

# GENE-BT07

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3.5" Subcompact Board

User's Manual 1<sup>st</sup> Ed

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## Packing List

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

Item	Quantity
● GENE-BT07	1
● Product CD/DVD with User's Manual (in pdf) and drivers	1

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

## About this Document

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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 [AAEON.com](http://AAEON.com) for the latest version of this document.

## Safety Precautions

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

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

17. If any of the following situations arises, please the contact our service personnel:
  - i. Damaged power cord or plug
  - ii. Liquid intrusion to the device
  - iii. Exposure to moisture
  - iv. Device is not working as expected or in a manner as described in this manual
  - v. The device is dropped or damaged
  - vi. Any obvious signs of damage displayed on the device
18. **DO NOT LEAVE THIS DEVICE IN AN UNCONTROLLED ENVIRONMENT WITH TEMPERATURES BEYOND THE DEVICE'S PERMITTED STORAGE TEMPERATURES (SEE CHAPTER 1) TO PREVENT DAMAGE.**

### **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 Main Board/ Daughter Board/ Backplane

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	○	○	○	○	○	○
<p>○: 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。</p> <p>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。</p> <p>备注: 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。</p>						

## China RoHS Requirement (EN)

Poisonous or Hazardous Substances or Elements in Products

AAEON Main Board/ Daughter Board/ Backplane

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	○	○	○	○	○	○
<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><b>Note:</b> The Environment Friendly Use Period as labeled on this product is applicable under normal usage only</p>						

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# Chapter 1

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Product Specifications

## 1.1 Specifications

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### System

- Form Factor 3.5"
- Processor Intel® Celeron® J1900 processor SoC
- System Memory 204-pin DDR3L 1333 SODIMM up to 8 GB
- Chipset Intel® Celeron® J1900 processor SoC
- Ethernet RTL8111E, RJ-45 x 2
- BIOS SPI BIOS – 8 MB flash
- Watchdog Timer Fintek F81866
- H/W Status Monitoring Fintek F81866
- RTC Intel® Celeron® J1900 processor SoC
- Expansion Interface MiniCard x 1  
SIM Card Socket x 1
- Power Requirement DC 12 V, AT mode only
- Board Size 146 x 101.6 mm (5.7" x 4")
- Gross Weight 0.4 kg (0.88 lb)
- Operating Temperature 0°C ~ 60°C (32°F ~ 140°F)
- Storage Temperature -40 ~ 80°C (-40 ~ 176°F)
- Operation Humidity 0 ~ 90% relative humidity, con-condensing

### Display

- **Chipset** Intel® Celeron® J1900 processor SoC
- **Resolution** VGA up to 2560 x 1600 @ 60 Hz  
LVDS up to 1920 x 1200 @ 60 Hz  
eDP up to 2560 x 1600 @ 60Hz
- **Output Interface** 18/24-bit Dual-Channel LVDS LCD  
Wafer connector x 1 for VGA
- **Display Combination** Dual simultaneous display

## I/O

- **Storage** Half size mSATA x 1
- **USB** USB 2.0 x 9
- **Serial Port** RS-232 x 6
- **PS/2 Port** -
- **DI/O** -
- **Audio** Realtek ALC892 codec  
Mic-in  
TPA3113, 8  $\Omega$ / 4W speaker supported



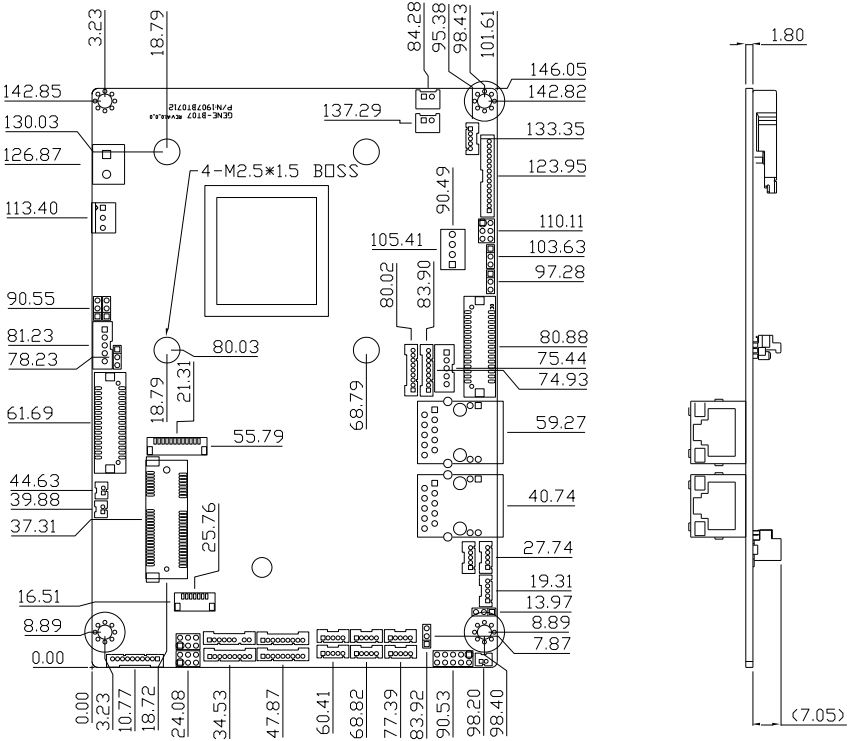
# Chapter 2

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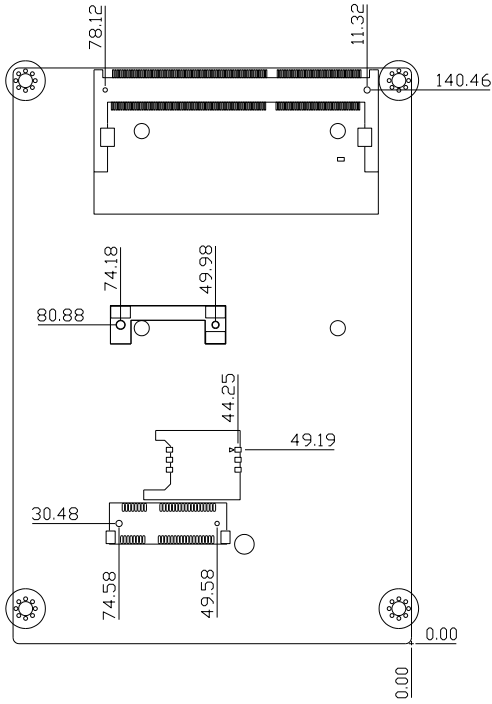
Hardware Information

## 2.1 Dimensions

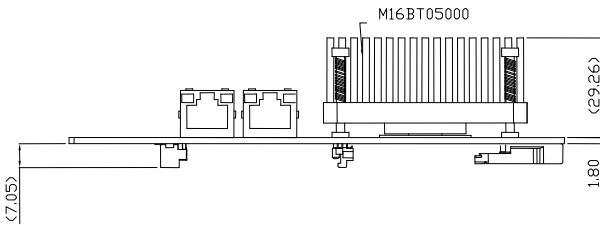
### Component side



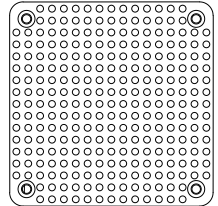
Solder side



With optional heat sink

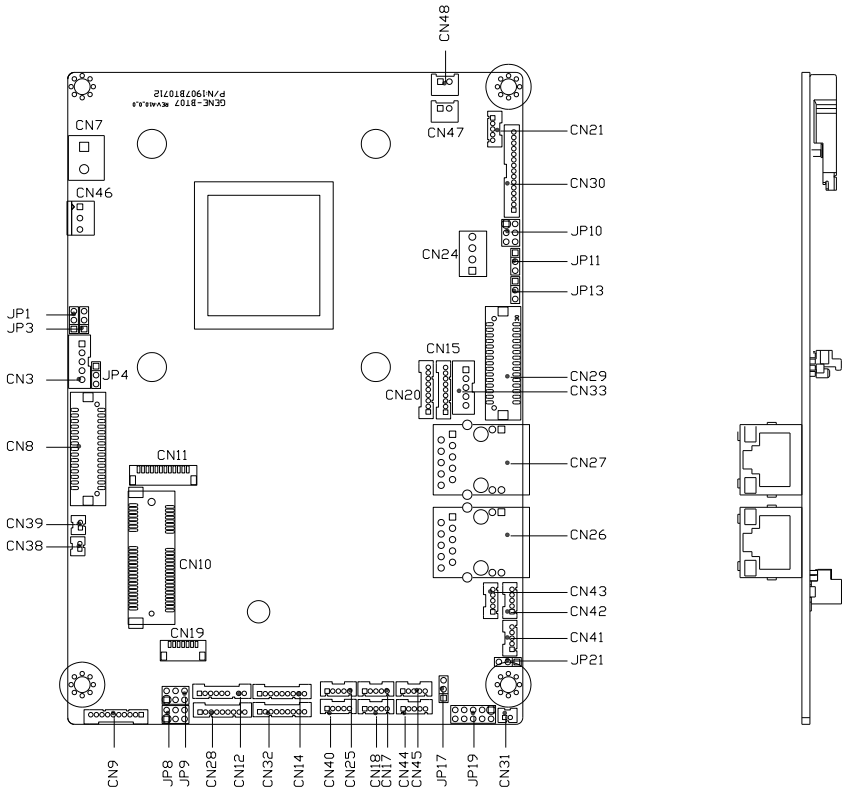


M16BT05000

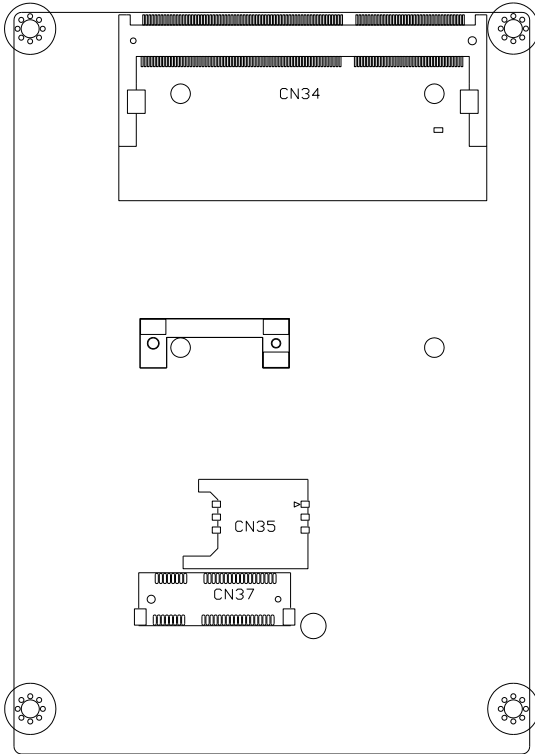


## 2.2 Jumpers and Connectors

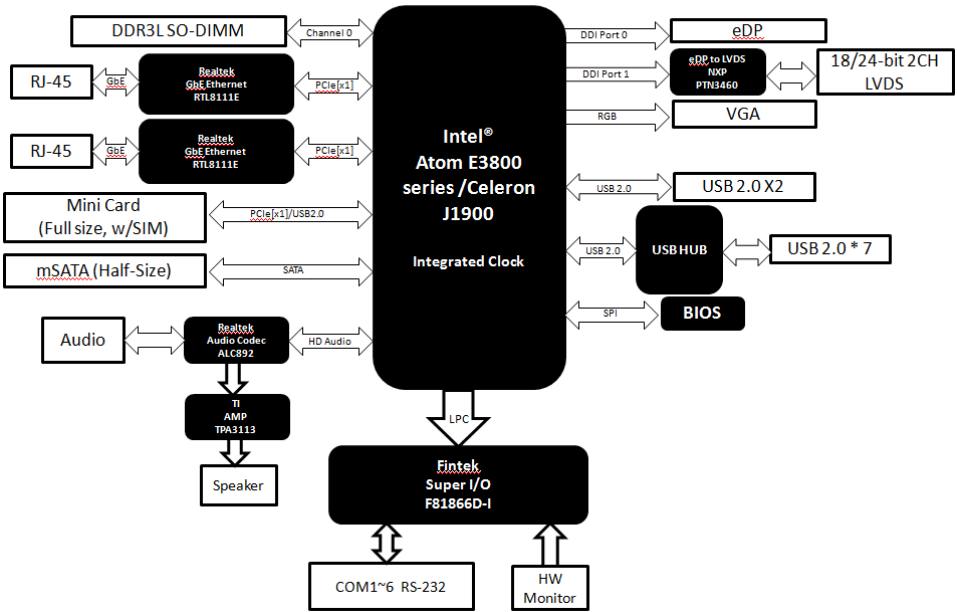
### Component side



Solder side



### 2.3 Block Diagram



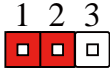
## 2.4 List of Jumpers

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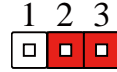
Please refer to the table below for all of the board's jumpers that you can configure for your application

Label	Function
JP1	LVDS port backlight inverter VCC selection
JP4	LVDS port operating VDD selection
JP8	COM6 pin8 function selection
JP9	COM2 pin8 function selection
JP10	COM1 pin8 function selection
JP11	eDP port backlight inverter VCC Selection
JP13	eDP port operating VDD selection
JP21	Clear CMOS Jumper
JP19	Front Panel Connector (Reserved, not used)

### 2.4.1 LVDS Port Backlight Inverter VCC Selection (JP1)

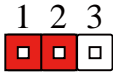


+12V

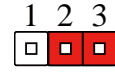


+5V (Default)

### 2.4.2 LVDS Port Operating VDD Selection (JP4)

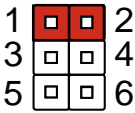


+5V

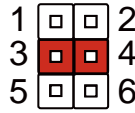


+3.3V (Default)

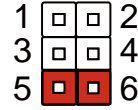
### 2.4.3 COM6 Pin8 Function Selection (JP8)



+12V

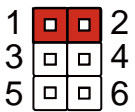


Ring(Default)

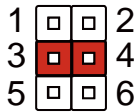


+5V

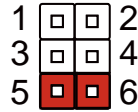
### 2.4.4 COM2 Pin8 Function Selection (JP9)



+12V



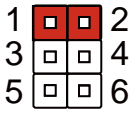
Ring(Default)



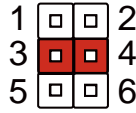
+5V



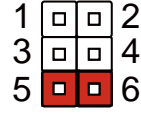
## 2.4.5 COM1 Pin8 Function Selection (JP10)



+12V

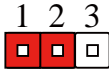


Ring(Default)

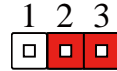


+5V

## 2.4.6 eDP Port Backlight Inverter VCC Selection (JP11)

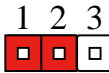


+12V

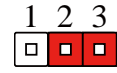


+5V (Default)

## 2.4.7 eDP Port Operating VDD Selection (JP13)

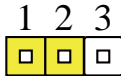


+5V

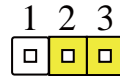


+3.3V (Default)

## 2.4.8 Clear CMOS Jumper (JP21)

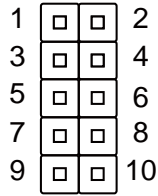


Normal (Default)



Clear CMOS

## 2.4.9 Front Panel Connector (JP19) (Reserved, not used)



Pin	Signal	Pin	Signal
1	PWR_BTN-	2	PWR_BTN+
3	HDD_LED-	4	HDD_LED+
5	SPEAKER-	6	SPEAKER+
7	PWR_LED-	8	PWR_LED+
9	H/W RESET-	10	H/W RESET+

## 2.5 List of Connectors

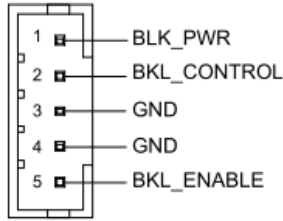
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Please refer to the table below for all of the board's connectors that you can configure for your application

