C&T SOLUTION INC.

USER'S MANUAL

AIO-200-ADL Series

All IN One Touch Panel PC

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Prefaces

Revision

Revision	Description	Date
1.0	Manual Released	2024/06/18

Disclaimer

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Environmental Protection Announcement

Do not dispose this electronic device into the trash while discarding. Please recycle to minimize pollution and ensure environment protection.

Safety Precautions

Before installing and using the equipment, please read the following precautions:

- Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
- The power outlet shall be installed near the equipment and shall be easily accessible.
- Turn off the system power and disconnect the power cord from its source before making 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 equipment is properly grounded.
- When the power is connected, never open the equipment. The equipment should be opened only by qualified service personnel.
- Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
- Disconnect this equipment from the power before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
- Avoid the dusty, humidity and temperature extremes.
- Do not place heavy objects on the equipment.
- If the equipment is not used for long time, disconnect it from the power to avoid being damaged by transient over-voltage.
- The storage temperature shall be above -20˚C and below 60˚C.
- The computer is provided with a battery-powered real-time clock circuit. There is a danger of explosion if incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.
- If one of the following situation arises, get the equipment checked be service personnel:
    - The power cord or plug is damaged.
    - Liquid has penetrated into the equipment.
    - The equipment has been exposed to moisture.
    - The equipment does not work well or it cannot work according the user's manual.
    - The equipment has been dropped and damaged.
    - The equipment has obvious signs of breakage.

Technical Support and Assistance

1. Visit the C&T Solution Inc website at https://www.candtsolution.com/ where you can find the latest information about the product.
2. Contact your distributor, our technical support team or sales representative for technical support if you need additional assistance. Please have following information ready before you call:
   - Model name and serial number
   - Description of your peripheral attachments
   - Description of your software (operating system, version, application software, etc.)
   - A complete description of the problem
   - The exact wording of any error messages

Conventions Used in this Manual

WARNING This indication alerts operators to an operation that, if not strictly observed, may result in severe injury.

CAUTION This indication alerts operators to an operation that, if not strictly observed, may result in safety hazards to personnel or damage to equipment.

NOTE This indication provides additional information to complete a task easily.

Package Contents

Before installation, please ensure all the items listed in the following table are included in the package.

Item	Description	Q'ty
1	AIO-200-ADL Series All IN One Touch Panel PC	1
2	Adapter 60W 12V 5A	1
3	128G M.2 B key NVMe SSD	1
4	8GB DDR5 4800 MT/s	1

Ordering Information

Model No.	Description
1-E09A06012	Adapter Output 12V 5A 60W / Input 100-240V
3-WIFI0801S10	WIFI 6E Module KIT, Intel, 2T2R & BT 5.3
1-TCOM00041	COM cable (CT-240125-01/CHEN PERNG)
3-AI101040S10	AIO-W210 Panel Mount Bracket Kit (AIO-W210-ADL only)
3-AI156040S10	AIO-W215 Panel Mount Bracket Kit (AIO-W215-ADL only)
3-AI215040S10	AIO-W221 Panel Mount Bracket Kit (AIO-W221-ADL only)
1-TPWR00118	3P Terminal Block(Female) To DC Plug

Available Models

Model No.	Description
AIO-W210-2L-N97	10.1" WXGA Capacitive All IN One Touch Panel PC with Intel® Alder lake N97 Processor
AIO-W215-2L-N97	15.6" Full HD Capacitive All IN One Touch Panel PC with Intel® Alder lake N97 Processor
AIO-W221-2L-N97	21.5" Full HD Capacitive All IN One Touch Panel PC with Intel® Alder lake N97 Processor

Chapter 1

Product Introductions

1.1 Overview

Key Features

- 10.1“ / 15.6“ / 21.5" All IN One Touch Panel PC
- World Class Certifications for Safety and Reliability: CE/FCC/CB/UL/UKCA/IC
- Front IP65 Rating for protection against water and dust
- Scratch Resistant 7H Glass Hardness
- Versatile Display Outputs; HDMI and DP
- MTBF Up to 30,000 Hours
- MTBF Up to 50,000 Hours (AIO-W221-ADL only)

1.2 Hardware Specification

Display	AIO-W210-ADL	AIO-W215-ADL	AIO-W221-ADL
LCD Size	10.1" (16:10)	15.6" (16:9)	21.5" (16:9)
Max. Resolution	1280 x 800	1920 x 1080 (FHD)	1920 x 1080 (FHD)
Brightness (cd/m2)	400	400	500
Contrast Ratio	800:1	800:1	1,000:1
LCD Color	16.7M	16.7M	16.7M
Pixel Pitch (mm)	0.169(H) x 0.1695 (V)	0.17925 (H) x 0.17925 (V)	0.248 (H) x 0.248 (V)
Viewing Angle (H-V)	89/89/89/89 (Typ.) (CR>=10)	85 /85 /85 /85 (Typ.) (CR>=10)	89/89/89/89 (Typ.) (CR>=10)
Backlight MTBF	30,000 Hours	30,000 Hours	50,000 Hours

System	
Processor	Intel® Processor N97 6M Cache, up to 3.60 GHz
System Chipset	SoC integrated
LAN Chipset	GbE1: Intel I225-V (Support Wake-on-LAN and PXE) GbE2: Intel I225-V (Support Wake-on-LAN and PXE)
Audio Codec	Realtek ALC897
System Memory	DDR5 4800MT/s SODIMM. Max up to 16GB (Default: 8GB)
BIOS	AMI uEFI 8Mbit SPI BIOS
Watchdog	Software Programmable Supports 1~255 sec. System Reset

Touch	
Touch Type	Projected Capacitive Touch
Surface Hardness	7H / IK07

Storage	
M.2 B Key	128G M.2 B Key NVMe SSD (Default)
SATA	1x SATA 3.0 6Gb/s port (Support AHCI)

Expansion	
M.2	1x M.2 E Key Support WiFi 6e (Optional)

I/O

DisplayPort	1x DP, support 4096 x 2304 Real 4K @60Hz
HDMI	1x HDMI, support 3840 x 2160 UHD@30Hz
COM	COM 1: RS-232/422/485 COM 2: RS-232
USB	4x USB 3.2 Gen 2
LAN	2x 2.5GbE LAN
Audio	1x Audio out
Others	Support up to 6x Antenna (optional)

Operating System

Windows	Windows 10 / Windows 11
Linux	Linux Ubuntu 22.04

Power

Power Adapter	60W (12V 5A, Default)
Power Supply Voltage	DC 12~36V
Power Connector	DC Jack 5.5mm/2.5mm

Environment

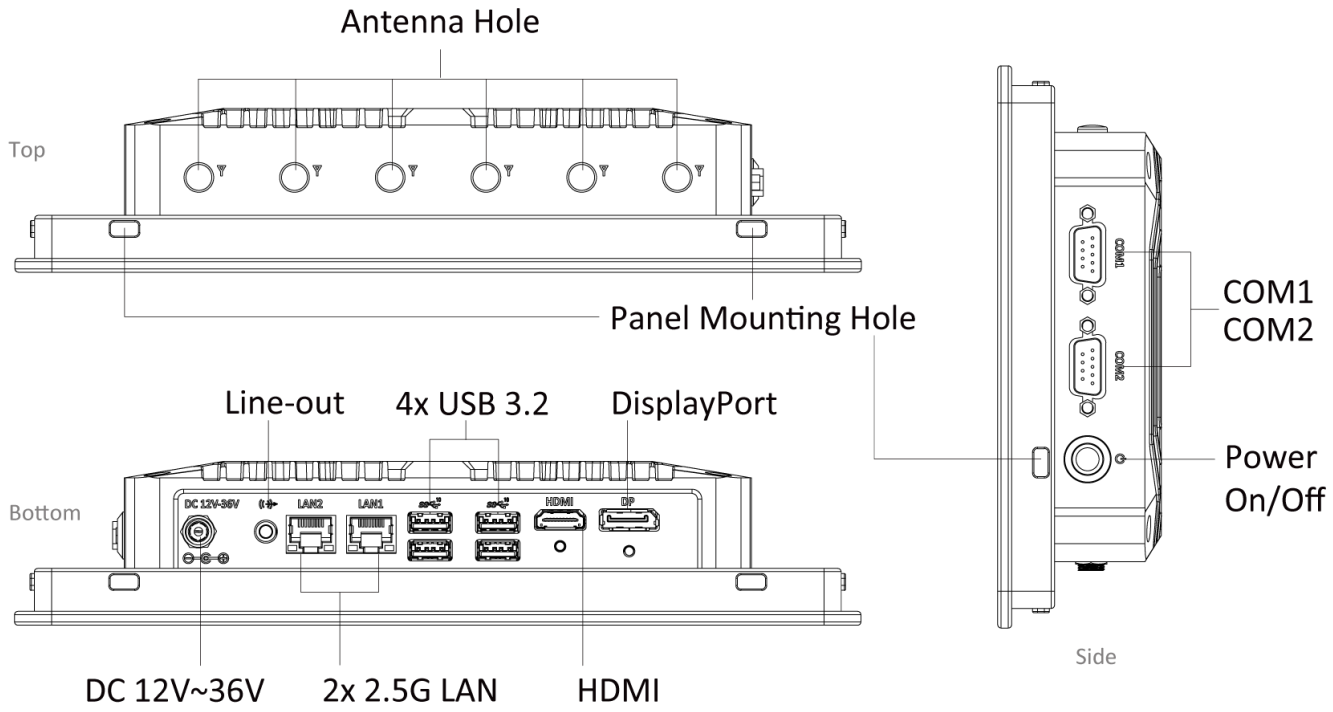
Operating Temp	-10°C to 50°C
Storage Temp	-20°C to 60°C
Relative Humidity	10% to 80% (non-condensing)
Certification	CE, FCC, CB, UL, UKCA, IC
Vibration	IEC60068-2-64:2008 With SSD: 3 Grms (5 - 500 Hz, 0.5 hr/axis) Designed to comply with MIL-STD-810G Method 514.7 Procedure I
Shock	IEC60068-2-27:2008 With SSD: 20G half-sin 11ms Designed to comply with MIL-STD-810G Method 516.7 Procedure I

Physical

Dimension	• AIO-W210-ADL : 256 (W) x 170 (H) x 50 (D) mm • AIO-W215 -ADL: 400 (W) x 249 (H) x 50 (D) mm • AIO-W221-ADL : 538 (W) x 329 (H) x 62 (D) mm
Weight	• AIO-W210-ADL：1.4 Kg • AIO-W215-ADL：2.3 Kg • AIO-W221-ADL：5.2 Kg
Mounting	VESA Mount (75mm x 75mm/100mm x 100mm) Panel Mount (optional)

1.3 System I/O

1.3.1 AIO-W210-ADL



Power On/Off
Press to power-on or power-off the system

USB 3.2 Gen 2 port
Used to connect USB 3.2 device

Line-out
Used to connect a speaker

DC IN
Used to plug a DC power input with terminal Block

COM port
COM 1: RS-232/422/485
COM 2: RS-232

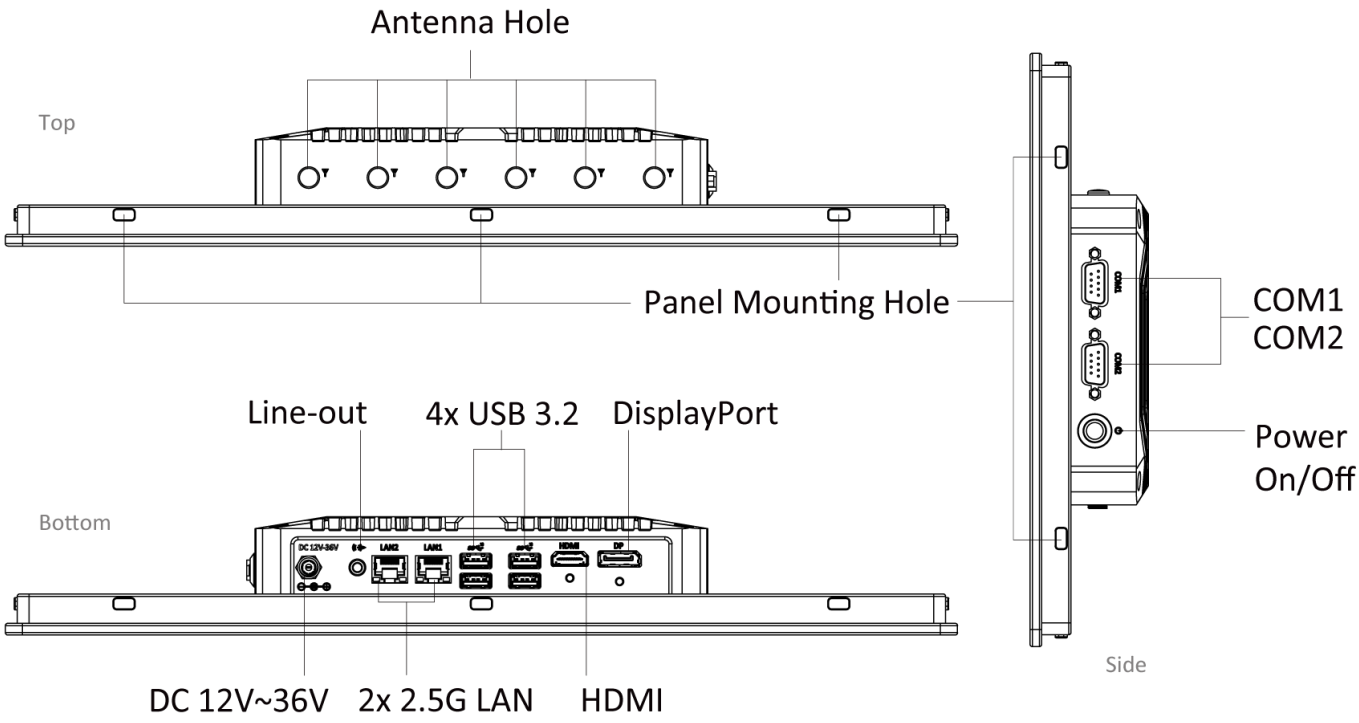
LAN port
Used to connect the system to a local area network

DisplayPort
Used to connect a DisplayPort monitor

HDMI
Used to connect a HDMI monitor

Antenna hole
Used to connect an antenna for optional WiFi module

1.3.2 AIO-W215-ADL



Power On/Off
Press to power-on or power-off the system

USB 3.2 Gen 2 port
Used to connect USB 3.2 device

Line-out
Used to connect a speaker

DC IN
Used to plug a DC power input with terminal Block

COM port
COM 1: RS-232/422/485
COM 2: RS-232

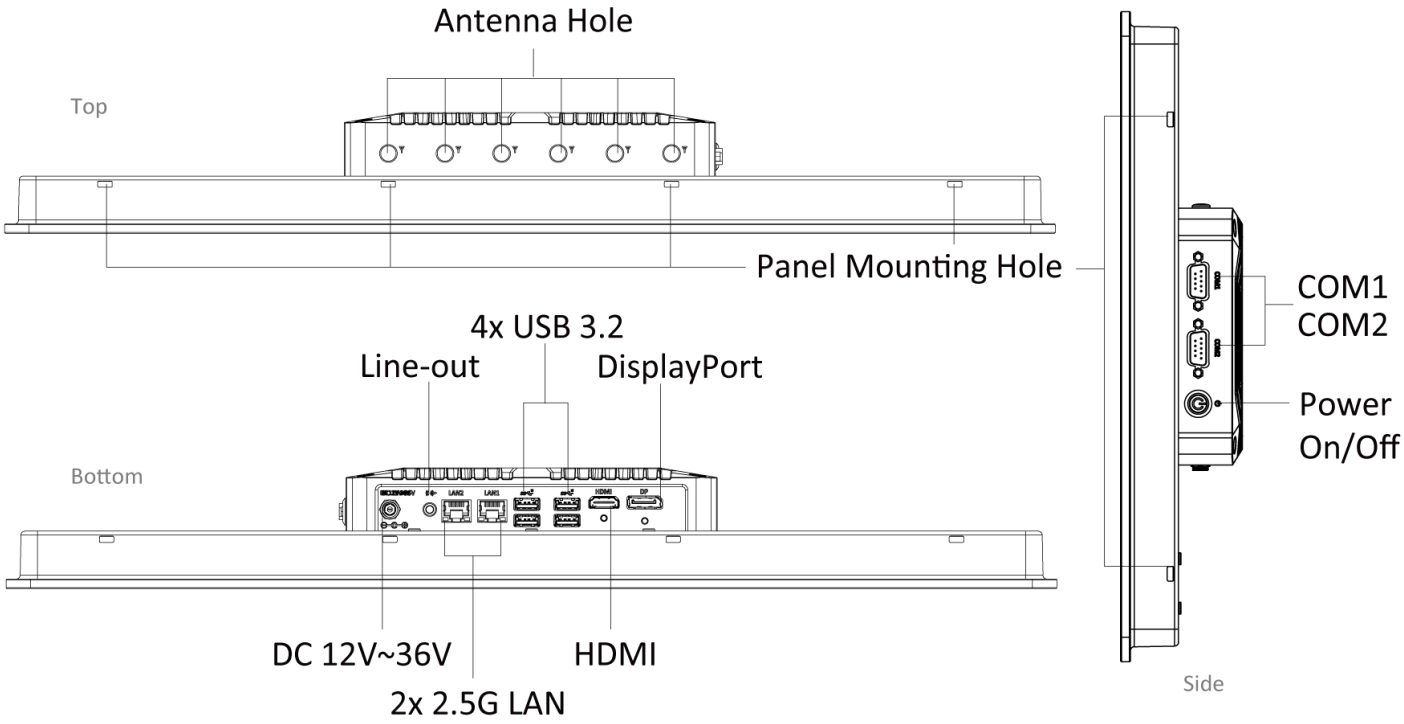
LAN port
Used to connect the system to a local area network

