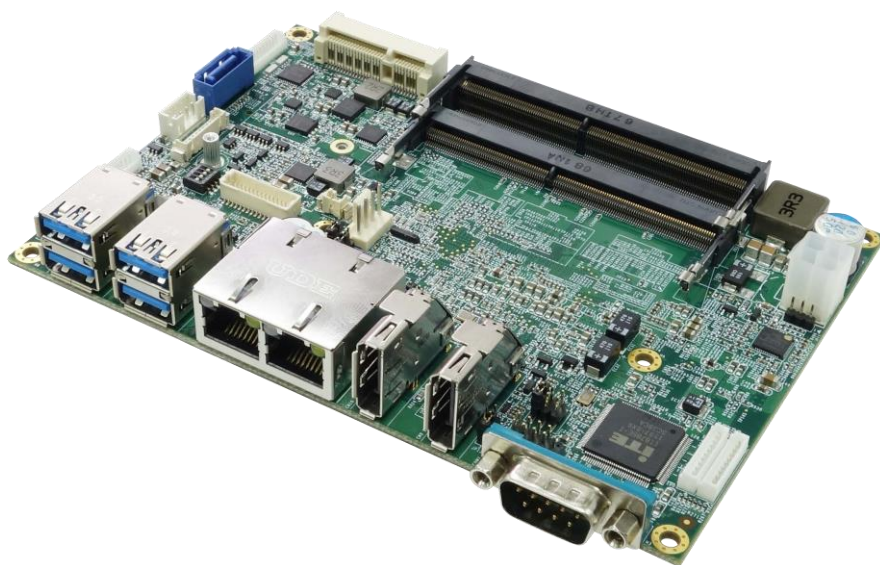


OXY5362A

3.5" SBC with Intel® Kabylake-USoC



Safety Information

Electrical safety

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

Operation safety

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

Statement

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- All trademarks are the properties of the respective owners.
- All product specifications are subject to change without prior notice

Revision History

Revision	Date (mm.dd.yyyy)	Changes
Version 1.0	06.17.2020	First release

Packing list

- ☐ OXY5362A 3.5" SBC
- ☐ CD (Driver + user's manual)
- ☐ Optional Accessories
 - ☐ Cable kit
 - SATA cable
 - SATA power cable
 - USB cable
 - COM cable
 - ☐ Thermal kit:
 - Copper heatspreader
 - Passive heatsink



If any of the above items is damaged or missing, please contact your local distributor.

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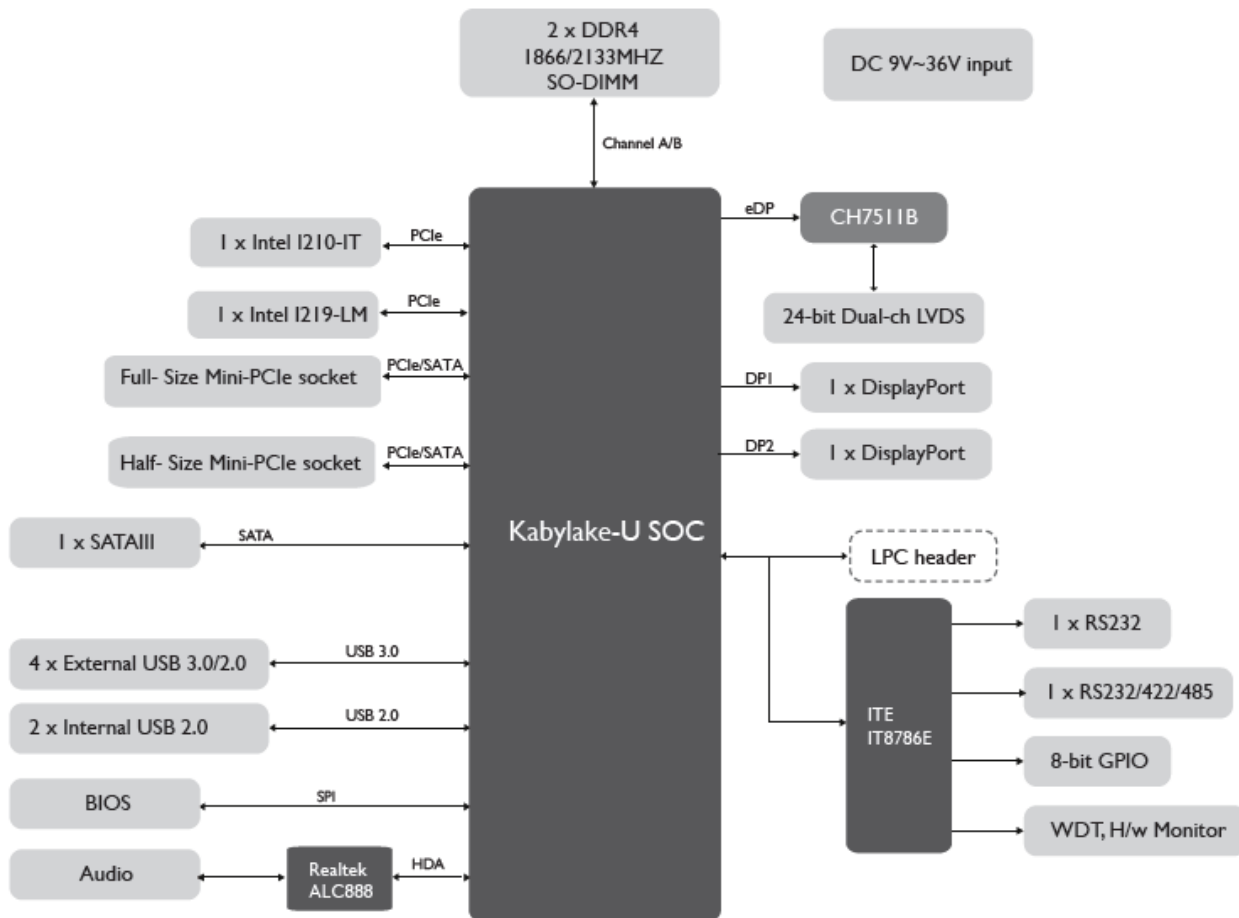
Safety Information	1
<i>Electrical safety.....</i>	<i>1</i>
<i>Operation safety.....</i>	<i>1</i>
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Chapter 1: Product Information

1.1 Block Diagram

Blockdiagram

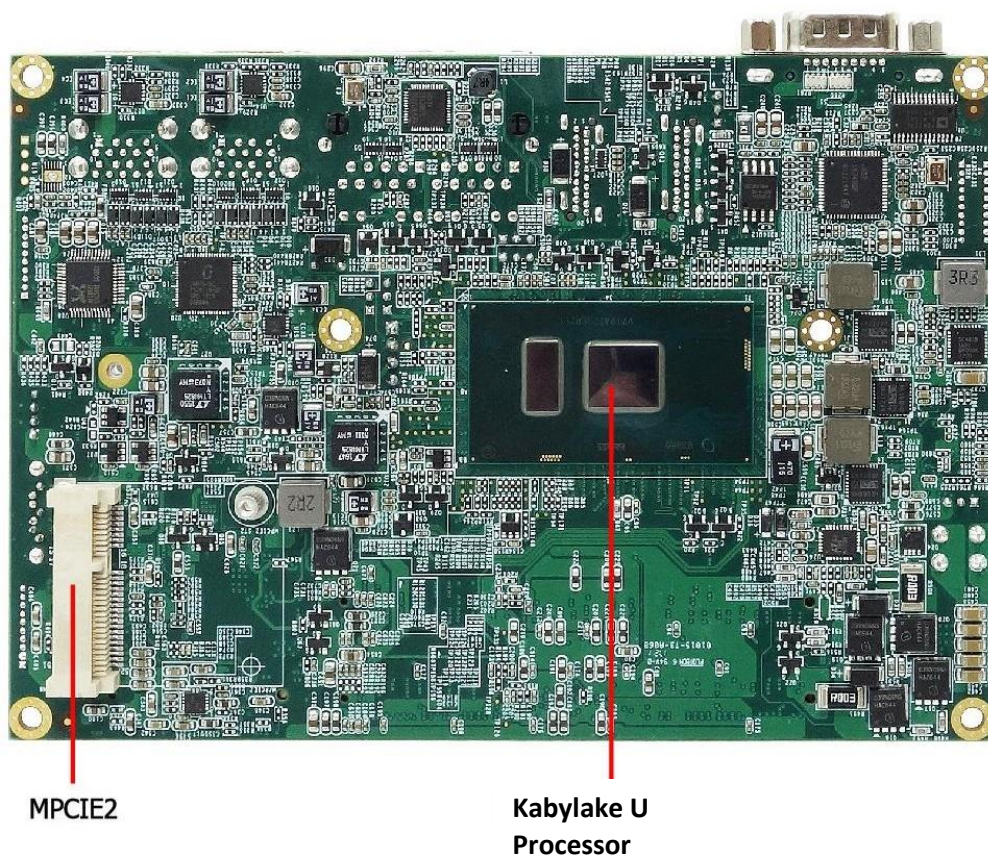
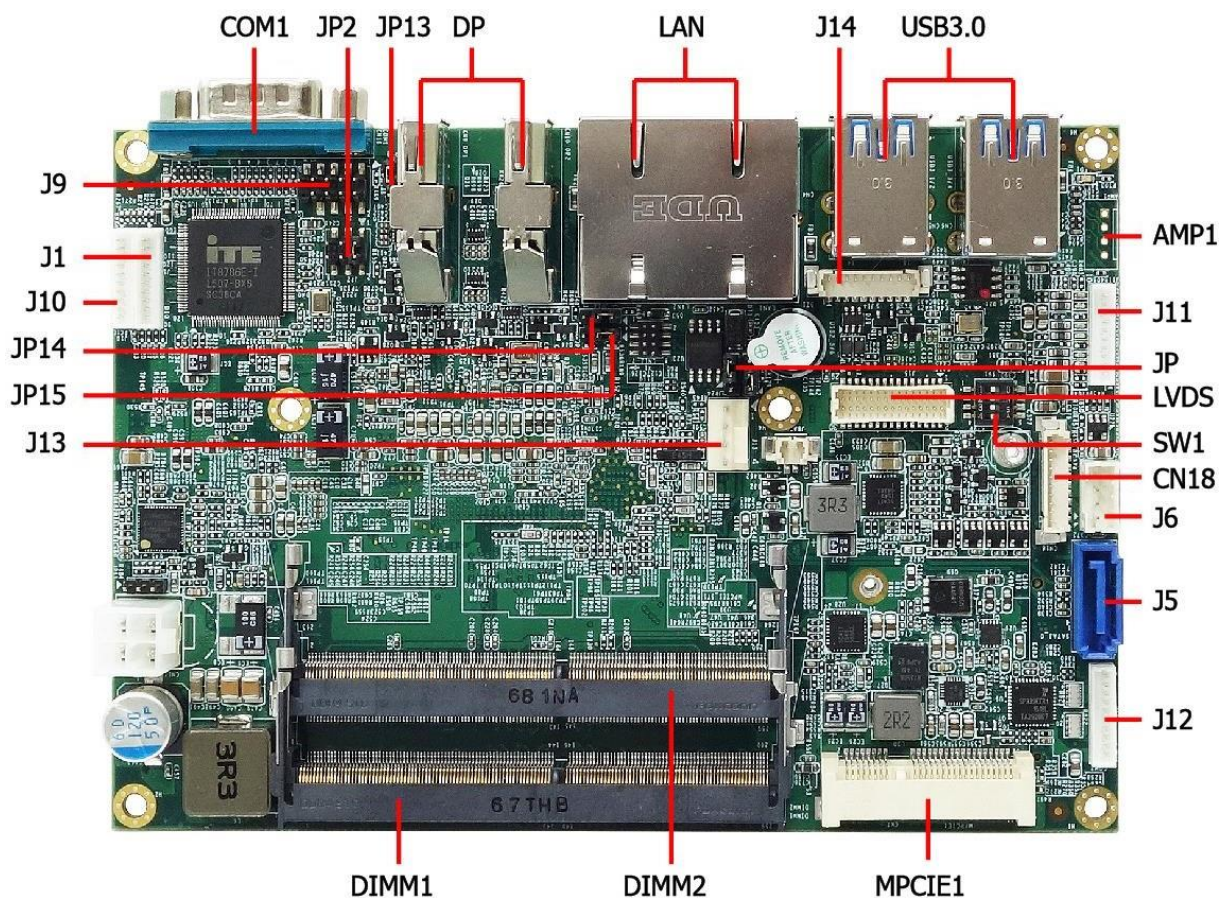