Label	Function
CN3	LVDS Back light Control Connector
CN7	DC 12V Power Input
CN8	LVDS Connector
CN9	Audio Connector
CN10	mSATA (Half-Mini Card)
CN12	COM Port 2
CN14	COM Port 3
CN15	COM Port 4
CN17	USB Port2 from HUB
CN18	USB Port1 from HUB
CN19	SPI Debug Port
CN20	COM Port 1
CN21	ALC connector (Reserved)
CN24	CPU Fan Connector
CN25	USB Port 0
CN26	LAN 2 connector
CN27	LAN 1 connector
CN28	COM Port 5
CN29	eDP Connector
CN30	CRT Connector
CN31	RTC Connector
CN32	COM Port 6
CN33	eDP Backlight Connector

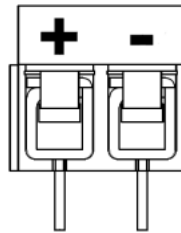
CN34	DDR SO-DOMM socket
CN35	SIM socket
CN37	Mini Card (Full-Mini Card)
CN38	Speaker Left channel
CN39	Speaker Right channel
CN40	USB Port 1
CN41	USB Port5 from HUB
CN42	USB Port6 from HUB
CN43	USB Port7 from HUB
CN44	USB Port3 from HUB
CN45	USB Port3 from HUB
CN46	System Fan Connector
CN47	Power LED connector(5V) (Optional)
CN48	Power button LED connector(12V) (Optional)

### 2.5.1 LVDS Back light Control Connector (CN3)



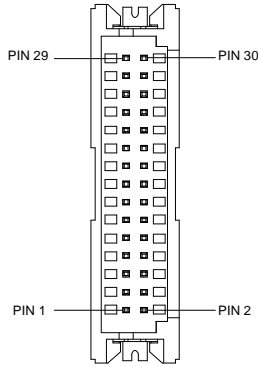
Pin	Pin Name	Signal Type	Signal Level
1	BKL_PWR	OUT	+5V / +12V
2	BKL_CONTROL	OUT	
3	GND	GND	
4	GND	GND	
5	BKL_ENABLE	OUT	

### 2.5.2 DC 12V Power Input (CN7)



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

## 2.5.3 LVDS Port (CN8)



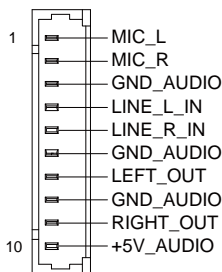
\* LVDS LCD\_PWR can be set to 3.3V or +5V by JP1

\* LVDS VDD power can be set by JP4

Pin	Pin Name	Signal Type	Signal Level
1	BKL_ENABLE	OUT	
2	BKL_CONTROL	OUT	
3	LCD_PWR	PWR	+3.3V/+5V
4	GND	GND	
5	LVDS_A_CLK-	DIFF	
6	LVDS_A_CLK+	DIFF	
7	LCD_PWR	PWR	+3.3V/+5V
8	GND	GND	
9	LVDS_DA0-	DIFF	
10	LVDS_DA0+	DIFF	
11	LVDS_DA1-	DIFF	
12	LVDS_DA1+	DIFF	
13	LVDS_DA2-	DIFF	
14	LVDS_DA2+	DIFF	
15	LVDS_DA3-	DIFF	

16	LVDS_DA3+	DIFF	
17	DDC_DATA	I/O	+3.3V
18	DDC_CLK	I/O	+3.3V
19	LVDS_DB0-	DIFF	
20	LVDS_DB0+	DIFF	
21	LVDS_DB1-	DIFF	
22	LVDS_DB1+	DIFF	
23	LVDS_DB2-	DIFF	
24	LVDS_DB2+	DIFF	
25	LVDS_DB3-	DIFF	
26	LVDS_DB3+	DIFF	
27	LCD_PWR	PWR	+3.3V/+5V
28	GND	GND	
29	LVDS_B_CLK-	DIFF	
30	LVDS_B_CLK+	DIFF	

### 2.5.4 Audio I/O Port (CN9)



Pin	Pin Name	Signal Type	Signal Level
1	MIC_L	IN	
2	MIC_R	IN	
3	GND_AUDIO	GND	

4	LINE_L_IN	IN	
5	LINE_R_IN	IN	
6	GND_AUDIO	GND	
7	LEFT_OUT	OUT	
8	GND_AUDIO	GND	
9	RIGHT_OUT	OUT	
10	+5V_AUDIO	PWR	+5V

### 2.5.5 mSATA (Half-MiniCard) (CN10)

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

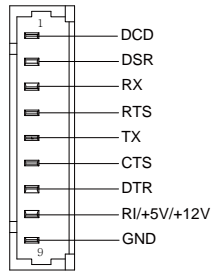


17	NC	NC	
18	GND	GND	
19	NC	NC	
20	W_DISABLE#	OUT	+3.3V
21	GND	GND	
22	PCIE_RST#	OUT	+3.3V
23	mSATA_RXP	DIFF	
24	+3.3VSB	PWR	+3.3V
25	mSATA_RXN	DIFF	
26	GND	GND	
27	GND	GND	
28	+1.5V	PWR	+1.5V
29	GND	GND	
30	SMB_CLK	I/O	+3.3V
31	mSATA_TXN	DIFF	
32	SMB_DATA	I/O	+3.3V
33	mSATA_TXP	DIFF	
34	GND	GND	
35	GND	GND	
36	NC	NC	
37	GND	GND	
38	NC	NC	
39	+3.3VSB	PWR	+3.3V
40	GND	GND	
41	+3.3VSB	PWR	+3.3V
42	NC	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

\* CN10 is for mSATA only

## 2.5.6 COM Port 1/2/6 (CN20/12/32)

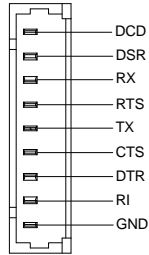


\* Pin 8 can't be set by JP8/9/10

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

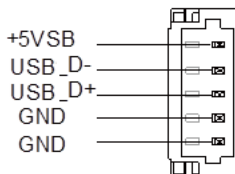
7	DTR	OUT	±5V
8	RI/+5V/+12V	IN/ PWR	+5V/+12V
9	GND	GND	

### 2.5.7 COM Port 3/4/5 (CN14/15/28)



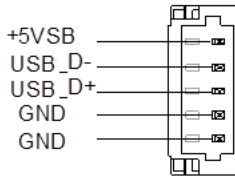
Pin	Pin Name	Signal Type	Signal Level
1	DCD	IN	
2	DSR	IN	
3	RX	IN	
4	RTS	OUT	±9V
5	TX	OUT	±9V
6	CT	IN	
7	DTR	OUT	±9V
8	RI	IN	
9	GND	GND	

### 2.5.8 USB Port 0/1 (CN25/40)



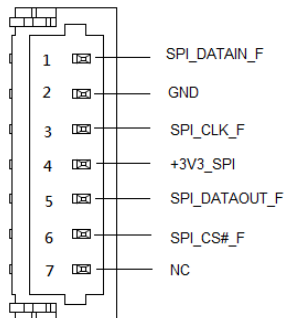
Pin	Pin Name	Signal Type	Signal Level
1	+5VSB	PWR	+5 V
2	USB_D-	DIFF	
3	USB_D+	DIFF	
4	GND	GND	
5	GND	GND	

### 2.5.9 USB Hub Port 1/2/3/4/5/6/7 (CN18/17/44/45/41/42/43)



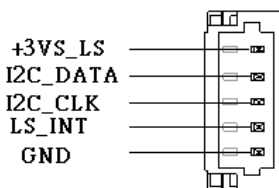
Pin	Pin Name	Signal Type	Signal Level
1	+5VSB	PWR	+5 V
2	USB_D-	DIFF	
3	USB_D+	DIFF	
4	GND	GND	
5	GND	GND	

### 2.5.10 SPI Debug Port (CN19)



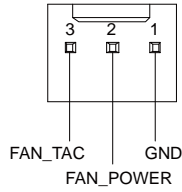
Pin	Pin Name	Signal Type	Signal Level
1	SPI_DATAIN_F	IN	
2	GND	GND	
3	SPI_CLK_F	IN	
4	+3V3_SPI	PWR	3.3 V
5	SPI_DATAOUT_F	OUT	
6	SPI_CS#_F	IN	
7	NC		

### 2.5.11 ALS Connector (CN21) (Reserved)



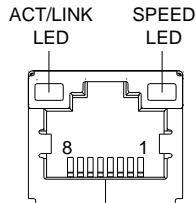
Pin	Pin Name	Signal Type	Signal Level
1	+3VS_LS	PWR	+5V
2	I2C_DATA	I/O	
3	I2C_CLK	OUT	
4	LS_INT	IN	
5	GND	GND	

## 2.5.12 CPU/SYS Fan Connector (CN24/46)



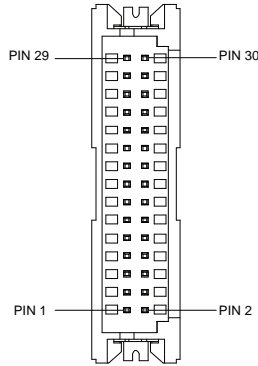
Pin	Pin Name	Signal Type	Signal Level
1	GND	GND	
2	FAN_POWER	PWR	+12V
3	FAN_TAC	IN	

## 2.5.13 LAN1/2 Connector (CN27/26)



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

## 2.5.14 eDP Connector (CN29)

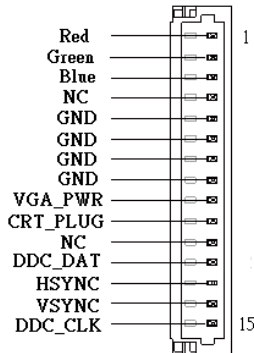


Pin	Pin Name	Signal Type	Signal Level
1	BKL_ENABLE	OUT	
2	BKL_CONTROL	OUT	
3	LCD_PWR	PWR	+3.3V/+5V
4	GND	GND	
5	eDP_A_TX3-	DIFF	
6	eDP_A_TX3+	DIFF	
7	LCD_PWR	PWR	+3.3V/+5V
8	GND	GND	
9	eDP_A_TX2-	DIFF	
10	eDP_A_TX2+	DIFF	
11	eDP_A_TX1-	DIFF	
12	eDP_A_TX1+	DIFF	
13	eDP_A_TX0-	DIFF	
14	eDP_A_TX0+	DIFF	
15	NC	NC	
16	eDP_HPD	DIFF	
17	eDP_AUX_N	DIFF	+3.3V

18	eDP_AUX_P	DIFF	+3.3V
19	NC	NC	
20	NC	NC	
21	NC	NC	
22	NC	NC	
23	NC	NC	
24	NC	NC	
25	NC	NC	
26	NC	NC	
27	LCD_PWR	PWR	+3.3V/+5V
28	GND	GND	
29	NC	NC	
30	NC	NC	

\* eDP backlight power can be set by JP11

### 2.5.15 CRT Connector (CN30)

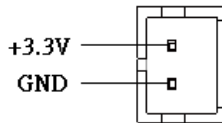


Pin	Pin Name	Signal Type	Signal Level
1	RED	OUT	
2	GREEN	OUT	



3	BLUE	OUT	
4	NC	NC	
5	GND	GND	
6	GND	GND	
7	GND	GND	
8	GND	GND	
9	VGA_PWR	PWR	+5V
10	CRT_PLUG	IN	
11	NC	NC	
12	DDC_DAT	I/O	
13	HSYNC	Out	
14	VSYNC	Out	
15	DDC_CLK	I/O	

### 2.5.16 RTC Battery Connector (CN31)



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

\* Clear CMOS can be set by JP21

### 2.5.17 SIM card Socket (CN35)

Pin	Pin Name	Signal Type	Signal Level
-----	----------	-------------	--------------

1	UIM_PWR	PWR
2	UIM_RST	IN
3	UIM_CLK	IN
4	GND	GND
5	UIM_VPP	PWR
6	UIM_DATA	IO

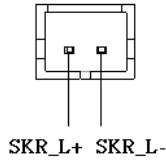
### 2.5.18 MiniCard Slot (Full MiniCard) (CN37)

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	UIM_PWR	PWR	
9	GND	GND	
10	UIM_DATA	I/O	
11	PCIE_REF_CLK-	DIFF	
12	UIM_CLK	IN	
13	PCIE_REF_CLK+	DIFF	
14	UIM_RST	IN	
15	GND	GND	
16	UIM_VPP	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-	DIFF	
24	+3.3VSB	PWR	+3.3V
25	PCIE_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-	DIFF	
32	SMB_DATA	I/O	+3.3V
33	PCIE_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		

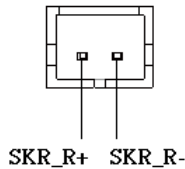
45	NC		
46	NC		
47	NC		
48	+1.5V	PWR	+1.5V
49	NC		
50	GND	GND	
51	NC		
52	+3.3VSB	PWR	+3.3V

### 2.5.19 Speaker Left Channel (CN38)



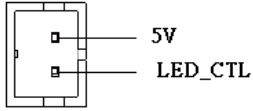
Pin	Pin Name	Signal Type	Signal Level
1	SKR_L+	OUT	
2	SKR_L-	OUT	

### 2.5.20 Speaker Right Channel (CN39)



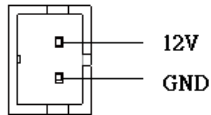
Pin	Pin Name	Signal Type	Signal Level
1	SKR_R+	OUT	
2	SKR_R-	OUT	

### 2.5.21 Power LED Connector (5V) (CN47) (Optional)



Pin	Pin Name	Signal Type	Signal Level
1	+5V	PWR	5V
2	LED Control	Out	

### 2.5.22 Power LED Connector (12V) (CN48) (Optional)



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

# Chapter 3

---

AMI BIOS Setup

## 3.1 System Test and Initialization

---

The board 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 <Del> 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

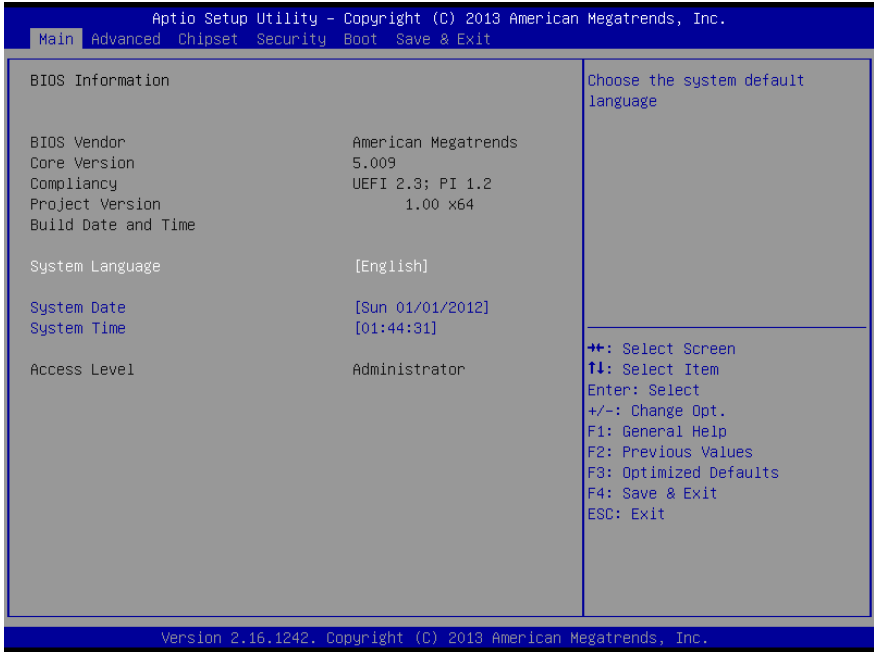
**Security** – The setup administrator password can be set here

