

FleetPC-5-B

In-Vehicle Computing

User's Manual

Version 1.0

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CarTFT.com e.K.

User Manual

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This device complies to Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must withstand any background interference including those that may cause undesired operation.

Safety Information

Read the following precautions before setting up a CarTFT.com Product.

Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.
- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Make sure that your power supply is set to the correct voltage in your area. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

Operation safety

- Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter technical problems with the product, contact a qualified service technician or your retailer.

CAUTION

Incorrectly replacing the battery may damage this computer. Replace only with the same or its equivalent as recommended by CarTFT.com e.K. Dispose used battery according to the manufacturer's instructions.

Technical Support

Please do not hesitate to call or e-mail our customer service when you still cannot fix the problems.

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Fax : +886-2-82280100

E-mail : sales@cartft.com

Website : www.cartft.com

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1.0 INTRODUCTION

1.0 INTRODUCTION

1.1 Model Specification

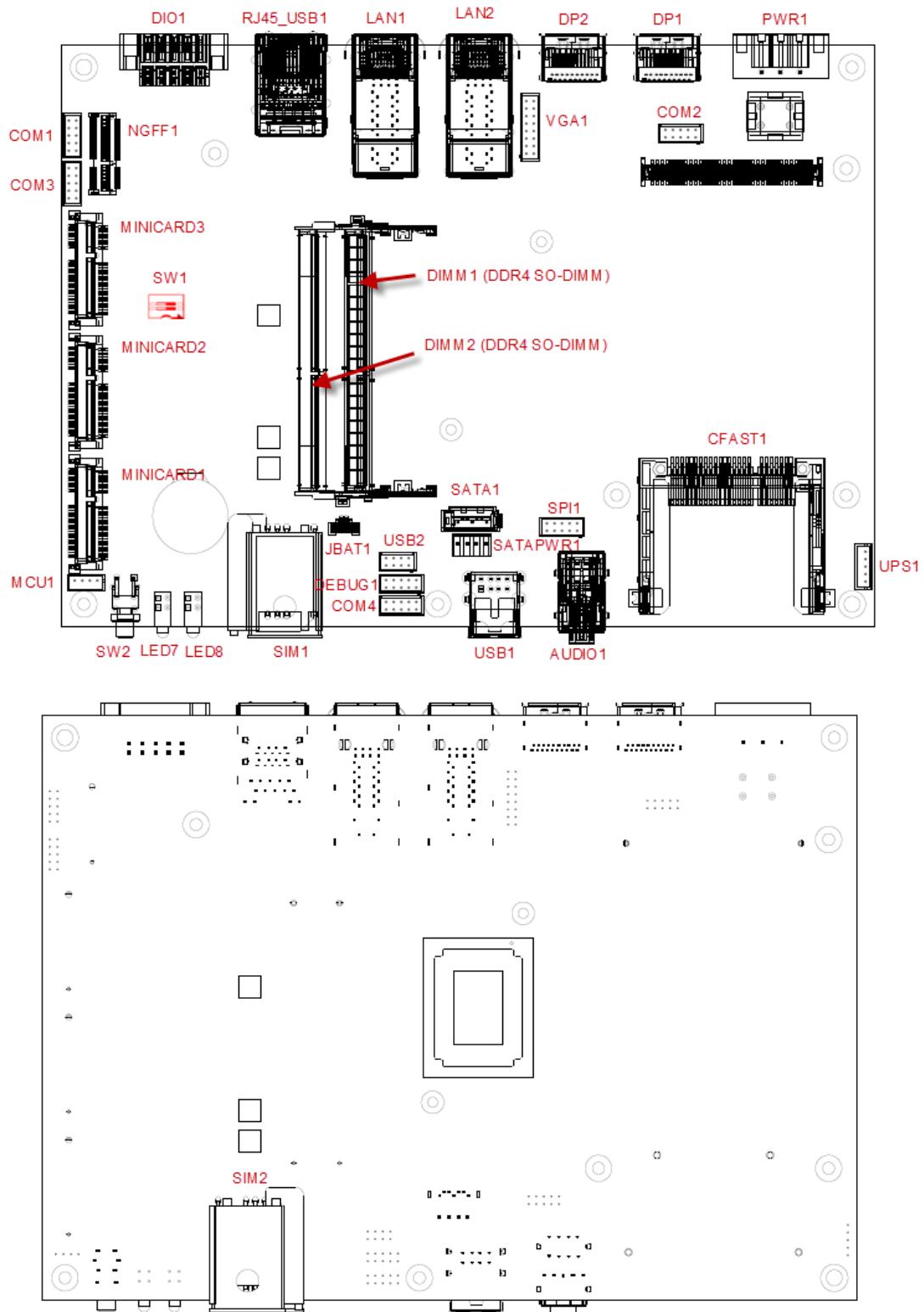


System	
CPU	AMD RX-421BD Quad Core 2.1GHz up to 3.4 GHz* AMD RX-216GD Dual Core 1.6GHz up to 3.0 GHz (Optional GX-224IJ, GX-215JJ) *Config to 15W
Memory	2 x SO-DIMM DDR4 up to 32GB (1 x SO-DIMM DDR4 for GX series)
Graphics	AMD Radeon™ graphics
ATA	2 x Serial ATA GEN 3.0
LAN Chipset	2 x Intel i210-AT; Ethernet Swtich: 1 x Marvell 88E6176
Watchdog	1 ~ 255 Level Reset
Power Requirement	
Power Input	9V-48V DC Power input
Power Protection	Automatics Recovery Short Circuit Protection
Power Management	Vehicle Power Ignition for Variety Vehicle
Power Off Control	Power off Delay Time Setting by BIOS and Software
Battery	Internal Battery Kit for 10 Mins Operating (Optional) Patent No. : M447854 - Build-in Battery
Storage	

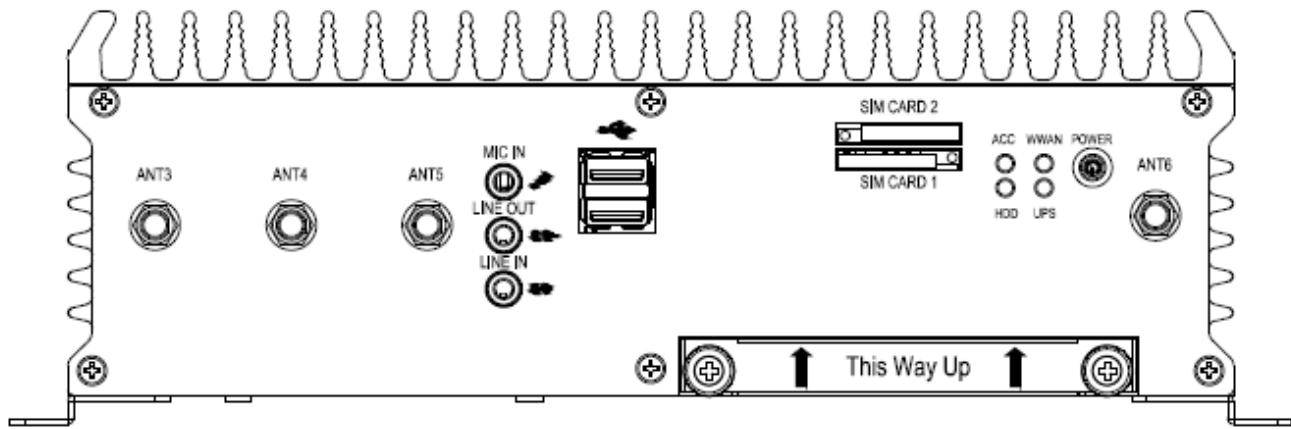
Type	1 x 2.5" Drive Bay for SATA Type HDD/SSD 1 x Cfast slot
Qualification	
Certifications	CE, FCC Class A, E13
I/O	
Serial Port	2 x RS232/422/485 (option additional 2 x RS232)
USB Port	2 x USB 3.0 ports and 2 x USB2.0 Ports
LAN	5 x RJ45 Ports GbE (Optimal for 4 x POE 802.3at/af*)
Video Port	2 x DP (Option additional 1 x VGA for RX series)
GPIO Port	4 In and 4 Out
Audio	Mic-in/Line-out(Optional Line in)
Expansion Bus	3 x Mini-card slots 1 x M.2 A-E key 2230 slot
Antenna	Antenna 4 x SMA-type External Antenna Connectors
SIM Card Socket	SIM Card Socket 2 x SIM Card Sockets Supported Onboard with eject
Environment	
Operating Temp.	-40°C ~ 70°C (w/SSD)
Storage Temp.	-40°C ~ 85°C
Relative Humidity	5% RH – 95% RH
Vibration (random)	IEC60068-2-64, random, 2.5G@5~500Hz, 1hr/axis with SSD
Vibration Operating	MIL-STD-810G, Method 514.6, Procedure I, Category 4
Shock	Operating: MIL-STD-810G, Method 516.6, Procedure I, Trucks and semi-trailers=15G (11ms) with SSD
Mechanical	
Construction	Aluminum Alloy
Mounting	Wall-mount, VESA-mount, Din Rail Mounting Kit
Weight	1405g (Barebone)
Dimensions	240(L) x 161(W) x 85(H) mm

1.2 FleetPC-5-B Illustration (MB, System)

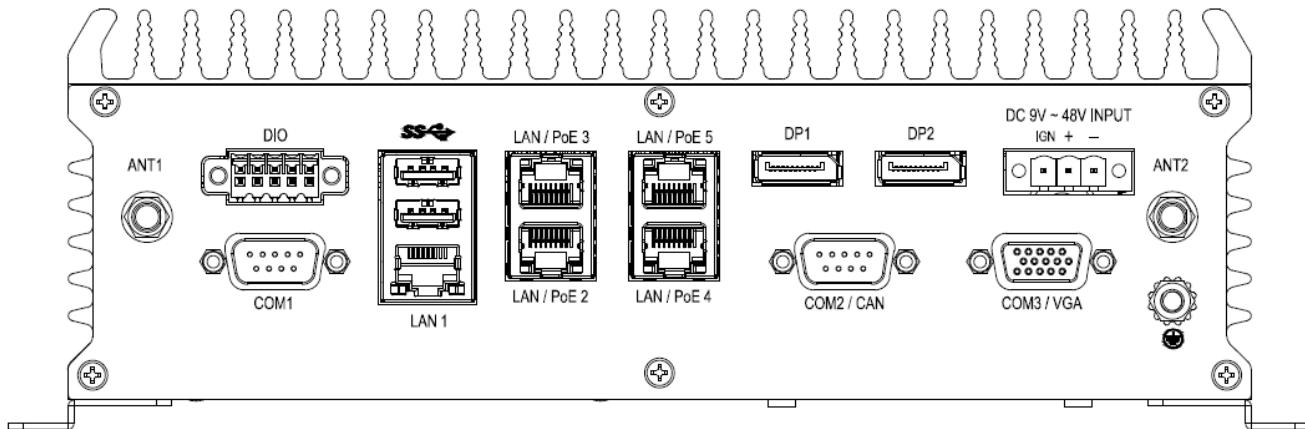
Main Board



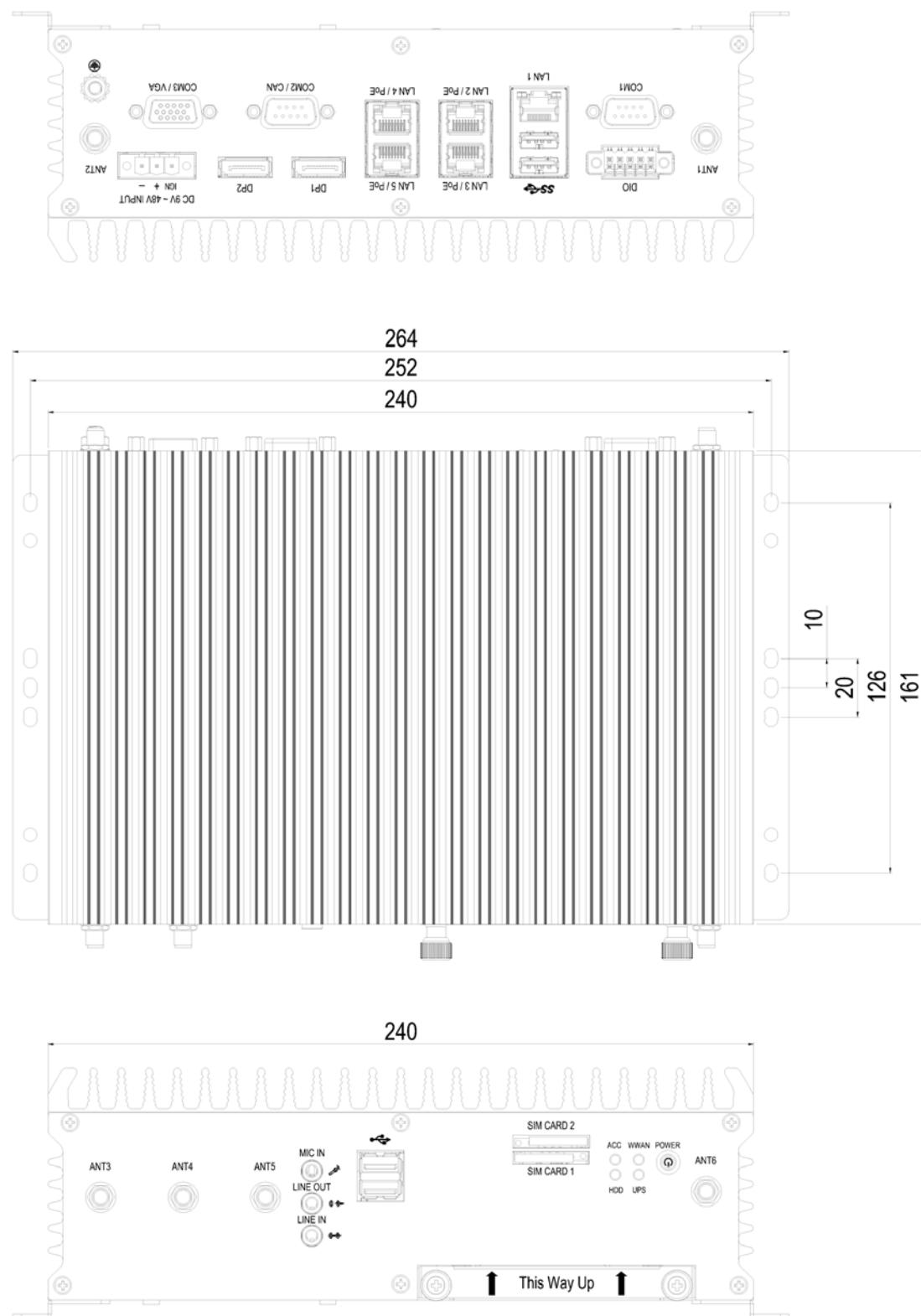
Front I/O



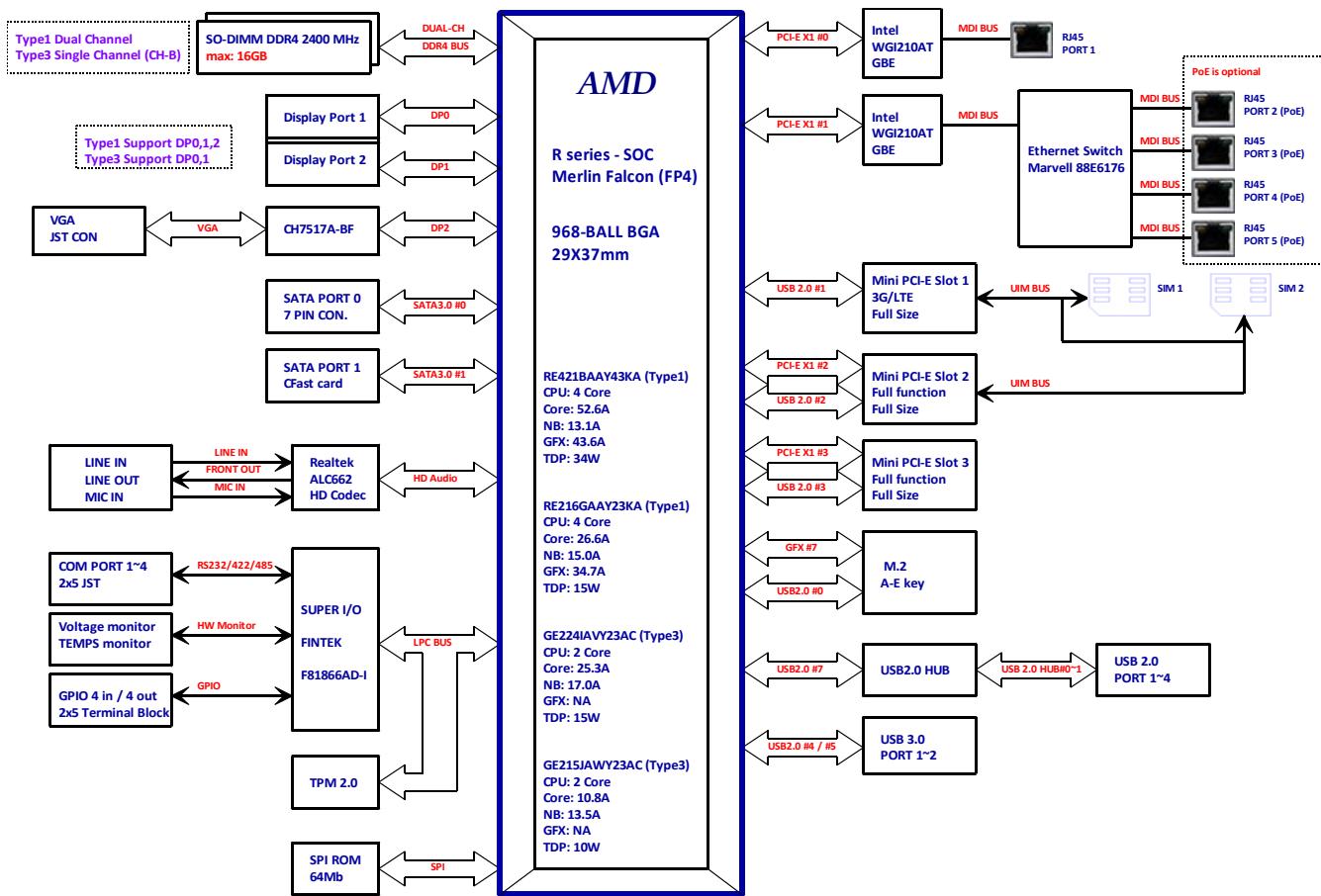
Rear I/O



System



1.3 Architecture



1.4 Power Consumption

Chip	Description					
Intel	Power consumption:					
	CPU	Cores	Core Frequency	L2 Cache	TDP	Tj
	RX-421BD	4	2.1 GHz	2MB	12~35W	105°C
	RX-216GD	2	1.6 GHz	1MB	12~15W	105°C
	GX-224IJ	2	2.4 GHz	1MB	10~15W	105°C
	GX-215JJ	2	1.5 GHz	1MB	6~10W	105°C

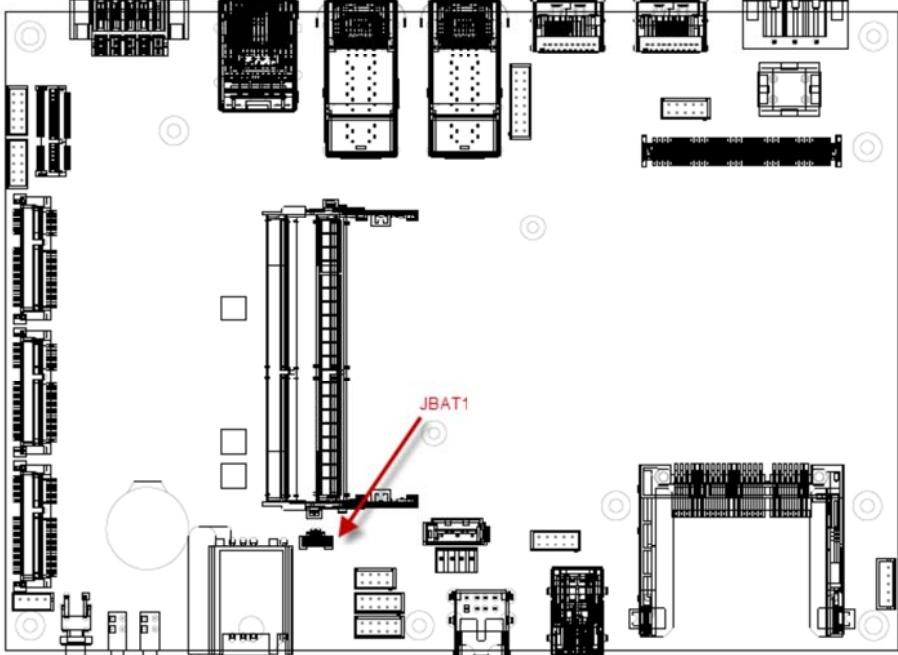
2.0

INTERNAL CONNECTOR

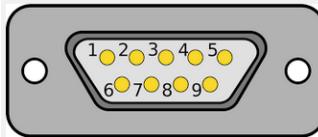
SPECIFICATION

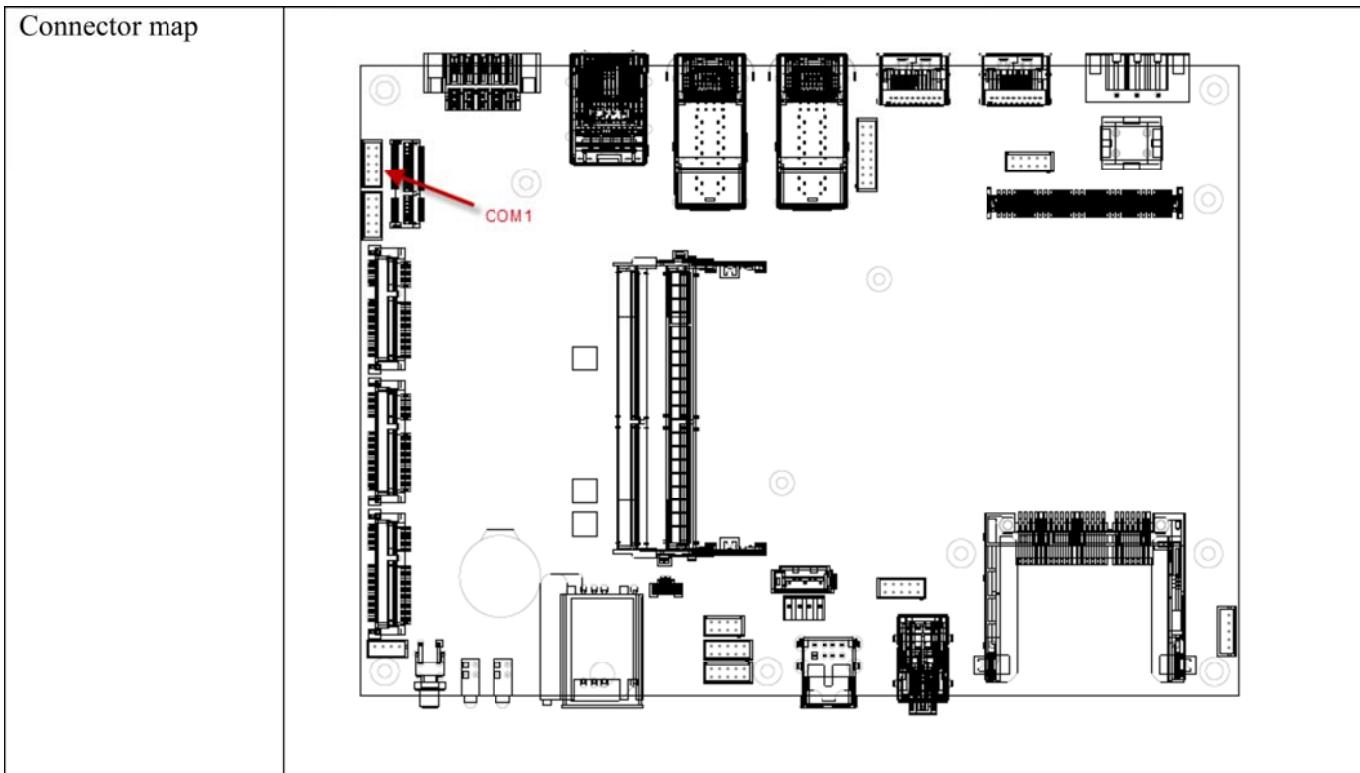
2.0 INTERNAL CONNECTOR SPECIFICATION

2.1 Battery Connector (BAT1)

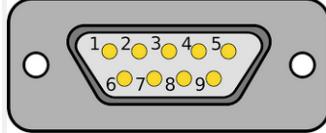
Connector size	1 X 2 = 2 Pin			
Connector type	JST-1.25mm-M-180			
Connector location	BAT1			
Connector pin definition	Pin	Signal	Pin	Signal
	1	+3VDC	2	GND
Connector map				