DisplayPort
Used to connect a DisplayPort monitor

HDMI
Used to connect a HDMI monitor

Antenna hole
Used to connect an antenna for optional WiFi module

1.3.3 AIO-W221-ADL



Power On/Off
Press to power-on or power-off the system

USB 3.2 Gen 2 port
Used to connect USB 3.2 device

Line-out
Used to connect a speaker

DC IN
Used to plug a DC power input with terminal Block

COM port
COM 1: RS-232/422/485
COM 2: RS-232

LAN port
Used to connect the system to a local area network

DisplayPort
Used to connect a DisplayPort monitor

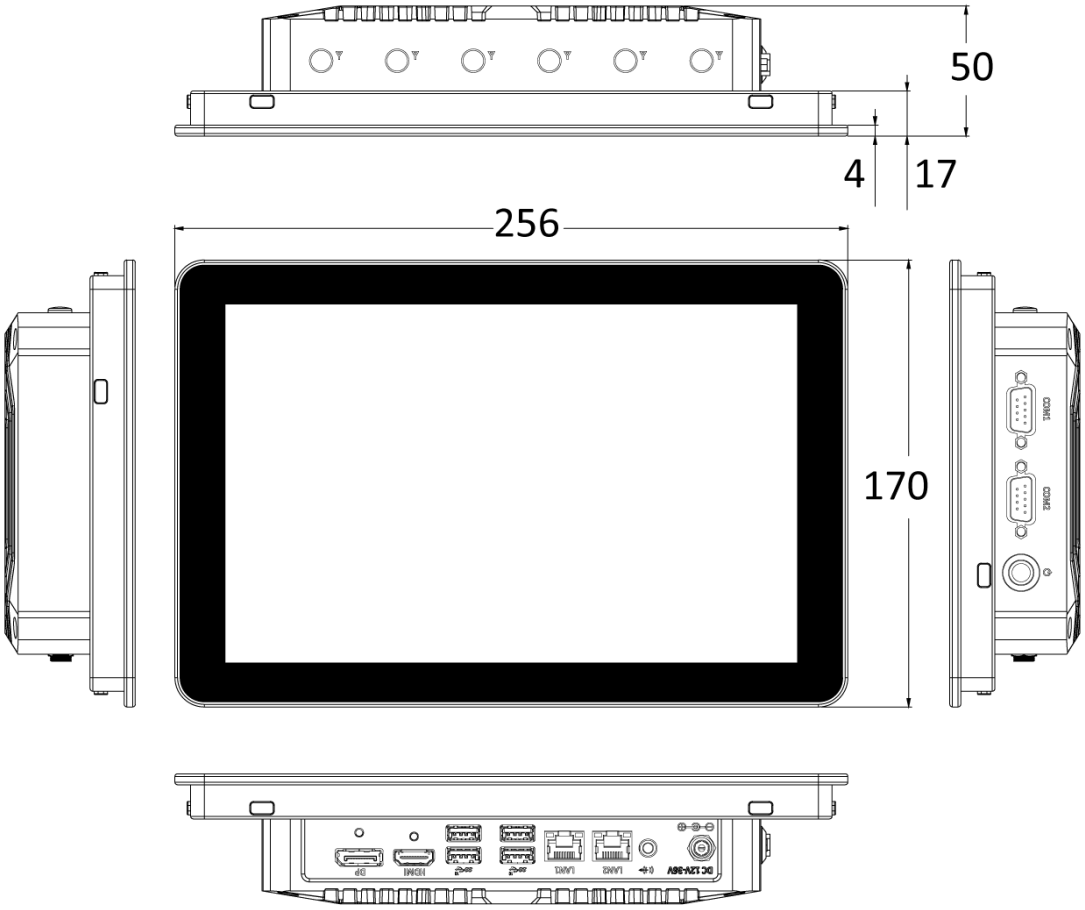
HDMI
Used to connect a HDMI monitor

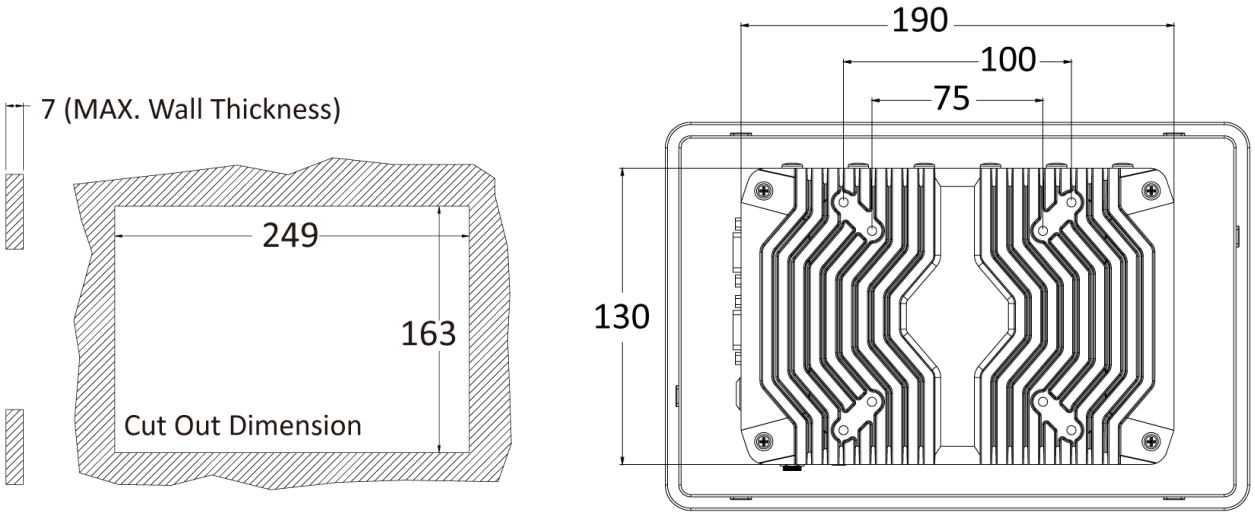
Antenna hole
Used to connect an antenna for optional WiFi module

