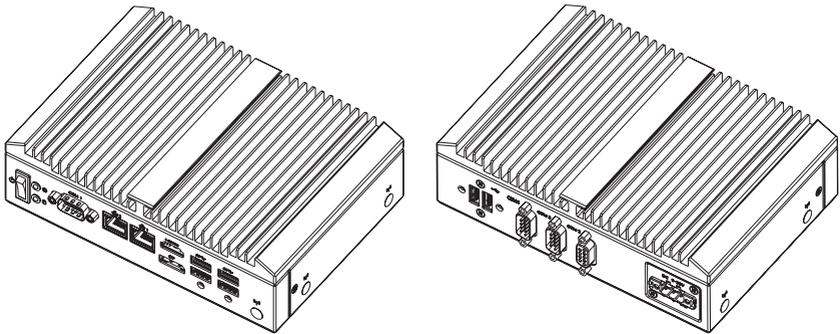


# QBiX-Pro-KBLB7100H-A1 (QD-7100A-SI)

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QBiX-Pro Industrial Embedded System  
Quick Start Guide



## Copyright Notice

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## Acknowledgement

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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
System kit	1
19V / 65W adapter	1
Power cord (May vary based on local distribution)	1
FPC SATA Cable	1
Exsiccator (10g)	1
Thermal pad for HDD	2

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 [GIGAIPC.com](http://GIGAIPC.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.**

## FCC Statement

---

### **Warning!**



This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

### **Caution:**

*There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions and your local government's recycling or disposal directives.*

### **Attention:**

*Il y a un risque d'explosion si la batterie est remplacée de façon incorrecte. Ne la remplacer qu'avec le même modèle ou équivalent recommandé par le constructeur. Recycler les batteries usées en accord avec les instructions du fabricant et les directives gouvernementales de recyclage.*

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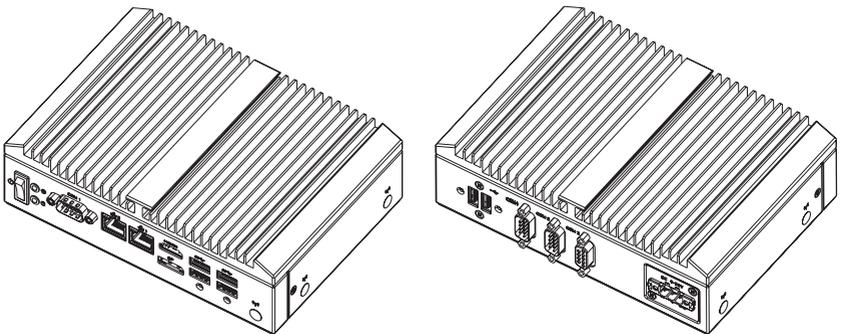
## **Chapter 4 – BIOS 49**

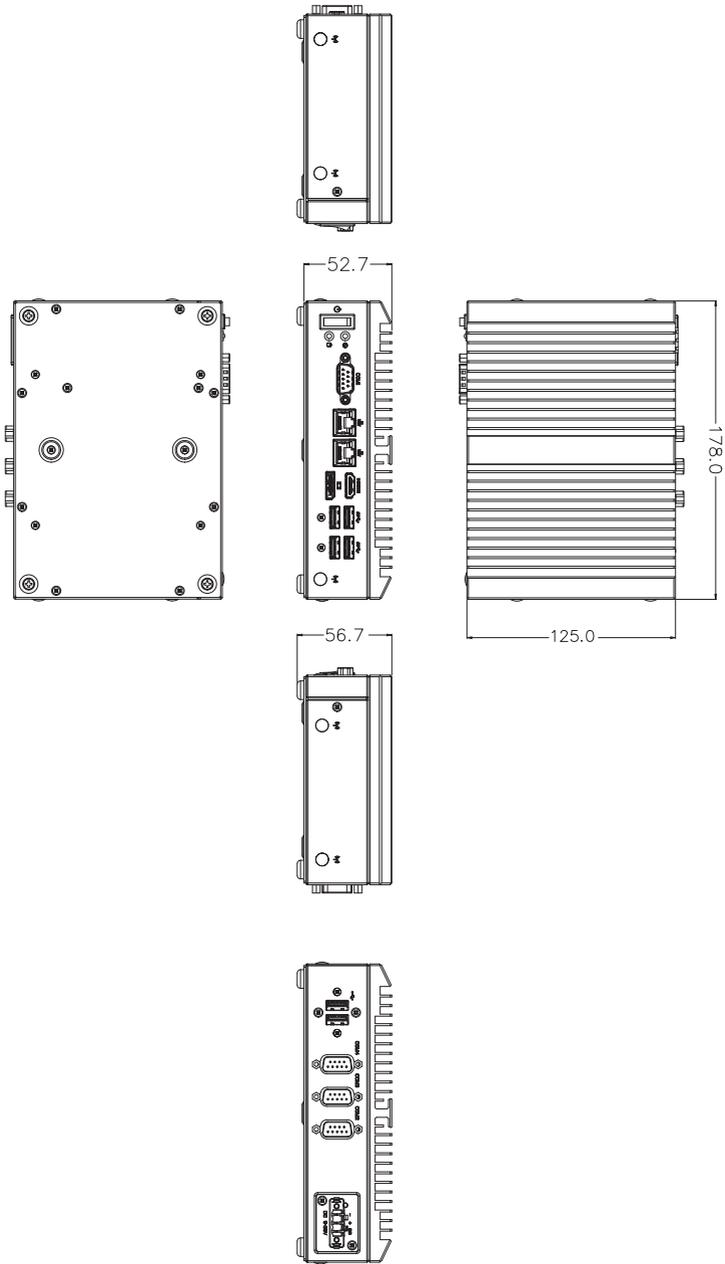
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# Chapter 1

## Chapter 1 - Product Specifications





## 1.1 Specifications

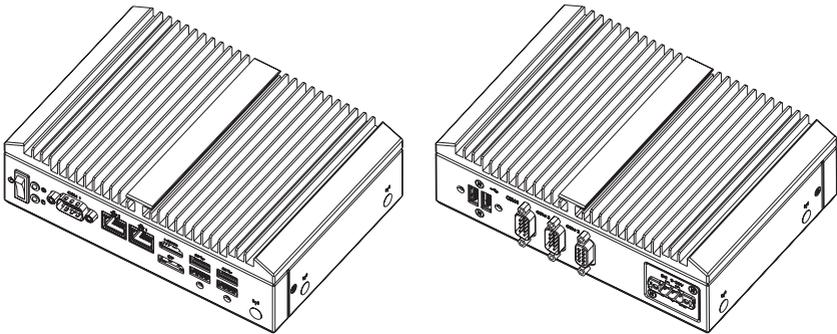
System	QBiX-Pro-KBLB7100H-A1 (QD-7100A-SI)
Dimension	System Size : 178W x 125D x 52.7H (mm)
CPU	Intel® Core™ i3-7100U Processor 14nm, 2 cores, 4 threads 2.40 GHz TDP 15W, 3 MB SmartCache
Chipset	SOC
Memory	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB Dual channel memory architecture Support DDR 2133MHz
Ethernet	2 x GbE LAN ports (Intel® i219V and Intel® i211AT)
Graphic support	Integrated Graphics Processor - Intel® HD Graphics 620 support 1 x HDMI2.0 port, supporting a maximum resolution of 4096 x 2160@60 Hz 1 x DP port, supporting a maximum resolution of 4096 x 2160@60 Hz
Audio	Realtek ALC269 High Definition Audio
Storage	1 x SATA 6 Gb/s port (Support 2.5" Hard drive/SSD)
Expansion Slots	1 x M.2 slot (Support NGFF-2230 Wifi/BT) 1 x M.2 slot (Supports NGFF-2280 SATA/PCIeX4) 1 x Mini-PCIe slot (PCIeX1+USB2.0) with Sim Slot
Front I/O	2 x RJ45 LAN port 4 x USB 3.0 1 x HDMI 1 x Display Port 1 x Power switch 1 x COM port (RS422/485/232, RI/5V/12V)
Rear I/O	2 x USB2.0 3 x COM Port ( RS-232) 1 x 3 pin Terninal Block connector
Side I/O	2 x Antenna option
TPM	—
Power	DC 9~36V Full Range

System	QBiX-Pro-KBLB7100H-A1 (QD-7100A-SI)
Operation Temperature	Operating temperature: 0°C to 50°C Operating humidity: 0-90% (non-condensing) Non-operating temperature: -20°C to 70°C Non-operating humidity: 0%-95% (non-condensing) Use wide temperature range memory and storage
Vibration During Operation	Operation: IEC 60068-2-64, 5 Grms, random, 5 ~ 500 Hz, 1 hr / Per Axis, with SSD/M.2 2280 Non-operation: IEC 60068-2-6, 2 G, Sine, 10 ~ 500 Hz, 1 Oct/min, 1 hr / Per Axis
Shock During Operation	Operation: IEC 60068-2-27, 50 G, half sine, 11 ms duration, With SSD
Packaging Content	Box Packing Capacity: 5pcs Carton size: 505 x 231 x 333(mm) Content: SCREW I HEAD FOR 25HDD M3 x 8L x 4 (25KSG-130081-K1R ) THERMAL PAD x 2 (25ST3-200052-T5R) THERMAL PAD x 1 (25ST3-200053-T5R) THERMAL PAD x 1 (25ST3-200051-T5R) CABLE SATA x 1 (25CF4-170020-S9R ) TERMINAL BLOCKS MALE PLUG (25IO0-5ESDV0-D2R )
Order Information	System : 6BCKACMR-SI