2.2 COM Port Connector (COM1)

Connector size	2 X 5 = 10 Pin																																										
Connector type	JST-2.0mm-M-180																																										
Connector location	COM1																																										
Connector pin definition	Pin	Signal	Pin	Signal																																							
	1	COM1_DCD	2	COM1_RXD																																							
	3	COM1_TXD	4	COM1_DTR																																							
	5	GND	6	COM1_DSR																																							
	7	COM1_RTS	8	COM1_CTS																																							
DB9 pin definition	9	COM1_RI	10	GND																																							
	 <table border="1"> <thead> <tr> <th>Pin</th> <th>RS232</th> <th>RS422</th> <th>RS485</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>COM1_DCD</td> <td>TXD-</td> <td>TXD-/RXD-</td> </tr> <tr> <td>2</td> <td>COM1_RXD</td> <td>TXD+</td> <td>TXD+/RXD+</td> </tr> <tr> <td>3</td> <td>COM1_TXD</td> <td>RXD+</td> <td>NC</td> </tr> <tr> <td>4</td> <td>COM1_DTR</td> <td>RXD-</td> <td>NC</td> </tr> <tr> <td>5</td> <td>GND</td> <td>GND</td> <td>GND</td> </tr> <tr> <td>6</td> <td>COM1_DSR</td> <td>NC</td> <td>NC</td> </tr> <tr> <td>7</td> <td>COM1_RTS</td> <td>NC</td> <td>NC</td> </tr> <tr> <td>8</td> <td>COM1_CTS</td> <td>NC</td> <td>NC</td> </tr> <tr> <td>9</td> <td>COM1_RI</td> <td>NC</td> <td>NC</td> </tr> </tbody> </table>				Pin	RS232	RS422	RS485	1	COM1_DCD	TXD-	TXD-/RXD-	2	COM1_RXD	TXD+	TXD+/RXD+	3	COM1_TXD	RXD+	NC	4	COM1_DTR	RXD-	NC	5	GND	GND	GND	6	COM1_DSR	NC	NC	7	COM1_RTS	NC	NC	8	COM1_CTS	NC	NC	9	COM1_RI	NC
Pin	RS232	RS422	RS485																																								
1	COM1_DCD	TXD-	TXD-/RXD-																																								
2	COM1_RXD	TXD+	TXD+/RXD+																																								
3	COM1_TXD	RXD+	NC																																								
4	COM1_DTR	RXD-	NC																																								
5	GND	GND	GND																																								
6	COM1_DSR	NC	NC																																								
7	COM1_RTS	NC	NC																																								
8	COM1_CTS	NC	NC																																								
9	COM1_RI	NC	NC																																								



2.3 COM Port Connector (COM2)

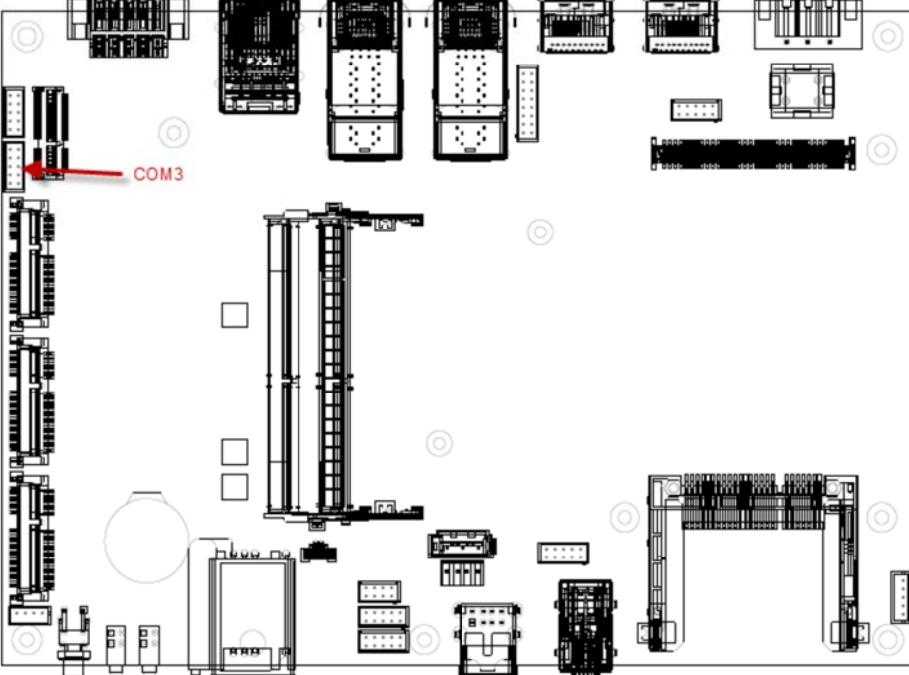
Connector size	2 X 5 = 10 Pin																																											
Connector type	JST-2.0mm-M-180																																											
Connector location	COM2																																											
Connector pin definition	Pin	Signal	Pin	Signal																																								
	1	COM2_DCD	2	COM2_RXD																																								
	3	COM2_TXD	4	COM2_DTR																																								
	5	GND	6	COM2_DSR																																								
	7	COM2_RTS	8	COM2_CTS																																								
	9	COM2_RI	10	GND																																								
DB9 pin definition	 <table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>RS232</th> <th>RS422</th> <th>RS485</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>COM2_DCD</td> <td>TXD-</td> <td>TXD-/RXD-</td> <td></td> </tr> <tr> <td>2</td> <td>COM2_RXD</td> <td>TXD+</td> <td>RXD+</td> <td>TXD+/RXD+</td> </tr> <tr> <td>3</td> <td>COM2_TXD</td> <td>RXD+</td> <td>NC</td> <td>NC</td> </tr> <tr> <td>4</td> <td>COM2_DTR</td> <td>RXD-</td> <td>NC</td> <td>NC</td> </tr> <tr> <td>5</td> <td>GND</td> <td>GND</td> <td>GND</td> <td>GND</td> </tr> <tr> <td>6</td> <td>COM2_DSR</td> <td>NC</td> <td>NC</td> <td>NC</td> </tr> <tr> <td>7</td> <td>COM2_RTS</td> <td>NC</td> <td>NC</td> <td>NC</td> </tr> </tbody> </table>				Pin	Signal	RS232	RS422	RS485	1	COM2_DCD	TXD-	TXD-/RXD-		2	COM2_RXD	TXD+	RXD+	TXD+/RXD+	3	COM2_TXD	RXD+	NC	NC	4	COM2_DTR	RXD-	NC	NC	5	GND	GND	GND	GND	6	COM2_DSR	NC	NC	NC	7	COM2_RTS	NC	NC	NC
Pin	Signal	RS232	RS422	RS485																																								
1	COM2_DCD	TXD-	TXD-/RXD-																																									
2	COM2_RXD	TXD+	RXD+	TXD+/RXD+																																								
3	COM2_TXD	RXD+	NC	NC																																								
4	COM2_DTR	RXD-	NC	NC																																								
5	GND	GND	GND	GND																																								
6	COM2_DSR	NC	NC	NC																																								
7	COM2_RTS	NC	NC	NC																																								

	8	COM2_CTS	NC	NC	
	9	COM2_RI	NC	NC	
Connector map					

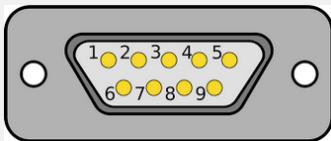
2.4 COM Port Connector (COM3)

Connector size	2 X 5 = 10 Pin																							
Connector type	JST-2.0mm-M-180																							
Connector location	COM3																							
Connector pin definition	Pin	Signal	Pin	Signal																				
	1	COM3_DCD	2	COM3_RXD																				
	3	COM3_TXD	4	COM3_DTR																				
	5	GND	6	COM3_DSR																				
	7	COM3_RTS	8	COM3_CTS																				
	9	COM3_RI	10	GND																				
DB9 pin definition	<table border="1"> <thead> <tr> <th>Pin</th> <th>RS232</th> <th>RS422</th> <th>RS485</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>COM3_DCD</td> <td>TXD-</td> <td>TXD-/RXD-</td> </tr> <tr> <td>2</td> <td>COM3_RXD</td> <td>TXD+</td> <td>TXD+/RXD+</td> </tr> <tr> <td>3</td> <td>COM3_TXD</td> <td>RXD+</td> <td>NC</td> </tr> <tr> <td>4</td> <td>COM3_DTR</td> <td>RXD-</td> <td>NC</td> </tr> </tbody> </table>				Pin	RS232	RS422	RS485	1	COM3_DCD	TXD-	TXD-/RXD-	2	COM3_RXD	TXD+	TXD+/RXD+	3	COM3_TXD	RXD+	NC	4	COM3_DTR	RXD-	NC
Pin	RS232	RS422	RS485																					
1	COM3_DCD	TXD-	TXD-/RXD-																					
2	COM3_RXD	TXD+	TXD+/RXD+																					
3	COM3_TXD	RXD+	NC																					
4	COM3_DTR	RXD-	NC																					

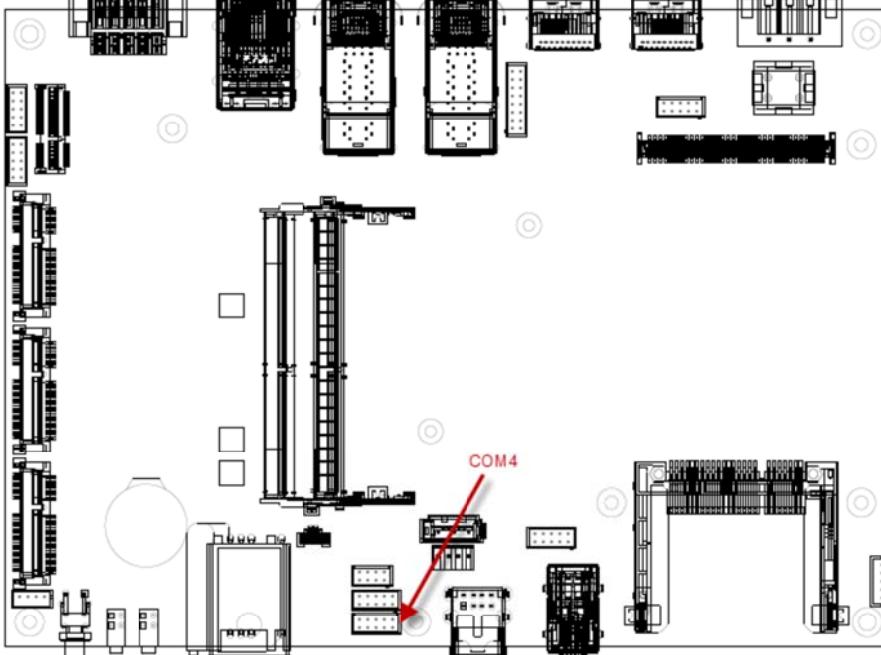
	5	GND	GND	GND	
	6	COM3_DSR	NC	NC	
	7	COM3_RTS	NC	NC	
	8	COM3_CTS	NC	NC	
	9	COM3_RI	NC	NC	

Connector map	
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2.5 COM Port Connector (COM4)

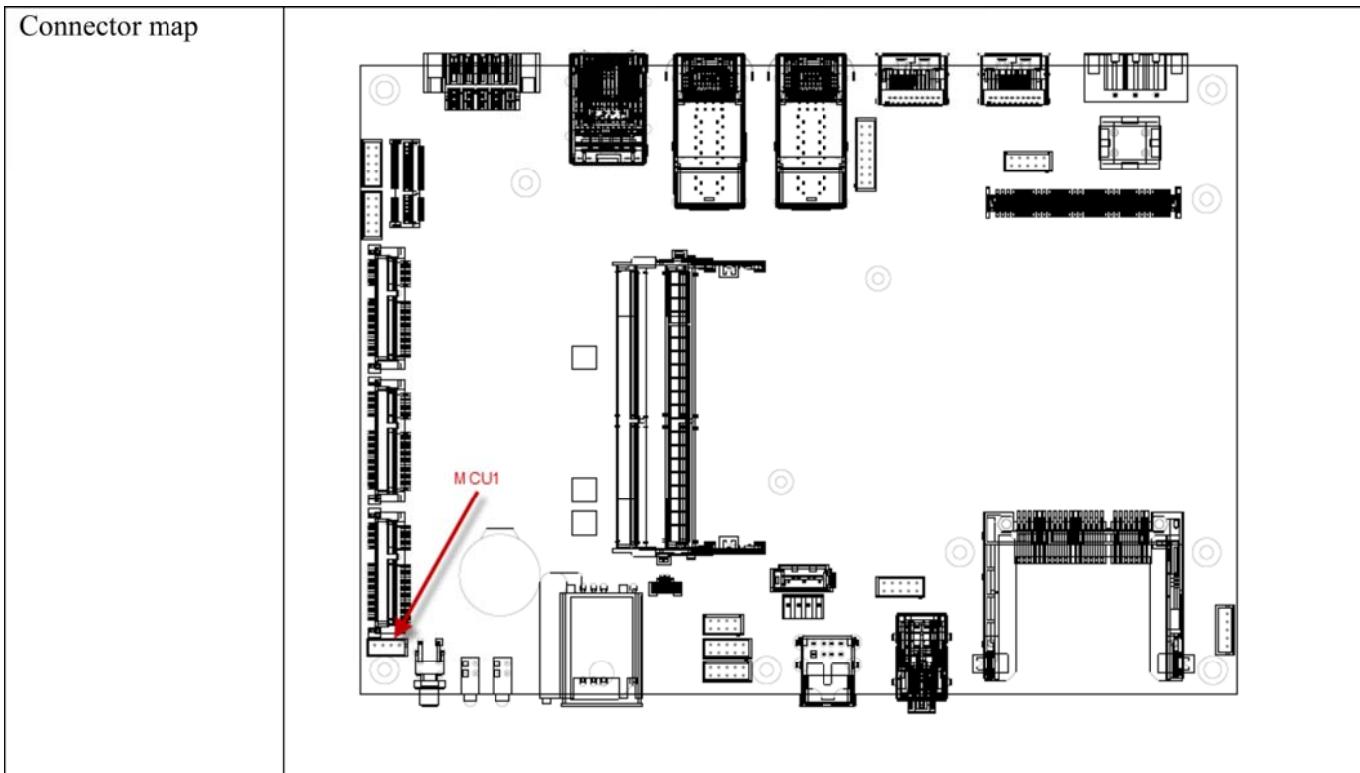
Connector size	2 X 5 = 10 Pin									
Connector type	JST-2.0mm-M-180									
Connector location	COM4									
Connector pin definition	Pin	Signal	Pin	Signal						
	1	COM4_DCD	2	COM4_RXD						
	3	COM4_TXD	4	COM4_DTR						
	5	GND	6	COM4_DSR						
	7	COM4_RTS	8	COM4_CTS						
	9	COM4_RI	10	GND						
DB9 pin definition	 <table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>RS232</td> <td>RS422</td> </tr> <tr> <td>1</td> <td>COM4_DCD</td> </tr> </tbody> </table>				Pin	Signal	RS232	RS422	1	COM4_DCD
Pin	Signal									
RS232	RS422									
1	COM4_DCD									

	2	COM4_RXD	TXD+	TXD+/RXD+	
	3	COM4_TXD	RXD+	NC	
	4	COM4_DTR	RXD-	NC	
	5	GND	GND	GND	
	6	COM4_DSR	NC	NC	
	7	COM4_RTS	NC	NC	
	8	COM4_CTS	NC	NC	
	9	COM4_RI	NC	NC	

Connector map	
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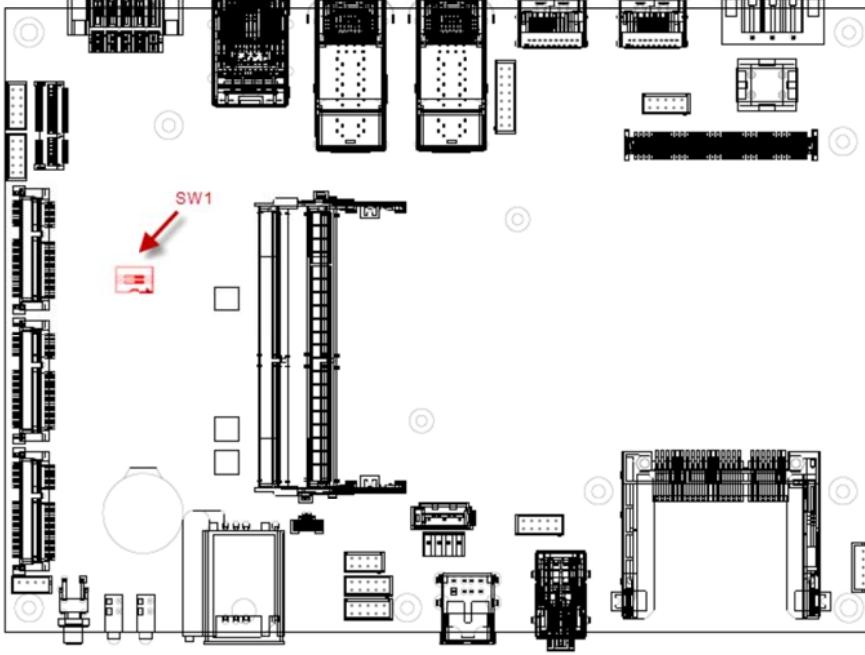
2.6 MCU DOWN Connector

Connector size	1 X 4 = 4 Pin		
Connector type	JST-2.0mm-M-180		
Connector location	MCU DOWN1		
Connector pin definition	Pin	Signal	
	1	MCU_PROGRAM	
	2	RXD	
	3	GND	
	4	TXD	



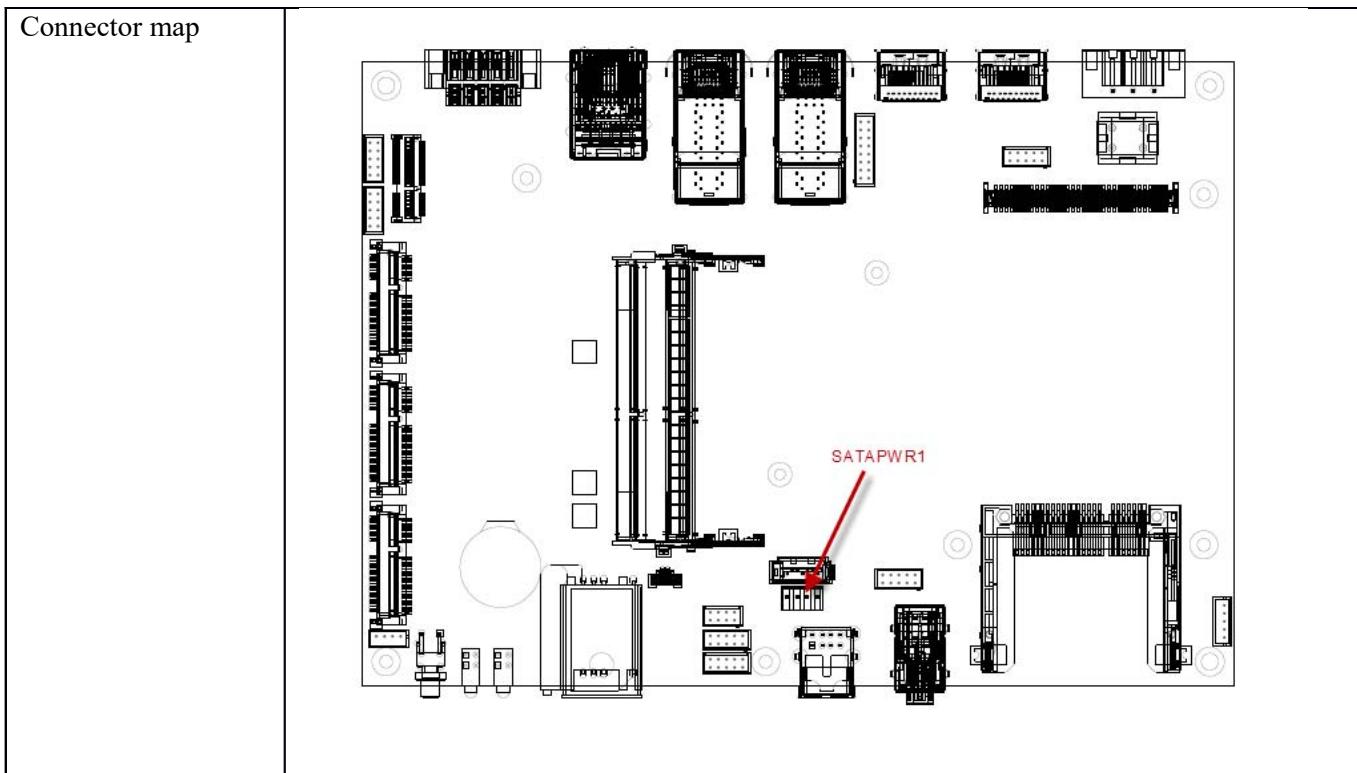
2.7 DIP Switch Connector

Connector size	DIP-Switch 2x2 PIN											
Connector type	pitch=1.27mm											
Connector location	SW1											
Connector pin definition	Default is set at ON <table border="1"> <thead> <tr> <th>Switch</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1-2 ON</td> <td>SMBUS switched ON for MINICARD2</td> </tr> <tr> <td>3-4 ON</td> <td></td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <th>Switch</th> <th>Description</th> </tr> </tbody> </table>		Switch	Description	1-2 ON	SMBUS switched ON for MINICARD2	3-4 ON				Switch	Description
Switch	Description											
1-2 ON	SMBUS switched ON for MINICARD2											
3-4 ON												
Switch	Description											

	<table border="1"> <tr> <td>1-2 OFF</td><td>SMBUS switched OFF for MINICARD2</td></tr> <tr> <td>3-4 OFF</td><td></td></tr> </table>	1-2 OFF	SMBUS switched OFF for MINICARD2	3-4 OFF		
1-2 OFF	SMBUS switched OFF for MINICARD2					
3-4 OFF						
Connector map						

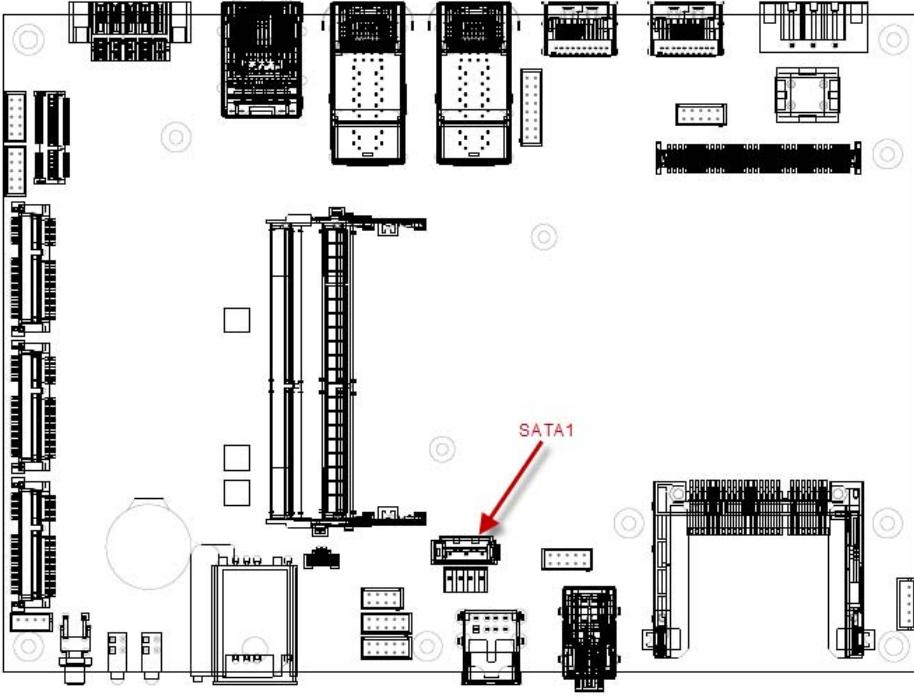
2.8 SATA Power Connector

Connector size	1 X 4 = 4 Pin	
Connector type	WAFER 2.54mm-M-180	
Connector location	SATAPWR1	
Connector pin definition	Pin	Signal
	1	+5V
	2	GND
	3	GND
	4	+12V



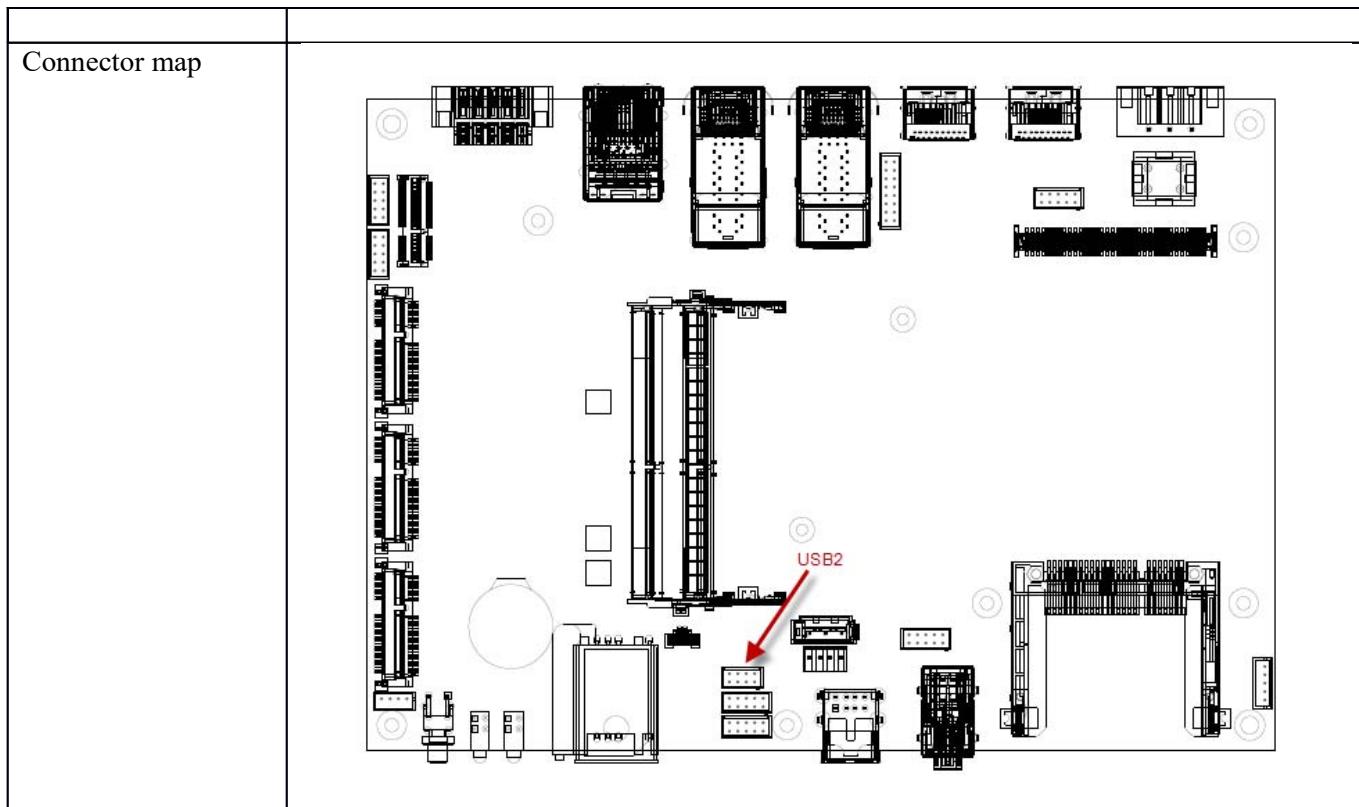
2.9 SATA Connector

Connector size	1 X 7 = 7 Pin	
Connector type	SATA 1.27mm-M-180D	
Connector location	SATA1	
Connector pin definition	Pin	Signal
	1	GND
	2	SATA TXP0
	3	SATA TXN0
	4	GND
	5	SATA RXN0
	6	SATA RXP0