1.4 Mechanical Dimensions

1.4.1 AIO-W210-ADL

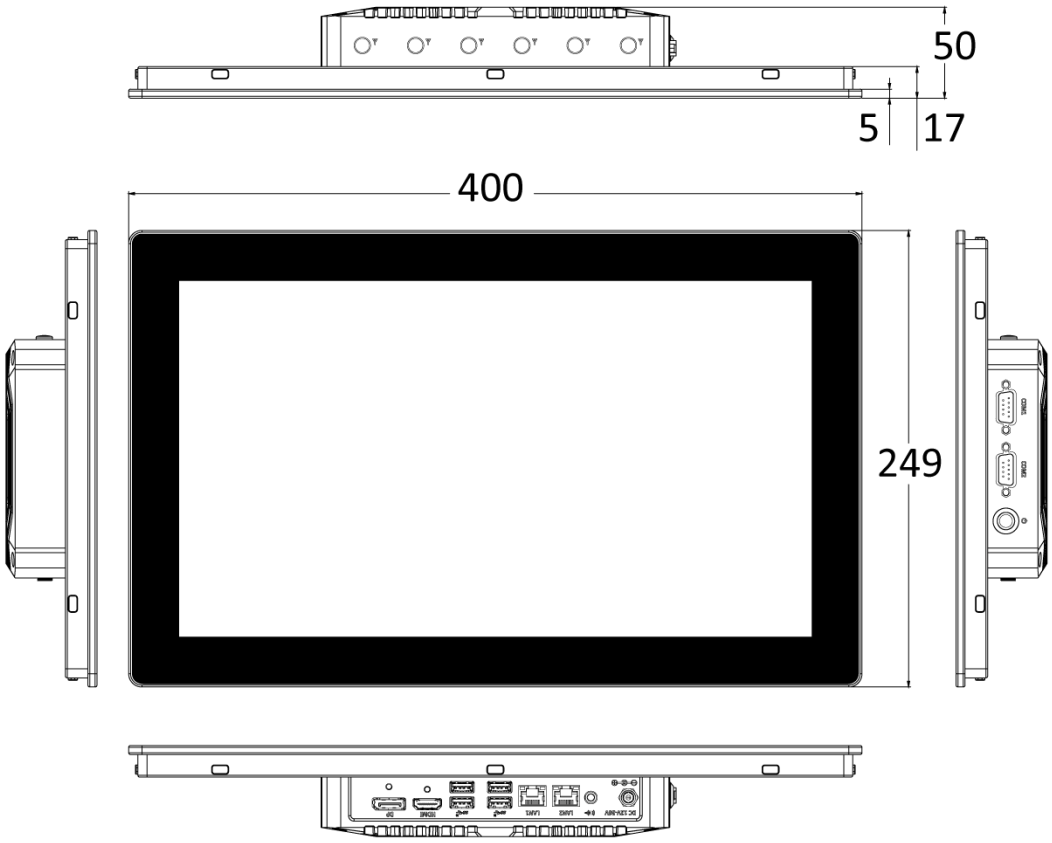
Unit: mm

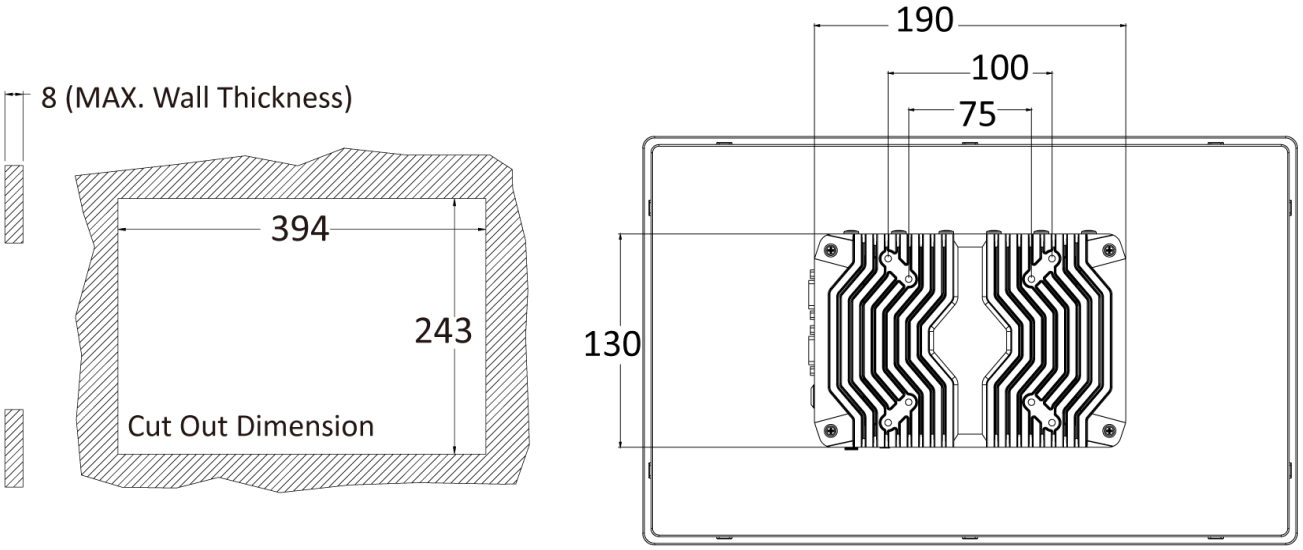




1.4.2 AIO-W215-ADL

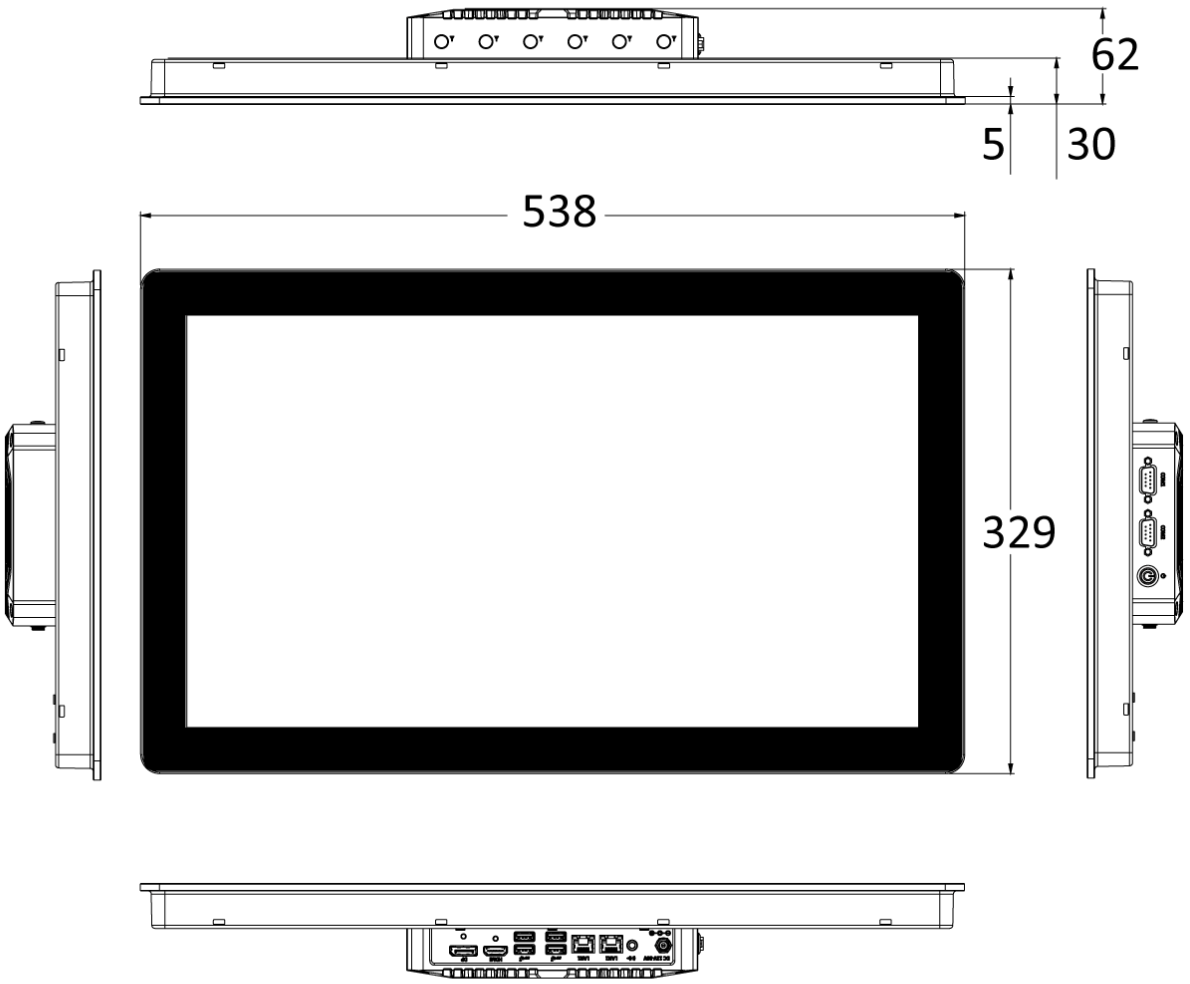
Unit: mm

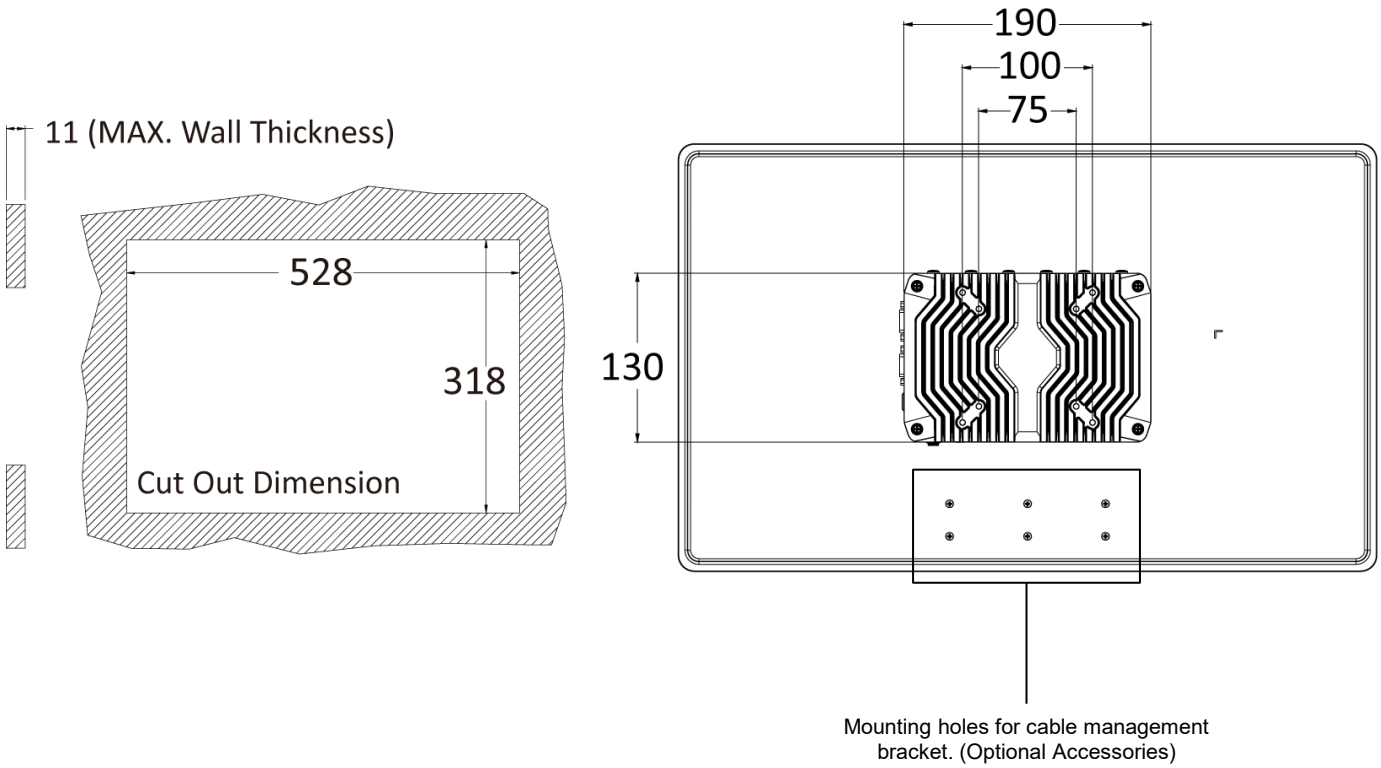




1.4.3 AIO-W221-ADL

Unit: mm

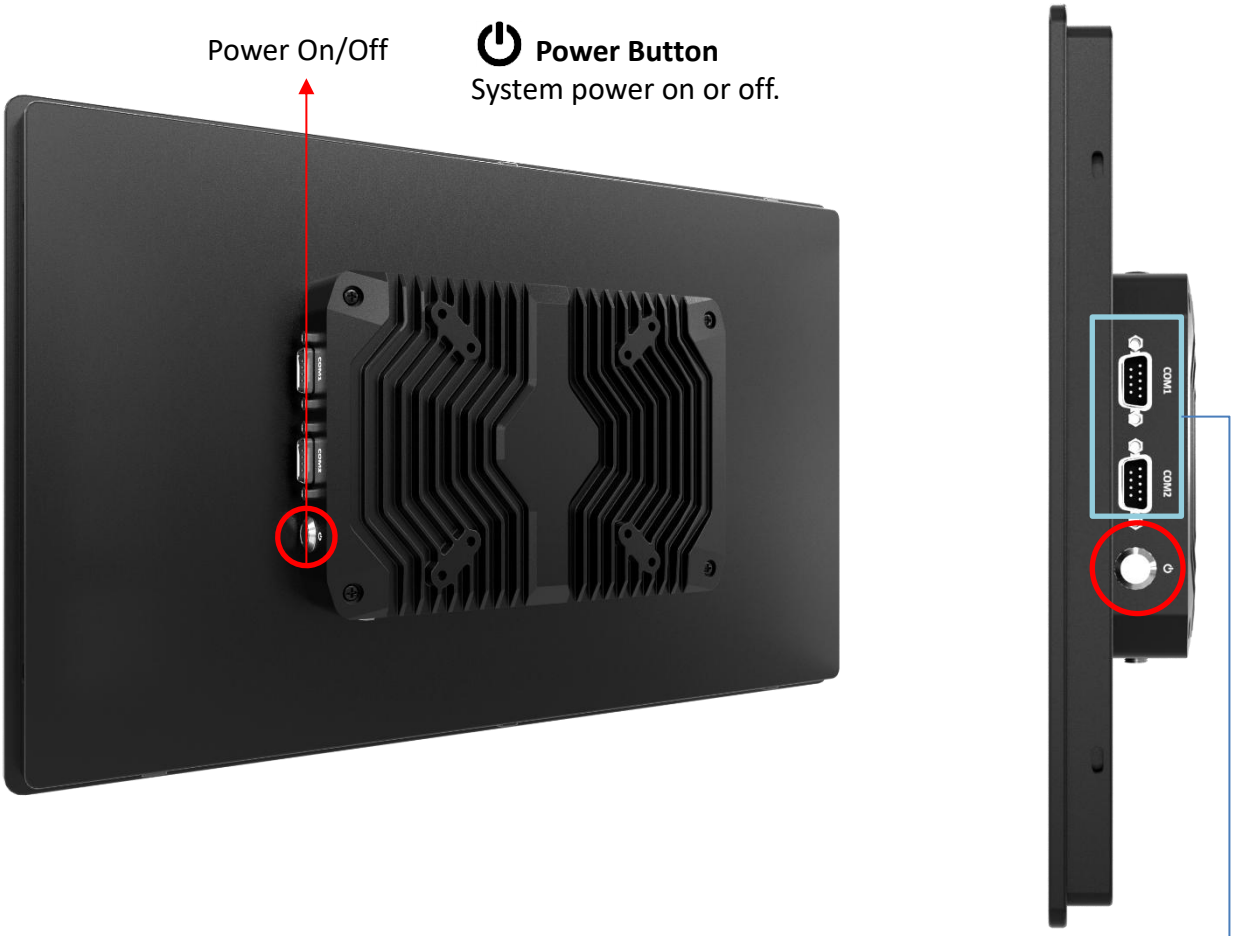


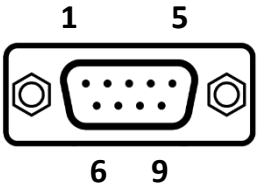


Chapter 2

Panel Controls

2.1 Users Controls





COM2

RS232		
PIN	SIGNAL	DESCRIPTION
1	NDCD	Data Carrier Detect
2	NSIN	Signal In
3	NSOUT	Signal Out
4	NDTR	Data Terminal Ready
5	GND	Signal Ground
6	NDSR	Data Set Ready
7	NRTS	Request To Send
8	NCTS	Clear To Send
9	NC	No Connection

COM1

RS232		
PIN	SIGNAL	DESCRIPTION
1	NDCD	Data Carrier Detect
2	NSIN	Signal In
3	NSOUT	Signal Out
4	NDTR	Data Terminal Ready
5	GND	Signal Ground
6	NDSR	Data Set Ready
7	NRTS	Request To Send
8	NCTS	Clear To Send
9	VCC_COM	VCC_COM

RS422		
PIN	SIGNAL	DESCRIPTION
1	422 TXD-	Transmit Data, Negative
2	422 TXD+	Receive Data, Positive
3	422 RXD+	Transmit Data, Positive
4	422 RXD-	Receive Data, Negative
5	GND	Signal Ground
6	NC	No Connection
7	NC	No Connection
8	NC	No Connection
9	NC	No Connection

RS485		
PIN	SIGNAL	DESCRIPTION
1	TXD-	Transmit Data, Negative
2	TXD+	Transmit Data, Positive
3	NC	No Connection
4	NC	No Connection
5	GND	Signal Ground
6	NC	No Connection
7	NC	No Connection
8	NC	No Connection
9	NC	No Connection

Chapter 3

System Setup

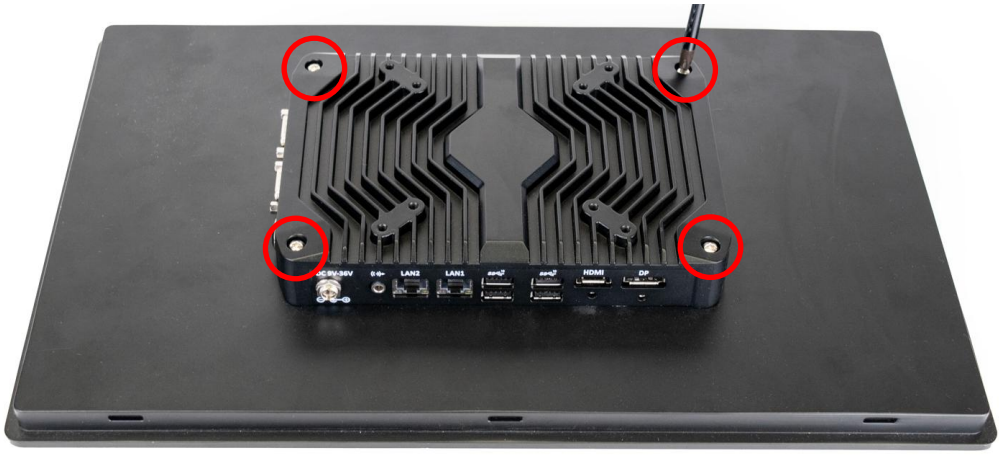
Set torque force to 3.5 kgf-cm to execute all the screwing and unscrewing.

3.1 Replacement of Internal Modules

WARNING

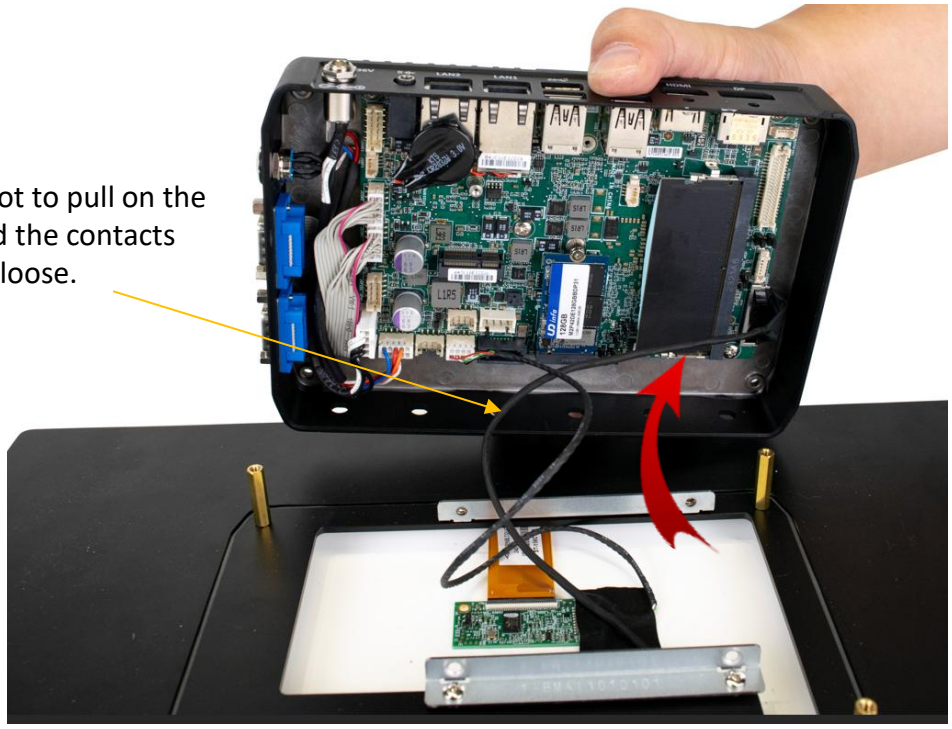
In order to prevent electric shock or system damage, before removing the chassis cover, must turn off power and disconnect the unit from power source.

1. Use a screwdriver to remove the four screws securing the back cover.



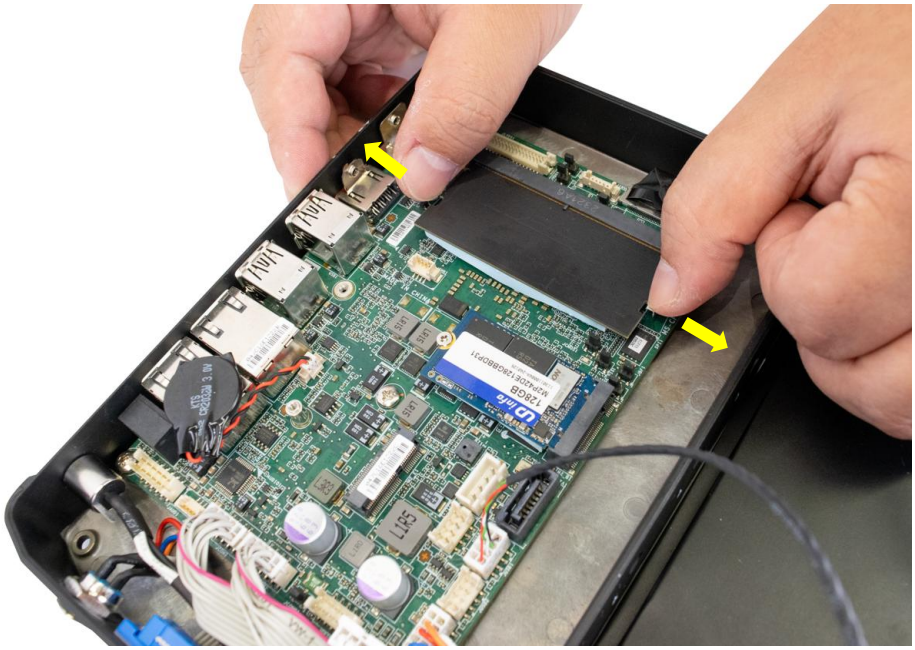
2. After removing the screws, detach the main unit from the screen.

*Be careful not to pull on the cable to avoid the contacts from coming loose.



3.2 Replacement of Memory Module

1. Pull out the locking tabs on both sides of the memory slot to release the memory module, allowing it to pop out.



2. After the memory module pops up, pull it out.
   Carefully remove the thermal pad underneath the memory module.

3.3 Replacement of M.2 Storage Module

1. Use a screwdriver to remove the single screw securing the M.2 card. After removing the M.2 card, carefully remove the thermal pad underneath.