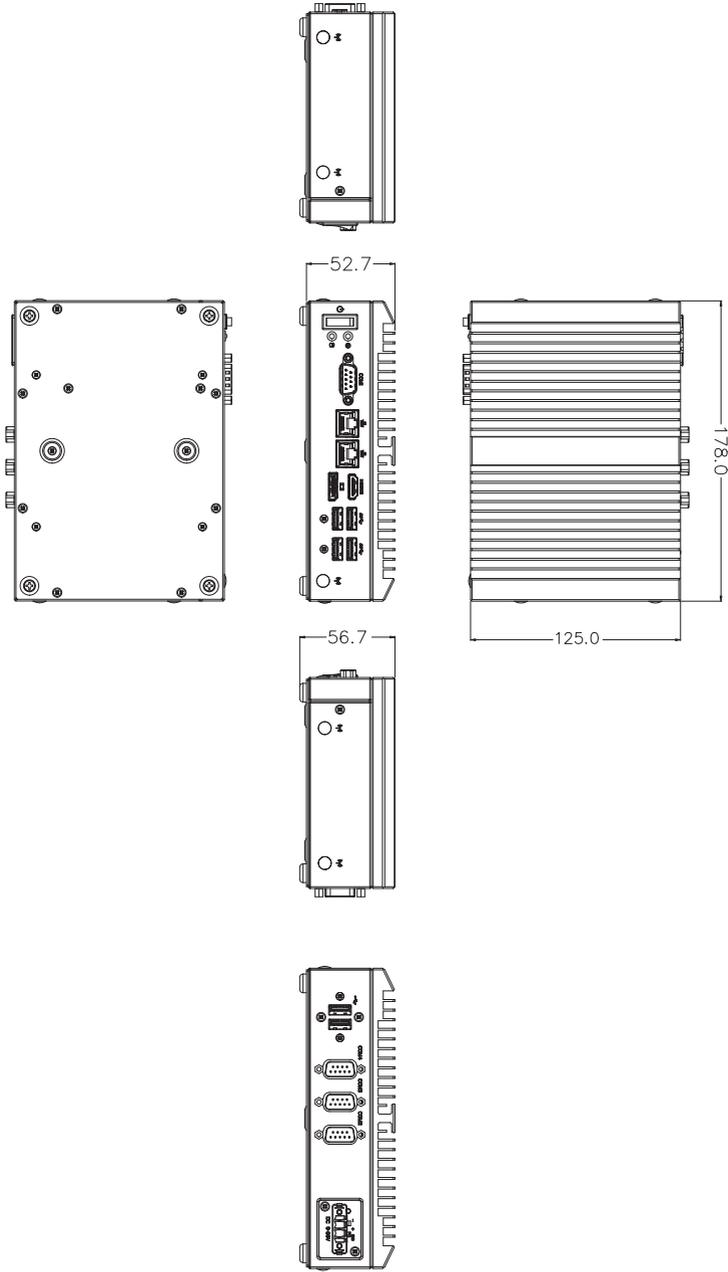
## Chapter 2

---

### Chapter 2 – QBiX-Pro-KBLB7100H-A1 (QD-7100A-SI) Industrial Embedded System Kit

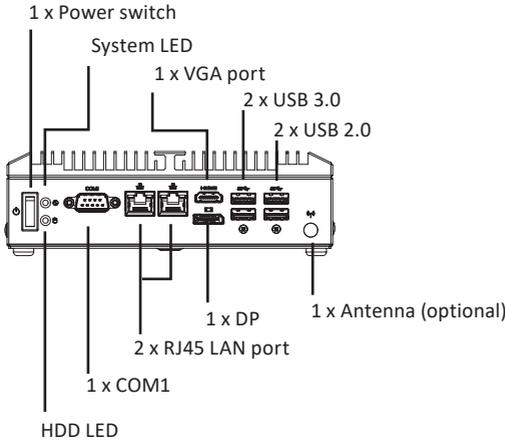


# 2.1 Dimension

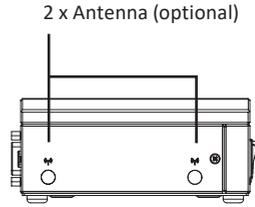


## 2.2 Getting Familiar with Your Unit

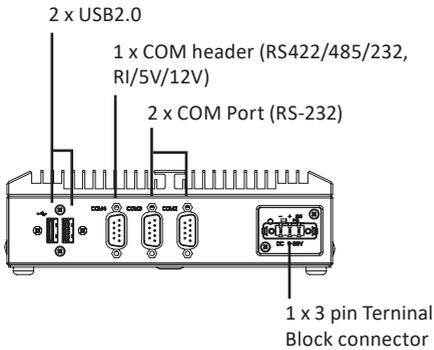
**[Front Side]**



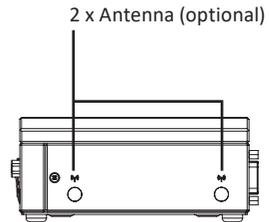
**[Left Side]**



**[Rear Side]**

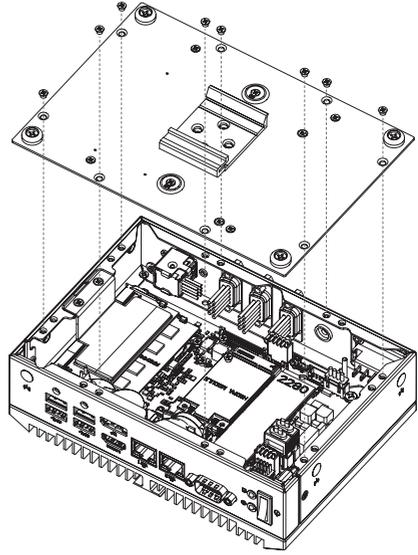
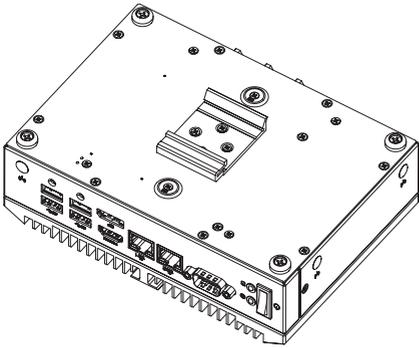


**[Right Side]**



## [Install]

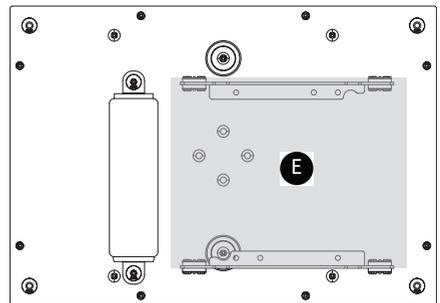
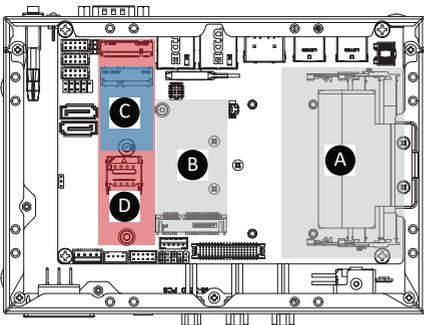
- \* Before opening the case, make sure to unplug the power cord.
- \* Before Connecting the power, make sure to fasten the case securely.



## [Bottom PCB Side]

	Information
A	2 x DDR4 SO-DIMM sockets, Max. Capacity 32 GB, Support Dual Channel DDR4 2133 MHz
B	1 x Full-size miniPCIe with SIM slot

	Information
C	1 x 2230 M.2 E-Key
D	1 x 2280 M.2 M-Key (PCIe x4, SATA 6Gb/s)
E	2.5" Hard drive/ SSD

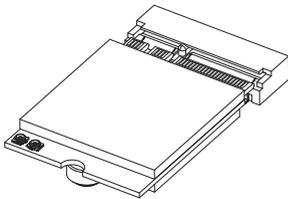


## 2.3 A) Wireless Module: How to safely install the Module (Wireless Module inclusion may vary based on local distribution)

1

Carefully insert the wireless module into the M.2 slot

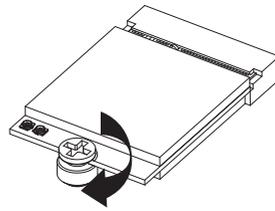
小心地將無線模組安裝於M.2插槽中。



2

Lock the screw in the middle.

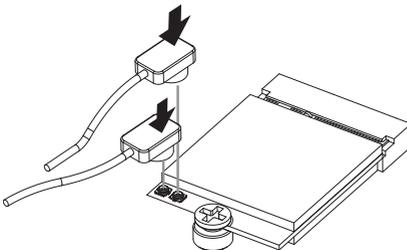
鎖入固定於無線模組中央頂端的螺絲。



3

Install the antenna on the left side of the connection wireless module down.

向下安裝連結於無線模組左側頂端天線。



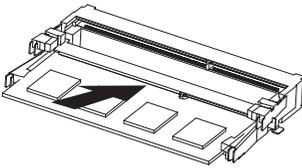
## 2.4 B) Memory Installation: DDR4 SO-DIMM

---

①

Carefully insert SO-DIMM memory modules.

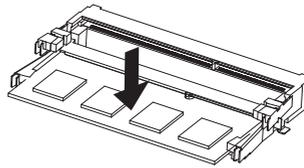
小心地由下至上將 SO-DIMM 記憶體安裝於記憶體插槽。



②

Push down until the modules click into place.

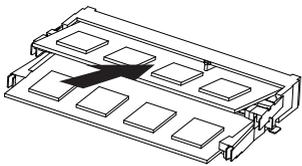
當記憶體固定於插槽後，再輕輕下壓至定點。



③

Carefully insert SO-DIMM memory modules.

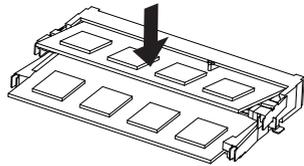
安裝下層記憶體後，重覆前述動作安裝上層記憶體。



④

Push down until the modules click into place.

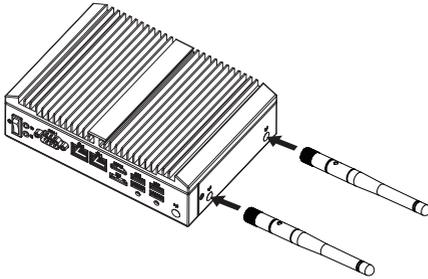
當記憶體固定於插槽後，再輕輕下壓至定點。



## 2.5 Antenna Installation (Antenna inclusion may vary based on local distribution)

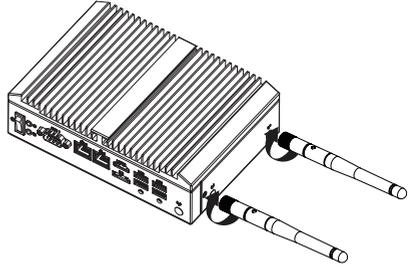
①

Carefully insert the antennas into the connectors.  
小心地將天線插入天線插孔中。



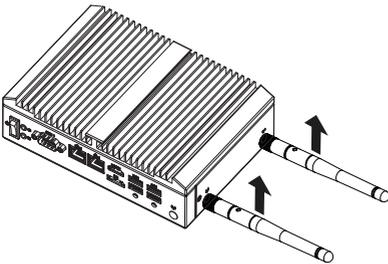
②

Turn the antennas clockwise until they are completely secure on the connectors.  
握住天線接頭底端，按順時針方向將天線旋入插孔中牢牢固定。



③

Flip up the antenna heads so that they are perpendicular to the machine.  
栓緊後請將天線拉起朝上呈垂直狀。





## 2.7 Support

---

- For a list of tested memory, M.2, 2.5" SSD, wireless adapters and OS supported, go to: <http://www.gigaipc.com>
- To download the latest drivers and BIOS updates, go to: <http://www.gigaipc.com>
- For product support, go to: <http://www.gigaipc.com>

## 2.8 Safety and Regulatory Information

---

Risk of explosion if the battery is replaced with an incorrect type. Batteries should be recycled where possible.

Disposal of used Batteries must be in accordance with local environmental regulations.

Failure to use the included Power Adapter may violate regulatory compliance and may expose the user to safety hazards.

**HDMI**™  
HIGH DEFINITION MULTIMEDIA INTERFACE



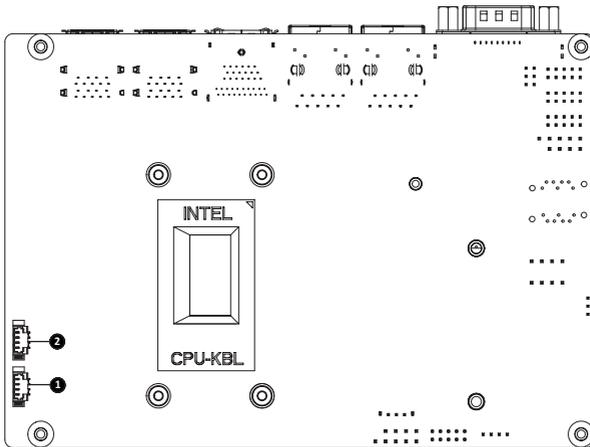
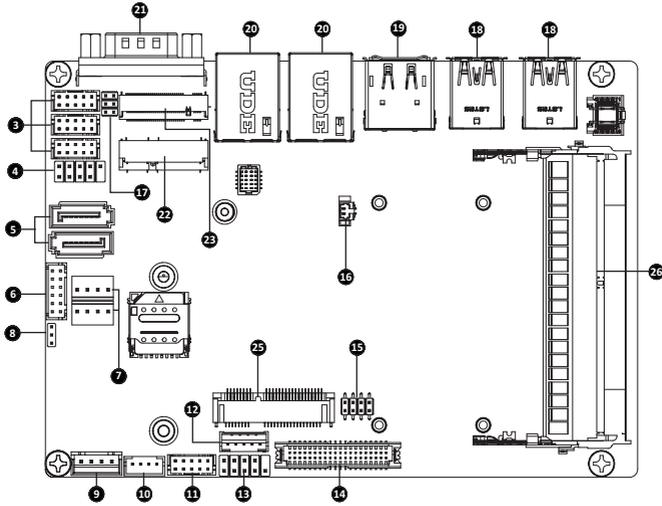
At the end of its serviceable life, this product should not be treated as household or general waste. It should be handed over to the applicable collection point for the recycling of electrical and electronic equipment, or returned to the supplier for disposal.