**Save & Exit** – Save your changes and exit the program

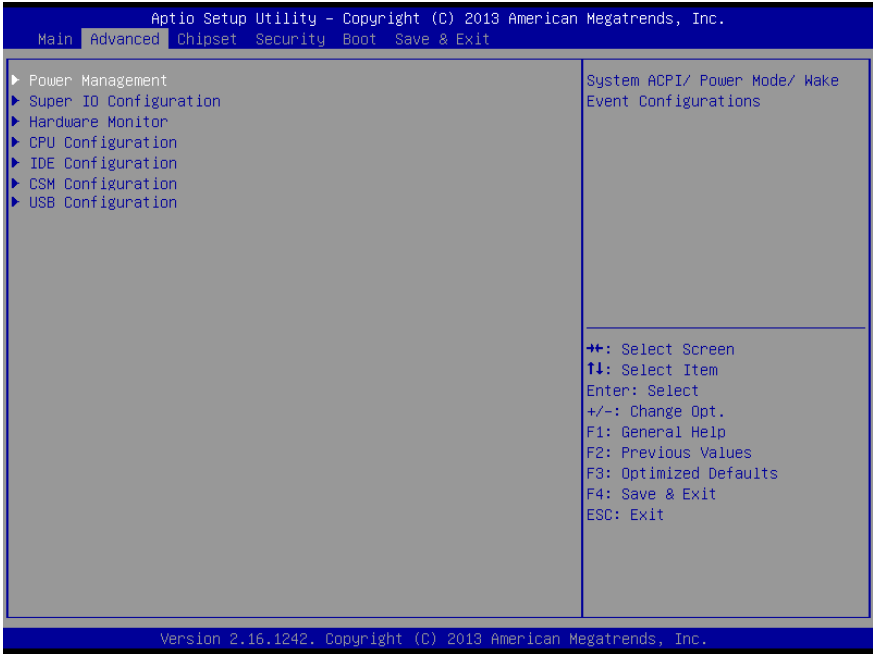


### 3.3 Setup submenu: Main

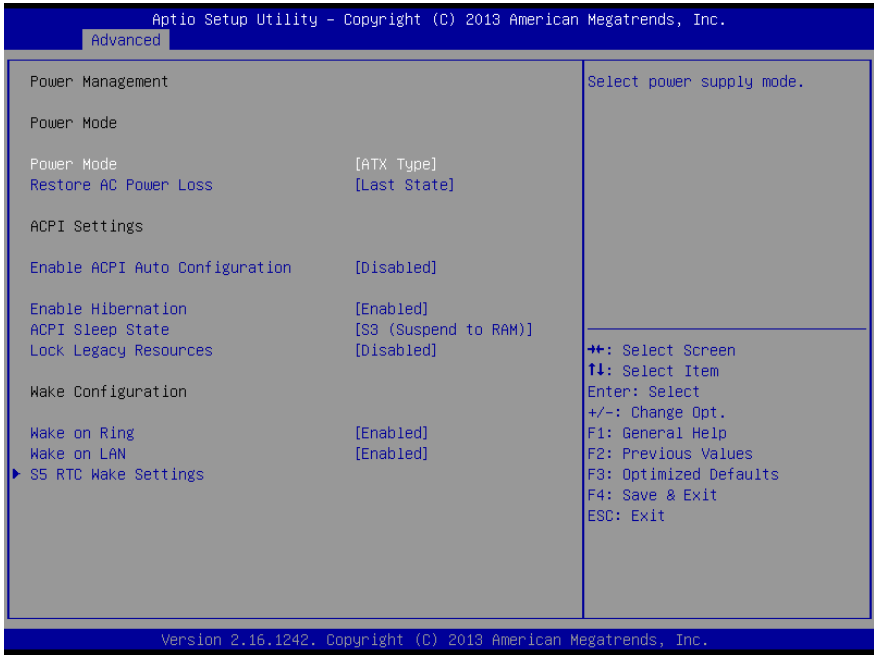
Press '*Delete*' Key to enter Setup



### 3.4 Setup submenu: Advanced



### 3.4.1 Advanced: Power Management

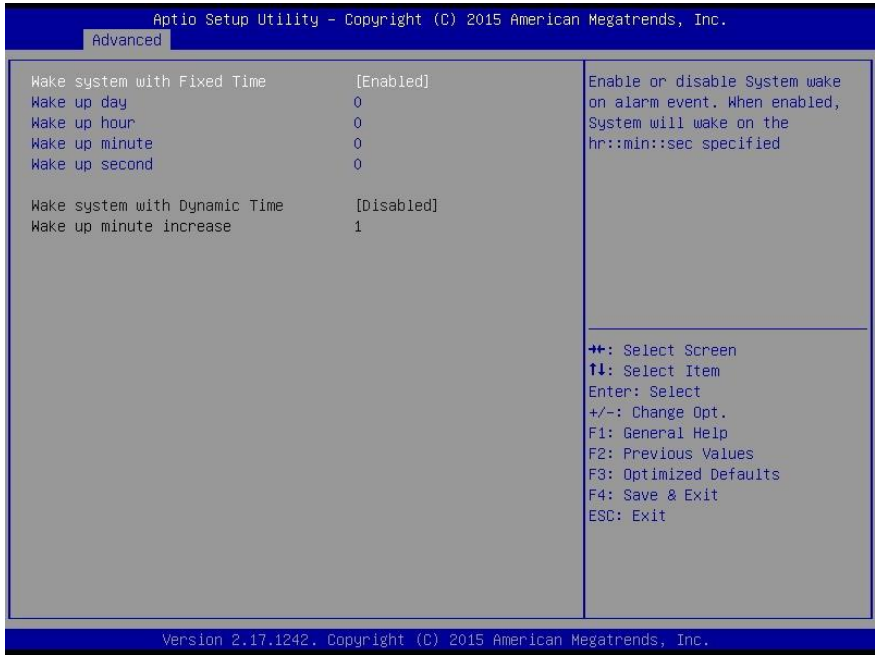


Options summary:

Power Mode	ATX Type	
	AT Type	Optimal Default, Failsafe Default
Select power supply mode		
Restore AC Power Loss	Power Off	
	Power On	
	Last State	Optimal Default, Failsafe Default
Select AC power state when power is re-applied after a power failure		
Enable ACPI Auto Configuration	Enable	
	Disable	Optimal Default, Failsafe Default
Enables or Disables BIOS ACPI Auto Configuration		

Enable Hibernation	Enable	Optimal Default, Failsafe Default
	Disable	
Enables or Disables System ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some OS		
ACPI Sleep State	Suspend Disabled	Optimal Default, Failsafe Default
	S3 only(Suspend to RAM)	
Select highest ACPI sleep state the System will enter when the Suspend button is pressed		
Lock Legacy Resources	Enable	Optimal Default, Failsafe Default
	Disable	
Enables or Disables Lock of Legacy Resources		
Wake on Ring	Enable	Optimal Default, Failsafe Default
	Disable	
Enabled/Disabled wake from Ring		
Wake on LAN	Enable	Optimal Default, Failsafe Default
	Disable	
Enabled/Disabled wake from LAN		
S5 RTC Wake Settings		
Enable system to wake from S5 using RTC alarm.		

### 3.4.1.1 Power Management: S5 RTC Wake Settings

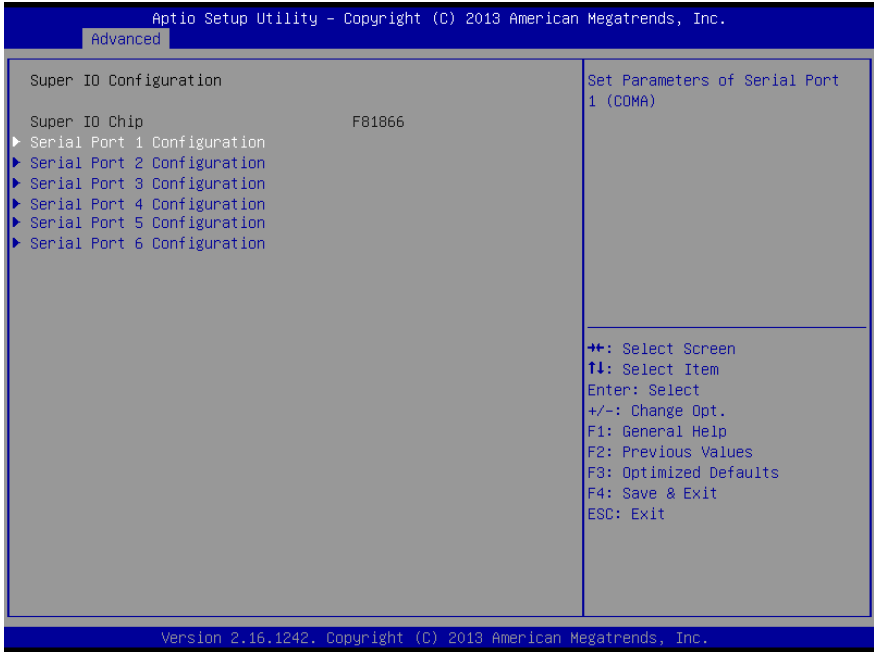


Options summary:

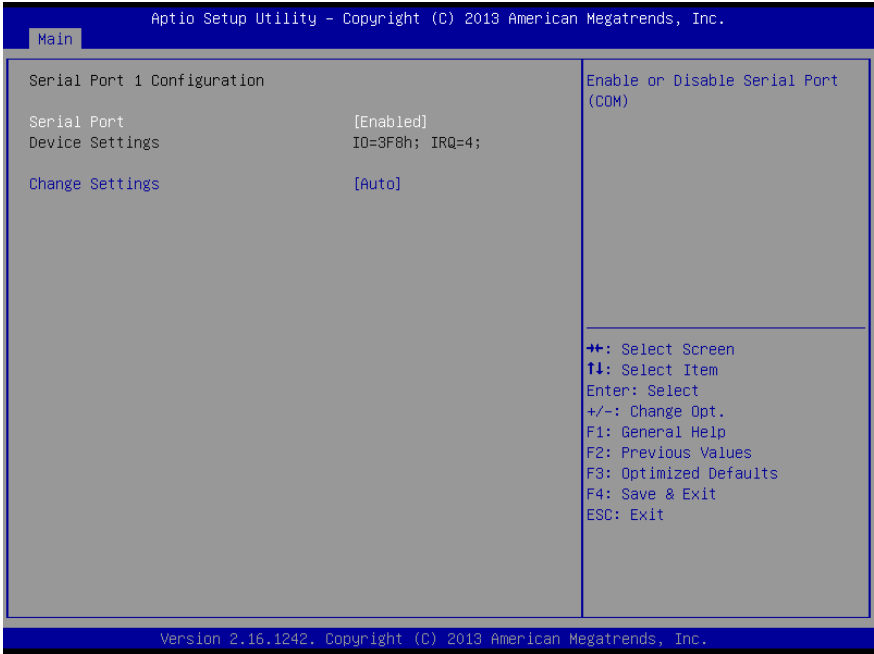
Wake system with Fixed Time	Enable	
	Disable	Optimal Default, Failsafe Default
Enable or disable System wake on alarm event. Wake up time is setting by following settings.		
Wake up day	0-31	
Select 0 for daily system wake up 1-31 for which day of the month that you would like the system to wake up		
Wake up hour	0-23	
Wake up minute	0-59	
Wake up second	0-59	

Wake system with Dynamic Time	Enable	
	Disable	Optimal Default, Failsafe Default
Enable or disable System wake on alarm event. Wake up time is current time + Increase minutes.		
Wake up minute increase	1-15	