1.2 Key Features

Processor & System	
CPU Type	Intel® Kabylake-U series, BGA type Intel® Core™ i7-7600U Processor (4M Cache, up to 3.9GHz) Intel® Core™ i5-7300U Processor (3M Cache, up to 3.5GHz) Intel® Core™ i3-7100U Processor (3M Cache, 2.4GHz)
Memory Type	2 x SO-DIMM DDR4 MHz up to 32 GB
BIOS	AMI® UEFI BIOS
Super I/O	Fintek F8786E
Watchdog	1-255 sec.
Expansion Slot	1 x Full-size mPCIe/mSATA 1 x Half-size mPCIe/mSATA
Display	
Chipset	Intel® HD Graphics 520
DisplayPort	Max. resolution 4096 x 2304
LVDS	Dual channel 24-bit LVDS
Display Type	DisplayPort, LVDS
Audio	
Codec	Realtek ALC888 High Definition Audio Codec
Ethernet	
Chipset	Intel® I210-IT + I219-LM
WOL	Yes
Boot from LAN	Yes for PXE
Rear I/O	
DisplayPort	2 x DisplayPort
Ethernet	2 x RJ45
USB	4 x USB 3.0
COM	1 x RS232 (5V/12V)
Internal I/O	
SATA	1 x SATAIII (6 Gb/s)
USB	2 x USB 2.0
COM	1 x RS232/422/485
Audio	Mic-in, Line-out
FAN	1 x CPU fan
LVDS	1 (40 pins)
DIO	1 (1 x 10-pin), 8-bit
Mechanical and Environment	
Form Factor	3.5" SBC
Power Type	9~36V DC-in, 4-pin ATX power connector, AT/ATX mode support
Dimension	146 x 101mm (5.7" x 4")
Operating Temp.	-20 to 85°C, -40 to 85°C (For option)
Storage Temp	-40 to 85°C
Relative Humidity	10% to 90%, non-condensing

***All specifications and photos are subject to change without notice.**

1.3 Board Placement



Chapter 2: Jumpers and Connectors

2.1 Onboard connector and jumper list

Label	Function
COM1 (Rear)	RS232, DB9 connector
DP1 (Rear)	DisplayPort
DP2 (Rear)	DisplayPort
LAN1 (Rear)	RJ45 connector
LAN2 (Rear)	RJ45 connector
USB1/2 (Rear)	2 x USB3.0
USB3/4 (Rear)	2 x USB3.0
MPCIE1	Full-size mPCIe/mSATA
MPCIE2	Half-size mPCIe/mSATA
AMP1	Audio amplifier
LVDS	LVDS
CN18	LVDS Control Connector
J1	DIO header
J5	SATAIII connector
J6	SATA power
J9	Front panel
J10	LPC header
J11	Audio
J12	COM2, RS232/422/485
J13	CPU fan
J14	2 x USB2.0, USB5/6
SW1	LVDS resolution Select
JP1	Clear CMOS
JP2	COM1 RI/+5V/+12V select
JP13	AT/ATX select
JP14	mPCIe1 SATA/PCIe select
JP15	mPCIe2 SATA/PCIe select

2.2 Connector and jumper pin definition

2.2.1 Jumper

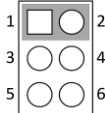
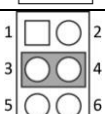
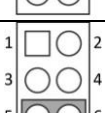
JP1: Clear

Jumper	Function description	Setting
1-2	Normal	
2-3	Clear CMOS	

CMOS

Default setting: 1-2

JP2: COM1 RI/+5V/+12V

Jumper	Function description	Setting
1-2	Ring	
3-4	5V	
5-6	12V	

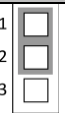
Default setting: 1-2

JP13: AT/ATX Mode

Jumper	Function description	Setting
1-2	ATX	
2-3	AT	

Default setting: 2-3

JP14: mPCIe1 signal select

Jumper	Function description	Setting
1-2	SATA	
2-3	PCIe	

Default setting: 2-3

JP15: mPCIe2 signal select

Jumper	Function description	Setting
1-2	SATA	1 2 3
2-3	PCIe	1 2 3
Default setting: 2-3		

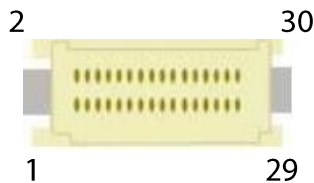
SW1: LVDS Resolution

Resolution	Color depth	Channel	Setting				Drawing
			Switch1	Switch2	Switch3	Switch4	
800 x 600	18-bit	Single	On	On	On	On	
1024 x 768	18-bit	Single	Off	On	On	On	
1024 x 768	24-bit	Single	On	Off	On	On	
1280 x 800	18-bit	Single	Off	Off	On	On	
1280 x 1024	24-bit	Dual	On	On	Off	On	
1366 x 768	24-bit	Single	Off	On	Off	On	
1440 x 900	24-bit	Dual	On	Off	Off	On	
1920 x 1080	24-bit	Dual	Off	Off	Off	On	

2.2.2 Connector

LVDS

PIN	DEFINITION	PIN	DEFINITION
1	LVDS_CLK+	2	GND
3	LVDS_CLK-	4	LVDSA3+
5	GND	6	LVDSA3-
7	LVDSB3+	8	GND
9	LVDSB3-	10	LVDSA_CLK+
11	LVDSB2+	12	LVDSA_CLK-
13	LVDSB2-	14	GND
15	LVDSB1+	16	LVDSA2+
17	LVDSB1-	18	LVDSA2-
19	LVDSB0+	20	LVDSA1+
21	LVDSB0-	22	LVDSA1-
23	GND	24	LVDSA0+
25	LVDS_SCLK	26	LVDSA0-
27	LVDS_SDATA	28	GND
29	VDD	30	VDD



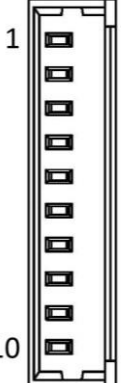
CN18: LVDS Control connector

PIN	DEFINITION
1	+12V
2	+12V
3	+12V
4	5V
5	5V
6	GND
7	GND
8	Backlight Enable
9	Backlight control
10	GND



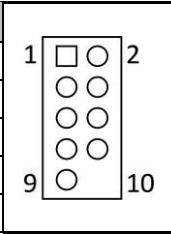
J1: DIO

PIN	DEFINITION
1	DIO0
2	DIO1
3	DIO2
4	DIO3
5	DIO4
6	DIO5
7	DIO6
8	DIO7
9	3.3V
10	GND

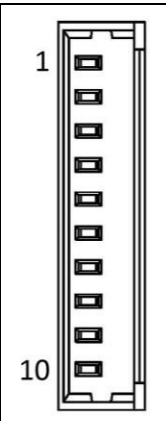


J9: Front Panel

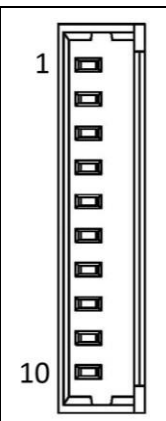
PIN	DEFINITION	PIN	DEFINITION
1	FP_HDLED+	2	FP_PLED+
3	SATALED#	4	GND
5	GND	6	EC_PWR_BTN
7	RESET-	8	GND
9			


J10: LPC

PIN	DEFINITION
1	GND
2	GND
3	+3.3VSB
4	LPC_AD0
5	LPC_AD1
6	LPC_AD2
7	LPC_AD3
8	LPC_FRAME#
9	PLTRST#_BUF1
10	LPC_CLK_1

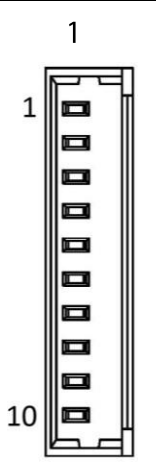

J11: Audio

PIN	DEFINITION
1	GND
2	MIC1_JD
3	MIC1_R
4	MIC1_L
5	FRONT_JD
6	FRONT_R
7	FRONT_L
8	LINE1_JD
9	LINE1_R
10	LINE1_L


J12: COM2 RS232/422/485

Note: RS232/422/485 can be set by BIOS.

Pin	RS232 mode (Default)	RS422 mode	RS485 mode
1	5V		
2	GND	GND	GND
3	RI		
4	DTR	RX-	
5	CTS		
6	TXD	RX+	
7	RTS		
8	RXD	TX+	DATA-
9	DSR		
10	DCD	TX-	DATA+



J14: USB2.0 x2

PIN	DEFINITION	1	10
1	+5V		
2	USB5-		
3	USB5+		
4	GND		
5	GND		
6	+5V		
7	USB6-		
8	USB6+		
9	GND		
10	GND		

Chapter 3: AMI BIOS UTILITY

This chapter provides users with detailed descriptions on how to setup a basic system configuration through the AMI BIOS setup utility.

3.1 Starting

To enter the setup screens, perform the following steps:

- Turn on the computer and press the key immediately.
- After the key is pressed, the main BIOS setup menu displays. Other setup screens can be accessed from the main BIOS setup menu, such as the Chipset and Power menus.

3.2 Navigation Keys

The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process.

Some of the hot keys are <F1>, <F10>, <Enter>, <ESC>, and <Arrow> keys.