	7	GND
Connector map		
		

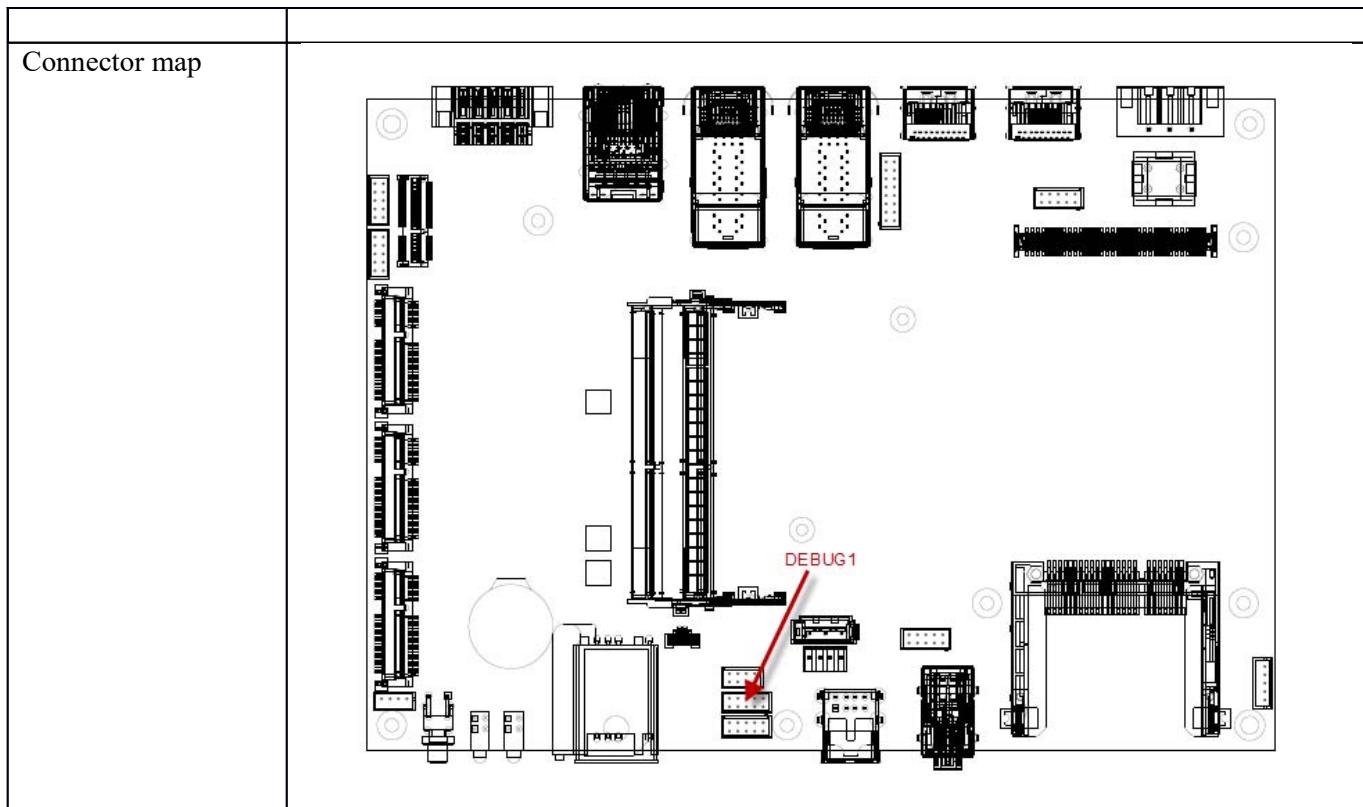
2.10 USB Connector

Connector size	2 X 4 = 8 Pin			
Connector type	JST-2.0mm-M-180			
Connector location	USB2			
Connector pin definition	Pin	Signal	Pin	Signal
	1	+5VDC	2	+5VDC
	3	USB0_10N	4	USB1_11N
	5	USB0_10P	6	USB1_11P
	7	GND	8	GND



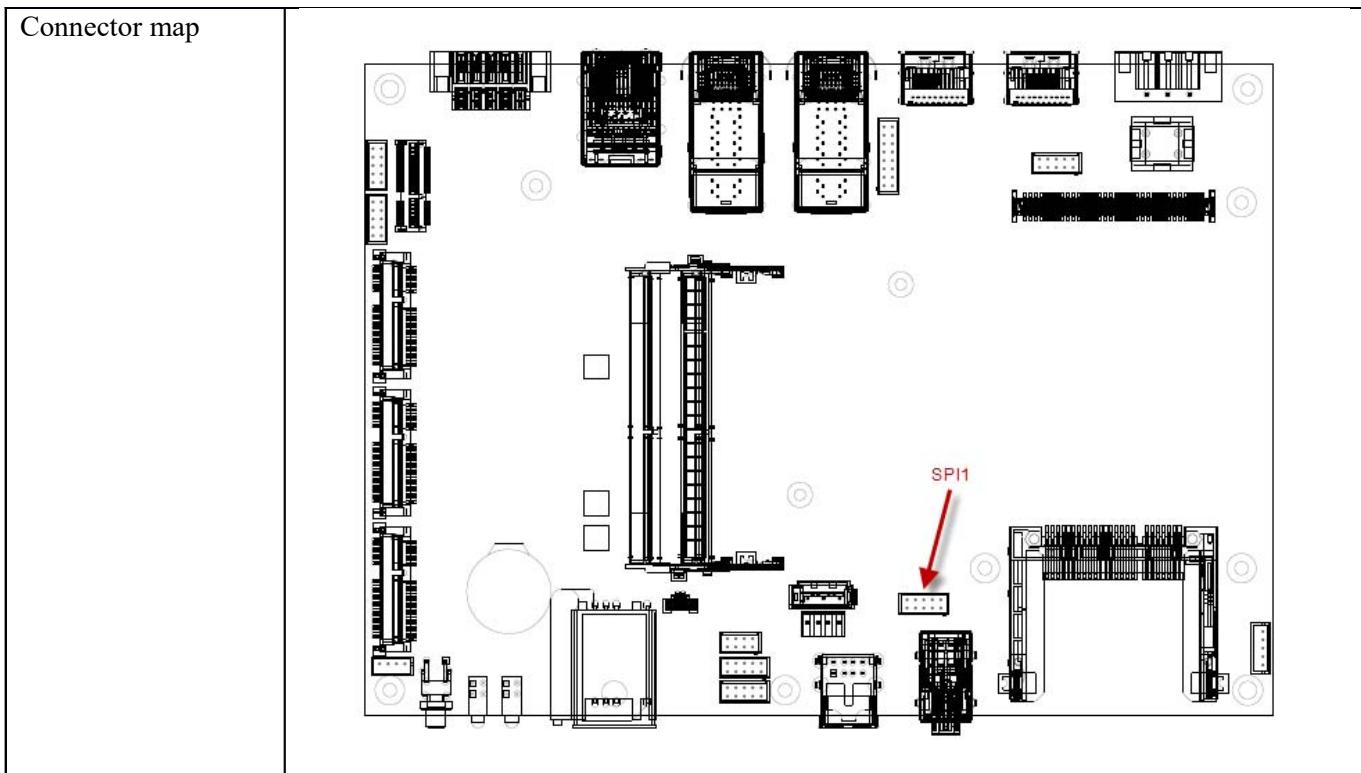
2.11 DEBUG Connector

Connector size	2 X 5 = 10 Pin			
Connector type	JST-2.0mm-M-180			
Connector location	DEBUG1			
Connector pin definition	Pin	Signal	Pin	Signal
	1	LCLK	2	LAD1
	3	LRST#	4	LAD0
	5	LFRAME#	6	+3.3VDC
	7	LAD3	8	GND
	9	LAD2	10	GND



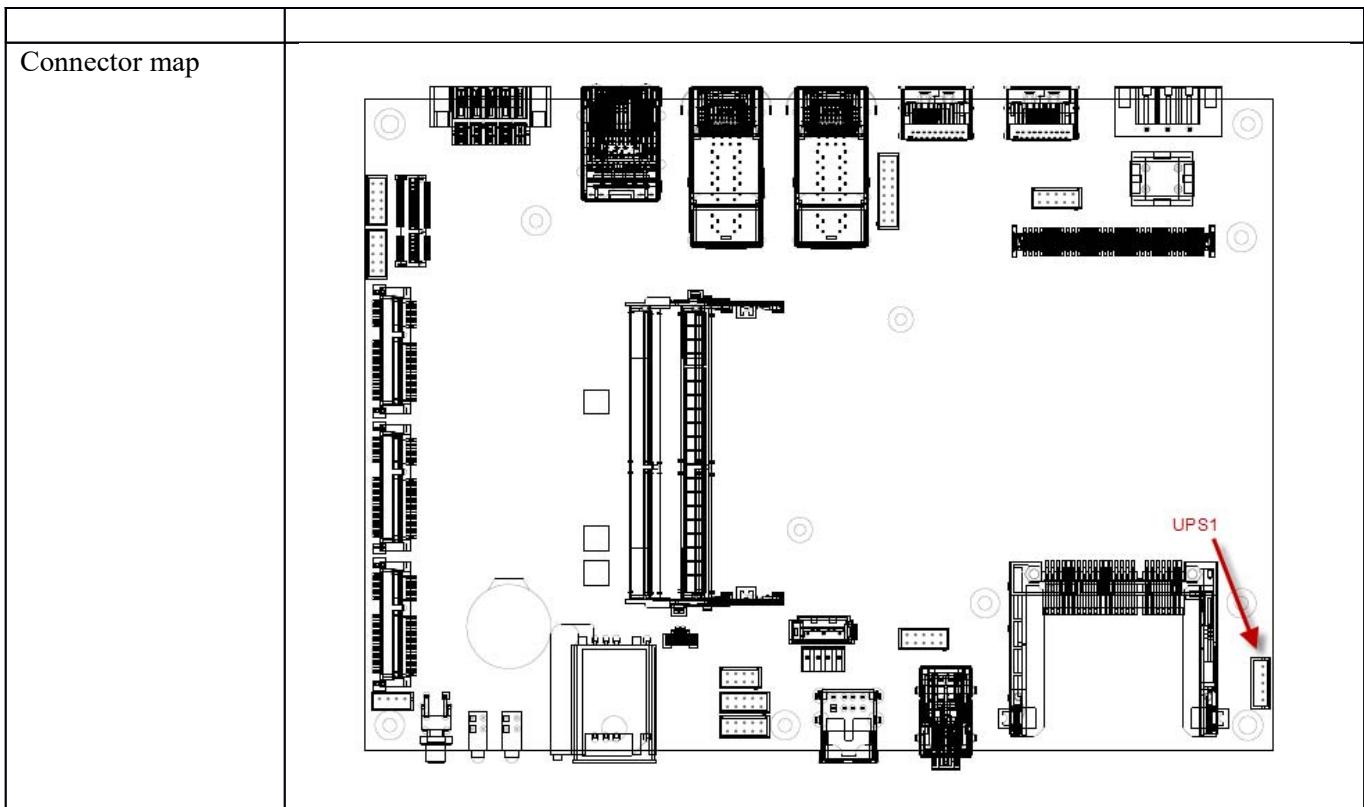
2.12 SPI Connector

Connector size	2 X 5 = 10 Pin			
Connector type	JST-2.0mm-M-180			
Connector location	SPI1			
Connector pin definition	Pin	Signal	Pin	Signal
	1	SPI HOLD#	2	NC
	3	SPI CS1#	4	SPI VCC
	5	SPI MISO	6	NC
	7	NC	8	SPI CLK
	9	GND	10	SPI MOSI



2.13 UPS Connector

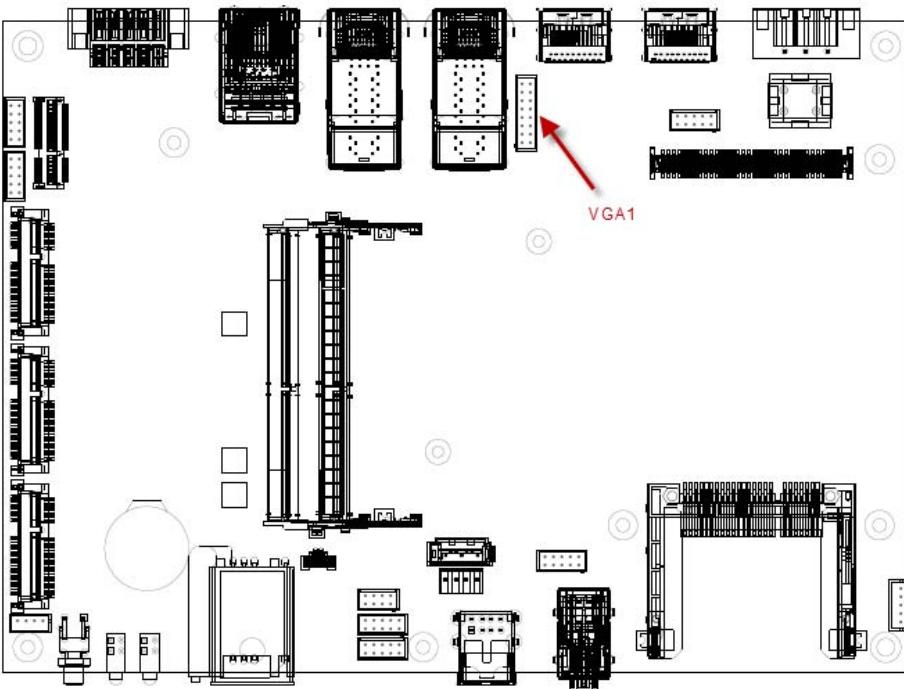
Connector size	1 X 5 = 5 Pin	
Connector type	JST-2.0mm-M-180	
Connector location	UPS1	
Connector pin definition	Pin	Signal
	1	UPS POWER
	2	UPS POWER
	3	NC
	4	GND
	5	GND



2.14 VGA Connector

Connector size	2 X 8 = 16 Pin			
Connector type	JST-2.0mm-M-180			
Connector location	VGA1			
Connector pin definition	Pin	Signal	Pin	Signal
	1	RED	2	GREEN
	3	BLUE	4	NC
	5	NC	6	NC
	7	GND	8	GND

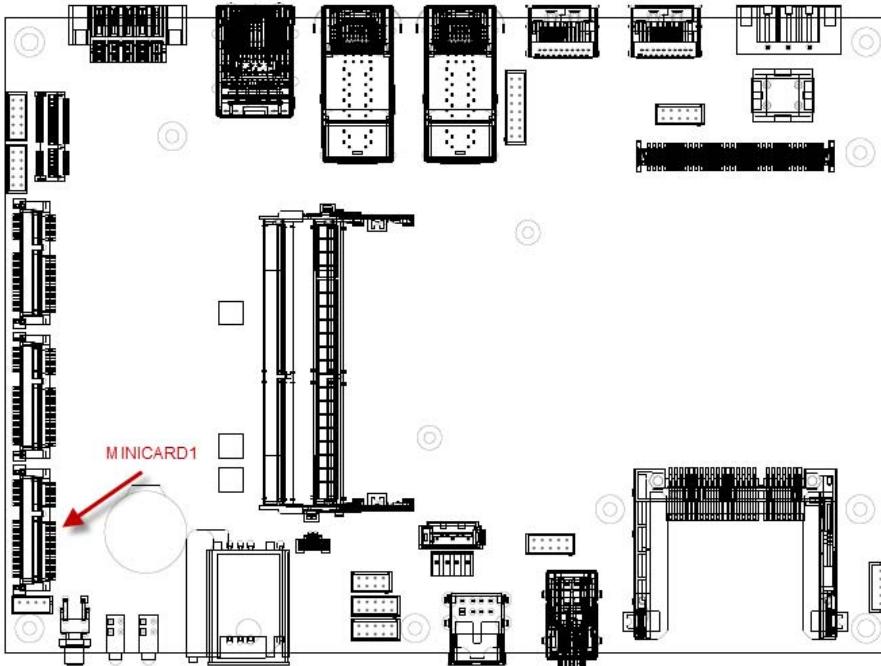
	9	CRT VCC	10	GND	
	11	NC	12	DAC SDATA	
	13	H SYNC	14	V SYNC	
	15	DAC SCLK	16	NC	

Connector map	 <p>The diagram shows a top-down view of a computer motherboard. A red arrow points to a specific location on the right side of the board, indicating the position of the VGA1 connector. The board features various components like the CPU, RAM, and multiple expansion slots.</p>
---------------	---

2.15 Mini PCI-E Connector (MINICARD1)

Connector size	2 X 26 = 52 Pin			
Connector type	MINI PCI-E CON 9.2mmH			
Connector location	MINICARD1 (Mini PCI-E spec. V1.2)			
Connector pin definition	Pin	Signal	Pin	Signal
	1	PCIE_WAKE#	2	3VSB
	3	NC	4	GND

	5	NC	6	NC
	7	NC	8	UIM PWR A
	9	GND	10	UIM DAT A
	11	NC	12	UIM CLK A
	13	NC	14	UIM RST A
	15	GND	16	NC
	17	NC	18	GND
	19	NC	20	MINICARD1 DIS#
	21	GND	22	PCIE RST#
	23	NC	24	3VSB
	25	NC	26	GND
	27	GND	28	NC
	29	GND	30	NC
	31	NC	32	NC
	33	NC	34	GND
	35	GND	36	USB 1N
	37	GND	38	USB 1P
	39	3VSB	40	GND
	41	3VSB	42	LED WWAN#
	43	GND	44	NC
	45	NC	46	NC
	47	NC	48	NC
	49	NC	50	GND
	51	NC	52	3VSB

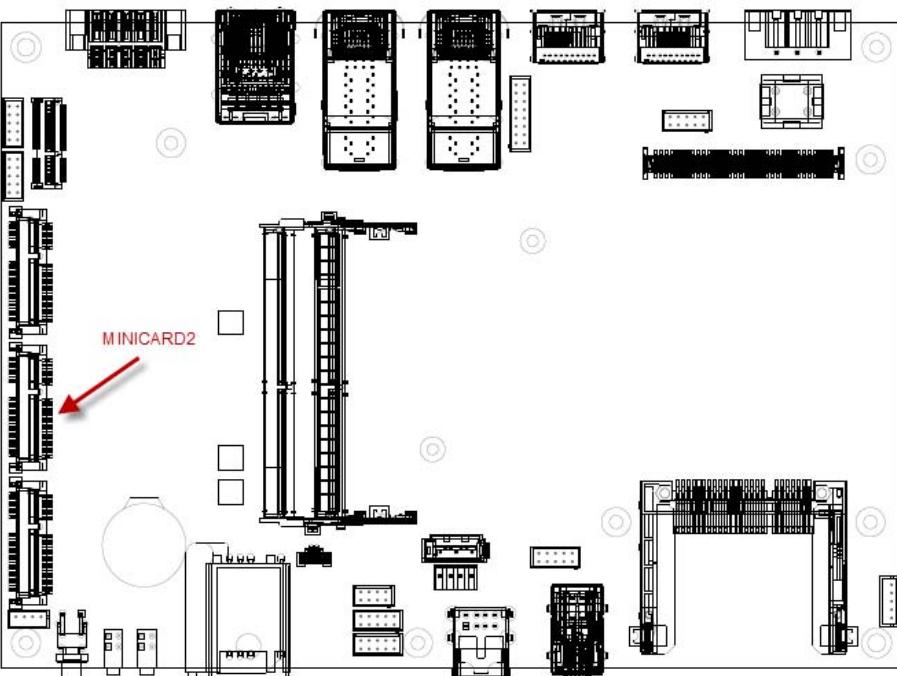
Connector map	
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2.16 Mini PCI-E Connector (MINICARD2)

Connector size	2 X 26 = 52 Pin			
Connector type	MINI PCI-E CON 9.2mmH			
Connector location	MINICARD2 (Mini PCI-E spec. V1.2)			
Connector pin definition	Pin	Signal	Pin	Signal
	1	PCIE_WAKE#	2	3VSB
	3	NC	4	GND
	5	NC	6	+1.5V
	7	MINICARD2_CLKREQ#	8	UIM_PWR_B
	9	GND	10	UIM_DAT_B
	11	PCIE_MCARD2_CLK_N	12	UIM_CLK_B
	13	PCIE_MCARD2_CLK_P	14	UIM_RST_B
	15	GND	16	NC
	17	NC	18	GND
	19	NC	20	MINICARD2_DIS#
	21	GND	22	PCIE_RST#
	23	PCIE_MCARD2_RX_N	24	3VSB
	25	PCIE_MCARD2_RX_P	26	GND
	27	GND	28	+1.5V
	29	GND	30	SMB_CLK
	31	PCIE_MCARD2_TX_N	32	SMB_DATA
	33	PCIE_MCARD2_TX_P	34	GND
	35	GND	36	USB_2N
	37	GND	38	USB_2P