# Chapter 2

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## Chapter 2 – Hardware Information

# 2.1 Jumpers and Connectors

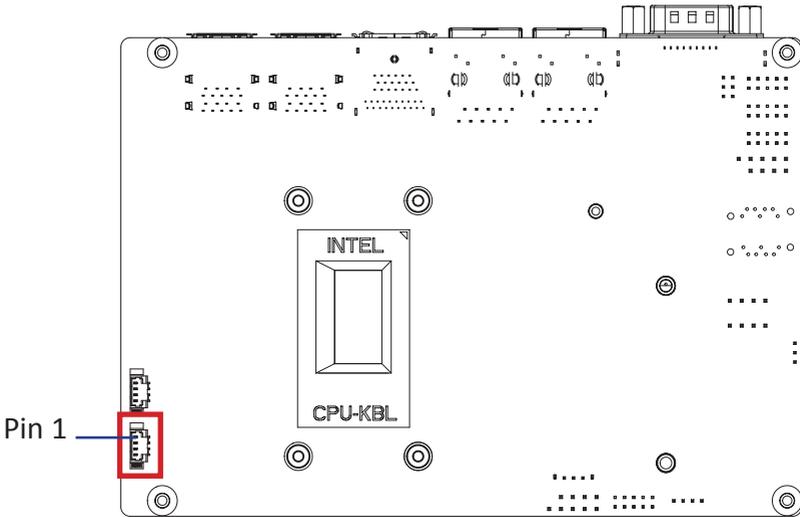


No	Code	Description
1	CPU FAN	CPU FAN connector
2	SYS FAN	System FAN connector
3	COM2 COM3 COM4	Serial port header
4	FUSB	USB 2.0 header
5	SATAIII1 SATAIII0	SATA 6GB/S Connector
6	GPIO_CNT	General purpose input/output header
7	SATAPW1 SATAPW2	SATA 6Gb/s power connector
8	AT_CN	AT/ATX power mode select jumper
9	DC_IN	DC IN 1x4pin power connector
10	SPK_OUT	Speaker out connector
11	FP_Audio	Front Audio connector
12	BKL_CN	Back light brightness control connector
13	SYS_PANEL	Front panel header
14	LVDS	LVDS connector
15	LSW	LVDS resolution jumper
16	BATTERY	Battery cable connector
17	JCOM1	COM1 (COM RI# pin RI#/5V/12V Select)
18	RUSB1 RUSB2	USB3.0 Connector
19	HDMI2_DP	HDMI connector (Bottom) & DP connector (Top)
20	LAN1, LAN2	LAN connector

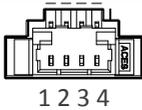
No	Code	Description
21	COM1	Serial Port connector
22	M2E1	M.2 Slot, E-key, NGFF2230, WiFi & Bluetooth module
23	M2M1	M.2 Slot, SATA/PCIeX4, NGFF2280
24	SIM-CARD	Sim Card slot
25	MPCIE	Mini PCIe full size, support 3G/4G module
26	SODIMM1 SODIMM2	DDR4 SO-DIMM Slot

## 2.2.1 CPU FAN (CPU FAN connector)

1



CPU FAN connector

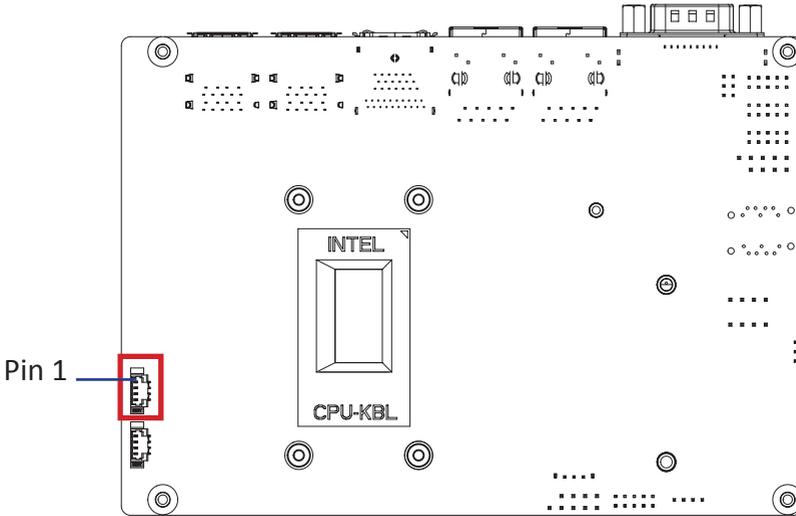


Connector PN	Vendor
85205-0470N	ACES
A1250WV-S-04PC	JOINT-TECH

Pin No.	Definition
1	GND
2	12V
3	Detect
4	Speed Control

## 2.2.2 System FAN (System FAN connector)

2

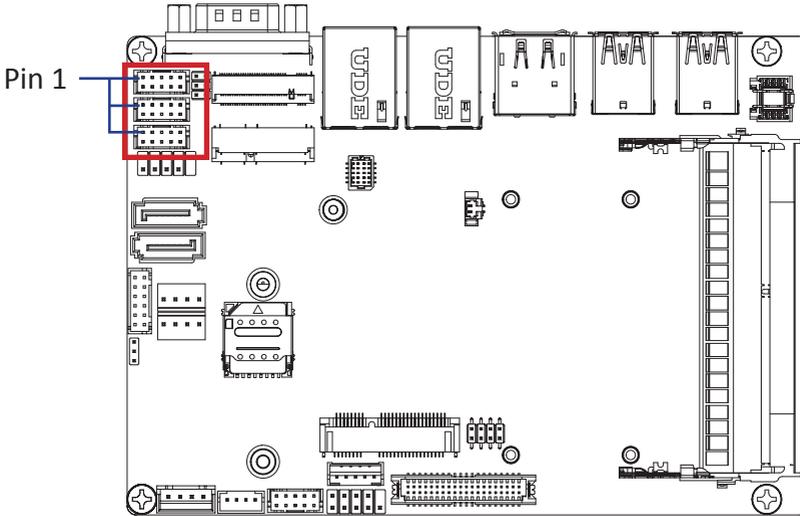


Connector PN	Vendor
85205-0470N	ACES
A1250WV-S-04PC	JOINT-TECH

Pin No.	Definition
1	GND
2	12V
3	Detect
4	Speed Control

## 2.2.3 COM2, COM3, COM4 (Serial port header)

3



Serial Port Cable Connector

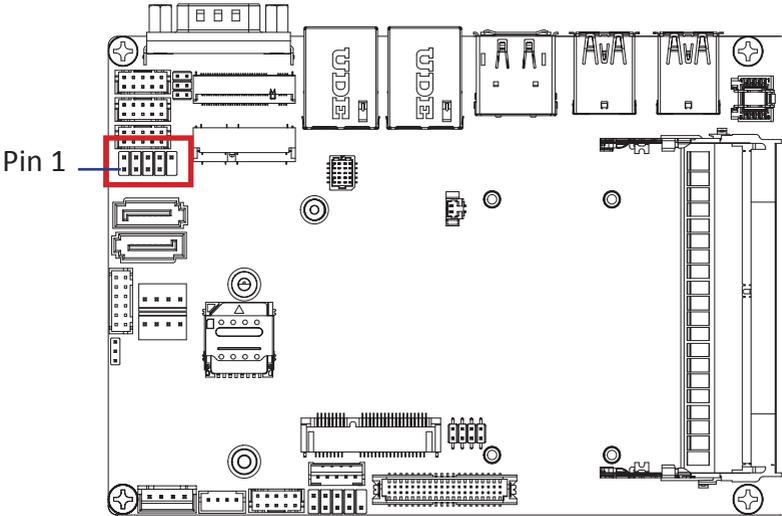


Connector PN	Vendor
725-81-10TW00	PINREX
A2004WV-2X05P46	JOINT-TECH

Pin No.	Definition
1	RXD
2	DCD
3	DTR
4	TXD
5	DSR
6	GND
7	CTS
8	RTS
9	No Connect
10	RI/ 5V/ 12V

## 2.2.4 FUSB (USB 2.0 header)

4

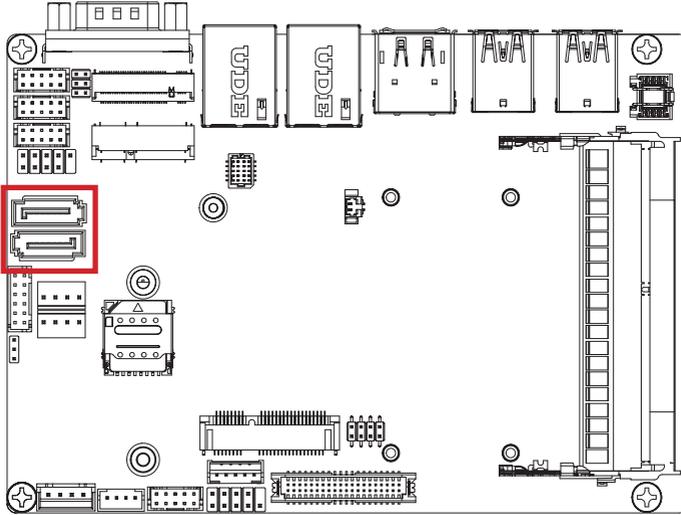


Connector PN	Vendor
210-92-05GB04	PINREX
PH10R53BAZ009	HORNGTONG

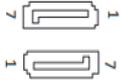
Pin No.	Definition
1	5V
2	5V
3	DX-
4	DY-
5	DX+
6	DY+
7	GND
8	GND
9	No Pin
10	No Connect

## 2.2.5 SATAIII\_0, SATAIII\_1 (SATA 6GB/S Connector)

5



SATA Connector



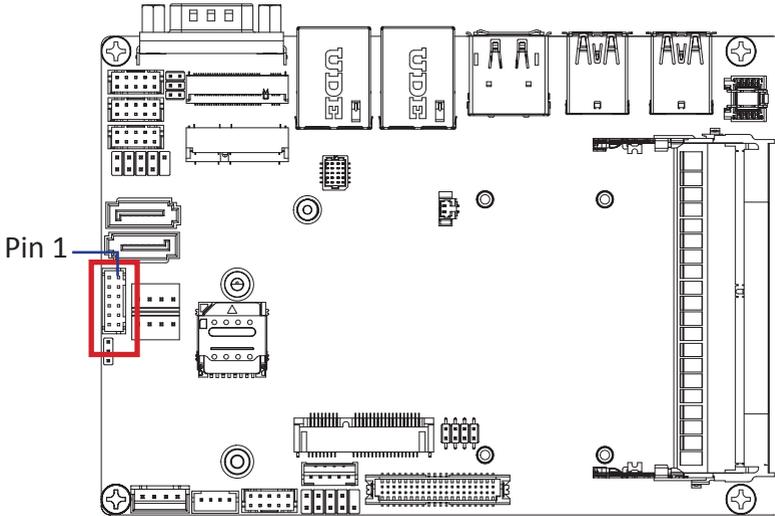
SATAIII\_1,SATAIII\_0

Connector PN	Vendor
WATM-07ABNB2BAUW3	WINWIN
770-83-07SW19	PINREX

Pin No.	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

## 2.2.6 GPIO\_CNT (General Purpose input/output header )

6

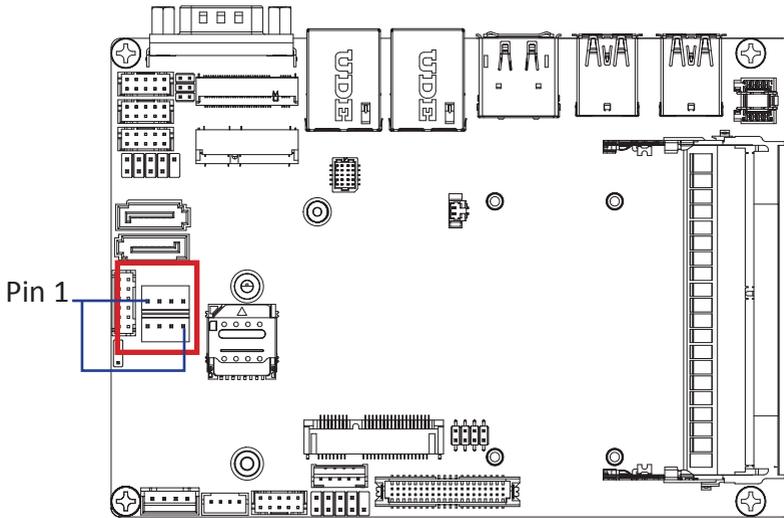


Connector PN	Vendor
725-81-12TW00	PINREX
A2004WV-2X06P46	JOINT-TECH

Pin No.	Definition
1	GPO1
2	GPI1
3	GPO2
4	GPI2
5	GPO3
6	GPI3
7	GPO4
8	GPI4
9	SMB_CLK
10	SMB_DATA
11	5V
12	GND

