USER'S MANUAL

P117-ADL-TRA

All-in-One
17" SXGA TFT Expandable
Panel PC

User's Manual

AXIOMTEK

www.axiomtek.com

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CAUTION

Wrong type of batteries may cause explosion. It is recommended that users only replace with the same or equivalent type of batteries as suggested by the manufacturer once properly disposing of any used ones.

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Safety Precautions

Before getting started, please read the following important safety precautions.

1. Be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and place all electronic components in any static-shielded devices. Most electronic components are sensitive to static electrical charge.

2. Disconnect the power cord from the P100 series prior to any installation. Be sure both the system and the external devices are turned off. Sudden surge of power could ruin sensitive components. Make sure the P100 series is properly grounded.

3. Do not open the system's top cover. If opening the cover for maintenance is a must, only a trained technician is allowed to do so. Integrated circuits on computer boards are sensitive to static electricity. To avoid damaging chips from electrostatic discharge, observe the following precautions:

    - Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This will help to discharge any static electricity on your body.

    - When handling boards and components, wear a grounding wrist strap available from most electronic component stores.

Trademark Acknowledgments

Table of Contents

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Section 1
Introduction

This section contains general information and detailed specifications of the P117-ADL-TRA, including the following subsections:

Figure 1-1 Front View of the P117-ADL-TRA

- General Description
- Specification
- Dimensions
- I/O Outlets
- Package List

1.1 General Description

The P117-ADL-TRA adopts a 17-inch SXGA TFT LCD with 250-nits brightness, a high performance LGA1700 socket for 12th/13th generation Intel® Core™ i7/i5/i3 & Pentium® processor, and an Intel® H610 Express chipset to provide excellent computing performance. Furthermore, P117-ADL-TRA supports optional WLAN module & antenna for wireless connectivity.

Industrial-grade front bezel

The P117-ADL-TRA adopts industrial-grade front bezel which incorporates the advantages of light weight, high degree of hardness, better heat releasing, easy-to-shape and anti-corrosion. Therefore, the P117-ADL-TRA is especially suitable for most rugged industrial environments.

Expandable for PCIe

P117-ADL-TRA comes with one PCIe x16 for expansion purpose. User can easily plug in PCIe card as required.

WLAN Antenna Supported

The P117-ADL-TRA supports a WLAN module (optional) antenna for wireless network connectivity.

High Performance computing: 12th/13th Generation Intel® Core™ Processors

The P117-ADL-TRA is powered by LGA1700 Socket 12th /13th Generation Intel® Core™ i7/i5/i3, Pentium® processors which provide powerful performance and less power consumption. The latest Intel® Alder lake-S platform offers reliable and stable performance suitable for rugged environments.

1.2 Specifications

1.2.1 System Specifications

Main CPU Board

- **CPU**
  - LGA1700 socket 12th /13th generation Intel® Core™ i7/i5/i3 and Pentium® processors, up to 35W
- **Chipset**
  - Intel® H610

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- **System Memory**
  - 2 x 260-pin DDR4-3200/2666/2400MHz SO-DIMM, up to 64GB

- **BIOS**
  - AMI BIOS via SPI interface.

I/O System

- **Standard I/O**

  - 1 x RS-232/422/485
  - 1 x RS-232
  - 2 x USB 3.2 GEN1(Type A)
  - 4 x USB 2.0(Type A)
  - 1 x AC Socket for power input
  - 1 x Switch for power on/off
  - 1 x Remote power switch
  - 1 x HDMI
  - 1 x VGA
  - 1 x Display Port
  - 1 x Audio Line-out
  - 1 x Audio Mic-in
  - 1 x flexible I/O windows, by option 2x RS232, CAN, LAN

- **Ethernet**

  - LAN1: 1000/100/10Mbps Gigabit/Fast Ethernet supports Wake-on-LAN, PXE with Intel® i219V.
  - LAN2: 2500/1000/100/10Mbps Gigabit/Fast Ethernet supports Wake-on-LAN, PXE with Intel® i225V.

- **Expansion**
  - 1 x PCIe x16 slot.

    Note: Supports dimensions of standard half size PCIE card. (Max. up 167.65mm x 111.15mm x 18.71mm)

  - 1 x PCI-Express Mini Card USB + SATA signal (USB+PCIe signal by option)
  - 3 x SMA Type Antenna Hole
  - 1 x M.2 Key E type 2230 with PCIe x1 and USB2.0.

- **Storage**
  - 1 x 2.5" SATA SSD (supports 7mm and 9.5mm)

- **Power connector**
  - 1 x AC Socket for power input

1.2.2 Mechanical/Environmental Specifications

- **17" SXGA (1280 x 1024) LCD 250 nits with LED backlight**
- **5-wire resistive touch**
- **Aluminum w/ IP65/NEMA 4 rugged protection**
- **Net Weight**

  10.89 kg (24.01 lb)
- **Dimensions (Main Body Size)**

  412.13 mm (16.23") (W) x 88.8 mm (3.5") (D) x 353.55 mm (13.92") (H)
- **Operation Temperature**

  0˚C to 45˚C (35W CPU/SSD)
- **Relative Humidity**

  10% to 90% @ 40˚C, non-condensing
- **Power Input**

  100~240VAC power connector

NOTE All specifications and images are subject to change without notice.

1.3 Dimensions and Outlines

Diagram 1-1 and 1-2 show the outlines and dimensions of P117-ADL-TRA, respectively.

Diagram 1-1 Outlines of the P117-ADL-TRA

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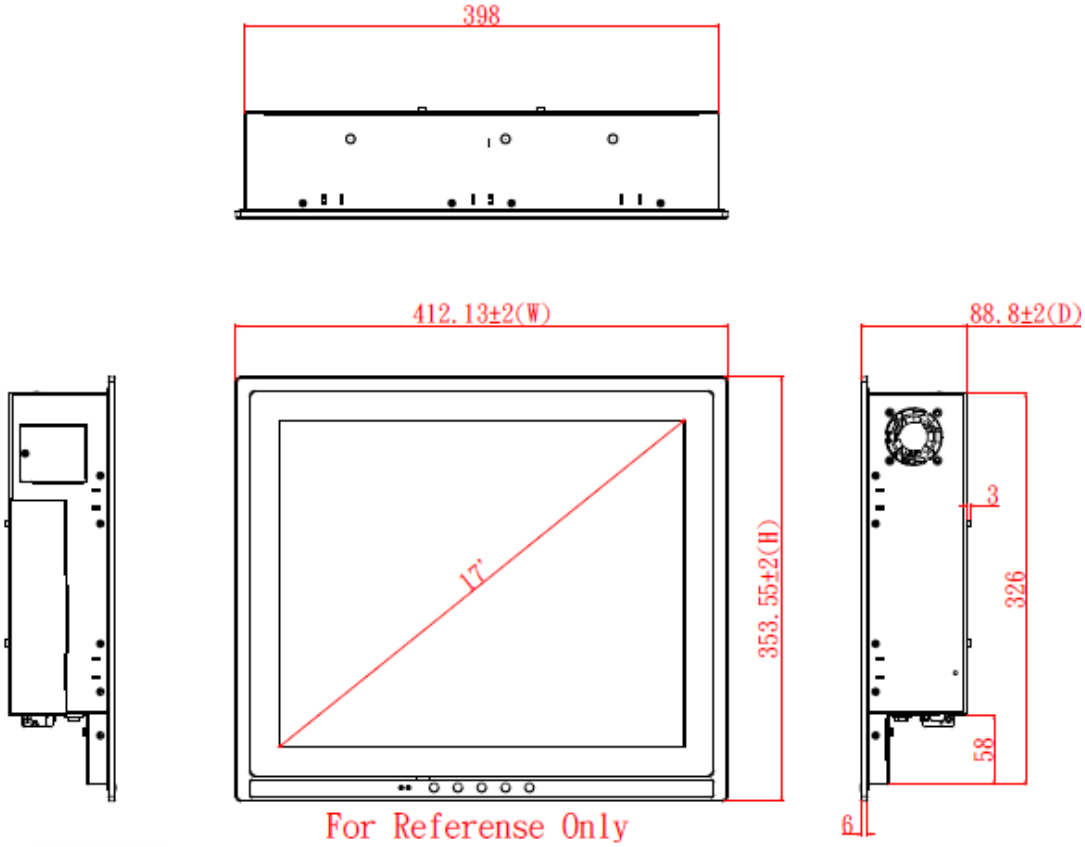


Cut out dimensions: 399 x 327 mm

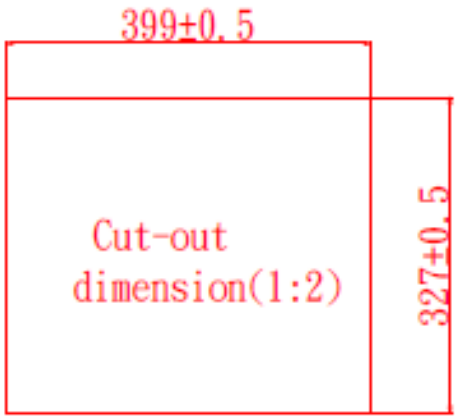
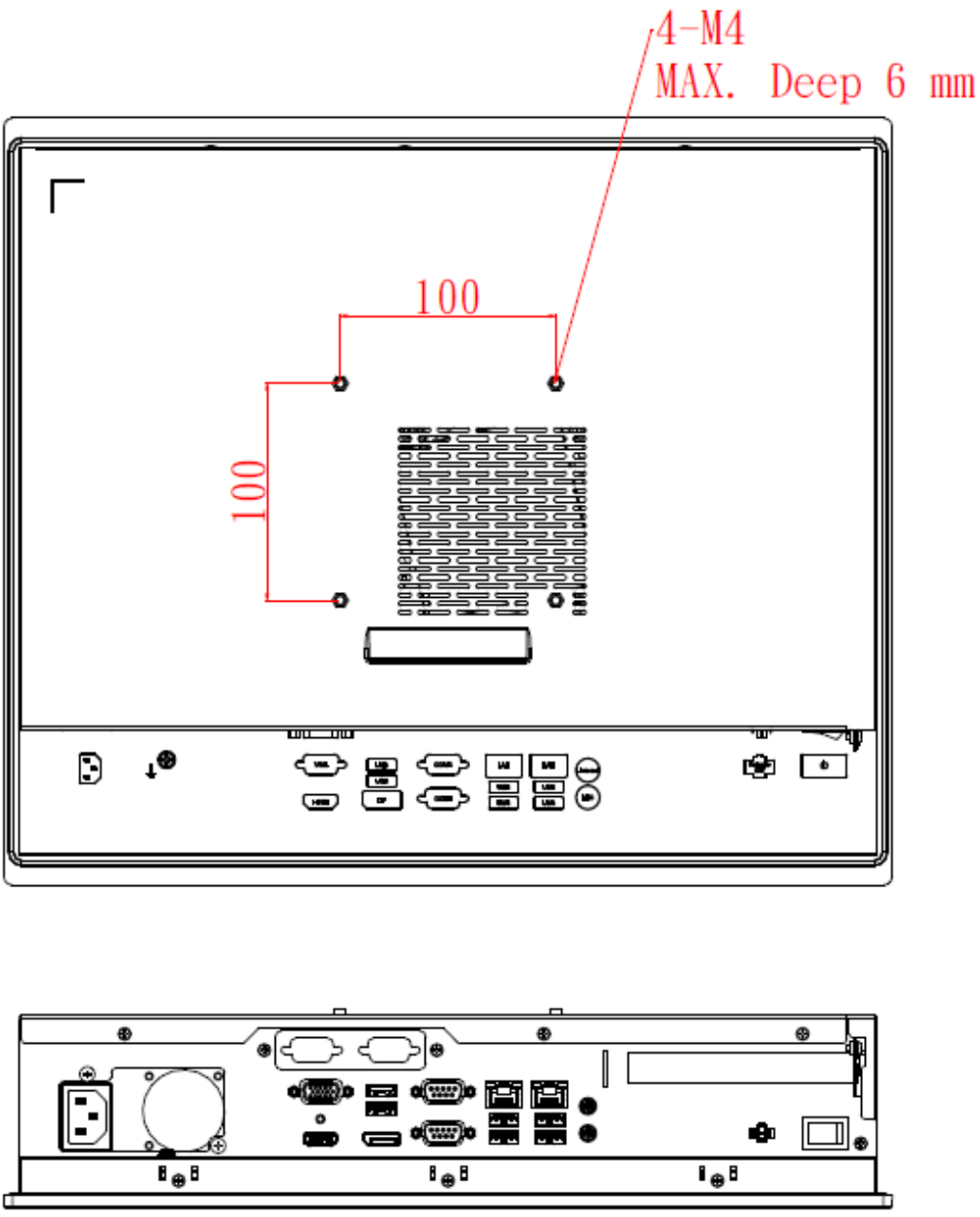


Diagram 1-2 Back outline of the P117-ADL-TRA



1.4 I/O Outlets

Figure 1-2,1-3 and Table 1-1,1-2 illustrate I/O locations and their functions of the P117-ADL-TRA.

Figure 1-2 Front View of the P117-ADL-TRA

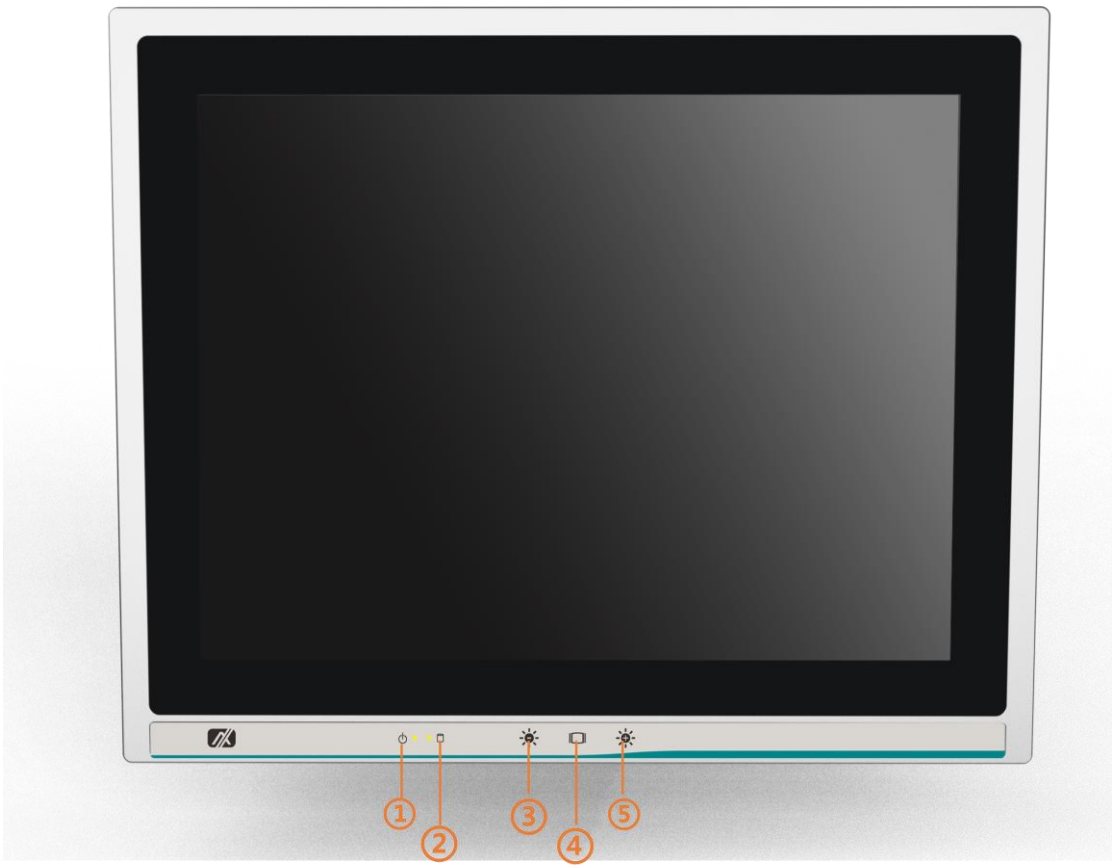


Table 1-1 Functions of the front panel of the P117-ADL-TRA

No	Function
1	1 x Power status LED
2	1 x SATA status LED
3	1 x Brightness down
4	1 x Display monitor ON/OFF
5	1 x Brightness up

Figure 1-3 Side View of the P117-ADL-TRA

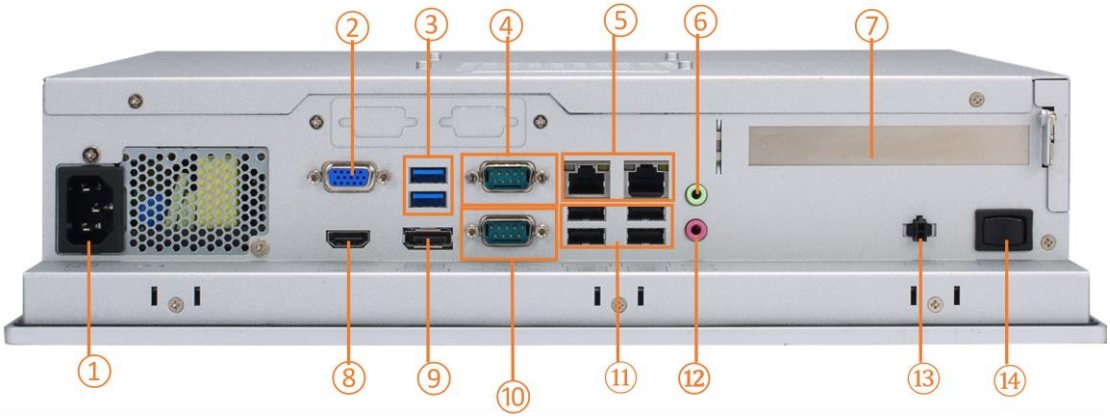


Table 1-2 Functions of the I/O Outlets of the P117-ADL-TRA

No	Function
1	AC Socket for power input
2	1 x VGA
3	2 x USB 3.2 Gen1
4	1 x RS-232
5	2 x LAN
6	1 x Line-out
7	1 x PCIE x16 slot
8	1 x HDMI
9	1 x DisplayPort
10	1 x RS-232/422/485
11	4 x USB 2.0
12	1 x Mic-in
13	Remote power switch
14	Switch for power on/off

Section 2
Hardware and Installation

The P117-ADL-TRA provides rich I/O ports and flexible expansion options to meet different demands. The Section explains how to install the hardware.