## 3.4.2 Advanced: Super IO Configuration

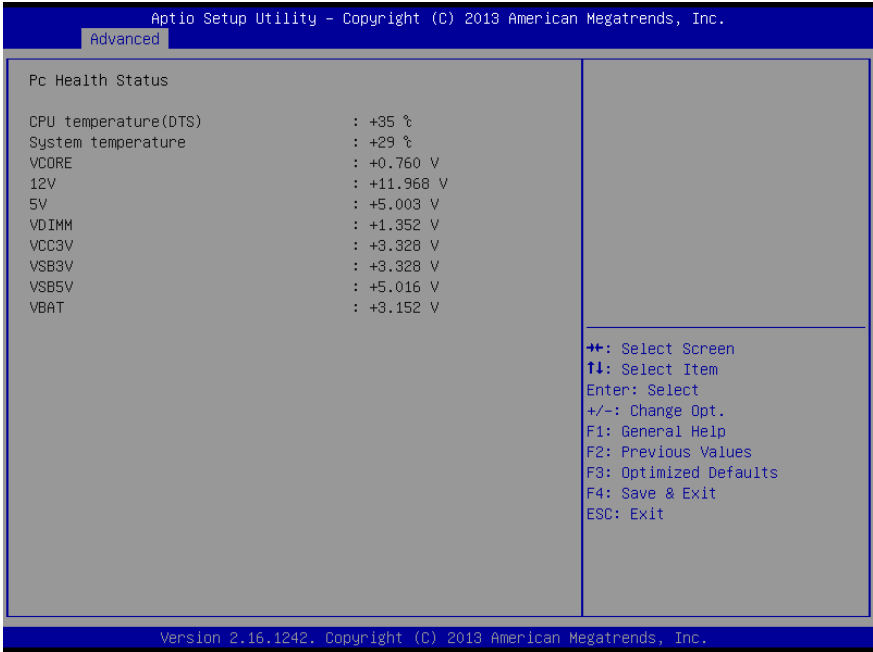


### 3.4.2.1 Super IO Configuration: Serial Port 1 Configuration

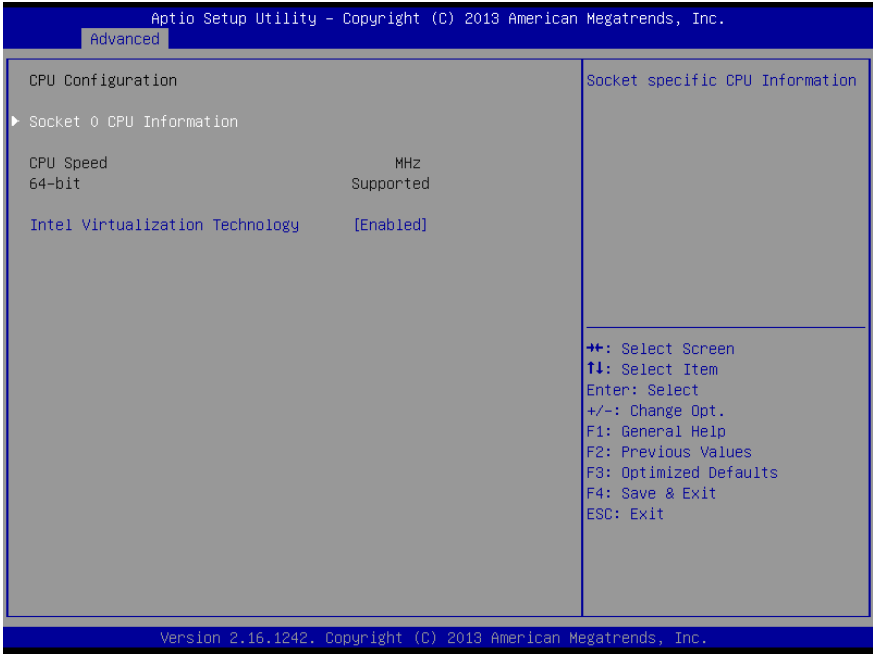




### 3.4.3 Advanced: H/W Monitor



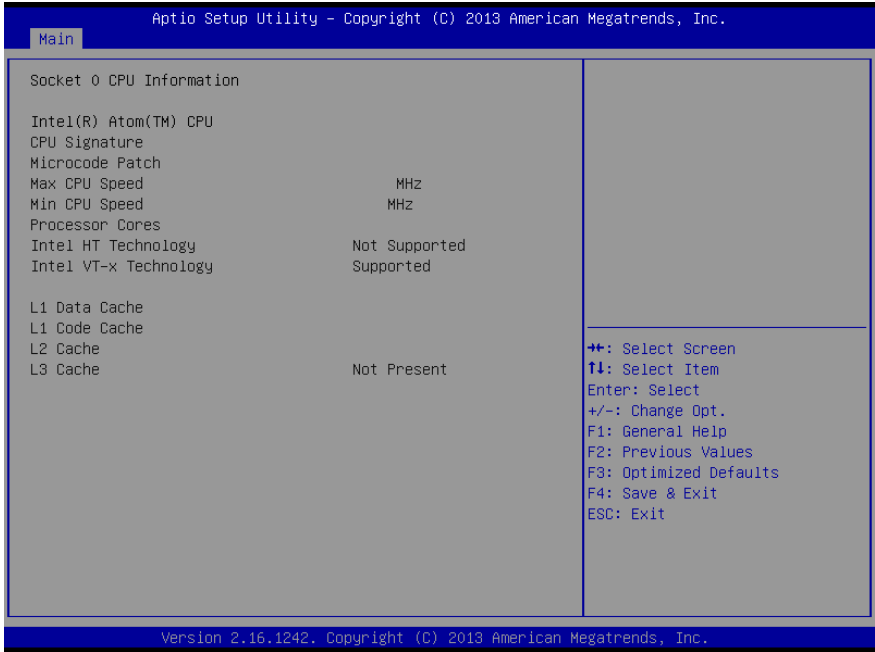
### 3.4.4 Advanced: CPU Configuration



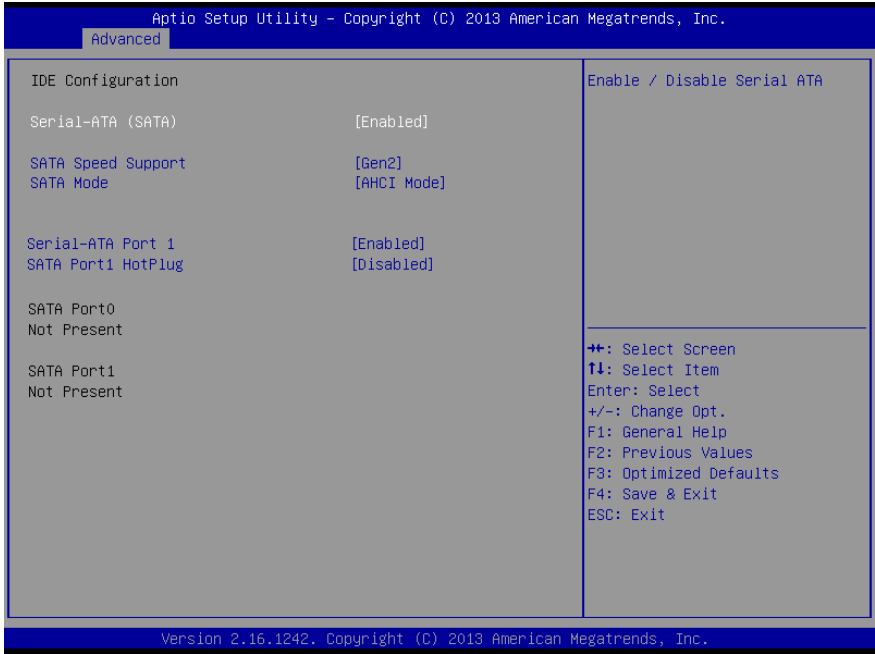
Options summary:

Intel Virtualization	Disabled	Optimal Default, Failsafe Default
Technology	Enabled	
When enabled, a VMM can utilize the additional hardware capabilities provided by Vander pool Technology		

### 3.4.4.1 CPU Configuration: Socket 0 CPU Information



### 3.4.5 Advanced: IDE Configuration



Options summary:

Serial-ATA(SATA)	Enabled	Default
	Disable	
SATA Speed Support	Gen1	
	Gen2	Default
SATA Mode	IDE	Default
	AHCI	
IDE: Configure SATA controllers as legacy IDE		
AHCI: Configure SATA controllers to operate in AHCI mode		
Serial-ATA Port 1	Enabled	Default
	Disable	

SATA Port 1 HotPlug	Enabled	
	Disable	Default

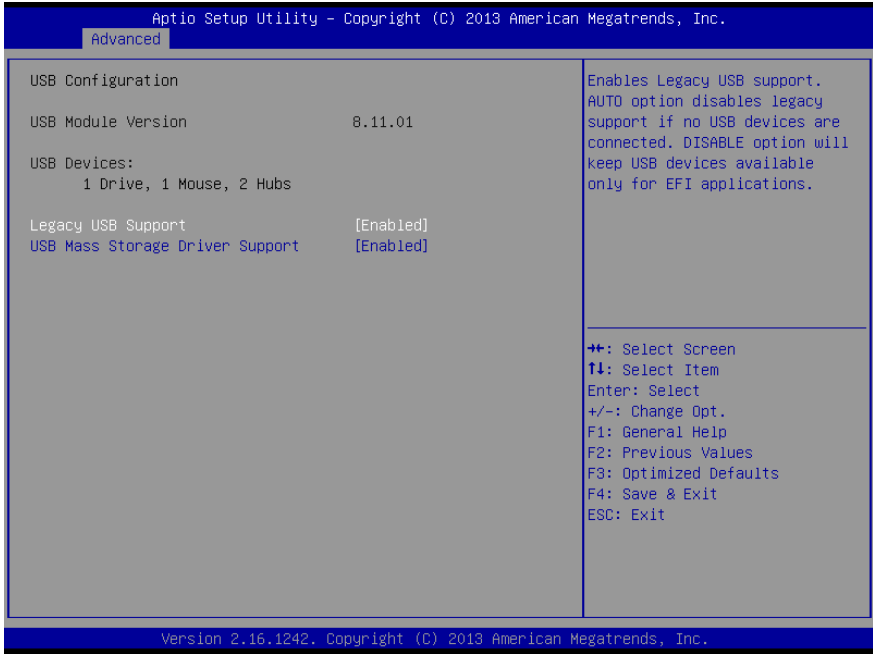
### 3.4.6 Advanced: CSM Configuration



Options summary:

CSM Support	Disable	Default
	Enabled	
Boot option filter	UEFI and Legacy	Default
	Legacy only	
	UEFI only	
Storage & Video	Do not launch	Default
	UEFI	
	Legacy	
Other PCI devices	UEFI	Default
	Legacy	

### 3.4.7 Advanced: USB Configuration



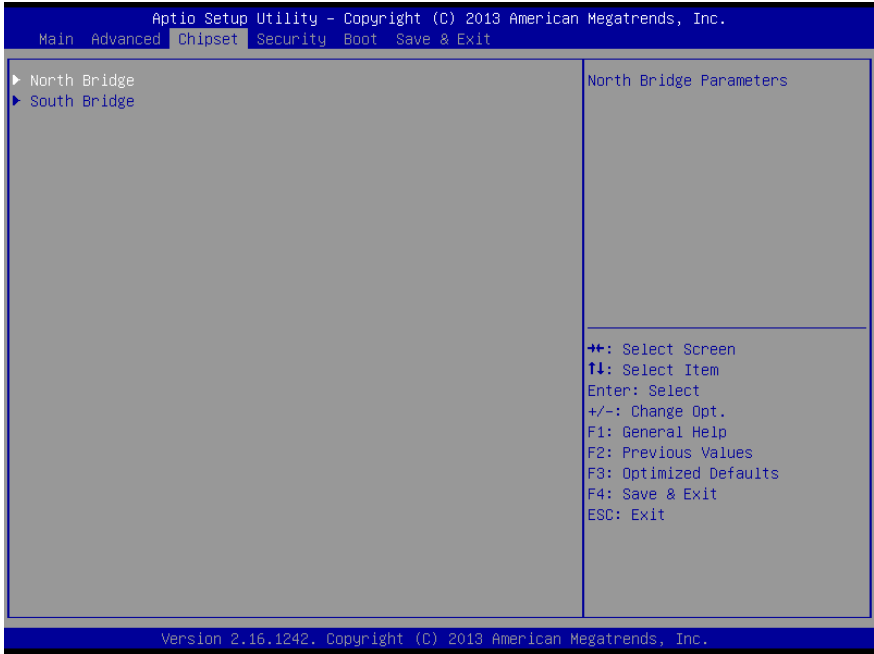
Options summary:

Legacy USB Support	Enabled	Optimal Default, Failsafe Default
	Disabled	
	Auto	
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		
USB Mass Storage Driver Support	Disabled	Optimal Default, Failsafe Default
	Enabled	
Enable/Disable USB Mass Storage Driver Support		
Device Name (Emulation	Auto	Optimal Default, Failsafe Default

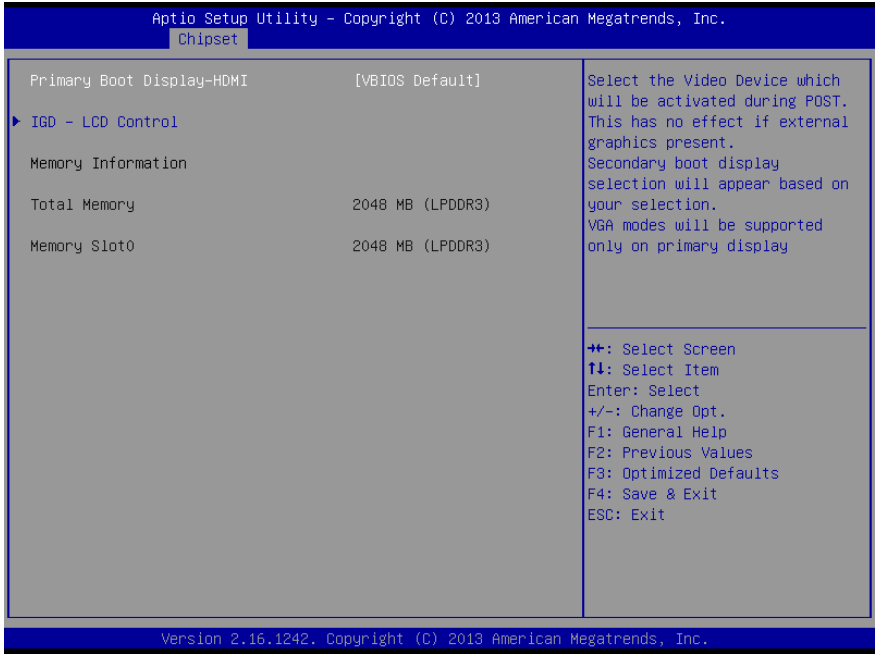
Type)	Floppy	
	Forced FDD	
	Hard Disk	
	CDROM	
If Auto. USB devices less than 530MB will be emulated as Floppy and remaining as Floppy and remaining as hard drive. Forced FDD option can be used to force a HDD formatted drive to boot as FDD(Ex. ZIP drive)		



### 3.5 Setup submenu: Chipset



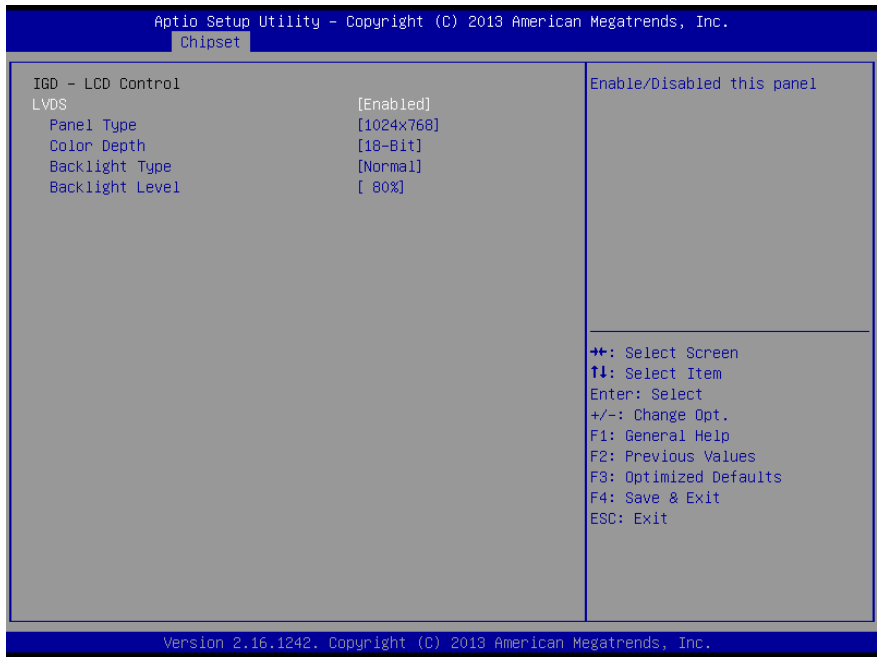
### 3.5.1 Chipset: Host Bridge



Options summary:

Primary Boot Display	VBIOS Default	Default
	CRT	
	eDP	
	LVDS	

### 3.5.1.1 Host Bridge: IGD - LCD Control

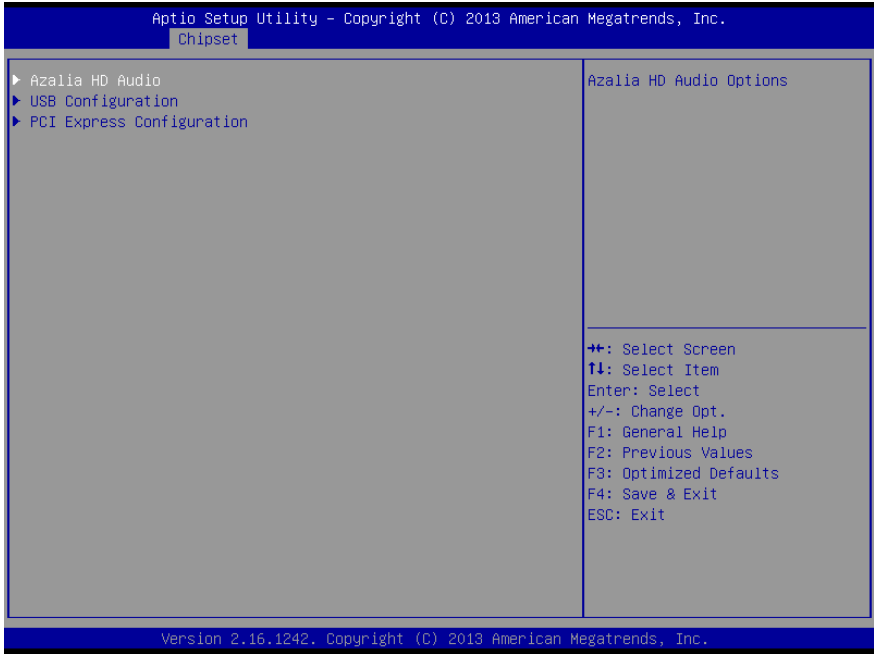


Options summary:

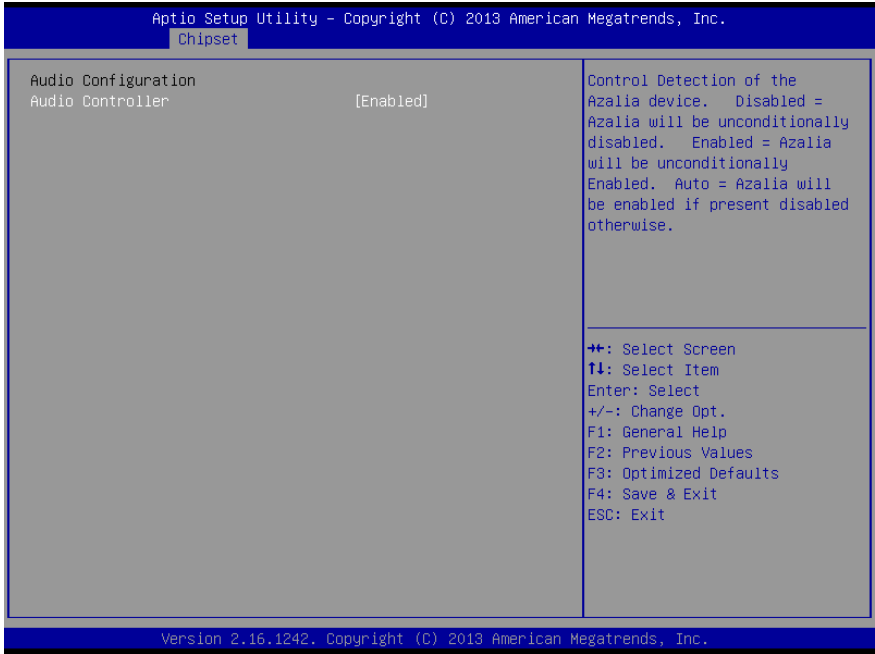
LVDS	Disabled	Default
	Enabled	
Enable or Disable LVDS interface		
Panel Type	640x480	Default
	800x480	
	800x600	
	1024x600	
	1024x768	
	1280x768	
	1280x1024	
	1366x768	