	39	3VSB	40	GND	
	41	3VSB	42	NC	
	43	GND	44	NC	
	45	NC	46	NC	
	47	NC	48	+1.5V	
	49	NC	50	GND	
	51	NC	52	3VSB	

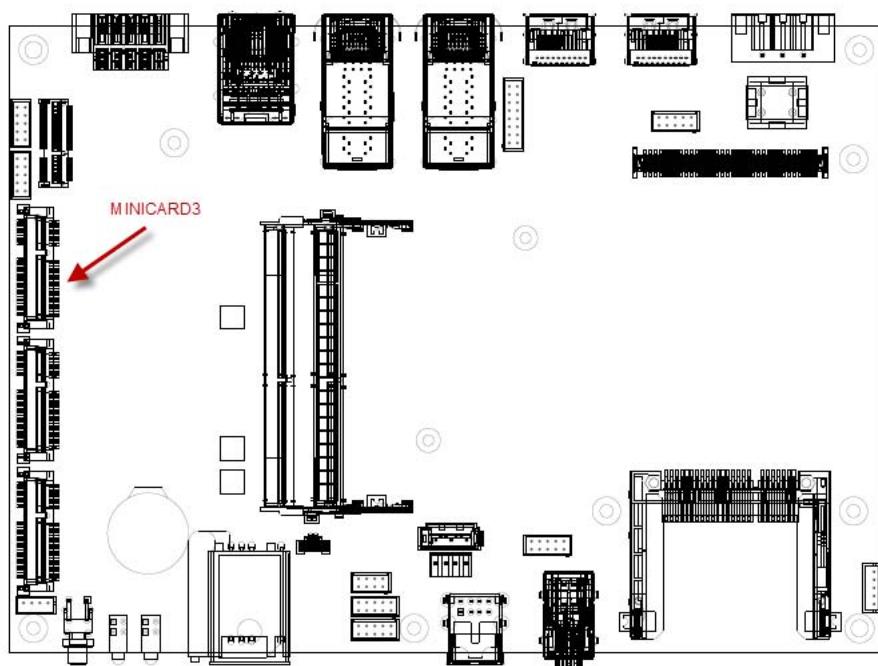
Connector map



2.17 Mini PCI-E Connector (MINICARD3)

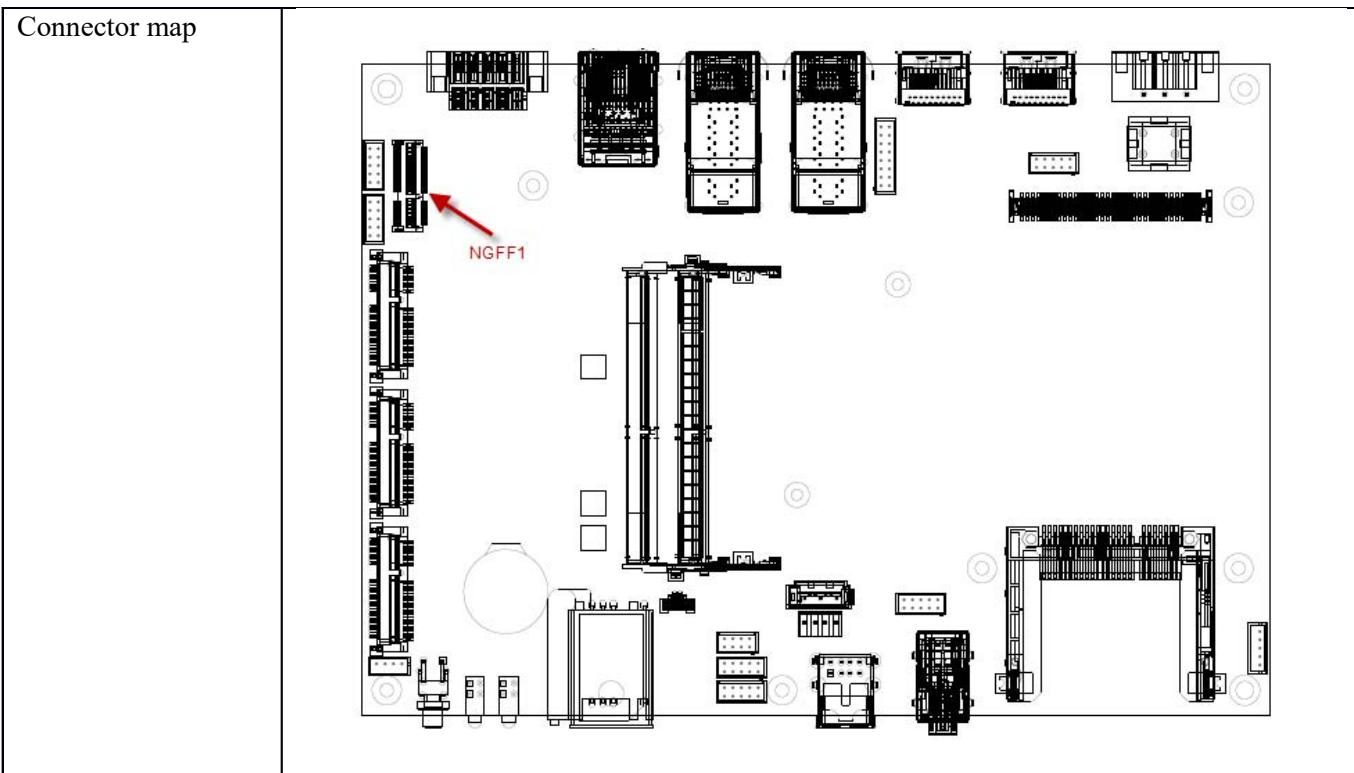
Connector size	2 X 26 = 52 Pin			
Connector type	MINI PCI-E CON 9.2mmH			
Connector location	MINICARD3 (Mini PCI-E spec. V1.2)			
Connector pin definition	Pin	Signal	Pin	Signal
	1	PCIE WAKE#	2	3VSB
	3	NC	4	GND
	5	NC	6	+1.5V
	7	MINICARD3_CLKREQ#	8	NC
	9	GND	10	NC
	11	PCIE MCARD3_CLK_N	12	NC
	13	PCIE MCARD3_CLK_P	14	NC
	15	GND	16	NC
	17	NC	18	GND
	19	NC	20	MINICARD3_DIS#
	21	GND	22	PCIE_RST#
	23	PCIE MCARD3_RX_N	24	3VSB
	25	PCIE MCARD3_RX_P	26	GND
	27	GND	28	+1.5V
	29	GND	30	SMB_CLK
	31	PCIE MCARD3_TX_N	32	SMB_DATA
	33	PCIE MCARD3_TX_P	34	GND
	35	GND	36	USB_3N
	37	GND	38	USB_3P
	39	3VSB	40	GND
	41	3VSB	42	NC
	43	GND	44	NC
	45	NC	46	NC
	47	NC	48	+1.5V
	49	NC	50	GND
	51	NC	52	3VSB

Connector map



2.18 M.2 Connector

Connector size	75 Pin			
Connector type	NGFF CON 8.5mmH			
Connector location	NGFF1 (A-E Key)			
Connector pin definition	Pin	Signal	Pin	Signal
	1	GND	2	3VSB
	3	USB0P	4	3VSB
	5	USB0N	6	NC
	7	GND	8	NC
	9	NC	10	NC
	11	NC	12	NC
	13	NC	14	NC
	15	NC	16	NC
	17	NC	18	NC
	19	NC	20	NC
	21	NC	22	NC
	23	NC	24	MODULE KEY
	25	MODULE KEY	26	MODULE KEY
	27	MODULE KEY	28	MODULE KEY
	29	MODULE KEY	30	MODULE KEY
	31	MODULE KEY	32	NC
	33	GND	34	NC
	35	NGFF_TXP	36	NC
	37	NGFF_TXN	38	NC
	39	GND	40	NC
	41	NGFF_RXP	42	NC
	43	NGFF_RXN	44	NC
	45	GND	46	NC
	47	NGFF_CLKP	48	NC
	49	NGFF_CLKN	50	NC
	51	GND	52	PCIE_RST#
	53	CLKREQ#	54	M2_DIS#_2
	55	WAKE#	56	M2_DIS#_1
	57	GND	58	NC
	59	NC	60	NC
	61	NC	62	NC
	63	GND	64	NC
	65	NC	66	NC
	67	NC	68	NC
	69	GND	70	NC
	71	NC	72	3VSB
	73	NC	74	3VSB
	75	GND		



2.19 CFAST Connector

Connector size	24 Pin			
Connector type	CFAST 90D			
Connector location	CFAST1			
Connector pin definition	Pin	Signal	Pin	Signal
	S1	GND	P1	CDI
	S2	SATA TXP1	P2	GND
	S3	SATA TXN1	P3	NC
	S4	GND	P4	NC
	S5	SATA RXN1	P5	NC
	S6	SATA RXP1	P6	NC
	S7	GND	P7	GND
			P8	NC
			P9	NC
			P10	NC
			P11	NC
			P12	NC
			P13	+3.3VDC
			P14	+3.3VDC
			P15	GND
			P16	GND
			P17	CDO
Connector map				

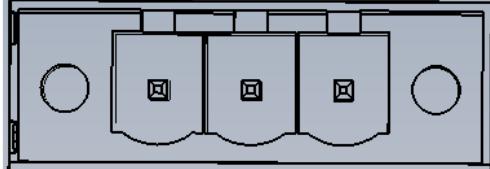
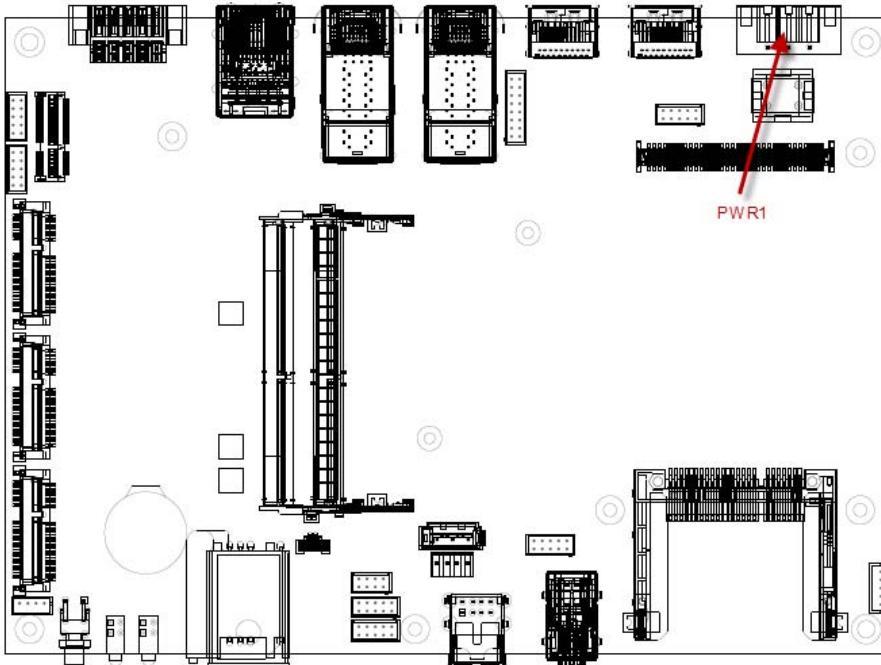
3.0

EXTERNAL CONNECTOR

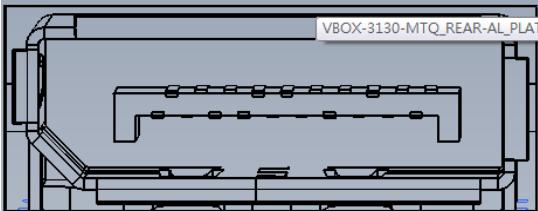
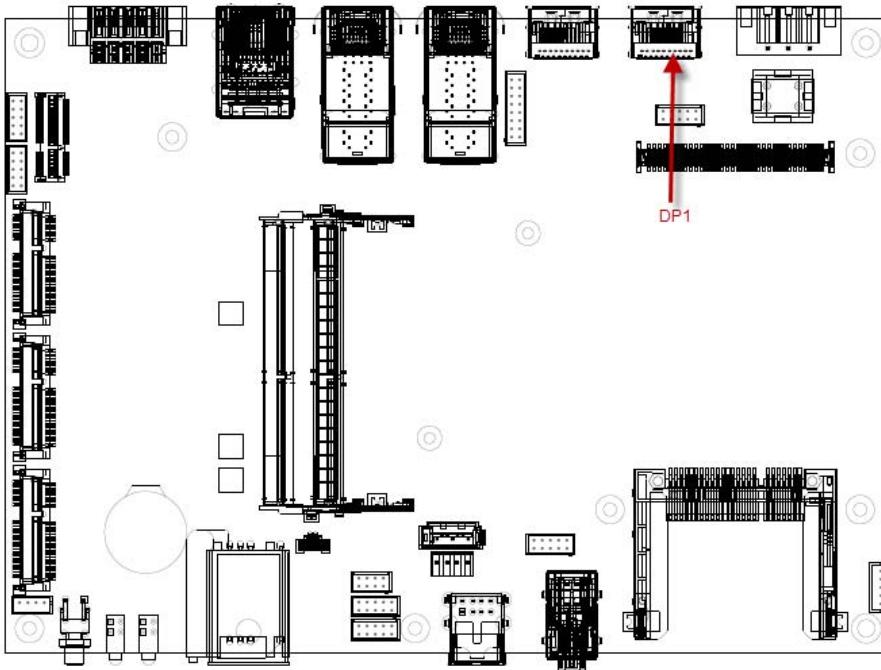
SPECIFICATION

3.0 EXTERNAL CONNECTOR SPECIFICATION

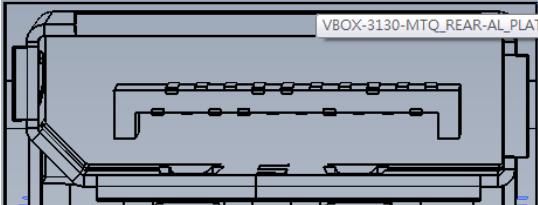
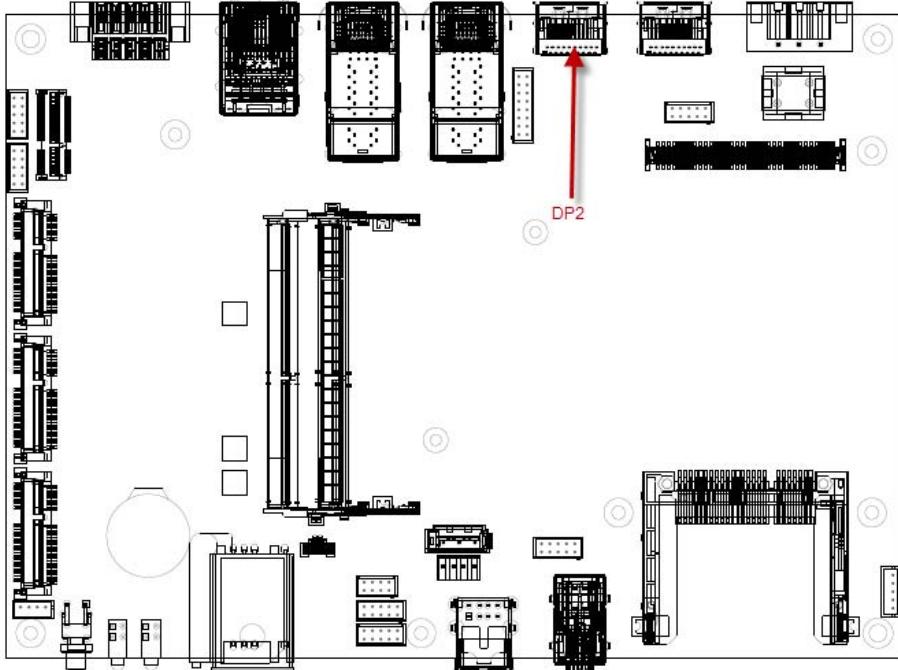
3.1 Power Input Connector

Connector size	1 X 3 = 3 Pin								
Connector type	Terminal block 3PIN pitch :5.08mm								
Connector location	PWR1								
Connector pin definition	<p style="text-align: center;">PIN1 / PIN2 / PIN3</p>  <table border="1" style="margin-top: 10px; width: 100%;"> <thead> <tr> <th>Pin</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>GND</td> </tr> <tr> <td>2</td> <td>VIN (9VDC~48VDC)</td> </tr> <tr> <td>3</td> <td>IGNITION</td> </tr> </tbody> </table>	Pin	Signal	1	GND	2	VIN (9VDC~48VDC)	3	IGNITION
Pin	Signal								
1	GND								
2	VIN (9VDC~48VDC)								
3	IGNITION								
Connector map									

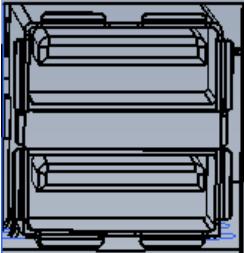
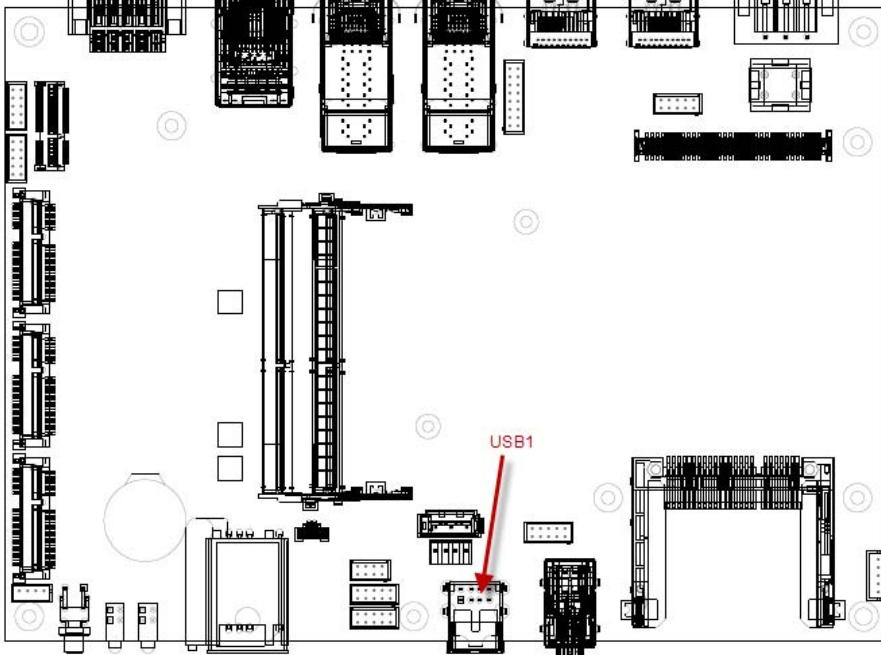
3.2 DP Connector (DP1)

Connector size	20 Pin																																												
Connector type	Display port																																												
Connector location	DP1																																												
Connector pin definition	 <table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Pin</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>DP1 LANE 0P</td> <td>2</td> <td>GND</td> </tr> <tr> <td>3</td> <td>DP1 LANE 0N</td> <td>4</td> <td>DP1 LANE 1P</td> </tr> <tr> <td>5</td> <td>GND</td> <td>6</td> <td>DP1 LANE 1N</td> </tr> <tr> <td>7</td> <td>DP1 LANE 2P</td> <td>8</td> <td>GND</td> </tr> <tr> <td>9</td> <td>DP1 LANE 2N</td> <td>10</td> <td>DP1 LANE 3P</td> </tr> <tr> <td>11</td> <td>GND</td> <td>12</td> <td>DP1 LANE 3N</td> </tr> <tr> <td>13</td> <td>DP1 AUX EN#</td> <td>14</td> <td>GND</td> </tr> <tr> <td>15</td> <td>DP1 AUXP CLK</td> <td>16</td> <td>GND</td> </tr> <tr> <td>17</td> <td>DP1 AUXN DATA</td> <td>18</td> <td>DP1 HPD</td> </tr> <tr> <td>19</td> <td>GND</td> <td>20</td> <td>DP1 VCC3</td> </tr> </tbody> </table>	Pin	Signal	Pin	Signal	1	DP1 LANE 0P	2	GND	3	DP1 LANE 0N	4	DP1 LANE 1P	5	GND	6	DP1 LANE 1N	7	DP1 LANE 2P	8	GND	9	DP1 LANE 2N	10	DP1 LANE 3P	11	GND	12	DP1 LANE 3N	13	DP1 AUX EN#	14	GND	15	DP1 AUXP CLK	16	GND	17	DP1 AUXN DATA	18	DP1 HPD	19	GND	20	DP1 VCC3
Pin	Signal	Pin	Signal																																										
1	DP1 LANE 0P	2	GND																																										
3	DP1 LANE 0N	4	DP1 LANE 1P																																										
5	GND	6	DP1 LANE 1N																																										
7	DP1 LANE 2P	8	GND																																										
9	DP1 LANE 2N	10	DP1 LANE 3P																																										
11	GND	12	DP1 LANE 3N																																										
13	DP1 AUX EN#	14	GND																																										
15	DP1 AUXP CLK	16	GND																																										
17	DP1 AUXN DATA	18	DP1 HPD																																										
19	GND	20	DP1 VCC3																																										
Connector map																																													

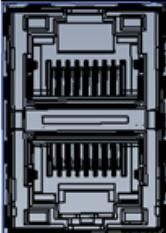
3.3 DP Connector (DP2)

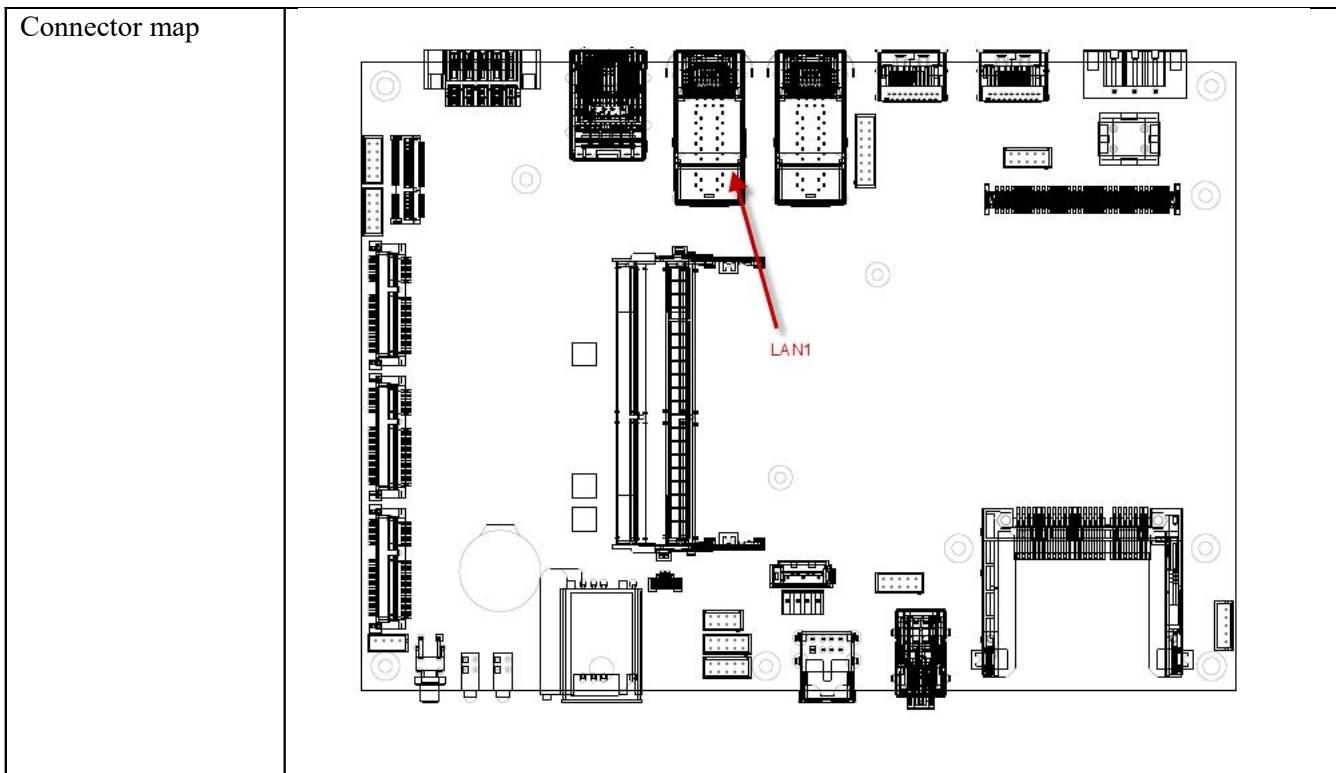
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Connector type	Display port																																												
Connector location	DP2																																												
Connector pin definition	 <table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Pin</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>DP2 LANE 0P</td> <td>2</td> <td>GND</td> </tr> <tr> <td>3</td> <td>DP2 LANE 0N</td> <td>4</td> <td>DP2 LANE 1P</td> </tr> <tr> <td>5</td> <td>GND</td> <td>6</td> <td>DP2 LANE 1N</td> </tr> <tr> <td>7</td> <td>DP2 LANE 2P</td> <td>8</td> <td>GND</td> </tr> <tr> <td>9</td> <td>DP2 LANE 2N</td> <td>10</td> <td>DP2 LANE 3P</td> </tr> <tr> <td>11</td> <td>GND</td> <td>12</td> <td>DP2 LANE 3N</td> </tr> <tr> <td>13</td> <td>DP2 AUX EN#</td> <td>14</td> <td>GND</td> </tr> <tr> <td>15</td> <td>DP2 AUXP CLK</td> <td>16</td> <td>GND</td> </tr> <tr> <td>17</td> <td>DP2 AUXN DATA</td> <td>18</td> <td>DP2 HPD</td> </tr> <tr> <td>19</td> <td>GND</td> <td>20</td> <td>DP2 VCC3</td> </tr> </tbody> </table>	Pin	Signal	Pin	Signal	1	DP2 LANE 0P	2	GND	3	DP2 LANE 0N	4	DP2 LANE 1P	5	GND	6	DP2 LANE 1N	7	DP2 LANE 2P	8	GND	9	DP2 LANE 2N	10	DP2 LANE 3P	11	GND	12	DP2 LANE 3N	13	DP2 AUX EN#	14	GND	15	DP2 AUXP CLK	16	GND	17	DP2 AUXN DATA	18	DP2 HPD	19	GND	20	DP2 VCC3
Pin	Signal	Pin	Signal																																										
1	DP2 LANE 0P	2	GND																																										
3	DP2 LANE 0N	4	DP2 LANE 1P																																										
5	GND	6	DP2 LANE 1N																																										
7	DP2 LANE 2P	8	GND																																										
9	DP2 LANE 2N	10	DP2 LANE 3P																																										
11	GND	12	DP2 LANE 3N																																										
13	DP2 AUX EN#	14	GND																																										
15	DP2 AUXP CLK	16	GND																																										
17	DP2 AUXN DATA	18	DP2 HPD																																										
19	GND	20	DP2 VCC3																																										
Connector map																																													

3.4 USB Connector

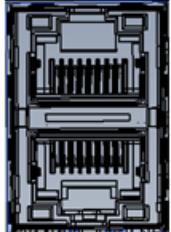
Connector size	8 Pin																							
Connector type	USB2.0 Type A																							
Connector location	USB1																							
Connector pin definition	 <table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Pin</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>5VSB</td> <td>2</td> <td>USB8_N</td> </tr> <tr> <td>3</td> <td>USB8_P</td> <td>4</td> <td>GND</td> </tr> <tr> <td>5</td> <td>5VSB</td> <td>6</td> <td>USB9_N</td> </tr> <tr> <td>7</td> <td>USB9_P</td> <td>8</td> <td>GND</td> </tr> </tbody> </table>				Pin	Signal	Pin	Signal	1	5VSB	2	USB8_N	3	USB8_P	4	GND	5	5VSB	6	USB9_N	7	USB9_P	8	GND
Pin	Signal	Pin	Signal																					
1	5VSB	2	USB8_N																					
3	USB8_P	4	GND																					
5	5VSB	6	USB9_N																					
7	USB9_P	8	GND																					
Connector map																								