- **Packing List**
- **System Layout**
- **SSD Installation**
- **DRAM Installation**
- **PCIe Mini-Card module Installation (optional)**
- **Add-on Card Installation**
- **Mountings: Panel / Wall / Desktop / VESA**
- **Rear I/O**
- **Jumper Settings**
- **Connectors**

2.1 Packing List

The package bundled with the P117-ADL-TRA should contain the following items:

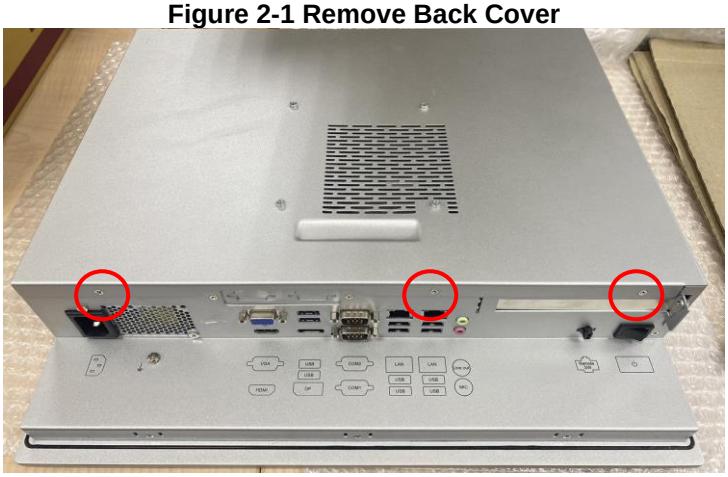
- **P117-ADL-TRA x 1**
- **Panel mount kit x 10**
- **Wall mount (optional)**
- **Power cord x 1**

2.2 System Layout

Please follow the steps below to open the P117-ADL-TRA unit.

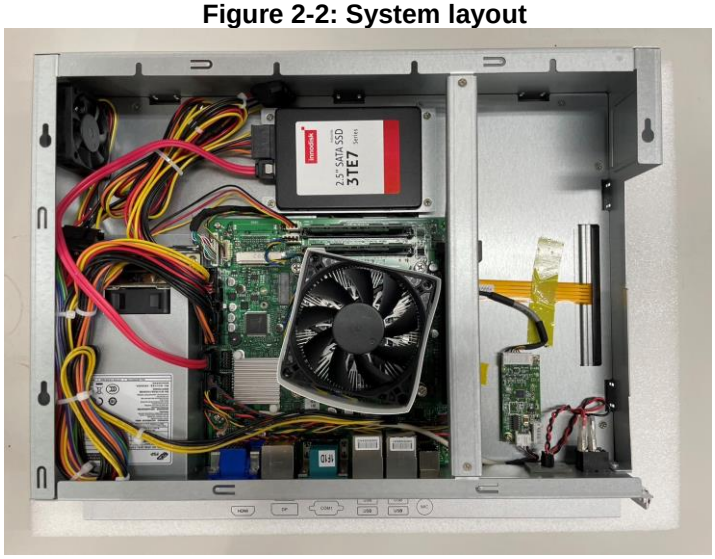
Step 1 **Remove the three screws (see red circles in Figure 2-1) on the back cover and pull the cover backward.**

Figure 2-1 Remove Back Cover



Step 2 **Remove the back cover.**

Figure 2-2: System layout

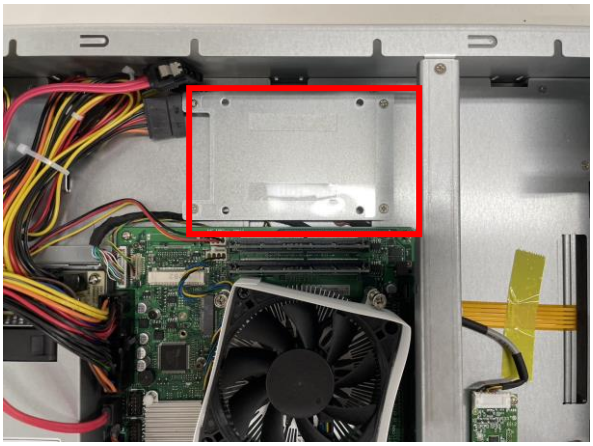


2.3 SSD Installation

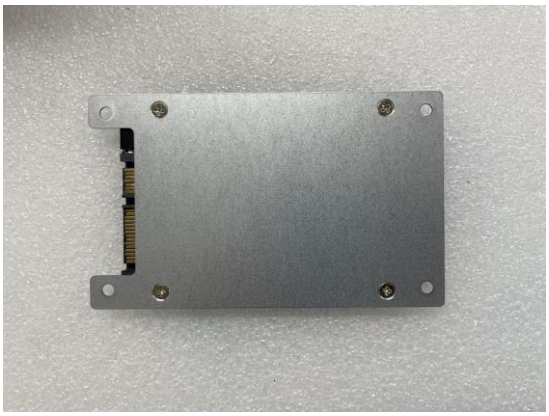
The P117-ADL-TRA provides a convenient SSD bracket for users to install one 2.5" SATA SSD. Please follow the steps:

Step 1 **Refer section 2.1 to open the back cover.**

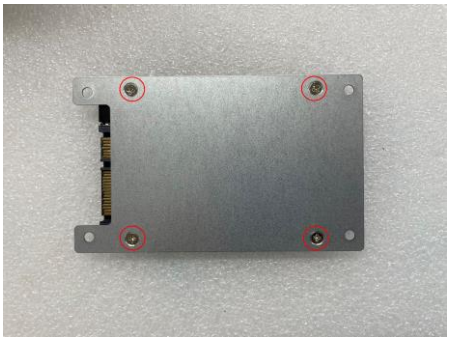
Step 2 **Unscrew four screws to take off the SSD bracket.**



Step 3 **Fix the SSD on bracket by the screws.**



▲1 x 2.5" SATA SSD Bracket



▲Fix the 2.5" SSD on the back of bracket

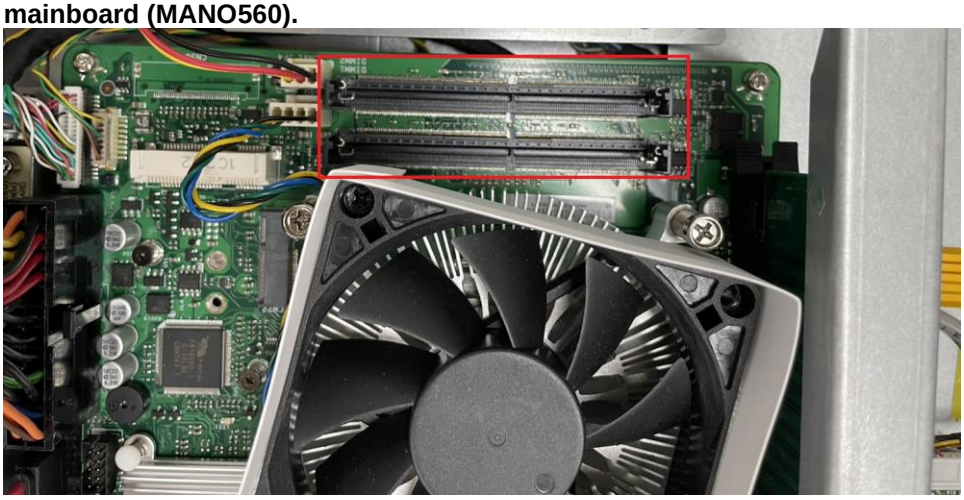
Step 4 Fix the SSD bracket onto the main base.

Step 5 Plug the power and SATA cables to connectors. Installation completes.

2.4 DRAM Installation

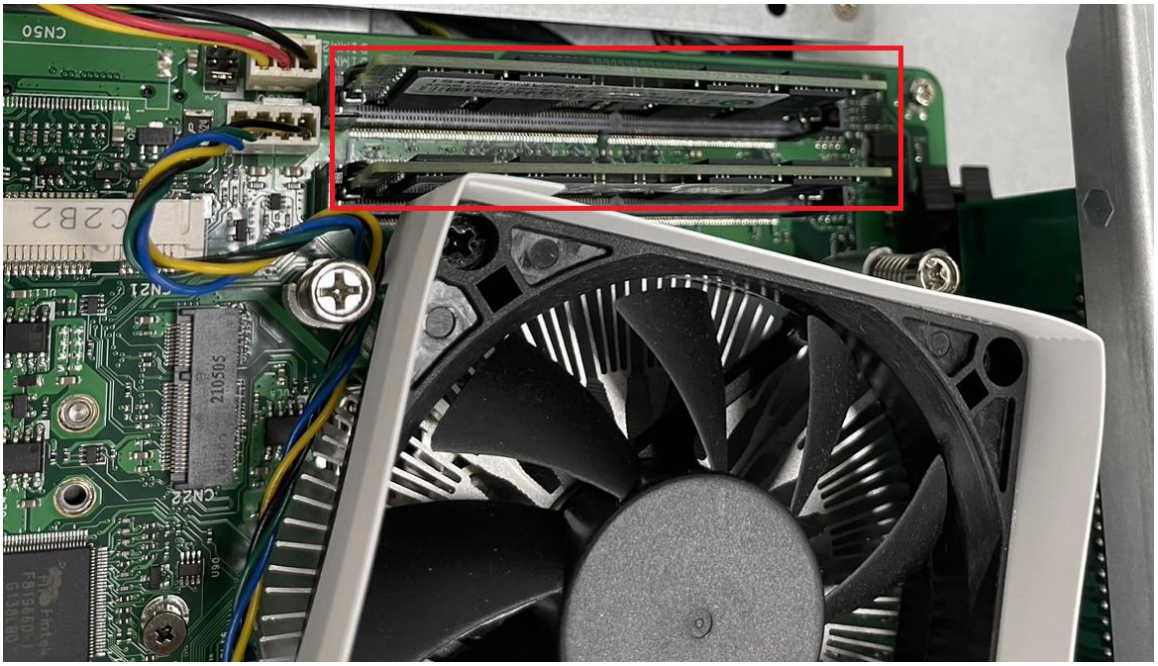
The P117-ADL-TRA provides one 260-pin DDR4 SO-DIMM socket that supports system memory up to 32GB. Please follow the steps below to install the memory modules:

Step 1 **Refer to section 2.1 to open the back cover and find the DIMM socket on the mainboard (MANO560).**



Step 2 **Install the SO-DIMM module into the slot and press it firmly down until it seats correctly.**

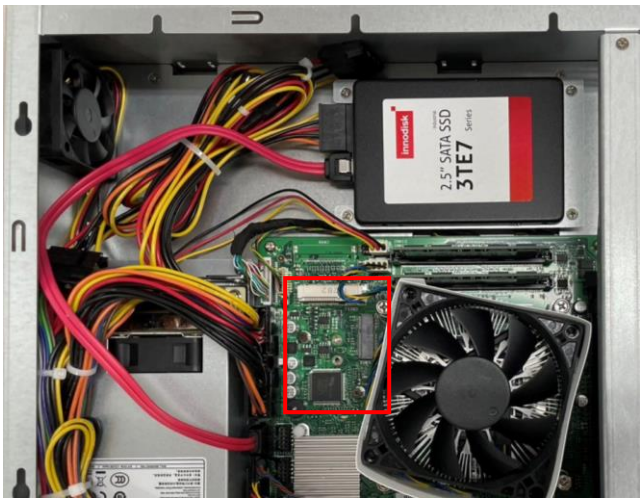
Step 3 **The slot latches are levered upwards and latch on to the edges of the SO-DIMM.**



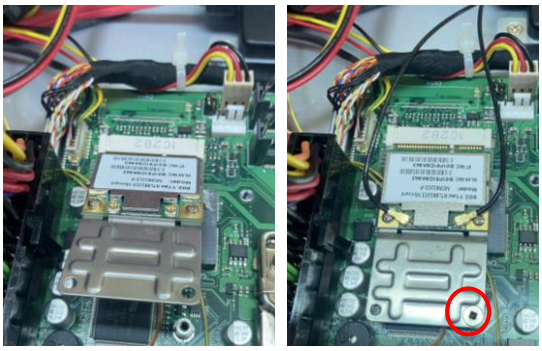
2.5 PCIe Mini-Card module Installation (optional)

The P117-ADL-TRA supports PCIe Mini-Card module to establish wireless connection. When installing the wireless LAN module, refer to the following instructions and illustration:

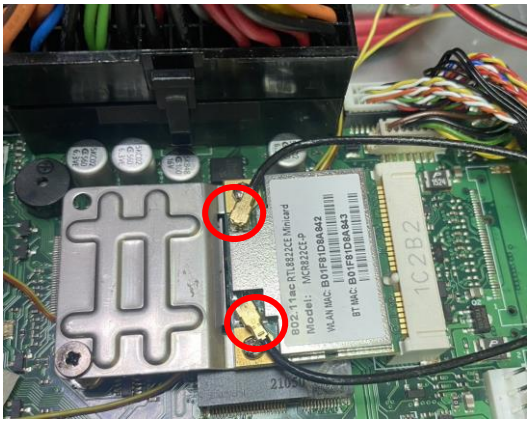
Step 1 Refer to section 2.1 to open the back cover and locate PCIe Mini-Card slot.



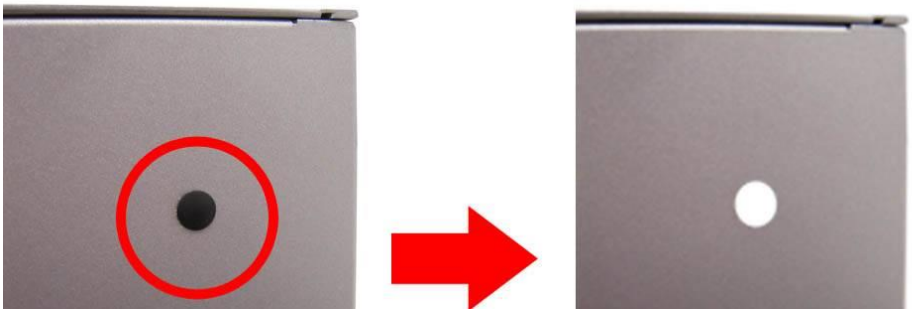
Step 2 Insert wireless LAN module to the Mini card slot and fixing it by one screw.



Step 3 Find the built-in antenna cable and connect it to the wireless LAN card.



Step 4 **Lift the rubber stopper from the top of back cover.**



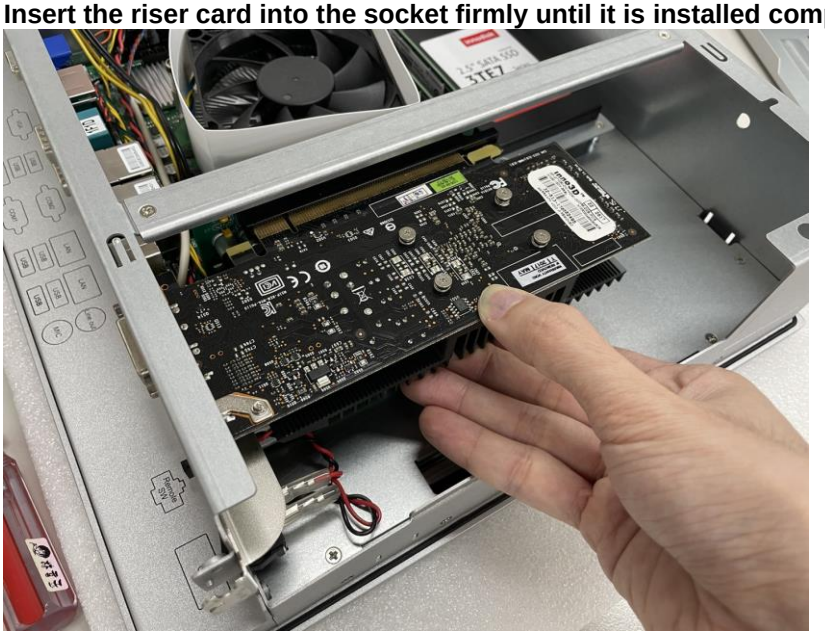
Step 5 **Install the antenna on the antenna connector.**

2.6 Add-on Card Installation

The P117-ADL-TRA provides one PCIe x16 slot for expansion. The system can accommodate half-size riser cards. To install the riser card, refer to the following figure and instructions below:

Step 1 **Refer section 2.1 to open the back cover and unscrew the three screw to remove the fixing bracket.**

Step 2 **Insert the riser card into the socket firmly until it is installed completely.**



Step 3 **Secure the metal bracket of the card to the system case with one screw. Installation complete.**

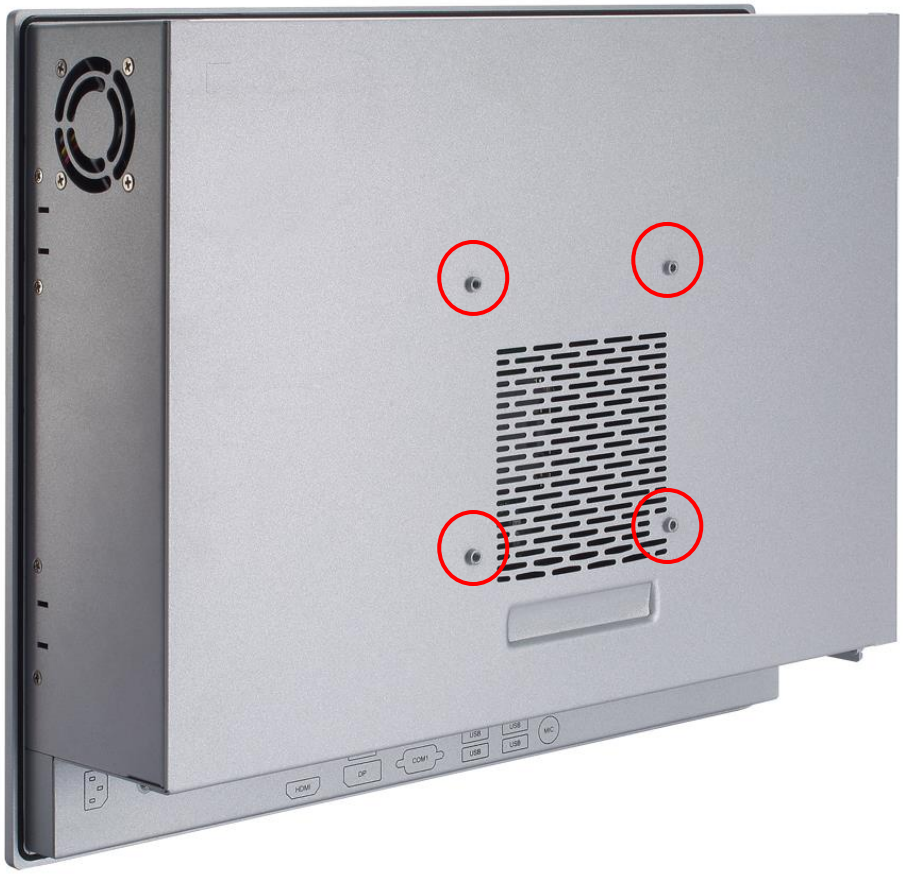
NOTE: Please use the standard size of add-on card to avoid conflicts with the mechanism.

2.7 Mountings: Panel / Wall / Desktop / VESA

There are four mounting options for the P117-ADL-TRA, including Panel/Wall/Desktop/VESA mount.