	1440x900	
	1600x1200	
	1920x1080	
	1920x1200	
Select panel resolution.		
Color Depth	18-Bit	Default
	24-Bit	
	36-Bit	
	48-Bit	
Select color depth of the panel		
Backlight Type	Normal	Default
	Inverted	
Select Backlight control type.		
Inverted: Brightest for low PWM duty cycle and low voltage.		
Normal: Brightest for high PWM duty cycle and high voltage.		
Backlight Level	0%	Default
	10%	
	20%	
	30%	
	40%	
	50%	
	60%	
	70%	
	80%	
	90%	
	100%	
Select Backlight Level		

## 3.5.2 Chipset: South Bridge



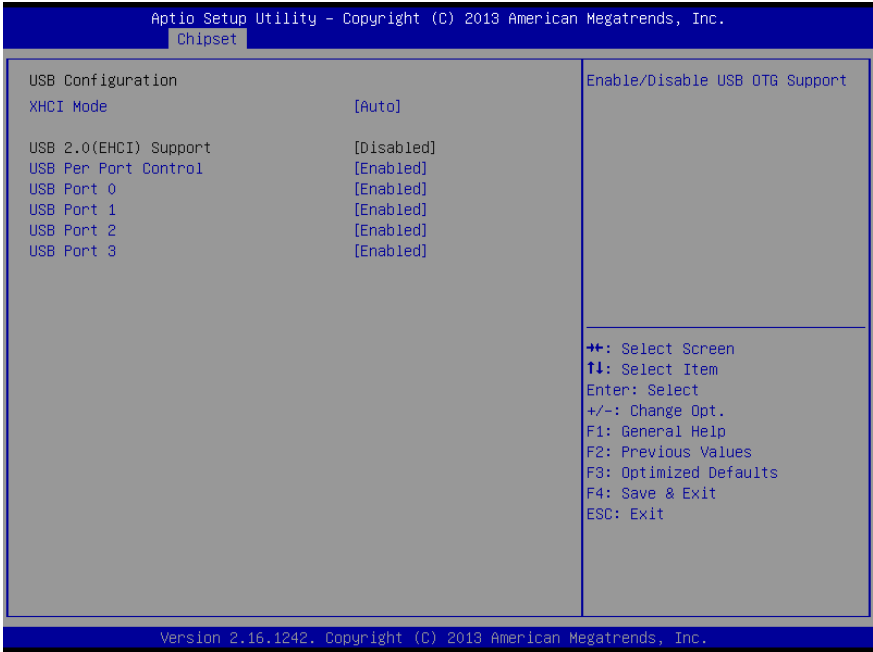
### 3.5.2.1 South Bridge: Azalia HD Audio



Options summary:

Audio Controller	Disabled	Default
	Enabled	
<p>Control Detection of the Azalia device.</p> <p>Disabled = Azalia will be unconditionally disabled.</p> <p>Enabled = Azalia will be unconditionally Enabled.</p> <p>Auto = Azalia will be enabled if present disabled otherwise.</p>		

### 3.5.2.2 South Bridge: USB Configuration



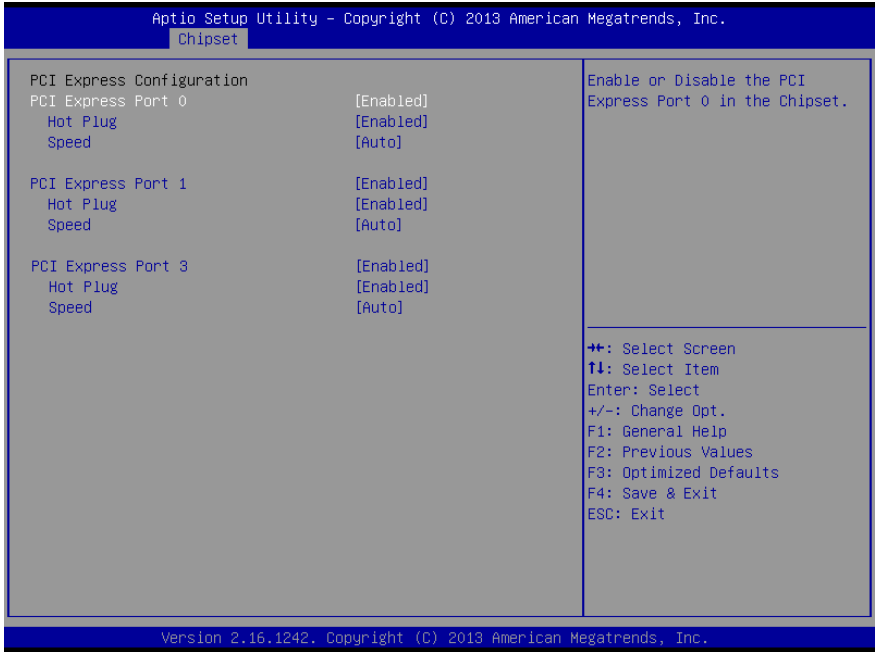
Options summary:

XHCI Mode	Enabled	Default
	Disabled	
	Auto	
	Smart Auto	
Mode of operation of XHCI controller		
USB Per Port Control	Enabled	Default
	Disabled	
Control each of the USB ports (0~3).		
Enable: Enable USB per port		
Disable: Use USB port X settings		

USB Port0/1/2/3	Enabled	Default
	Disabled	
Enable/Disable USB Port0/1/2/3		



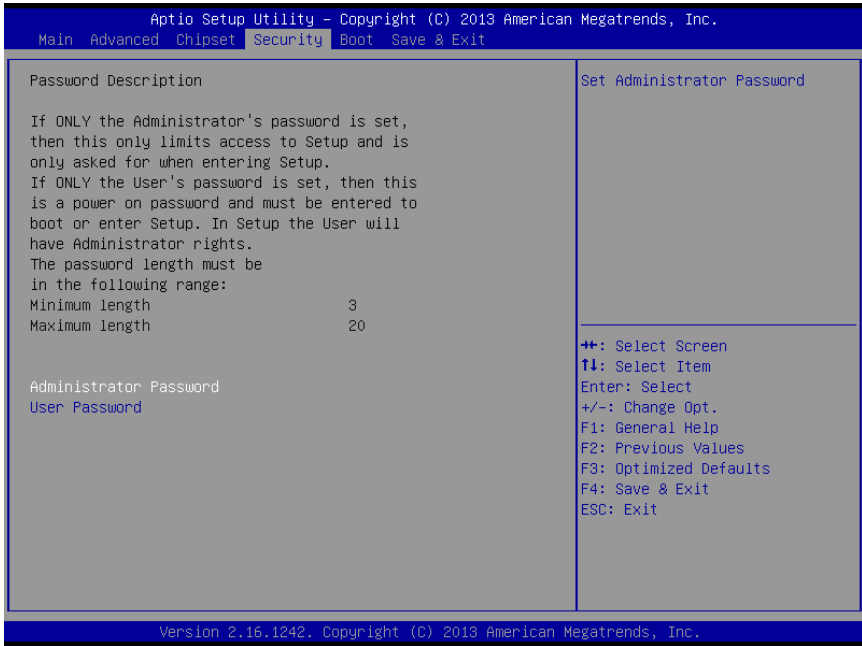
### 3.5.2.3 South Bridge: PCI Express Configuration



Options summary:

PCI Express Root Port 0/1/3	Enabled	Optimal Default, Failsafe Default
	Disabled	
Enabling/Disabling the PCI Express root ports		
Hot Plug	Disabled	Default
	Enabled	
Enabling/Disabling the PCI Express Hot Plug		
Speed	Auto	Default
	Gen2	
	Gen1	
Configure PCIe Port Speed		

## 3.6 Setup submenu: Security



### Change User/Administrator Password

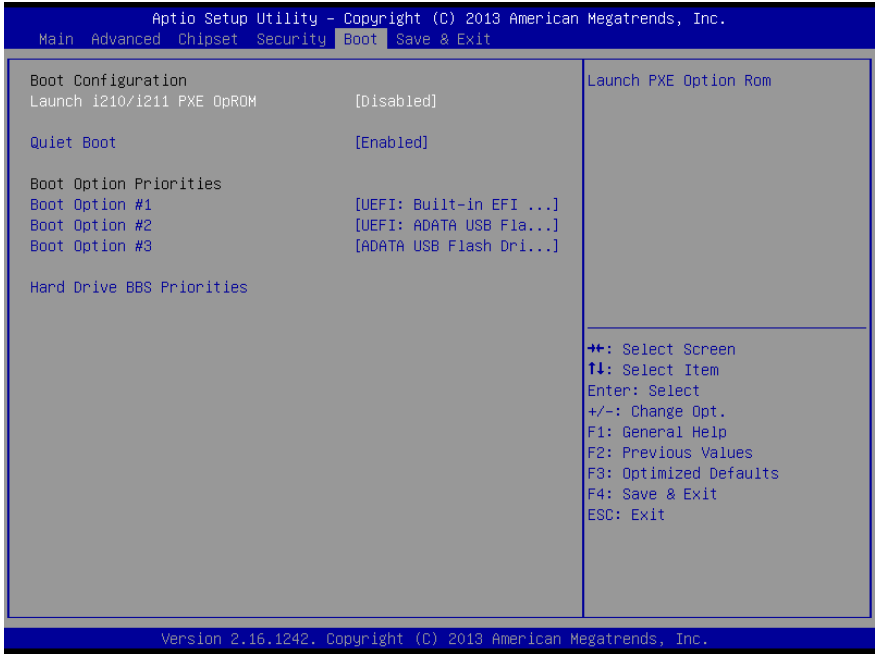
You can set a User Password once an Administrator Password is set. The password will be required during boot up, or when the user enters the Setup utility. Please Note that a User Password does not provide access to many of the features in the Setup utility.

Select the password you wish to set, press Enter to open a dialog box to enter your password (you can enter no more than six letters or numbers). 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.

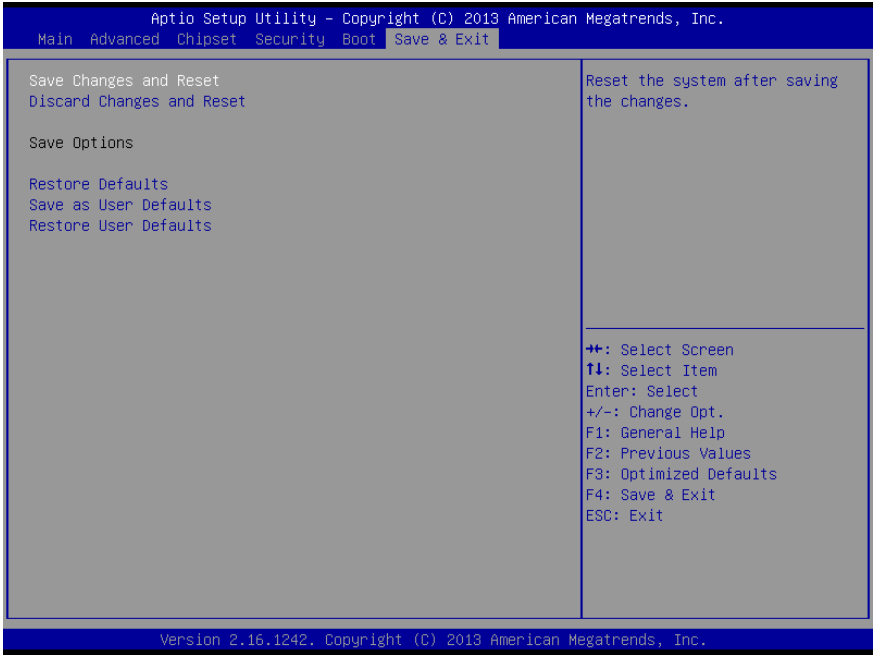
### 3.7 Setup submenu: Boot



Options summary:

Launch PXE OpROM	Disabled	Default
	Enabled	
Launch PXE Option Rom		
Quiet Boot	Disabled	Default
	Enabled	
En/Disables Quiet Boot option		

### 3.8 Setup submenu: Exit



# Chapter 4

---

Drivers Installation

## 4.1 Product CD/DVD

---

The GENE-BT06 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 Driver

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

### Step 2 – Install Graphics Driver

1. Open the **Step 2 - Graphics** 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. Click on the **Step 3 - LAN** 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 4 – Install Audio Driver

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

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

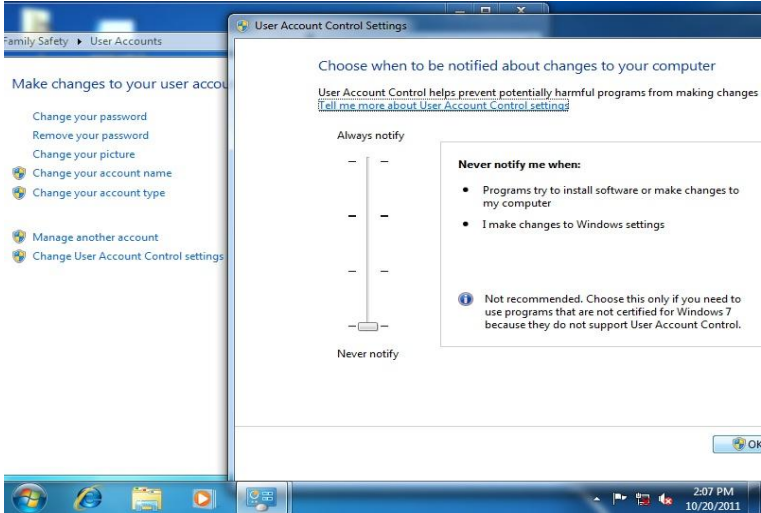
1. Open the **Step 5 – MBI (Optional)** folder and select your OS
2. Open the **Setup.exe** file in the folder
3. Follow the instructions
4. Drivers will be installed automatically



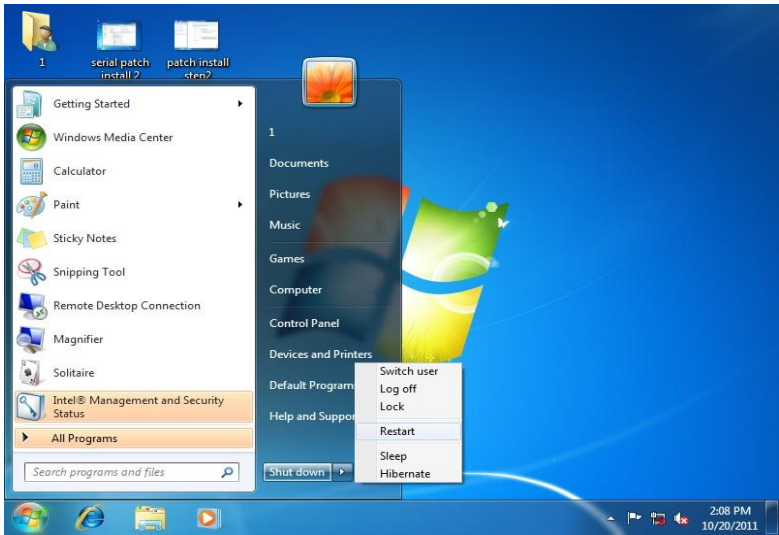
## Step 6 – Install Serial Port Driver (Optional)

For Windows 7:

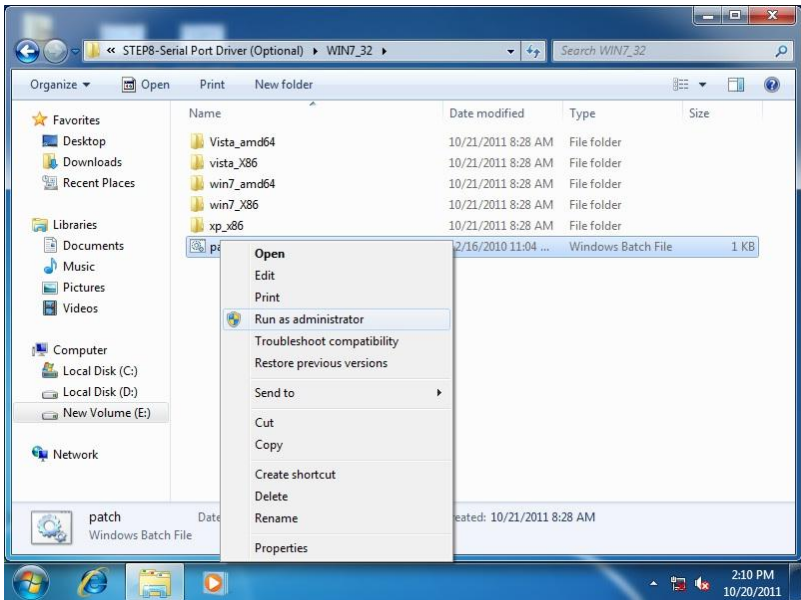
1. Change User Account Control settings to **Never notify**



2. Reboot and log in as administrator

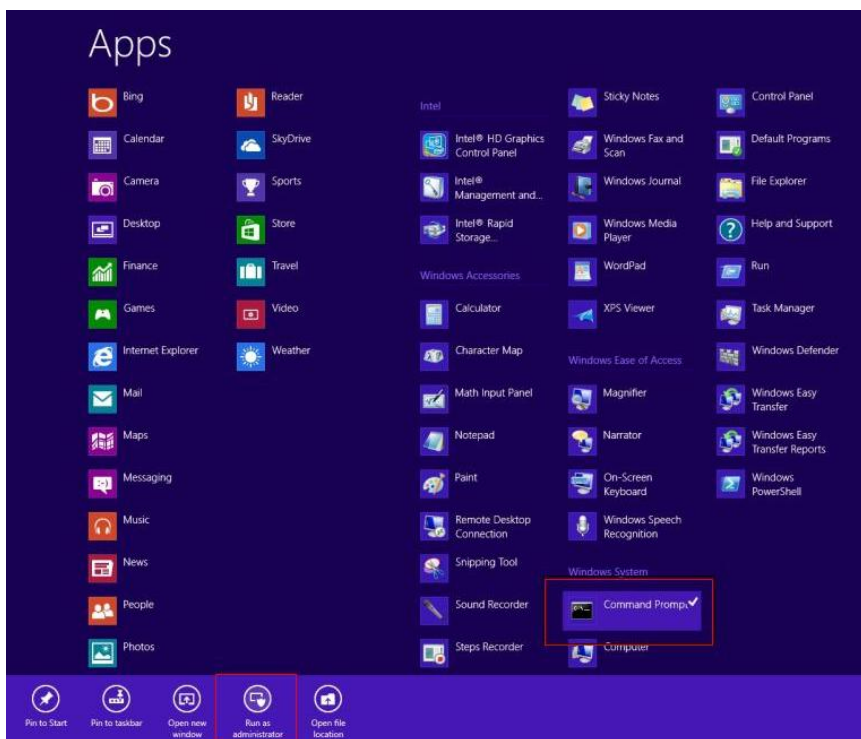


### 3. Run patch.bat as administrator

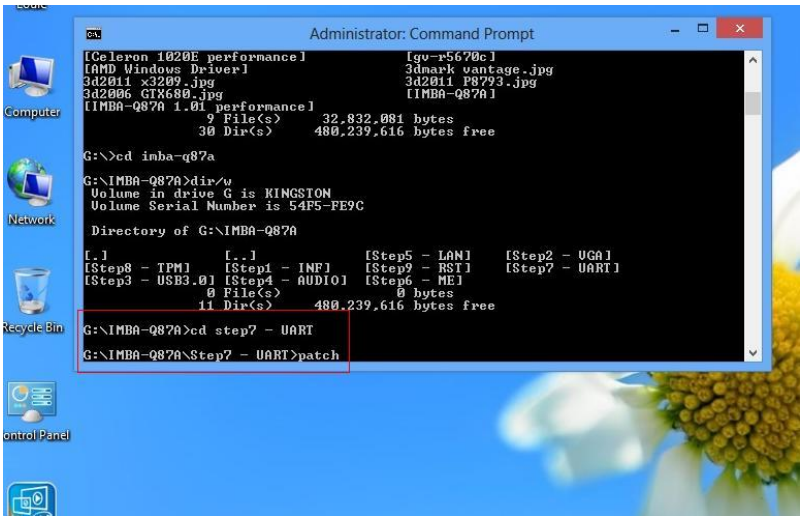


## For Windows 8:

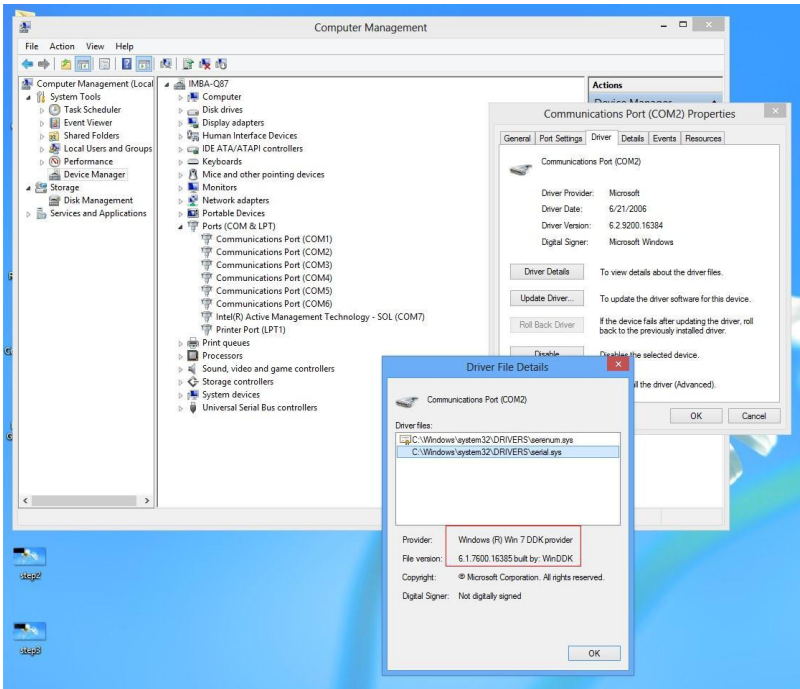
1. Open the Apps Screen, right click on the **Command Prompt** tile and select **Run as Administrator**



2. To install the driver (patch.bat), you will first have to locate the file in command prompt. To do that, go to the folder in which the file resides by entering **cd (file path)** eg: if the file is in a folder named abc in c drive, enter `cd c:\abc` (screenshot for reference only)
3. You are now at the folder where the file is located. Enter the **patch.bat** to open and install the drivers.

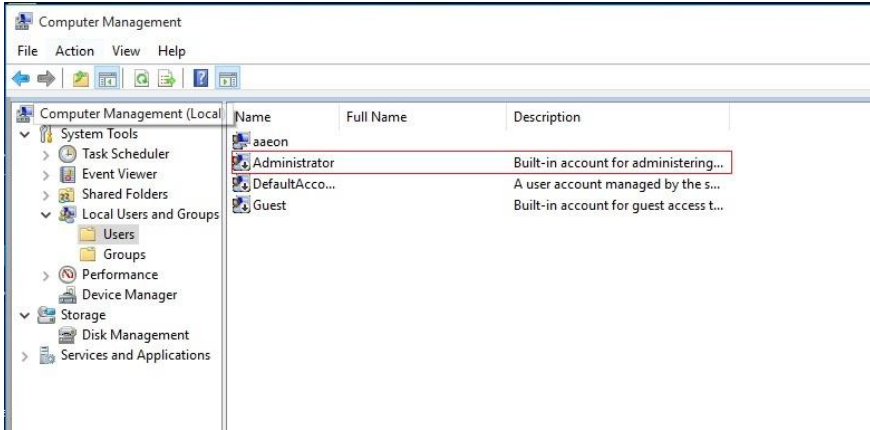


4. Reboot after installation completes.
5. To confirm the installation, go to Device Manager, expand the Ports (COM & LPT) tree and double click on any of the COM ports to open its properties. Go to the Driver tab, select Driver Details and click on **serial.sys**, you should see its provider as **Windows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

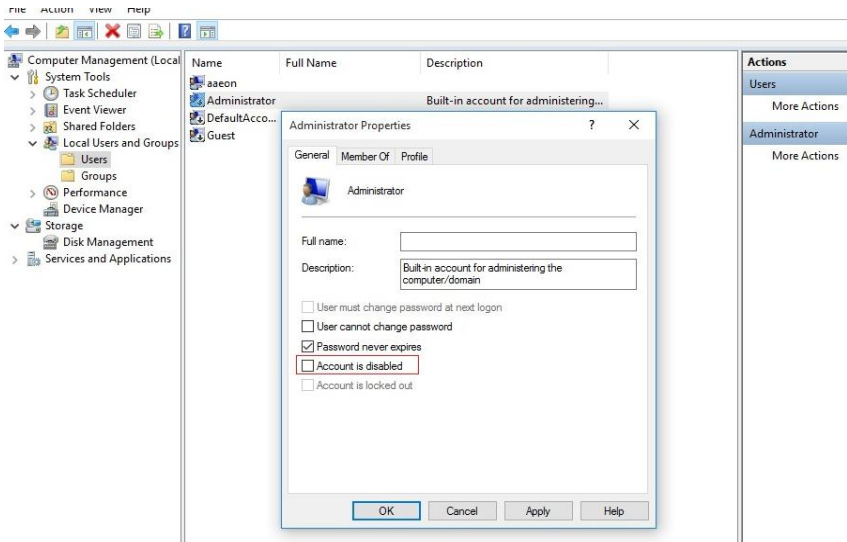


## For Windows 10:

1. You will need administrator rights to install the drivers. To get it, first go to **Computer Management** in **Control Panel** and double-click on **Administrator**



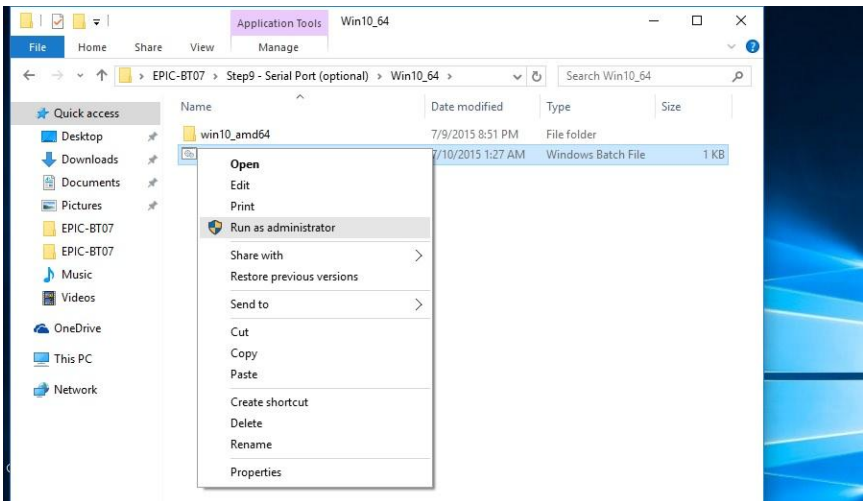
2. In the dialog box, **uncheck** the **Account is disabled** option to enable administrator account.



- Restart and sign in as the administrator (not password-protected by default)



- Go back to the Windows 10 Serial Port drivers directory and run `patch.bat` as administrator.



# Appendix A

---

## Watchdog Timer Programming



## A.1 Watchdog Timer Registers

Table 1 : Watch dog relative IO address

I/O Base Address	Default Value	Note
	0xA00	I/O Base address for Watchdog operation. This address is assigned by SIO LDN7, register 0x60-0x61.

Table 2 : Watchdog relative register table

Register	Offset	BitNum	Value	Note
Watchdog WDRST# Enable	0x00	7	1	Enable/Disable time out output via WDRST# 0: Disable 1: Enable
Pulse Width	0x05	0:1	01	Width of Pulse signal 00: 1ms (do not use) 01: 25ms 10: 125ms 11: 5s <i>Pulse width is must longer than 16ms.</i>
Signal Polarity	0x05	2	0	0: low active 1: high active <i>Must set this bit to 0</i>
Counting Unit	0x05	3	0	Select time unit. 0: second 1: minute

Output Signal Type	0x05	4	1	0: Level 1: Pulse <i>Must set this bit to 1</i>
Watchdog Timer Enable	0x05	5	1	0: Disable 1: Enable
Timeout Status	0x05	6	1	1: timeout occurred. Write a 1 to clear timeout status
Timer Counter	0x06			Time of watchdog timer (0~255)

## A.2 Watchdog Sample Program

```

*****// WDT I/O
operation relative definition (Please reference to Table 1)
#define WDTAddr 0xA00 // WDT I/O base address
Void WDTWriteByte(byte Register, byte Value);
byte WDTReadByte(byte Register);
Void WDTSetReg(byte Register, byte Bit, byte Val);
// Watch Dog relative definition (Please reference to Table 2)
#define DevReg 0x00 // Device configuration register
#define WDRstBit 0x80 // Watchdog WDTRST# (Bit7)
#define WDRstVal 0x80 // Enabled WDTRST#
#define TimerReg 0x05 // Timer register
#define PSWidthBit 0x00 // WDTRST# Pulse width (Bit0:1)
#define PSWidthVal 0x01 // 25ms for WDTRST# pulse
#define PolarityBit 0x02 // WDTRST# Signal polarity (Bit2)
#define PolarityVal 0x00 // Low active for WDTRST#
#define UnitBit 0x03 // Unit for timer (Bit3)
#define ModeBit 0x04 // WDTRST# mode (Bit4)
#define ModeVal 0x01 // 0:level 1: pulse
#define EnableBit 0x05 // WDT timer enable (Bit5)
#define EnableVal 0x01 // 1: enable
#define StatusBit 0x06 // WDT timer status (Bit6)
#define CounterReg 0x06 // Timer counter register
*****
*****
VOID Main(){
// Procedure : AaeonWDTConfig
// (byte)Timer : Counter of WDT timer.(0x00~0xFF)

```

```

// (boolean)Unit : Select time unit(0: second, 1: minute).
AaeonWDTConfig(Counter, Unit);
// Procedure : AaeonWDTEnable
// This procedure will enable the WDT counting.
WDTSetBit(TimerReg, PSWidthBit, PSWidthVal);
// Watchdog WDRST# Enable
WDTSetBit(DevReg, WDRstBit, WDRstVal);
}
VOID WDTClearTimeoutStatus(){
WDTSetBit(TimerReg, StatusBit, 1);
}
*****

*****

VOID WDTWriteByte(byte Register, byte Value){
IOWriteByte(WDTAddr+Register, Value);
}
byte WDTReadByte(byte Register){
return IOReadByte(WDTAddr+Register);
}
VOID WDTSetBit(byte Register, byte Bit, byte Val){
byte TmpValue;
TmpValue = WDTReadByte(Register);
TmpValue &= ~(1 << Bit);
TmpValue |= Val << Bit;
WDTWriteByte(Register, TmpValue);
}
*****

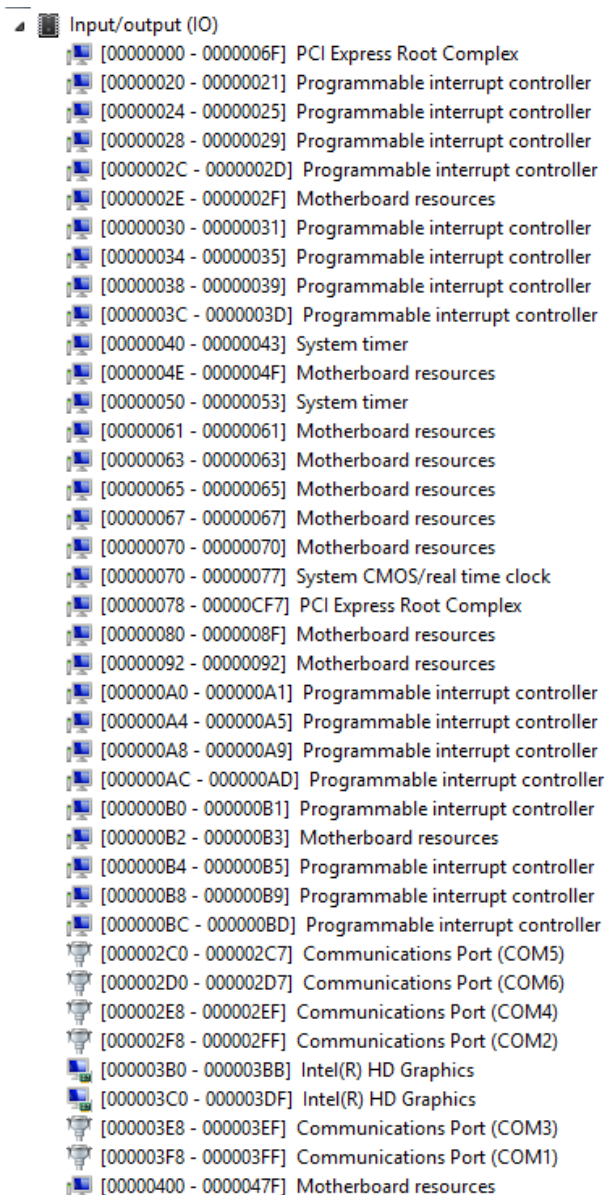
```