## 2.2.7 SATAPW1, SATAPW2 (SATA 6Gb/s power connector)

7



Hard Disk Power Connector



Connector PN

743-81-04TW00  
WF04Q2-3BJQ000

Vendor

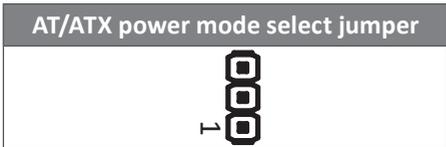
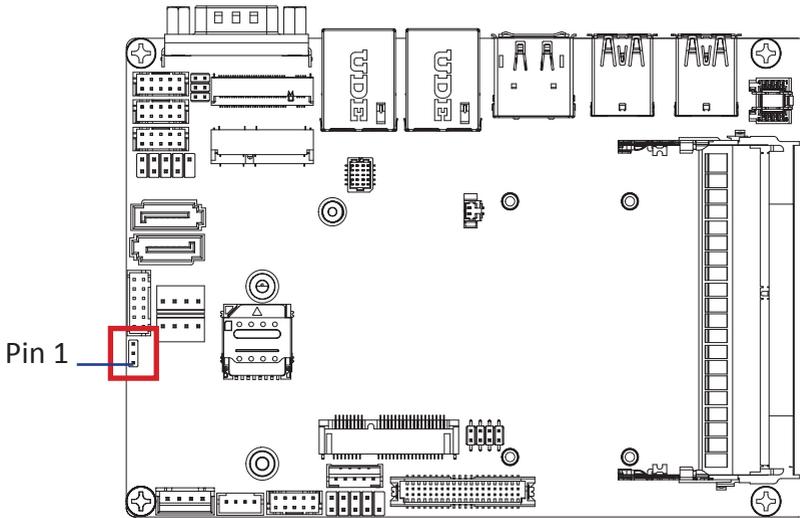
PINREX  
HORNGTONG

Pin No. Definition

Pin No.	Definition
1	12V
2	GND
3	GND
4	5V

## 2.2.8 AT\_CN (AT/ATX power mode select jumper)

8



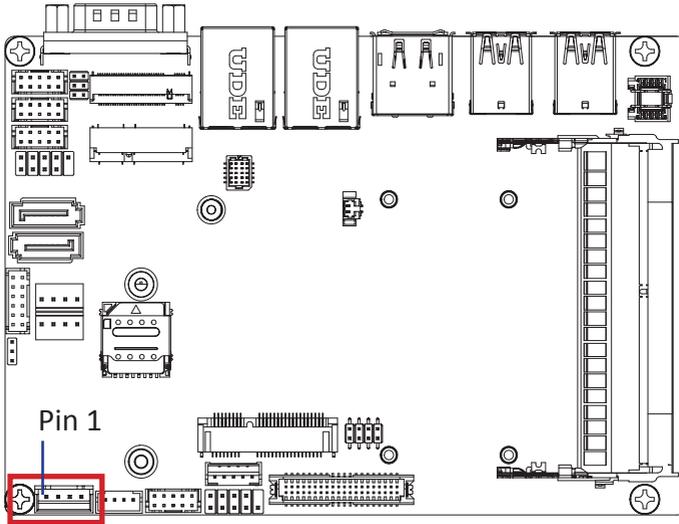
Connector PN	Vendor
220-96-03GB01	PINREX
PH03N2-7BAN000	HORNGTONG

Pin No.	Definition
1	AT MODE
2	TXD5
3	ATX MODE

Jumper setting  
 1-2 Close : AT mode.  
 2-3 Close : ATX mode.(Default setting)

## 2.2.9 DC\_IN (DC IN 1x4-pin power connector)

9



DC in connector



Connector PN

753-81-04TW00

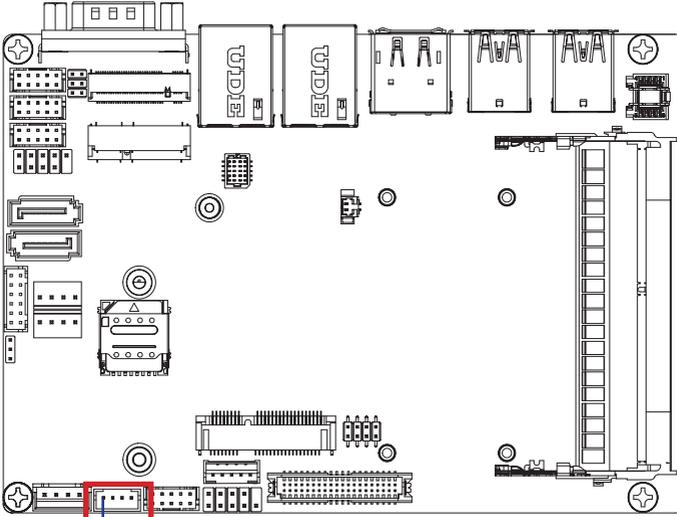
Vendor

PINREX

Pin No.	Definition
1	GND
2	Power
3	Power
4	GND

## 2.2.10 SPK\_OUT (Speaker out connector)

10



Pin 1

### Audio Amplifier Connector



Pin No.	Definition
1	Speaker Out L+
2	Speaker Out L-
3	Speaker Out R-
4	Speaker Out R+

### Connector PN

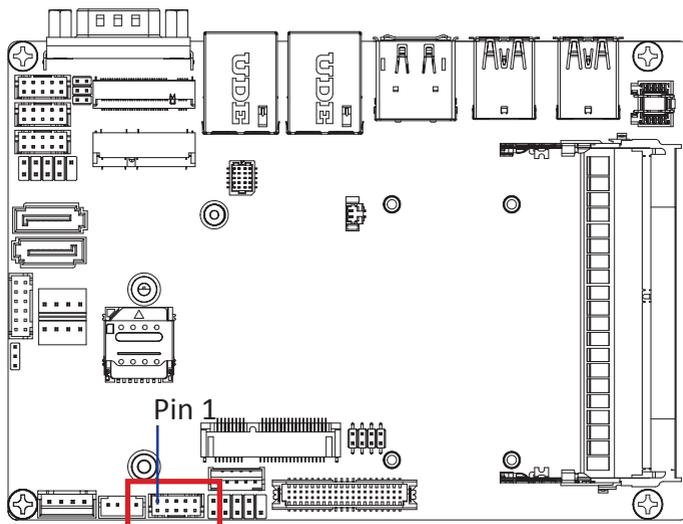
721-81-045W00  
A2001WV-04P146

### Vendor

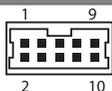
PINREX  
JOINT-TECH

## 2.2.11 FP\_Audio (Front Audio connector)

11



Front Audio Connector



Pin No.	Definition
1	MIC_L
2	GND
3	MIC_R
4	Detect
5	HPOUT_R
6	GND
7	FAUDIO_JD
8	No Connect
9	HPOUT_L
10	GND

Connector PN

725-81-10TW00

A2004WV-2X05P46

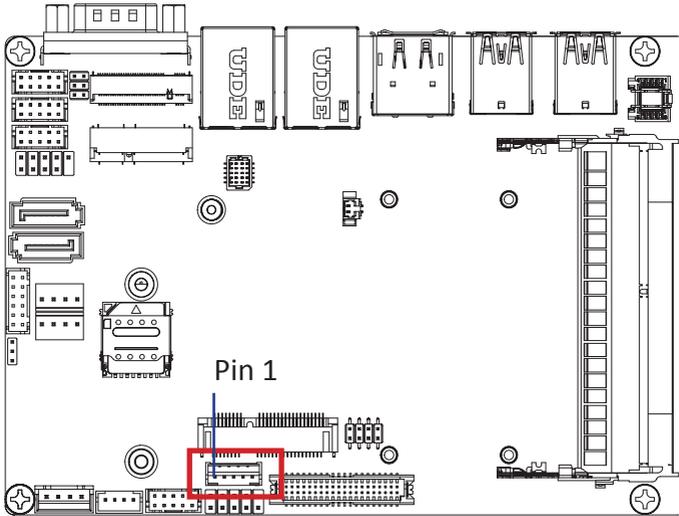
Vendor

PINREX

JOINT-TECH

## 2.2.12 BKL\_CN (Back light brightness control connector)

12



Back light brightness control connector	
1	5

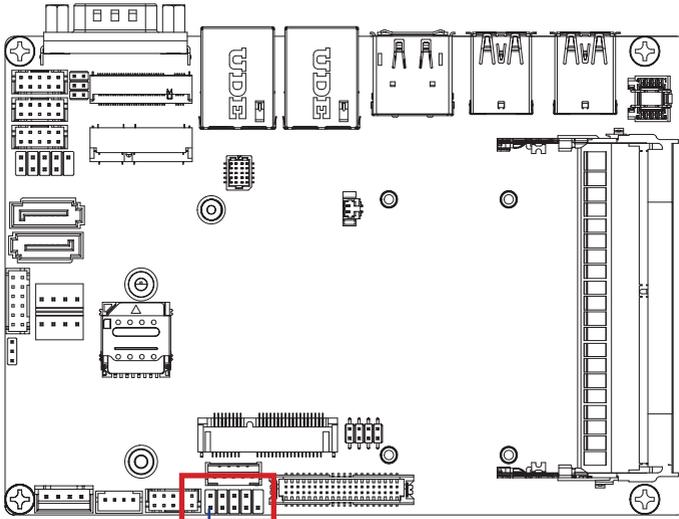
Connector PN	Vendor
A2001WV-05P146	JOINT-TECH

Pin No.	Definition
1	5V
2	PWM
3	Back Light Enable
4	GND
5	12V

Connector PN	Vendor
721-81-05TW00	PINREX

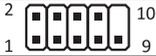
## 2.2.13 SYS\_PANEL (Front panel header)

13



Pin 1

### System Panel Header



### Connector PN

210-92-05G111

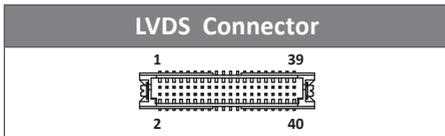
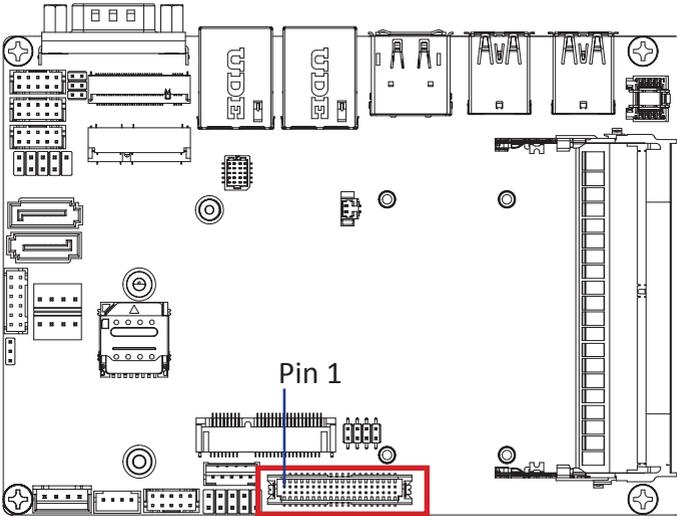
### Vendor