3.4 Replacement of 2.5" SSD Storage Module

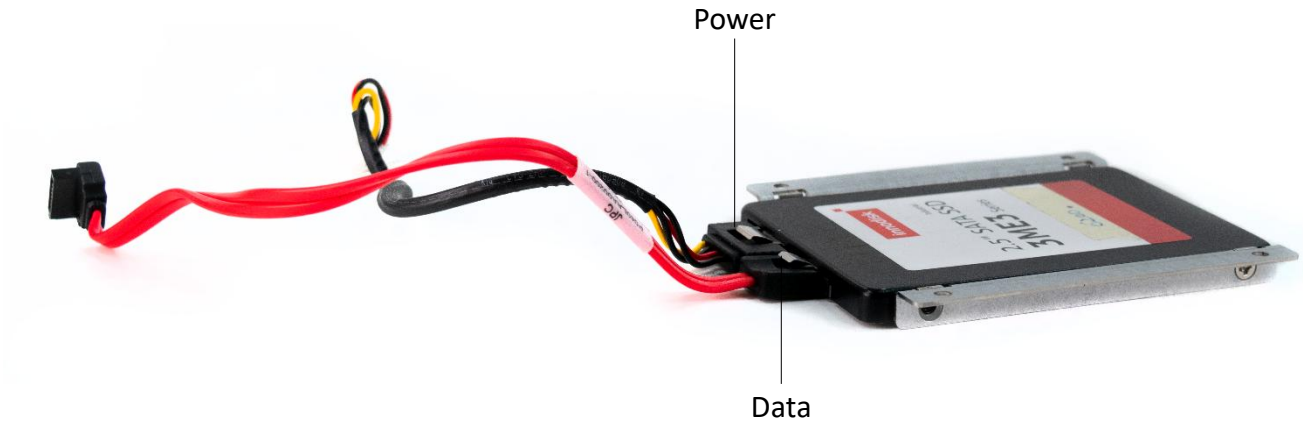
1.1 Standard SSD Mounting Bracket (**without 5G module**)

- First, use 4x screws to mount the bracket to the SSD
- Second, use 4x screws to mount the bracket on to the AIO display panel

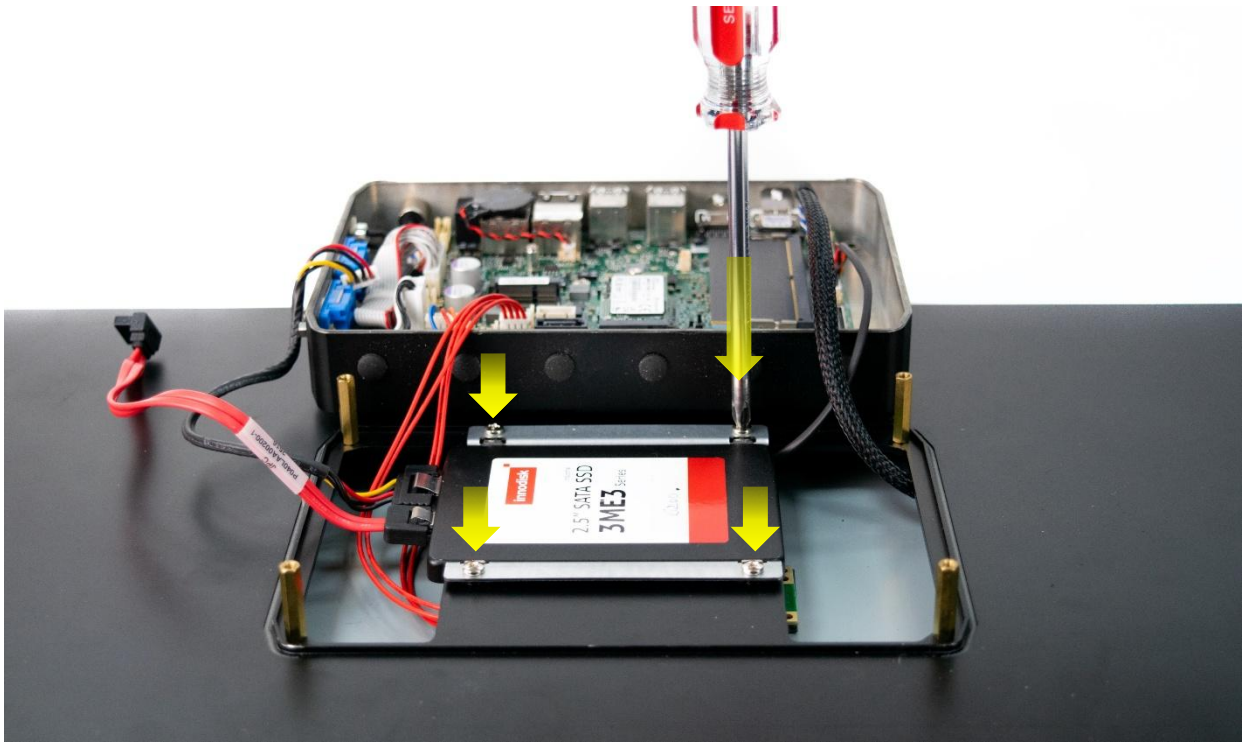
1.2 SSD Mounting Bracket (**with 5G module attached**)

- First, use 4x screws to mount the bracket to the SSD
- Second, use 4x screws to mount the bracket on to the AIO display panel

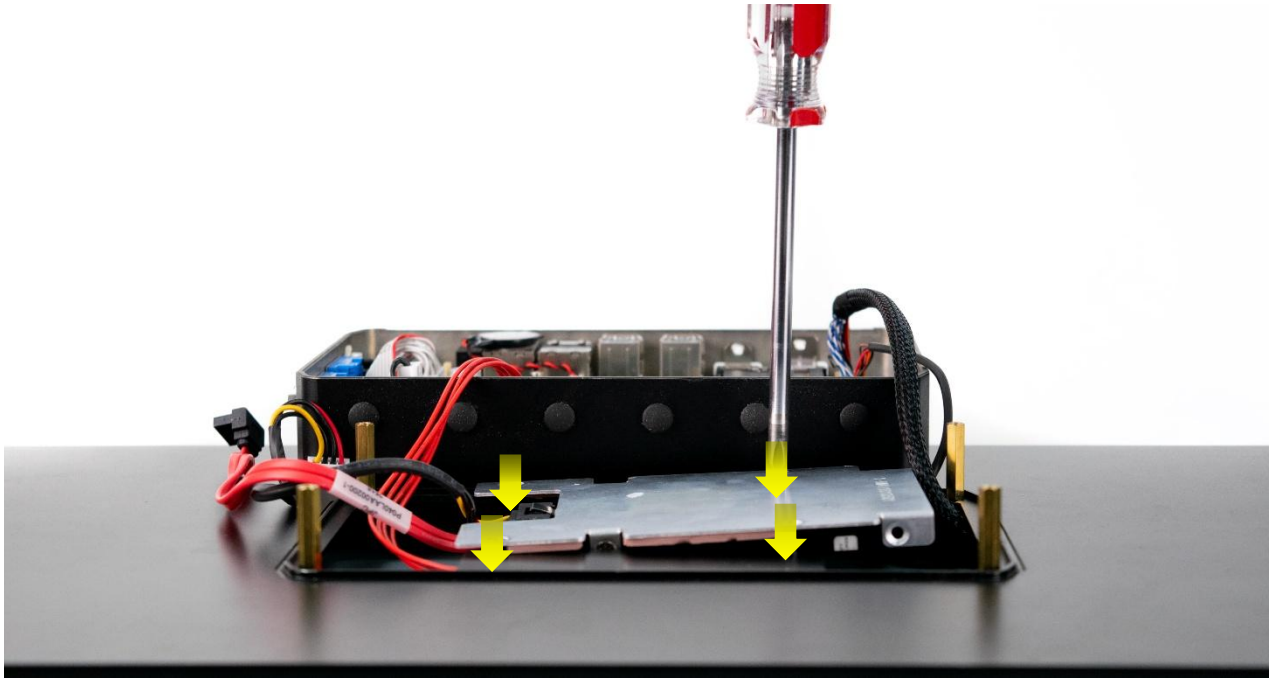
2. Plug in the SATA power and data cables to the SSD



3.1 Use 4x screws to mount the SSD bracket onto the AIO display panel (standard SSD bracket, no 5G)

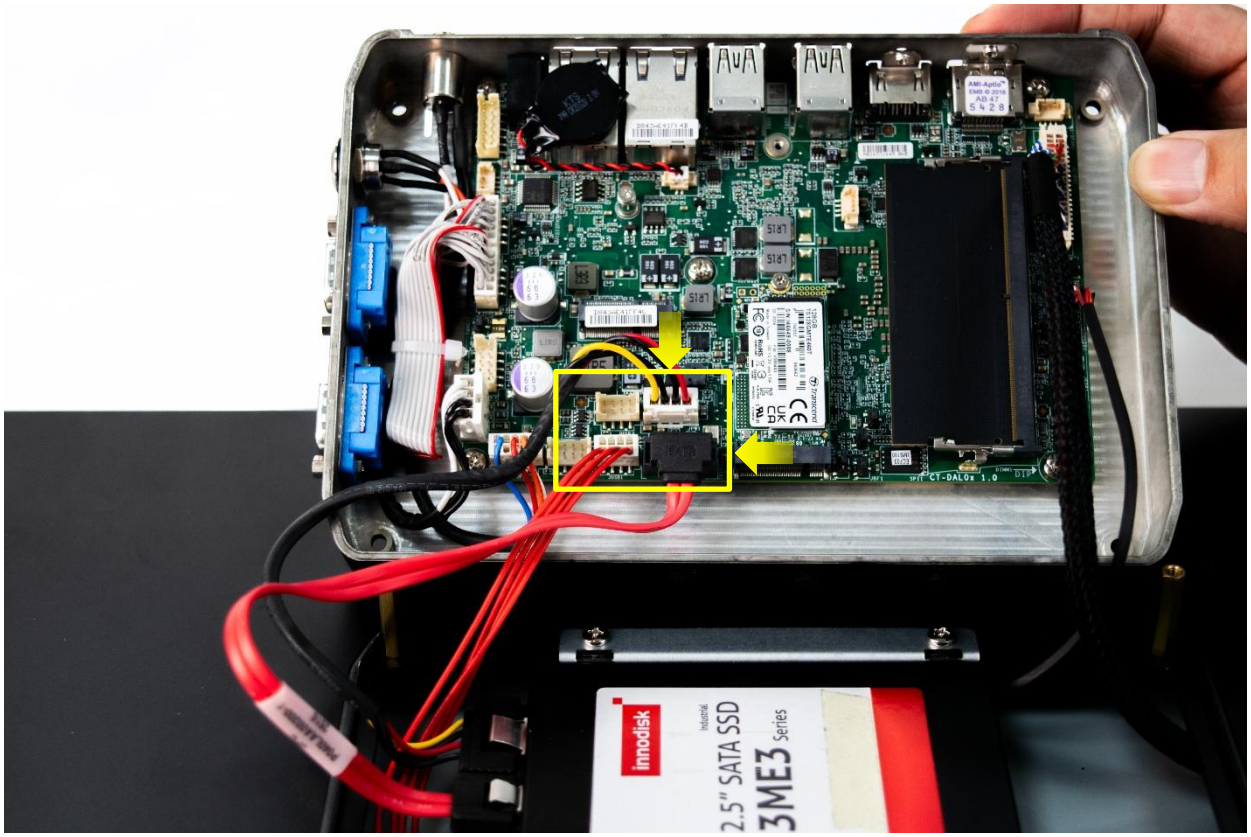


3.2 Use 4x screws to mount the SSD bracket onto the AIO display panel (**SSD bracket with 5G**)



*The 5G module's thermal pad will attached on the SSD bracket once the system is closed.

4. Plug in the SATA power and data cables to the motherboard



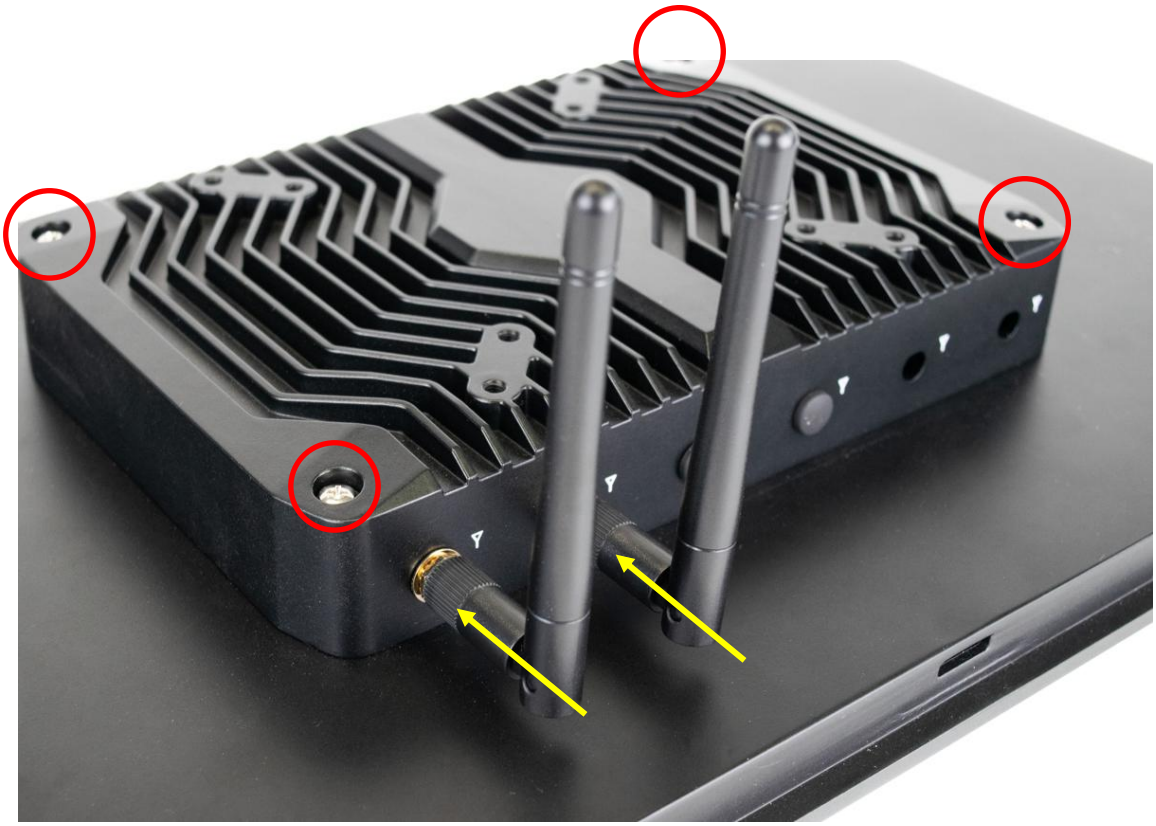
5. Carefully organize all of the cables before closing the whole system with 4x screws

3.5 Install wireless network card and antenna

1. Install the network card in the designated red frame and secure it with screws.

2. Ensure the internal antenna is securely connected to the network card, and the antenna interface is properly installed in the designated opening on the chassis cover.

3. Connect the external antenna to the internal antenna, reattach the main unit to the screen following the original steps, and secure it with the four screws.



3.6 Cable Management Bracket Installation (21.5" only)

1. Use 3x screws to mount the cable management bracket below the system's I/O ports

*The bracket provides additional layer to organize and securely locks all cables connected to the AIO.
**You can use zipties or other similar alternatives to securely lock the cables in place

Chapter 3

BIOS Setup

3.1 BIOS Setup

This chapter provides information on the BIOS Setup program and allows users to configure the system for optimal use.

Users may need to run the Setup program when:

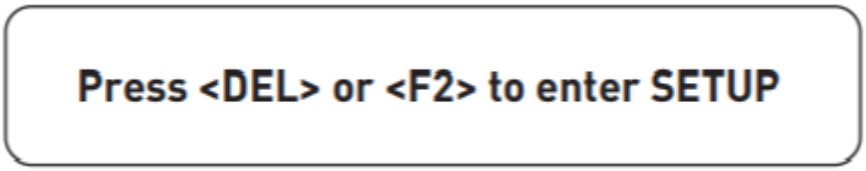
- An error message appears on the screen at system startup and requests users to run SETUP.
- Users want to change the default settings for customized features.

