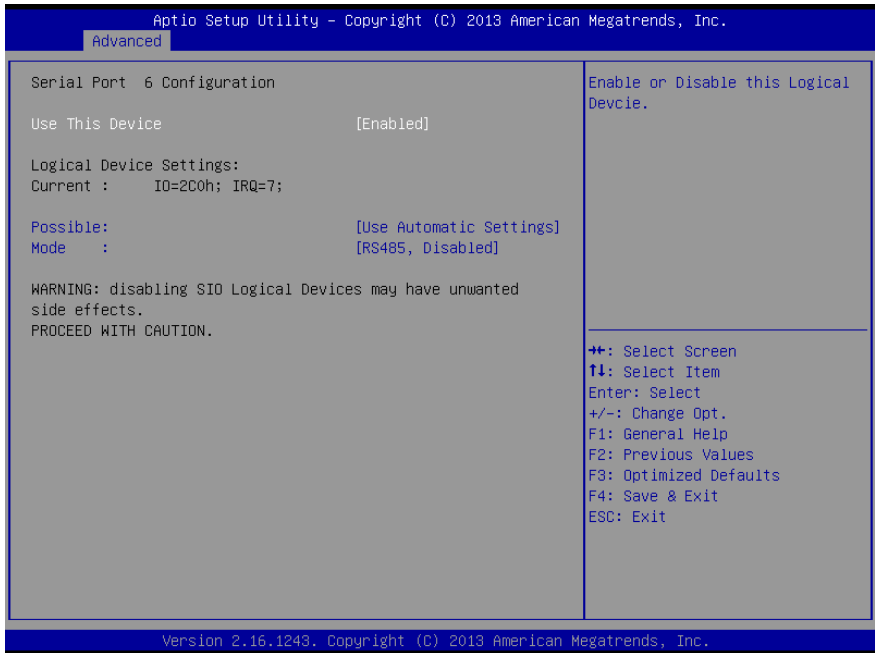
3.4.6.2 Super IO Management: Serial Port 5 Configuration



Options summary:

Use This Device	Disabled	Optimal Default, Failsafe Default
	Enabled	
Enable or Disable Serial Port (COM)		
Possible:	Use Automatic Settings	Optimal Default, Failsafe Default
	IO=2D0; IRQ=7;	
	IO=2C0; IRQ=7;	
Select an optimal setting for IO device		
Mode:	RS485, Disabled	Optimal Default, Failsafe Default
	RS485, Enabled	
Set the Serial Mode		

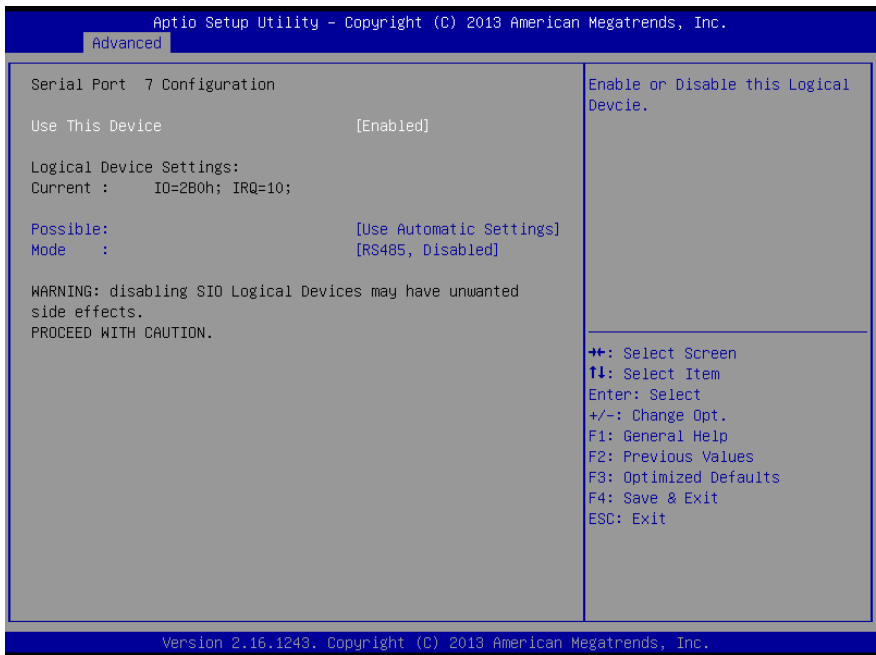
3.4.6.3 Super IO Management: Serial Port 6 Configuration (Optional)



Options summary:

Use This Device	Disabled	Optimal Default, Failsafe Default
	Enabled	
En/Disable Serial Port (COM)		
Possible:	Use Automatic Settings	Optimal Default, Failsafe Default
	IO=2C0; IRQ=7;	
	IO=2D0; IRQ=7;	
Select an optimal setting for IO device		
Mode:	RS485, Disabled	Optimal Default, Failsafe Default
	RS485, Enabled	
Set the Serial Mode		

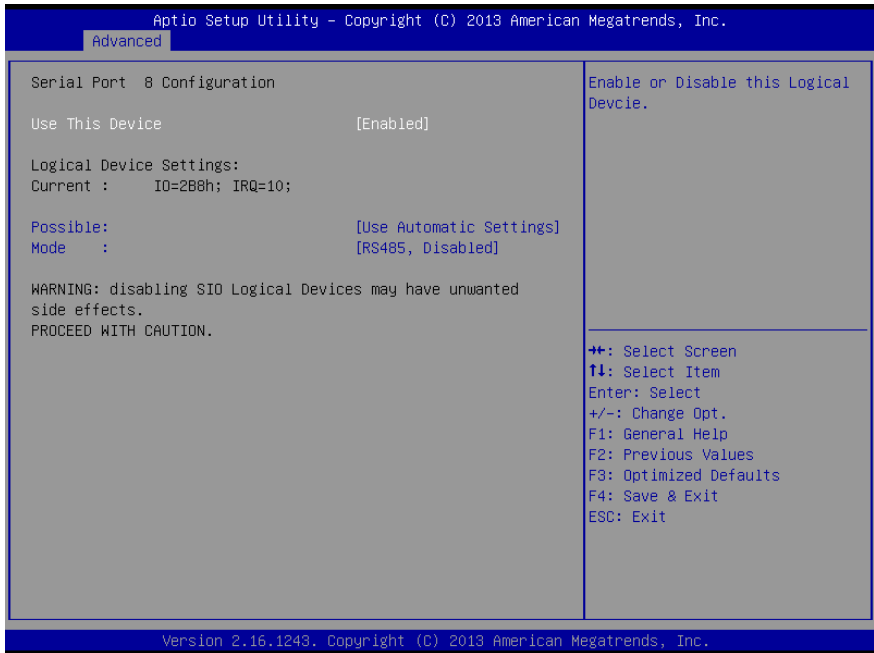
3.4.6.4 Super IO Management: Serial Port 7 Configuration (Optional)



Options summary:

Use This Device	Disabled	Optimal Default, Failsafe Default
	Enabled	
En/Disable Serial Port (COM)		
Possible:	Use Automatic Settings	Optimal Default, Failsafe Default
	IO=2B0; IRQ=10;	
	IO=2B8; IRQ=10;	
Select an optimal setting for IO device		
Mode:	RS485, Disabled	Optimal Default, Failsafe Default
	RS485, Enabled	
Set the Serial Mode		

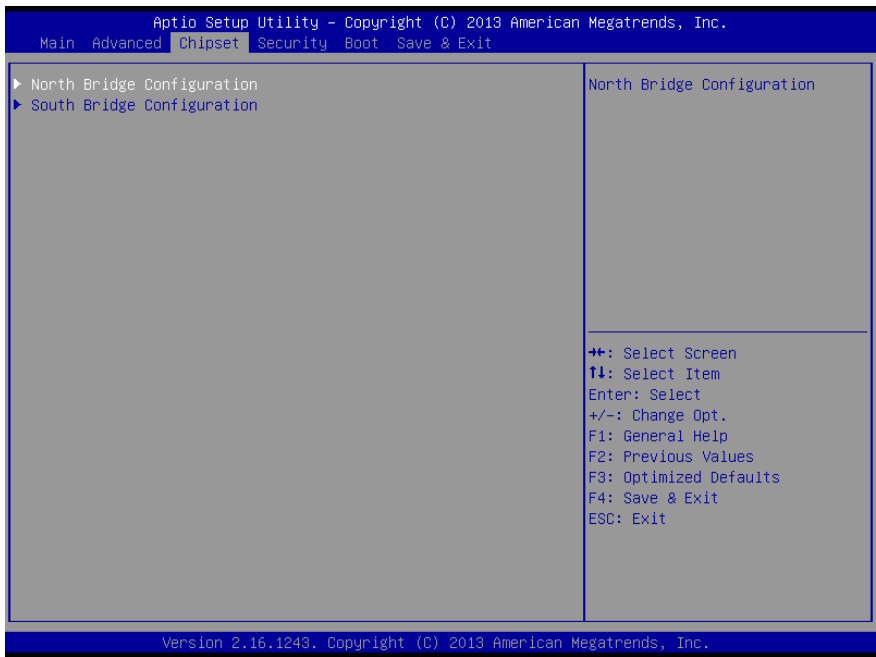
3.4.6.5 Super IO Management: Serial Port 8 Configuration (Optional)



Options summary:

Use This Device	Disabled	Optimal Default, Failsafe Default
	Enabled	
En/Disable Serial Port (COM)		
Possible:	Use Automatic Settings	Optimal Default, Failsafe Default
	IO=2B8; IRQ=10;	
	IO=2B0; IRQ=10;	
Select an optimal setting for IO device		
Mode:	RS485, Disabled	Optimal Default, Failsafe Default
	RS485, Enabled	
Set the Serial Mode		

3.5 Setup submenu: Chipset



3.5.1 Chipset: North Bridge

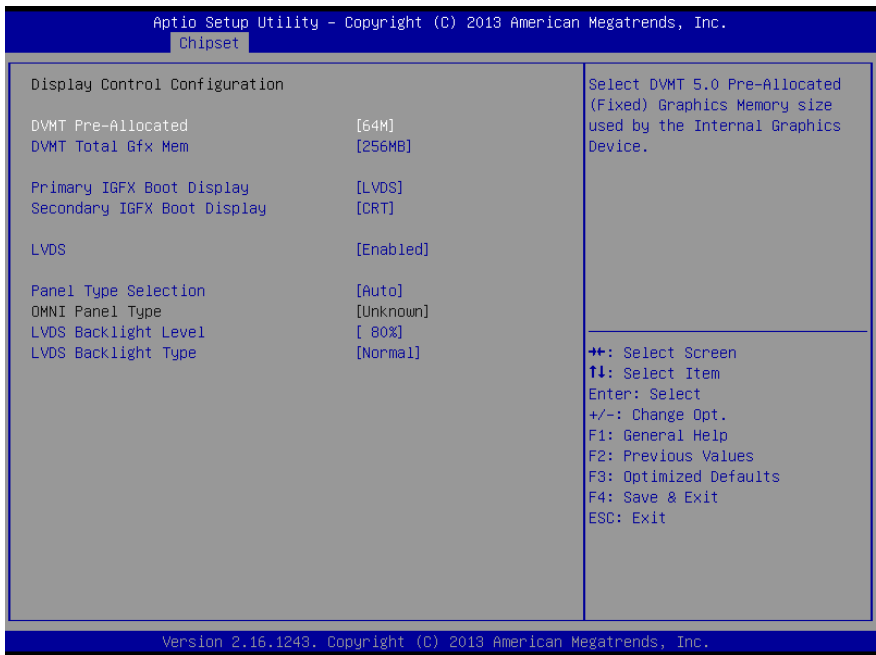
Aptio Setup Utility - Copyright (C) 2013 American Megatrends, Inc.

Chipset

North Bridge Configuration	Display Control Configuration
Memory Information	
Total Memory	2048 MB (LPDDR3)
Memory Slot0	2048 MB (LPDDR3)
▶ Display Control Configuration	
	++: Select Screen T1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Version 2.16.1243. Copyright (C) 2013 American Megatrends, Inc.

3.5.1.1 North Bridge: Display Control Configuration

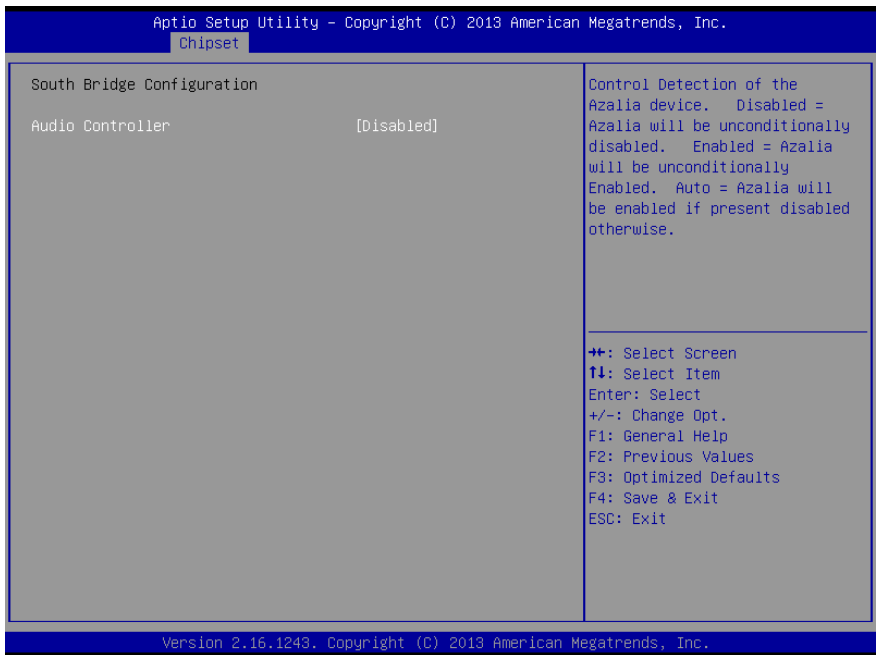


Options summary:

DVMT Pre-Allocated	64M	Optimal Default, Failsafe Default
	96M	
	128M	
	160M	
	192M	
	224M	
	256M	
	288M	
	320M	
	352M	
	384M	
	416M	
448M		
480M		
512M		
DVMT Total Gfx Mem	128MB	Optimal Default, Failsafe Default
	256MB	

	Max	
Primary IGFX Boot Display	VBIOS default	Optimal Default, Failsafe Default
	CRT	
	HDMI	
	LVDS	
Secondary IGFX Boot Display	Disable	Optimal Default, Failsafe Default
	CRT	
	HDMI	
	LVDS	
LVDS	Disabled	Optimal Default, Failsafe Default
	Enabled	
Panel Type Selection	Auto	Optimal Default, Failsafe Default
	Manual	
OMNI Panel Type	Unknown	Auto detect
	OMNI-3105	
	OMNI-3125/3155	
	OMNI-2155	
	OMNI-3175/3195	
	OMNI-2215	
LVDS Backlight Level	100%	Optimal Default, Failsafe Default
	90%	
	80%	
	70%	
	60%	
	50%	
	40%	
	30%	
	20%	
	10%	
	0%	
LVDS Backlight Control	Normal	Optimal Default, Failsafe Default

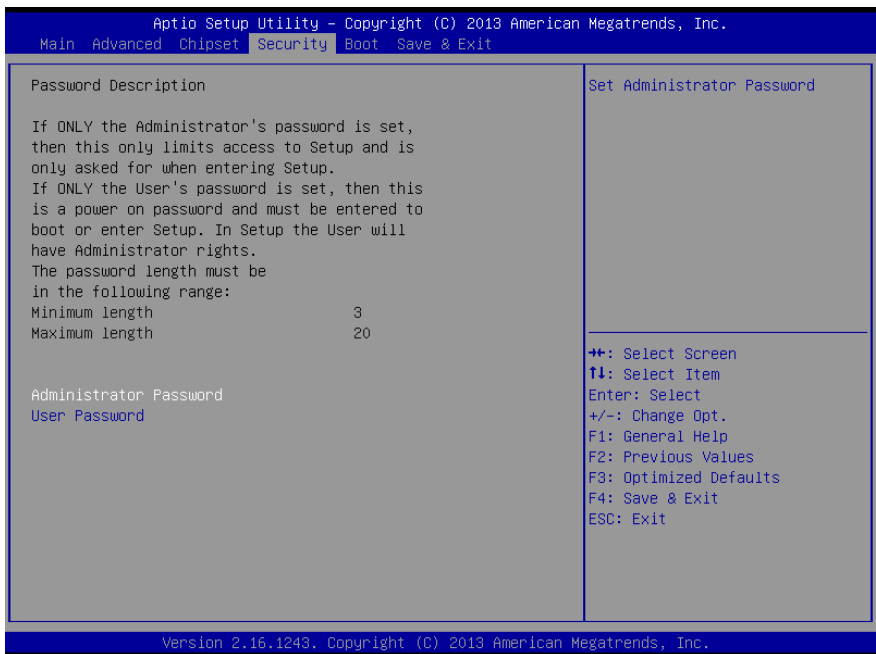
3.5.2 Chipset: South Bridge



Options summary:

Audio Controller	Disabled	Optimal Default, Failsafe Default
	Enabled	

3.6 Setup submenu: Security



Change User/Administrator Password

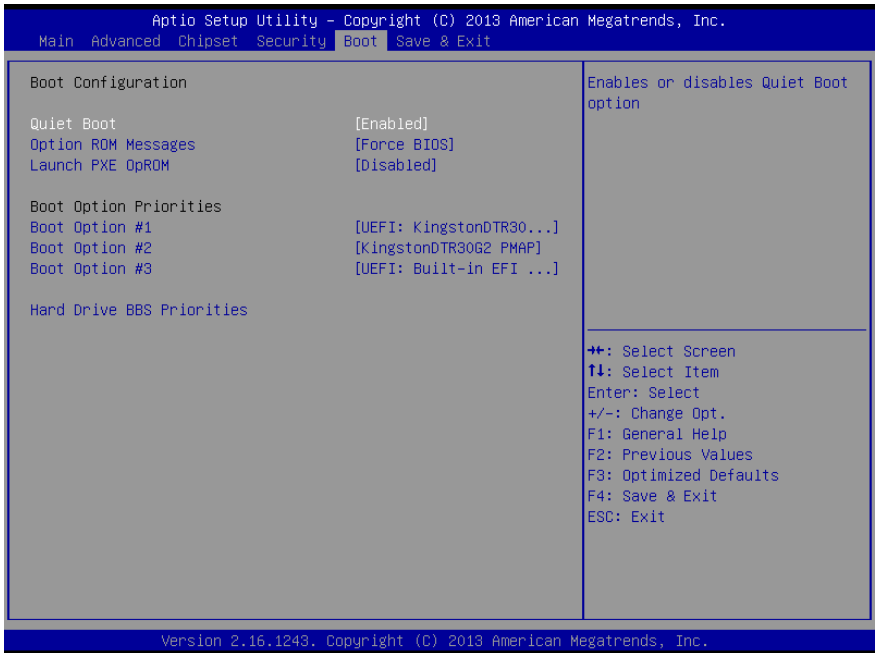
You can set a User Password once an Administrator Password is set. The password will be required during boot up, or when the user enters the Setup utility. Please Note that a User Password does not provide access to many of the features in the Setup utility.