PINREX

Pin No.	Definition
1	HDD LED+
2	Power LED+
3	HDD LED-
4	Power LED-
5	GND
6	Power Button+
7	Reset Button
8	Power Button-
9	No Connect
10	No Pin

## 2.2.14 LVDS (LVDS connector)

14

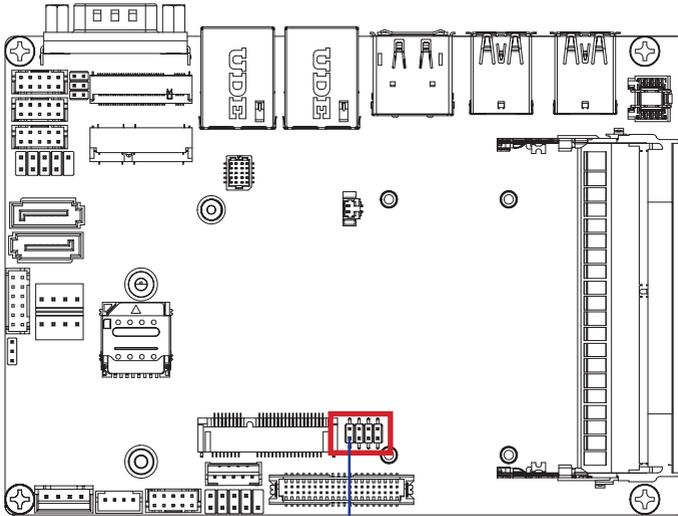


Connector PN	Vendor
712-76-40GWE0	PINREX
A1252WV-SF-2X20PD01	JOINT-TECH

Pin No.	Definition	Pin No.	Definition
1	3.3V	21	A5+
2	5V	22	A4+
3	3.3V	23	A5-
4	5V	24	A4-
5	SPECO	25	GND
6	SPEDO	26	GND
7	GND	27	A7+
8	GND	28	A6+
9	A1+	29	A7-
10	A0+	30	A6-
11	A1-	31	GND
12	A0-	32	GND
13	GND	33	CLK2+
14	GND	34	CLK1+
15	A3+	35	CLK2-
16	A2+	36	CLK1-
17	A3-	37	GND
18	A2-	38	GND
19	GND	39	12V
20	GND	40	12V

## 2.2.15 LSW (LVDS resolution jumper)

15



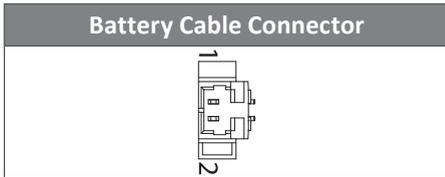
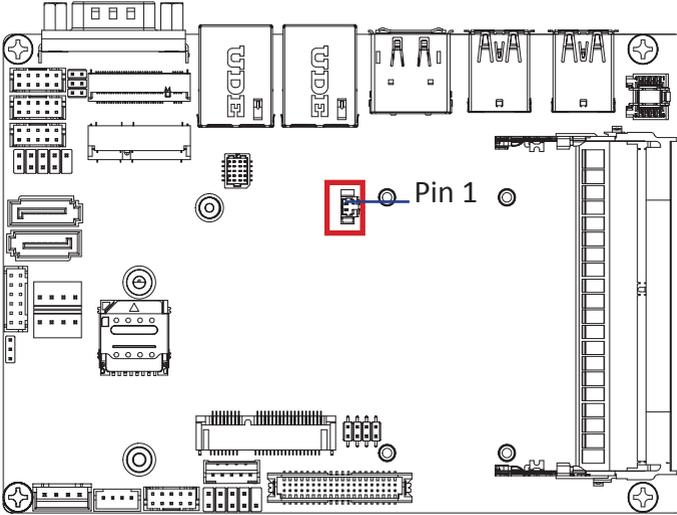
Pin 1

LVDS Resolution Jumper			
Jumper Setting	Resolution	Jumper Setting	Resolution
1 	800 x 600 18bit	1 	1366 x 768 24bit
1 	1024 x 768 18bit	1 	1440 x 900 24bit
1 	1024 x 768 24bit	1 	1400 x 1050 24bit
1 	1024 x 600 18bit	1 	1600 x 900 24bit
1 	1280 x 800 18bit	1 	1680 x 1050 24bit
8 	1024 x 600 18bit	1 	1600 x 1200 24bit
1 	1280 x 1024 24bit	1 	1920 x 1080 24bit
1 	1366 x 768 18bit	1 	1920 x 1200 24bit

Connector PN	Vendor
222-97-04GBE1	PINREX

## 2.2.16 BATTERY (Battery cable connector)

16

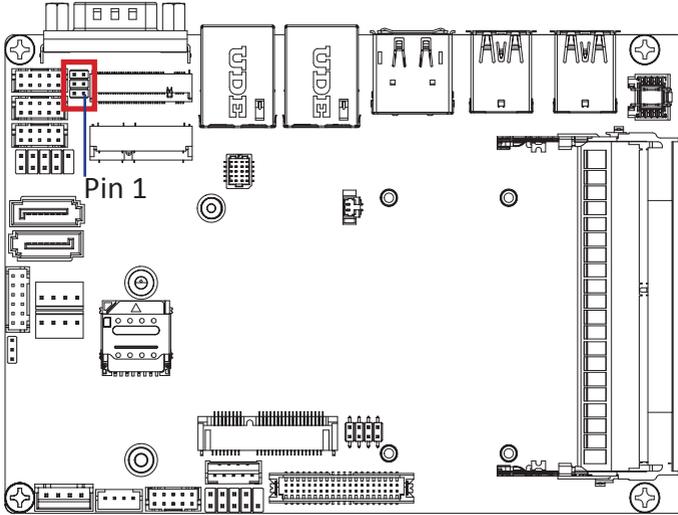


Connector PN	Vendor
85205-0270L	ACES
A1250WV-S-02PC	JOINT-TECH

Pin No.	Definition
1	3.3V
2	GND

## 2.2.17 JCOM1 (COM1 RI# pin RI#/5V/12V Select)

17



JCOM11 Jumper Select									
<table border="1"> <tr><td>6</td><td>5</td></tr> <tr><td>⊗</td><td>⊗</td></tr> <tr><td>⊗</td><td>⊗</td></tr> <tr><td>2</td><td>1</td></tr> </table>	6	5	⊗	⊗	⊗	⊗	2	1	1-2 Close: 5V (Power COM)
6	5								
⊗	⊗								
⊗	⊗								
2	1								
<table border="1"> <tr><td>6</td><td>5</td></tr> <tr><td>⊗</td><td>⊗</td></tr> <tr><td>⊗</td><td>⊗</td></tr> <tr><td>2</td><td>1</td></tr> </table>	6	5	⊗	⊗	⊗	⊗	2	1	3-4 Close: RI (Stand COM)
6	5								
⊗	⊗								
⊗	⊗								
2	1								
<table border="1"> <tr><td>6</td><td>5</td></tr> <tr><td>⊗</td><td>⊗</td></tr> <tr><td>⊗</td><td>⊗</td></tr> <tr><td>2</td><td>1</td></tr> </table>	6	5	⊗	⊗	⊗	⊗	2	1	5-6 Close: 12V (Power COM)
6	5								
⊗	⊗								
⊗	⊗								
2	1								

Connector PN	Vendor
220-97-03GB01	PINREX
PH06N53BAZ000	HORNGTONG



# Chapter 4

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## Chapter 4 – BIOS

## 4.1 The Main Menu

Once you enter the BIOS Setup program, the Main Menu (as shown below) appears on the screen. Use arrow keys to move among the items and press to accept or enter other sub-menu.

### Main Menu Help

The on-screen description of a highlighted setup option is displayed on the bottom line of the Main Menu.

### Submenu Help

While in a submenu, press to display a help screen (General Help) of function keys available for the menu. Press to exit the help screen. Help for each item is in the Item Help block on the right side of the submenu.

- When the system is not stable as usual, select the Restore User Defaults item to set your system to its defaults.
- The BIOS Setup menus described in this chapter are for reference only and may differ by BIOS version.



## **BIOS Information**

### » **Project Name**

Display version number of the project.

### » **BIOS Version**

Display version number of the BIOS setup utility.

### » **Build Date and Time**

Displays the date and time when the BIOS setup utility was created.

### » **LAN1/2 MAC Address**

### » **Total Memory**

Displays the technical specifications for the installed memory.

### » **TXE FW Version**

### » **System Date**

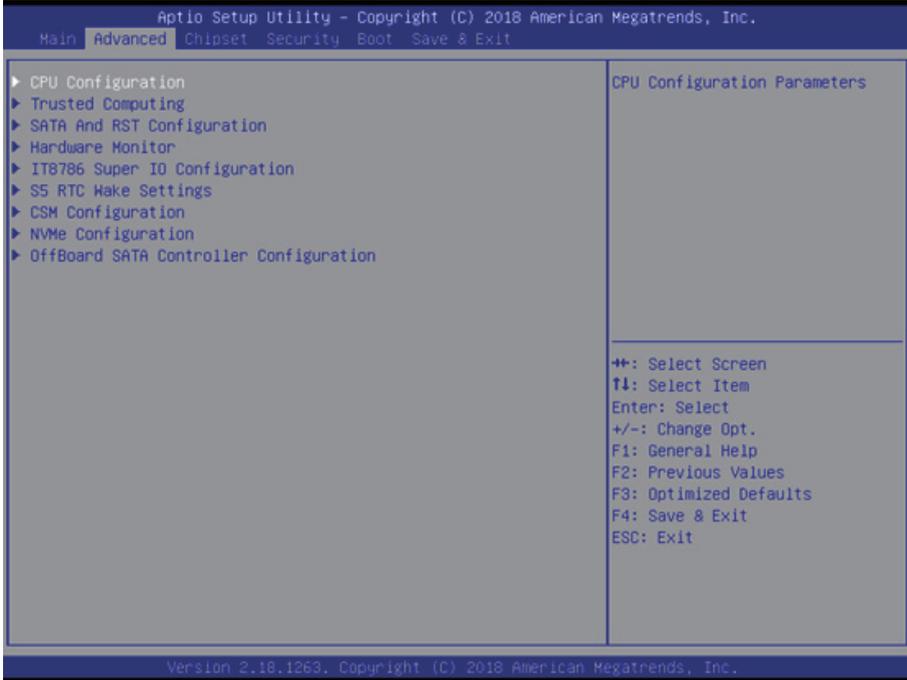
Set the date following the weekday-month-day- year format.

### » **System Time**

Set the system time following the hour-minute- second format.

## 4.2 Advanced Menu

The Advanced menu display submenu options for configuring the function of various hardware components. Select a submenu item, and then press Enter to access the related submenu screen.



## 4.2.1 CPU Configuration

The Advanced menu display submenu options for configuring the function of various hardware components. Select a submenu item, and then press Enter to access the related submenu screen.



### » SW Guard Extension

Enable/Disable SGX, SGX is a set of instructions that increase the security of application code and data.

### » Intel Virtualization Technology

Enables or disables Intel® Virtualization Technology. Virtualization enhanced by Intel® Virtualization Technology will allow a platform to run multiple operating systems and applications in independent partitions. With virtualization, one computer system can function as multiple virtual systems.