3.5 LAN Connector (LAN1)

Connector size	32 Pin																																										
Connector type	RJ45+LED																																										
Connector location	LAN1																																										
Connector pin definition	 LAN/PoE3 LAN/PoE2																																										
	PoE/LAN2 <table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Pin</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>LAN2 MDI0P</td> <td>2</td> <td>LAN2 MDI0N</td> </tr> <tr> <td>3</td> <td>LAN2 MDI1P</td> <td>4</td> <td>LAN2 MDI2P</td> </tr> <tr> <td>5</td> <td>LAN2 MDI2N</td> <td>6</td> <td>LAN2 MDI1N</td> </tr> <tr> <td>7</td> <td>LAN2 MDI3P</td> <td>8</td> <td>LAN2 MDI3N</td> </tr> </tbody> </table> PoE/LAN3 <table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Pin</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>LAN3 MDI0P</td> <td>2</td> <td>LAN3 MDI0N</td> </tr> <tr> <td>3</td> <td>LAN3 MDI1P</td> <td>4</td> <td>LAN3 MDI2P</td> </tr> <tr> <td>5</td> <td>LAN3 MDI2N</td> <td>6</td> <td>LAN3 MDI1N</td> </tr> <tr> <td>7</td> <td>LAN3 MDI3P</td> <td>8</td> <td>LAN3 MDI3N</td> </tr> </tbody> </table>			Pin	Signal	Pin	Signal	1	LAN2 MDI0P	2	LAN2 MDI0N	3	LAN2 MDI1P	4	LAN2 MDI2P	5	LAN2 MDI2N	6	LAN2 MDI1N	7	LAN2 MDI3P	8	LAN2 MDI3N	Pin	Signal	Pin	Signal	1	LAN3 MDI0P	2	LAN3 MDI0N	3	LAN3 MDI1P	4	LAN3 MDI2P	5	LAN3 MDI2N	6	LAN3 MDI1N	7	LAN3 MDI3P	8	LAN3 MDI3N
Pin	Signal	Pin	Signal																																								
1	LAN2 MDI0P	2	LAN2 MDI0N																																								
3	LAN2 MDI1P	4	LAN2 MDI2P																																								
5	LAN2 MDI2N	6	LAN2 MDI1N																																								
7	LAN2 MDI3P	8	LAN2 MDI3N																																								
Pin	Signal	Pin	Signal																																								
1	LAN3 MDI0P	2	LAN3 MDI0N																																								
3	LAN3 MDI1P	4	LAN3 MDI2P																																								
5	LAN3 MDI2N	6	LAN3 MDI1N																																								
7	LAN3 MDI3P	8	LAN3 MDI3N																																								



3.6 LAN Connector (LAN2)

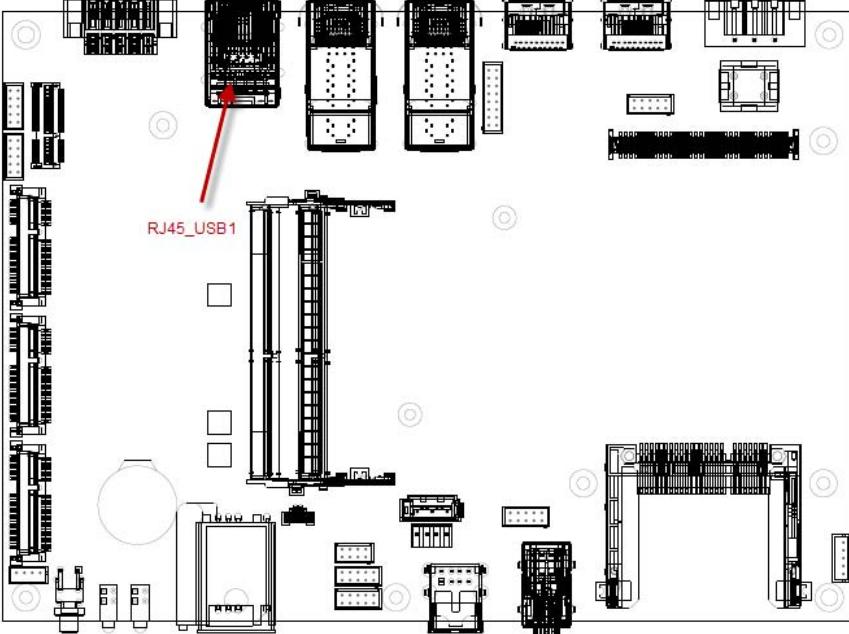
Connector size	32 Pin																																				
Connector type	RJ45+LED																																				
Connector location	LAN2																																				
Connector pin definition	 <p>LAN/PoE5</p>  <p>LAN/PoE4</p>																																				
	<p>PoE/LAN4</p> <table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Pin</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>LAN4 MDI0P</td> <td>2</td> <td>LAN4 MDI0N</td> </tr> <tr> <td>3</td> <td>LAN4 MDI1P</td> <td>4</td> <td>LAN4 MDI2P</td> </tr> <tr> <td>5</td> <td>LAN4 MDI2N</td> <td>6</td> <td>LAN4 MDI1N</td> </tr> <tr> <td>7</td> <td>LAN4 MDI3P</td> <td>8</td> <td>LAN4 MDI3N</td> </tr> </tbody> </table> <p>PoE/LAN5</p> <table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Pin</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>LAN5 MDI0P</td> <td>2</td> <td>LAN5 MDI0N</td> </tr> <tr> <td>3</td> <td>LAN5 MDI1P</td> <td>4</td> <td>LAN5 MDI2P</td> </tr> <tr> <td>5</td> <td>LAN5 MDI2N</td> <td>6</td> <td>LAN5 MDI1N</td> </tr> </tbody> </table>	Pin	Signal	Pin	Signal	1	LAN4 MDI0P	2	LAN4 MDI0N	3	LAN4 MDI1P	4	LAN4 MDI2P	5	LAN4 MDI2N	6	LAN4 MDI1N	7	LAN4 MDI3P	8	LAN4 MDI3N	Pin	Signal	Pin	Signal	1	LAN5 MDI0P	2	LAN5 MDI0N	3	LAN5 MDI1P	4	LAN5 MDI2P	5	LAN5 MDI2N	6	LAN5 MDI1N
Pin	Signal	Pin	Signal																																		
1	LAN4 MDI0P	2	LAN4 MDI0N																																		
3	LAN4 MDI1P	4	LAN4 MDI2P																																		
5	LAN4 MDI2N	6	LAN4 MDI1N																																		
7	LAN4 MDI3P	8	LAN4 MDI3N																																		
Pin	Signal	Pin	Signal																																		
1	LAN5 MDI0P	2	LAN5 MDI0N																																		
3	LAN5 MDI1P	4	LAN5 MDI2P																																		
5	LAN5 MDI2N	6	LAN5 MDI1N																																		

	7	LAN5 MDI3P	8	LAN5 MDI3N	
Connector map	<p>The diagram shows a top-down view of a computer motherboard. A red arrow points to a blue rectangular connector labeled 'LAN2' located on the right side of the board. Above it, another blue rectangular connector is labeled 'LAN5'. Various other components like RAM, chips, and heat sinks are visible around the connectors.</p>				

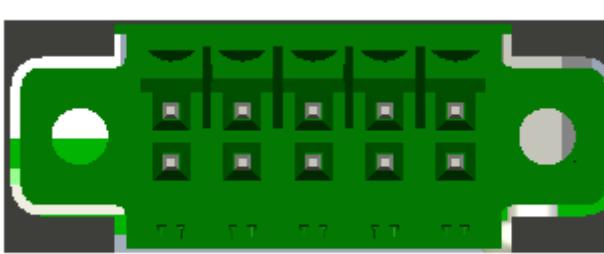
3.7 LAN + USB 3.0 Connector

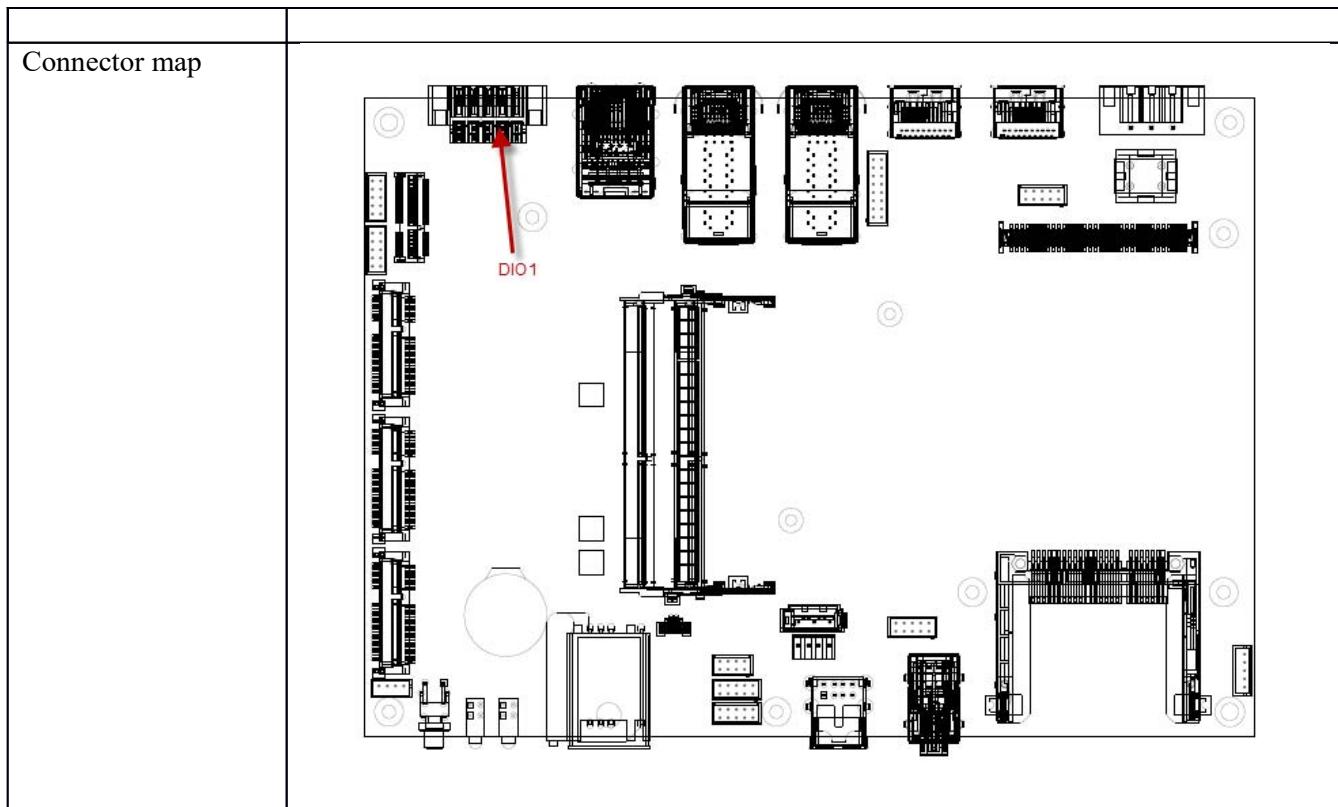
Connector size	28 Pin																																																							
Connector type	RJ45+LED+USB3.0																																																							
Connector location	RJ45 USB1																																																							
Connector pin definition	LAN1 <table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Pin</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>LAN1 MDI0P</td> <td>2</td> <td>LAN1 MDI0N</td> </tr> <tr> <td>3</td> <td>LAN1 MDI1P</td> <td>4</td> <td>LAN1 MDI2P</td> </tr> <tr> <td>5</td> <td>LAN1 MDI2N</td> <td>6</td> <td>LAN1 MDI1N</td> </tr> <tr> <td>7</td> <td>LAN1 MDI3P</td> <td>8</td> <td>LAN1 MDI3N</td> </tr> </tbody> </table> USB LOWER <table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Pin</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>5VSB</td> <td>2</td> <td>USB5 ON</td> </tr> <tr> <td>3</td> <td>USB5 OP</td> <td>4</td> <td>GND</td> </tr> <tr> <td>5</td> <td>USB SS RXN1</td> <td>6</td> <td>USB SS RXP1</td> </tr> <tr> <td>7</td> <td>GND</td> <td>8</td> <td>USB SS TXN1</td> </tr> <tr> <td>9</td> <td>USB SS TXP1</td> <td></td> <td></td> </tr> </tbody> </table> USB UPPER <table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Pin</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>5VSB</td> <td>11</td> <td>USB4 ON</td> </tr> </tbody> </table>				Pin	Signal	Pin	Signal	1	LAN1 MDI0P	2	LAN1 MDI0N	3	LAN1 MDI1P	4	LAN1 MDI2P	5	LAN1 MDI2N	6	LAN1 MDI1N	7	LAN1 MDI3P	8	LAN1 MDI3N	Pin	Signal	Pin	Signal	1	5VSB	2	USB5 ON	3	USB5 OP	4	GND	5	USB SS RXN1	6	USB SS RXP1	7	GND	8	USB SS TXN1	9	USB SS TXP1			Pin	Signal	Pin	Signal	10	5VSB	11	USB4 ON
Pin	Signal	Pin	Signal																																																					
1	LAN1 MDI0P	2	LAN1 MDI0N																																																					
3	LAN1 MDI1P	4	LAN1 MDI2P																																																					
5	LAN1 MDI2N	6	LAN1 MDI1N																																																					
7	LAN1 MDI3P	8	LAN1 MDI3N																																																					
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1	5VSB	2	USB5 ON																																																					
3	USB5 OP	4	GND																																																					
5	USB SS RXN1	6	USB SS RXP1																																																					
7	GND	8	USB SS TXN1																																																					
9	USB SS TXP1																																																							
Pin	Signal	Pin	Signal																																																					
10	5VSB	11	USB4 ON																																																					

	12	USB4 OP	13	GND
	14	USB SS RXN0	15	USB SS RXP0
	16	GND	17	USB SS TXN0
	18	USB SS TXP0		

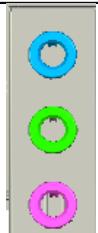
Connector map	
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3.8 DIO Connector

Connector size	2x5=10PIN(Male) pitch:3.5mm																								
Connector type	90D Terminal Block																								
Connector location	DIO1																								
Connector pin definition	 <table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Pin</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>GND</td> <td>6</td> <td>GND</td> </tr> <tr> <td>2</td> <td>DO 1</td> <td>7</td> <td>DI 1</td> </tr> <tr> <td>3</td> <td>DO 2</td> <td>8</td> <td>DI 2</td> </tr> <tr> <td>4</td> <td>DO 3</td> <td>9</td> <td>DI 3</td> </tr> <tr> <td>5</td> <td>DO 4</td> <td>10</td> <td>DI 4</td> </tr> </tbody> </table>	Pin	Signal	Pin	Signal	1	GND	6	GND	2	DO 1	7	DI 1	3	DO 2	8	DI 2	4	DO 3	9	DI 3	5	DO 4	10	DI 4
Pin	Signal	Pin	Signal																						
1	GND	6	GND																						
2	DO 1	7	DI 1																						
3	DO 2	8	DI 2																						
4	DO 3	9	DI 3																						
5	DO 4	10	DI 4																						



3.9 AUDIO Connector

Connector size	34 Pin																				
Connector type	AUDIO PHONE JACK																				
Connector location	AUDIO1																				
Connector pin definition	 <table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>GND</td> </tr> <tr> <td>2</td> <td>MIC OUT R</td> </tr> <tr> <td>3</td> <td>MIC JD</td> </tr> <tr> <td>4</td> <td>GND</td> </tr> <tr> <td>5</td> <td>MIC OUT L</td> </tr> <tr> <td>22</td> <td>FRONT OUT R</td> </tr> <tr> <td>23</td> <td>FRONT JD</td> </tr> <tr> <td>24</td> <td>GND</td> </tr> <tr> <td>25</td> <td>FRONT OUT L</td> </tr> </tbody> </table>	Pin	Signal	1	GND	2	MIC OUT R	3	MIC JD	4	GND	5	MIC OUT L	22	FRONT OUT R	23	FRONT JD	24	GND	25	FRONT OUT L
Pin	Signal																				
1	GND																				
2	MIC OUT R																				
3	MIC JD																				
4	GND																				
5	MIC OUT L																				
22	FRONT OUT R																				
23	FRONT JD																				
24	GND																				
25	FRONT OUT L																				

	32	LINE IN R	
	33	LINE IN JD	
	34	GND	
	35	LINE IN L	

Connector map

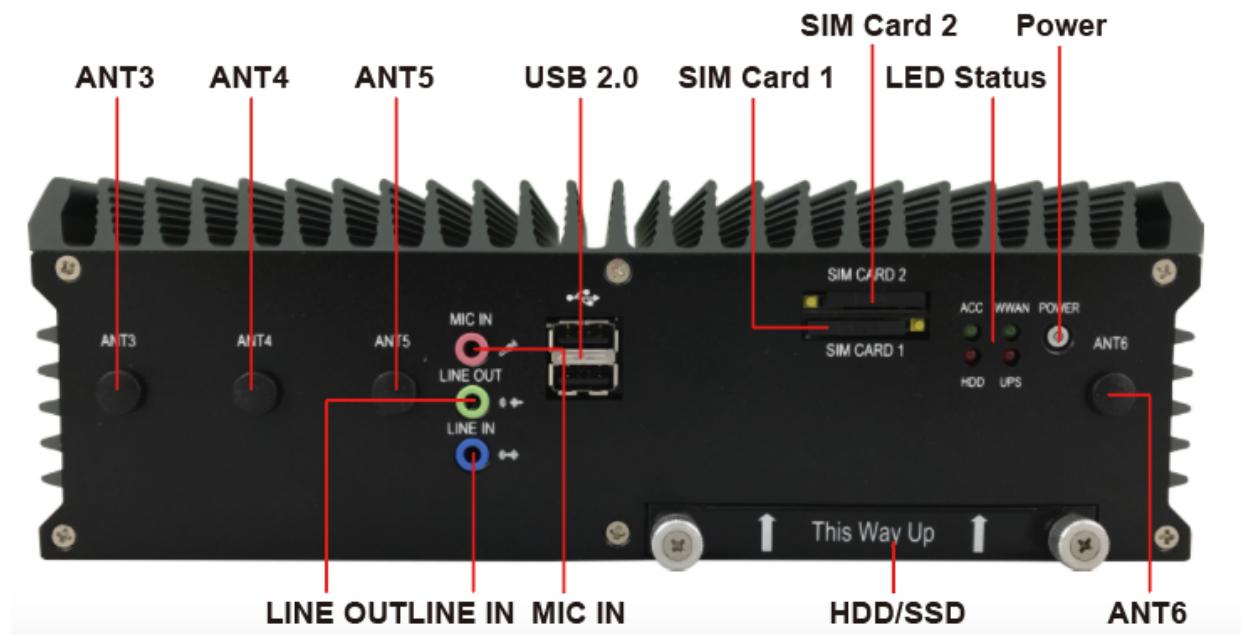
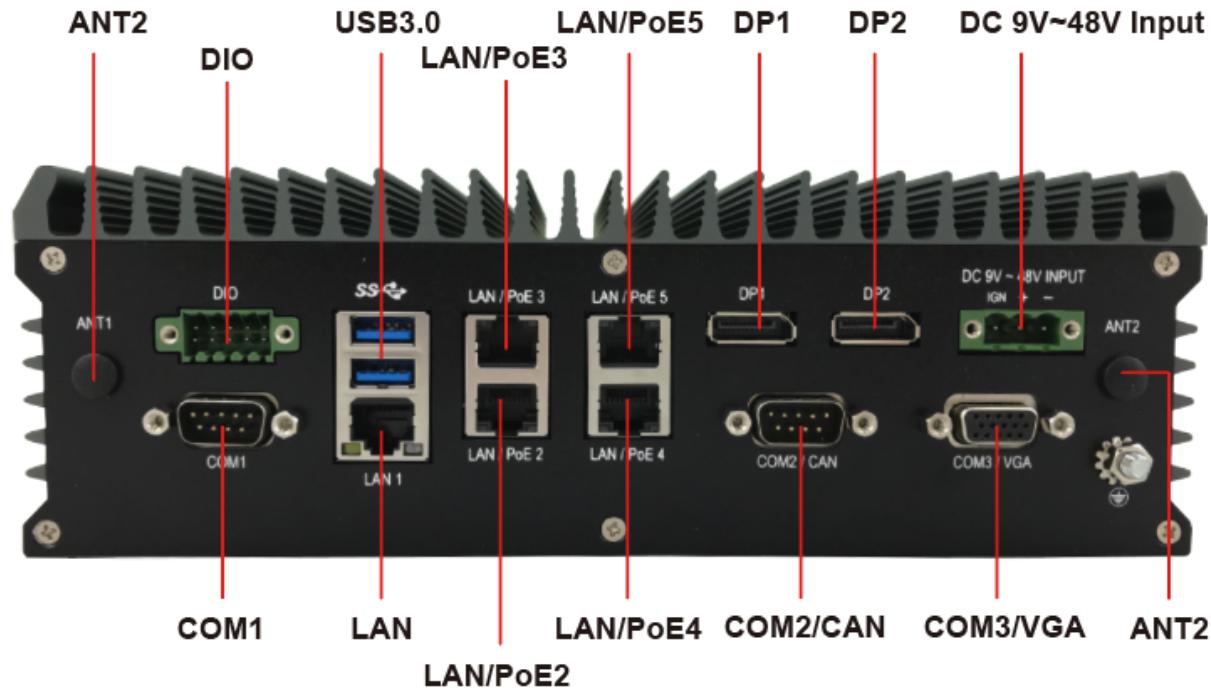
The diagram shows a top-down view of a computer motherboard with various components and connectors. A red arrow points to a specific black rectangular connector labeled "ADUIO1". This connector is located near the bottom right of the board, below the RAM slots and above the M.2 SSD slot. It has a standard 24-pin ATX power connector attached to it.

4.0

SYSTEM INSTALLATION

4.0 SYSTEM INSTALLATION

4.1 System Introduction



4.2 Opening Chassis

Step1. Unscrew the six screws of the Back Cover as shown in the picture.



Step2. Unscrew the three screws of the Front Panel as shown in the picture.



Step3. Unscrew the three screws of the Rear Panel as shown in the picture.

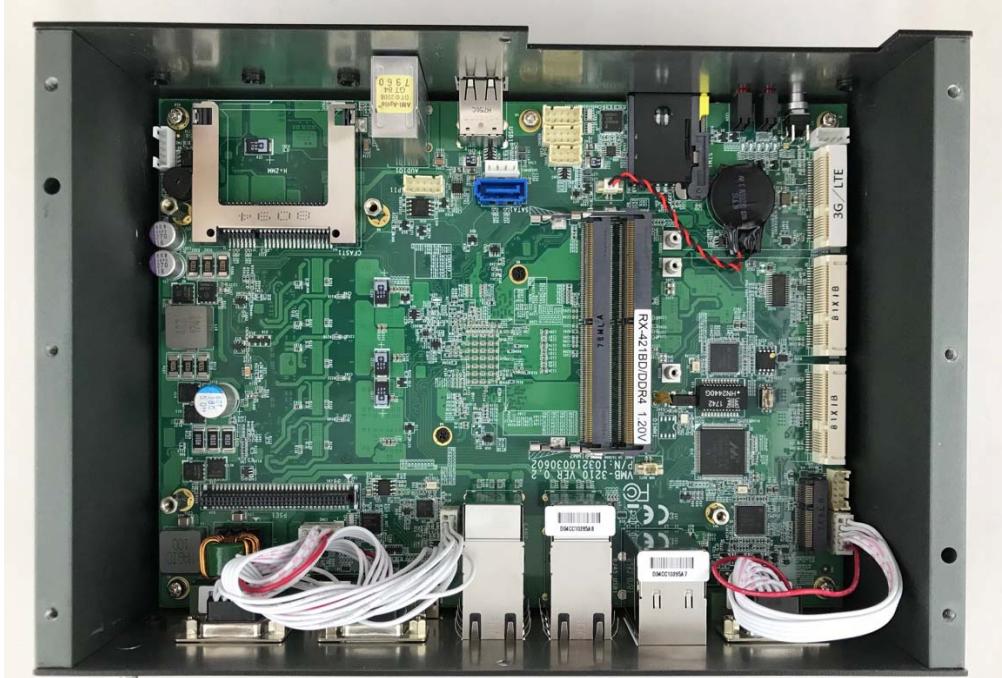


Step4. Open Bottom Cover as shown in the picture.