Select the password you wish to set, press Enter to open a dialog box to enter your password. Password length must be between 3 and 20 numbers or letters. Press Enter to confirm your entry, after which you will be prompted to retype your password for a final confirmation. Press Enter again after you have retyped it correctly.

Removing the Password

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

3.7 Setup submenu: Boot



Options summary:

Quiet Boot	Disabled	Optimal Default, Failsafe Default
	Enabled	
En/Disable showing boot logo.		
Option ROM Messages	Force BIOS	Optimal Default, Failsafe Default
	Keep Current	
Set display mode for Option ROM		
Launch PXE OpROM	Disabled	Optimal Default, Failsafe Default
	Enabled	
En/Disable Legacy Boot Option		

3.8 Boot: BBS Priorities

Aptio Setup Utility - Copyright (C) 2013 American Megatrends, Inc.

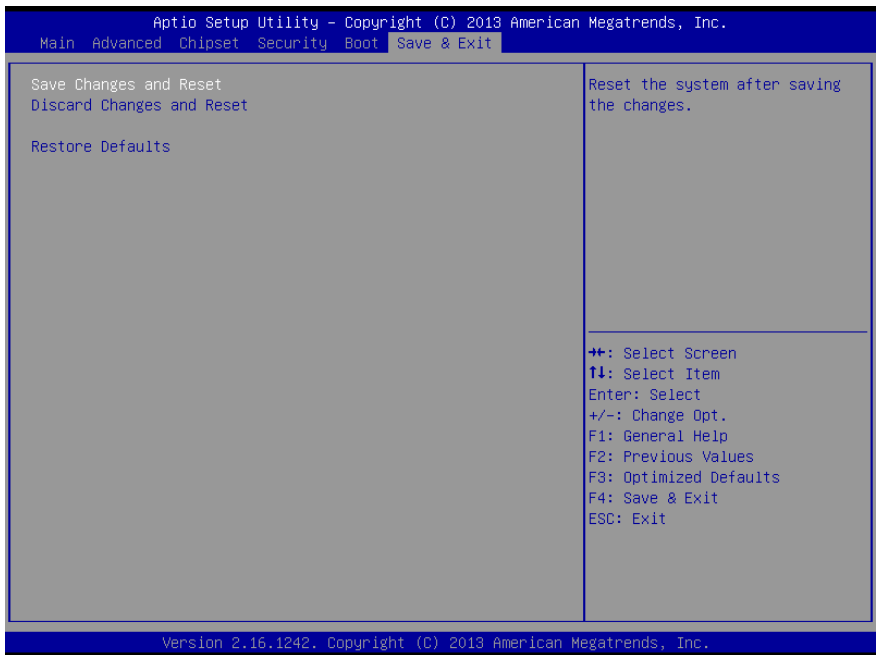
Boot

Boot Option #1	[Lexar USB Flash Dri...]	Sets the system boot order
Boot Option #2	[P0: mSATA mini 3ME ...]	

++: Select Screen
T1: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.

3.9 Setup submenu: Exit



Chapter 4

Drivers Installation & Touchscreen Settings

4.1 Product CD/DVD

The OMNI-BT series comes with a product DVD that contains all the drivers and utilities you need to setup your product. Insert the DVD and follow the steps in the autorun program to install the drivers.

In case the program does not start, follow the sequence below to install the drivers.

Step 1 – Install Chipset Drivers

1. Open the **Step 1 – Chipset** folder and select your OS
2. Open the **SetupChipset.exe** file in the folder
3. Follow the instructions
4. Drivers will be installed automatically

Step 2 – Install Graphics Driver

1. Open the **STEP2 - VGA** folder and select your OS
2. Open the **Setup.exe** file in the folder
3. Follow the instructions
4. Drivers will be installed automatically

Step 3 – Install LAN Driver

1. Open the **STEP3 – LAN** folder and select your OS
2. Open the **.exe** file in the folder
3. Follow the instructions
4. Drivers will be installed automatically

Step 4 – Install USB 3.0 Drivers (Windows 7 only)

1. Open the **STEP 4 - USB3.0** folder followed by **Setup.exe**

2. Follow the instructions
3. Drivers will be installed automatically

Step 5 – Install MBI Drivers (Optional, Windows 8.1/ 10 only)

1. Open the **STEP 5 – MBI (Optional)** folder and select your OS
2. Open the **Setup.exe** file in the folder
3. Follow the instructions
4. Drivers will be installed automatically

Step 6 – Install PenMount Touch 6000 Series Driver (Resistive touchscreen only)

1. Open the **STEP 6 –PenMount Touch 6000** folder followed by **Setup.exe**
2. Follow the instructions
3. Drivers will be installed automatically

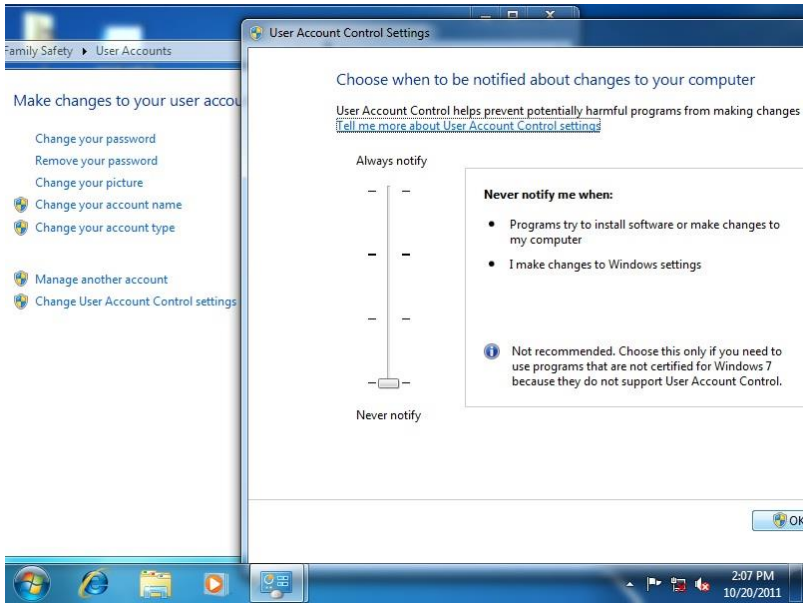
* The OMNI-BT Series uses either 5-wire resistive or projected capacitive multi-touch technologies. The latter is capable of 10 fingers multi-touch with Windows 7 & Windows 8.x.

Step 7.1 – Install Serial Port Patch Driver

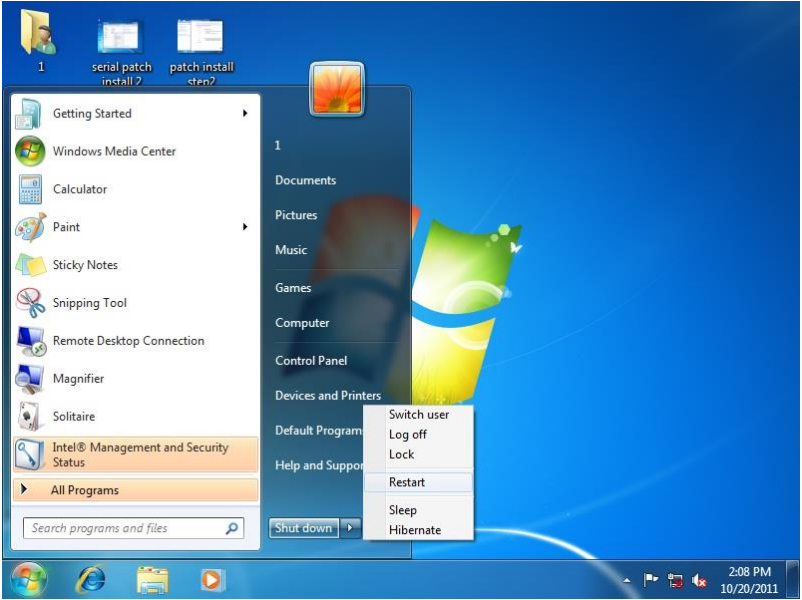
1. Open the Serial Port Patch Driver folder and select your OS

For Windows 7:

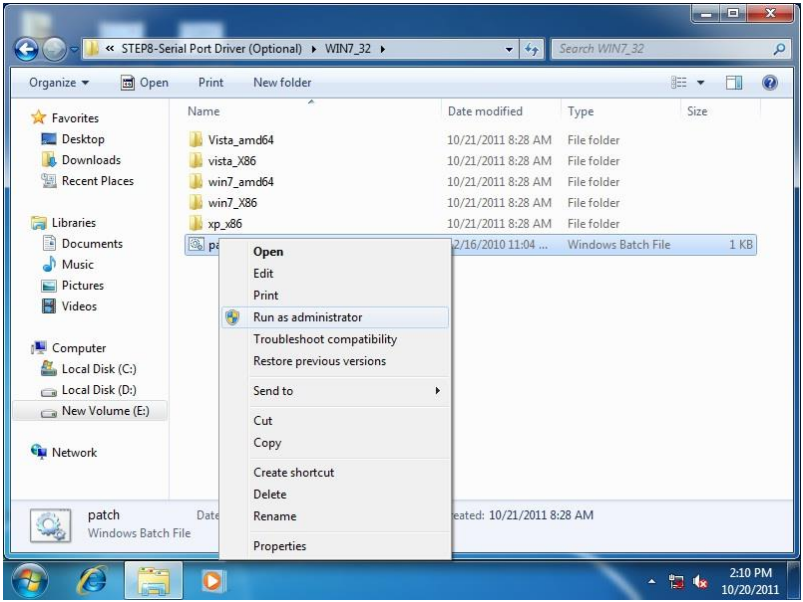
1. Change User Account Control settings to **Never notify**



2. Reboot and log in as administrator

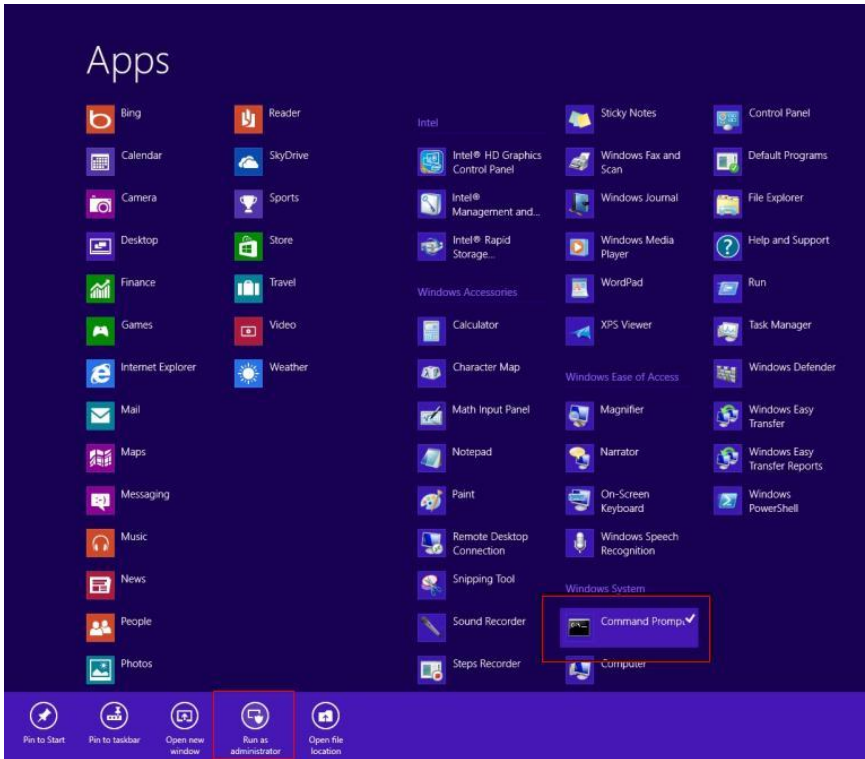


3. Run patch.bat as administrator

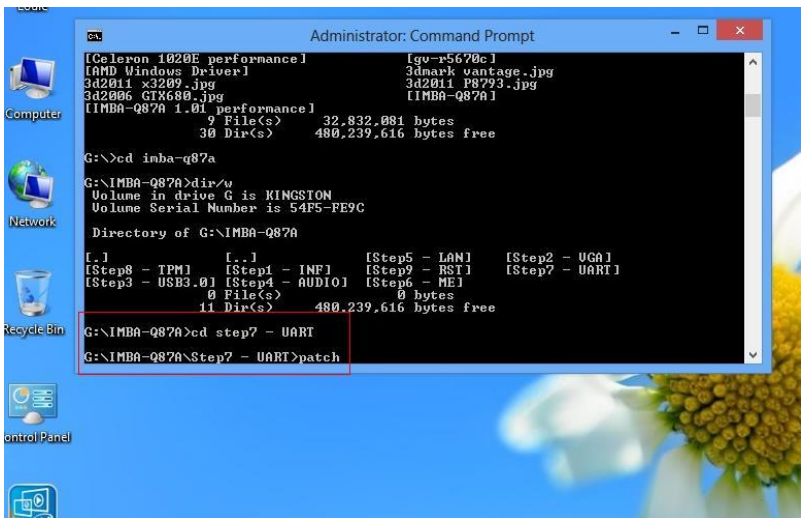


For Windows 8:

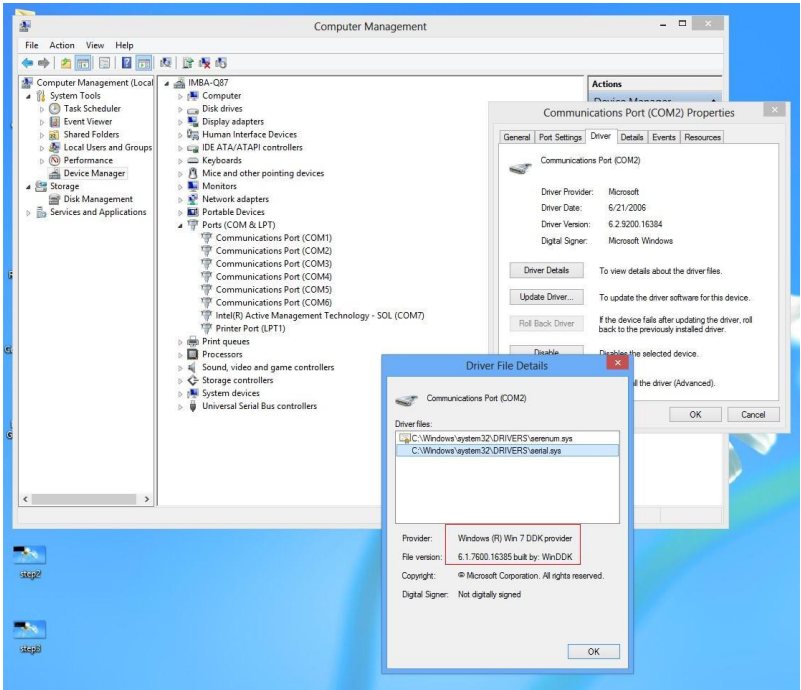
1. Open the Apps Screen, right click on the **Command Prompt** tile and select **Run as Administrator**



- To install the driver (patch.bat), you will first have to locate the file in command prompt. To do that, first go to the directory which contains the file by entering **<drive letter>: eg.** if the driver is in D drive, enter **D:**
- You are now at the directory containing the installation file. Next, go to the folder in which the file resides by entering **cd <folder>** eg: if the file is in a folder named abc, enter **cd <abc>**.
- You are now at the folder where the file is located. Enter the **patch.bat** to open and install the drivers. If your file is in a subfolder, enter the **cd <folder>** command again to access the subfolder (screenshot below is for reference only).



- Reboot after installation completes.
- To confirm the installation, go to Device Manager, expand the Ports (COM & LPT) tree and double click on any of the COM ports to open its properties. Go to the Driver tab, select Driver Details and click on **serial.sys**, you should see its provider as **Windows (R) Win 7 DDK Provider**.



For Windows 10

1. Open the **STEP 7 – Serial Port Driver (Optional)** folder and select **Win10_32_64**
2. Open the **Setup.exe** file in the folder
3. Follow the instructions
4. Drivers will be installed automatically

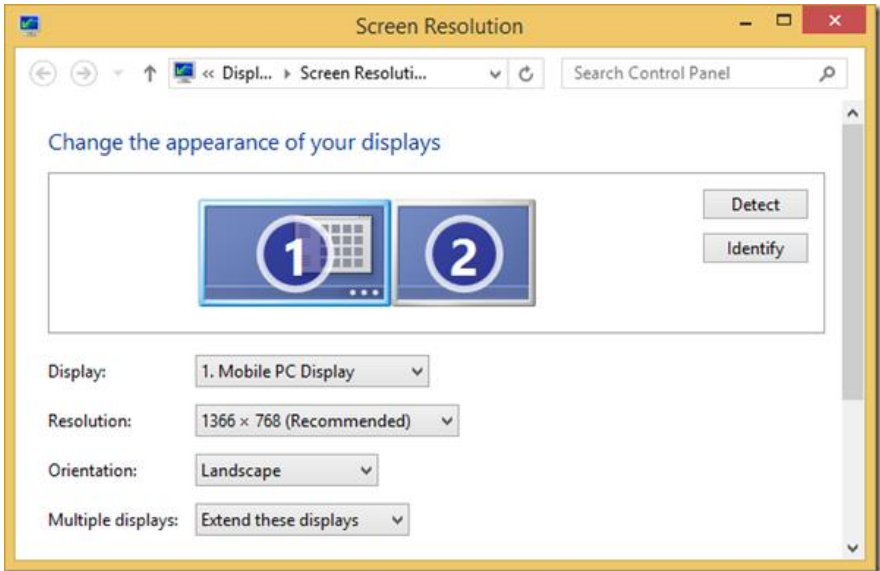
Step 7.2 – Install USB to UART Driver

1. Open the USB to UART Driver folder and select your OS
2. Open the Setup.exe file in the folder
3. Follow the instructions
4. Drivers will be installed automatically