2.7.1 VESA-ARM / Wall-mount / Desktop-mount

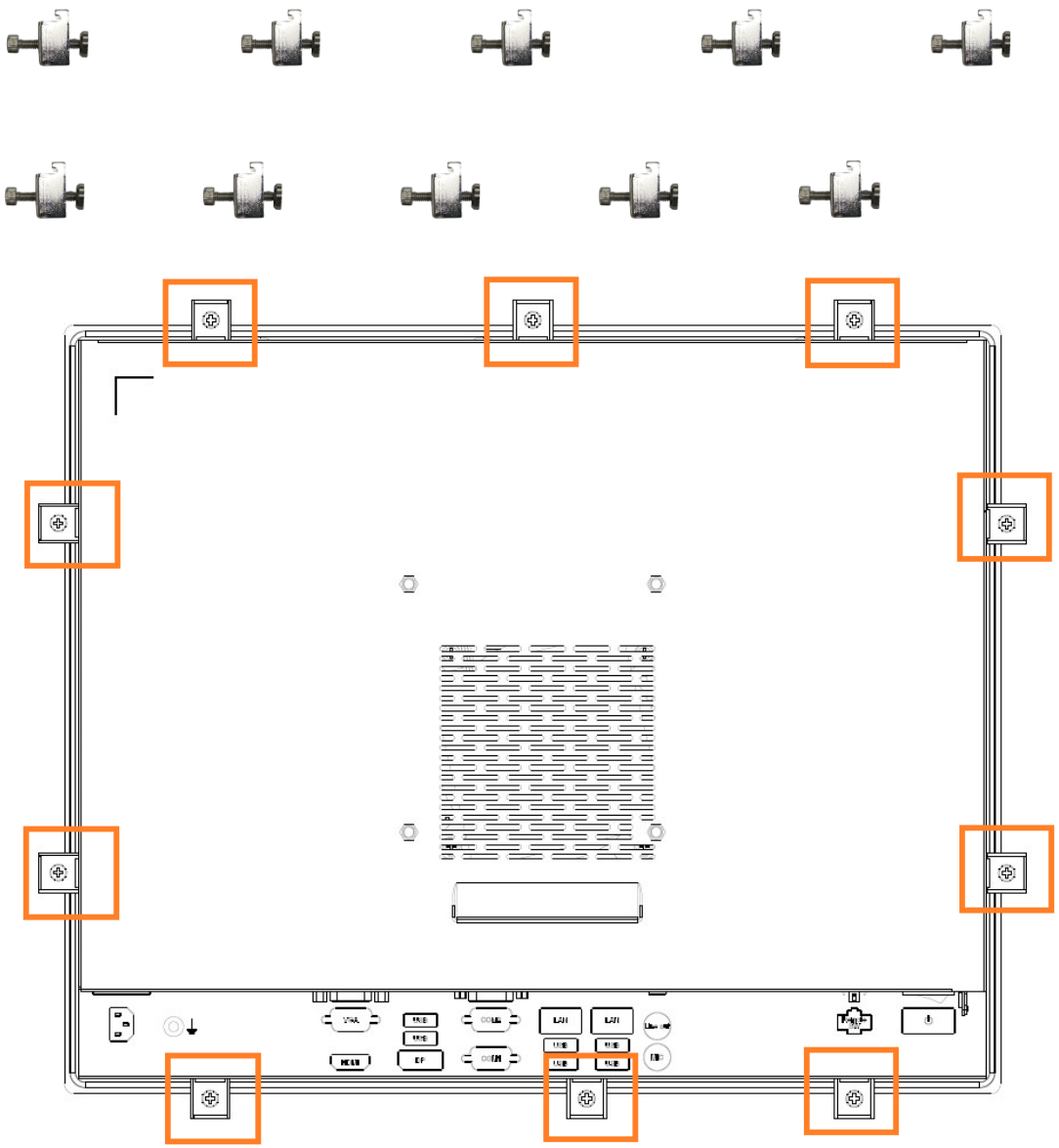
The P117-ADL-TRA can be installed by way of VESA mount which is in the dimensions of 100x100 mm. Simply fix four screws to fasten the kit from the back cover, , as shown in the picture below.



▲VESA mount (back cover)

2.7.2 Panel-mount Kit Assembly

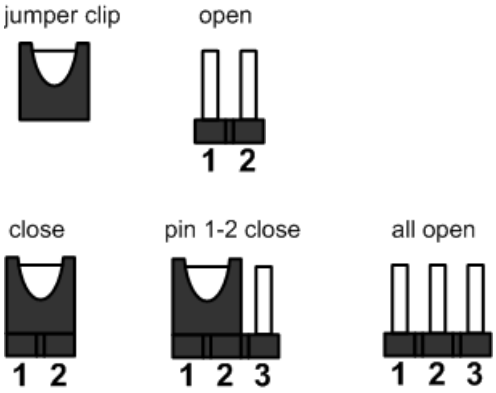
The P117-ADL-TRA is designed for panel mount. To mount the P117-ADL-TRA, the standard set of mounting kit (10pcs included in the system packaging) is needed.



2.8 Jumper Settings

Jumper is a small component consisting of jumper clip and jumper pins. Install jumper clip on 2 jumper pins to close. And remove jumper clip from 2 jumper pins to open. The following illustration shows how to set up jumper.

Diagram 2-1 Definitions of Pin Settings



Before applying power to the P117-ADL-TRA series, please make sure the jumpers are in default positions which are defined as follows:

NOTE: ***In case that default jumper setting needs to be changed, please make any change under the power-off condition.***

Table 2-2 Jumper Settings

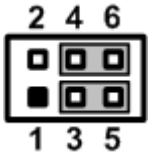
Jumper	Description	Setting
JP1	COM Data/Power Select Default: RS-232 Data	3-5 Close
		4-6 Close
JP3	Clear CMOS Default: Normal Operation	1-2 Close
JP5	AT/ATX Power Mode Select Default: ATX Mode	1-2 Close

2.9.1 COM1 Data/Power Select (JP1)

This is a 3x2-pin (pitch=2.00mm) jumper. The COM1 port has +5V power capability on DCD and +12V on RI by setting JP1.

Table 2-3 Jumper Settings for JP1

Function	Setting
Power: Set COM1 pin 1 to +5V	1-3 close
Data: Set COM1 pin 1 to DCD (Default)	3-5 close
Power: Set COM1 pin 9 to +12V	2-4 close
Data: Set COM1 pin 9 to RI (Default)	4-6 close



2.9.2 Clear CMOS (JP3)

This jumper allows you to clear the Real Time Clock (RTC) RAM in CMOS. You can clear the CMOS memory of date, time, and system setup parameters by erasing the CMOS RTC RAM data. The onboard button cell battery powers the RAM data in CMOS, which includes system setup information such as system passwords.

To erase the RTC RAM:

1. Turn OFF the computer and unplug the power cord.
2. Remove the onboard battery.
3. Move the jumper clip from pins 1-2 (default) to pins 2-3. Keep the clip-on pins 2-3 for about 5~10 seconds, then move the clip back to pins 1-2.
4. Re-install the battery.
5. Plug the power cord and turn ON the computer.
6. Hold down the <Del> key during the boot process and enter BIOS setup to re-enter data.

Table 2-4 Jumper Settings for JP3

Function	Setting
Normal operation (Default)	1-2 close
Clear CMOS	2-3 close

2.9.3 AT/ATX Power Mode Select (JP5)

This 3-pin (pitch=2.0mm) jumper allows you to select AT or ATX power mode.

Table 2-5 Jumper Settings for JP5

Function	Setting
ATX mode (Default)	1-2 close
AT mode	2-3 close

2.9 Connectors

Please refer to below connector table to get their pin assignments

Table 2-6 A Summary of Connectors

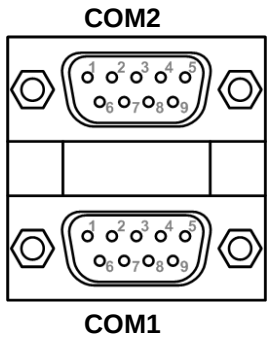
External connectors	Sections
COM1 and COM2 D-Sub Connector	2.9.1
SATA 3.0 Connector	2.9.2
USB 3.2 GEN1 Stack Port	2.9.3
LAN and USB 2.0 Connectors	2.9.4
PCI-Express Mini Card Connector	2.9.5
M.2 Key E Socket	2.9.6
DisplayPort Connector	2.9.7
HDMI Connector	2.9.8
VGA Connector	2.9.9
Audio Jack	2.9.10

2.9.1 COM1 and COM2 D-Sub Connector (CN1)

The CN1 is a double 9-pin D-Sub connector for COM1 and COM2 serial port interfaces on the rear I/O. Only COM1 supports RS-232/422/485 mode. The pin assignments of RS-232/422/485 are listed in table below.

COM1:

Pin	RS-232 (3T/5R)	RS-422 (1T/1R Full Duplex)	RS-485 (1T/1R TX Enable Low Active)
1	COM1C_DCD [*]	TX (-)	(R (-) / T (-))
2	COM1C_RXD	TX (+)	(R (+) / T (+))
3	COM1C_TXD	RX (+)	NC
4	COM1C_DTR	RX (-)	NC
5	GND	GND	GND
6	COM1C_DSR	NC	NC
7	COM1C_RTS	NC	NC
8	COM1C_CTS	NC	NC
9	COM1C_RI [*]	NC	NC



NOTE: ***Pin 1 of COM1 can be DCD/+5V and pin 9 of COM1 can be RI/+12V by selecting JP1 (see section 2.9.1).***

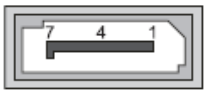
COM2:

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

2.9.2 SATA 3.0 Connectors (CN7)

This connector supports the thin Serial ATA cable for primary internal storage device..

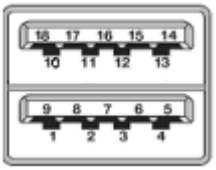
Pin	Signal
1	GND
2	TX+
3	TX-
4	GND
5	RX-
6	RX+
7	GND



2.9.3 USB 3.2 GEN1 Stack Port (CN10)

The motherboard comes with one stacked Universal Serial Bus (compliant with USB 3.2 GEN1) connector on the rear I/O for installing USB peripherals such as a keyboard, mouse, scanner, etc.

Pin	Signal	Pin	Signal
1	USB_PWR	10	USB_PWR
2	USB#1_D-	11	USB#2_D-
3	USB#1_D+	12	USB#2_D+
4	GND	13	GND
5	SSRX1-	14	SSRX2-
6	SSRX1+	15	SSRX2+
7	GND	16	GND
8	SSTX1-	17	SSTX2-
9	SSTX1+	18	SSTX2+



2.9.4 LAN and USB 2.0 Connectors (CN11 and CN19)

The motherboard supports two Ethernet ports (CN11, CN19): two RJ45 connectors with

CN11: Intel® i225-V controller support 10/100/1000/2500Mbps.

CN19: Intel® i219-V controller support 10/100/1000 Mbps.

The Universal Serial Bus (compliant with USB 2.0) connectors on the rear I/O are for installing USB peripherals such as keyboard, mouse, scanner, etc.

Pin	LAN Signal	Pin	LAN Signal
L1	Tx+ (Data transmission positive)	L2	Tx- (Data transmission negative)
L3	Rx+ (Data reception positive)	L4	RJ-1 (For 1000 Base-T only)
L5	RJ-1 (For 1000 Base-T only)	L6	Rx- (Data reception negative)
L7	RJ-1 (For 1000 Base-T only)	L8	RJ-1 (For 1000 Base-T only)
A	Speed LED LAN1: Intel® i219-V OFF: 10Mbps data rate Green: 100Mbps data rate Orange: 1Gbps data rate LAN2: Intel® i225-V OFF: 10/100Mbps data rate Green: 1Gbps data rate Orange: 2.5Gbps data rate	B	Active LED(Yellow) OFF: No link Blinking: Link established; data activity detected

NOTE: CN11/CN19 supports Wake-on-LAN.

Pin	USB Signal	Pin	USB Signal
1	USB VCC (+5V level)	5	USB VCC (+5V level)
2	USB _D-	6	USB _D-
3	USB _D+	7	USB _D+
4	GND	8	GND

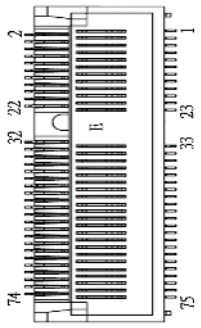
2.9.5 PCI-Express Mini Card Connector (CN21)

The CN21 complies with PCI-Express Mini Card Spec. V1.2.

Pin	Signal	Pin	Signal
1	WAKE#	2	+3.3VAUX
3	NC	4	GND
5	NC	6	+1.5V
7	CLKREQ#	8	UIM_PWR/NC
9	GND	10	UIM_DAT/NC
11	REFCLK-	12	UIM_CLK/NC
13	REFCLK+	14	UIM_REST/NC
15	GND	16	UIM_VPP/NC
17	NC	18	GND
19	NC	20	NC
21	GND	22	PERST#
23	SATA_RP(PCIE_RX_D-)	24	+3.3VAUX
25	SATA_RN(PCIE_RX_D+)	26	GND
27	GND	28	+1.5V
29	GND	30	SMB_CLK
31	SATA_TN(PCIE_TX_D-)	32	SMB_DATA
33	SATA_TP(PCIE_TX_D+)	34	GND
35	GND	36	USB_D-
37	GND	38	USB_D+
39	+3.3VAUX	40	GND
41	+3.3VAUX	42	NC
43	GND	44	NC
45	NC	46	NC
47	NC	48	+1.5V
49	NC	50	GND
51	NC	52	+3.3VAUX

2.9.6 M.2 Key E Socket (CN22)

The motherboard comes with one M.2 Key E socket (PCIe & USB2.0), The CN22 supports CNVi module.

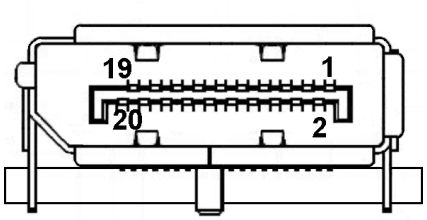


Pin	Signal	Pin	Signal
1	GND	2	+3.3V_SBY
3	USB_D+	4	+3.3V_SBY
5	USB_D-	6	NC
7	GND	8	M.2_BT_PCMCLK
9	CNVI_WGR_DATA1_D-	10	M.2_BT_PCMRST
11	CNVI_WGR_DATA1_D+	12	M.2_BT_PCMIN
13	GND	14	M.2_BT_PCMOUT
15	CNVI_WGR_DATA0_D-	16	NC
17	CNVI_WGR_DATA0_D+	18	GND
19	GND	20	UART_BT_WAKE-
21	CNVI_WGR_CLK_D-	22	CNVI_BRI_RSP
23	CNVI_WGR_CLK_D+	24	**Key E**
25	**Key E**	26	
27		28	
29		30	
31		32	CNVI_RGI_DT
33	GND	34	CNVI_RGI_RSP
35	PCIE_TX_+	36	CNVI_BRI_DT
37	PCIE_TX_-	38	CL_RST
39	GND	40	CL_DATA
41	PCIE_RX_+	42	CL_CLK
43	PCIE_RX_-	44	CNVI_GNSS_PA_BLANKING
45	GND	46	CNVI_MFUART_TXD
47	CLK_PCIE_+	48	CNVI_MFUART_RXD
49	CLK_PCIE_-	50	SUSCLK (+3.3V Level)
51	GND	52	PERST# (+3.3V Level)
53	CLKREQ0#	54	BT_RF_KILL
55	PEWAKE0#	56	WIFI_RF_KILL
57	GND	58	NC
59	CNVI_WT_DATA1_D-	60	NC
61	CNVI_WT_DATA1_D+	62	NC
63	GND	64	GND
65	CNVI_WT_DATA0_D-	66	NC
67	CNVI_WT_DATA0_D+	68	NC
69	GND	70	NC
71	CNVI_WT_CLK_D-	72	+3.3V_SBY
73	CNVI_WT_CLK_D+	74	+3.3V_SBY
75	GND		

2.9.7 DisplayPort1.3 Connector (CN32)

The motherboard comes with DisplayPort interface on the rear I/O.

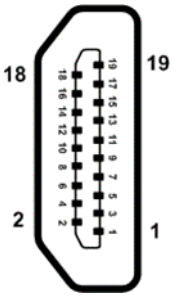
Pin	Signal
1	DP_TX0_+
2	GND
3	DP_TX0_-
4	DP_TX1_+
5	GND
6	DP_TX1_-
7	DP_TX2_+
8	GND
9	DP_TX2_-
10	DP_TX3_+
11	GND
12	DP_TX3_-
13	GND
14	GND
15	DP_AUX+
16	GND
17	DP_AUX-
18	DP_HPD
19	GND
20	+3.3V



2.9.8 HDMI1.4 Connector (CN33)

The HDMI (High-Definition Multimedia Interface) is a compact digital interface which can transmit high-definition video and high-resolution audio over a single cable.

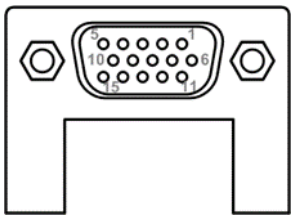
Pin	Signal	Pin	Signal
1	HDMI OUT_DATA2+	2	GND
3	HDMI OUT_DATA2-	4	HDMI OUT_DATA1+
5	GND	6	HDMI OUT_DATA1-
7	HDMI OUT_DATA0+	8	GND
9	HDMI OUT_DATA0-	10	HDMI OUT_CLK+
11	GND	12	HDMI OUT_CLK-
13	NC	14	NC
15	HDMI OUT_SCL	16	HDMI OUT_SDA
17	GND	18	+5V
19	HDMI_HPDET		



2.9.9 VGA Connector (CN34)

The CN34 is a high rise 15-pin D-Sub connector which is commonly used for VGA display. This VGA interface configuration can be configured via software utility.

Pin	Signal	Pin	Signal
1	Red	2	Green
3	Blue	4	NC
5	GND	6	GND
7	GND	8	GND
9	VCC	10	GND
11	NC	12	DDC DATA
13	Horizontal Sync	14	Vertical Sync
15	DDC CLK		



2.9.10 Audio Jack (CN82)

The motherboard provides HD audio jack on the rear I/O. Install audio driver, and then attach audio devices to CN82.

Pin Color	Signal
Green	Line-out
Pink	MIC-in

Section 3
AMI BIOS Setup Utility

The AMI UEFI BIOS provides users with a built-in setup program to modify basic system configuration. All configured parameters are stored in a flash chip to save the setup information whenever the power is turned off. This Section provides users with detailed description about how to set up basic system configuration through the AMI BIOS setup utility.

3.1 Starting

To enter the setup screens, follow the steps below:

1. Turn on the computer and press <Del> during the Power On Self-Test (POST) to enter BIOS setup, otherwise, POST will continue with its test routines.
2. Once you enter the BIOS, the main BIOS setup menu displays. You can access the other setup screens from the main BIOS setup menu, such as the Advanced and Chipset menus.