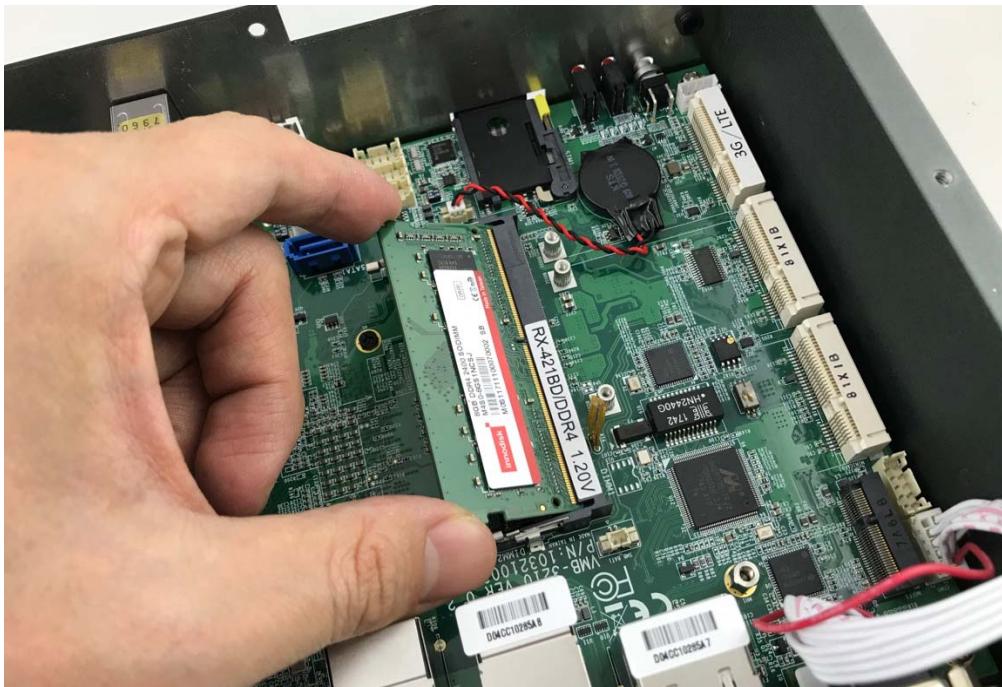


4.3 Installing Memory

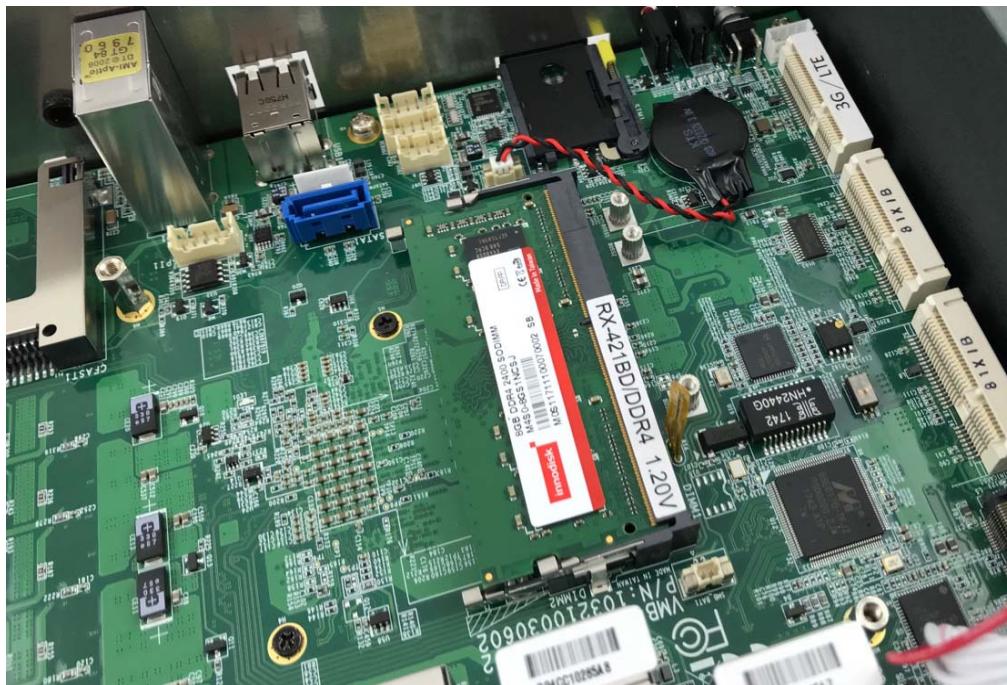
Step1. Put Memory on this place as shown in the picture.



Step2. Hold the Memory with its notch aligned with the Memory socket of the board and insert it at a 30-degree angle into the socket as shown in the picture.

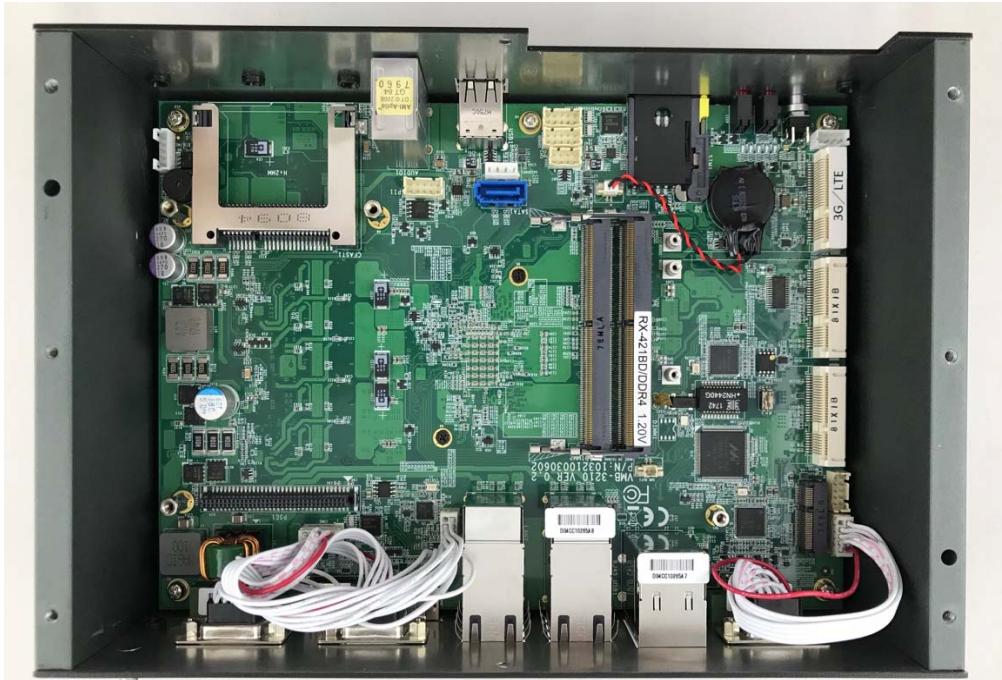


Step3. Press down on the Memory so that the tabs of the socket lock on both sides of the module as shown in the picture.

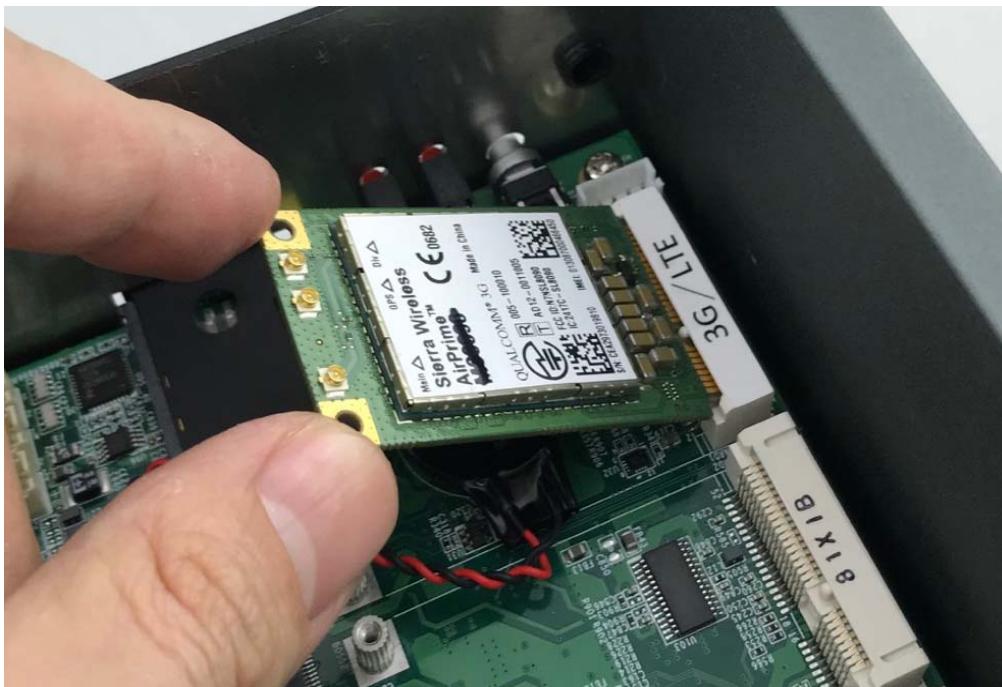


4.4 Installing MINI PCIe Expansion Card (Minicard 1, 3G/LTE)

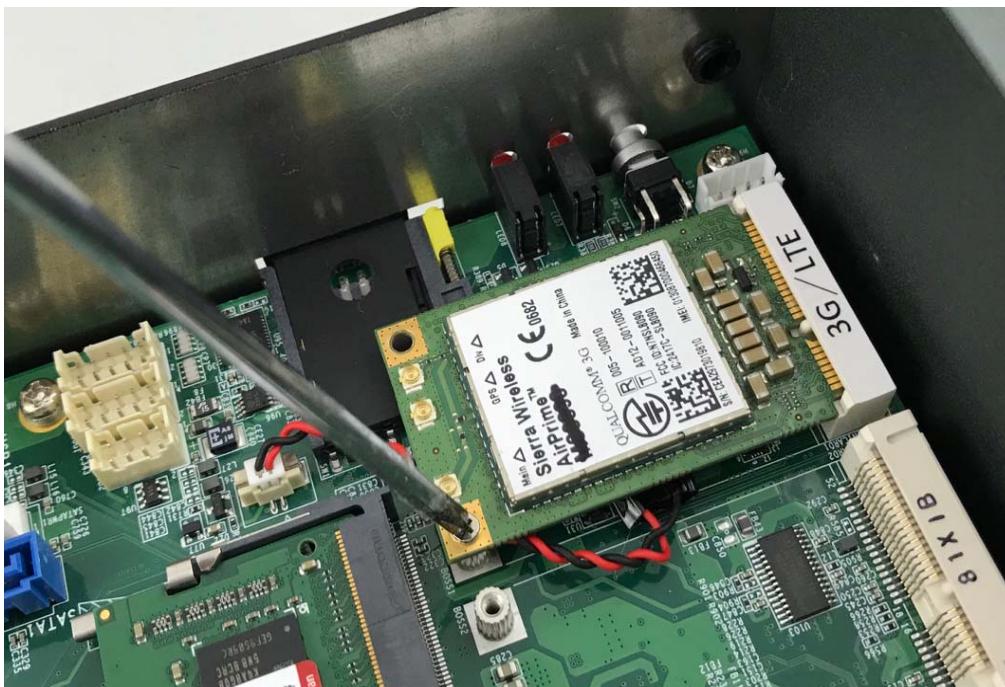
Step 1. Put MINI PCIe Expansion Card on this place as shown in the picture.



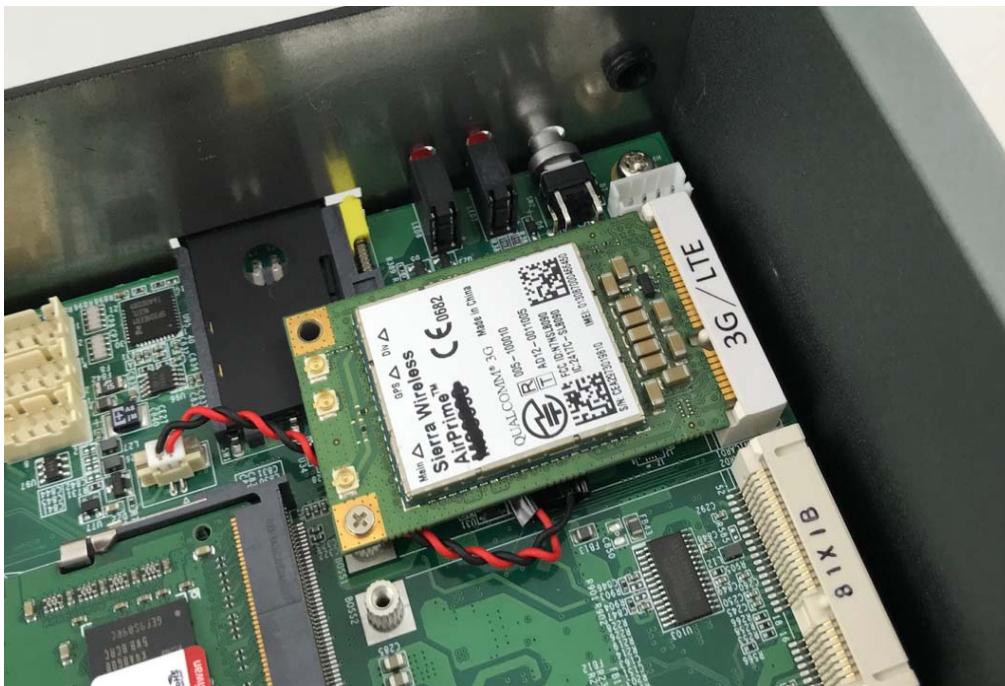
Step 2. Hold the Module with its notch aligned with the socket of the board and insert it at a 30 degree angle into the socket as shown in the picture.



Step 3. Screw one screw to the holder as shown in the picture.

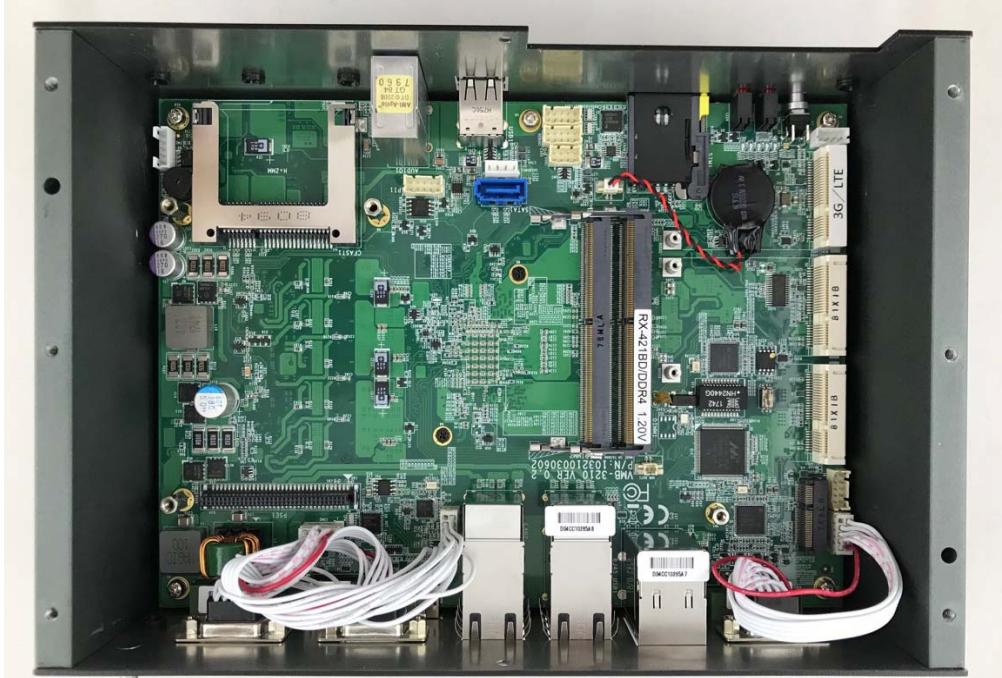


Step 4. Done as shown in the picture.

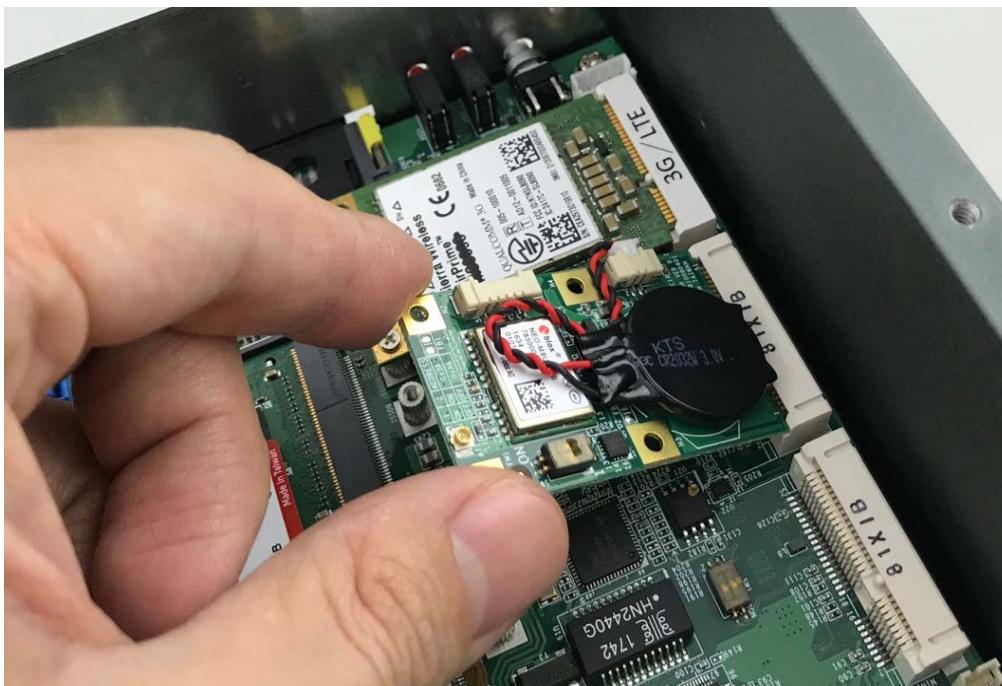


4.5 Installing MINI PCIe Expansion Card (MiniCard 2)

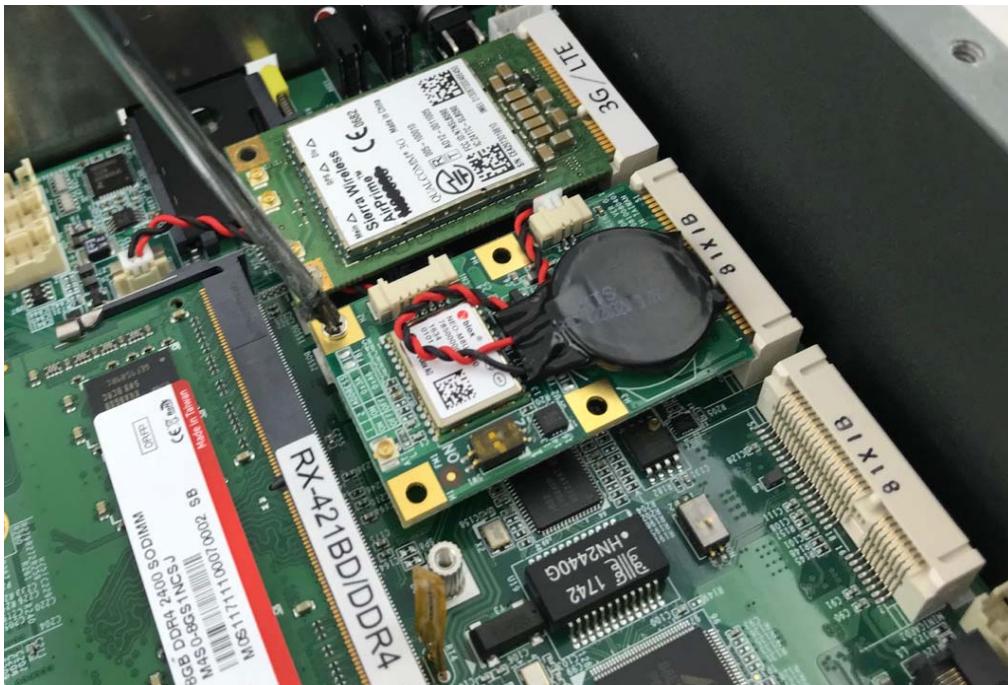
Step 1. Put MINI PCIe Expansion Card on this place as shown in the picture.



Step 2. Hold the Module with its notch aligned with the socket of the board and insert it at a 30 degree angle into the socket as shown in the picture.



Step 3. Screw one screw to the holder as shown in the picture.

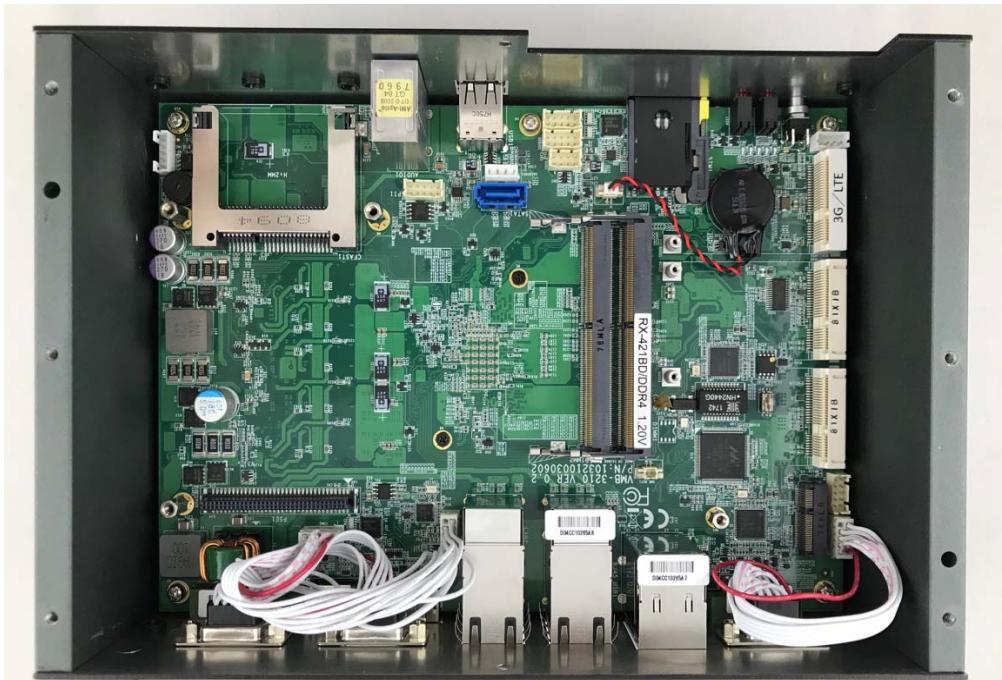


Step 4. Done as shown in the picture.

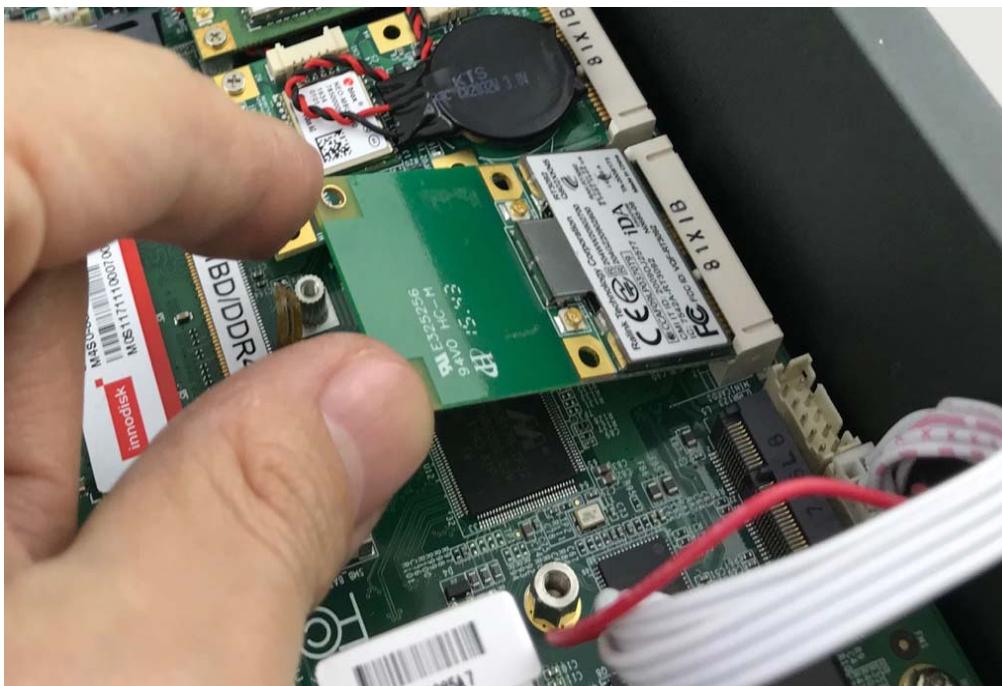


4.6 Installing MINI PCIe Expansion Card (MiniCard 3)

Step 1. Put MINI PCIe Expansion Card on this place as shown in the picture.



Step 2. Hold the Module with its notch aligned with the socket of the board and insert it at a 30 degree angle into the socket as shown in the picture.



Step 3. Screw one screw to the holder as shown in the picture.

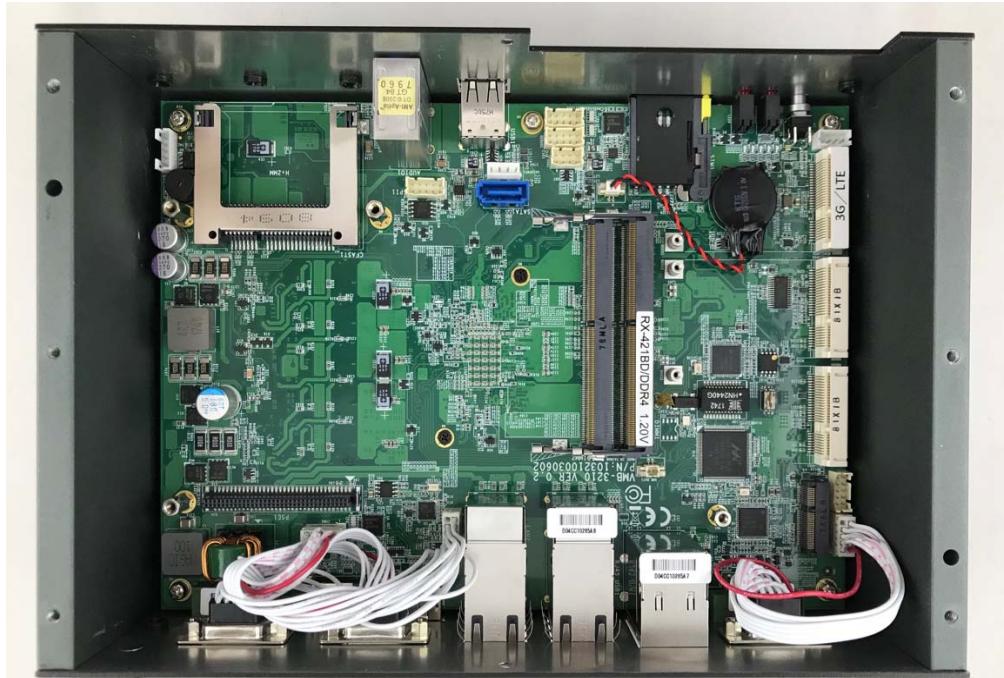


Step 4. Done as shown in the picture.