Options available: Enabled/Disabled. Default setting is Enable

## » **EIST**

Enables or disables Enhanced Intel® Speed Step Technology (EIST). Depending on CPU loading, Intel® EIST technology can dynamically and effectively lower the CPU voltage and core frequency to decrease average power consumption and heat production. Auto lets the BIOS automatically configure this setting.

Options available: Enabled/Disabled. Default setting is Enable

## » **Turbo Mode**

Allows you to determine whether to enable the Intel® CPU Turbo Boost technology.

Options available: Enabled/Disabled. Default setting is Enable

## **CPU C-States**

Enables or disables support for C-States.

Options available: Enabled/Disabled. Default setting is Enable

## **CPU P-States**

Enables or disables support for P-States.

Options available: Enabled/Disabled. Default setting is Enable

## **CFG lock**

Enable/Disable CFG lock.

Options available: Enabled/Disabled. Default setting is Disabled

## 4.2.2 Trusted Computing

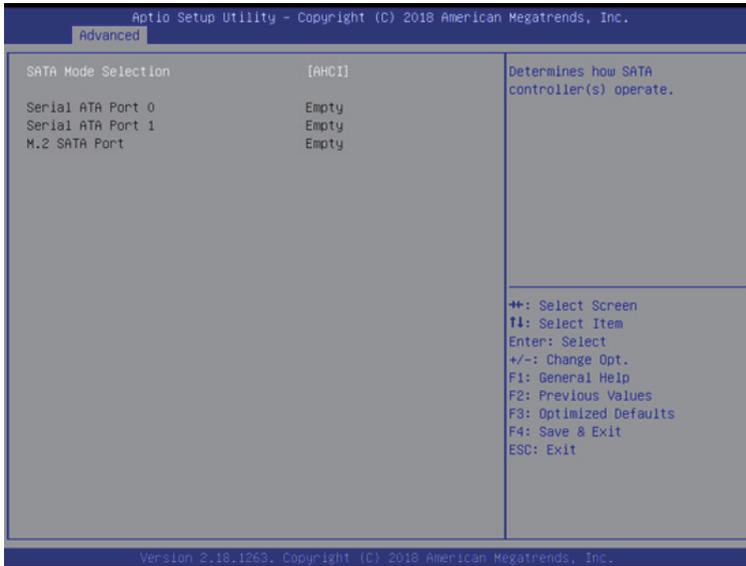


### » Security Device Support

Select Enabled to activate TPM support feature.

Options available: Enabled/Disabled. Default setting is Disabled.

## 4.2.3 SATA Configuration



### » SATA Mode Selection

Enables or disables RAID for the SATA controllers integrated in the Intel Chipset or configures the SATA controllers to AHCI mode.

AHCI Configures the SATA controllers to AHCI mode. Advanced Host Controller Interface (AHCI) is an interface specification that allows the storage driver to enable advanced Serial ATA features such as Native Command Queuing and hot plug. (Default)

RAID Enables RAID for the SATA controller.

### » M.2 Port

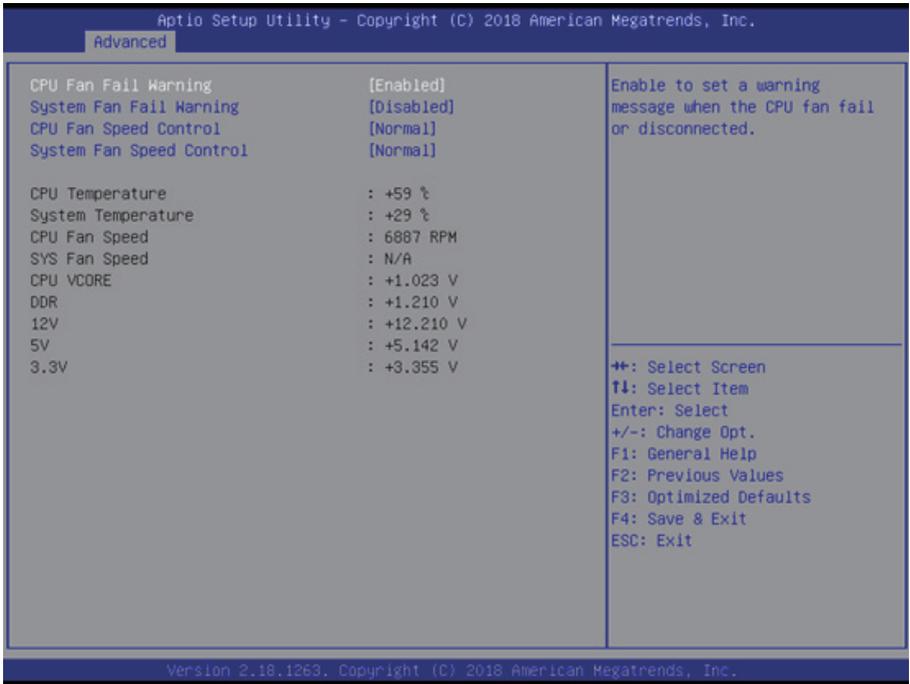
The category identifies M.2 types of hard disk that are installed in the computer. System will automatically detect HDD type.

Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information

for this category.

Hard drive information should be labeled on the outside device casing. Enter the appropriate option based on this information.

## 4.2.3 Hardware Monitor



### » CPU/System FAN Fail Warning

Enable/Disable CPU/System FAN Fail warning alert function.

Option available: Enabled/Disabled.

Default setting for CPU FAN Fail Warning is Enabled.

Default setting for System FAN Fail Warning is Disabled.

### » CPU/System FAN Speed Control

Enable CPU/System Fan Speed Control function.

Option available: Normal/Full Speed. Default setting is Normal.

### » System/CPU Temperature

Displays current CPU temperature.

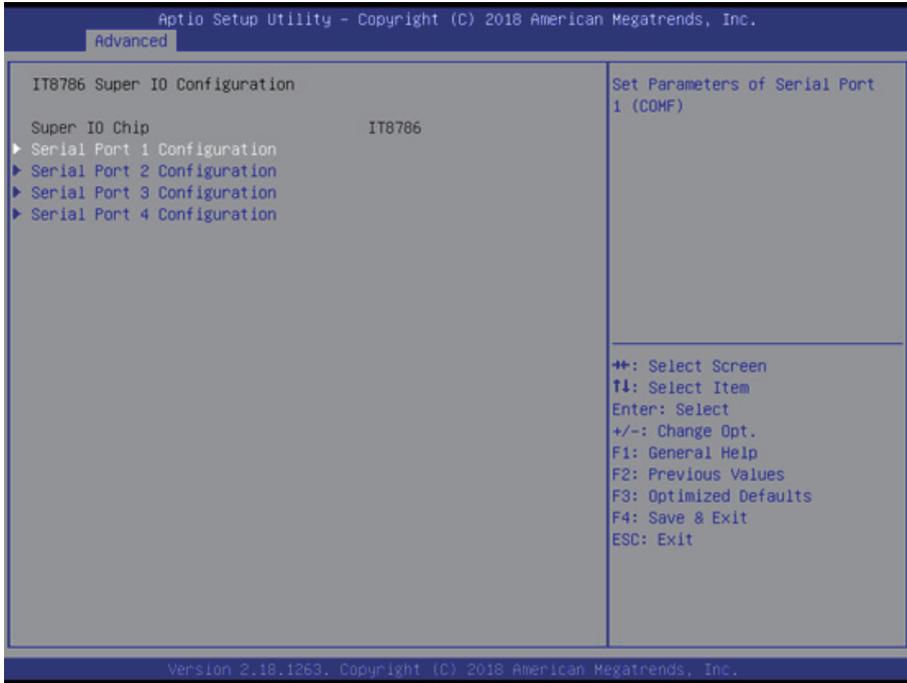
### » CPU/System Fan Speed (RPM)

Displays current CPU and system fan speed.

### » VCORE/DDR1.2V/+12V/VCC/VCC3/VSB3V

Displays a real-time record of the related system voltage.

## 4.2.4 Super IO Configuration



### » CPU/System FAN Fail Warning

Super IO Configuration

#### **Serial Port 1 Configuration**

Press [Enter] for configuration of advanced items.

#### **Serial Port 2 Configuration**

Press [Enter] for configuration of advanced items.

#### **Serial Port 3 Configuration**

Press [Enter] for configuration of advanced items.

#### **Serial Port 4 Configuration**

Press [Enter] for configuration of advanced items.

## 4.2.4.1 Serial Port Configuration

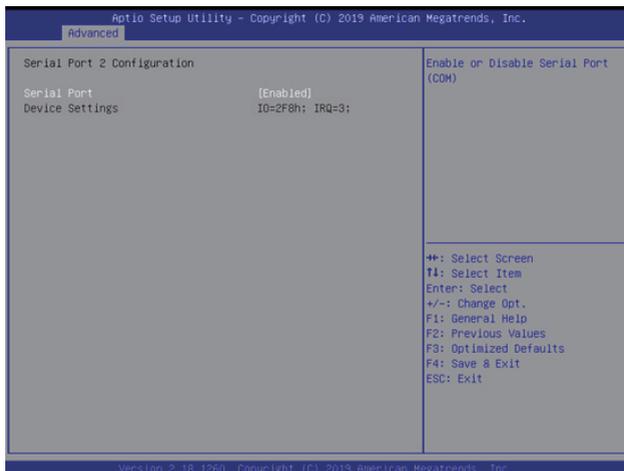
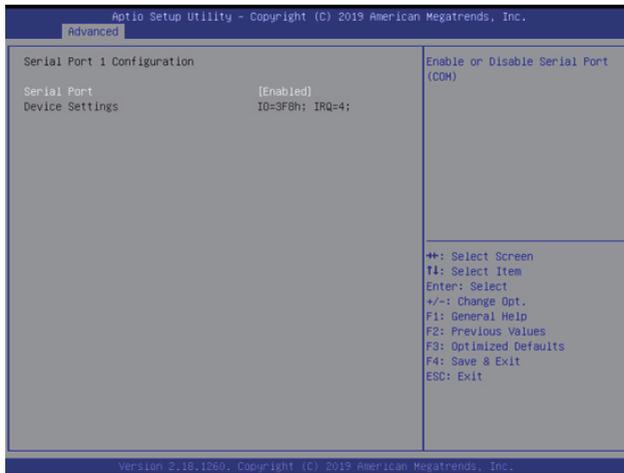
### » Serial Port

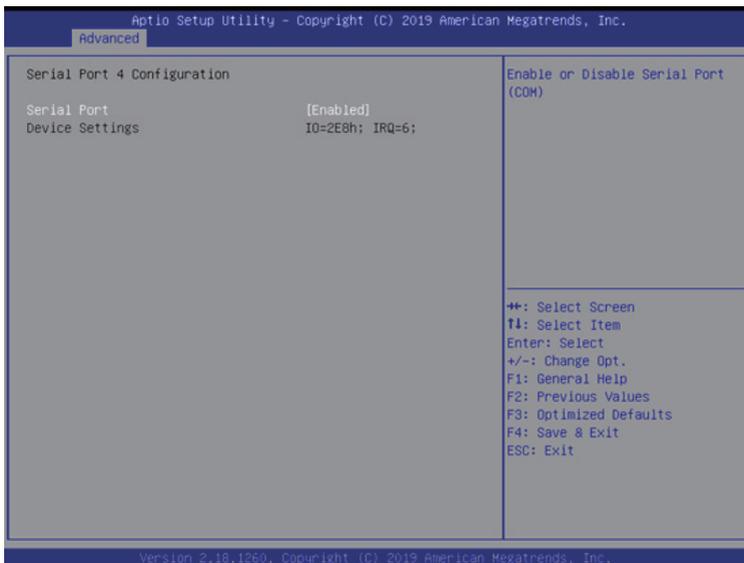
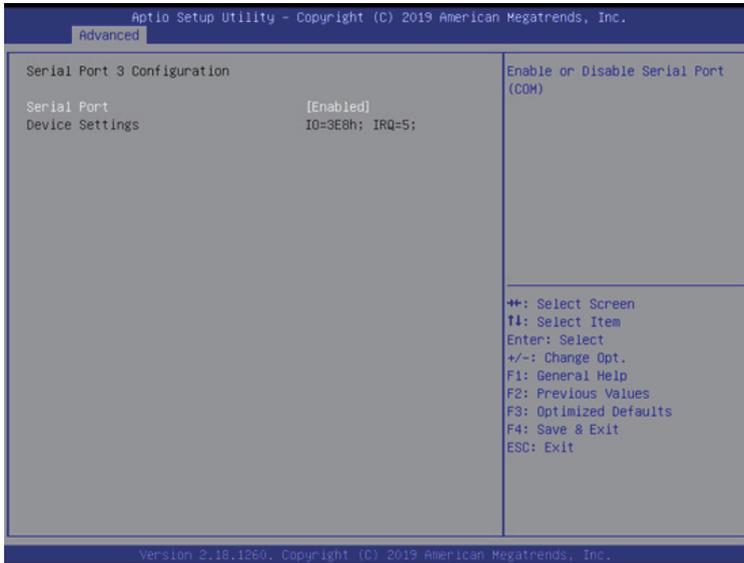
When enabled allows you to configure the serial port settings. When set to Disabled, displays no configuration for the serial port.