Important

- *Please note that BIOS update assumes technician-level experience.*
- *As the system BIOS is under continuous update for better system performance, the illustrations in this chapter should be held for reference only.*

Entering Setup

Power on the computer and the system will start POST (Power On Self Test) process. When the message below appears on the screen, press <DEL> or <F2> key to enter Setup, <F11> key to Boot Menu, <F12> key to PXE Boot .



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

Important

The items under each BIOS category described in this chapter are under continuous update for better system performance. Therefore, the description may be slightly different from the latest BIOS and should be held for reference only.

Control Keys	
<→> <←>	Select Screen
<↑> <↓>	Select Item
<Enter>	Select
+ -	Change Value
<F1>	General Help
<F7>	Previous Values
<F9>	Optimized Defaults
<F10>	Save & Reset*
<F12>	Screenshot capture
<K>	Scroll help area upwards
<M>	Scroll help area downwards

* When you press **<F10>,** a confirmation window appears and it provides the modification information. Select between **Yes** or **No** to confirm your choice.

Getting Help

Upon entering setup, you will see the Main Menu.

Main Menu

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

Sub-Menu

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

General Help <F1>

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

3.2 BIOS Item Contents

Item
The Menu Bar
Main • System Date • System Time • SATA Mode Selection
Advanced • Full Screen Logo Display • Bootup NumLock State • CPU Configuration ▶ Intel Virtualization Technology ▶ Active Efficient-cores ▶ Intel(R) SpeedStep(TM) ▶ Intel(R) Speed Shift Technology ▶ C States • Super IO Configuration ▶ Serial Port 1/ 2 ▶ FIFO Mode ▶ Shared IRQ Mode ▶ Watch Dog Timer • H/W Monitor (PC Health Status) ▶ Thermal Shutdown • Smart Fan Configuration ▶ SYSFAN • PCI/PCIE Device Configuration ▶ Audio Controller • Network Stack Configuration ▶ Network Stack • GPIO Group Configuration ▶ GPO0 ~ GPO3 • PCIE ASPM settings ▶ M2_B1/ M2_E1
Boot • Boot Option #1-2
Security • Administrator Password • User Password • PCH-FW Configuration ▶ ME State ▶ Comms Hub Support ▶ JHI Support ▶ Core BIOS Done Message ▶ Firmware Update Configuration

▶ PTT Configuration
▶ ME Debug Configuration
▶ Anti-Rollback SVN Configuration

- Trusted Computing
  - ▶ Security Device Support
  - ▶ SHA256/ SHA384 PCR Bank
  - ▶ Pending Operation
  - ▶ Platform Hierarchy, Storage Hierarchy, Endorsement Hierarchy
  - ▶ Physical Presence Spec Version
  - ▶ TPM 2.0 Interface Type
  - ▶ PH Randomization
  - ▶ Device Select
- Serial Port Console Redirection
  - ▶ Console Redirection
  - ▶ Console Redirection Settings (COM1)
- Secure Boot
  - ▶ Secure Boot
  - ▶ Secure Boot Mode
  - ▶ Restore Factory Keys
  - ▶ Reset to setup Mode
  - ▶ Key Management

Chipset

- DVMT Total Gfx Mem
- LVDS Panel Type
- Backlight Control

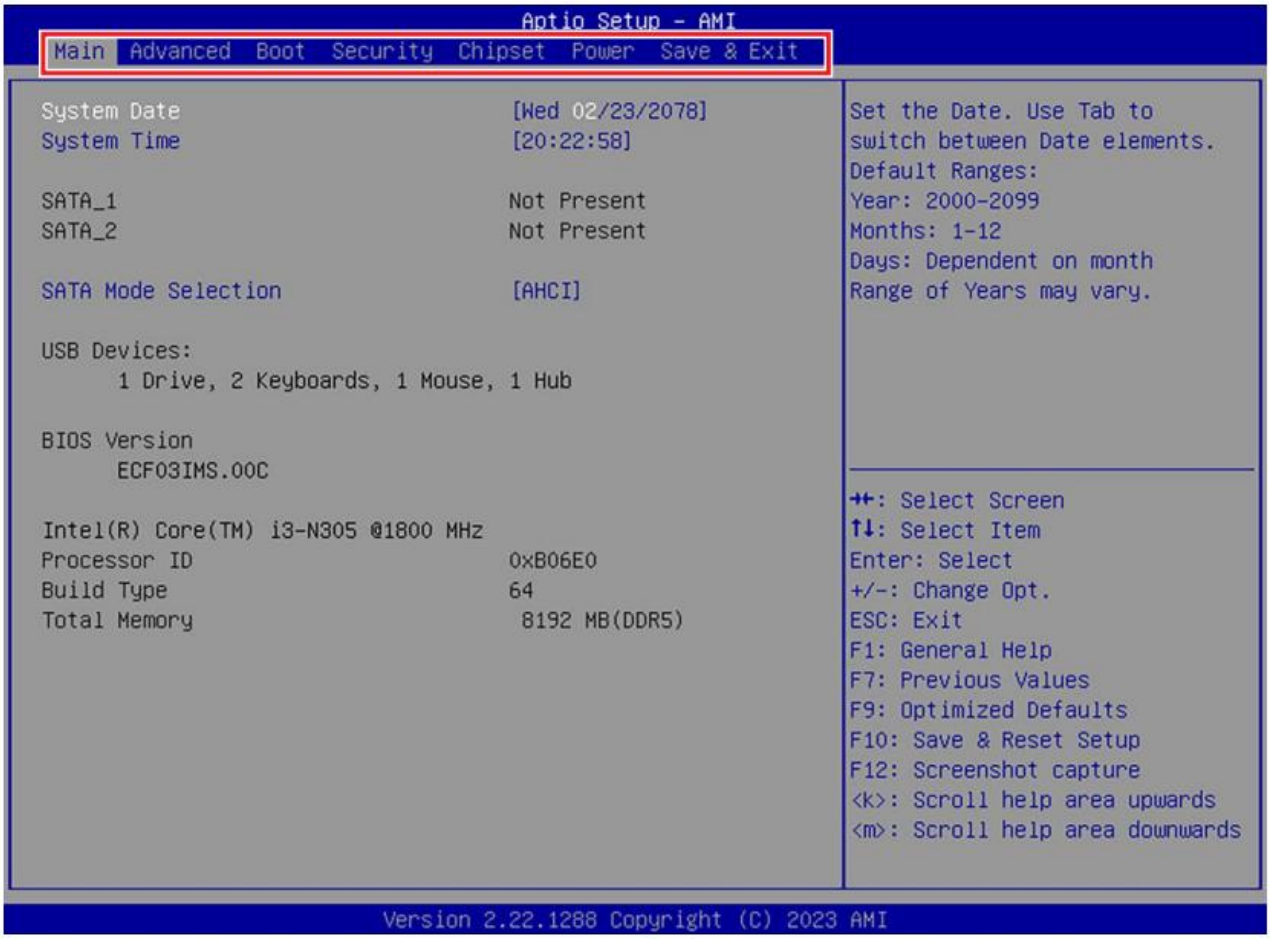
Power

- Restore AC Power Loss
- Deep Sleep Mode
- OnChip USB
- LAN/ PCIE PME
- RTC

Save & Exit

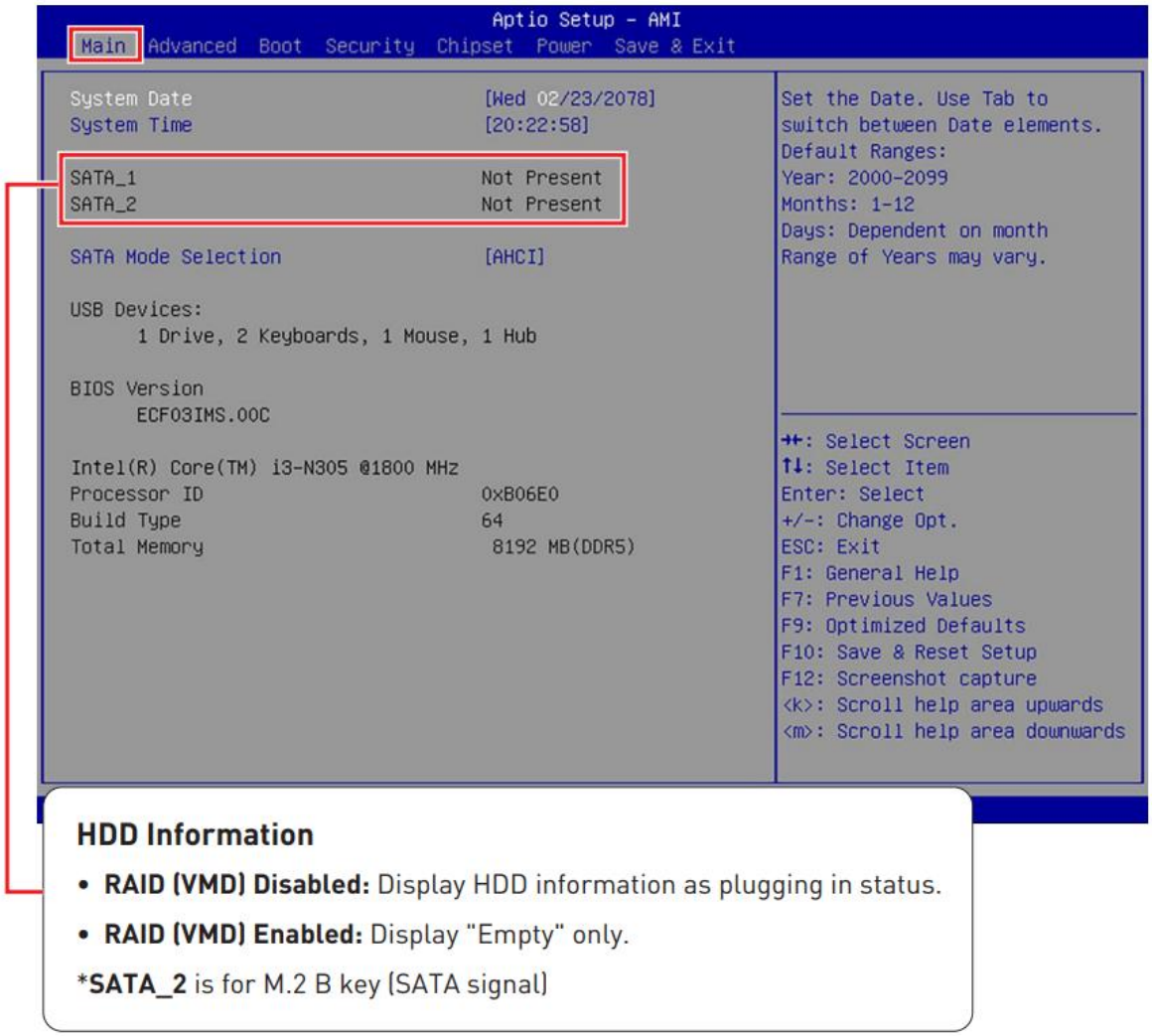
- Save Changes and Reset
- Discard Changes and Exit
- Discard Changes
- Load Optimized Defaults
- Save as User Defaults
- Restore User Defaults
- Launch EFI Shell from filesystem device

3.3 The Menu Bar



▶ Main
Use this menu for basic system configurations, such as time, date, etc.
▶Advanced
Use this menu to set up the items of special enhanced features.
▶Boot
Use this menu to specify the priority of boot devices.
▶Security
Use this menu to set supervisor and user passwords.
▶Chipset
This menu controls the advanced features of the on-board chipsets.
▶Power
Use this menu to specify your settings for power management.
▶Save & Exit
This menu allows you to load the BIOS default values or factory default settings into the BIOS and exit the BIOS setup utility with or without changes.

3.4 Main



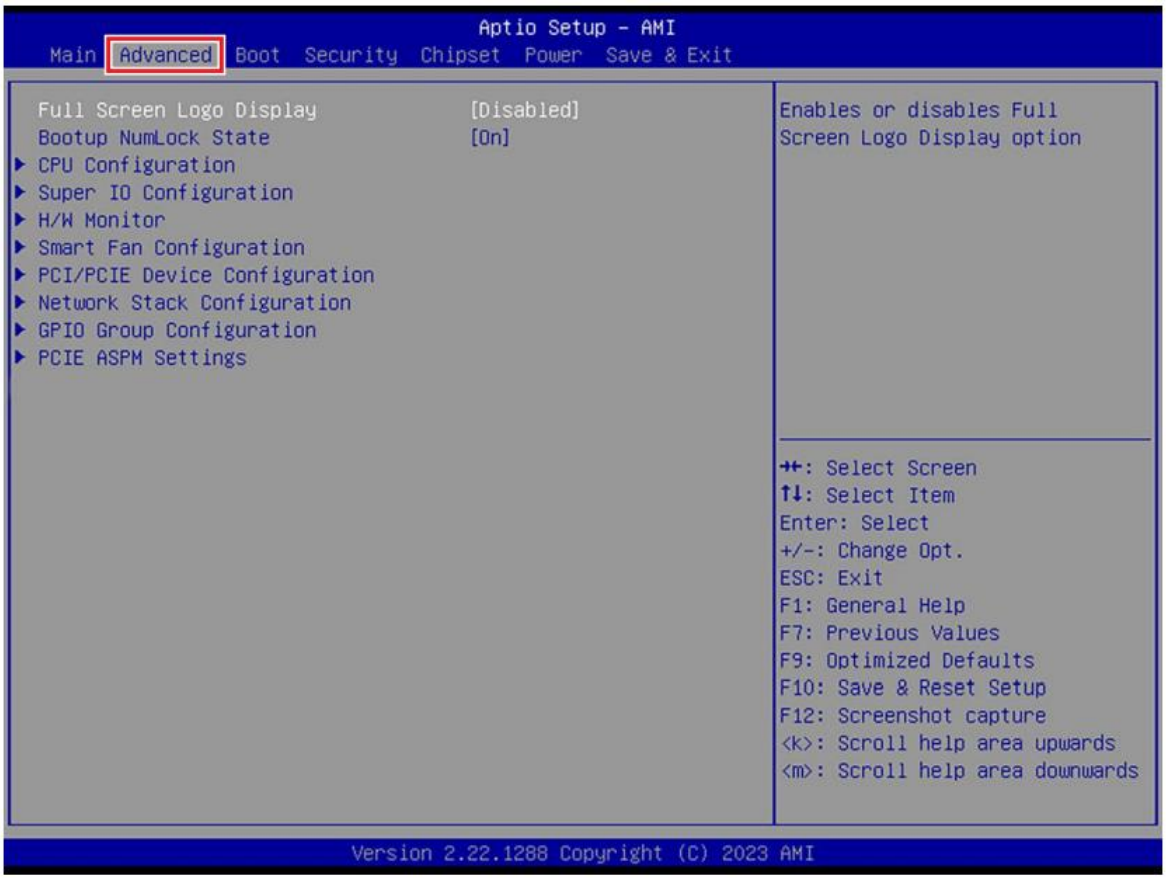
▶System Date
This setting allows you to set the system date. Use <Tab> key to switch between date elements.
Format: <Day> <Month> <Date> <Year>.

▶System Time
This setting allows you to set the system time. Use <Tab> key to switch between time elements.
Format: <Hour> <Minute> <Second>.

▶SATA Mode Selection
This setting specifies SATA controller mode.

[AHCI]	AHCI (Advanced Host Controller Interface), is a technical standard for an interface that allows the software to communicate with Serial ATA (SATA) devices. It offers advanced SATA features such as Native Command Queuing (NCQ) and hot-plugging.
[RAID]	[RAID] RAID (Redundant Array of Independent Disks) is a virtual disk storage technology that combines multiple physical disks into one unit for data redundancy, performance improvement, or both.

3.5 Advanced



3.5.1 Full Screen Logo Display

This BIOS feature determines if the BIOS should hide the normal POST messages with the motherboard or system manufacturer's full-screen logo.

[Enabled]	BIOS will display the full-screen logo during the boot-up sequence, hiding normal POST messages.
[Disabled]	BIOS will display the normal POST messages, instead of the fullscreen logo.