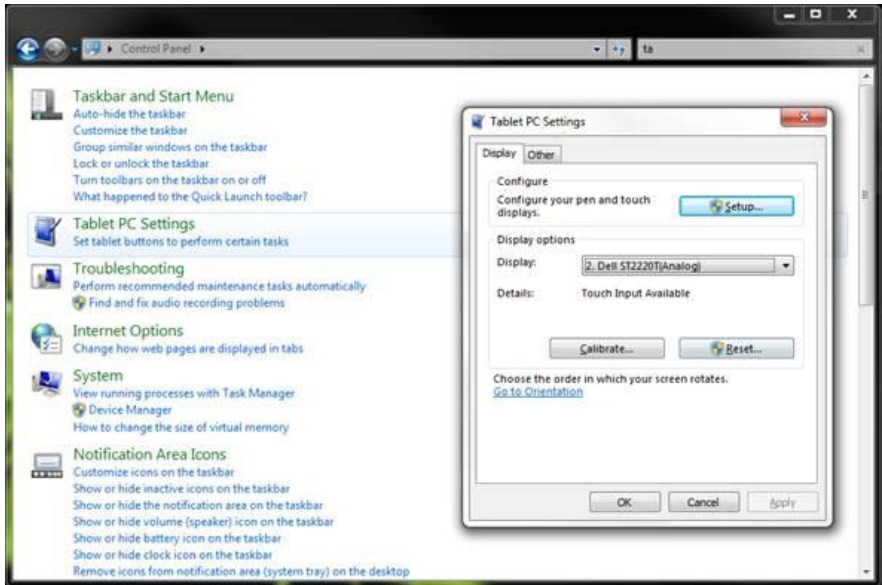
4.2 PCAP Dual Monitor Touch Settings

When two panels are used, they can set to be the primary and secondary display. The instruction below shows how this can be done:

1. Go to Display Panel and choose your preferred primary display.



- Go to **Tablet PC Settings** in **Control Panel**. Under **Display options**, select the primary display from step 1. Apply the changes and exit.