Options available: Enabled/Disabled. Default setting is Enabled.

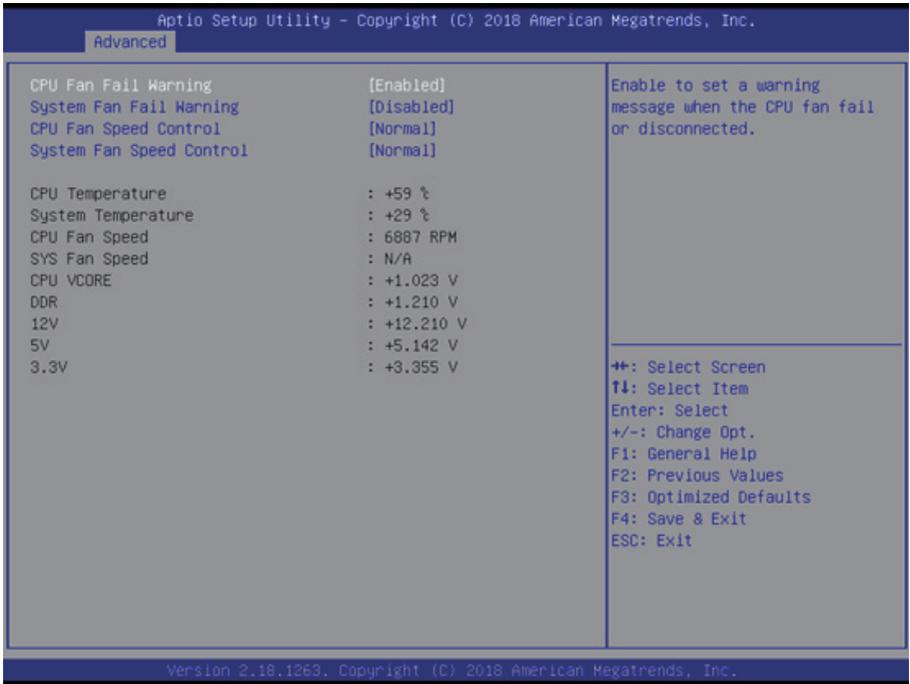
### » Device Settings

Display the specified Serial Port base I/O address and IRQ.





## 4.2.6 S5 RTC Wake Settings



### » **Wake system from S5**

Enable or disable System wake on alarm event. When enabled, System will wake on the hr:min:sec specified. Default setting is Disabled.

### » **Wake up hour (Note)**

Press <+> and <-> to define the wake up hour.

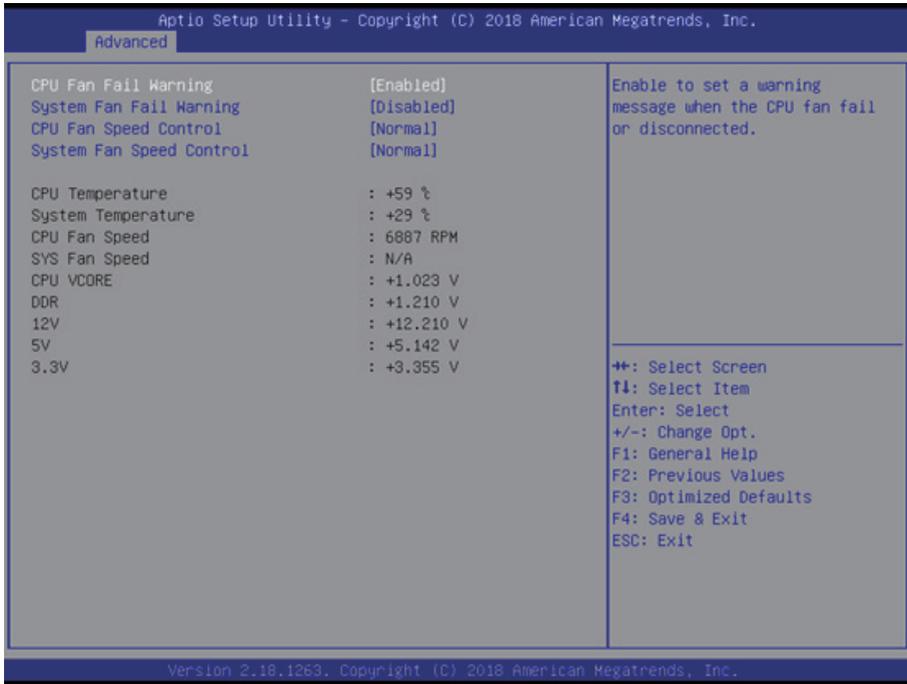
### » **Wake up minute (Note)**

Press <+> and <-> to define the wake up minute.

### » **Wake up second (Note)**

Press <+> and <-> to define the wake up second.

## 4.2.7 OS Selection



### » **CSM (Compatibility Support Module)**

Enable/Disable Compatibility Support Module (CSM) launch.

Options available: Enabled/Disabled. Default setting is Disabled.

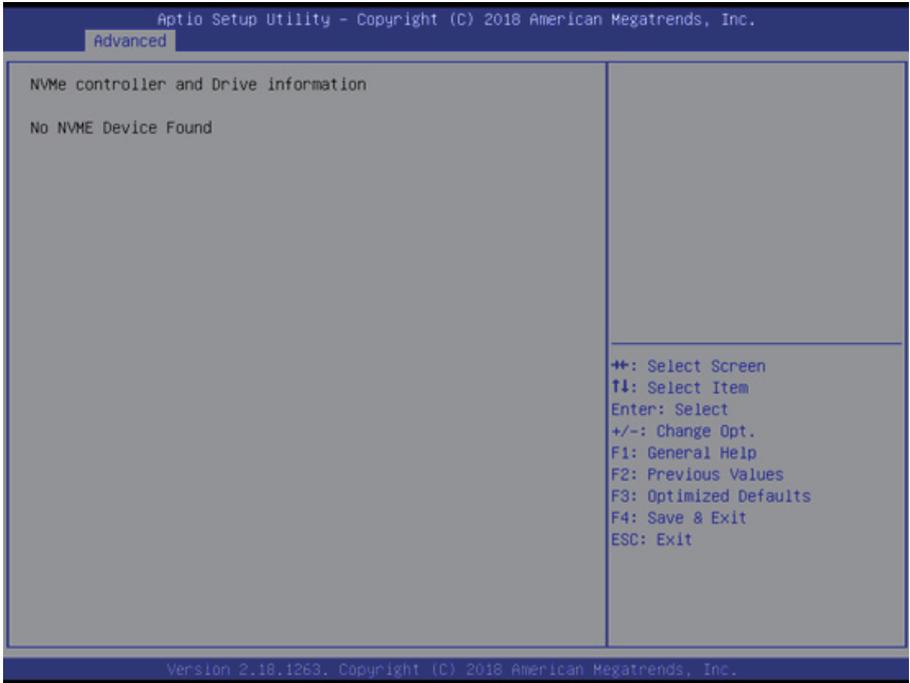
If the CSM is set to Disabled, the following five items will not be able to support Legacy mode.

### » **LAN EFI driver**

Enable/Disable LAN EFI driver.

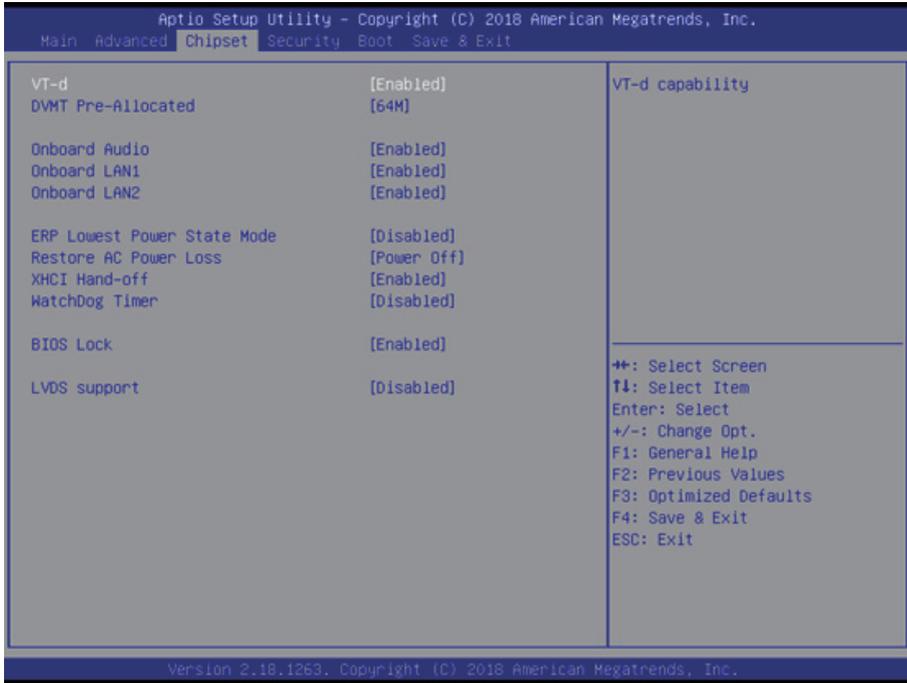
Options available: Enabled/Disabled. Default setting is Disabled

## 4.2.8 NVMe Configuration



NVMe Configuration Displays information on your M.2 NVME PCIe SSD if installed.

## 4.3 Chipset Menu



### » **VT-d**

Enable/Disable VT-d function.

Options available: Enabled/Disabled. Default setting is Enabled.

### » **DVMT Pre-Allocated**

Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.

Options available: 64M/128M/192M/256M/320M/384M/512M. Default setting is 64M.

### » **Onboard Audio**

Enable/Disable onboard audio controller.

Options available: Enabled/Disabled. Default setting is Enabled.

### » **Onboard LAN1/2**

Enable/Disable onboard LAN controller.

Options available: Enabled/Disabled. Default setting is Enabled.

» **ERP Lowest Power State Mode**

Enable/Disable ERP Lowest Power State Mode.

Options available: Enabled/Disabled. Default setting is Disabled.

» **Restore AC Power Loss**

This option provides user to set the mode of operation if an AC / power loss occurs.

Power On: System power state when AC cord is re-plugged.

Power Off: Do not power on system when AC power is back.

Last State: Set system to the last state when AC power is removed.

Options available: Power On/Power Off/Last State. Default setting is Power Off.