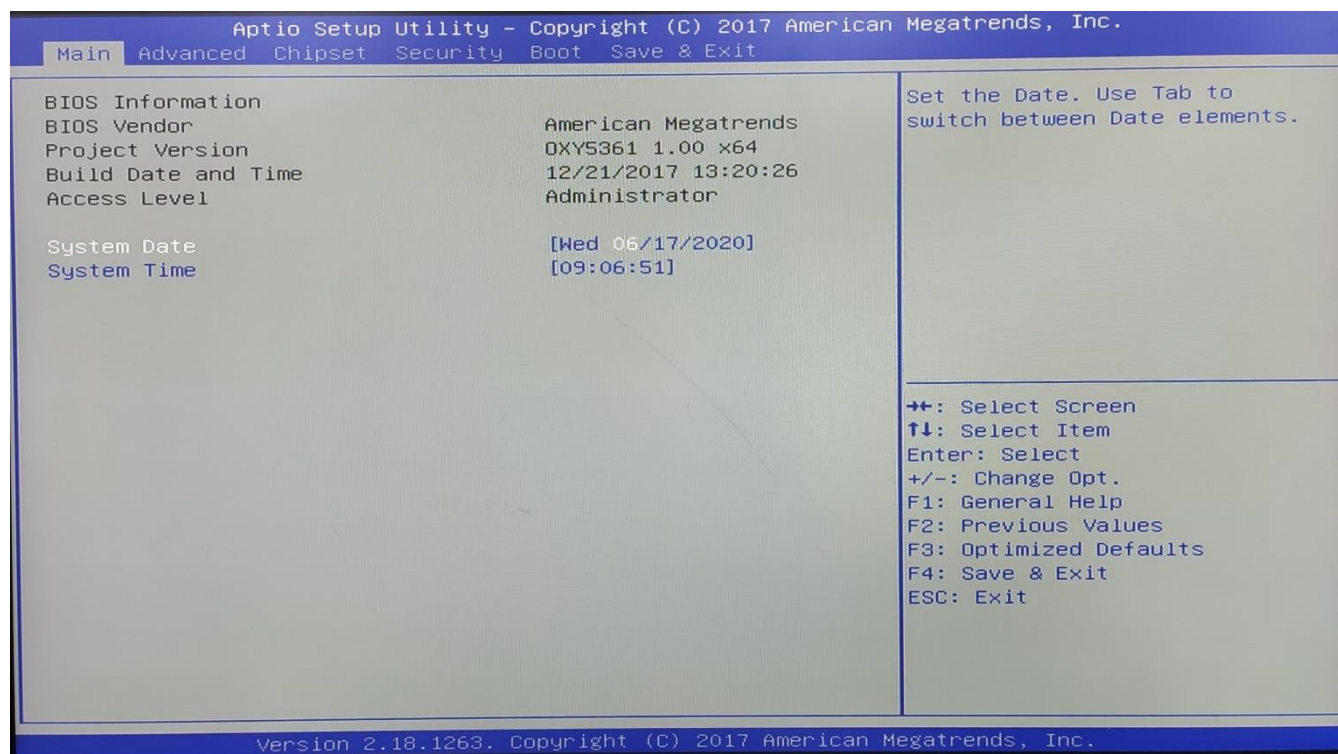


Some of the navigation keys may differ from one screen to another.

Left/Right	The Left and Right <Arrow> keys move the cursor to select a menu.
Up/Down	The Up and Down <Arrow> keys move the cursor to select a setup screen or sub-screen.
+– Plus/Minus	The Plus and Minus <Arrow> keys change the field value of a particular setup setting.
F1	The <F1> key offers general help.
F2	The <F2> key loads previous values.
F3	The <F3> key loads optimized defaults.
F4	The <F4> key saves any changes made and exits the BIOS setup utility.
Esc	The <Esc> key discards any changes made and exits the BIOS setup utility.
Enter	The <Enter> key displays a sub-screen or changes a selected or highlighted option in each menu.

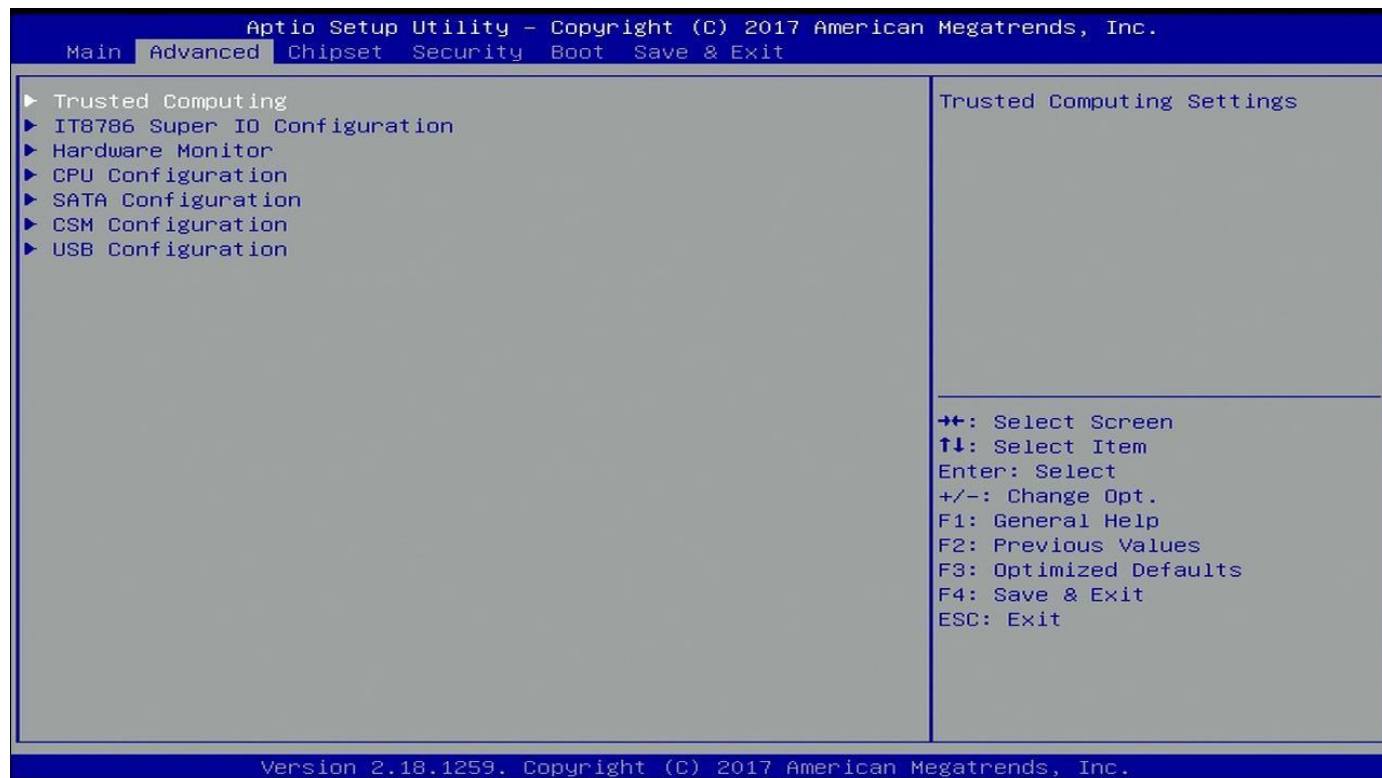
3.3 Main Menu

The Main menu is the first screen that you will see when you enter the BIOS Setup Utility.