It is strongly recommended that you should avoid changing the chipset's defaults. Both AMI and your system manufacturer have carefully set up these defaults that provide the best performance and reliability.

3.2 Navigation Keys

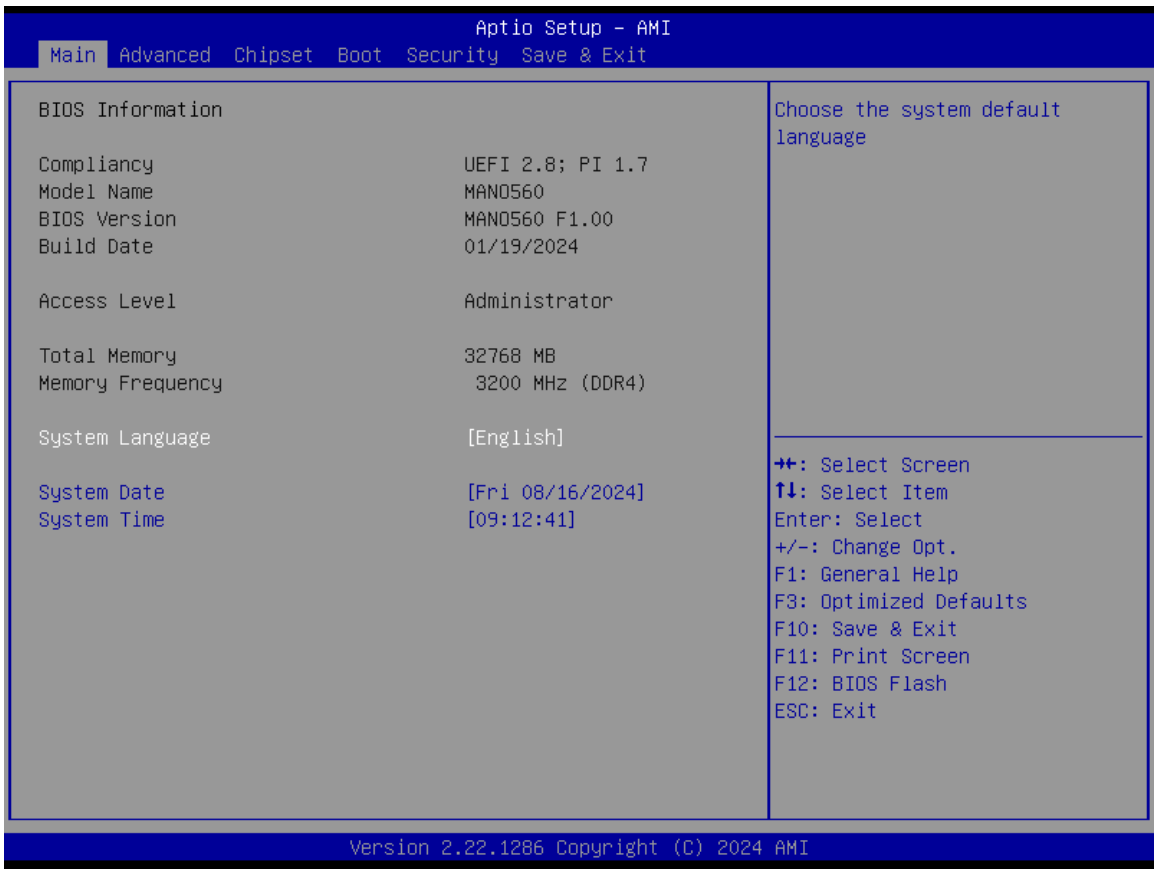
The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process. These keys include <F1>, <F9>, <F10>, <F11>, <F12>, <Enter>, <ESC>, <Arrow> keys, and so on.

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

Hot Keys	Description
→← **Left/Right**	The Left and Right <Arrow> keys allow you to select a setup screen.
↑↓ **Up/Down**	The Up and Down <Arrow> keys allow you to select a setup screen or sub screen.
Enter	The <Enter> key allows you to display or change the setup option listed for a particular setup item. The <Enter> key can also allow you to display the setup sub screens.
+– Plus/Minus	The Plus and Minus <Arrow> keys allow you to change the field value of a particular setup item.
F1	The <F1> key allows you to display the General Help screen.
F9	The <F9> key allows you to Load Optimized Defaults.
F10	The <F10> key allows you to save any changes you have made and exit Setup.
F11	The <F11> key allows you to print the BIOS setting screen.
F12	The <F12> key allows you to update BIOS.
Esc	The <Esc> key allows you to discard any changes you have made and exit the Setup. Press the <Esc> key to exit the setup without saving your changes.

3.3 Main Menu

When you first enter the setup utility, you will enter the Main setup screen. You can always return to the Main setup screen by selecting the Main tab. System Time/Date can be set up as described below. The Main BIOS setup screen is shown below.



BIOS Information
Display system BIOS information.

System Language
Use this option to choose the system default language.

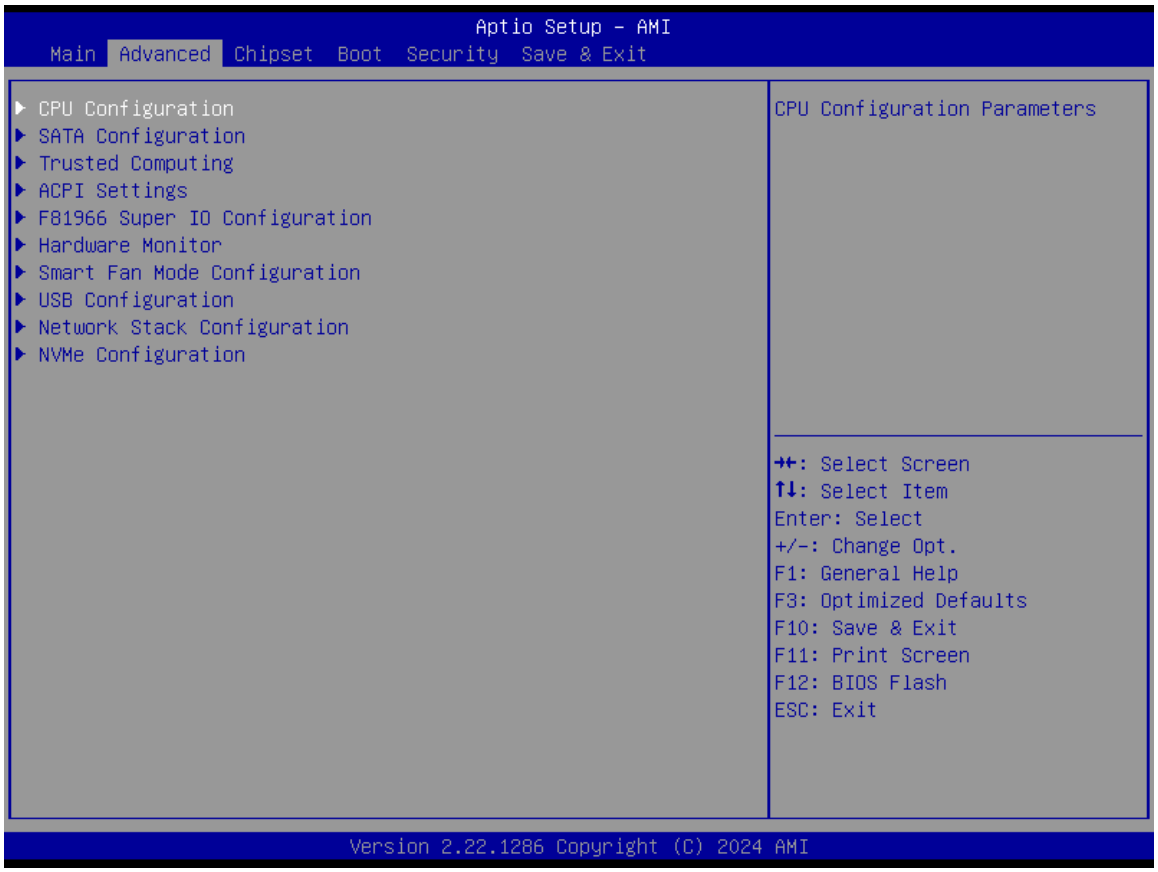
System Date/Time
Use this option to change the system time and date. Highlight System Time or System Date using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time is entered in HH:MM:SS format.

3.4 Advanced Menu

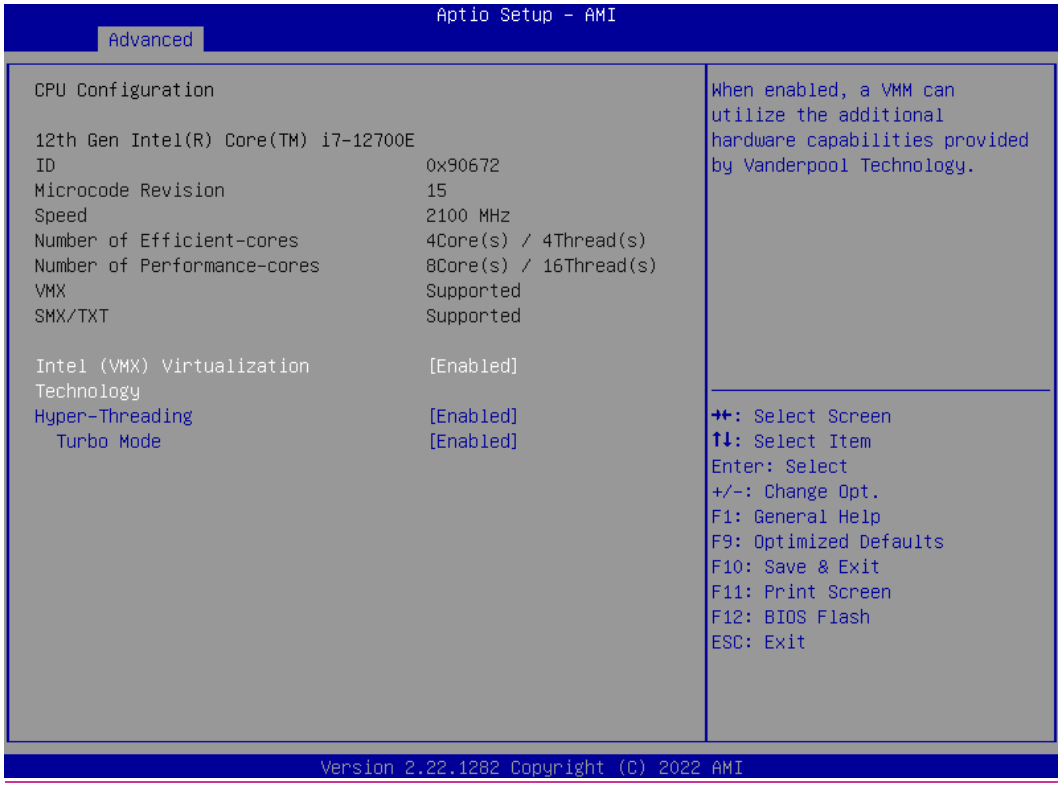
The Advanced menu also allows users to set configuration of the CPU and other system devices. You can select any of the items in the left frame of the screen to go to the sub menus:

- ► CPU Configuration
- ► SATA Configuration
- ► Trusted Computing
- ► ACPI Settings
- ► F81966 Super IO Configuration
- ► Hardware Monitor
- ► Smart Fan Mode Configuration
- ► USB Configuration
- ► Network Stack Configuration
- ► Offboard PCIe SATA Controller

For items marked with"►", please press <Enter> for more options.



- **CPU Configuration**
  This screen shows CPU information.



Intel (VMX) Virtualization Technology
Enable or disable Intel Virtualization Technology. When enabled, a VMM (Virtual Machine Mode) can utilize the additional hardware capabilities. It allows a platform to run multiple operating systems and applications independently, hence enabling a single computer system to work as several virtual systems.

Hyper-Threading
Enable or disable Hyper-Threading Technology. When enabled, it allows a single physical processor to multitask as multiple logical processors. When disabled, only one thread per enabled core is enabled.

Turbo Mode
Enable or disable processor Turbo Mode (requires Intel® Speed Step or Intel® Speed Shift to available and enabled) allowing processor cores to run faster but not exceed CPU defined frequency limits.

- **SATA Configuration**
  During system boot up, BIOS automatically detects the presence of SATA devices. In the SATA Configuration menu, you can see all currently installed SATA device(s).

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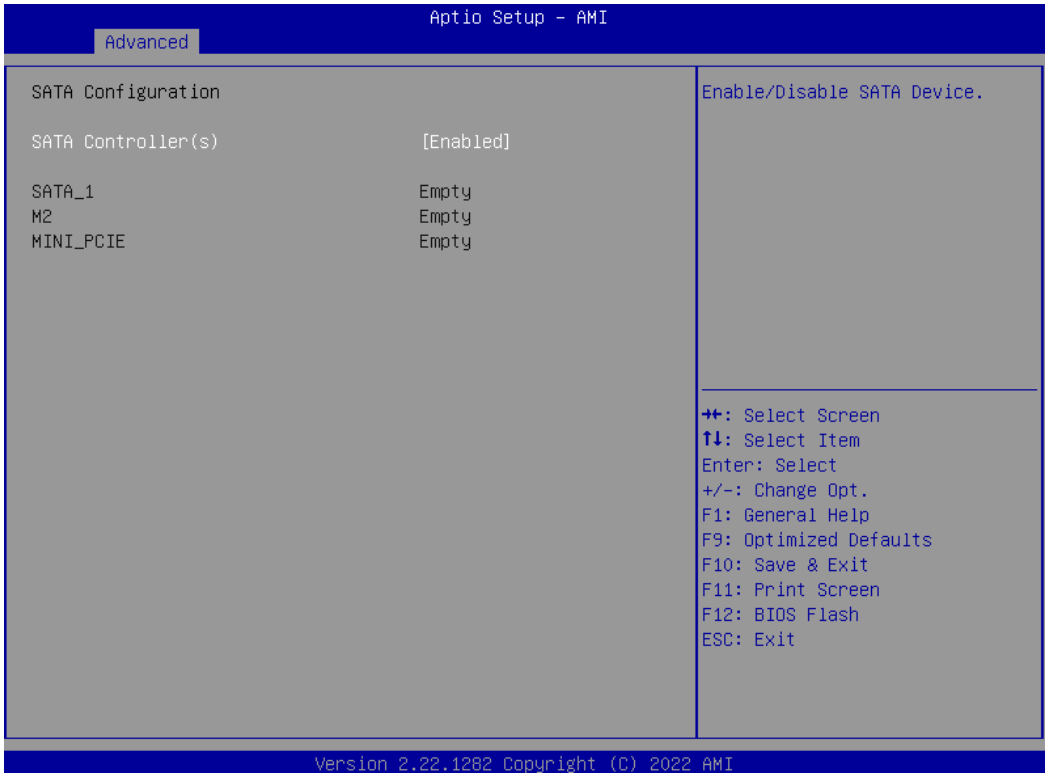
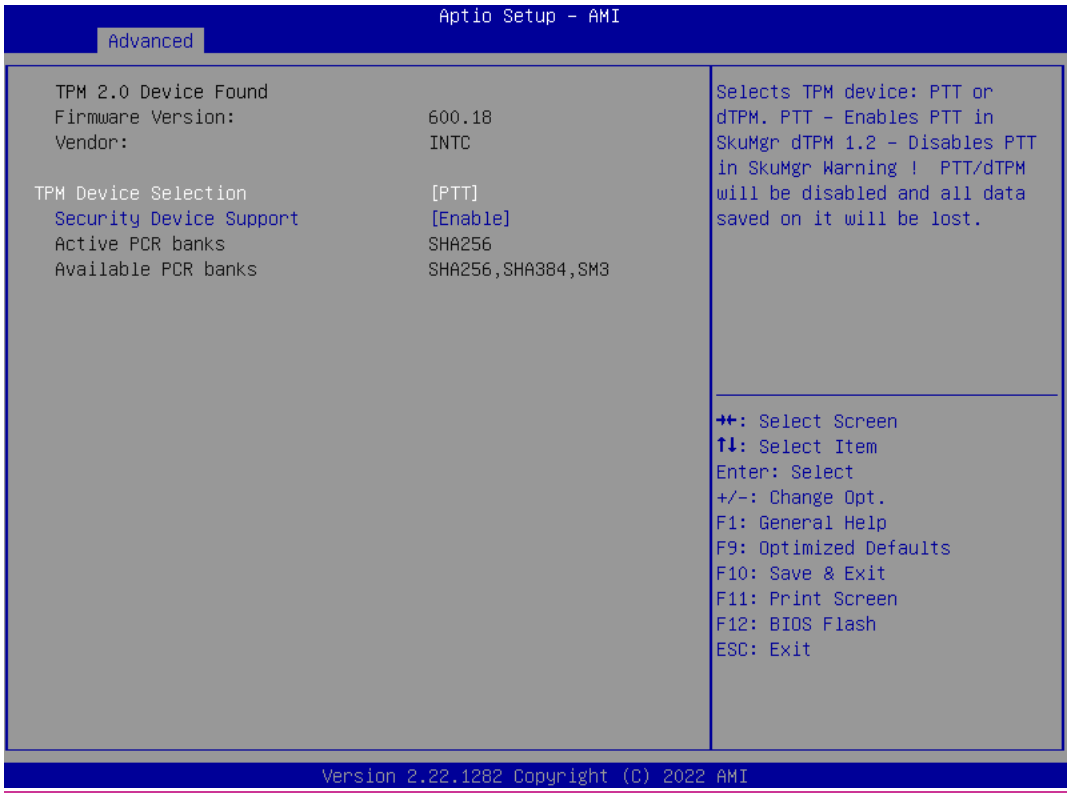


SATA Controller(s)

Enable or disable the SATA Controller feature.

- **Trusted Computing**
  This screen provides function for specifying the TPM settings.