# Appendix B





















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I/O Information

## B.1 I/O Address Map



Address Range	Component
[00000000 - 0000006F]	PCI Express Root Complex
[00000020 - 00000021]	Programmable interrupt controller
[00000024 - 00000025]	Programmable interrupt controller
[00000028 - 00000029]	Programmable interrupt controller
[0000002C - 0000002D]	Programmable interrupt controller
[0000002E - 0000002F]	Motherboard resources
[00000030 - 00000031]	Programmable interrupt controller
[00000034 - 00000035]	Programmable interrupt controller
[00000038 - 00000039]	Programmable interrupt controller
[0000003C - 0000003D]	Programmable interrupt controller
[00000040 - 00000043]	System timer
[0000004E - 0000004F]	Motherboard resources
[00000050 - 00000053]	System timer
[00000061 - 00000061]	Motherboard resources
[00000063 - 00000063]	Motherboard resources
[00000065 - 00000065]	Motherboard resources
[00000067 - 00000067]	Motherboard resources
[00000070 - 00000070]	Motherboard resources
[00000070 - 00000077]	System CMOS/real time clock
[00000078 - 000000CF]	PCI Express Root Complex
[00000080 - 0000008F]	Motherboard resources
[00000092 - 00000092]	Motherboard resources
[000000A0 - 000000A1]	Programmable interrupt controller
[000000A4 - 000000A5]	Programmable interrupt controller
[000000A8 - 000000A9]	Programmable interrupt controller
[000000AC - 000000AD]	Programmable interrupt controller
[000000B0 - 000000B1]	Programmable interrupt controller
[000000B2 - 000000B3]	Motherboard resources
[000000B4 - 000000B5]	Programmable interrupt controller
[000000B8 - 000000B9]	Programmable interrupt controller
[000000BC - 000000BD]	Programmable interrupt controller
[000002C0 - 000002C7]	Communications Port (COM5)
[000002D0 - 000002D7]	Communications Port (COM6)
[000002E8 - 000002EF]	Communications Port (COM4)
[000002F8 - 000002FF]	Communications Port (COM2)
[000003B0 - 000003BB]	Intel(R) HD Graphics
[000003C0 - 000003DF]	Intel(R) HD Graphics
[000003E8 - 000003EF]	Communications Port (COM3)
[000003F8 - 000003FF]	Communications Port (COM1)
[00000400 - 0000047F]	Motherboard resources









































	[00000400 - 0000047F] Motherboard resources
	[000004D0 - 000004D1] Programmable interrupt controller
	[00000500 - 000005FE] Motherboard resources
	[00000600 - 0000061F] Motherboard resources
	[00000680 - 0000069F] Motherboard resources
	[00000A00 - 00000A0F] Motherboard resources
	[00000A10 - 00000A1F] Motherboard resources
	[00000A20 - 00000A2F] Motherboard resources
	[00000D00 - 0000FFFF] PCI Express Root Complex
	[0000C000 - 0000C0FF] Realtek PCIe GBE Family Controller #2
	[0000C000 - 0000CFFF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 2 - 0F4A
	[0000D000 - 0000D0FF] Realtek PCIe GBE Family Controller
	[0000D000 - 0000DFFF] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 1 - 0F48
	[0000E000 - 0000E01F] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor Platform Control Unit - SMBus Port - 0F12
	[0000E020 - 0000E03F] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
	[0000E040 - 0000E043] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
	[0000E050 - 0000E057] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
	[0000E060 - 0000E063] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
	[0000E070 - 0000E077] Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
	[0000E080 - 0000E087] Intel(R) HD Graphics










































## B.2 Memory Address Map

Address Range	Device Name
[000A0000 - 000BFFFF]	Intel(R) HD Graphics
[000A0000 - 000BFFFF]	PCI Express Root Complex
[000C0000 - 000DFFFF]	PCI Express Root Complex
[000E0000 - 000FFFFF]	PCI Express Root Complex
[C0000000 - CFFFFFFF]	Intel(R) HD Graphics
[C0000000 - D0822FFE]	PCI Express Root Complex
[D0000000 - D03FFFFF]	Intel(R) HD Graphics
[D0400000 - D04FFFFF]	Intel(R) Trusted Execution Engine Interface
[D0500000 - D05FFFFF]	Intel(R) Trusted Execution Engine Interface
[D0600000 - D0603FFF]	Realtek PCIe GBE Family Controller #2
[D0600000 - D06FFFFFF]	Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 2 - 0F4A
[D0604000 - D0604FFF]	Realtek PCIe GBE Family Controller #2
[D0700000 - D0703FFF]	Realtek PCIe GBE Family Controller
[D0700000 - D07FFFFFF]	Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor PCI Express - Root Port 1 - 0F48
[D0704000 - D0704FFF]	Realtek PCIe GBE Family Controller
[D0800000 - D080FFFF]	Intel(R) USB 3.0 eXtensible Host Controller - 0100 (Microsoft)
[D0814000 - D0817FFF]	High Definition Audio Controller
[D081C000 - D081C01F]	Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor Platform Control Unit - SMBus Port - 0F12
[D081F000 - D081FFFF]	SDA Standard Compliant SD Host Controller
[D0820000 - D08207FF]	Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor AHCI - 0F23
[D0821000 - D0821FFF]	SDA Standard Compliant SD Host Controller
[E0000000 - EFFFFFFF]	Motherboard resources
[E00000D0 - E00000DB]	Intel(R) Sideband Fabric Device
[FED00000 - FED003FF]	High precision event timer
[FED01000 - FED01FFF]	Motherboard resources
[FED03000 - FED03FFF]	Motherboard resources
[FED04000 - FED04FFF]	Motherboard resources
[FED08000 - FED08FFF]	Motherboard resources
[FED1C000 - FED1CFFF]	Motherboard resources
[FEE00000 - FEEFFFFFFF]	Motherboard resources
[FEF00000 - FEFFFFFFFF]	Motherboard resources
[FF000000 - FFFFFFFF]	Intel(R) 82802 Firmware Hub Device












































## B.3 IRQ Mapping Chart










































Interrupt request (IRQ)	
 (ISA) 0x00000000 (00)	System timer
 (ISA) 0x00000003 (03)	Communications Port (COM2)
 (ISA) 0x00000004 (04)	Communications Port (COM1)
 (ISA) 0x00000008 (08)	High precision event timer
 (ISA) 0x0000000A (10)	Communications Port (COM3)
 (ISA) 0x0000000A (10)	Communications Port (COM4)
 (ISA) 0x0000000B (11)	Communications Port (COM5)
 (ISA) 0x0000000B (11)	Communications Port (COM6)
 (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

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 (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
 (ISA) 0x000000BF (191)	Microsoft ACPI-Compliant System
 (ISA) 0x00000100 (256)	Microsoft ACPI-Compliant System
 (ISA) 0x00000101 (257)	Microsoft ACPI-Compliant System
 (ISA) 0x00000102 (258)	Microsoft ACPI-Compliant System

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 (ISA) 0x00000103 (259)	Microsoft ACPI-Compliant System
 (ISA) 0x00000104 (260)	Microsoft ACPI-Compliant System
 (ISA) 0x00000105 (261)	Microsoft ACPI-Compliant System
 (ISA) 0x00000106 (262)	Microsoft ACPI-Compliant System
 (ISA) 0x00000107 (263)	Microsoft ACPI-Compliant System
 (ISA) 0x00000108 (264)	Microsoft ACPI-Compliant System
 (ISA) 0x00000109 (265)	Microsoft ACPI-Compliant System
 (ISA) 0x0000010A (266)	Microsoft ACPI-Compliant System
 (ISA) 0x0000010B (267)	Microsoft ACPI-Compliant System
 (ISA) 0x0000010C (268)	Microsoft ACPI-Compliant System
 (ISA) 0x0000010D (269)	Microsoft ACPI-Compliant System
 (ISA) 0x0000010E (270)	Microsoft ACPI-Compliant System
 (ISA) 0x0000010F (271)	Microsoft ACPI-Compliant System
 (ISA) 0x00000110 (272)	Microsoft ACPI-Compliant System
 (ISA) 0x00000111 (273)	Microsoft ACPI-Compliant System
 (ISA) 0x00000112 (274)	Microsoft ACPI-Compliant System
 (ISA) 0x00000113 (275)	Microsoft ACPI-Compliant System
 (ISA) 0x00000114 (276)	Microsoft ACPI-Compliant System
 (ISA) 0x00000115 (277)	Microsoft ACPI-Compliant System
 (ISA) 0x00000116 (278)	Microsoft ACPI-Compliant System
 (ISA) 0x00000117 (279)	Microsoft ACPI-Compliant System
 (ISA) 0x00000118 (280)	Microsoft ACPI-Compliant System
 (ISA) 0x00000119 (281)	Microsoft ACPI-Compliant System
 (ISA) 0x0000011A (282)	Microsoft ACPI-Compliant System
 (ISA) 0x0000011B (283)	Microsoft ACPI-Compliant System
 (ISA) 0x0000011C (284)	Microsoft ACPI-Compliant System
 (ISA) 0x0000011D (285)	Microsoft ACPI-Compliant System
 (ISA) 0x0000011E (286)	Microsoft ACPI-Compliant System
 (ISA) 0x0000011F (287)	Microsoft ACPI-Compliant System
 (ISA) 0x00000120 (288)	Microsoft ACPI-Compliant System
 (ISA) 0x00000121 (289)	Microsoft ACPI-Compliant System
 (ISA) 0x00000122 (290)	Microsoft ACPI-Compliant System
 (ISA) 0x00000123 (291)	Microsoft ACPI-Compliant System
 (ISA) 0x00000124 (292)	Microsoft ACPI-Compliant System
 (ISA) 0x00000125 (293)	Microsoft ACPI-Compliant System
 (ISA) 0x00000126 (294)	Microsoft ACPI-Compliant System
 (ISA) 0x00000127 (295)	Microsoft ACPI-Compliant System
 (ISA) 0x00000128 (296)	Microsoft ACPI-Compliant System
 (ISA) 0x00000129 (297)	Microsoft ACPI-Compliant System
 (ISA) 0x0000012A (298)	Microsoft ACPI-Compliant System
 (ISA) 0x0000012B (299)	Microsoft ACPI-Compliant System










































 (ISA) 0x0000012C (300)	Microsoft ACPI-Compliant System
 (ISA) 0x0000012D (301)	Microsoft ACPI-Compliant System
 (ISA) 0x0000012E (302)	Microsoft ACPI-Compliant System
 (ISA) 0x0000012F (303)	Microsoft ACPI-Compliant System
 (ISA) 0x00000130 (304)	Microsoft ACPI-Compliant System
 (ISA) 0x00000131 (305)	Microsoft ACPI-Compliant System
 (ISA) 0x00000132 (306)	Microsoft ACPI-Compliant System
 (ISA) 0x00000133 (307)	Microsoft ACPI-Compliant System
 (ISA) 0x00000134 (308)	Microsoft ACPI-Compliant System
 (ISA) 0x00000135 (309)	Microsoft ACPI-Compliant System
 (ISA) 0x00000136 (310)	Microsoft ACPI-Compliant System
 (ISA) 0x00000137 (311)	Microsoft ACPI-Compliant System
 (ISA) 0x00000138 (312)	Microsoft ACPI-Compliant System
 (ISA) 0x00000139 (313)	Microsoft ACPI-Compliant System
 (ISA) 0x0000013A (314)	Microsoft ACPI-Compliant System
 (ISA) 0x0000013B (315)	Microsoft ACPI-Compliant System
 (ISA) 0x0000013C (316)	Microsoft ACPI-Compliant System
 (ISA) 0x0000013D (317)	Microsoft ACPI-Compliant System
 (ISA) 0x0000013E (318)	Microsoft ACPI-Compliant System
 (ISA) 0x0000013F (319)	Microsoft ACPI-Compliant System
 (ISA) 0x00000140 (320)	Microsoft ACPI-Compliant System
 (ISA) 0x00000141 (321)	Microsoft ACPI-Compliant System
 (ISA) 0x00000142 (322)	Microsoft ACPI-Compliant System
 (ISA) 0x00000143 (323)	Microsoft ACPI-Compliant System
 (ISA) 0x00000144 (324)	Microsoft ACPI-Compliant System
 (ISA) 0x00000145 (325)	Microsoft ACPI-Compliant System
 (ISA) 0x00000146 (326)	Microsoft ACPI-Compliant System
 (ISA) 0x00000147 (327)	Microsoft ACPI-Compliant System
 (ISA) 0x00000148 (328)	Microsoft ACPI-Compliant System
 (ISA) 0x00000149 (329)	Microsoft ACPI-Compliant System
 (ISA) 0x0000014A (330)	Microsoft ACPI-Compliant System
 (ISA) 0x0000014B (331)	Microsoft ACPI-Compliant System
 (ISA) 0x0000014C (332)	Microsoft ACPI-Compliant System
 (ISA) 0x0000014D (333)	Microsoft ACPI-Compliant System
 (ISA) 0x0000014E (334)	Microsoft ACPI-Compliant System
 (ISA) 0x0000014F (335)	Microsoft ACPI-Compliant System
 (ISA) 0x00000150 (336)	Microsoft ACPI-Compliant System
 (ISA) 0x00000151 (337)	Microsoft ACPI-Compliant System
 (ISA) 0x00000152 (338)	Microsoft ACPI-Compliant System
 (ISA) 0x00000153 (339)	Microsoft ACPI-Compliant System
 (ISA) 0x00000154 (340)	Microsoft ACPI-Compliant System