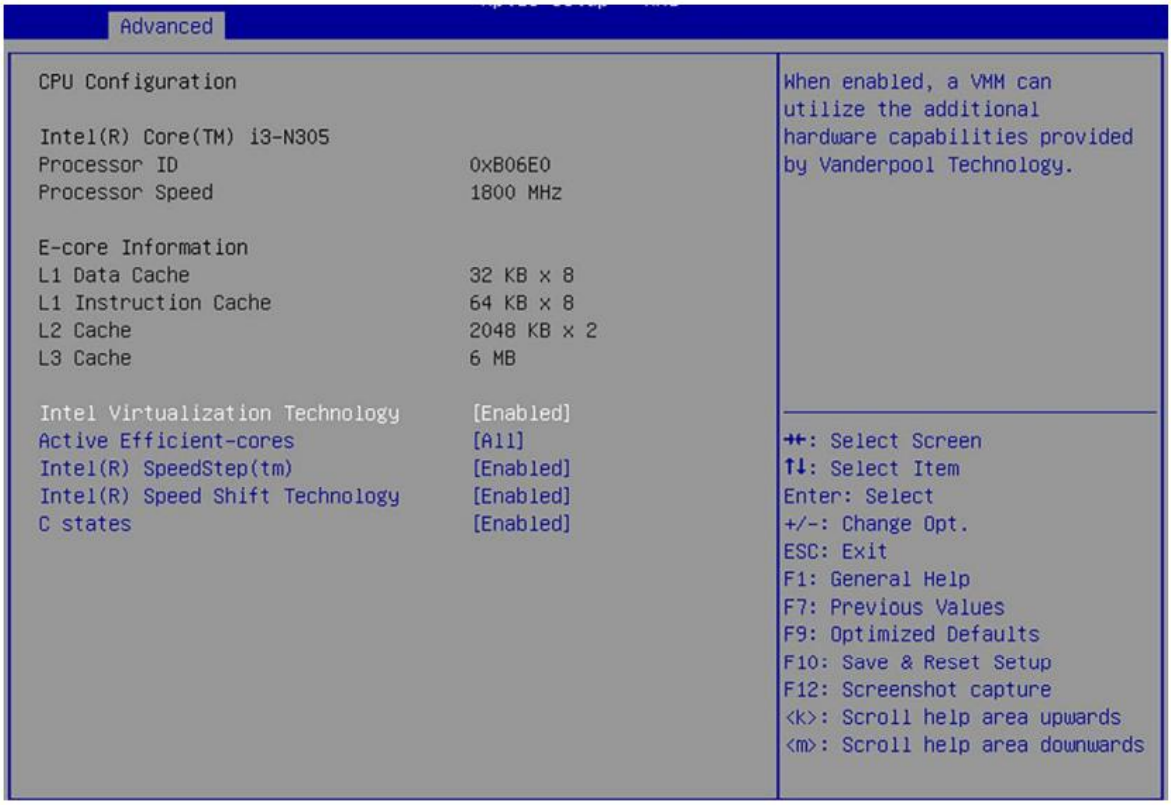
Please note that enabling this BIOS feature often adds 2-3 seconds to the booting sequence. This delay ensures that the logo is displayed for a sufficient amount of time. Therefore, it is recommended to disable this BIOS feature for faster boot-up.

3.5.2 Bootup NumLock State

This setting is to set the state of the Num Lock key on the keyboard when the system is powered on.

[On]	Turn on the Num Lock key when the system is powered on.
[Off]	Allow users to use the arrow keys on the numeric keypad.

3.5.3 CPU Configuration



▶ Intel Virtualization Technology
Enables or disables Intel Virtualization technology.

[Enabled]	Enables Intel Virtualization technology and allows a platform to run multiple operating systems in independent partitions. The system can function as multiple systems virtually.
[Disabled]	Disables this function.

▶ Active Efficient-cores
Select the number of active Efficient-cores (E-cores).

▶ Intel(R) SpeedStep(TM)
Enhanced Intel SpeedStep® Technology enables the OS to control and activate performance states (P-States) of the processor.

[Enabled]	When enabled, Intel SpeedStep® technology is activated. This technology allows the processor to manage its power consumption via performance state (P-State) transitions.
[Disabled]	Disables this function.

▶ **Intel(R) Speed Shift Technology**

Intel® Speed Shift Technology is an energy-efficient method that allows frequency control by hardware rather than the OS.

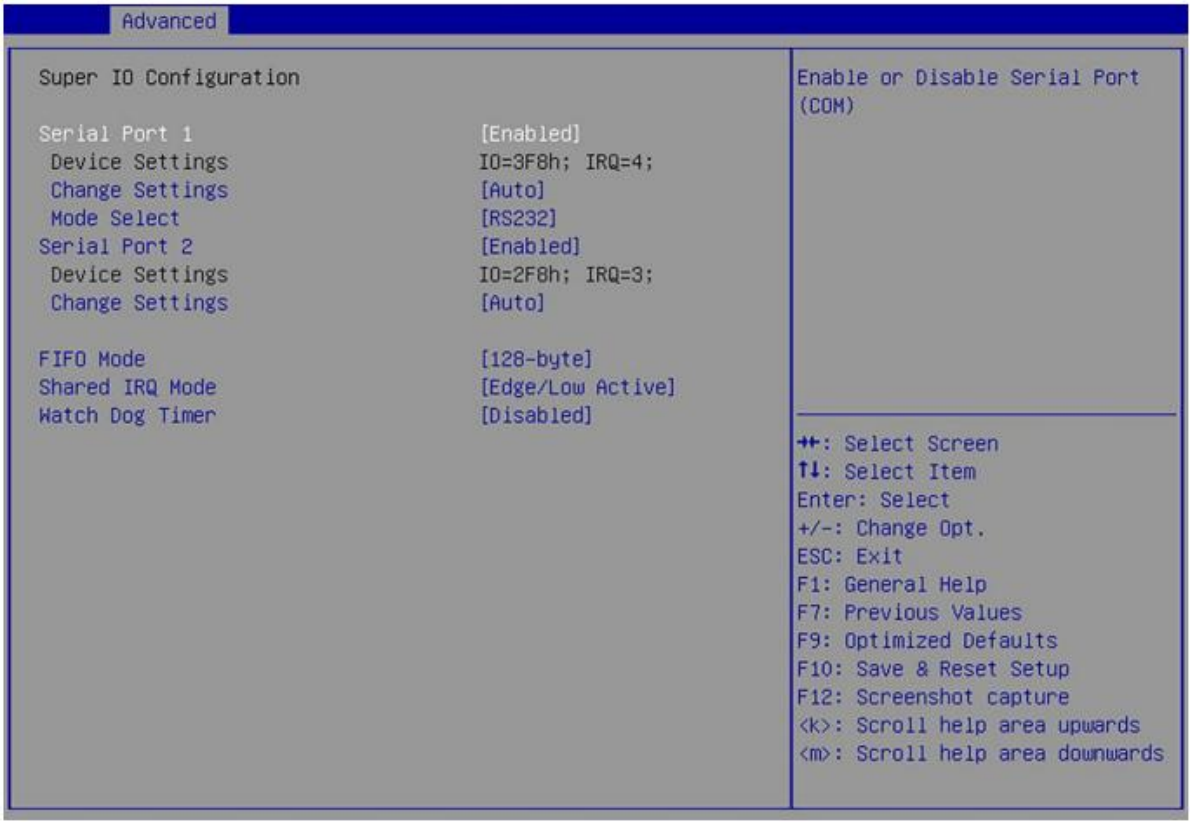
[Enabled]	When enabled, Intel® Speed Shift Technology is activated. The technology enables the management of processor power consumption via hardware performance state (P-State) transitions.
[Disabled]	Disable this function.

▶ **C States**

This setting controls the C-States (CPU Power states).

[Enabled]	Detects the idle state of system and reduce CPU power consumption accordingly.
[Disabled]	Disable this function.

3.5.4 Super IO Configuration



▶ Serial Port 1/ 2

This setting enables or disables the specified serial port.

» Change Settings

This setting is used to change the address & IRQ settings of the specified serial port.

» Mode Select

Select an operation mode for Serial Port 1/ 2.

▶ FIFO Mode

This setting controls the FIFO (First In First Out) data transfer mode.

▶ Shared IRQ Mode

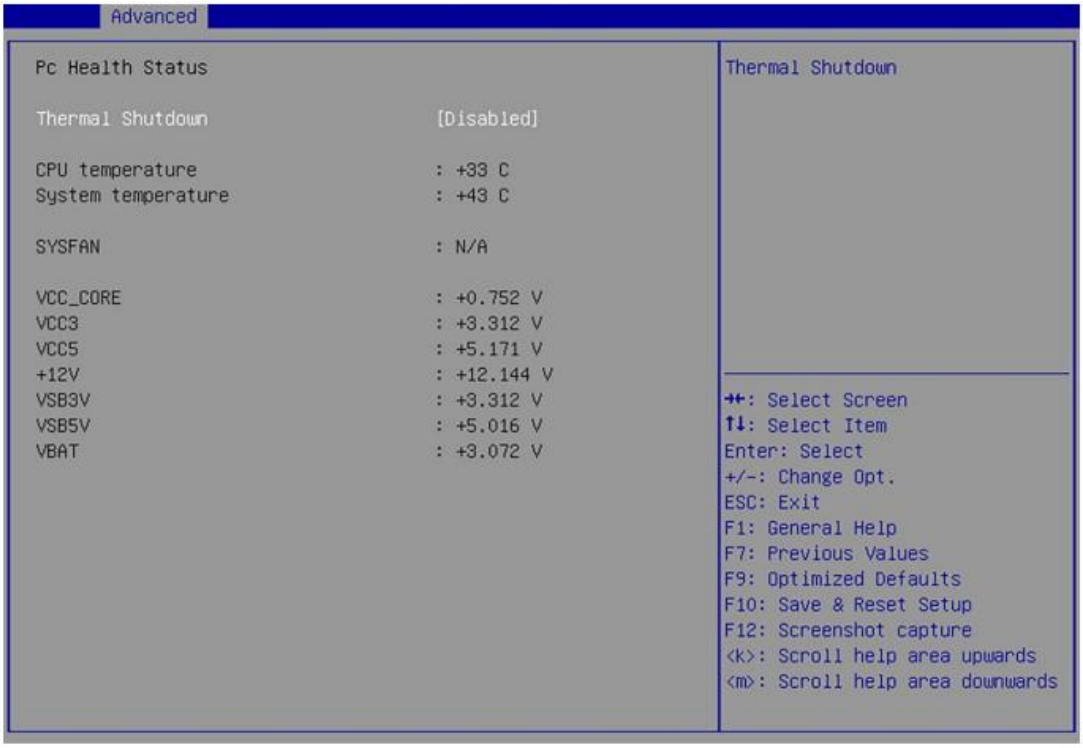
This setting provides the system with the ability to share interrupts among its serial ports.

▶ Watch Dog Timer

You can enable the system watchdog timer, a hardware timer that generates a reset when the software that it monitors does not respond as expected each time the watchdog polls it.

3.5.5 H/W Monitor (PC Health Status)

These items display the current status of all monitored hardware devices/components such as voltages, temperatures and all fans' speeds.



▶ Thermal Shutdown

This setting determines the behavior of the system when the CPU temperature reaches a predefined threshold.

[Enabled]	Initiate an automatic shutdown of the system to protect from potential damage due to overheating.
[Disabled]	Disable this function.

3.5.6 Smart Fan Configuration

These items display the current status of all monitored hardware devices/components such as voltages, temperatures and all fans' speeds.

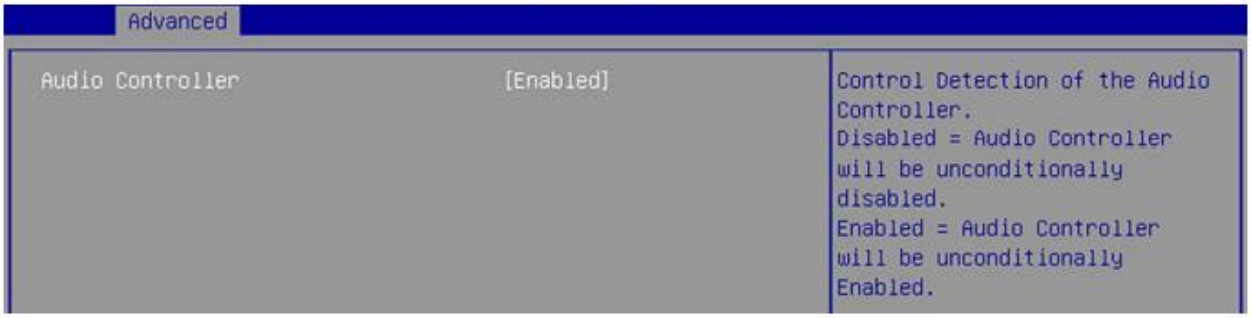
▶ SYSFAN

This setting enables or disables the Smart Fan function. Smart Fan is an excellent feature which will adjust the system fan speed automatically depending on the current system temperature, avoiding the overheating to damage your system. The following items will display when SYSFAN is enabled.

» **Min. Speed (%)**

The beginning speed of the System fan.

3.5.7 PCI/PCIE Device Configuration

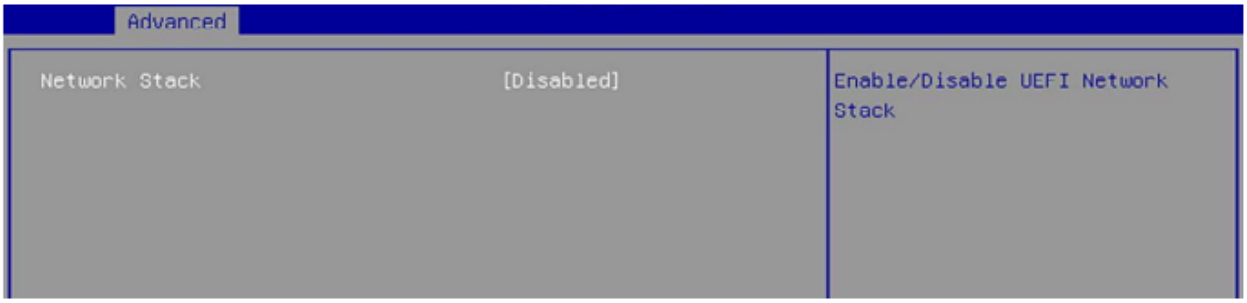


▶ Audio Controller

This setting enables or disables the detection of the onboard audio controller.

3.5.8 Network Stack Configuration

This menu provides Network Stack settings for users to enable network boot (PXE) from BIOS.



▶ Network Stack

This menu provides Network Stack settings for users to enable network boot (PXE) from BIOS. The following items will display when Network Stak is enabled.

» **IPV4 PXE Support**

Enables or disables IPv4 PXE boot support.

» **IPV4 HTTP Support**

Enables or disables Ipv4 HTTP Support.

» **IPV6 PXE Support**

Enables or disables Ipv6 PXE Support.

» **IPV6 HTTP Support**

Enables or disables Ipv6 HTTP Support.

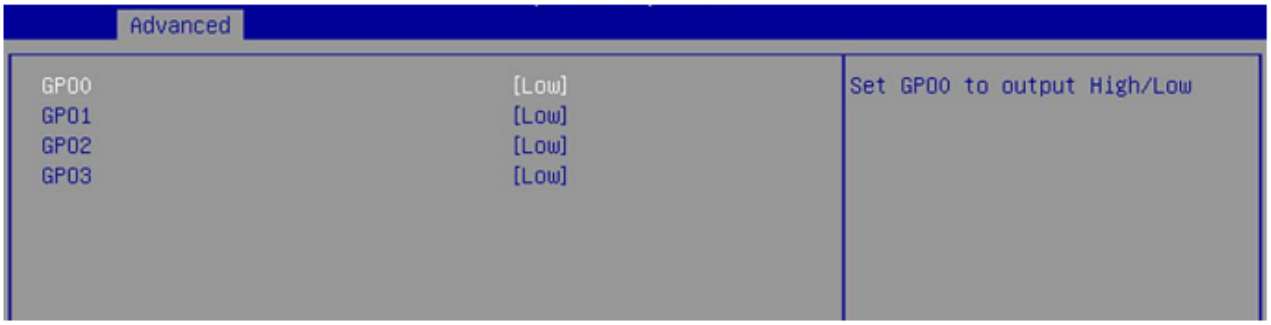
» **PXE boot wait time**

Use this option to specify the wait time to press the ESC key to abort the PXE boot. Press "+" or "-" on your keyboard to change the value. The default setting is 0.