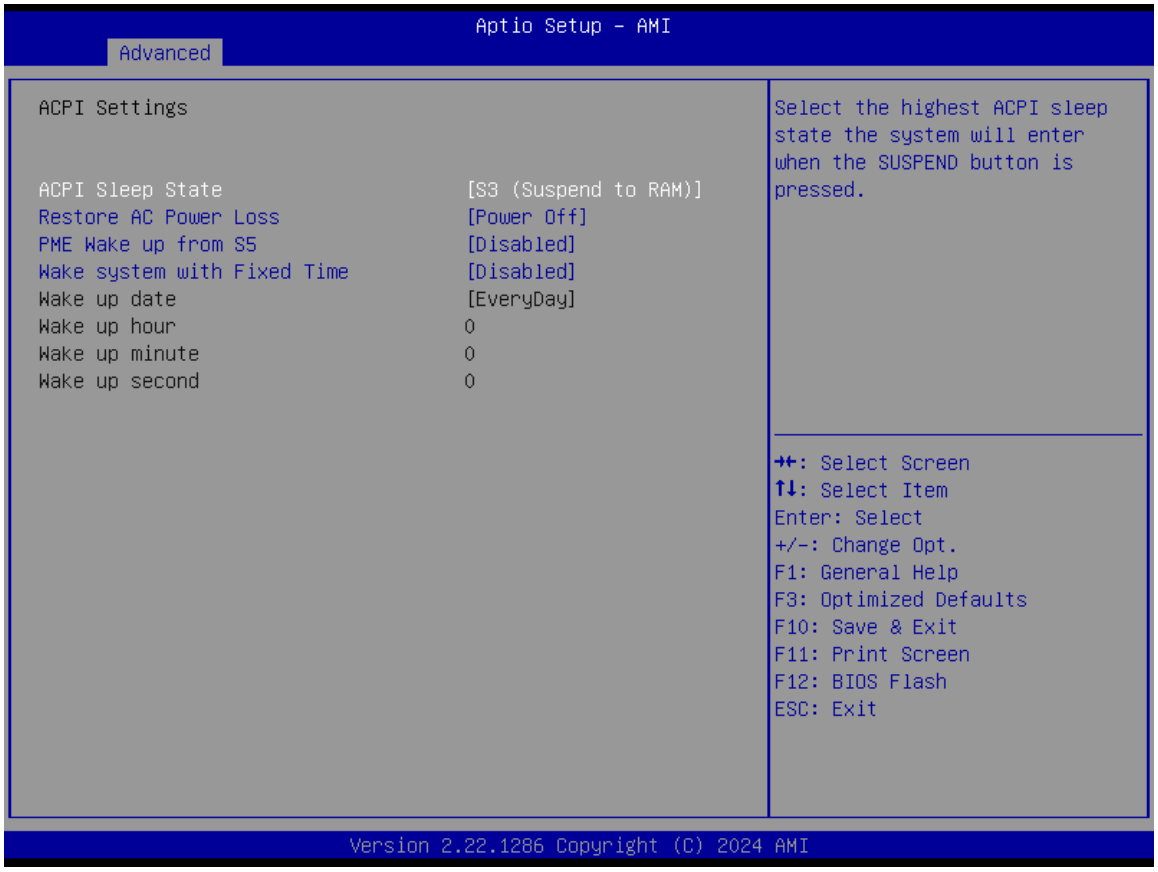


TPM Device Selection
Select TPM device:

- PTT: Intel® built-in TPM. Enables PTT in SkuMgr.
- dTPM: External extended Infineon's TPM. Disables PTT in SkuMgr.

Security Device Support
Enable or disable BIOS support for security device. OS will not show security device. TCG EFI protocol and INT1A interface will not be available.

- **ACPI Settings**



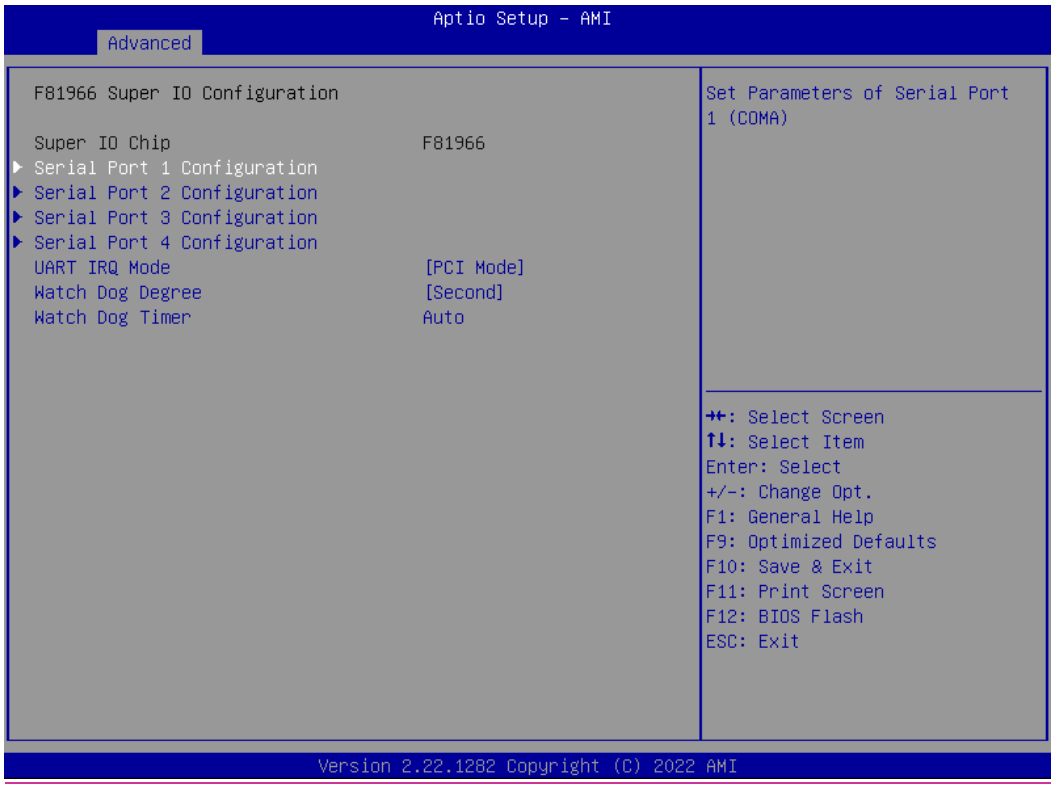
ACPI Sleep State
When the suspend button is pressed, the ACPI (Advanced Configuration and Power Interface) sleep state is S3 (Suspend to RAM).

Restore AC Power Loss
Decide the state of system when power is re-applied after a power failure.
- Power Off: Keep the power off until the power button is pressed.
- Power On: Restore power to the computer.

PME Wake up from S5
Enable system to wake from S5 using PME event.

Wake System with Fixed Time
Enable or disable system wake on alarm event. When enabled, system will wake on the hr: min:sec specified..

- **F81966 Super IO Configuration**
  You can use this screen to select options for the Super IO Configuration and change the value of the selected option. A description of the selected item appears on the right side of the screen. For items marked with "►", please press <Enter> for more options.



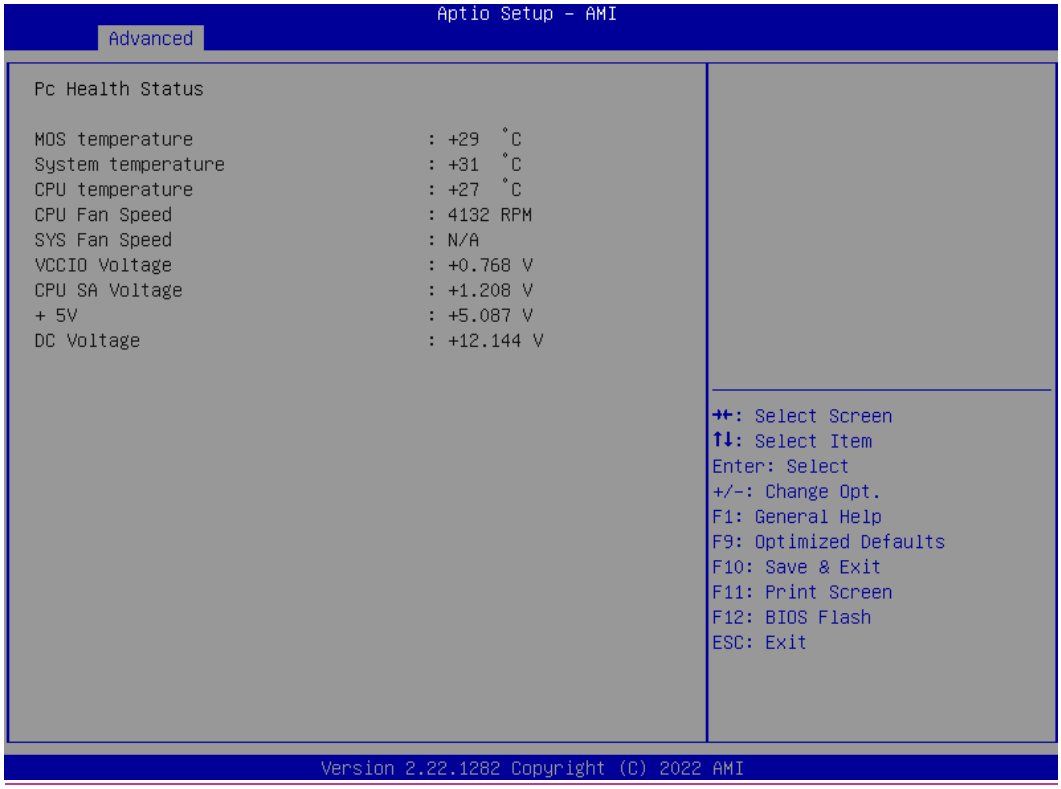
Serial Port 1~4 Configuration
Use these items to set parameters related to serial port 1~4.

UART IRQ Mode
PCI IRQ sharing for OS (ex. Windows), ISA IRQ for Dos.

Watch Dog Degree
Watchdog degree selection in minute or second.

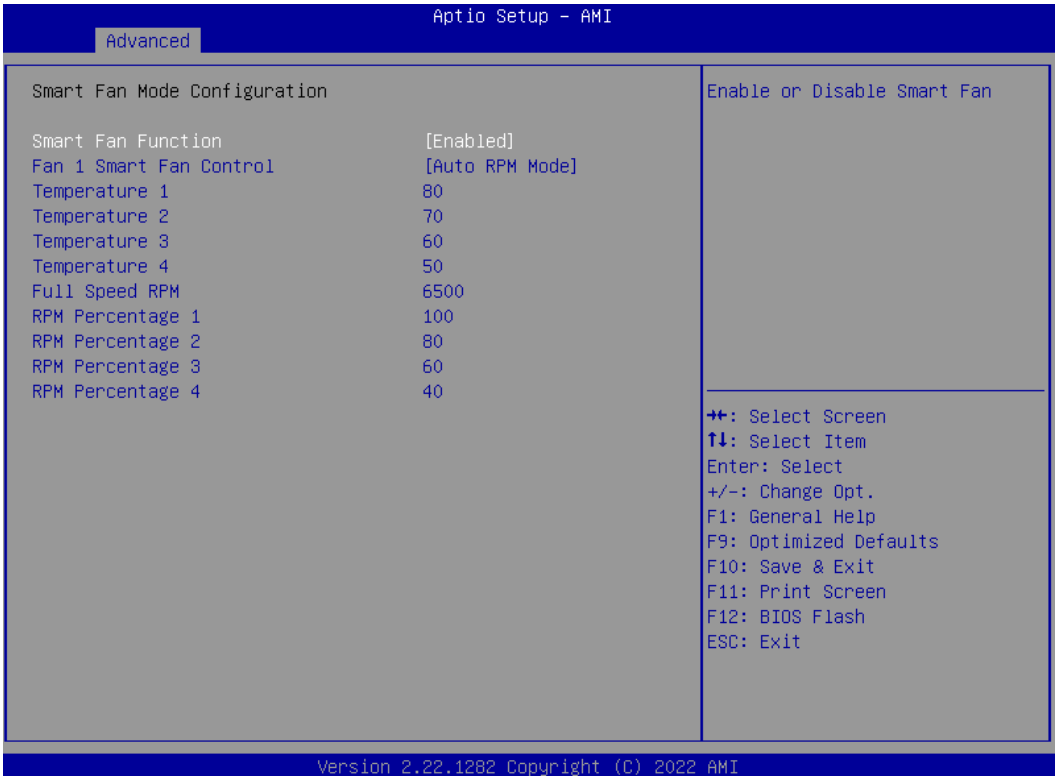
Watch Dog Timer
Watchdog timer value range from 1 to 255. Set 0 will disable watchdog timer.

- **Hardware Monitor**
  This screen monitors hardware health status.



This screen displays the temperature of system and CPU, cooling fans speed in RPM and system voltages (VCCIO, CPU SA, +5V and +12V).

- **Smart Fan Mode Configuration**
  This screen allows you to configure Smart Fan mode. You can use Smart Fan function to control CN60.



Smart Fan Function
Enable or disable Smart Fan.

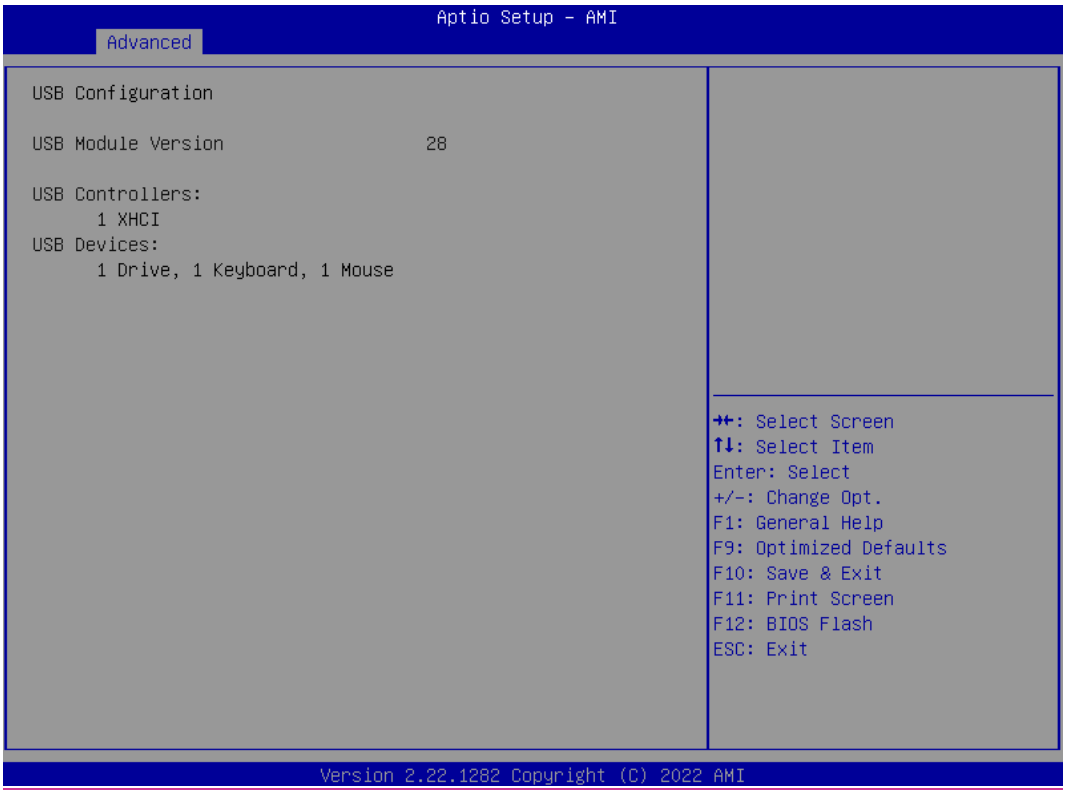
Fan 1 Smart Fan Control
Select Smart Fan operating mode. Auto RPM Mode: The fan speed is controlled automatically according to temperature and RPM.

Temperature 1
Auto fan speed control. Fan speed will follow different temperature by different RPM 1~100.

Full Speed RPM
Set fan full speed RPM.

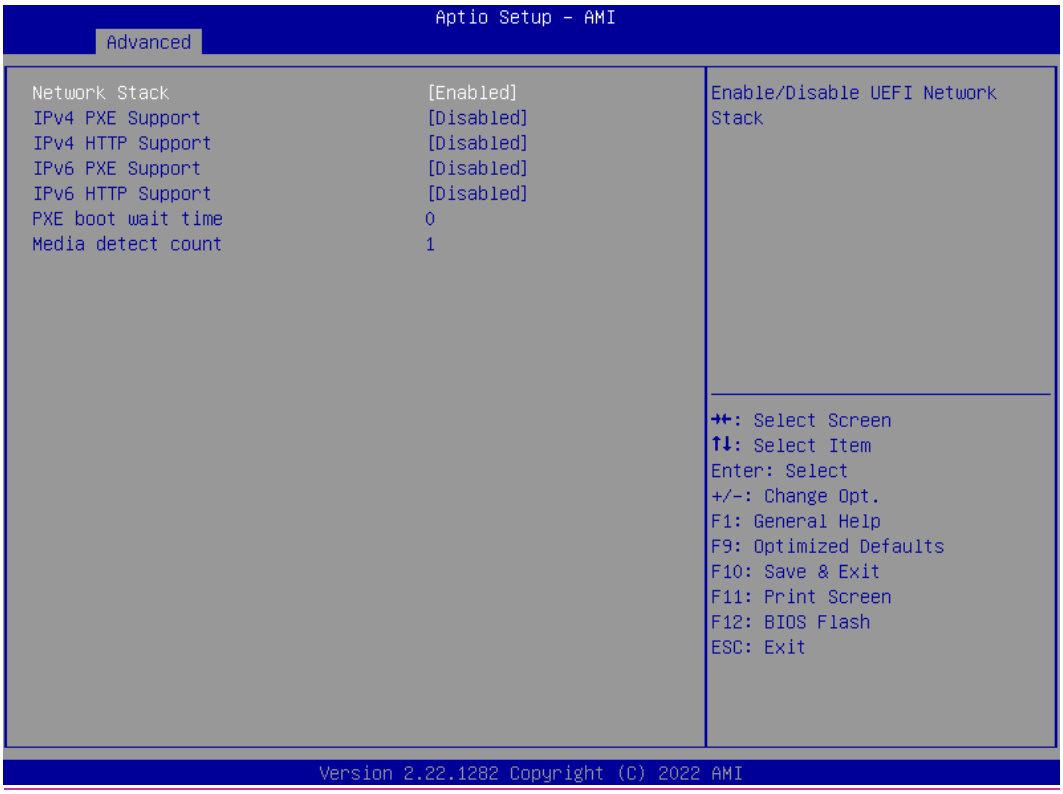
RPM Percentage 1
Auto fan speed control. Fan speed will follow different temperature by different RPM 1~100.

- **USB Configuration**



USB Devices
Display all detected USB devices

- **Network Stack Configuration**



Network Stack
Enable or disable UEFI Network Stack.