***Do NOT calibrate the screen on your own. Doing so might disrupt the device's factory calibration**

Appendix A

Watchdog Timer Programming

A.1 Watchdog Timer Initial Program

Table 1 : Super I/O relative register table		
	Default Value	Note
Index	0x2E(Note1)	SIO MB PnP Mode Index Register 0x2E or 0x4E
Data	0x2F(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
*****

```

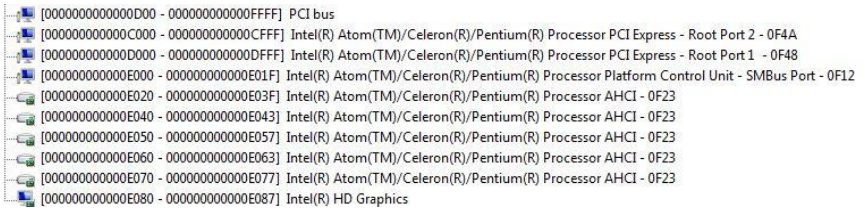
Appendix B

I/O Information

B.1 I/O Address Map

Note: There is no PS/2 interface on the OMNI-BT series, hence the exclamation marks

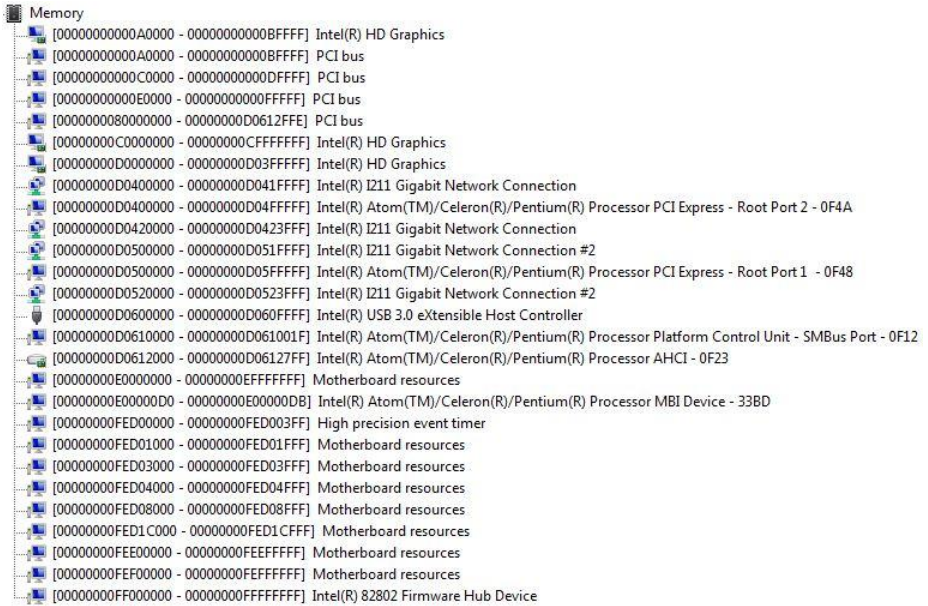
Input/output (I/O)	
[0000000000000000 - 000000000000006F]	PCI bus
[0000000000000020 - 0000000000000021]	Programmable interrupt controller
[0000000000000024 - 0000000000000025]	Programmable interrupt controller
[0000000000000028 - 0000000000000029]	Programmable interrupt controller
[000000000000002C - 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
[0000000000000060 - 0000000000000060]	Standard PS/2 Keyboard
[0000000000000061 - 0000000000000061]	Motherboard resources
[0000000000000063 - 0000000000000063]	Motherboard resources
[0000000000000064 - 0000000000000064]	Standard PS/2 Keyboard
[0000000000000065 - 0000000000000065]	Motherboard resources
[0000000000000067 - 0000000000000067]	Motherboard resources
[0000000000000070 - 0000000000000070]	Motherboard resources
[0000000000000070 - 0000000000000077]	System CMOS/real time clock
[0000000000000078 - 00000000000000CF]	PCI bus
[0000000000000080 - 000000000000008F]	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
[00000000000002E8 - 00000000000002EF]	Communications Port (COM4)
[00000000000002F8 - 00000000000002FF]	Communications Port (COM2)
[00000000000003B0 - 00000000000003BB]	Intel(R) HD Graphics
[00000000000003C0 - 00000000000003DF]	Intel(R) HD Graphics
[00000000000003E8 - 00000000000003EF]	Communications Port (COM3)
[00000000000003F8 - 00000000000003FF]	Communications Port (COM1)
[0000000000000400 - 000000000000047F]	Motherboard resources
[00000000000004D0 - 00000000000004D1]	Programmable interrupt controller
[0000000000000500 - 00000000000005FE]	Motherboard resources
[0000000000000600 - 000000000000061F]	Motherboard resources
[0000000000000680 - 000000000000069F]	Motherboard resources
[0000000000000A00 - 0000000000000A0F]	Motherboard resources
[0000000000000A10 - 0000000000000A1F]	Motherboard resources
[0000000000000A20 - 0000000000000A2F]	Motherboard resources



The image shows a BIOS/UEFI boot menu with the following items:

- [000000000000D00 - 000000000000FFFF] PCI bus
- [000000000000C000 - 000000000000CFFF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 2 - 0F4A
- [000000000000D000 - 000000000000DFFF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 1 - 0F48
- [000000000000E000 - 000000000000E01F] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor Platform Control Unit - SMBus Port - 0F12
- [000000000000E020 - 000000000000E03F] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
- [000000000000E040 - 000000000000E043] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
- [000000000000E050 - 000000000000E057] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
- [000000000000E060 - 000000000000E063] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
- [000000000000E070 - 000000000000E077] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
- [000000000000E080 - 000000000000E087] Intel(R) HD Graphics













































B.2 Memory Address Map

































































































The image shows a screenshot of the Windows System Information tool, specifically the 'Memory' section. It displays a list of memory addresses and their corresponding hardware components. The list includes various Intel(R) HD Graphics, PCI bus, Intel(R) HD Graphics, Intel(R) I211 Gigabit Network Connection, Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 2 - 0F4A, Intel(R) I211 Gigabit Network Connection, Intel(R) I211 Gigabit Network Connection #2, Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 1 - 0F48, Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 2 - 0F48, Intel(R) USB 3.0 eXtensible Host Controller, Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor Platform Control Unit - SMBus Port - 0F12, Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23, Motherboard resources, Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor MBI Device - 33BD, High precision event timer, and Intel(R) 82802 Firmware Hub Device.

Memory Address	Hardware Component
[0000000000A0000 - 0000000000BFFFF]	Intel(R) HD Graphics
[0000000000A0000 - 0000000000BFFFF]	PCI bus
[0000000000C0000 - 0000000000DFFFF]	PCI bus
[0000000000E0000 - 0000000000FFFFFF]	PCI bus
[0000000080000000 - 00000000D0612FFE]	PCI bus
[00000000C0000000 - 00000000CFFFFFFF]	Intel(R) HD Graphics
[00000000D0000000 - 00000000D03FFFFFFF]	Intel(R) HD Graphics
[00000000D0400000 - 00000000D041FFFFF]	Intel(R) I211 Gigabit Network Connection
[00000000D0400000 - 00000000D04FFFFFFF]	Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 2 - 0F4A
[00000000D0420000 - 00000000D0423FFFF]	Intel(R) I211 Gigabit Network Connection
[00000000D0500000 - 00000000D051FFFFF]	Intel(R) I211 Gigabit Network Connection #2