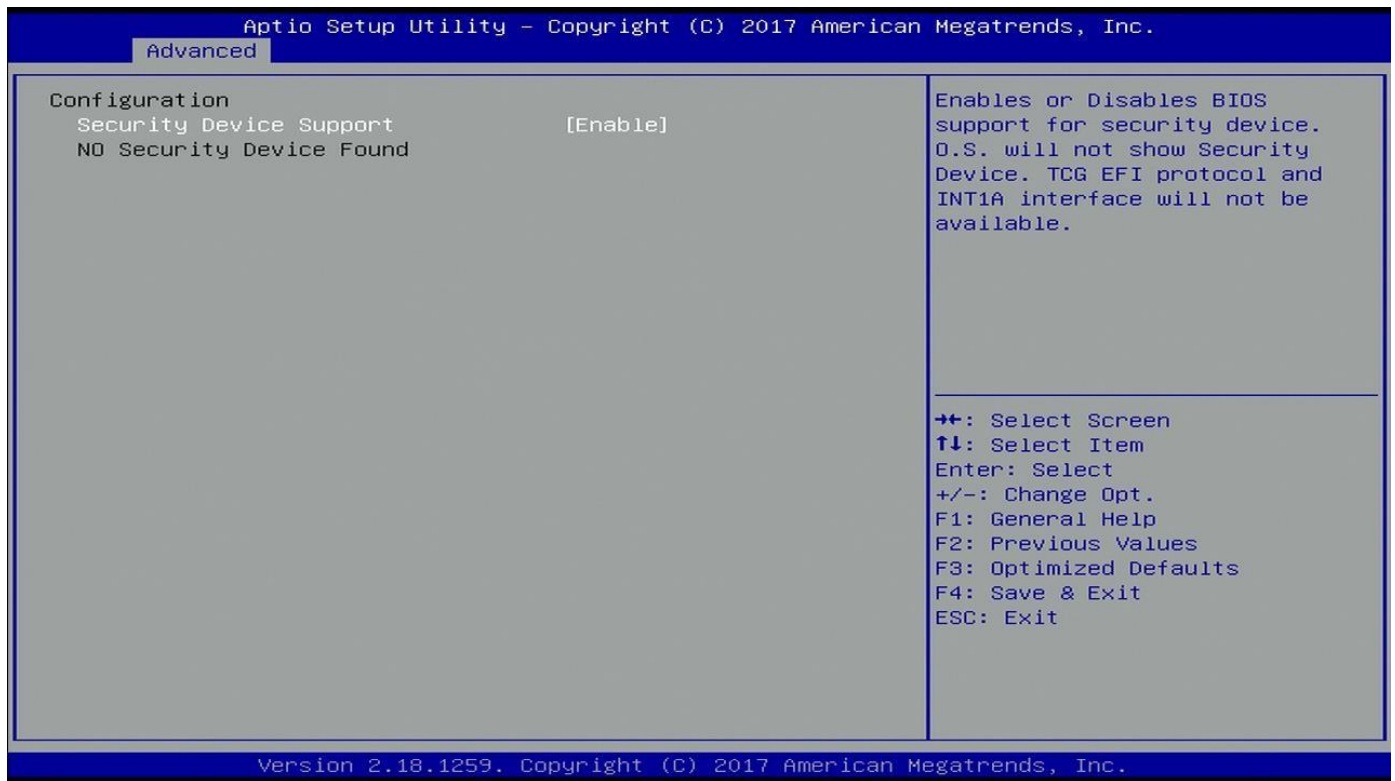


3.4 Advanced Menu

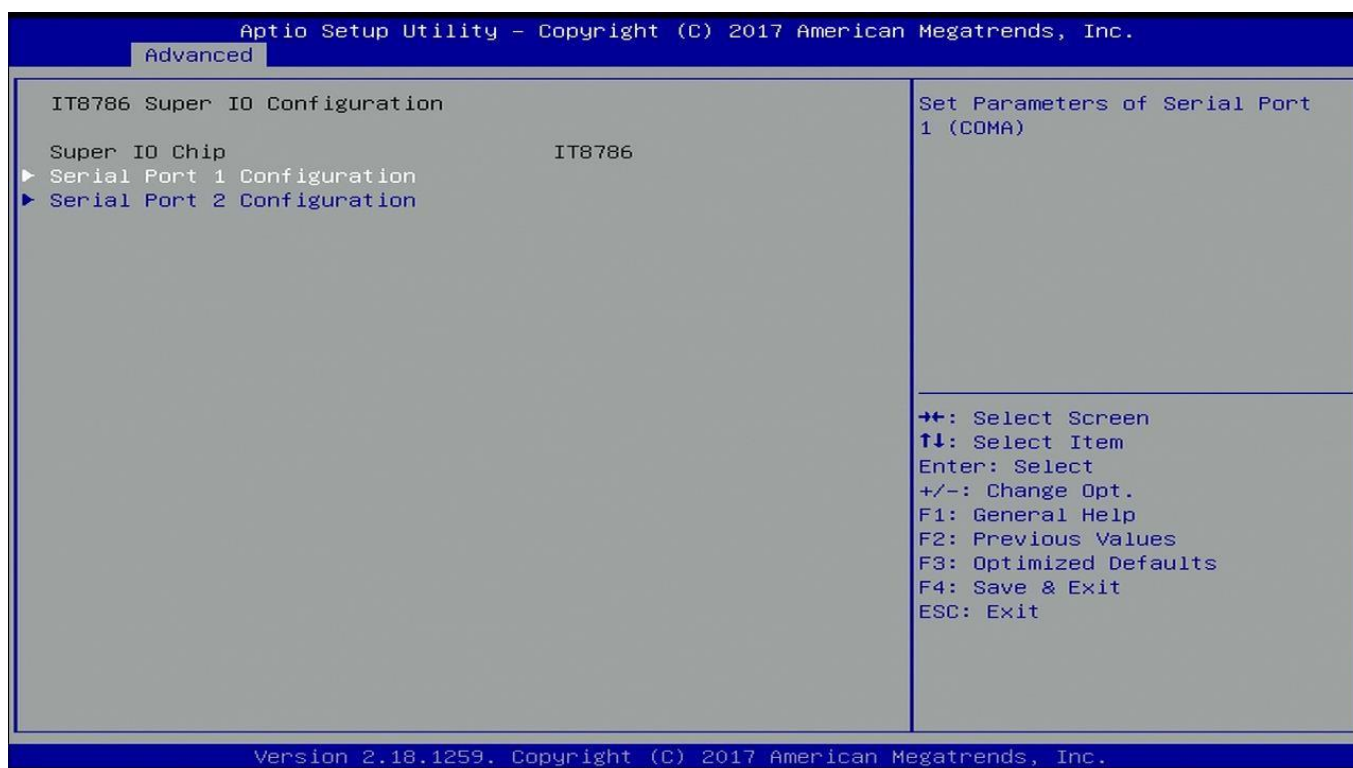
The Advanced Menu allows you to configure your system for basic operation. Some entries are defaults required by the system board, while others, if enabled, will improve the performance of your system or let