» **Media detect count**

Use this option to specify the number of times media will be checked. Press "+" or "-" on your keyboard to change the value. The default setting is 1.

3.5.9 GPIO Group Configuration

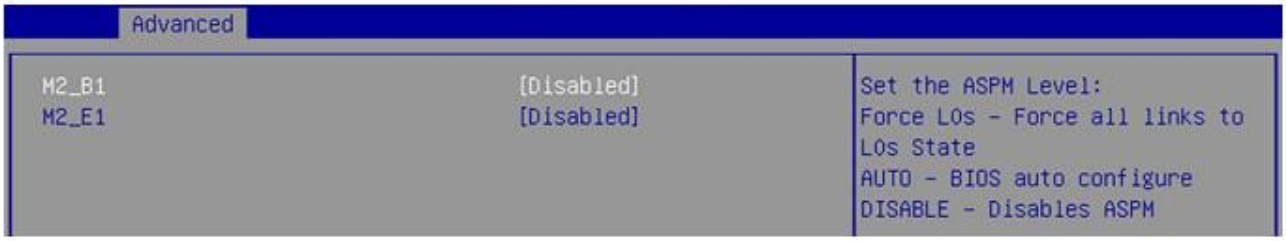


▶ GPO0 ~ GPO3

These settings control the operation mode of the specified GPIO.

3.5.10 PCIE ASPM settings

This menu provide settings for PCIe ASPM (Active State Power Management) level for different installed devices.



▶ M2_B1/ M2_E1

Sets PCI Express ASPM (Active State Power Management) state for power saving.

[L0s]	nitiate an automatic shutdown of the system to protect from potential damage due to overheating.
[L1]	Higher latency, lower power "standby" state (optional).
[L0sL1]	Activate both L0s and L1 support.
[Disabled]	Disable this function.

3.6 Boot

▶ Boot Option #1-2

This setting allows users to set the sequence of boot devices where BIOS attempts to load the disk operating system.

3.7 Security

3.7.1 Administrator Password

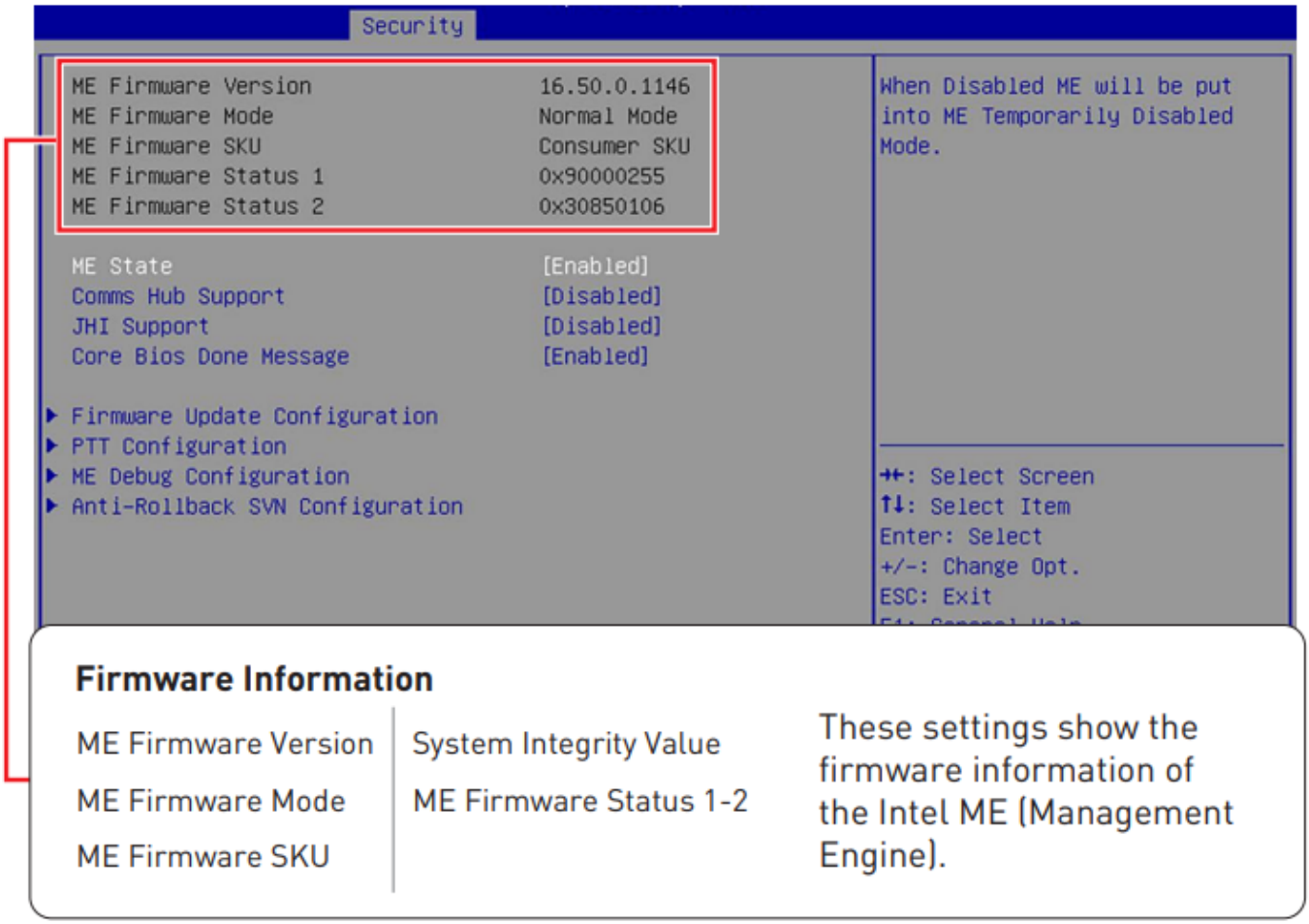
Administrator Password controls access to the BIOS Setup utility.

3.7.2 User Password

User Password controls access to the system at boot and to the BIOS Setup utility.

3.7.3 PCH-FW Configuration

This menu allows you to configure settings related to the PCH firmware.



▶ ME State

This menu controls the Intel® Management Engine State (ME state) parameters, which provides various management and security capabilities. The following items will display when ME State is enabled.

▶ Comms Hub Support

Enables or disables the communications hub support.

▶ JHI Support

Enables or disables JHI Support. JHI stands for Intel® Dynamic Application Loader Host Interface Service (Intel® DAL HIS) and is the engineering name for this feature. Enabling JHI Support in the BIOS settings allows the system to utilize this interface for communication between trusted applications and hostbased applications.

▶ Core BIOS Done Message

Enables or disables Core BIOS Done Message sent to ME.

▶ Firmware Update Configuration

This menu will display when ME State is enabled.

» ME FW Image Re-Flash

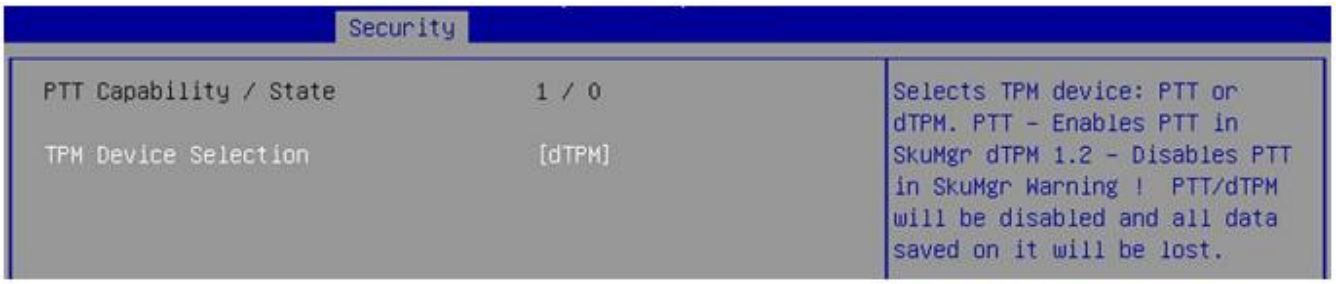
Enables or disables the ME Firmware Image Re-flashing.

» Local FW Update

Enables or disables the capability to perform a firmware update of the ME locally.

▶ PTT Configuration

Intel® Platform Trust Technology (PTT) is a platform functionality for credential storage and key management used by Microsoft Windows. This menu will display when ME State is enabled.



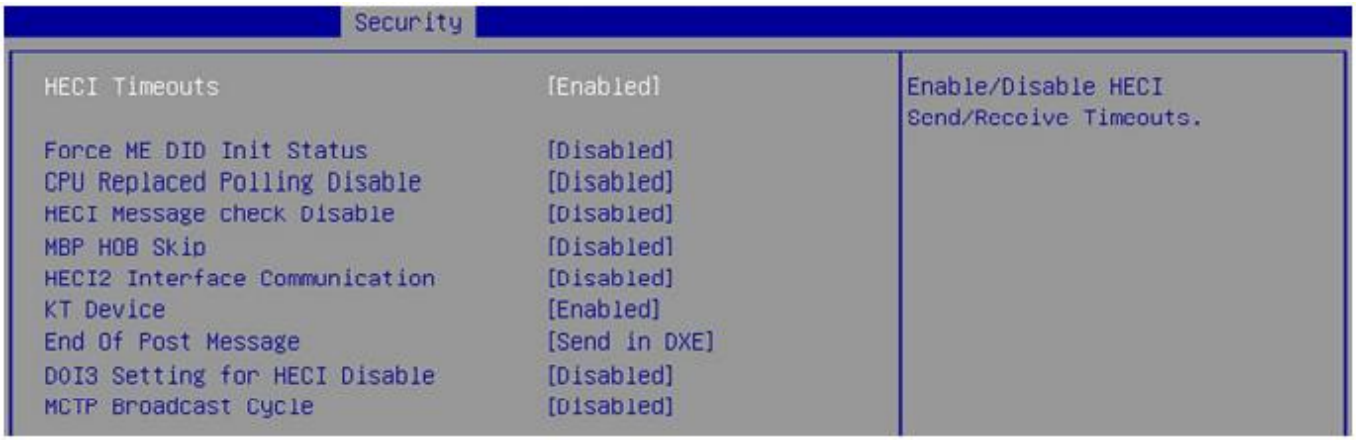
» TPM Device Selection

Select TPM (Trusted Platform Module) devices from PTT or dTPM (Discrete TPM).

[PTT]	Enables PTT in SkuMgr.
[dTPM]	Disables PTT in SkuMgr. Warning! PTT/ dTPM will be disabled and all data saved on it will be lost.

▶ ME Debug Configuration

This menu allows you to configure debug-related options for the Intel® Management Engine (ME). This menu will display when ME State is enabled.



» HECI Timeouts

This setting enables/ disables the HECI (Host Embedded Controller Interface) send/ receive timeouts.

» Force ME DID Init Status

Forces the ME Device ID (DID) initialization status value.

» CPU Replaced Polling Disable

Setting this option disables the CPU replacement polling loop.

» HECI Message Check Disable

This setting disables message check for BIOS boot path when sending messages.

» MBP HOB Skip

Setting this option will skip ME's Memory-Based Protection (MBP) H0B region.

» HECI2 Interface Communication

This setting Adds/ Removes HECI2 device from PCI space.

» KT Device

Enables or disables Key Transfer (KT) Device.

» End of Post Message

Enables or disables End of Post Message sent to ME.

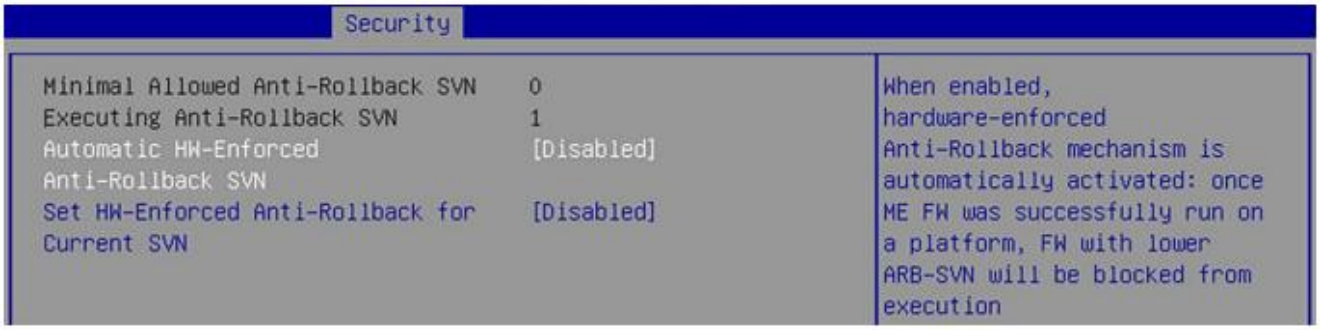
» DOI3 Setting for HECI Disable

Setting this option disables setting DOI3 bit for all HECI devices.

» MCTP Broadcast Cycle

Enables or disables Management Component Transport Protocol (MCTP) Broadcast Cycle.

▶ Anti-Rollback SVN Configuration



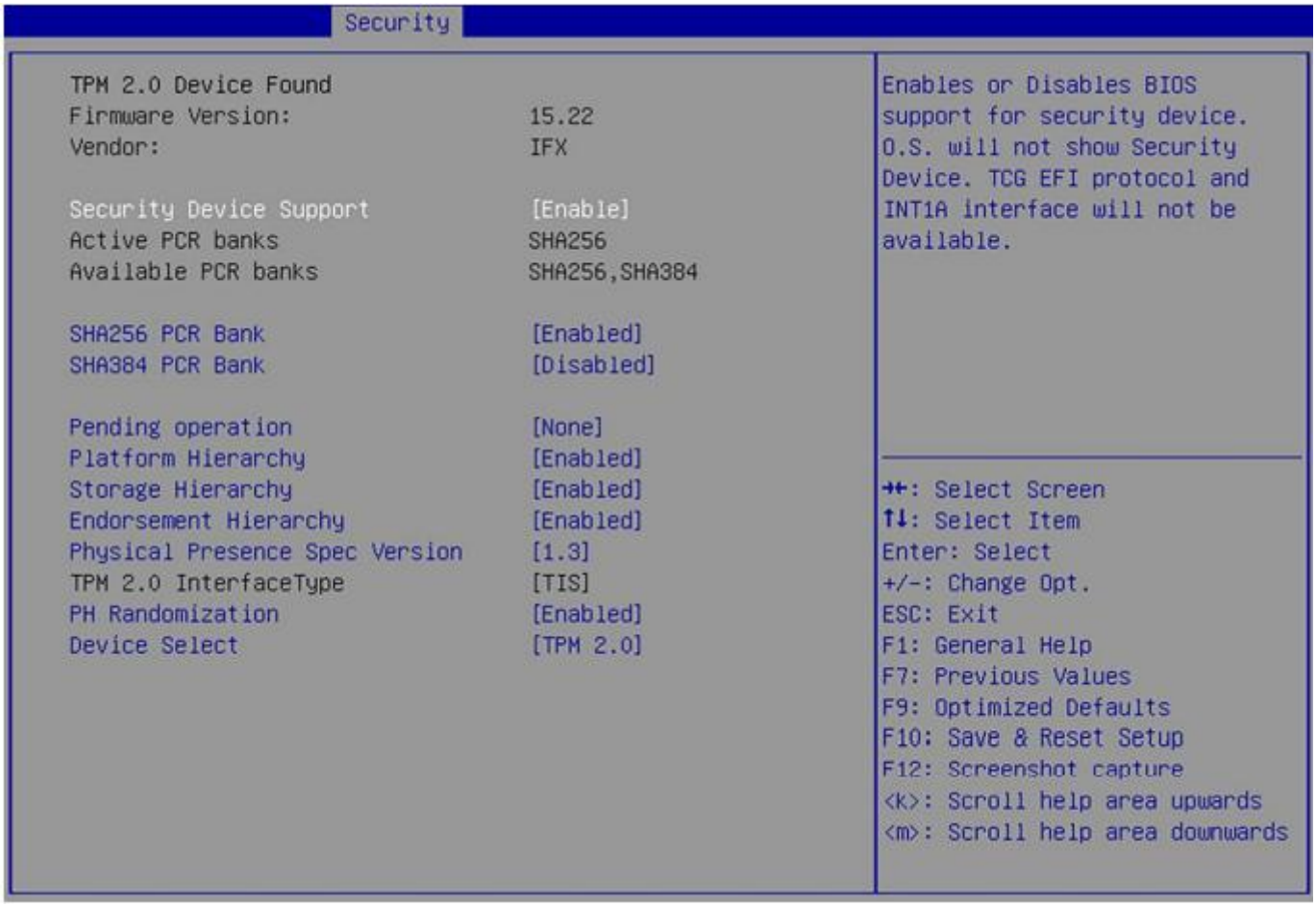
» Automatic HW-Enforced Anti-Rollback SVN

Setting this item enables will automatically activate the hardware-enforced antirollback protection based on the Secure Version Number (SVN). Once enabled, the hardware will enforce that only firmware updates with an SVN equal to or higher
than the current SVN can be installed.