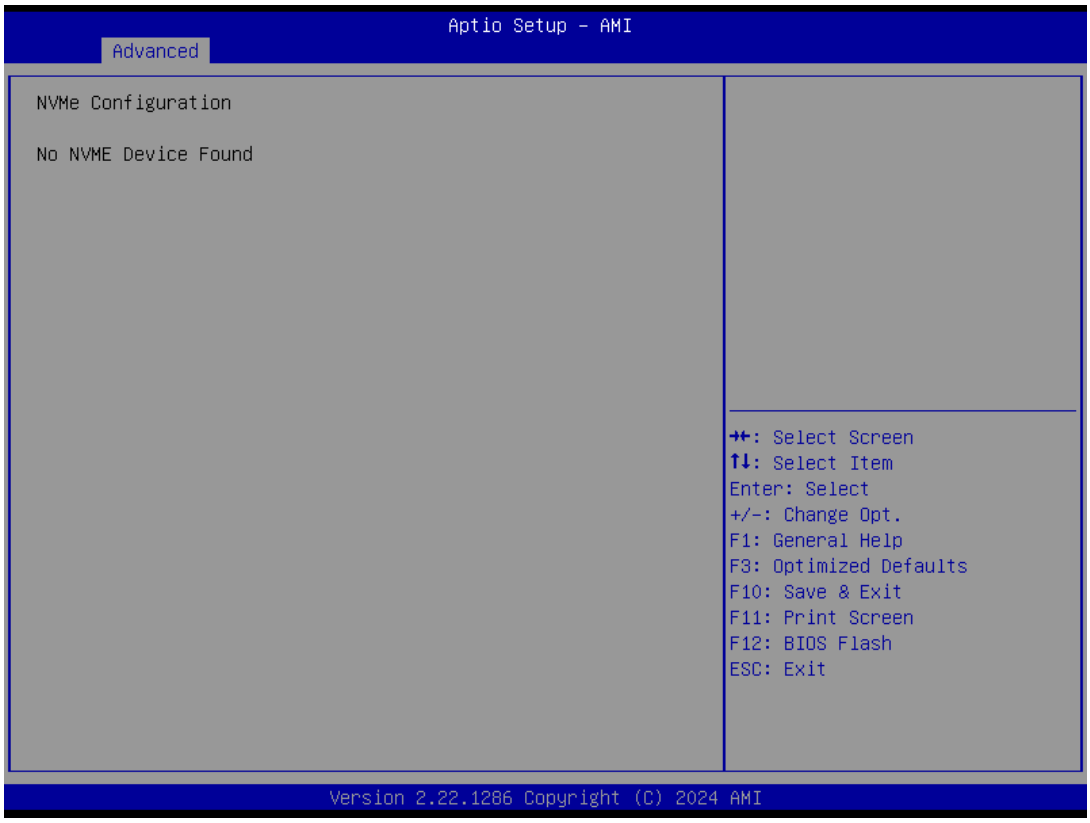
IPv4/IPv6 PXE Support
Enable or disable IPv4 PXE boot support. If disabled, IPv4/IPv6 PXE boot support will not be available.

IPv4/IPv6 HTTP Support
Enable or disable IPv4/IPv6 HTTP boot support. If disabled, IPv4/IPv6 HTTP boot support will not be available.

PXE boot wait time
Wait time in seconds to press <ESC> key to abort the PXE boot. Use either +/- or numeric keys to set the value.

Media detect count
Number of times the presence of media will be checked. Use either +/- or numeric keys to set the value.

- **NVMe Configuration**

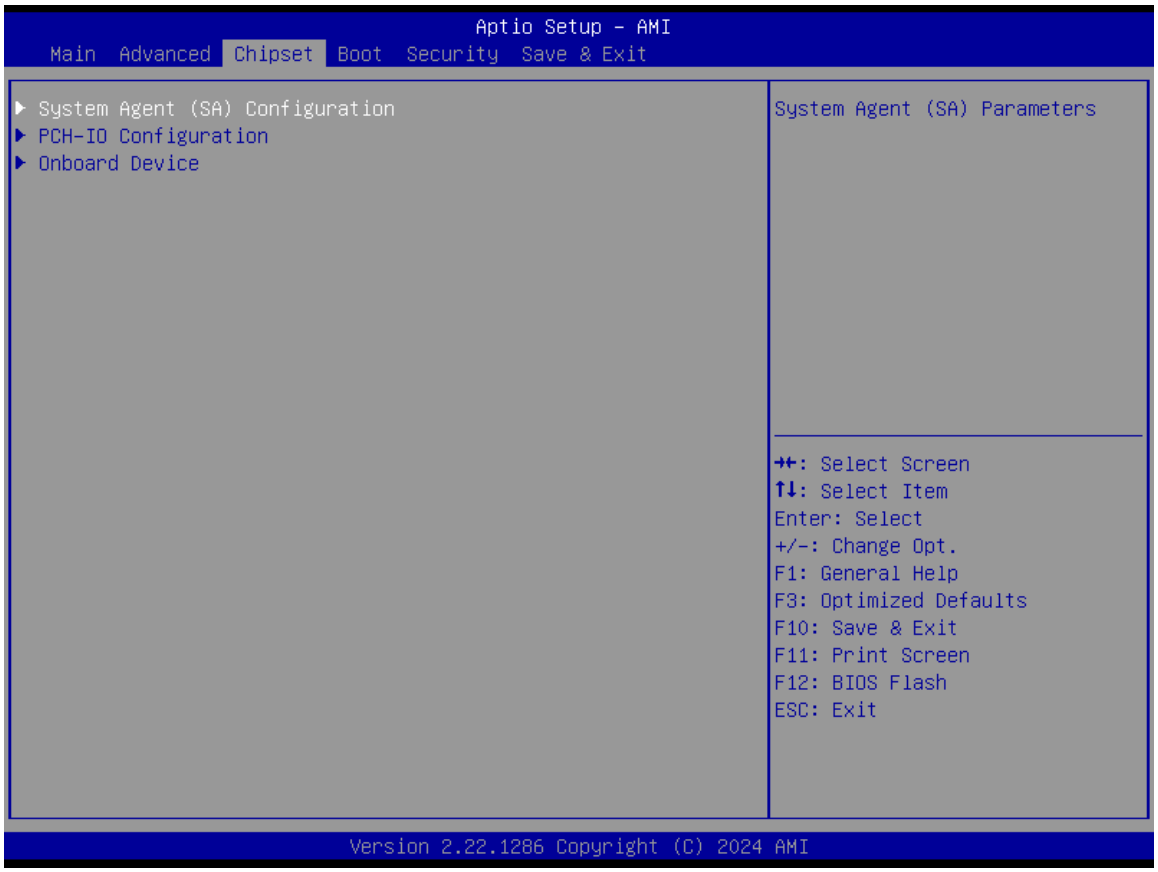


3.5 Chipset Menu

The Chipset menu allows users to change the advanced chipset settings. You can select any of the items in the left frame of the screen to go to the sub menus:

- ► System Agent (SA) Configuration
- ► PCH-IO Configuration
- ► Onboard Device

For items marked with "►", please press <Enter> for more options.



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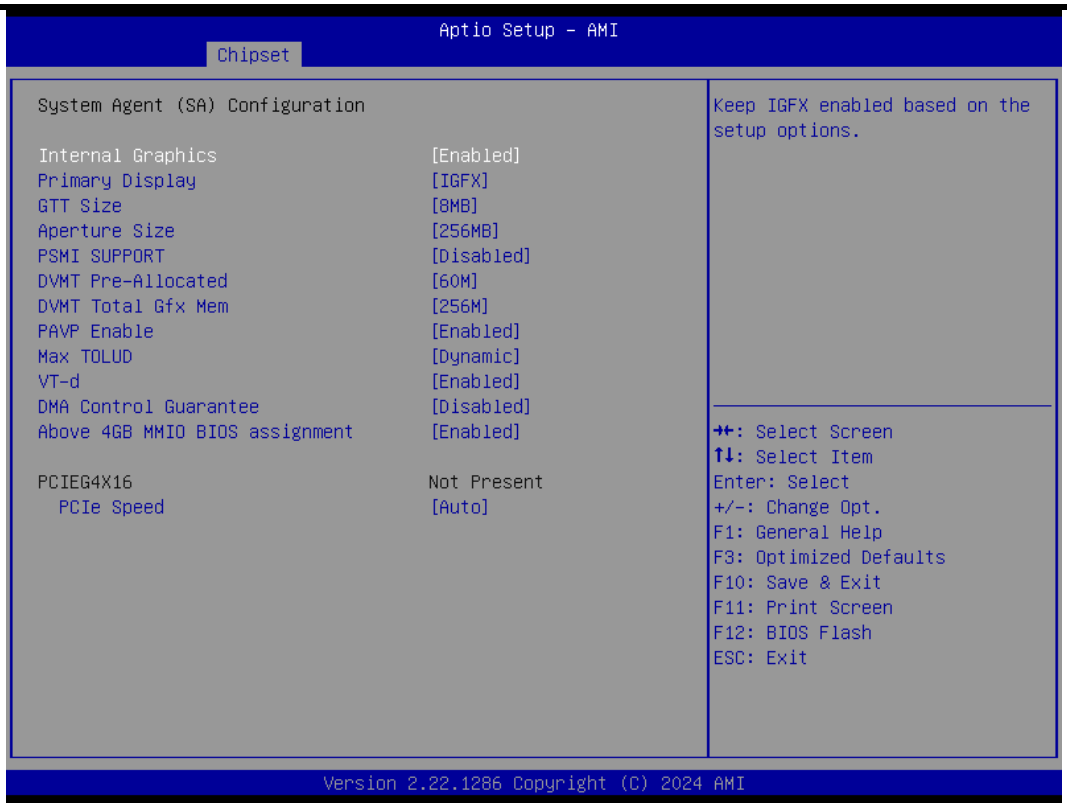
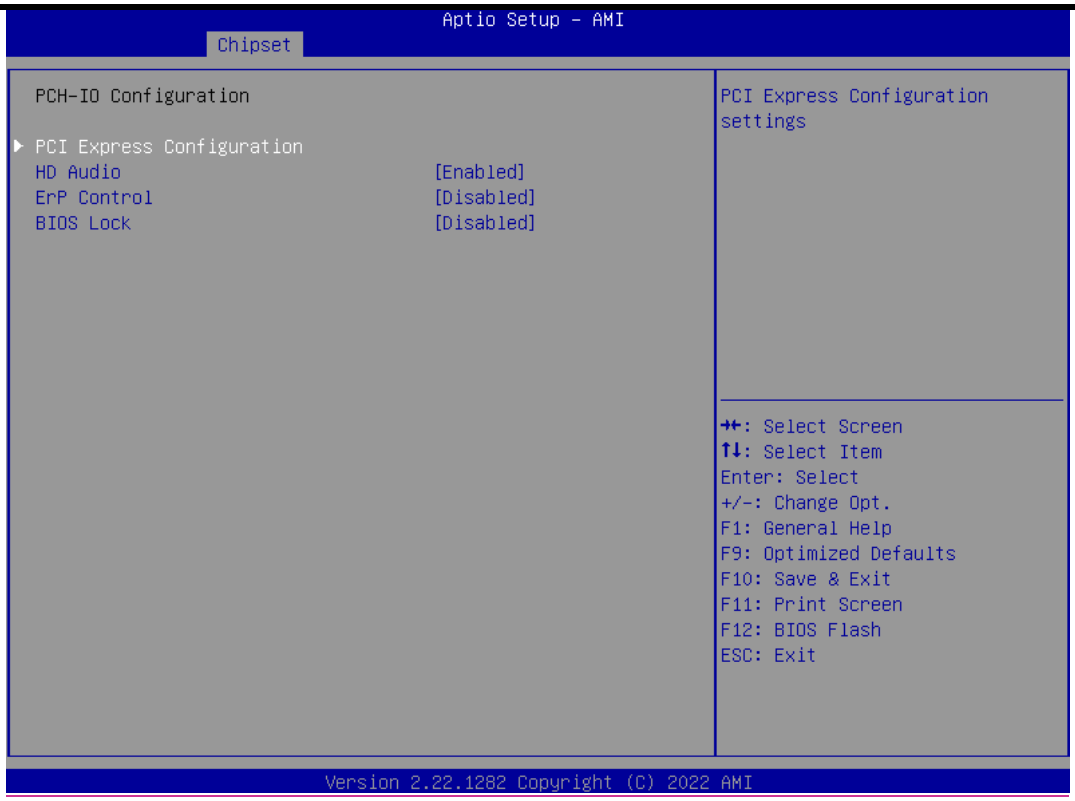
- **System Agent (SA) Configuration**



- **PCH-IO Configuration**
  This screen allows you to set PCH parameters.



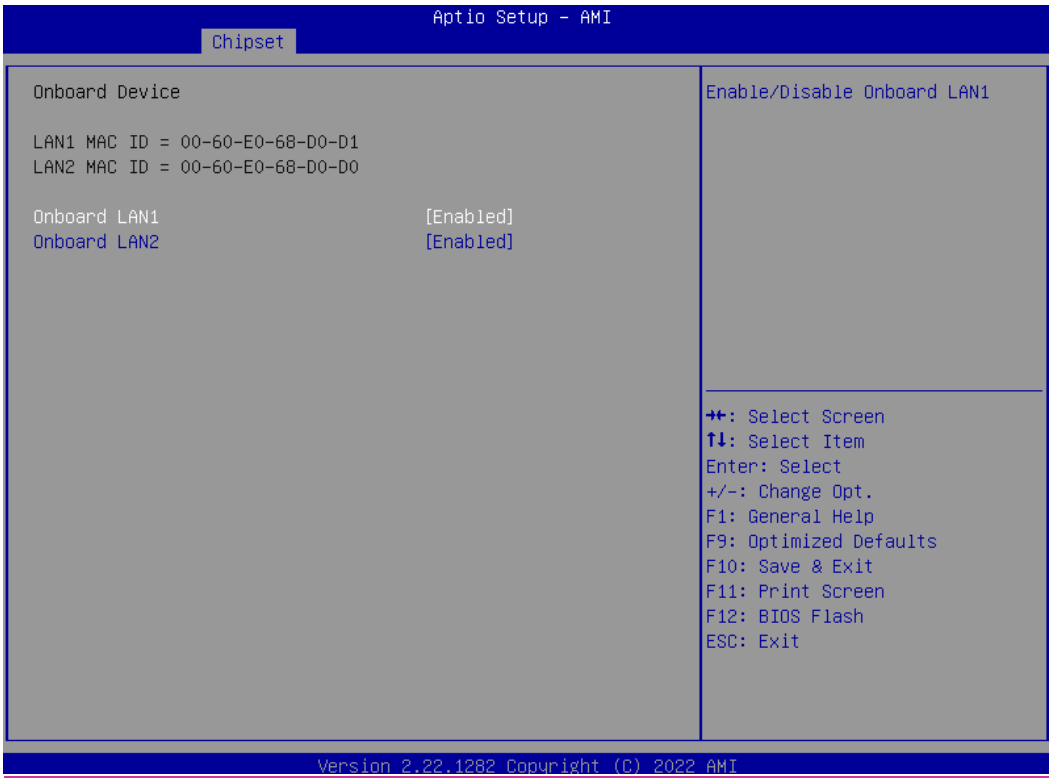
HD Audio
Control detection of the HD Audio device.

- Disabled: HDA will be unconditionally disabled.
- Enabled: HDA will be unconditionally enabled.
- Auto: HDA will be enabled if present, disabled otherwise.

ErP Control
When ErP is enabled, system meets ErP requirement.

BIOS Lock
Enable or disable the PCH BIOS Lock Enable feature. Required to be enabled to ensure SMM protection of flash.

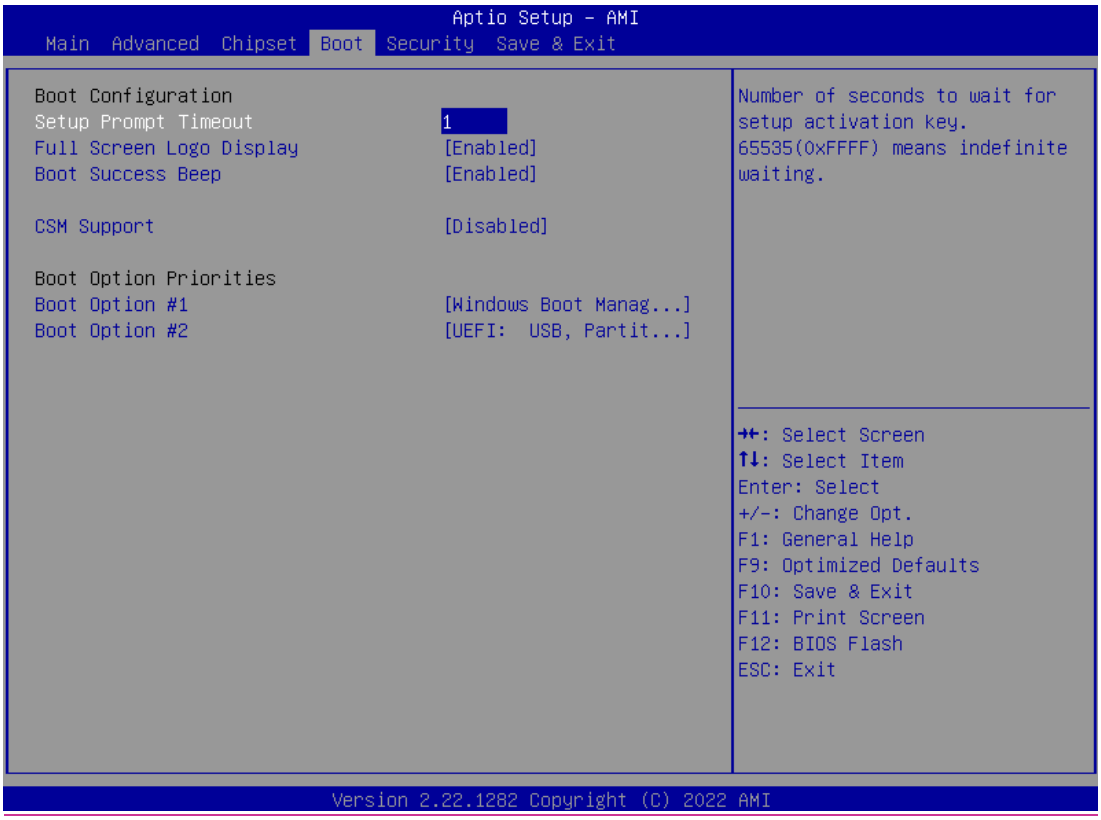
- **Onboard Device**



Onboard LAN 1/2
Enable or disable onboard LAN 1/2.

3.6 Boot Menu

The Boot menu allows users to change boot options of the system.



- **Setup Prompt Timeout**
  Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.

- **Full Screen Logo Display**.
  Enable or disable full screen logo display feature.