you set some features according to your preference. **Setting incorrect field values may cause the system to malfunction.**



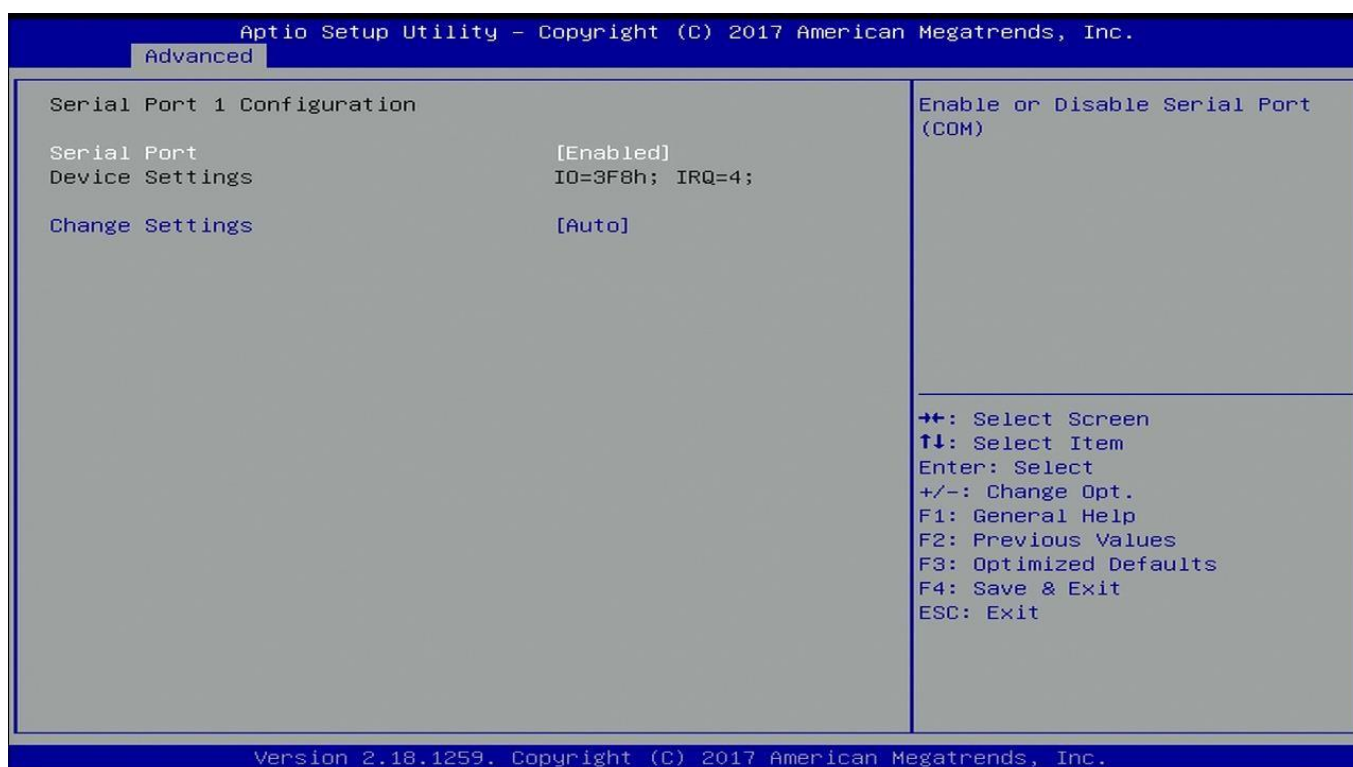
3.4.1 Trust Computing



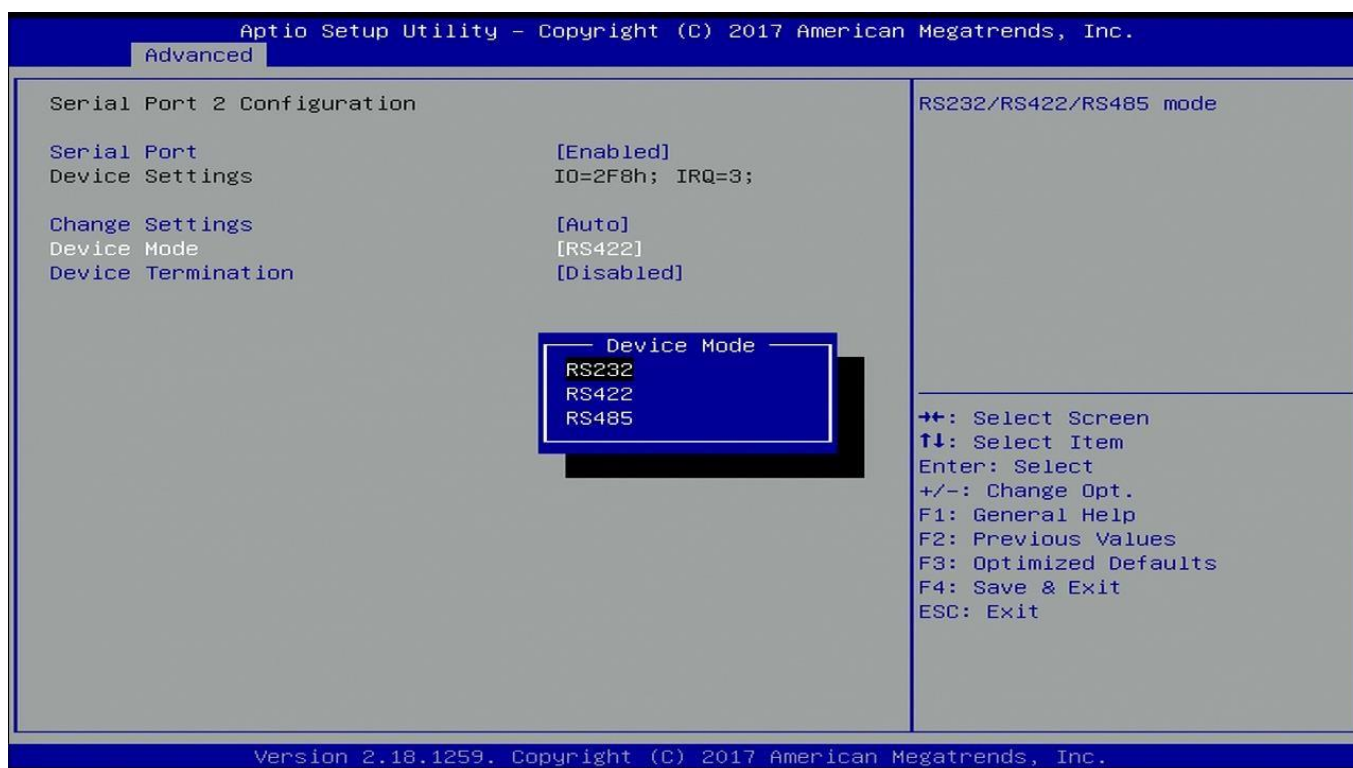
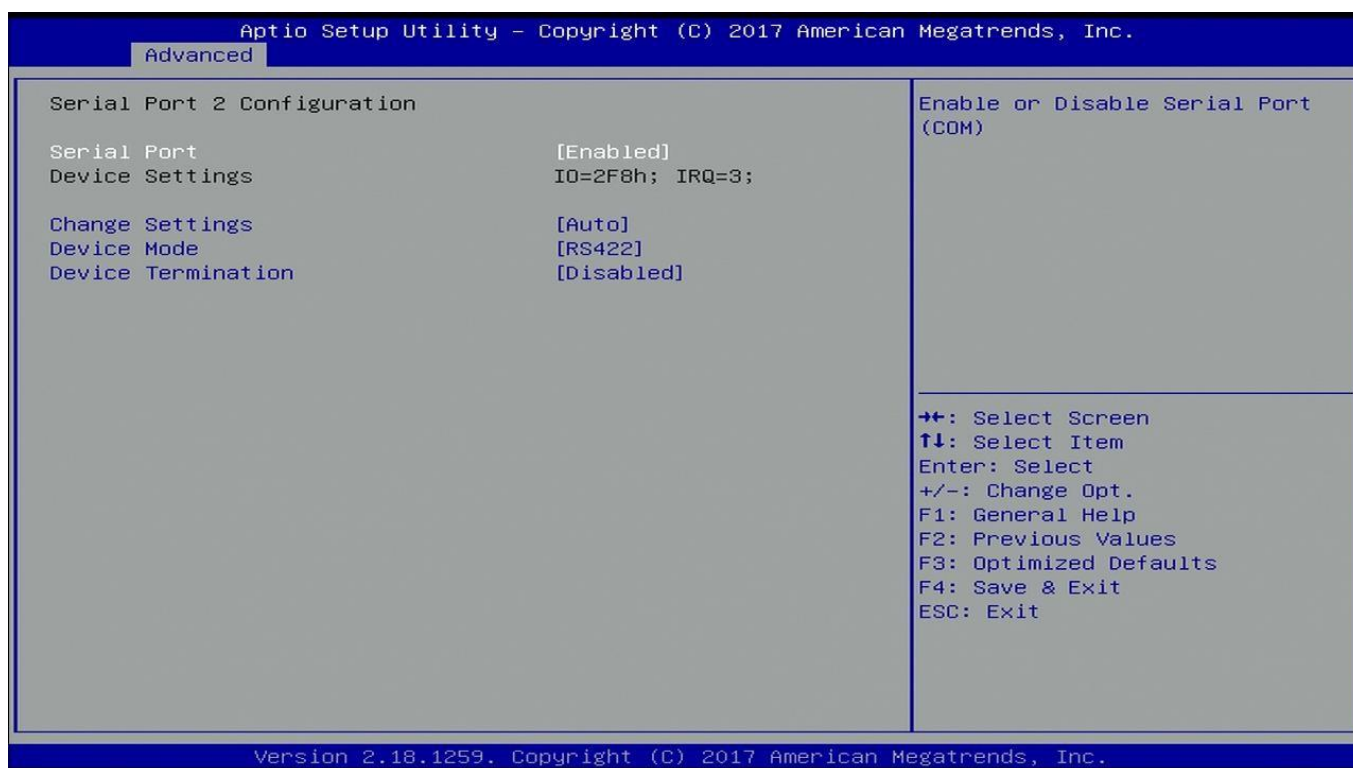
3.4.2 IT8786 Super IO Configuration