[00000000D0500000 - 00000000D05FFFFFFF]	Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 1 - 0F48
[00000000D0520000 - 00000000D0523FFFF]	Intel(R) I211 Gigabit Network Connection #2
[00000000D0600000 - 00000000D060FFFFF]	Intel(R) USB 3.0 eXtensible Host Controller
[00000000D0610000 - 00000000D061001F]	Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor Platform Control Unit - SMBus Port - 0F12
[00000000D0612000 - 00000000D06127FFF]	Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
[00000000E0000000 - 00000000EFFFFFFF]	Motherboard resources
[00000000E00000D0 - 00000000E00000DB]	Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor MBI Device - 33BD
[00000000FED00000 - 00000000FED003FFF]	High precision event timer
[00000000FED01000 - 00000000FED01FFFF]	Motherboard resources
[00000000FED03000 - 00000000FED03FFFF]	Motherboard resources
[00000000FED04000 - 00000000FED04FFFF]	Motherboard resources
[00000000FED08000 - 00000000FED08FFFF]	Motherboard resources
[00000000FED1C000 - 00000000FED1CFFFF]	Motherboard resources
[00000000FEE00000 - 00000000FEEFFFFFFF]	Motherboard resources
[00000000FEF00000 - 00000000FEFFFFFFF]	Motherboard resources
[00000000FF000000 - 00000000FFFFFFFFF]	Intel(R) 82802 Firmware Hub Device

B.3 IRQ Mapping Chart

Interrupt request (IRQ)	
 (ISA) 0x00000000 (00)	System timer
 (ISA) 0x00000001 (01)	Standard PS/2 Keyboard
 (ISA) 0x00000003 (03)	Communications Port (COM2)
 (ISA) 0x00000004 (04)	Communications Port (COM1)
 (ISA) 0x00000008 (08)	High precision event timer
 (ISA) 0x0000000B (11)	Communications Port (COM3)
 (ISA) 0x0000000B (11)	Communications Port (COM4)
 (ISA) 0x0000000C (12)	Microsoft PS/2 Mouse
 (ISA) 0x00000051 (81)	Microsoft ACPI-Compliant System
 (ISA) 0x00000052 (82)	Microsoft ACPI-Compliant System
 (ISA) 0x00000053 (83)	Microsoft ACPI-Compliant System
 (ISA) 0x00000054 (84)	Microsoft ACPI-Compliant System
 (ISA) 0x00000055 (85)	Microsoft ACPI-Compliant System
 (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) 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
	(ISA) 0x0000009A (154)	Microsoft ACPI-Compliant System
	(ISA) 0x0000009B (155)	Microsoft ACPI-Compliant System
	(ISA) 0x0000009C (156)	Microsoft ACPI-Compliant System
	(ISA) 0x0000009D (157)	Microsoft ACPI-Compliant System
	(ISA) 0x0000009E (158)	Microsoft ACPI-Compliant System
	(ISA) 0x0000009F (159)	Microsoft ACPI-Compliant System
	(ISA) 0x000000A0 (160)	Microsoft ACPI-Compliant System
	(ISA) 0x000000A1 (161)	Microsoft ACPI-Compliant System
	(ISA) 0x000000A2 (162)	Microsoft ACPI-Compliant System
	(ISA) 0x000000A3 (163)	Microsoft ACPI-Compliant System
	(ISA) 0x000000A4 (164)	Microsoft ACPI-Compliant System
	(ISA) 0x000000A5 (165)	Microsoft ACPI-Compliant System
	(ISA) 0x000000A6 (166)	Microsoft ACPI-Compliant System

	(ISA) 0x000000A7 (167)	Microsoft ACPI-Compliant System
	(ISA) 0x000000A8 (168)	Microsoft ACPI-Compliant System
	(ISA) 0x000000A9 (169)	Microsoft ACPI-Compliant System
	(ISA) 0x000000AA (170)	Microsoft ACPI-Compliant System
	(ISA) 0x000000AB (171)	Microsoft ACPI-Compliant System
	(ISA) 0x000000AC (172)	Microsoft ACPI-Compliant System
	(ISA) 0x000000AD (173)	Microsoft ACPI-Compliant System
	(ISA) 0x000000AE (174)	Microsoft ACPI-Compliant System
	(ISA) 0x000000AF (175)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B0 (176)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B1 (177)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B2 (178)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B3 (179)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B4 (180)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B5 (181)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B6 (182)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B7 (183)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B8 (184)	Microsoft ACPI-Compliant System
	(ISA) 0x000000B9 (185)	Microsoft ACPI-Compliant System
	(ISA) 0x000000BA (186)	Microsoft ACPI-Compliant System
	(ISA) 0x000000BB (187)	Microsoft ACPI-Compliant System
	(ISA) 0x000000BC (188)	Microsoft ACPI-Compliant System
	(ISA) 0x000000BD (189)	Microsoft ACPI-Compliant System
	(ISA) 0x000000BE (190)	Microsoft ACPI-Compliant System
	(PCI) 0x00000005 (05)	Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor Platform Control Unit - SMBus Port - 0F12
	(PCI) 0x00000010 (16)	Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 1 - 0F48
	(PCI) 0x00000011 (17)	Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 2 - 0F4A
	(PCI) 0x00000011 (17)	PCI standard PCI-to-PCI bridge
	(PCI) 0x00000011 (17)	PCI standard PCI-to-PCI bridge
	(PCI) 0x00000012 (18)	Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 3 - 0F4C
	(PCI) 0x00000012 (18)	PCI standard PCI-to-PCI bridge
	(PCI) 0x00000013 (19)	Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
	(PCI) 0x00000013 (19)	Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 4 - 0F4E
	(PCI) 0x00000013 (19)	PCI standard PCI-to-PCI bridge
	(PCI) 0x00000013 (19)	PCI standard PCI-to-PCI bridge
	(PCI) 0xFFFFFFF1 (-15)	Intel(R) I211 Gigabit Network Connection
	(PCI) 0xFFFFFFF2 (-14)	Intel(R) I211 Gigabit Network Connection
	(PCI) 0xFFFFFFF3 (-13)	Intel(R) I211 Gigabit Network Connection
	(PCI) 0xFFFFFFF4 (-12)	Intel(R) I211 Gigabit Network Connection