4.7 Installing M.2 Module

Step 1. Put M.2 Card on this place as shown in the picture.



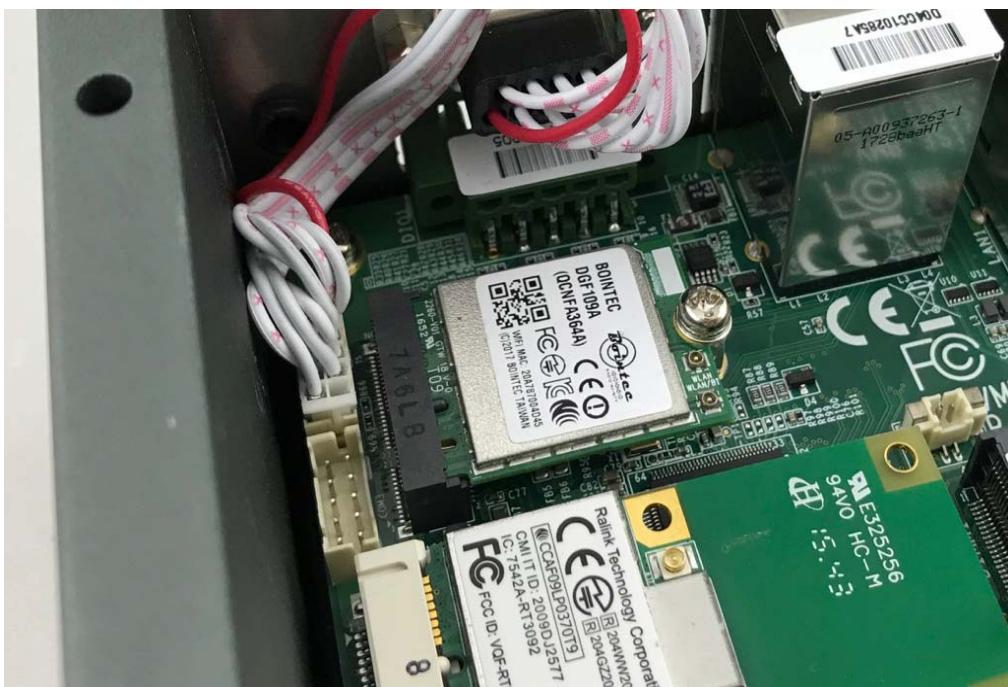
Step 2. Hold the Module with its notch aligned with the socket of the board and insert it at a 30 degree angle into the socket as shown in the picture.



Step 3. Screw one screw to the holder as shown in the picture.



Step 4. Done as shown in the picture.



4.8 Installing Internal Antenna Cable

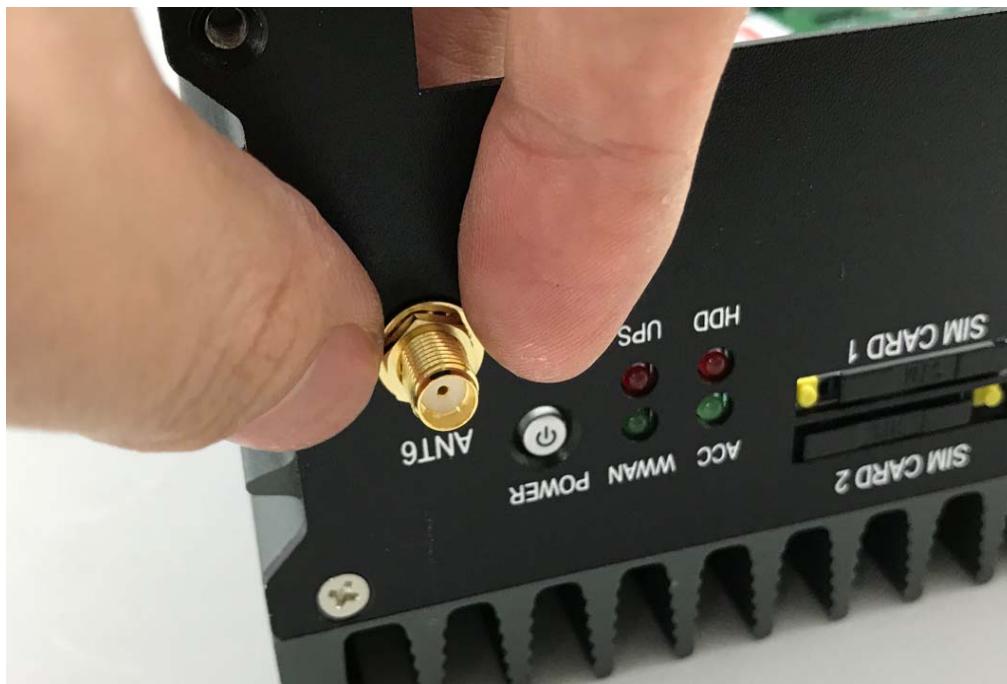
Step 1. Take the SMA Connector and Plug into IO Panel as shown in the picture.



Step 2. Put the Washer into the SMA Connector as shown in the picture.



Step 3. Put the O-ring to SMA Connector and tighten as shown in the picture.



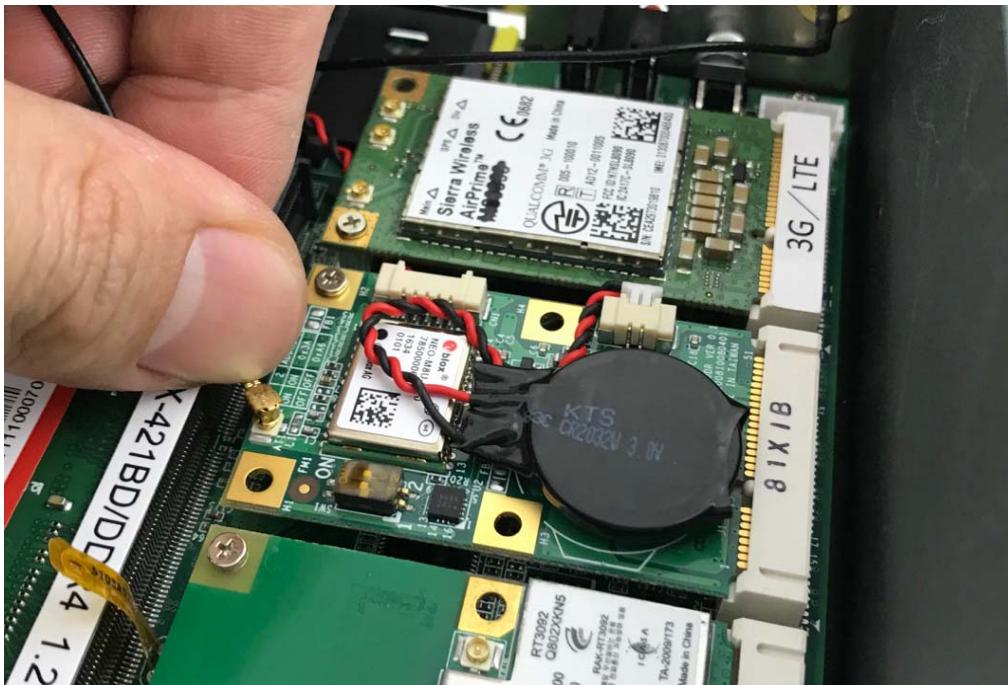
Step 4. Done as shown in the picture.



Step 5. Take the Ipxe Connector and press on the 3G/LTE module as shown in the picture.



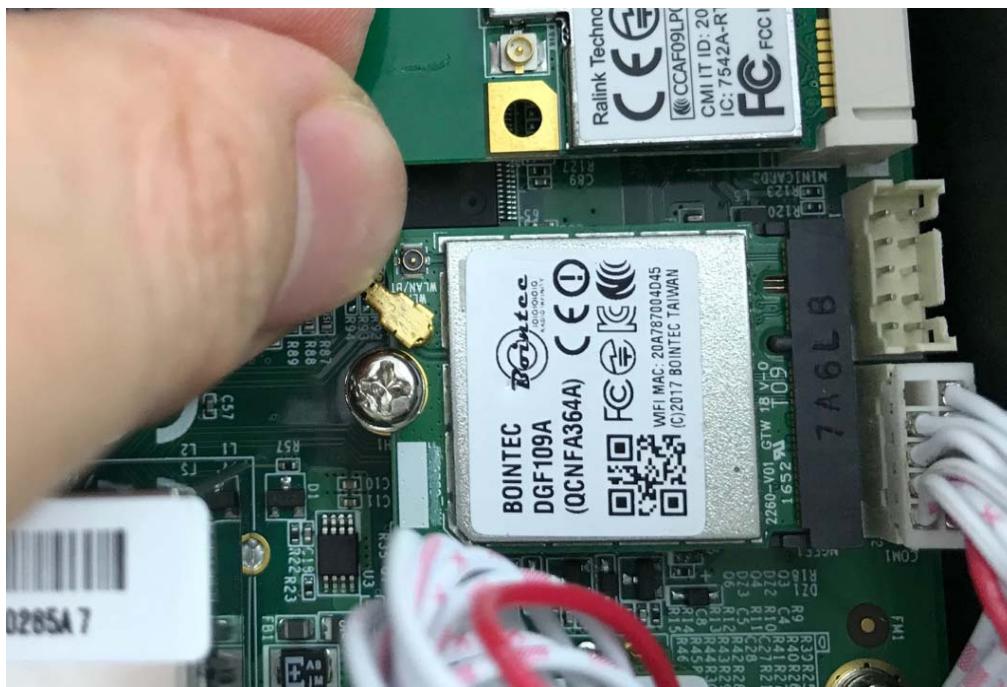
Step 6. Take the Ipxe Connector and press on the GPS module as shown in the picture.



Step 7. Take the Ipxe Connector and press on the wifi module as shown in the picture.



Step 8. Take the Ipxe Connector and press on the M.2 module as shown in the picture.



4.9 Installing SIM Card

Step 1. Use thin stick to push the button as shown in the picture.



Step 2. Take the holder away from front panel as shown in the picture.



Step 3. Put your SIM Card into the holder and take the SIM card holder and Insert it into the socket as shown in the picture.



Caution:

When insert a SIM card to the SIM card holder, please remove the main power at input to avoid undetectable SIM card.

4.10 Installing HDD

Step 1. Put the HDD into HDD Holder as shown in the picture.



Step 2. Screw two screws on both side as shown in the picture.



Step 3. Push the HDD Holder into the socket as shown in the picture.



Step 4. Fully insert the HDD Holder into the socket until a “click” is heard as shown in the picture.

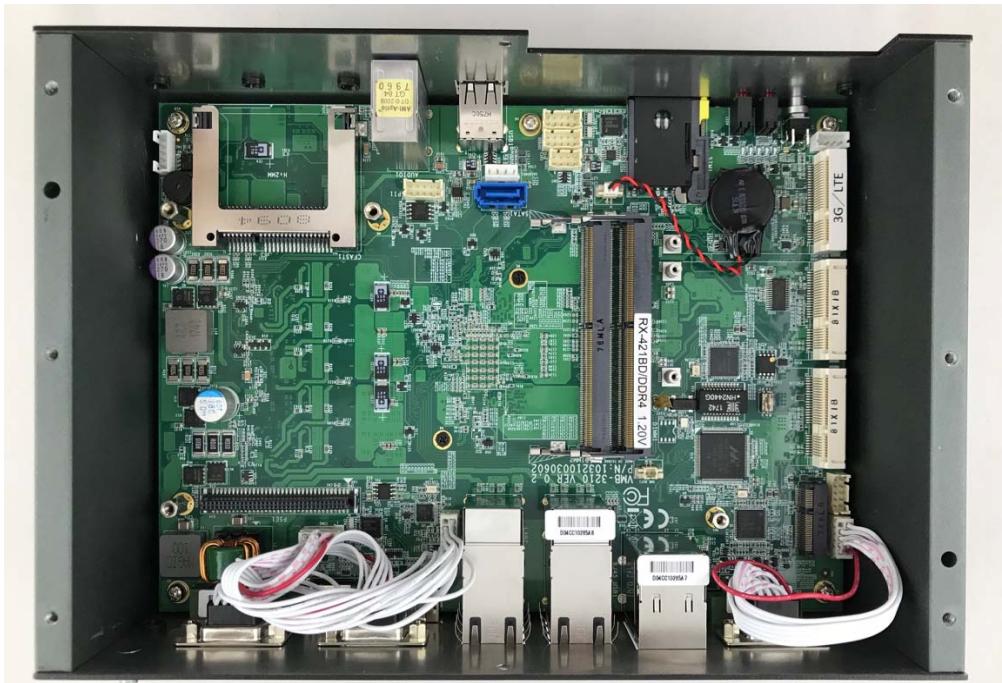


Step 5. Tighten to Storage Bracket screws as shown in the picture.



4.11 Installing CFast Card Module

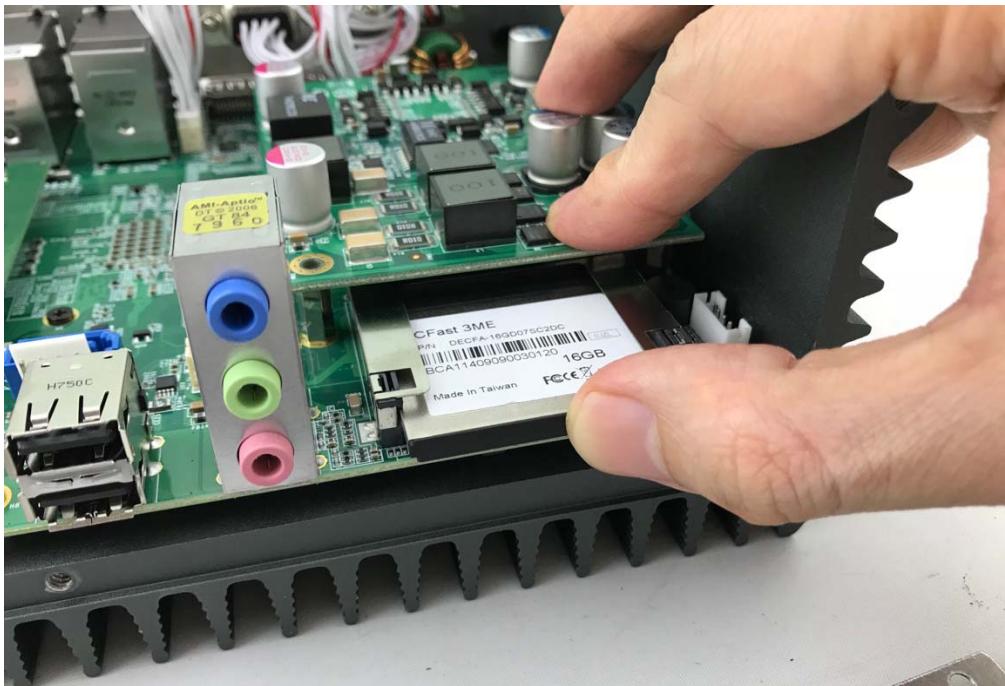
Step 1. Put CFast Card on this place as shown in the picture.



Step2. Unscrew the three screws of the Front Panel as shown in the picture.



Step 3. Take CFast Card into the holder as shown in the picture.



Step 4. Fully insert the CFast Card into the socket until a “click” is heard as shown in the picture.



Step 5. Put the Front Panel back and screw the three screws of it as shown in the picture. Unscrew the three screws of the Front Panel as shown in the picture.

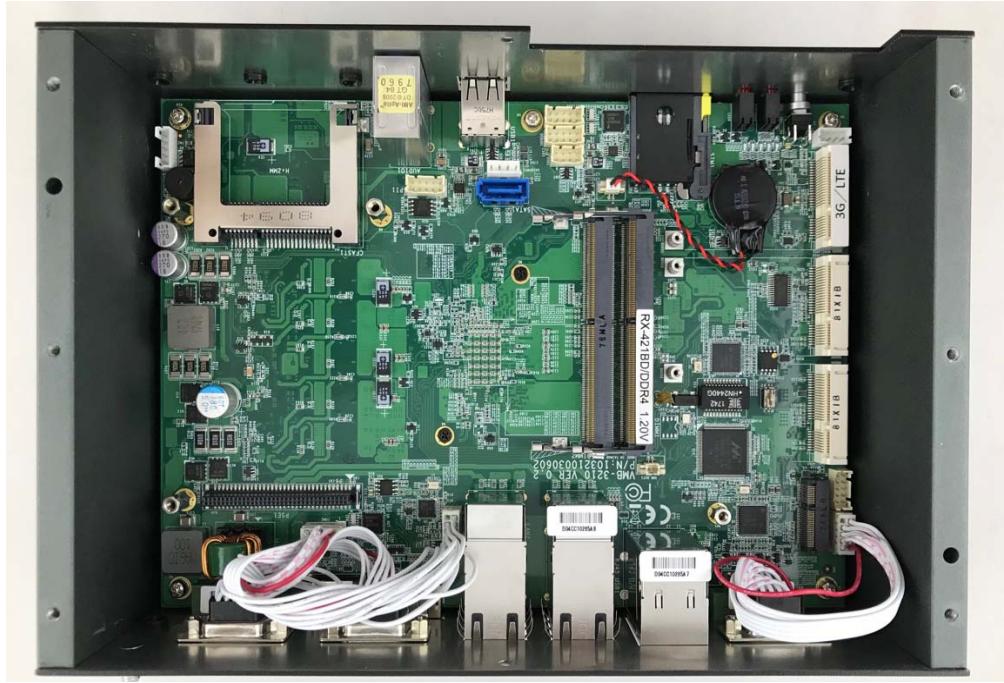


Step 5. Done as shown in the picture.

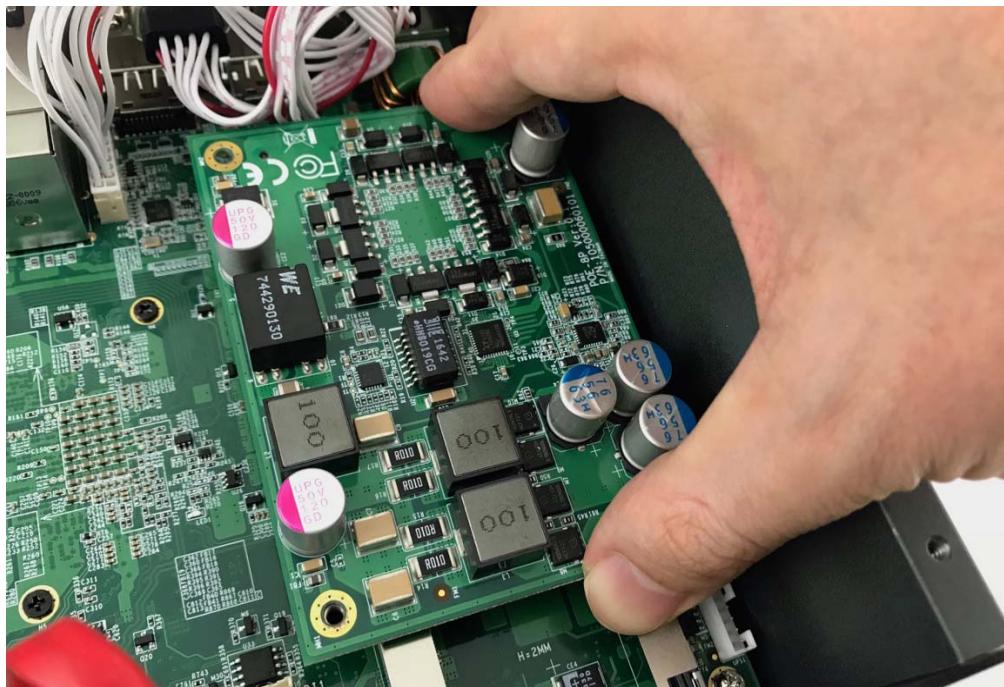


4.12 Installing POE Module

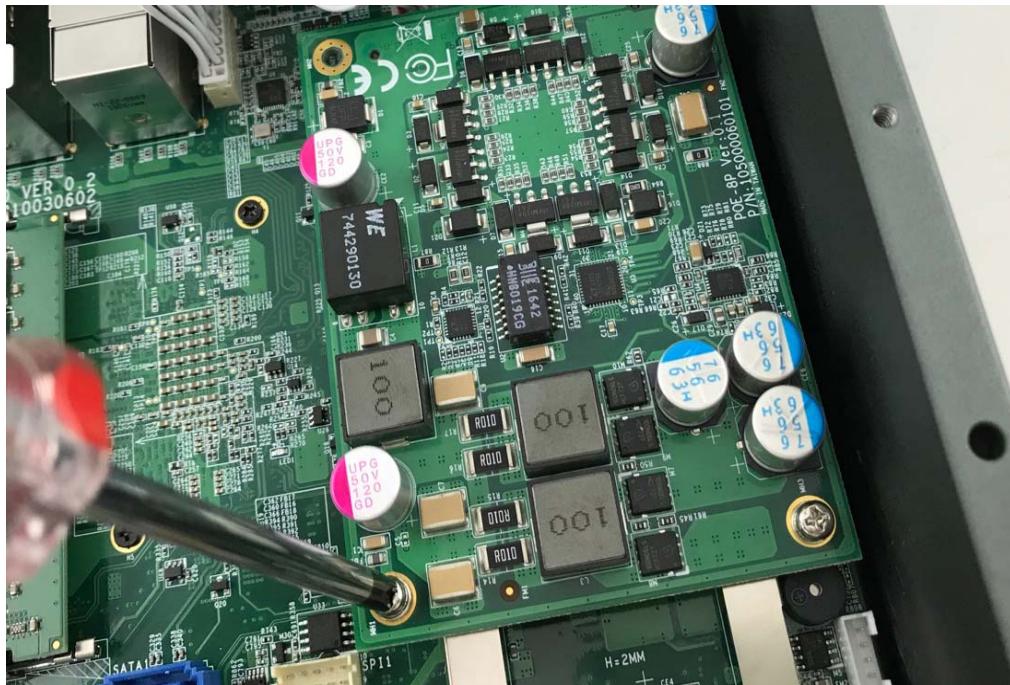
Step 1. Put POE Module on this place as shown in the picture.



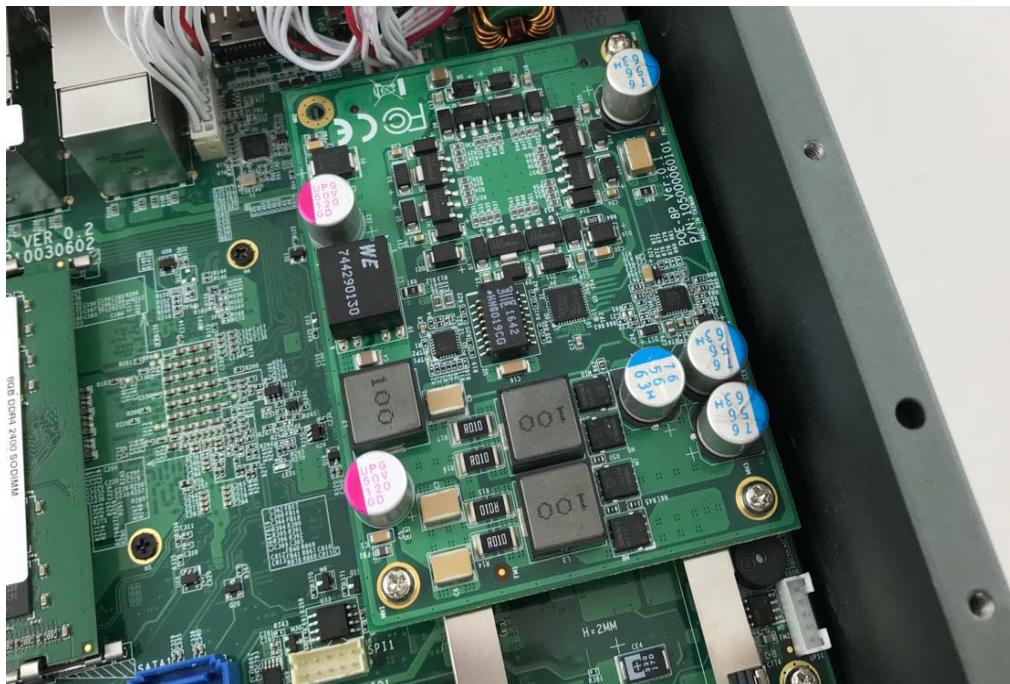
Step 4. Put the POE-8P module on the motherboard as shown in the picture



Step 5. Screw the three screws as shown in the picture



Step 6. Done as shown in the picture



5.0 BIOS

5.0 BIOS

5.1 Enter The BIOS

Power on the computer and the system will start POST (Power On Self Test) process. When the message below appears on the screen, press (DEL) key to enter Setup.

Press DEL to enter SETUP

If the message disappears before you respond and you still wish to enter Setup, restart the system by turning it OFF and On or pressing the RESET button. You may also restart the system by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys.

Important

- The items under each BIOS category described in this chapter are under continuous update for better system performance. Therefore, the description may be slightly different from the latest BIOS and should be held for reference only.
- Upon boot-up, the 1st line appearing after the memory count is the BIOS version. It is usually in the format.