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 (ISA) 0x00000155 (341)	Microsoft ACPI-Compliant System
 (ISA) 0x00000156 (342)	Microsoft ACPI-Compliant System
 (ISA) 0x00000157 (343)	Microsoft ACPI-Compliant System
 (ISA) 0x00000158 (344)	Microsoft ACPI-Compliant System
 (ISA) 0x00000159 (345)	Microsoft ACPI-Compliant System
 (ISA) 0x0000015A (346)	Microsoft ACPI-Compliant System
 (ISA) 0x0000015B (347)	Microsoft ACPI-Compliant System
 (ISA) 0x0000015C (348)	Microsoft ACPI-Compliant System
 (ISA) 0x0000015D (349)	Microsoft ACPI-Compliant System
 (ISA) 0x0000015E (350)	Microsoft ACPI-Compliant System
 (ISA) 0x0000015F (351)	Microsoft ACPI-Compliant System
 (ISA) 0x00000160 (352)	Microsoft ACPI-Compliant System
 (ISA) 0x00000161 (353)	Microsoft ACPI-Compliant System
 (ISA) 0x00000162 (354)	Microsoft ACPI-Compliant System
 (ISA) 0x00000163 (355)	Microsoft ACPI-Compliant System
 (ISA) 0x00000164 (356)	Microsoft ACPI-Compliant System
 (ISA) 0x00000165 (357)	Microsoft ACPI-Compliant System
 (ISA) 0x00000166 (358)	Microsoft ACPI-Compliant System
 (ISA) 0x00000167 (359)	Microsoft ACPI-Compliant System
 (ISA) 0x00000168 (360)	Microsoft ACPI-Compliant System
 (ISA) 0x00000169 (361)	Microsoft ACPI-Compliant System
 (ISA) 0x0000016A (362)	Microsoft ACPI-Compliant System
 (ISA) 0x0000016B (363)	Microsoft ACPI-Compliant System
 (ISA) 0x0000016C (364)	Microsoft ACPI-Compliant System
 (ISA) 0x0000016D (365)	Microsoft ACPI-Compliant System
 (ISA) 0x0000016E (366)	Microsoft ACPI-Compliant System
 (ISA) 0x0000016F (367)	Microsoft ACPI-Compliant System
 (ISA) 0x00000170 (368)	Microsoft ACPI-Compliant System
 (ISA) 0x00000171 (369)	Microsoft ACPI-Compliant System
 (ISA) 0x00000172 (370)	Microsoft ACPI-Compliant System
 (ISA) 0x00000173 (371)	Microsoft ACPI-Compliant System
 (ISA) 0x00000174 (372)	Microsoft ACPI-Compliant System
 (ISA) 0x00000175 (373)	Microsoft ACPI-Compliant System
 (ISA) 0x00000176 (374)	Microsoft ACPI-Compliant System
 (ISA) 0x00000177 (375)	Microsoft ACPI-Compliant System
 (ISA) 0x00000178 (376)	Microsoft ACPI-Compliant System
 (ISA) 0x00000179 (377)	Microsoft ACPI-Compliant System
 (ISA) 0x0000017A (378)	Microsoft ACPI-Compliant System
 (ISA) 0x0000017B (379)	Microsoft ACPI-Compliant System
 (ISA) 0x0000017C (380)	Microsoft ACPI-Compliant System
 (ISA) 0x0000017D (381)	Microsoft ACPI-Compliant System





















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 (ISA) 0x0000017D (381)	Microsoft ACPI-Compliant System
 (ISA) 0x0000017E (382)	Microsoft ACPI-Compliant System
 (ISA) 0x0000017F (383)	Microsoft ACPI-Compliant System
 (ISA) 0x00000180 (384)	Microsoft ACPI-Compliant System
 (ISA) 0x00000181 (385)	Microsoft ACPI-Compliant System
 (ISA) 0x00000182 (386)	Microsoft ACPI-Compliant System
 (ISA) 0x00000183 (387)	Microsoft ACPI-Compliant System
 (ISA) 0x00000184 (388)	Microsoft ACPI-Compliant System
 (ISA) 0x00000185 (389)	Microsoft ACPI-Compliant System
 (ISA) 0x00000186 (390)	Microsoft ACPI-Compliant System
 (ISA) 0x00000187 (391)	Microsoft ACPI-Compliant System
 (ISA) 0x00000188 (392)	Microsoft ACPI-Compliant System
 (ISA) 0x00000189 (393)	Microsoft ACPI-Compliant System
 (ISA) 0x0000018A (394)	Microsoft ACPI-Compliant System
 (ISA) 0x0000018B (395)	Microsoft ACPI-Compliant System
 (ISA) 0x0000018C (396)	Microsoft ACPI-Compliant System
 (ISA) 0x0000018D (397)	Microsoft ACPI-Compliant System
 (ISA) 0x0000018E (398)	Microsoft ACPI-Compliant System
 (ISA) 0x0000018F (399)	Microsoft ACPI-Compliant System
 (ISA) 0x00000190 (400)	Microsoft ACPI-Compliant System
 (ISA) 0x00000191 (401)	Microsoft ACPI-Compliant System
 (ISA) 0x00000192 (402)	Microsoft ACPI-Compliant System
 (ISA) 0x00000193 (403)	Microsoft ACPI-Compliant System
 (ISA) 0x00000194 (404)	Microsoft ACPI-Compliant System
 (ISA) 0x00000195 (405)	Microsoft ACPI-Compliant System
 (ISA) 0x00000196 (406)	Microsoft ACPI-Compliant System
 (ISA) 0x00000197 (407)	Microsoft ACPI-Compliant System
 (ISA) 0x00000198 (408)	Microsoft ACPI-Compliant System
 (ISA) 0x00000199 (409)	Microsoft ACPI-Compliant System
 (ISA) 0x0000019A (410)	Microsoft ACPI-Compliant System
 (ISA) 0x0000019B (411)	Microsoft ACPI-Compliant System
 (ISA) 0x0000019C (412)	Microsoft ACPI-Compliant System
 (ISA) 0x0000019D (413)	Microsoft ACPI-Compliant System
 (ISA) 0x0000019E (414)	Microsoft ACPI-Compliant System
 (ISA) 0x0000019F (415)	Microsoft ACPI-Compliant System
 (ISA) 0x000001A0 (416)	Microsoft ACPI-Compliant System
 (ISA) 0x000001A1 (417)	Microsoft ACPI-Compliant System
 (ISA) 0x000001A2 (418)	Microsoft ACPI-Compliant System
 (ISA) 0x000001A3 (419)	Microsoft ACPI-Compliant System
 (ISA) 0x000001A4 (420)	Microsoft ACPI-Compliant System
 (ISA) 0x000001A5 (421)	Microsoft ACPI-Compliant System

 (ISA) 0x000001A6 (422)	Microsoft ACPI-Compliant System
 (ISA) 0x000001A7 (423)	Microsoft ACPI-Compliant System
 (ISA) 0x000001A8 (424)	Microsoft ACPI-Compliant System
 (ISA) 0x000001A9 (425)	Microsoft ACPI-Compliant System
 (ISA) 0x000001AA (426)	Microsoft ACPI-Compliant System
 (ISA) 0x000001AB (427)	Microsoft ACPI-Compliant System
 (ISA) 0x000001AC (428)	Microsoft ACPI-Compliant System
 (ISA) 0x000001AD (429)	Microsoft ACPI-Compliant System
 (ISA) 0x000001AE (430)	Microsoft ACPI-Compliant System
 (ISA) 0x000001AF (431)	Microsoft ACPI-Compliant System
 (ISA) 0x000001B0 (432)	Microsoft ACPI-Compliant System
 (ISA) 0x000001B1 (433)	Microsoft ACPI-Compliant System
 (ISA) 0x000001B2 (434)	Microsoft ACPI-Compliant System
 (ISA) 0x000001B3 (435)	Microsoft ACPI-Compliant System
 (ISA) 0x000001B4 (436)	Microsoft ACPI-Compliant System
 (ISA) 0x000001B5 (437)	Microsoft ACPI-Compliant System
 (ISA) 0x000001B6 (438)	Microsoft ACPI-Compliant System
 (ISA) 0x000001B7 (439)	Microsoft ACPI-Compliant System
 (ISA) 0x000001B8 (440)	Microsoft ACPI-Compliant System
 (ISA) 0x000001B9 (441)	Microsoft ACPI-Compliant System
 (ISA) 0x000001BA (442)	Microsoft ACPI-Compliant System
 (ISA) 0x000001BB (443)	Microsoft ACPI-Compliant System
 (ISA) 0x000001BC (444)	Microsoft ACPI-Compliant System
 (ISA) 0x000001BD (445)	Microsoft ACPI-Compliant System
 (ISA) 0x000001BE (446)	Microsoft ACPI-Compliant System
 (ISA) 0x000001BF (447)	Microsoft ACPI-Compliant System
 (ISA) 0x000001C0 (448)	Microsoft ACPI-Compliant System
 (ISA) 0x000001C1 (449)	Microsoft ACPI-Compliant System
 (ISA) 0x000001C2 (450)	Microsoft ACPI-Compliant System
 (ISA) 0x000001C3 (451)	Microsoft ACPI-Compliant System
 (ISA) 0x000001C4 (452)	Microsoft ACPI-Compliant System
 (ISA) 0x000001C5 (453)	Microsoft ACPI-Compliant System
 (ISA) 0x000001C6 (454)	Microsoft ACPI-Compliant System
 (ISA) 0x000001C7 (455)	Microsoft ACPI-Compliant System
 (ISA) 0x000001C8 (456)	Microsoft ACPI-Compliant System
 (ISA) 0x000001C9 (457)	Microsoft ACPI-Compliant System
 (ISA) 0x000001CA (458)	Microsoft ACPI-Compliant System
 (ISA) 0x000001CB (459)	Microsoft ACPI-Compliant System
 (ISA) 0x000001CC (460)	Microsoft ACPI-Compliant System
 (ISA) 0x000001CD (461)	Microsoft ACPI-Compliant System
 (ISA) 0x000001CE (462)	Microsoft ACPI-Compliant System



 (ISA) 0x00001CF (463)	Microsoft ACPI-Compliant System
 (ISA) 0x00001D0 (464)	Microsoft ACPI-Compliant System
 (ISA) 0x00001D1 (465)	Microsoft ACPI-Compliant System
 (ISA) 0x00001D2 (466)	Microsoft ACPI-Compliant System
 (ISA) 0x00001D3 (467)	Microsoft ACPI-Compliant System
 (ISA) 0x00001D4 (468)	Microsoft ACPI-Compliant System
 (ISA) 0x00001D5 (469)	Microsoft ACPI-Compliant System
 (ISA) 0x00001D6 (470)	Microsoft ACPI-Compliant System
 (ISA) 0x00001D7 (471)	Microsoft ACPI-Compliant System
 (ISA) 0x00001D8 (472)	Microsoft ACPI-Compliant System
 (ISA) 0x00001D9 (473)	Microsoft ACPI-Compliant System
 (ISA) 0x00001DA (474)	Microsoft ACPI-Compliant System
 (ISA) 0x00001DB (475)	Microsoft ACPI-Compliant System
 (ISA) 0x00001DC (476)	Microsoft ACPI-Compliant System
 (ISA) 0x00001DD (477)	Microsoft ACPI-Compliant System
 (ISA) 0x00001DE (478)	Microsoft ACPI-Compliant System
 (ISA) 0x00001DF (479)	Microsoft ACPI-Compliant System
 (ISA) 0x00001E0 (480)	Microsoft ACPI-Compliant System
 (ISA) 0x00001E1 (481)	Microsoft ACPI-Compliant System
 (ISA) 0x00001E2 (482)	Microsoft ACPI-Compliant System
 (ISA) 0x00001E3 (483)	Microsoft ACPI-Compliant System
 (ISA) 0x00001E4 (484)	Microsoft ACPI-Compliant System
 (ISA) 0x00001E5 (485)	Microsoft ACPI-Compliant System
 (ISA) 0x00001E6 (486)	Microsoft ACPI-Compliant System
 (ISA) 0x00001E7 (487)	Microsoft ACPI-Compliant System
 (ISA) 0x00001E8 (488)	Microsoft ACPI-Compliant System
 (ISA) 0x00001E9 (489)	Microsoft ACPI-Compliant System
 (ISA) 0x00001EA (490)	Microsoft ACPI-Compliant System
 (ISA) 0x00001EB (491)	Microsoft ACPI-Compliant System
 (ISA) 0x00001EC (492)	Microsoft ACPI-Compliant System
 (ISA) 0x00001ED (493)	Microsoft ACPI-Compliant System
 (ISA) 0x00001EE (494)	Microsoft ACPI-Compliant System
 (ISA) 0x00001EF (495)	Microsoft ACPI-Compliant System
 (ISA) 0x00001F0 (496)	Microsoft ACPI-Compliant System
 (ISA) 0x00001F1 (497)	Microsoft ACPI-Compliant System
 (ISA) 0x00001F2 (498)	Microsoft ACPI-Compliant System
 (ISA) 0x00001F3 (499)	Microsoft ACPI-Compliant System
 (ISA) 0x00001F4 (500)	Microsoft ACPI-Compliant System
 (ISA) 0x00001F5 (501)	Microsoft ACPI-Compliant System
 (ISA) 0x00001F6 (502)	Microsoft ACPI-Compliant System
 (ISA) 0x00001F7 (503)	Microsoft ACPI-Compliant System

 (ISA) 0x000001F8 (504)	Microsoft ACPI-Compliant System
 (ISA) 0x000001F9 (505)	Microsoft ACPI-Compliant System
 (ISA) 0x000001FA (506)	Microsoft ACPI-Compliant System
 (ISA) 0x000001FB (507)	Microsoft ACPI-Compliant System
 (ISA) 0x000001FC (508)	Microsoft ACPI-Compliant System
 (ISA) 0x000001FD (509)	Microsoft ACPI-Compliant System
 (ISA) 0x000001FE (510)	Microsoft ACPI-Compliant System
 (ISA) 0x000001FF (511)	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) 0x00000012 (18)	SDA Standard Compliant SD Host Controller
 (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) 0x00000016 (22)	High Definition Audio Controller
 (PCI) 0xFFFFFFFF (-6)	Intel(R) Trusted Execution Engine Interface
 (PCI) 0xFFFFFFFFB (-5)	Realtek PCIe GBE Family Controller #2
 (PCI) 0xFFFFFFFFC (-4)	Realtek PCIe GBE Family Controller
 (PCI) 0xFFFFFFFFD (-3)	Intel(R) USB 3.0 eXtensible Host Controller - 0100 (Microsoft)
 (PCI) 0xFFFFFFFFE (-2)	Intel(R) HD Graphics

# Appendix C

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Mating Connectors

## C.1 List of Mating Connectors and Cables

Connector Label	Function	Mating Connector		Available Cable	Cable P/N
		Vendor	Model no		
CN39	Amplifier right channel output	Molex	51021-02000	N/A	N/A
CN38	Amplifier left channel output	Molex	51021-02000	N/A	N/A
CN9	MIC/Line in	Molex	51021-1000	Audio Cable	1709100254
CN8	LVDS LCD	Hirose	DF13-30DS-1.25C	N/A	N/A
CN3	LCD Inverter	JWT	A2001H02-05	N/A	N/A
CN25	USB port0 connector	Molex	51021-0500	USB2.0 Cable	1700050207
CN40	USB2 port1 connector	Molex	51021-0500	USB2.0 Cable	1700050207
CN18	USB HUB Port1 connector	Molex	51021-0500	USB2.0 Cable	1700050207
CN17	USB HUB Port2 connector	Molex	51021-0500	USB2.0 Cable	1700050207
CN44	USB HUB Port3 connector	Molex	51021-0500	USB2.0 Cable	1700050207
CN45	USB HUB Port4 connector	Molex	51021-0500	USB2.0 Cable	1700050207
CN41	USB HUB Port5 connector	Molex	51021-0500	USB2.0 Cable	1700050207
CN42	USB HUB Port6 connector	Molex	51021-0500	USB2.0 Cable	1700050207

CN43	USB HUB Port7 connector	Molex	51021-0500	USB2.0 Cable	1700050207
CN20	COM Port1 Connector	Molex	51021-0900	COM Cable	1701090150
CN12	COM Port2 Connector	Molex	51021-0900	COM Cable	1701090150
CN14	COM Port3 Connector	Molex	51021-0900	COM Cable	1701090150
CN15	COM Port4 Connector	Molex	51021-0900	COM Cable	1701090150
CN28	COM Port5 Connector	Molex	51021-0900	COM Cable	1701090150
CN32	COM Port6 Connector	Molex	51021-0900	COM Cable	1701090150
CN30	VGA	Molex	51021-1500	CRT Cable	1704150153
CN47	Power LED	JST	PHR-2	N/A	N/A
CN48	ON/OFF LED	JST	PHR-2	N/A	N/A
CN46	SYSTEM Fan	Molex	22-01-2035	N/A	N/A
CN24	CPU Fan	Molex	22-01-2035	N/A	N/A
CN29	eDP LCD	Hirose	DF13-30DS-1.25C	N/A	N/A
CN33	eDP Inverter	JWT	A2001H02-05	N/A	N/A