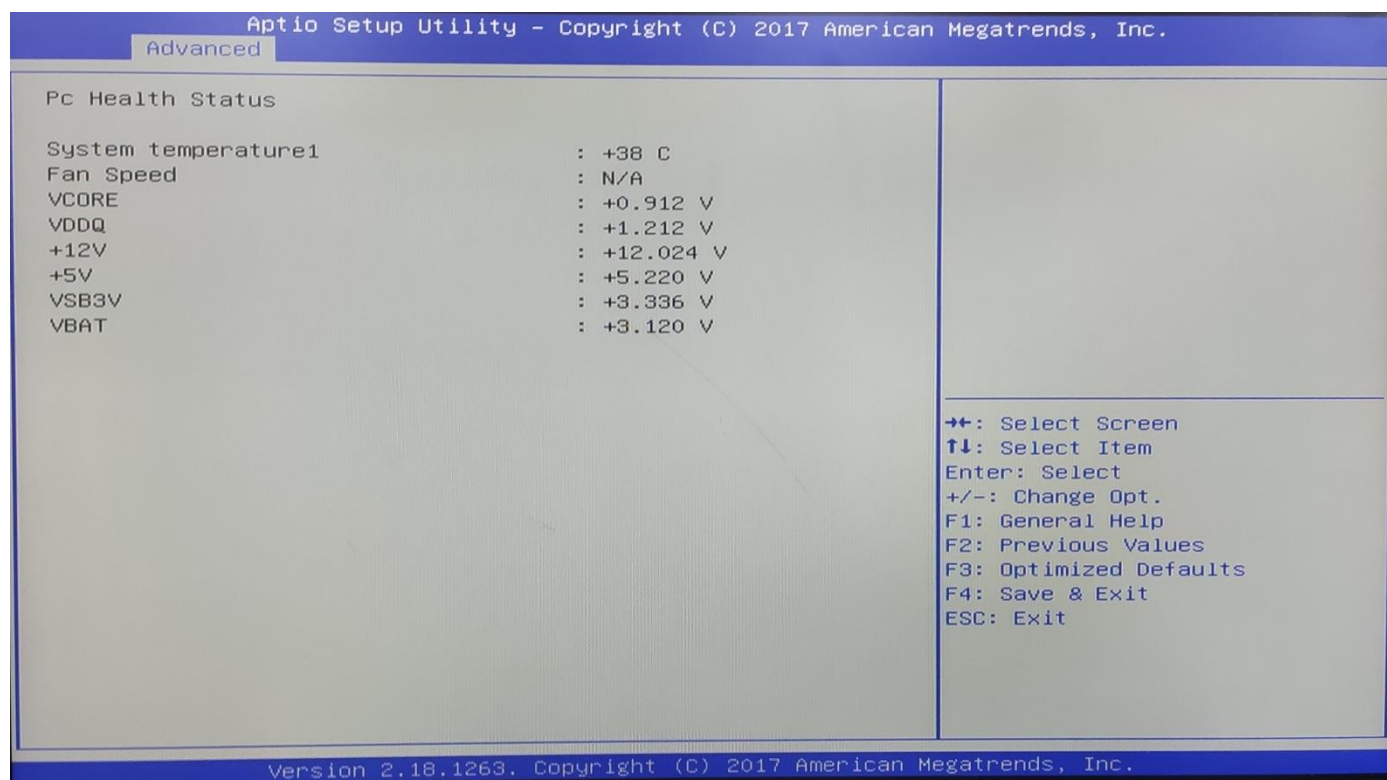
3.4.2.1 Serial Port 1 Configuration



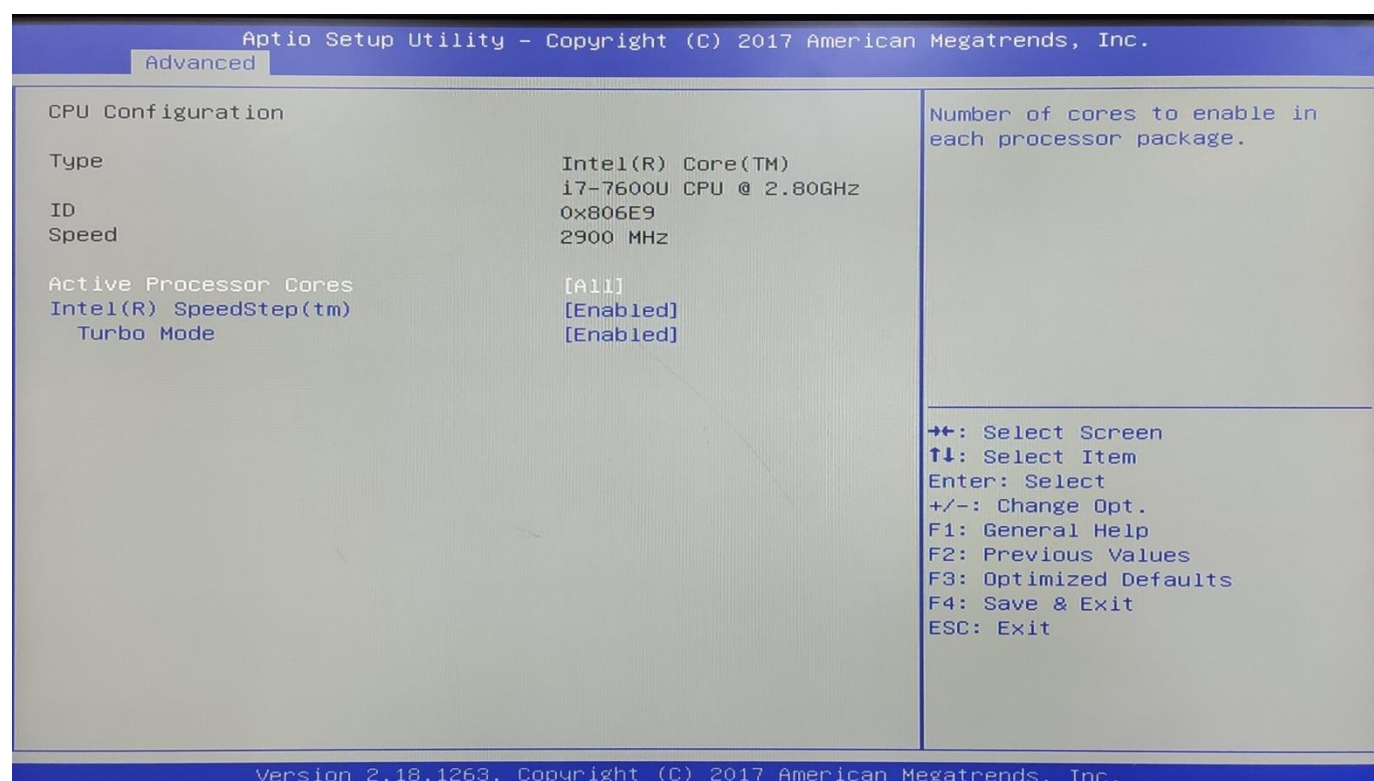
3.4.2.2 Serial Port 2 Configuration



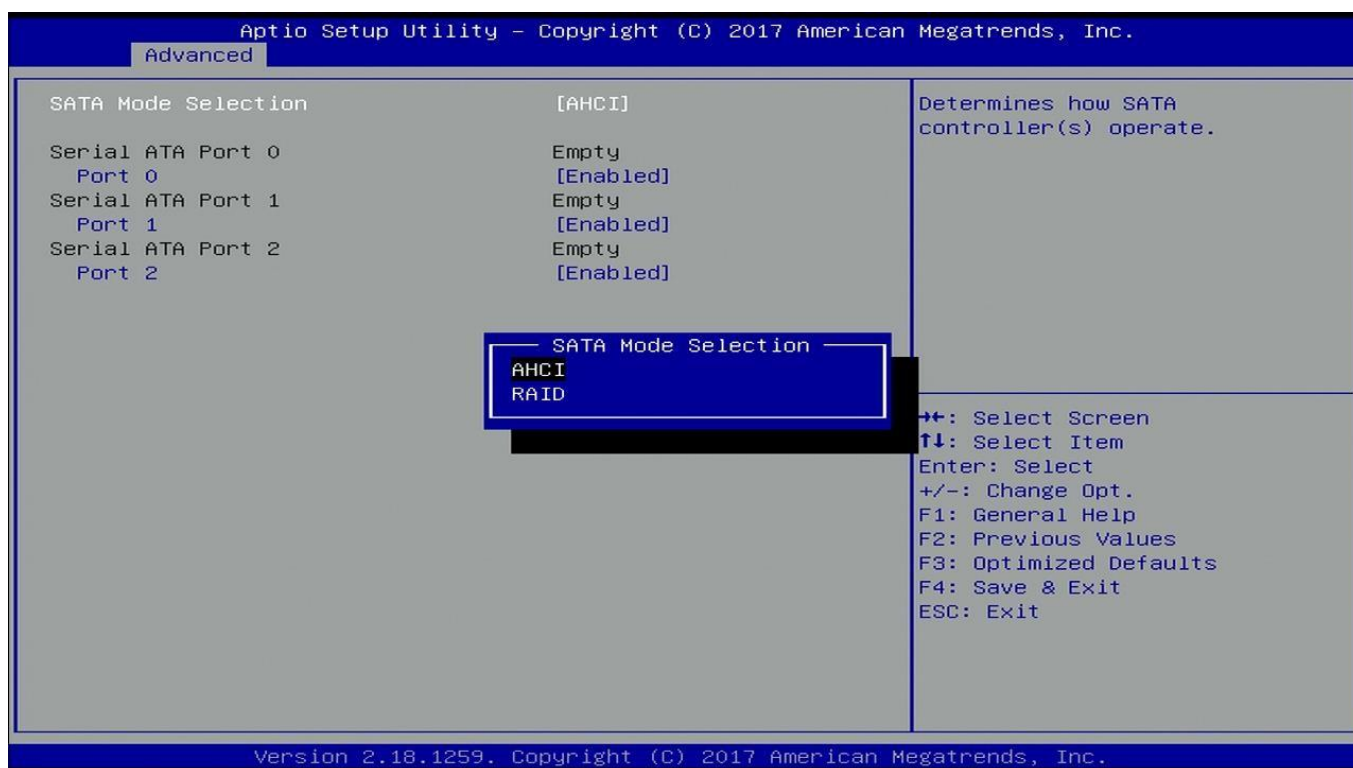
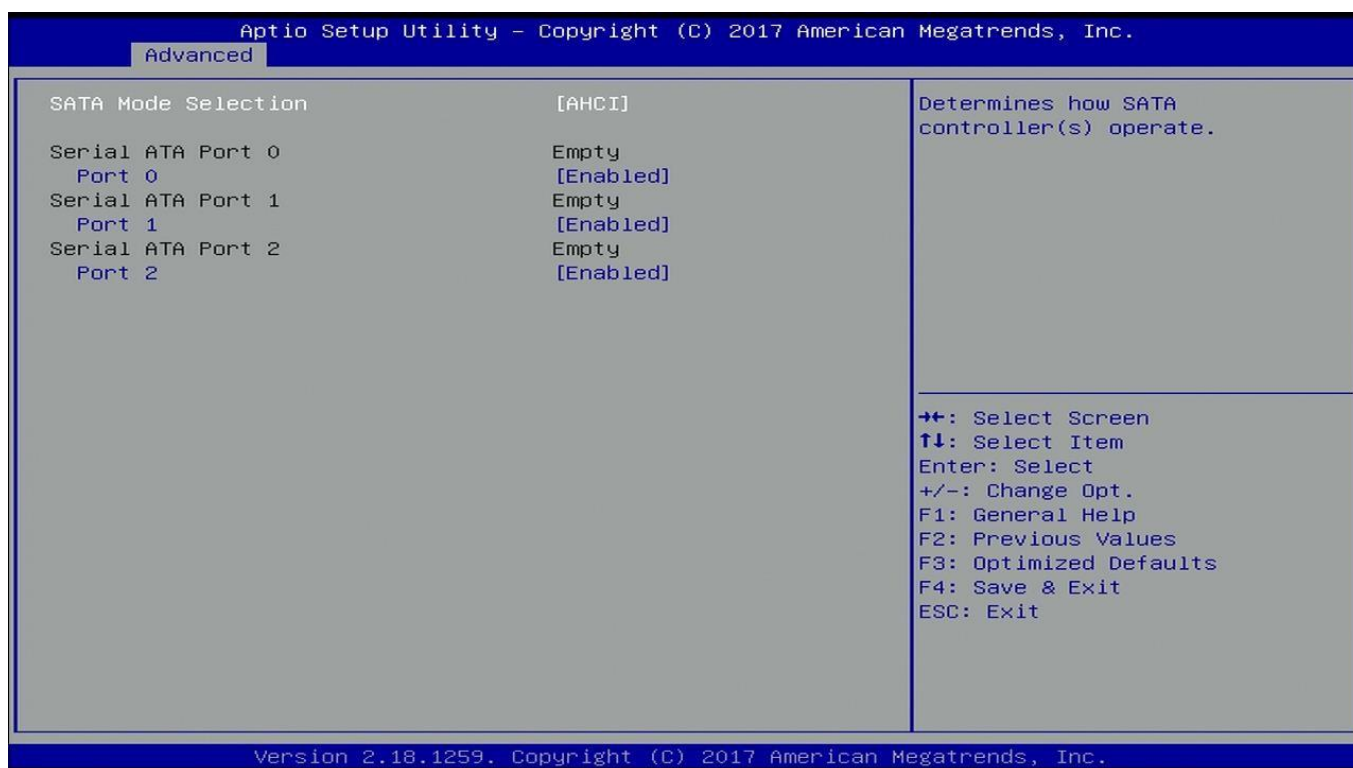
3.4.3 Hardware Monitor