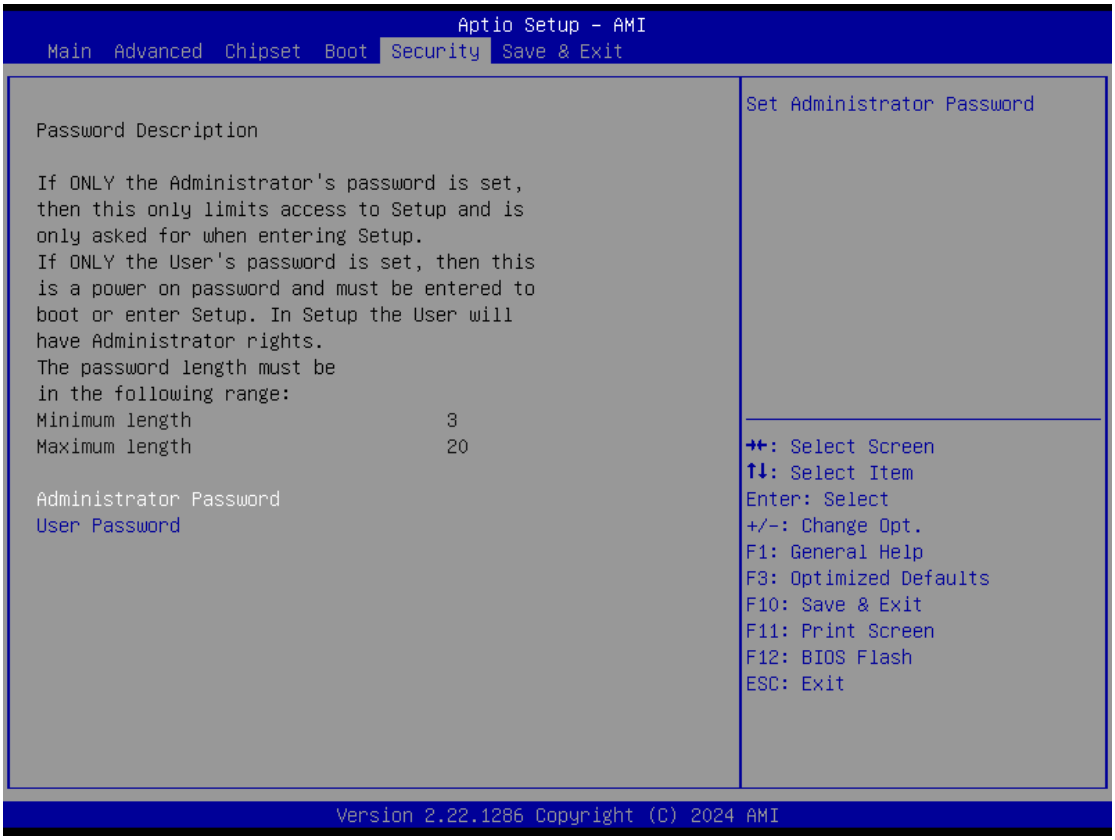
- **Boot Success Beep**
  Enable or disable beep sound after successful boot.

- **CSM Support**
  Enable or disable to launch the CSM (Compatibility Support Module) support. Please do not disable unless you're running a WHCK test. If you are using Windows® 8 64-bit and all of your devices support UEFI, you may also disable CSM for faster boot speed.

Boot Option Priorities
These are settings for boot priority. Specify the boot device priority sequence from the available devices.

3.7 Security Menu

The Security menu allows users to change the security settings for the system.

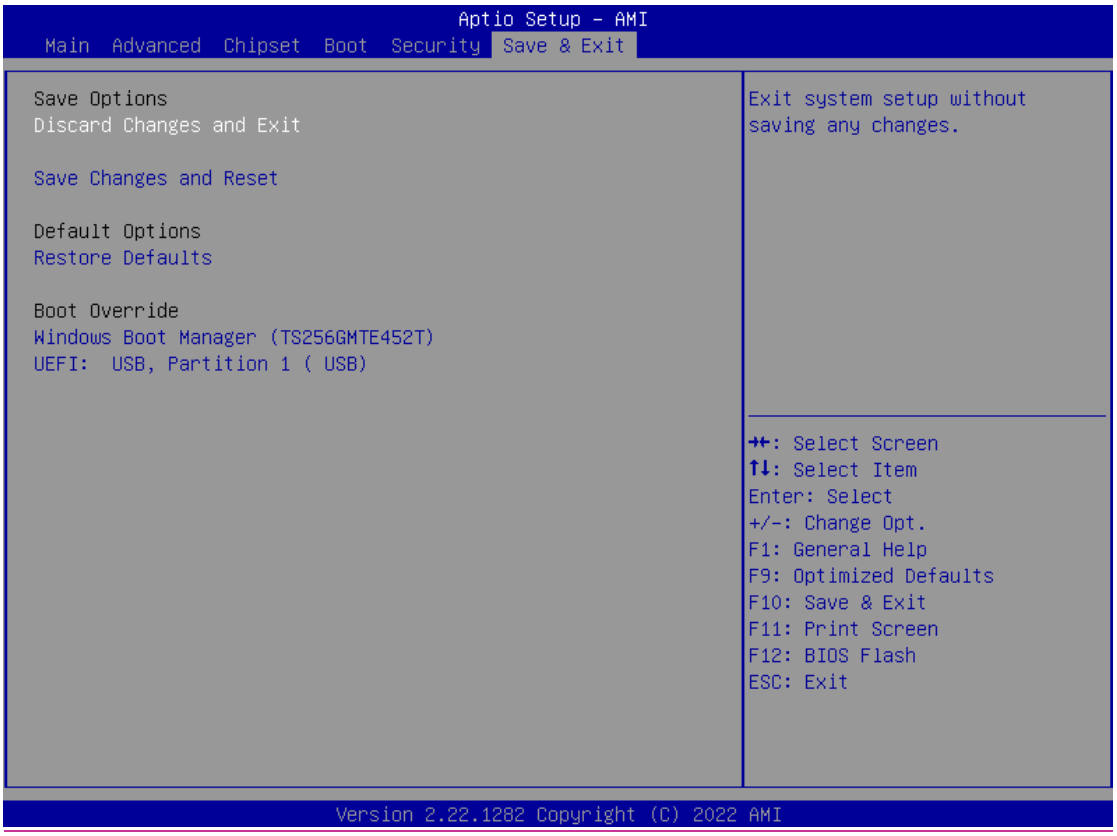


- **Administrator Password**
  Set administrator password.

- **User Password**
  Set user password.

3.8 Save & Exit Menu

The Save & Exit menu allows users to load your system configuration with optimal or fail-safe default values.



- **Discard Changes and Exit**
  Exit system setup without saving any changes.

- **Save Changes and Reset**
  Reset the system after saving the changes.

- **Restore Defaults**
  Restore or load default values for all the setup options.

- **Boot Override**
  Select a drive to immediately boot that device regardless of the current boot order.

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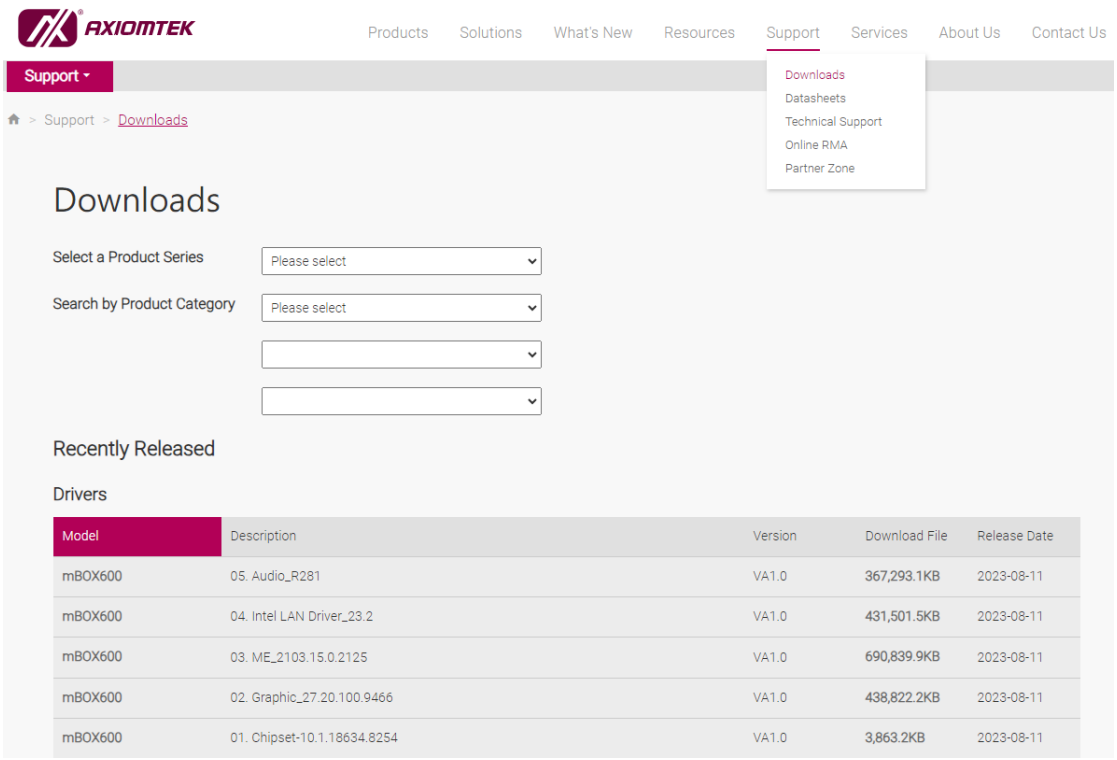
Section 4
Drivers Installation

4.1 Operating System

P117-ADL-TRA is compatible with operating systems Windows 11 and Windows 11 IoT Enterprise. To facilitate the installation of system drivers, please carefully read the instructions in this section before any of such installation.

4.1.1 Driver download

Please download the P117-ADL-TRA driver from Axiomtek's official website



4.2 Touch Screen

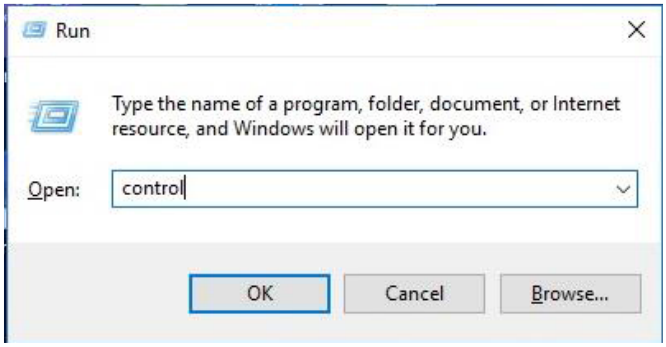
The P117-ADL-TRA adopts a projected capacitive multi-touch screen of which specifications are listed below. The touch driver will be installed automatically to allow the user to operate the touch panel using two-finger touch functions on the Windows 11 and Windows11 IoT Enterprise environments.

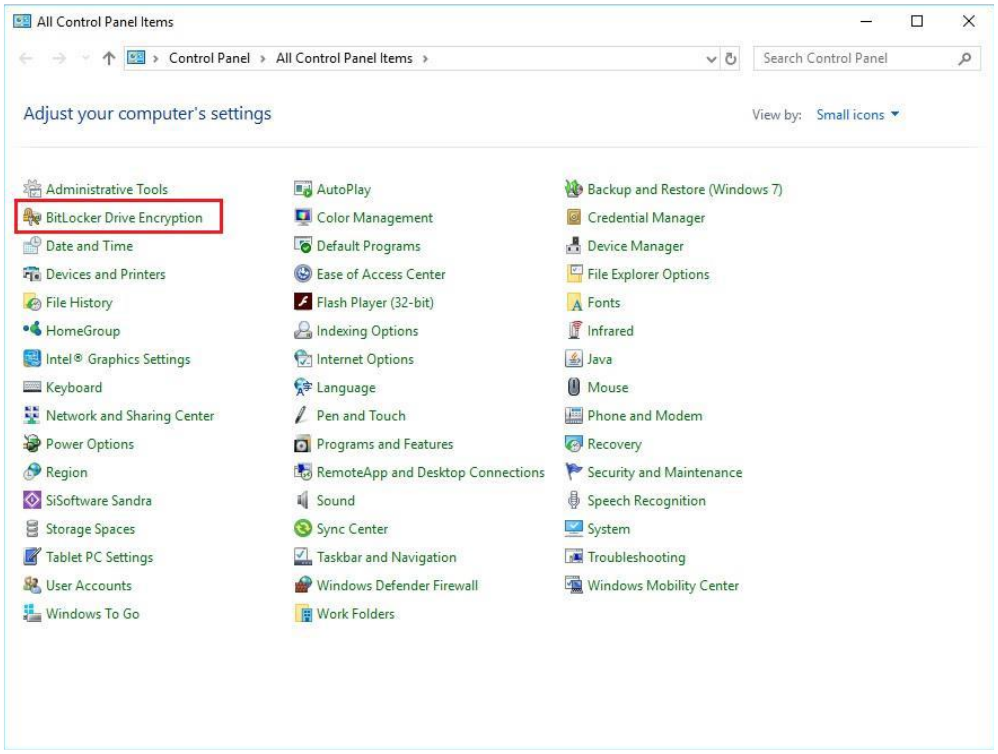
Table 4-1 Touch screen specifications

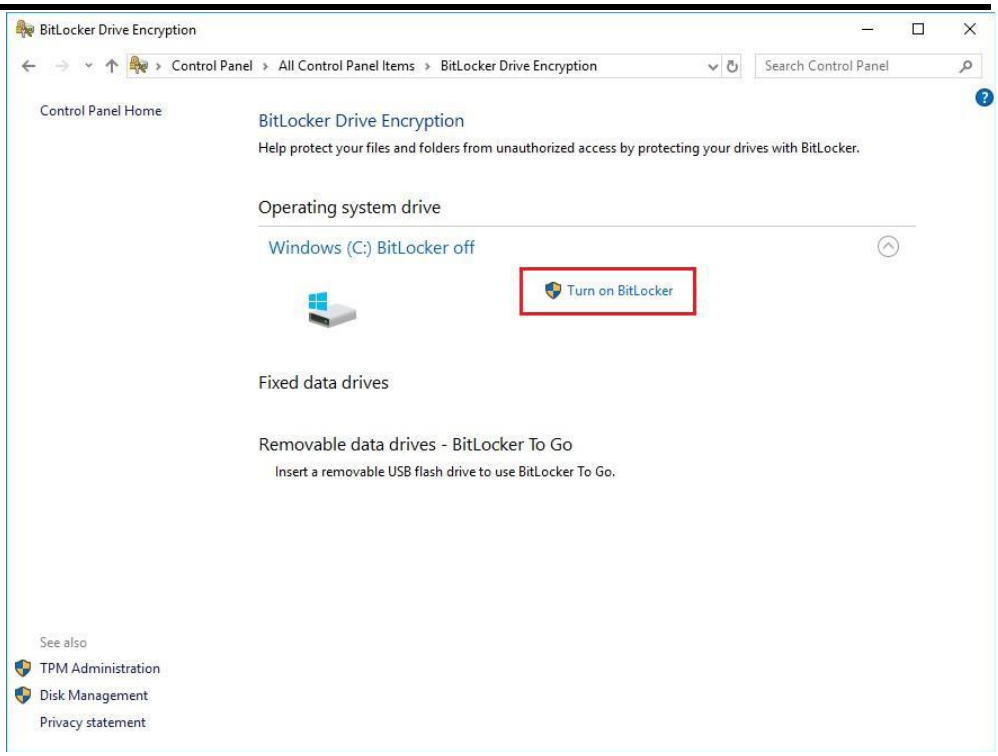
Touch Screen	5-wire Analog Resistive type
Touch Screen Controller	PenMount 6500 USB Touch Screen Controller IC
Communications	USB interface
Resolution	1024x1024

APPENDIX A
TPM BitLocker SETTINGS

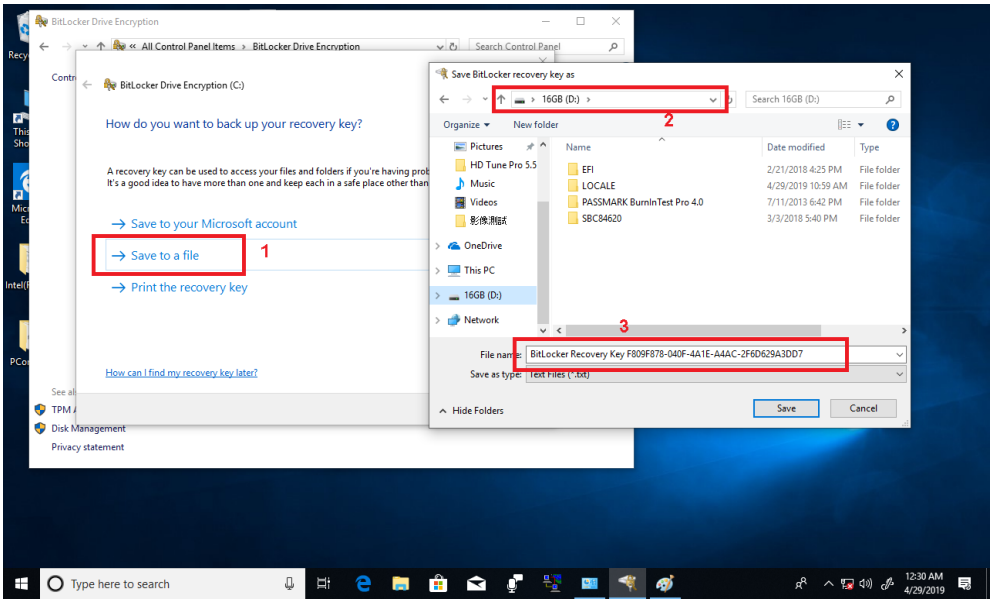
1. Setup BitLocker Drive Encryption main storage. Press <Win + R> and type "Control Panel", then select BitLocker Drive Encryption.