	(PCI) 0xFFFFFFF5 (-11)	Intel(R) I211 Gigabit Network Connection
	(PCI) 0xFFFFFFF6 (-10)	Intel(R) I211 Gigabit Network Connection
	(PCI) 0xFFFFFFF7 (-9)	Intel(R) I211 Gigabit Network Connection #2
	(PCI) 0xFFFFFFF8 (-8)	Intel(R) I211 Gigabit Network Connection #2
	(PCI) 0xFFFFFFF9 (-7)	Intel(R) I211 Gigabit Network Connection #2
	(PCI) 0xFFFFFFFA (-6)	Intel(R) I211 Gigabit Network Connection #2
	(PCI) 0xFFFFFFFB (-5)	Intel(R) I211 Gigabit Network Connection #2
	(PCI) 0xFFFFFFF4 (-4)	Intel(R) I211 Gigabit Network Connection #2
	(PCI) 0xFFFFFFF5 (-3)	Intel(R) USB 3.0 eXtensible Host Controller
	(PCI) 0xFFFFFFF6 (-2)	Intel(R) HD Graphics

Appendix C

OMNI COM Module / UART Setting

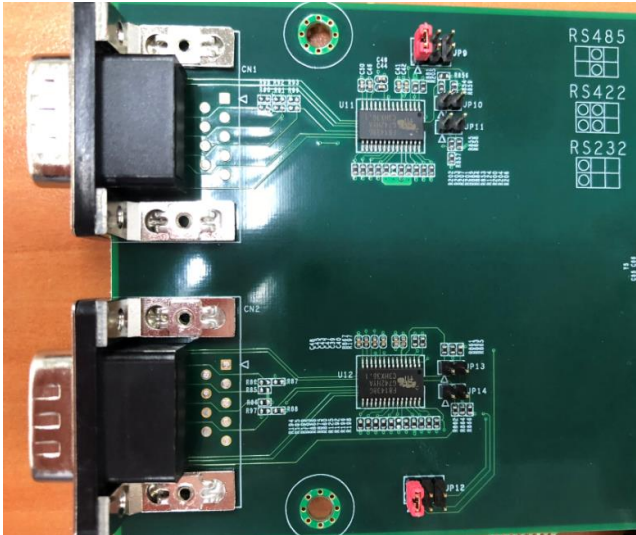
C.1 9741215513 [PER-T497], RS-232/422/485 x 2, I/O module



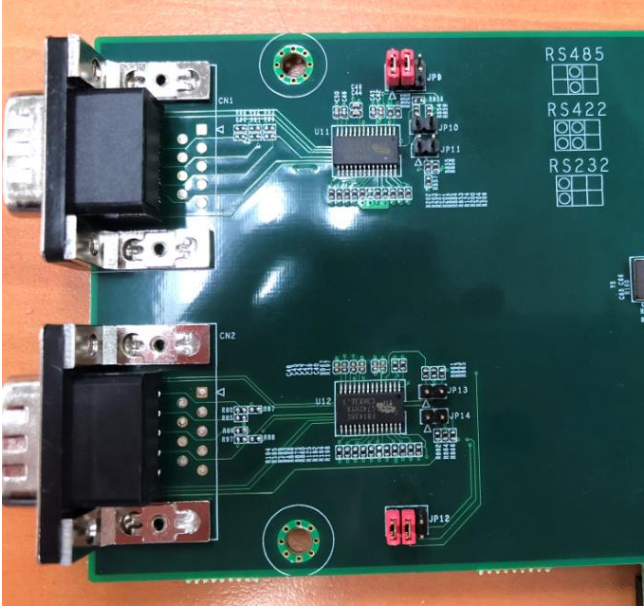
Signal type: USB

Jumper setting for RS232/422/R85

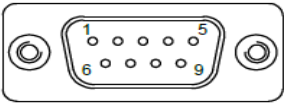
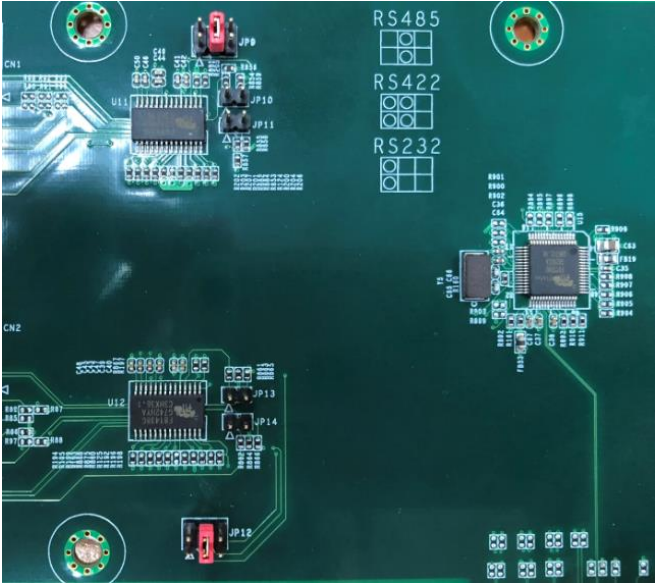
EX : RS-232 Jumper setting as bellow:



EX : RS-422 Jumper setting as bellow:



EX : RS-485 Jumper setting as bellow:



RS-232 Pin Define

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

RS-422 Pin Define

Pin	Signal	Pin	Signal
1	TXD-	2	TXD+
3	RXD+	4	RXD-
5	GND	6	N/C
7	N/C	8	N/C
9	N/C		

RS-485 Pin Define

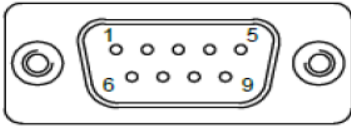
Pin	Signal	Pin	Signal
1	D-	2	D+

C.2 9741215513 [PER-T371], OMNI COM x 2, USB x 2, LAN x 1, I/O module

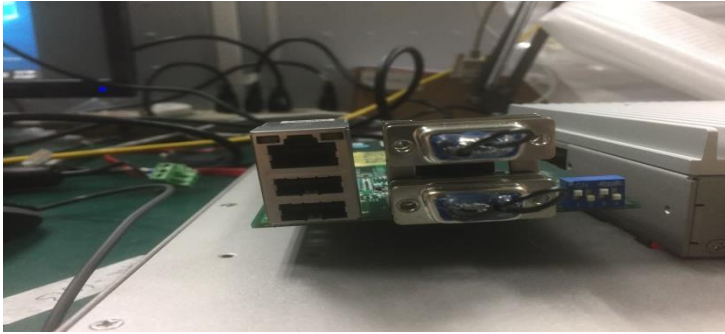


Signal type: USB

COM3, COM4 (RS232 / RS485 / RS422)



RS-485 Jumper setting as bellow:



RS-232 Jumper Setting			
switch position		switch position	
	switch position		switch position

RS-232 Pin Define			
Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

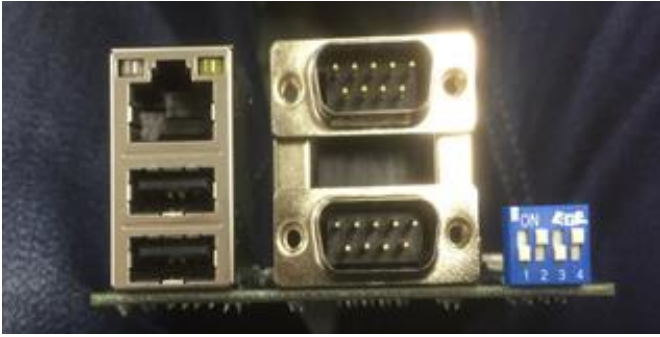
RS-422 Jumper setting as bellow:



RS-422 Jumper Setting			
switch position	switch position	switch position	switch position

RS-422 Pin Define			
Pin	Signal	Pin	Signal
1	TXD-	2	TXD+
3	RXD+	4	RXD-
5	GND	6	N/C
7	N/C	8	N/C
9	N/C		

RS-485 Jumper setting as bellow:



RS-485 Jumper Setting			
	switch position		switch position
switch position		switch position	

RS-485 Pin Define			
Pin	Signal	Pin	Signal
1	D-	2	D+

C.3 9741215516 – RS-232/422/485 x 4

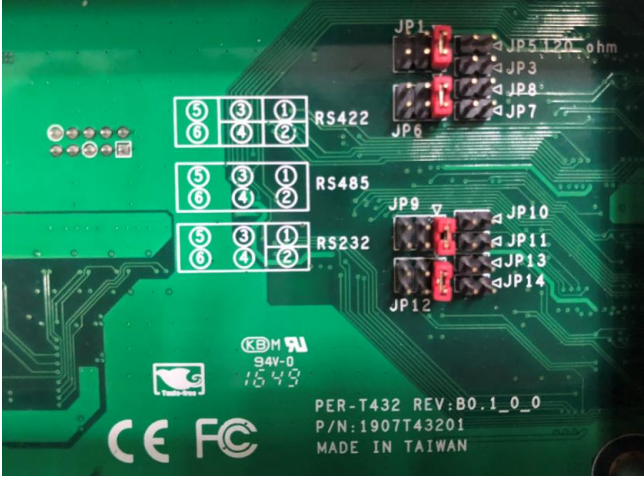


Signal type: USB

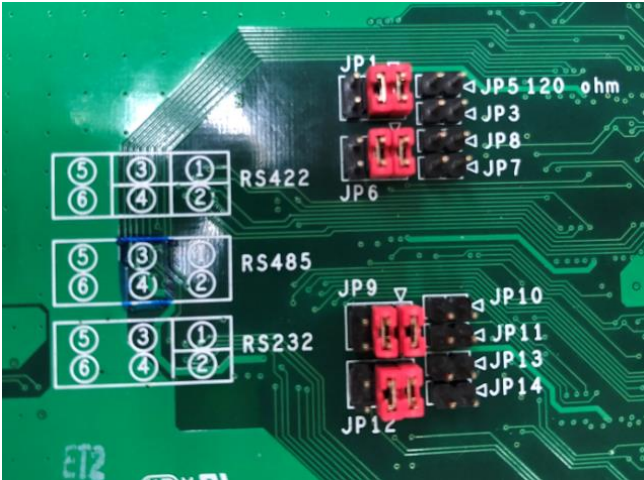
Jumper setting for RS232/422/R85

RS-232	RS422	RS485
JP1 (1-2)	JP1 (1-2) JP1 (3-4)	JP1 (3-4)
JP6 (1-2)	JP6 (1-2) JP6 (3-4)	JP6 (3-4)
JP9 (1-2)	JP9 (1-2) JP9 (3-4)	JP9 (3-4)
JP12 (1-2)	JP12 (1-2) JP12 (3-4)	JP12 (3-4)

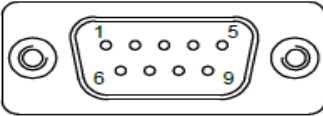
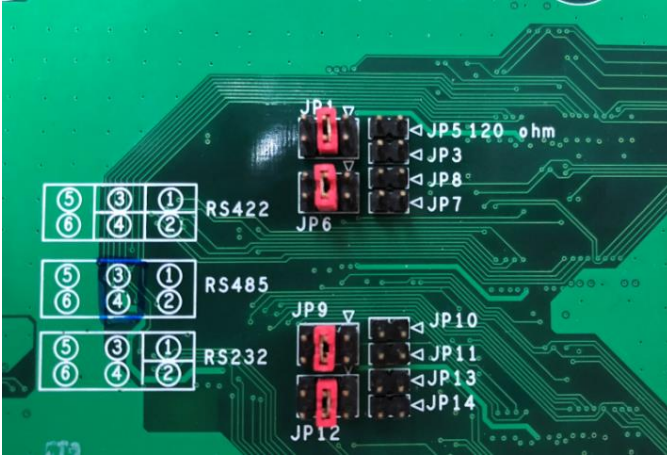
EX : RS-232 Jumper setting as bellow:



RS-422 Jumper setting as bellow:



RS-485 Jumper setting as bellow:



RS-232 Pin Define

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

RS-422 Pin Define

Pin	Signal	Pin	Signal
1	TXD-	2	TXD+
3	RXD+	4	RXD-
5	GND	6	N/C
7	N/C	8	N/C
9	N/C		

RS-485 Pin Define

Pin	Signal	Pin	Signal
1	D-	2	D+

C.4 9741215517 – Isolation RS-232/422/485 x 4

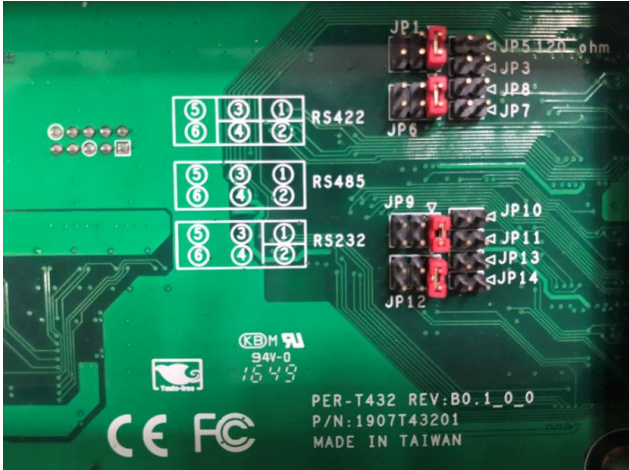


Signal type: USB

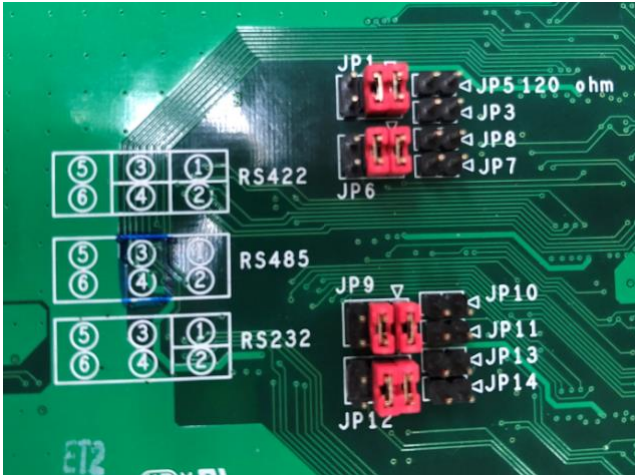
Jumper setting for RS232/422/R85

RS-232	RS422	RS485
JP1 (1-2)	JP1 (1-2) JP1 (3-4)	JP1 (3-4)
JP6 (1-2)	JP6 (1-2) JP6 (3-4)	JP6 (3-4)
JP9 (1-2)	JP9 (1-2) JP9 (3-4)	JP9 (3-4)
JP12 (1-2)	JP12 (1-2) JP12 (3-4)	JP12 (3-4)

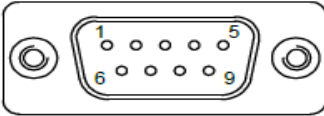
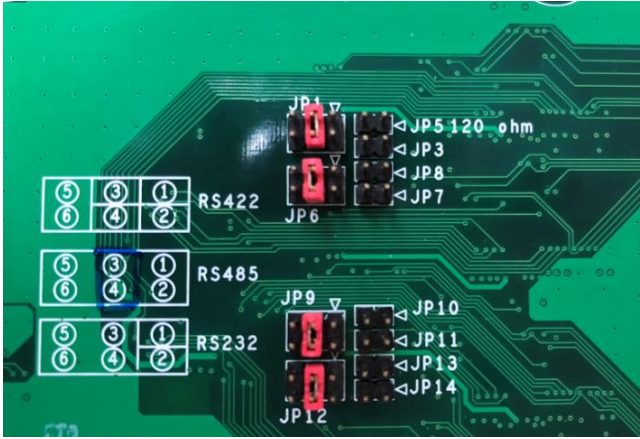
EX : RS-232 Jumper setting as bellow:



RS-422 Jumper setting as bellow:



RS-485 Jumper setting as bellow:



RS-232 Pin Define

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

RS-422 Pin Define

Pin	Signal	Pin	Signal
1	TXD-	2	TXD+
3	RXD+	4	RXD-
5	GND	6	N/C
7	N/C	8	N/C
9	N/C		

RS-485 Pin Define

Pin	Signal	Pin	Signal
1	D-	2	D+

C.5 9741215518 [PER-T432], Isolation RS-232/422/485 x 4, DIO x 16 I/O
Module



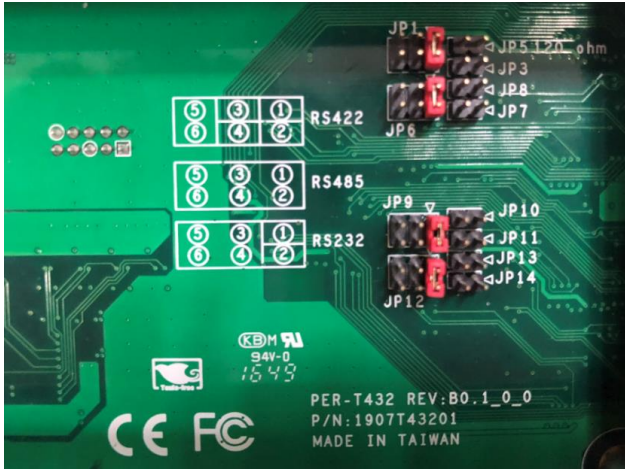
Signal type: USB

PCB back side for jumper setting:

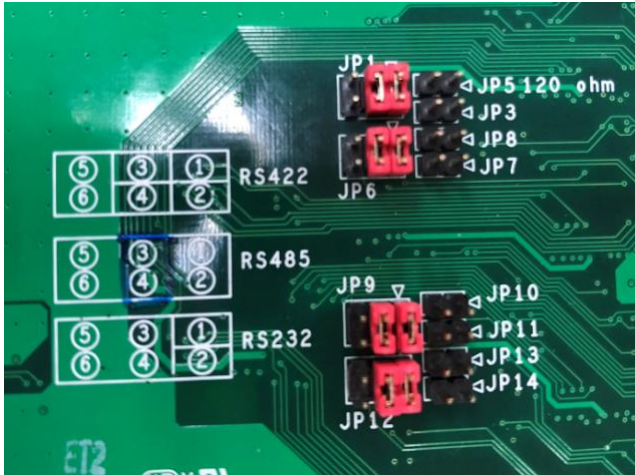
Jumper setting for RS232/422/R85

RS-232	RS422	RS485
JP1 (1-2)	JP1 (1-2) JP1 (3-4)	JP1 (3-4)
JP6 (1-2)	JP6 (1-2) JP1 (3-4)	JP6 (3-4)
JP9 (1-2)	JP9 (1-2) JP1 (3-4)	JP9 (3-4)
JP12 (1-2)	JP12 (1-2) JP12 (3-4)	JP12 (3-4)

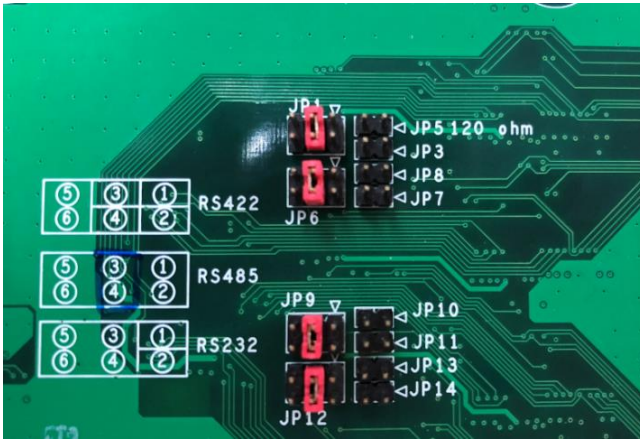
EX : Setting for RS-232



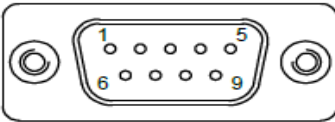
RS-422 Jumper setting as bellow:



RS-485 Jumper setting as bellow:



Pin Define



RS-232 Pin Define

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

RS-422 Pin Define

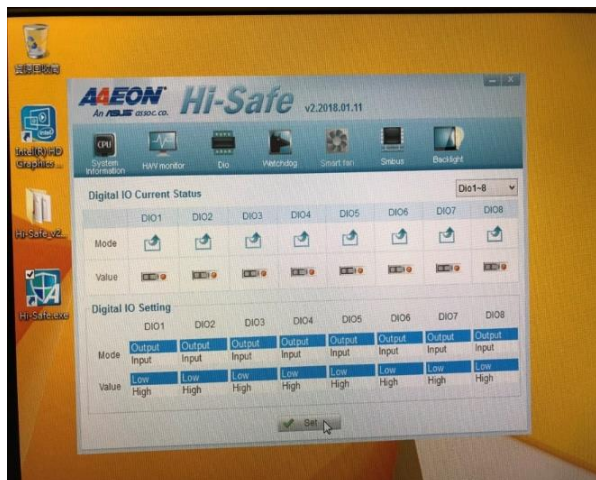
Pin	Signal	Pin	Signal
1	TXD-	2	TXD+
3	RXD+	4	RXD-
5	GND	6	N/C
7	N/C	8	N/C
9	N/C		

RS-485 Pin Define

Pin	Signal	Pin	Signal
1	D-	2	D+

16 bit DIO Setting:

Use AAEON Hi-Safe Software to configuration





DIO (16BIT)

CN15

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

CN16

Pin	Signal	Pin	Signal
1	DIO9	2	DIO10
3	DIO11	4	DIO12
5	DIO13	6	DIO14
7	DIO15	8	DIO16
9	5V	10	GND

C.6 UART mode setting

1. Open the device manager in Windows
2. Find the target COM device of Fintek Serial which comes from OMNI COM Module
3. Right click and select Properties
4. Switch to page Advance Setting
5. Select the target UART Mode RS232/422/485 by item Select Mode

*RS232/422/485 mode should be the same UART mode as jumper setting

Select Mode of Fintek Serial Properties