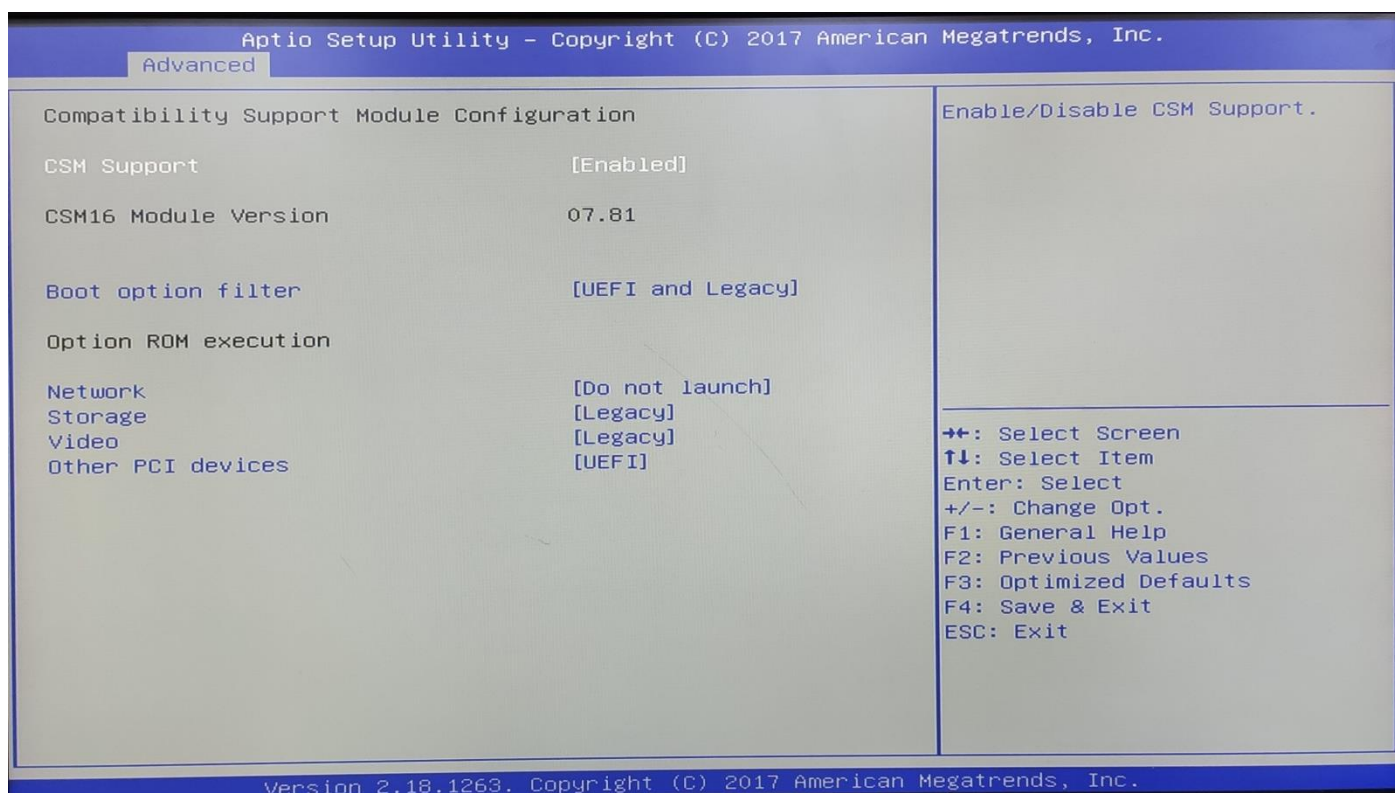
3.4.4 CPU Configuration



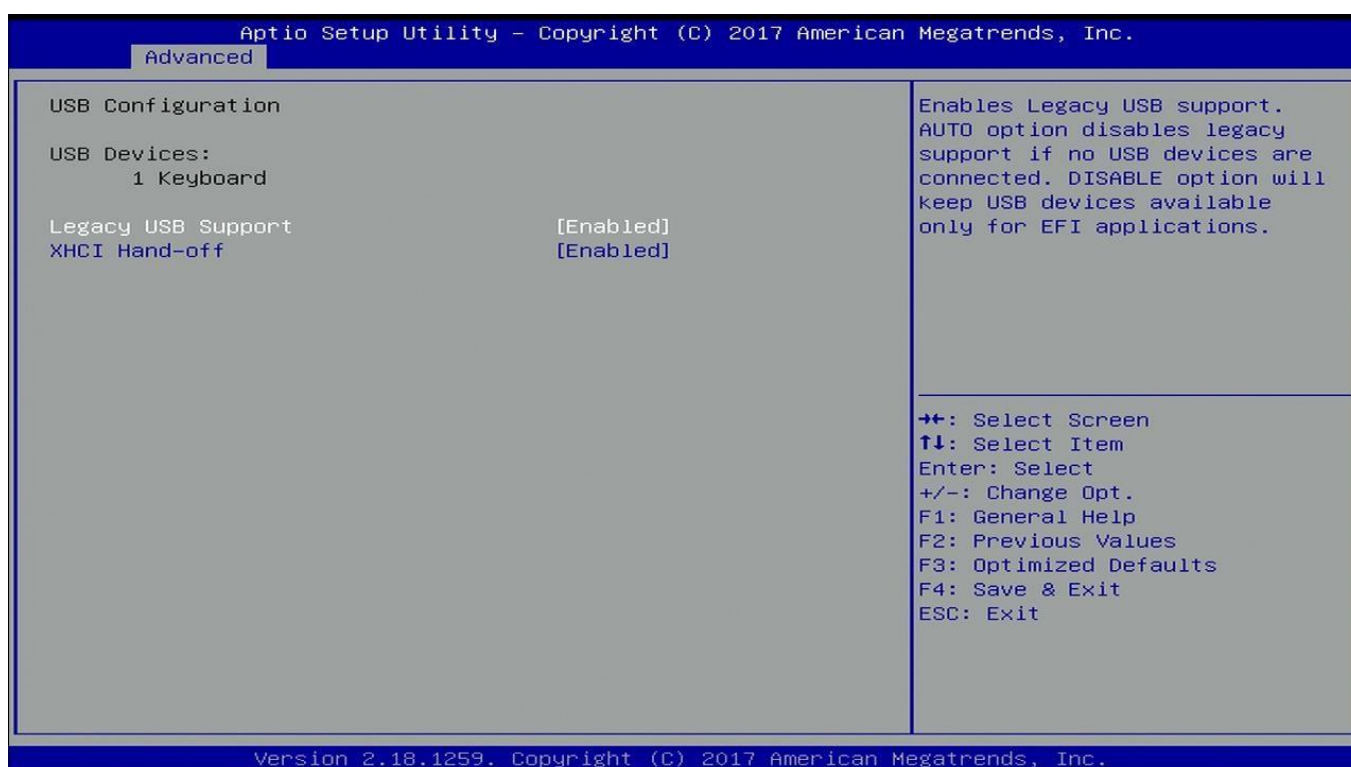
3.4.5 SATA Configuration



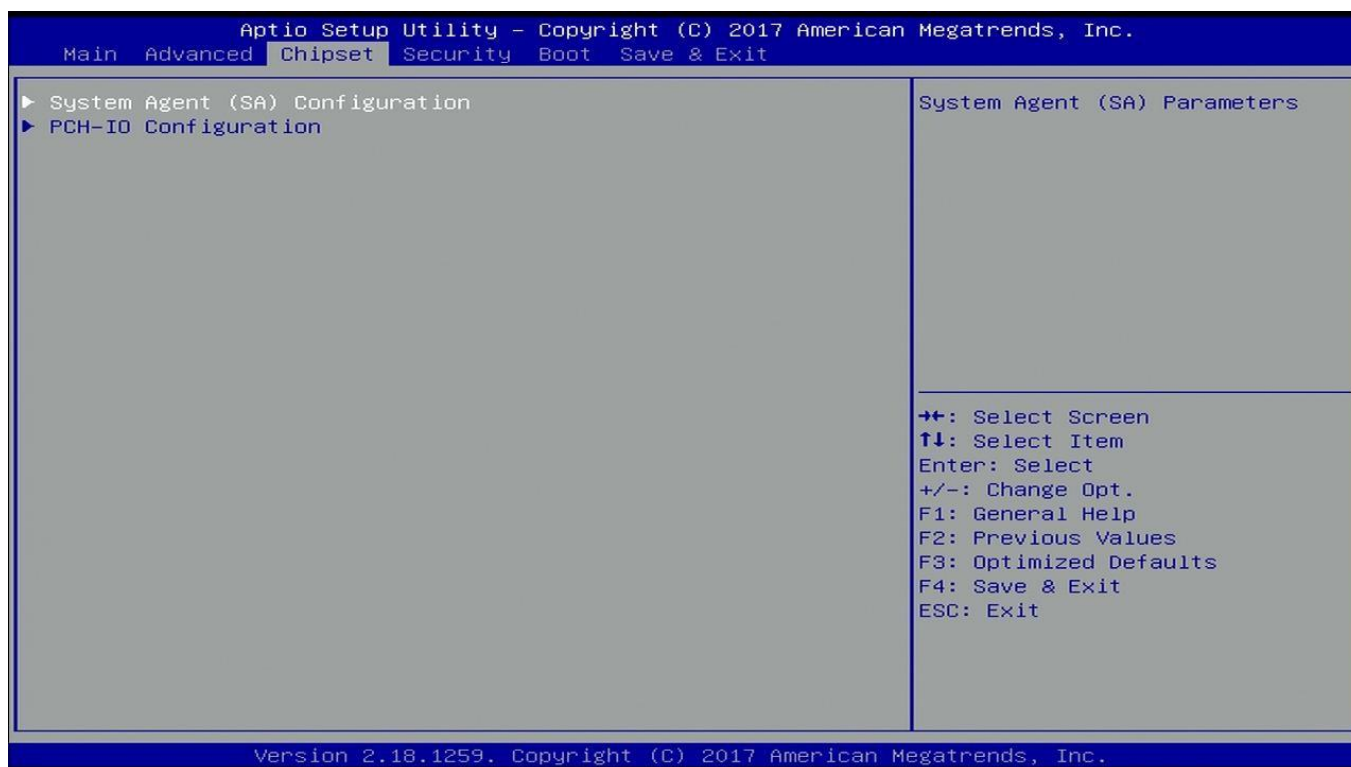
3.4.6 CMS Configuration



3.4.7 USB Configuration



3.5 Chipset



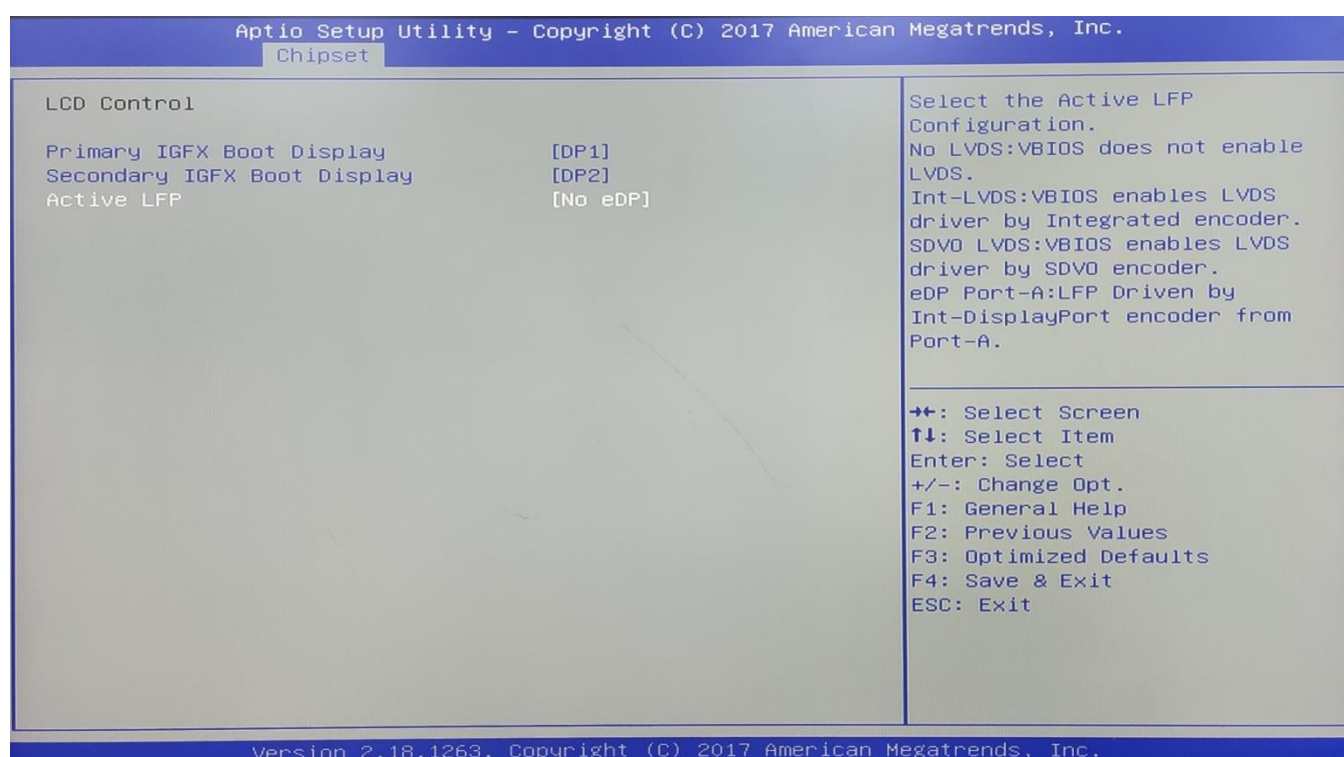
3.5.1 System Agent (SA) Configuration



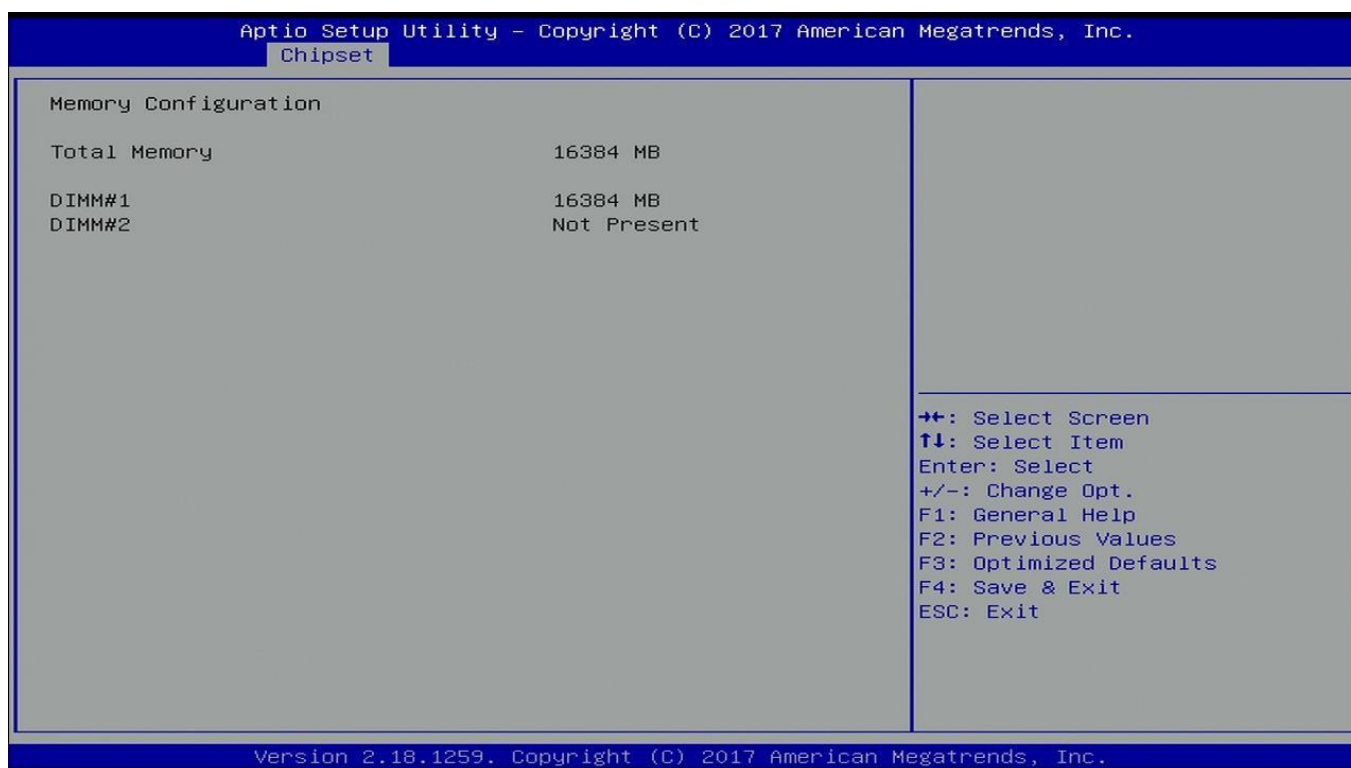
3.5.1.1 Graphic Configuration