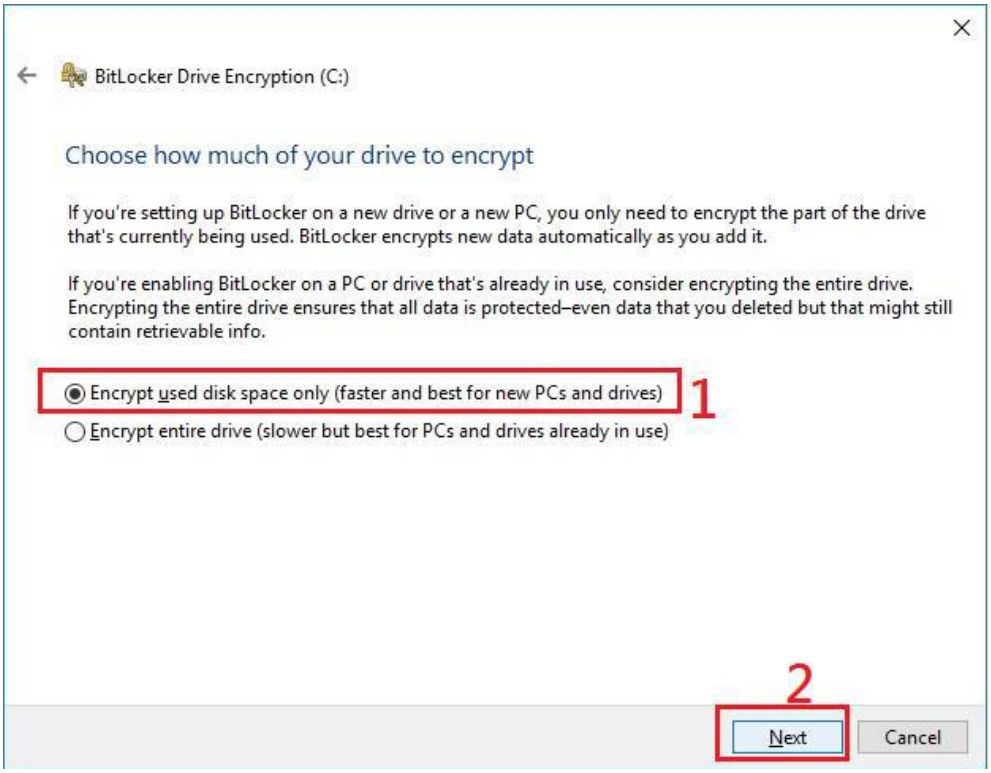


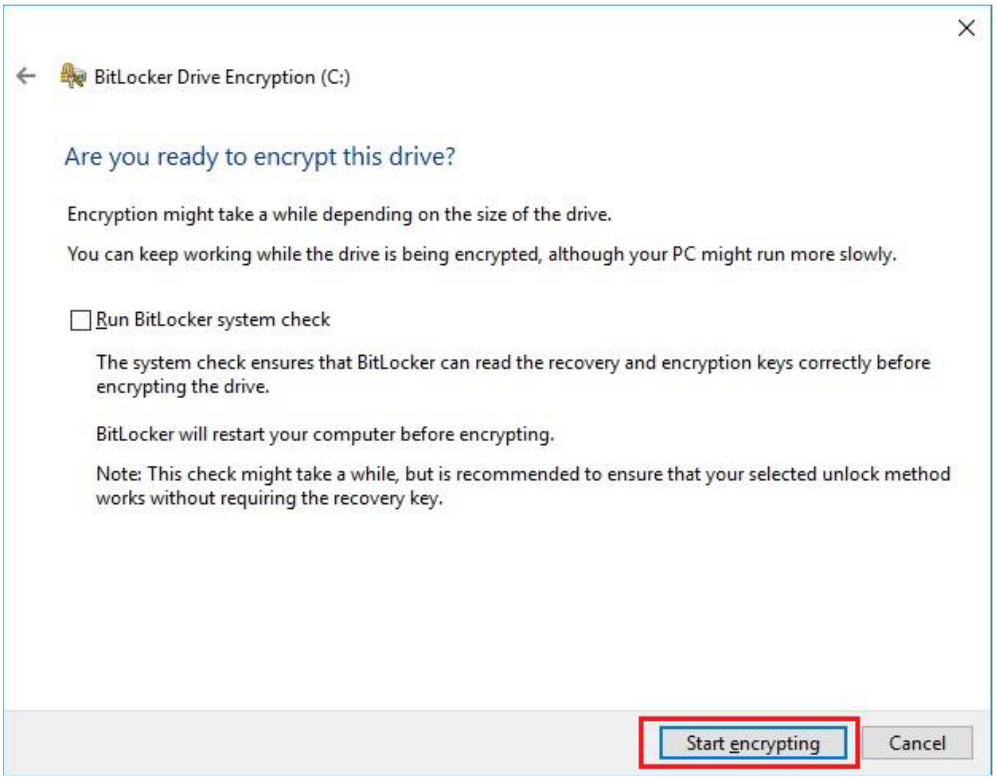


2. Insert an external storage device, for example USB Storage. Back up BitLocker recovery key in a new file and save it to the USB Storage.

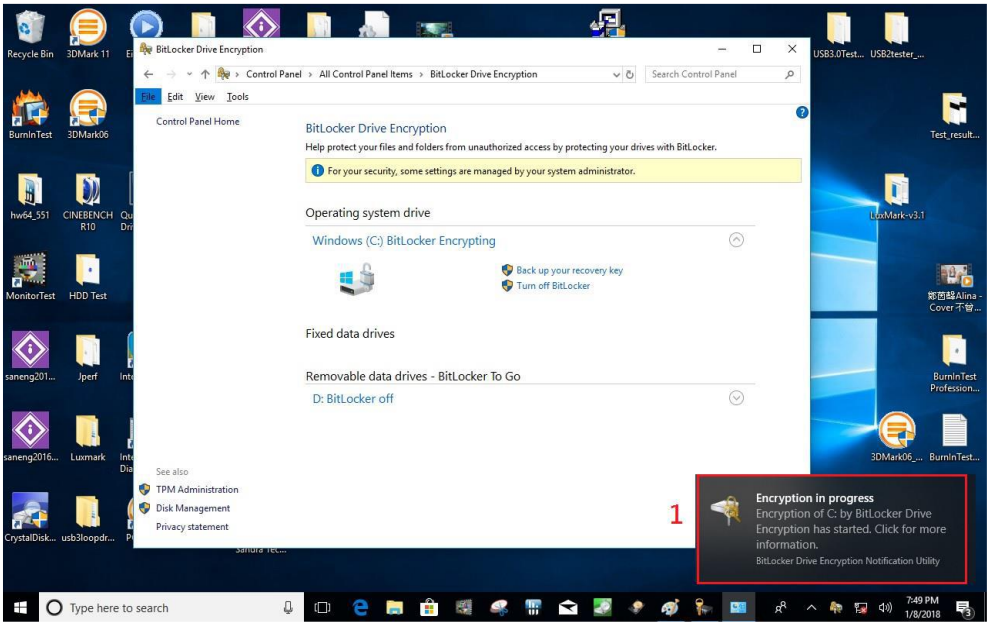


3. Please follow the steps below to encrypt your storage device:

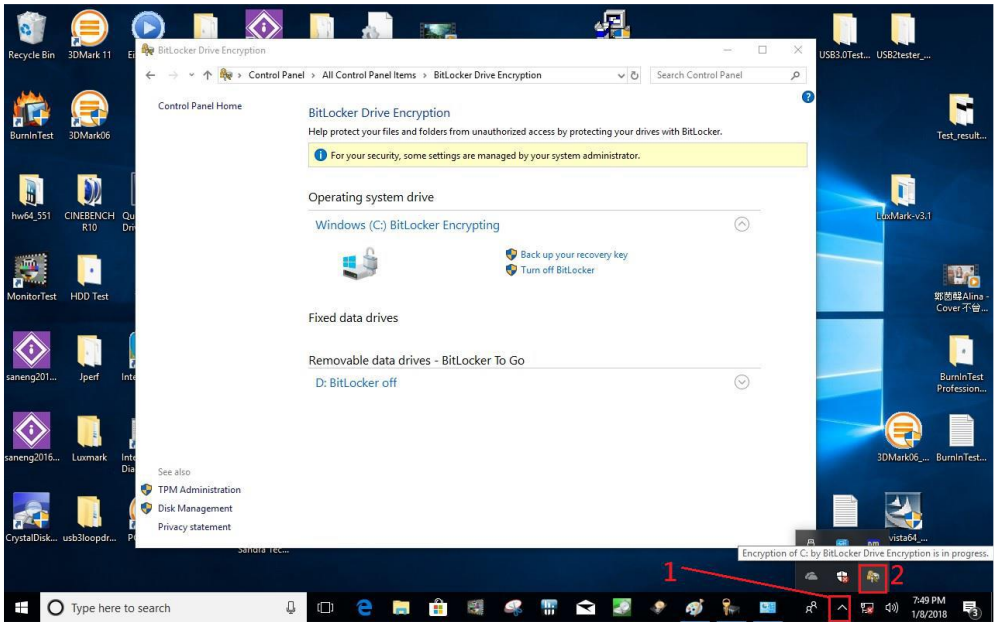


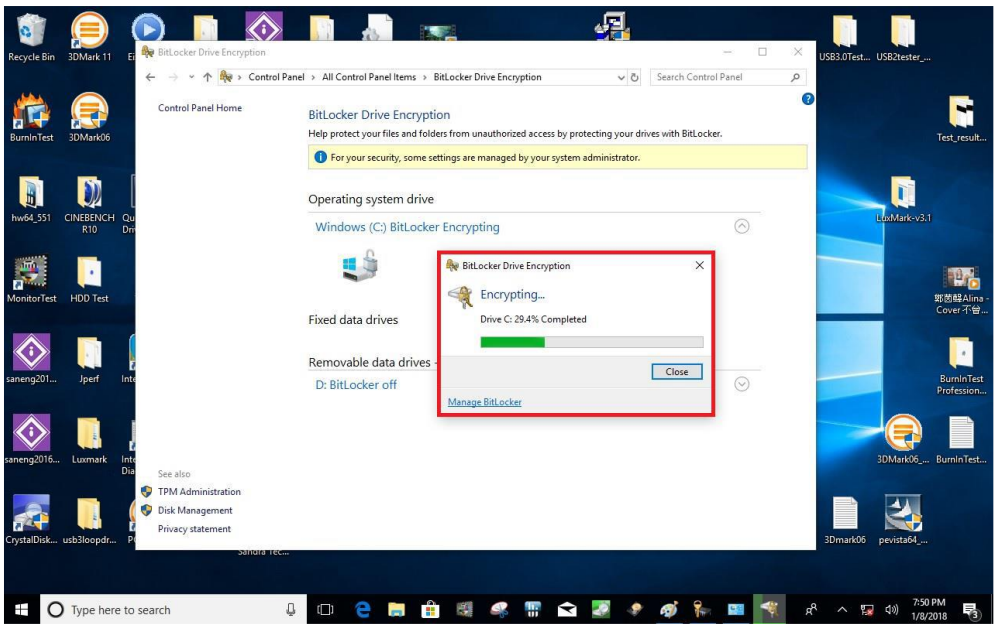


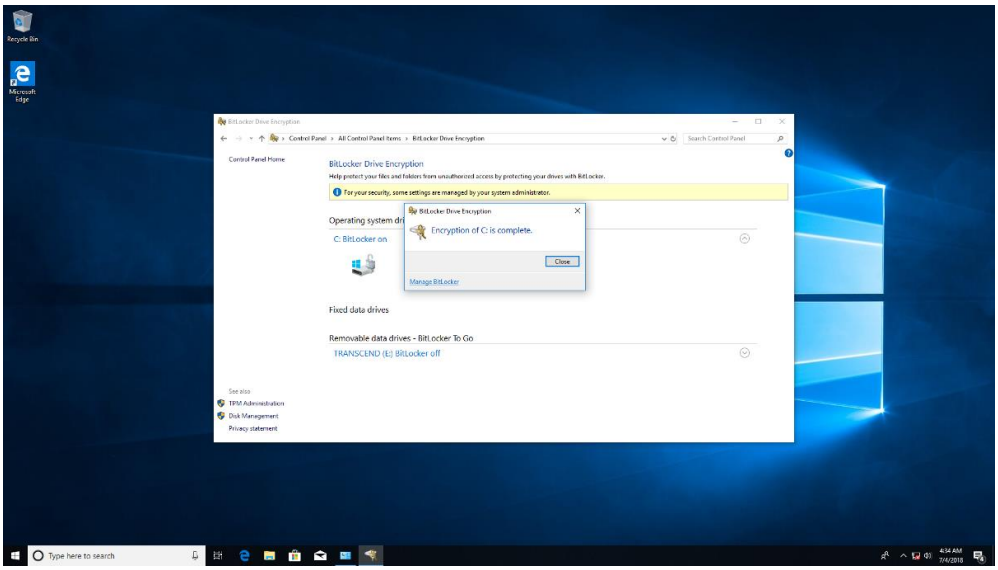
Now, the system prompts that the operating system drive encryption is in progress, and the encryption progress is checked.



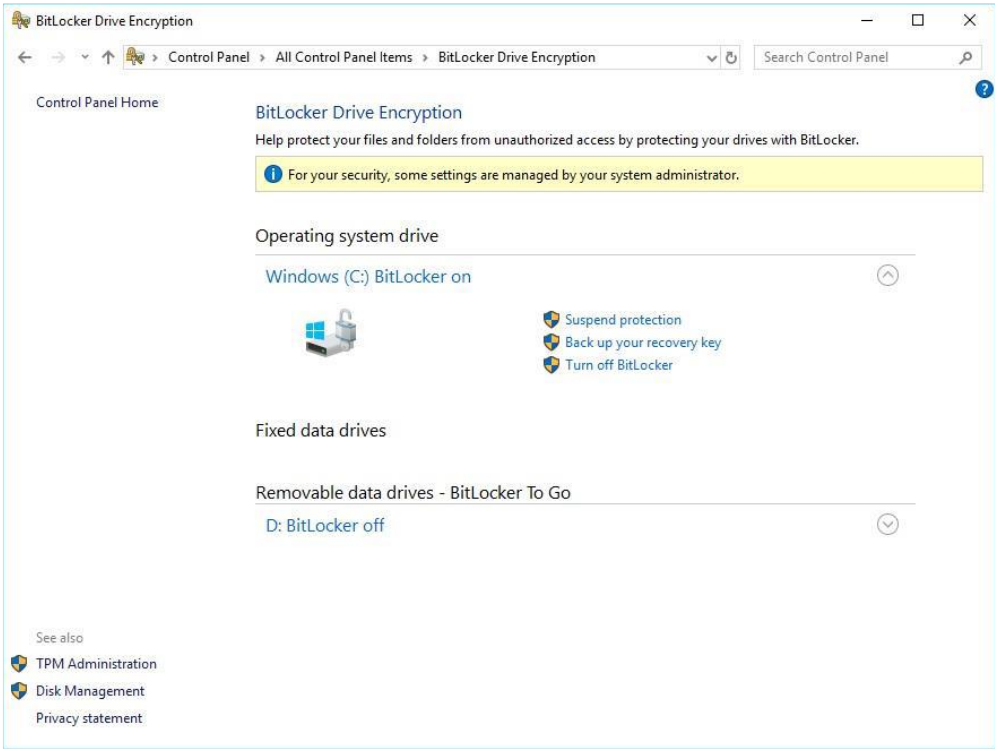
Select and click the icon in the lower right corner to complete the encryption.



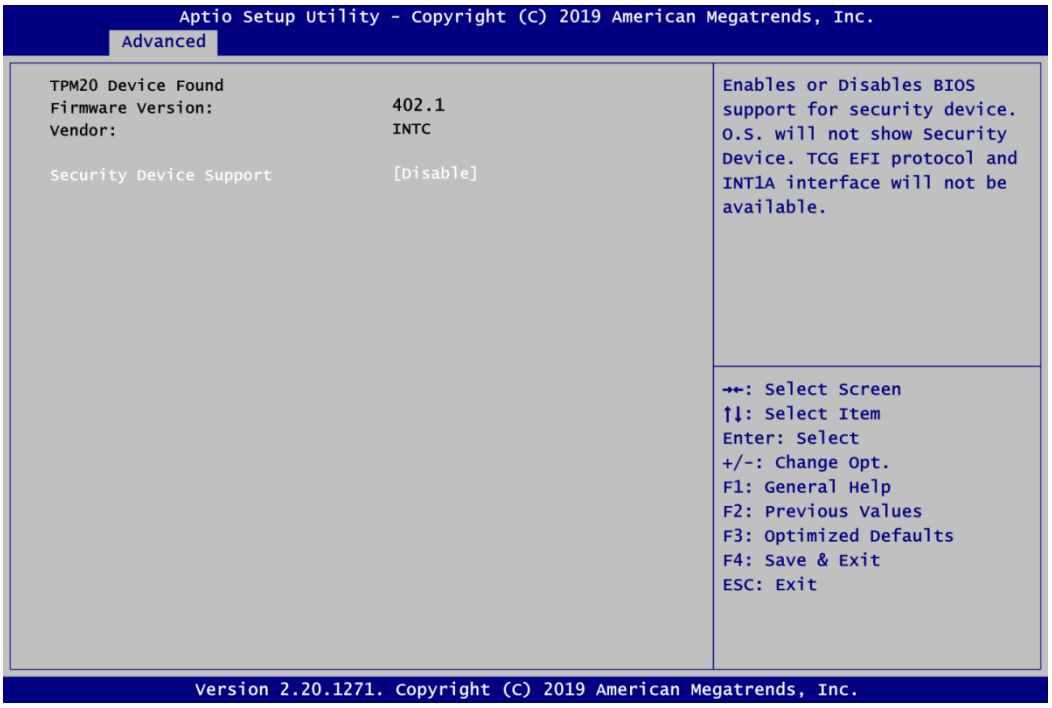




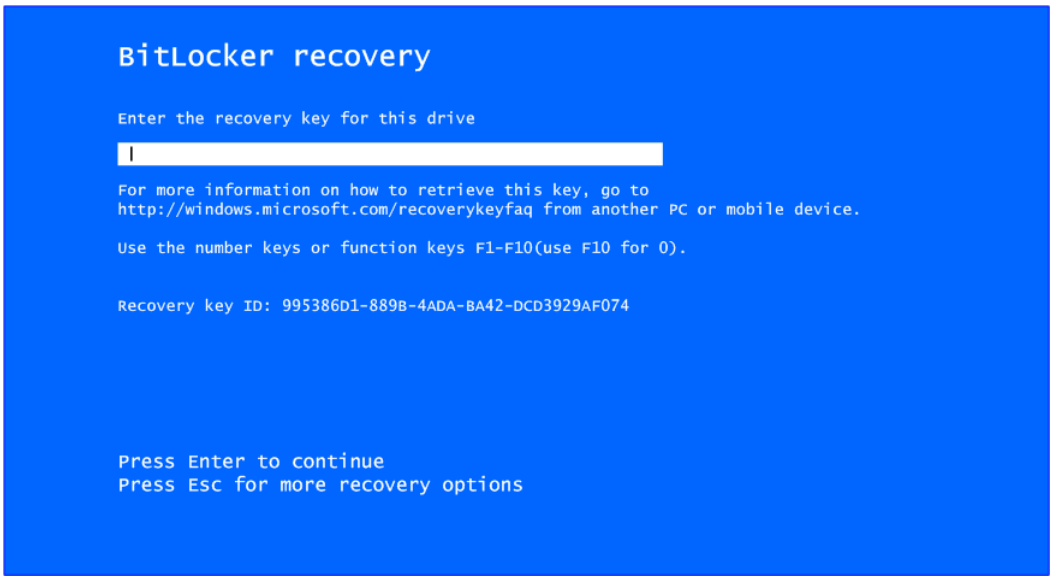
4. Confirm the completion of encryption.



5. Disable TPM function in BIOS Setup Utility.

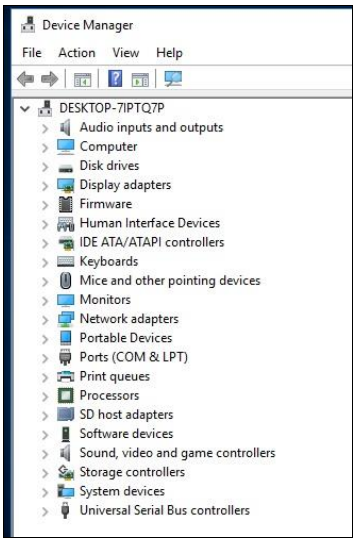


6. When the system is powered on and you see the following screen, it means the TPM module function is working fine. Note that BitLocker cannot be executed if your system does not have TPM function.



NOTE: System with no TPM function support is as below:

1. ***TPM information is not found in Device Manager.***



2. ***When trying to turn on Bitlocker, the following error message shows up.***