ABOX-5000(P)G1 Mainboard V1.0 073109 where :

1st digit refers to BIOS maker as A = AMI, W = AWARD, and P = PHOENIX

2nd - 5th digit refers to the model number.

6th digit refers to the chipset as I = Intel, N = NVIDIA, A = AMD and V = VIA.

7th - 8th digit refers to the customer as MS = all standard customers.

V1.0 refers to the BIOS was released.

073109 refers to the date this BIOS was released.

Control Keys

Power on the computer and the system will start POST (Power On Self Test) process. When the message below appears on the screen, press (DEL) key to enter Setup.

<↑>	Move to the previous item
<↓>	Move to the next item
<↔>	Move to the item in the left hand
<→>	Move to the item in the right hand
<Enter>	Select the item
<Esc>	Jumps to the Exit menu or returns to the main menu from a submenu
<+/PU>	Increase the numeric value or make changes
<-/PD>	Decrease the numeric value or make changes
<F1>	General Help
<F3>	Load Optimized Defaults
<F4>	Save all the CMOS changes and exit

Getting Help

After entering the Setup menu, the first menu you will see is the Main Menu.

Main Menu

The main menu lists the setup functions you can make changes to. You can use the arrow keys ($\uparrow\downarrow$) to select the item. The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Sub-Menu

If you find a right pointer symbol (as shown in the right view) appears to the left of certain fields that means a sub-menu can be launched from this field. A sub-menu contains additional options for a field parameter. You can use arrow keys ($\uparrow\downarrow$) to highlight the field and press <Enter> to call up the sub-menu. Then you can use the control keys to enter values and move from field to field within a sub-menu. If you want to return to the main menu, just press the <Esc>.

General Help <F1>

The BIOS setup program provides a General Help screen. You can call up this screen from any menu by simply pressing <F1>. The Help screen lists the appropriate keys to use and the possible selections for the highlighted item. Press <Esc> to exit the Help screen.

5.2 Main

Time Setting

Aptio Setup Utility - Copyright (C) 2017 American Megatrends	
Main	Advanced Chipset Security Boot Save & Exit
BIOS Information	
BIOS Vendor	American Megatrends
Core Version	5.12
Compliance	UEFI 2.5; PI 1.4
BIOS Version	R1.00-OC
Motherboard Serial Number	N/A
Firmware Version	V003
Build Date and Time	09/07/2017 16:59:19
Access Level	Administrator
Microcode Revision	A6
IGFX VBIOS Version	1031
Memory RC Version	2.0.0.6
Total Memory	8192 MB
Memory Frequency	2133 MHZ
ME FW Version	11.6.27.3264
System Date	[Thu 10/26/2017]
System Time	[14:31:05]

» System Date

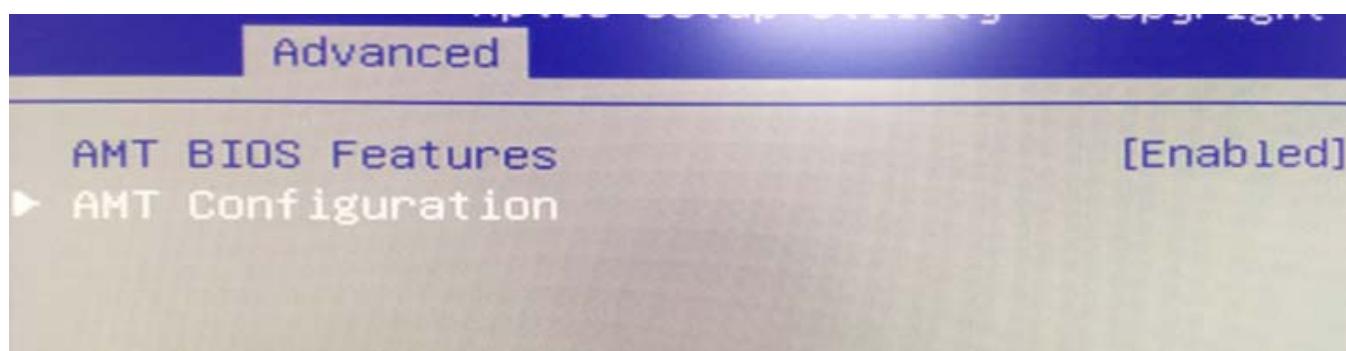
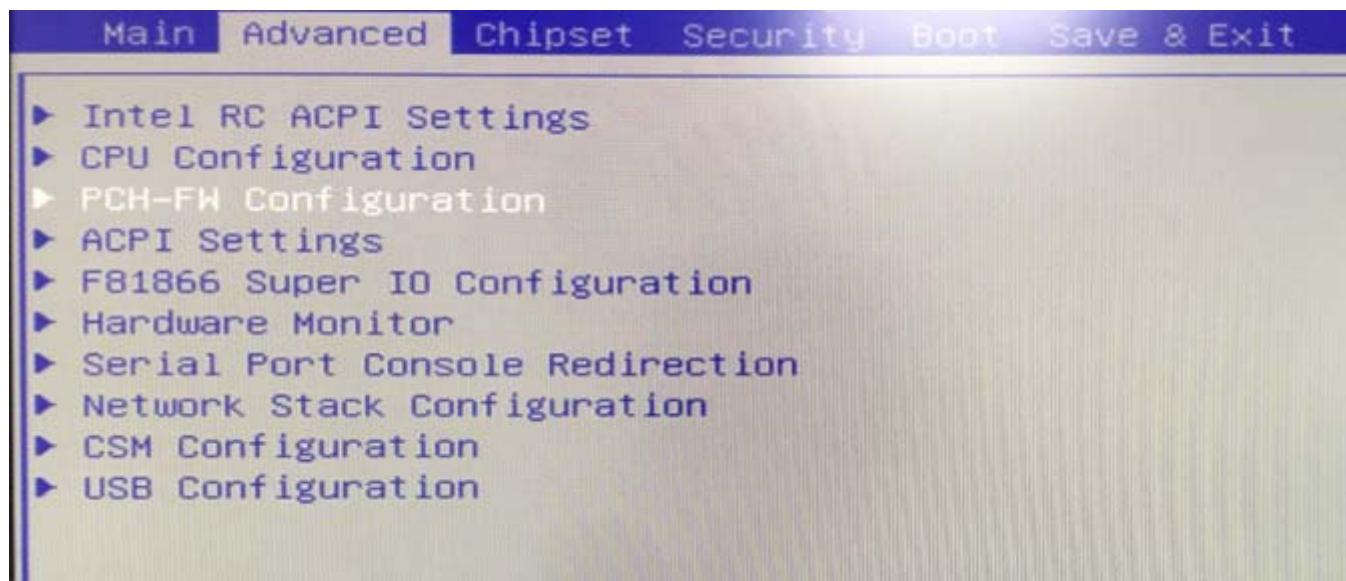
This setting allows you to set the system Date. The time format is <Day> <Month> <Date> <Year>.

» System Time

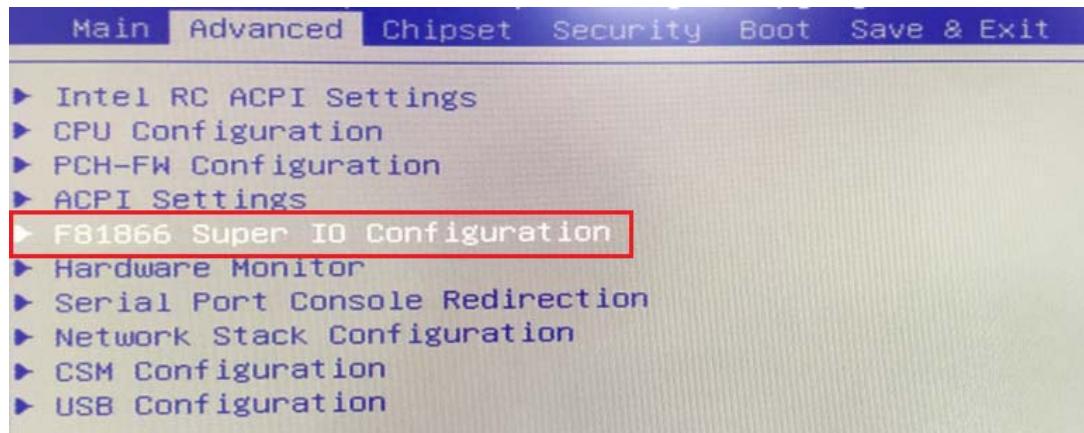
This setting allows you to set the system time. The time format is <Hour> <Minute> <Second>.

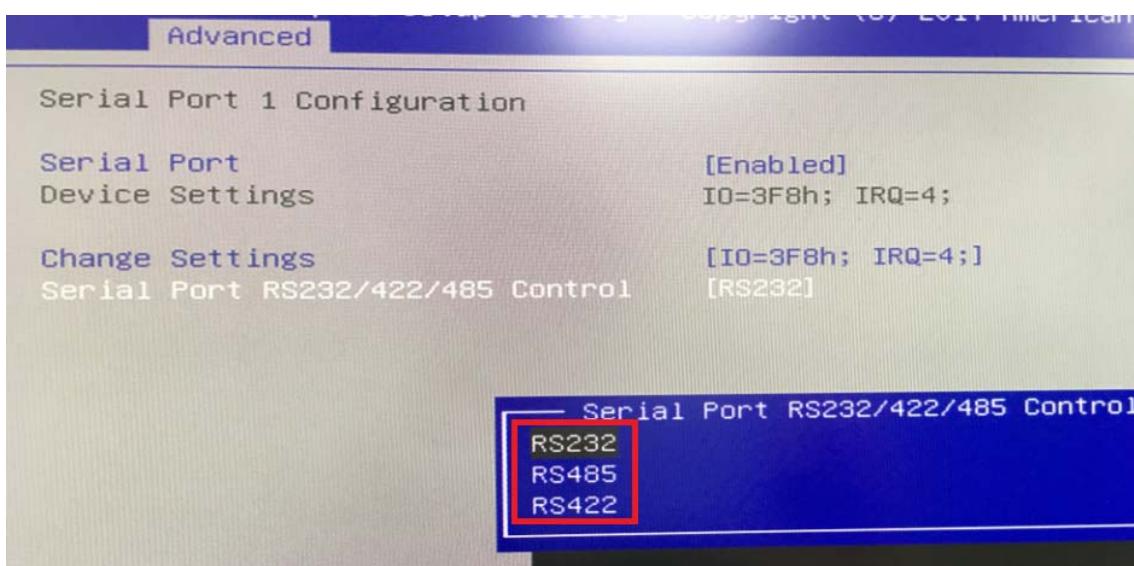
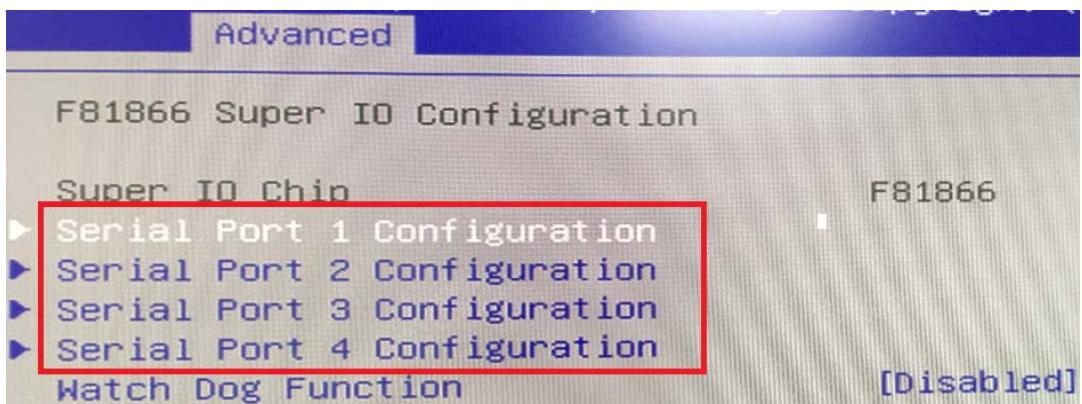
5.3 Advanced

AMT Configuration



Serial Port Configuration

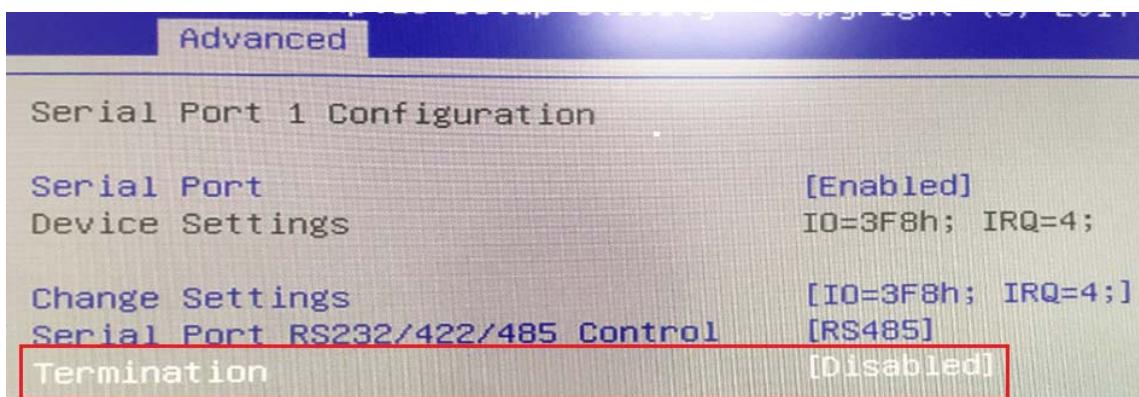




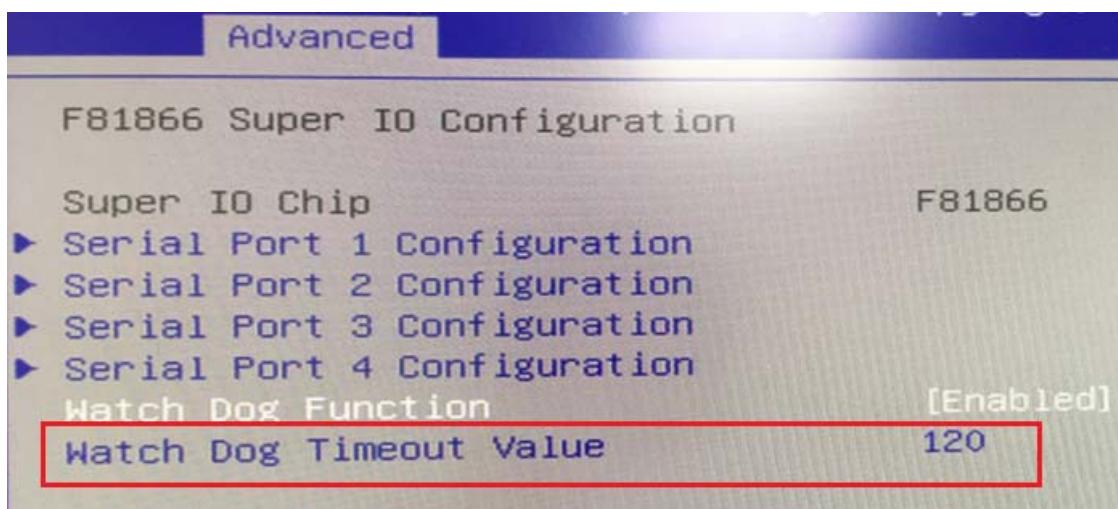
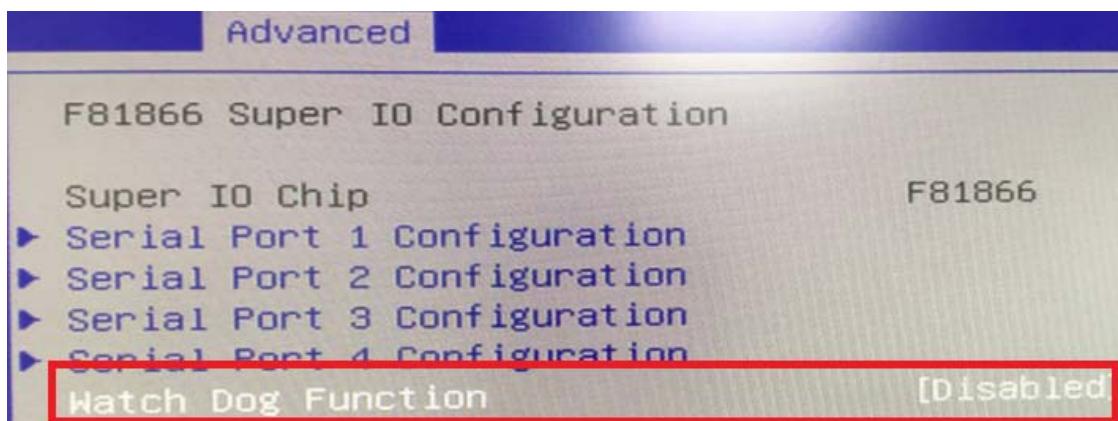
» Serial Port 1/2/3/4 Enable or Disable

Select an Enable or Disable for the specified serial ports.

» COM1 RS232/422/485 Select

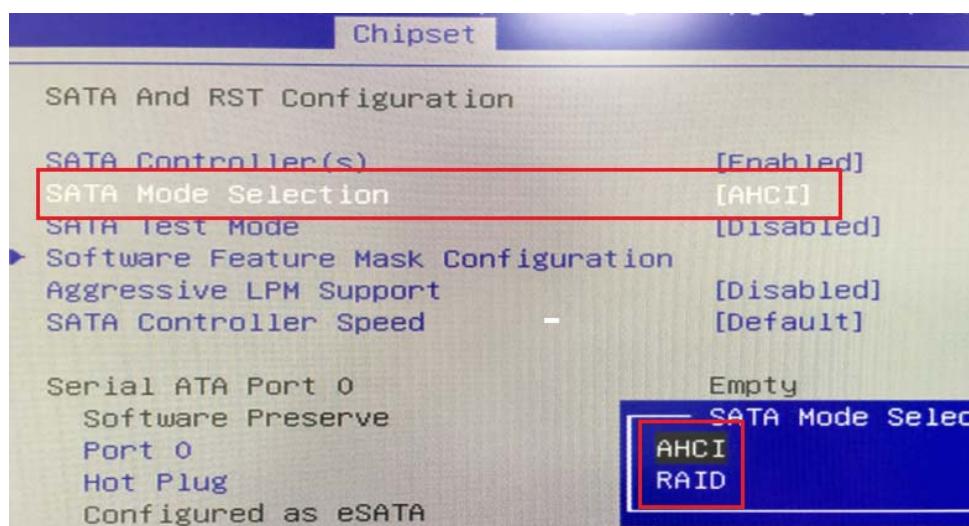
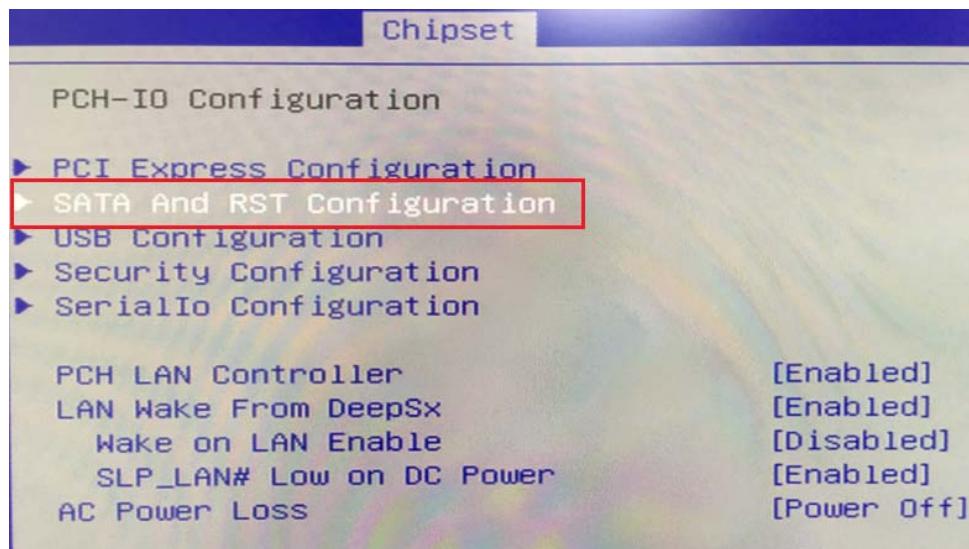


» Watch Dog Function



5.4 Chipset

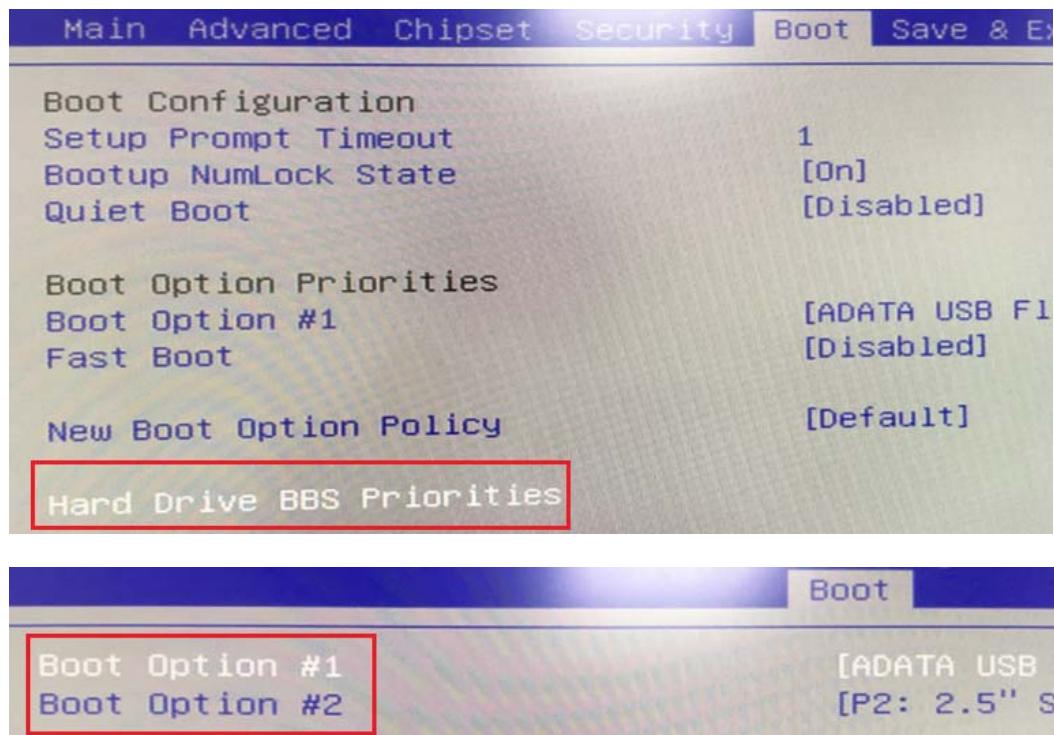
RAID Mode



SATA And RST Configuration	
SATA Controller(s)	[Enabled]
SATA Mode Selection	[RAID]
SATA Test Mode	[Disabled]
RAID Device ID	[Client]
Software Feature Mask Configuration	
Aggressive LPM Support	[Disabled]
SATA Controller Speed	[Default]
Serial ATA Port 0	Empty
Software Preserve	Unknown
Port 0	[Enabled]
Hot Plug	[Disabled]
Configured as eSATA	Hot Plug su
Spin Up Device	[Disabled]
SATA Device Type	[Solid Stat
Topology	[ISATA]
SATA Port 0 DevSlp	[Disabled]
DITO Configuration	[Disabled]

Software Feature Mask Configuration	
HDD Unlock	[Enabled]
LED Locate	[Enabled]
Use RST Legacy OROM	[Enabled]
RAIDO	[Enabled]
RAID1	[Disabled]
RAID10	[Disabled]
RAIDS5	[Disabled]
Intel Rapid Recovery Technology	[Enabled]
OROM UI and BANNER	[Enabled]
IRRT Only on eSATA	[Enabled]
Smart Response Technology	[Enabled]
OROM UI Normal Delay	[2 secs]
RST Force Form	[Disabled]

5.5 Boot



» 1st/2nd Boot Device

The items allow you to set the sequence of boot devices where BIOS attempts to load the disk operating system.

» Try Other Boot Devices

Setting the option to [Enabled] allows the system to try to boot from other device if the system fail to boot from the 1st/2nd boot device.

» Hard Disk Drives, CD/DVD Drives, USB Drives

These settings allow you to set the boot sequence of the specified devices.

6.0

PACKING LIST

6.0 PACKING LIST

6.1 Packing List

System

Item	Part Number	Module Name
1	763210020001	FleetPC-5-B-G215 System
2	763210020002	FleetPC-5-BP-G215 System
3	763210020003	FleetPC-5-B-G224 System
4	763210020004	FleetPC-5-BP-G224 System
5	763210020005	FleetPC-5-B-R216 System
6	763210020006	FleetPC-5-BP-R216 System
7	763210020007	FleetPC-5-B-R421 System
8	763210020008	FleetPC-5-BP-R421 System

Accessory

Picture	Part Number	Module Name	Q'ty
	326910039661	Cabling MC101-508-03G F 90D	1
	326920087061	Cabling 2x5PIN(F) pitch:3.5mm	1
	351102040110	Screw I Type M2*4L ISO NI	3
	351103040250	Screw F Type M3*4L ISO BK	4

	351103060250	Screw F Type M3*6L ISO BK	4
	351103060810	ROUND HAND SCREW W/SPRING_P3x0.5Px6L	1
	370831501000	VBOX-3150 Mount Bracket	2
	417290370250	HDD-RUBBER FOR H=7mm Silicone Rubber	1