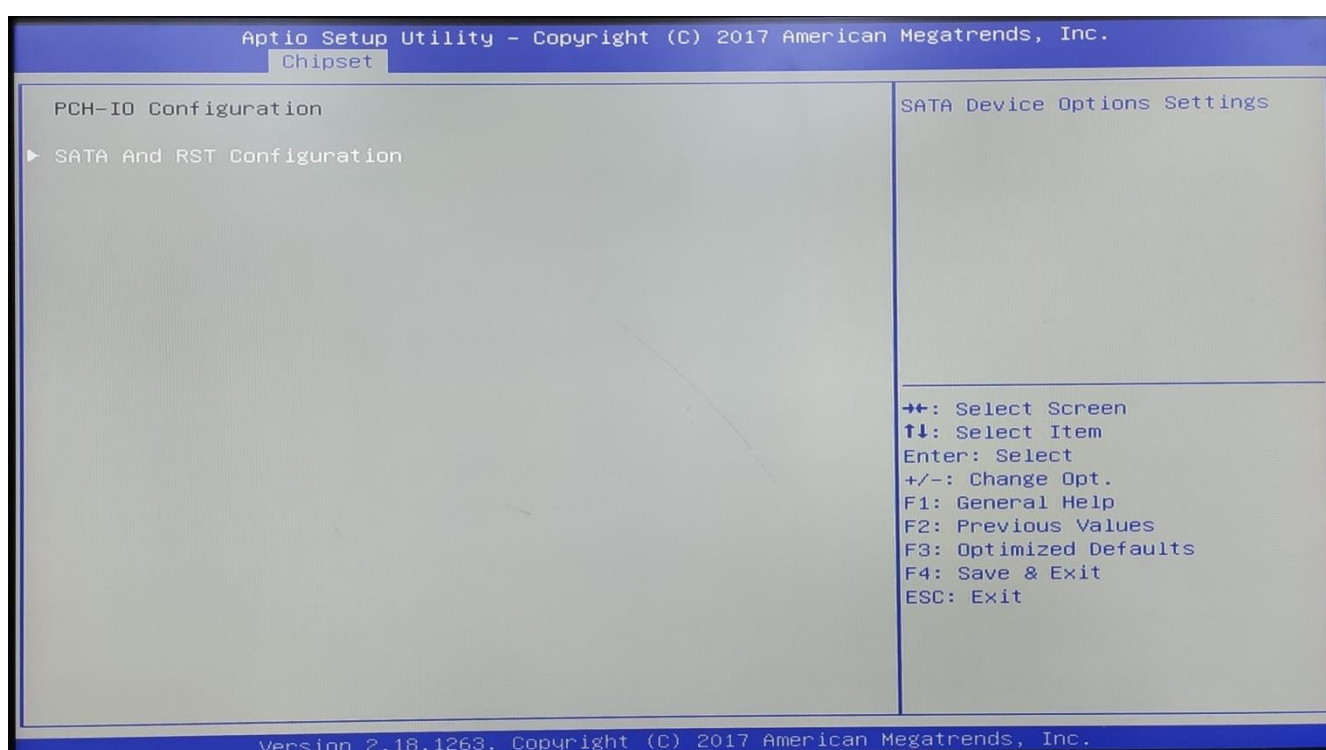
3.5.1.1.1 LCD Control



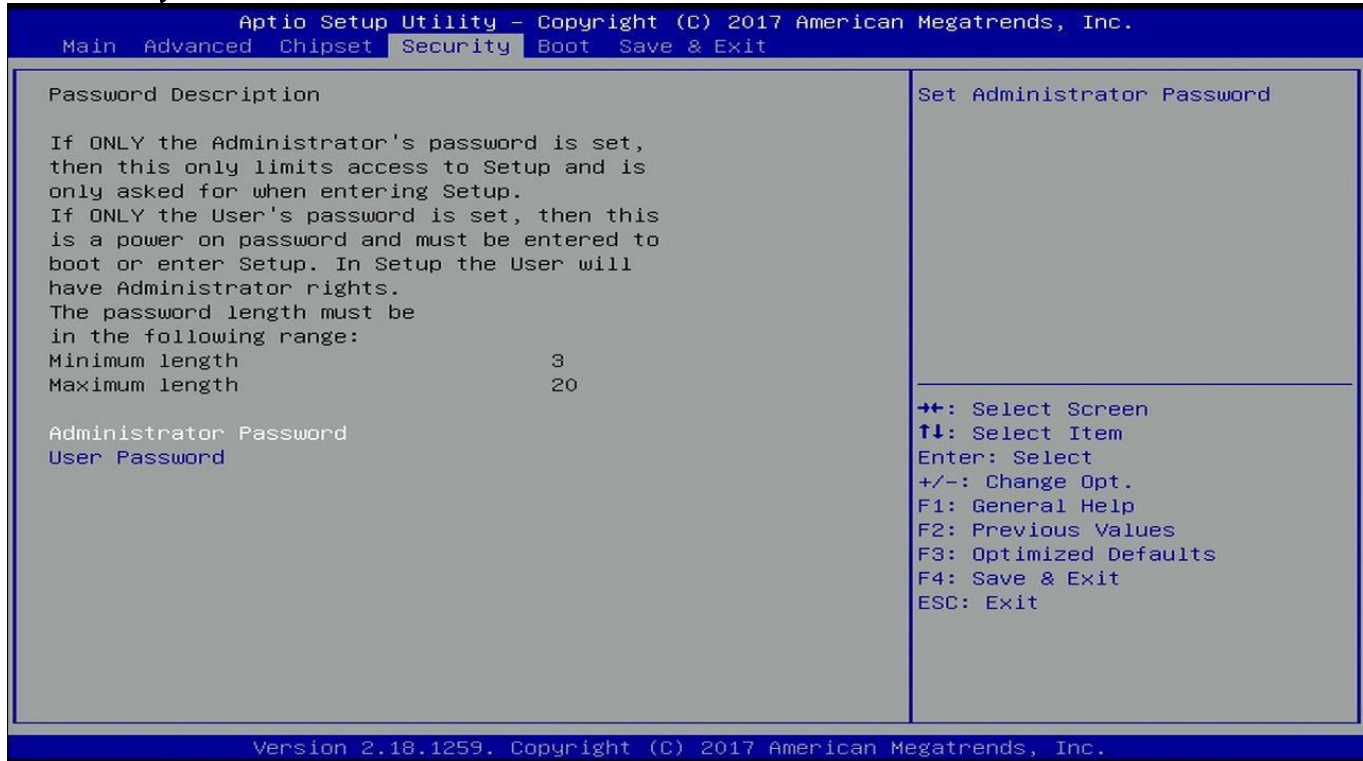
3.5.1.2 Memory Configuration



3.5.2 PCH-IO Configuration



3.6 Security



Administrator Password

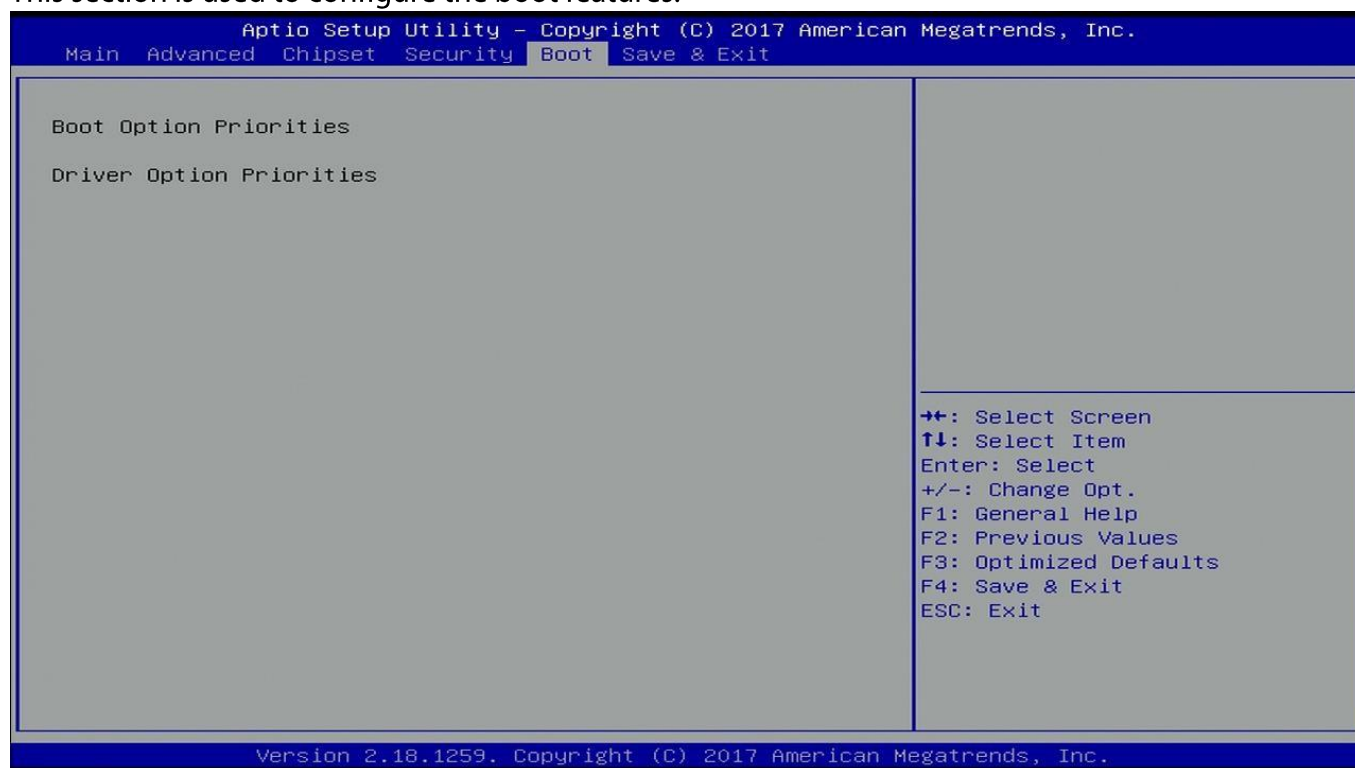
Set administrator password.

User Password

Set user Password.

3.7 Boot Menu

This section is used to configure the boot features.



3.8 Save & Exit