» **XHCI Hand-off**

Determines whether to enable XHCI Hand-off feature for an operating system without XHCI Hand-off support. (Default: Enabled)

» **WatchDog Timer**

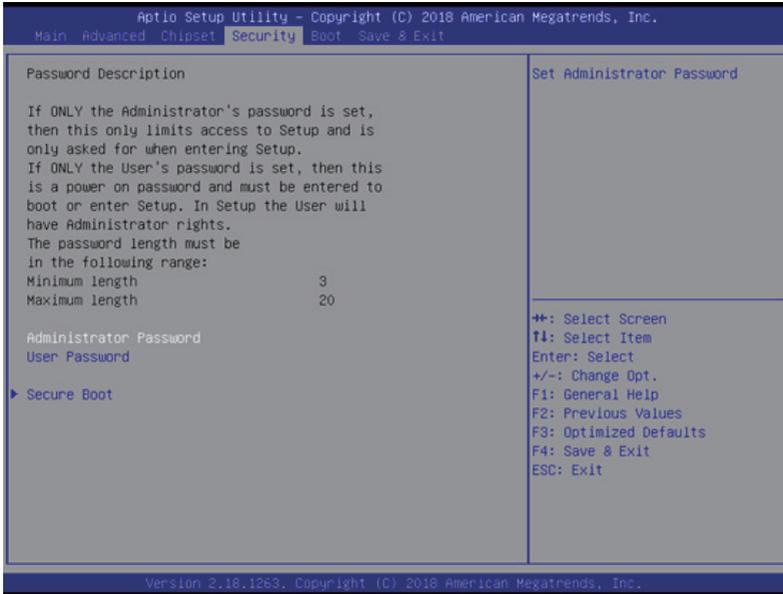
Force system reboot if system hang up by memory detection fail

» **LVDS Support**

Enable/Disable LVDS.

Options available: Enabled/Disabled. Default setting is Disable.

## 4.4 Security Menu



here are two types of passwords that you can set:

- Administrator Password

Entering this password will allow the user to access and change all settings in the Setup Utility.

- User Password

Entering this password will restrict a user's access to the Setup menus.

To enable or disable

this field, a Administrator Password must first be set. A user can only access and modify the

System Time, System Date, and Set User Password fields.

### » Administrator Password

Press Enter to configure the Administrator password.

### » User Password

Press Enter to configure the user password.

### » Secure Boot menu

Press [Enter] for configuration of advanced items.

## 4.4.1 Security Menu



### » System Mode

Display the System Mode state.

### » Secure Boot

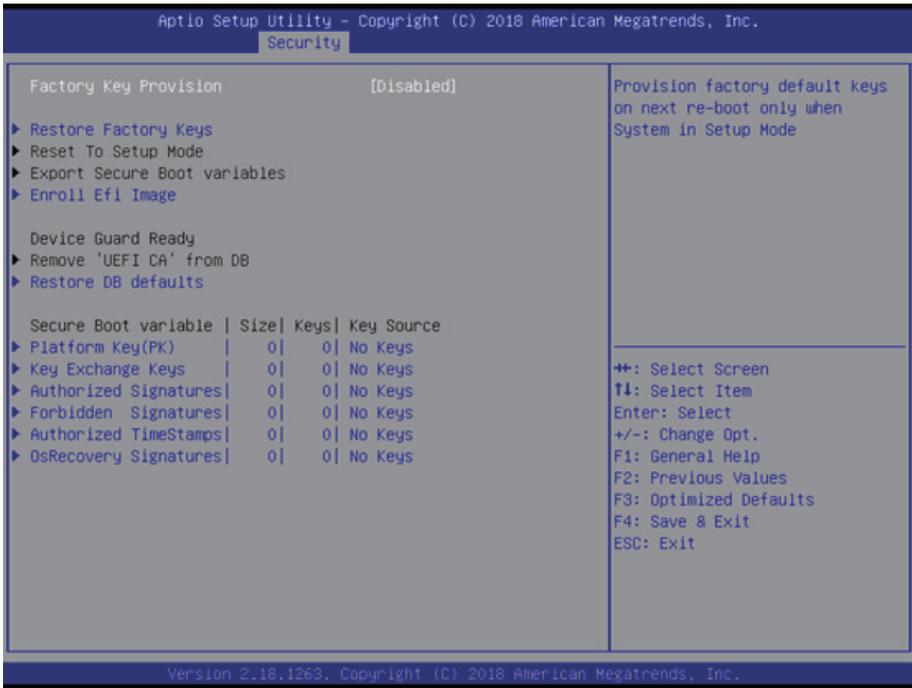
Display the System Mode State.

Vendor Keys

Display the Vendor Keys information.

### » Secure Boot

Secure Boot requires all the applications that are running during the booting process to be pre-signed with valid digital certificates. This way, the system knows all the files being loaded before Windows 8 loads and gets to the login screen have not been tampered with. Options available: Enabled/Disabled. Default setting is Disabled.



» **Secure Boot Mode (Note)**

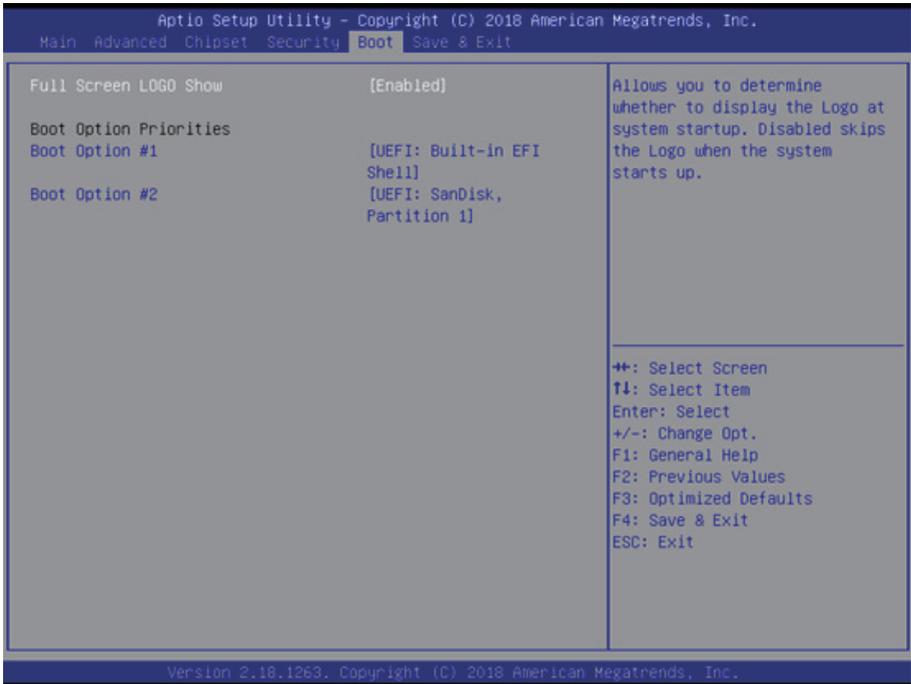
Define the Secure Boot Mode. Set this item to Custom to advanced items configuration.

Option available: Standard/Custom. Default setting is Custom.

» **Key Management**

Press Enter to configure the advanced items.

## 4.5 Boot Menu

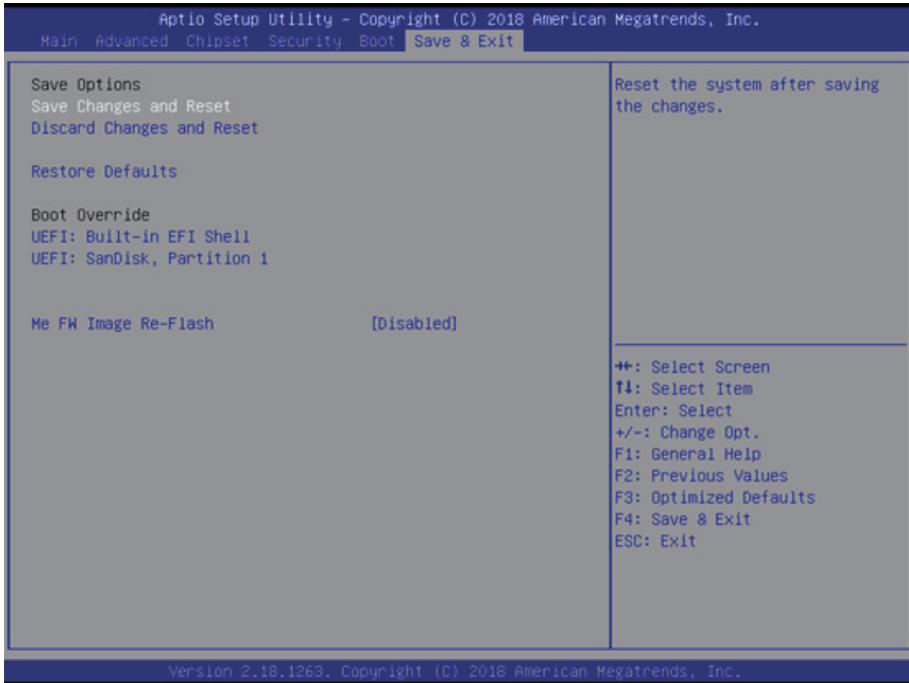


The Boot menu allows you to set the drive priority during system boot-up. BIOS setup will display an error message if the drive(s) specified is not bootable.

- » **Boot Configuration**
- » **Boot Option Priorities**
- » **Boot Option #1/#2#3**

Press Enter to configure the boot priority.

## 4.6 Save & Exit Menu



The Exit menu displays the various options to quit from the BIOS setup. Highlight any of the exit options then press Enter.

### » **Save Changes and Exit**

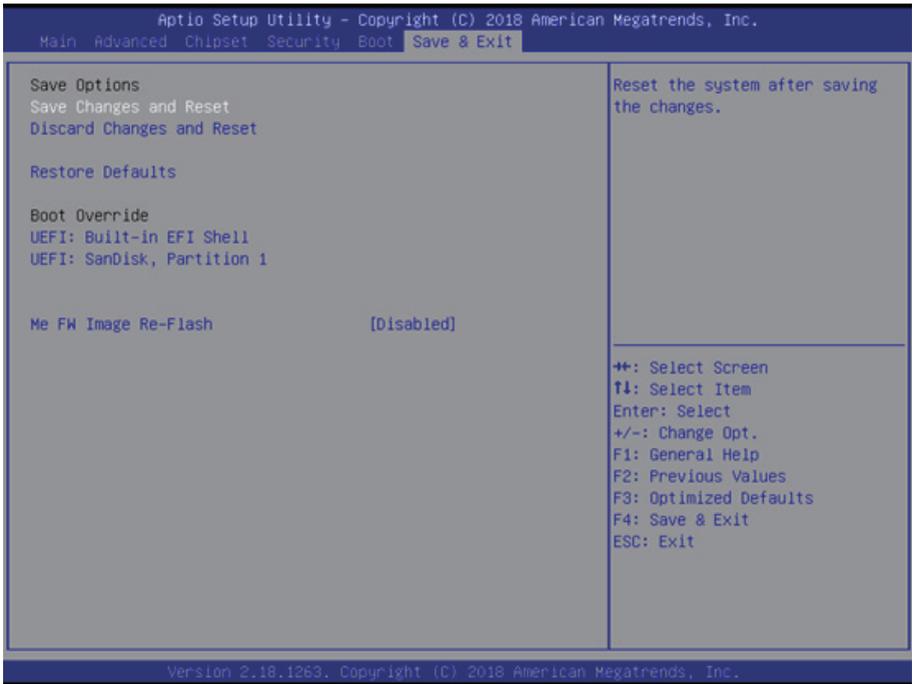
Saves changes made and close the BIOS setup.  
Options available: Yes/No.

### » **Discard Changes and Exit**

Discards changes made and close the BIOS setup.  
Options available: Yes/No.

### » **Save Changes and Reset**

Saves changes made and reset the system.  
Options available: Yes/No.



» **Discard Changes and Reset**

Discards changes made and reset the system.  
 Options available: Yes/No.

» **Save Changes**

Saves changes made in the BIOS setup.  
 Options available: Yes/No.  
 Press [Enter] to save all Secure Boot Variables.

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