» Set HW-Enforced Anti-Rollback for Current SVN

Enable HW ERB mechanism for current ARB SVN value. FW with lower ARB-SVN will be blocked from execution. The value will be restored to disable after the command is sent. This item will display when Automatic HW-Enforced AntiRollback SVN is enabled.

3.7.4 Trusted Computing



▶ Security Device Support

This item enables or disables BIOS support for security device. When set to [Disable], the OS will not show security device.

▶ SHA256/ SHA384 PCR Bank

These settings enables or disables the SHA256 PCR Bank and SHA384 PCR Bank.

▶ Pending Operation

When Security Device Support is set to [Enable], Pending Operation will appear.

It is advised that users should routinely back up their TPM secured data.

[TPM Clear]	Clear all data secured by TPM.
[None]	Discard the selection.

▶ Platform Hierarchy, Storage Hierarchy, Endorsement Hierarchy

These settings enables or disables the Platform Hierarchy, Storage Hierarchy and Endorsement Hierarchy.

▶ Physical Presence Spec Version

This settings show the Physical Presence Spec Version.

▶ TPM 2.0 Interface Type

This setting shows the TPM 2.0 Interface Type.

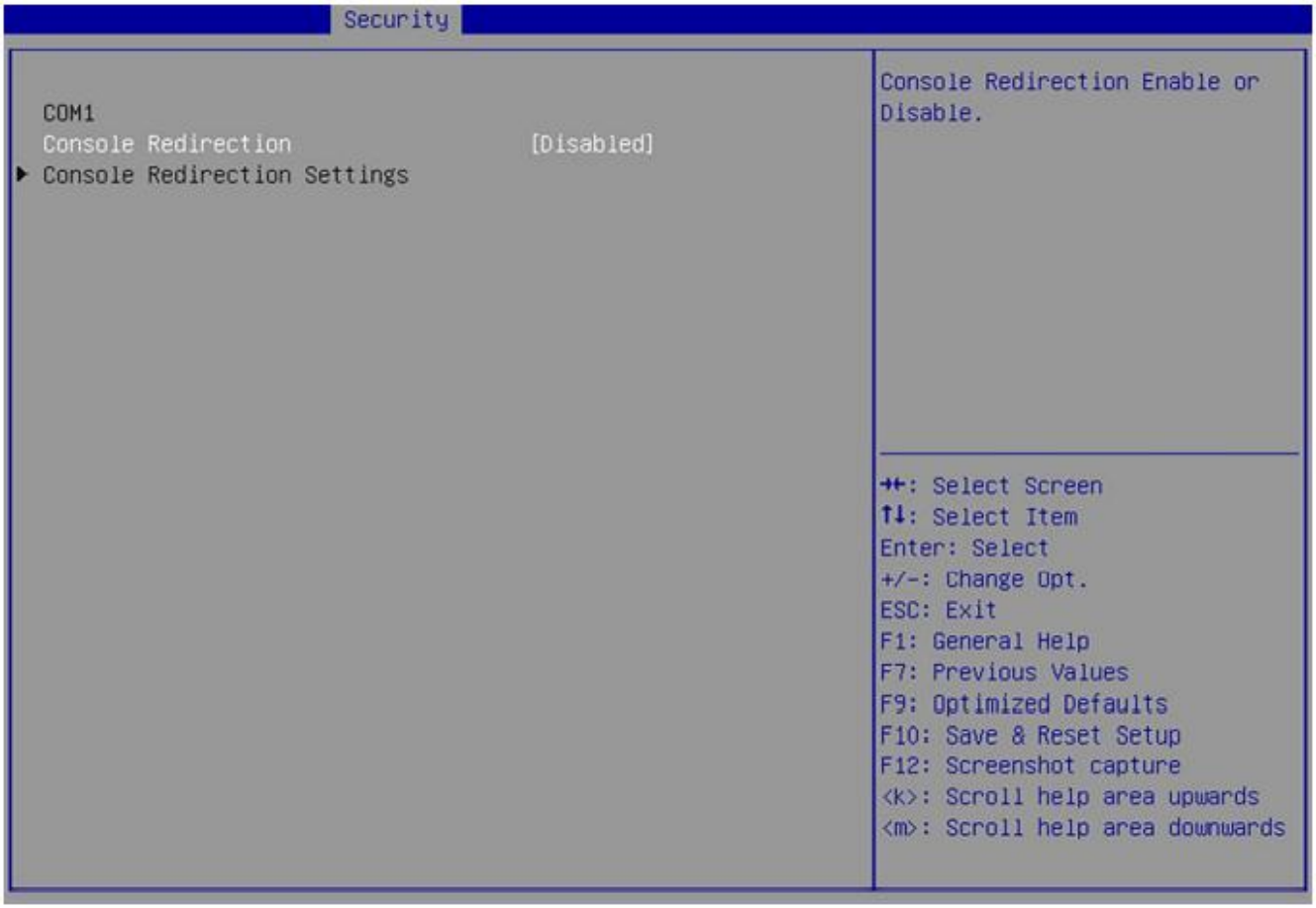
▶ PH Randomization

Enables or disables Platform Hierarchy (PH) Randomization.

▶ Device Select

Select your TPM device through this setting.

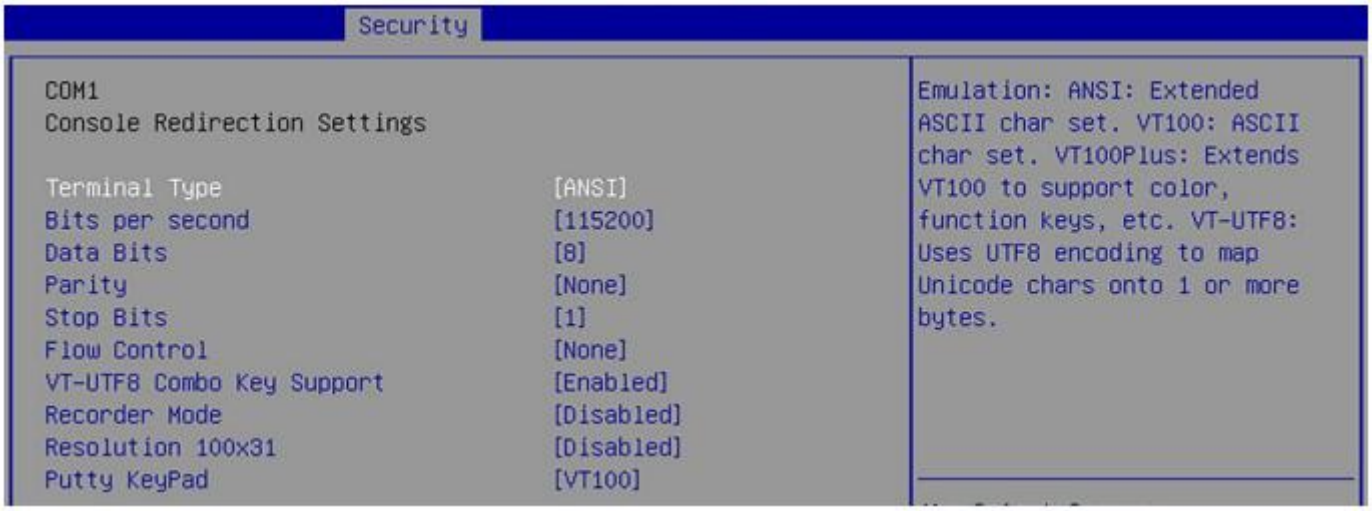
3.7.5 Serial Port Console Redirection



▶ Console Redirection

Console Redirection operates in host systems that do not have a monitor and keyboard attached. This setting enables or disables the operation of console redirection. When set to [Enabled], BIOS redirects and sends all contents that should be displayed on the screen to the serial COM port for display on the terminal screen. Besides, all data received from the serial port is interpreted as keystrokes from a local keyboard.

▶ Console Redirection Settings (COM1)



» Terminal Type
To operate the system's console redirection, you need a terminal supporting ANSI terminal protocol and a RS-232 null modem cable connected between the host system and terminal(s). You can select emulation for the terminal from this setting.

[ANSI]	Extended ASCII character set.
[VT100]	ASCII character set.
[VT100Plus]	Extends VT100 to support color, function keys, etc.
[VT-UTF8]	Uses UTF8 encoding to map Unicode characters onto one or more bytes.

» Bits per second, Data Bits, Parity, Stop Bits

These setting specifies the transfer rate (bits per second, data bits, parity, stop bits) of Console Redirection.

» Flow Control

Flow control is the process of managing the rate of data transmission between two nodes. It's the process of adjusting the flow of data from one device to another to ensure that the receiving device can handle all of the incoming data. This is particularly important where the sending device is capable of sending data much faster than the receiving device can receive it.

» VT-UTF8 Combo Key Support

This setting enables or disables the VT-UTF8 combination key support for ANSI/VT100 terminals.

» Recorder Mode, Resolution 100x31

These settings enables or disables the recorder mode and the resolution 100x31.

» Putty KeyPad

PuTTY is a terminal emulator for Windows. This setting controls the numeric keypad for use in PuTTY.

3.7.6 Secure Boot

▶ Secure Boot

Secure Boot function can be enabled only when the Platform Key (PK) is enrolled and running accordingly.

▶ Secure Boot Mode

[Standard]	The system will automatically load the secure keys from BIOS.
[Custom]	Allows user to configure the secure boot settings and manually load the secure keys.

▶ Restore Factory Keys

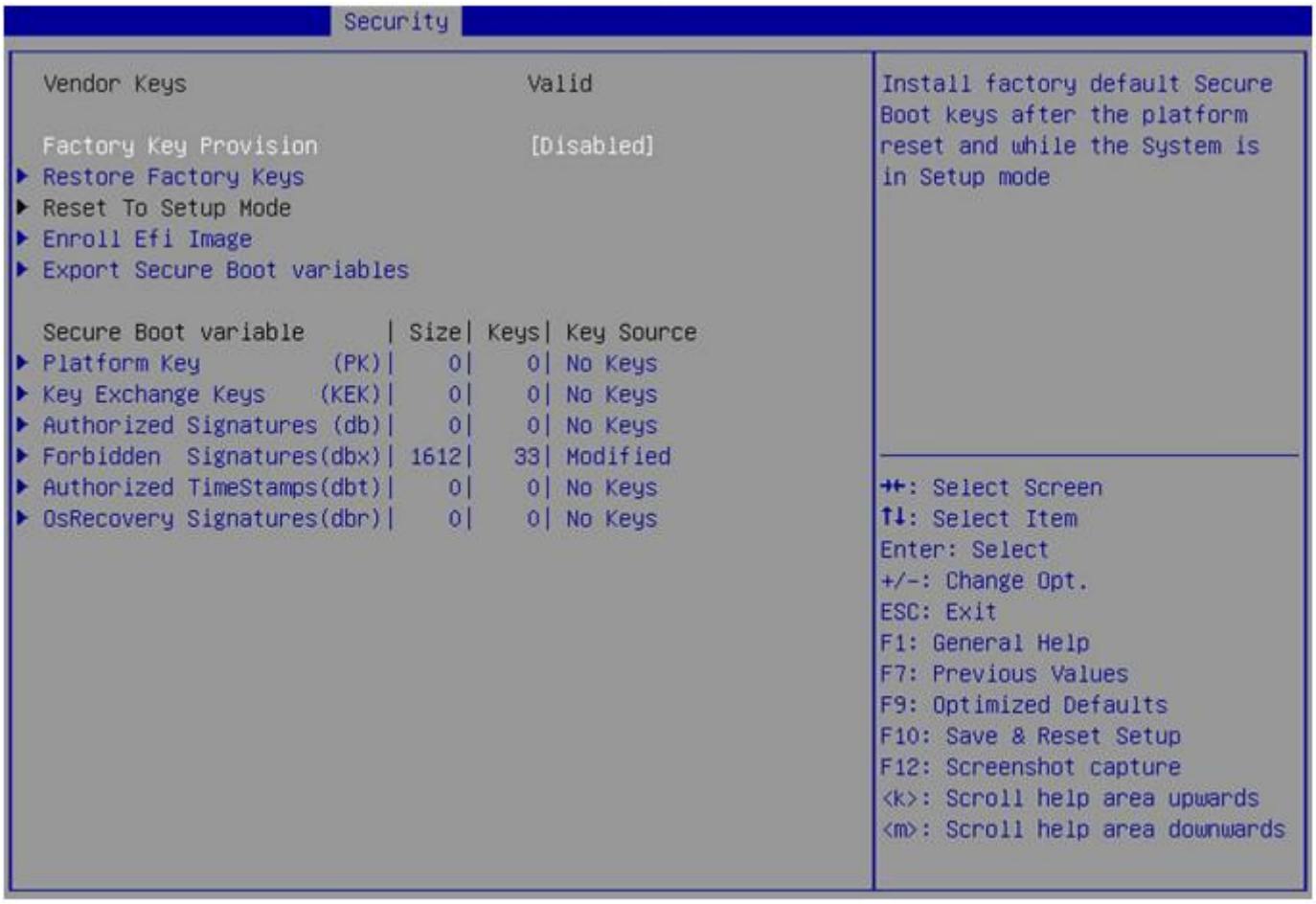
Allows you to restore all factory default keys. The settings will be applied after reboot or at the next reboot. This item appears when "Secure Boot Mode" sets to [Custom].

▶ Reset to setup Mode

Allows you to delete all the Secure Boot keys (PK,KEK,db,dbt,dbx). The settings will be applied after reboot or at the next reboot. This item appears when “Secure Boot Mode” sets to [Custom].

▶ Key Management

Press Enter key to enter the sub-menu. Manage the secure boot keys. This item appears when "Secure Boot Mode" sets to [Custom].



» Platform Key (PK):
The Platform Key (PK) can protect the firmware from any un-authenticated changes. The system will verify the PK before your system enters the OS. Platform Key (PK) is used for updating KEK.
» Set New Key
Sets a new PK to your system.
» Delete Key
Deletes the PK from your system.
» Key Exchange Keys (KEK):
Key Exchange Key (KEK) is used for updating DB or DBX.
» Set New Key
Sets a new KEK to your system.
» Append Key
Loads an additional KEK from storage devices to your system.
» Delete Key
Deletes the KEK from your system.
» Authorized Signatures (db) :
Authorized Signatures (db) lists the signatures that can be loaded.
» Set New Key
Sets a new db to your system.

» Append Key

Loads an additional db from storage devices to your system.

» Delete Key

Deletes the db from your system.

» Forbidden Signatures (dbx):

Forbidden Signatures (dbx) lists the forbidden signatures that are not trusted and cannot be loaded.

» Set New Key

Sets a new dbx to your system.

» Append Key

Loads an additional dbx from storage devices to your system.

» Delete Key

Deletes the dbx from your system.

» Authorized TimeStamps (dbt):

Authorized TimeStamps (dbt) lists the authentication signatures with authorization time stamps.

» Set New Key

Sets a new DBT to your system.

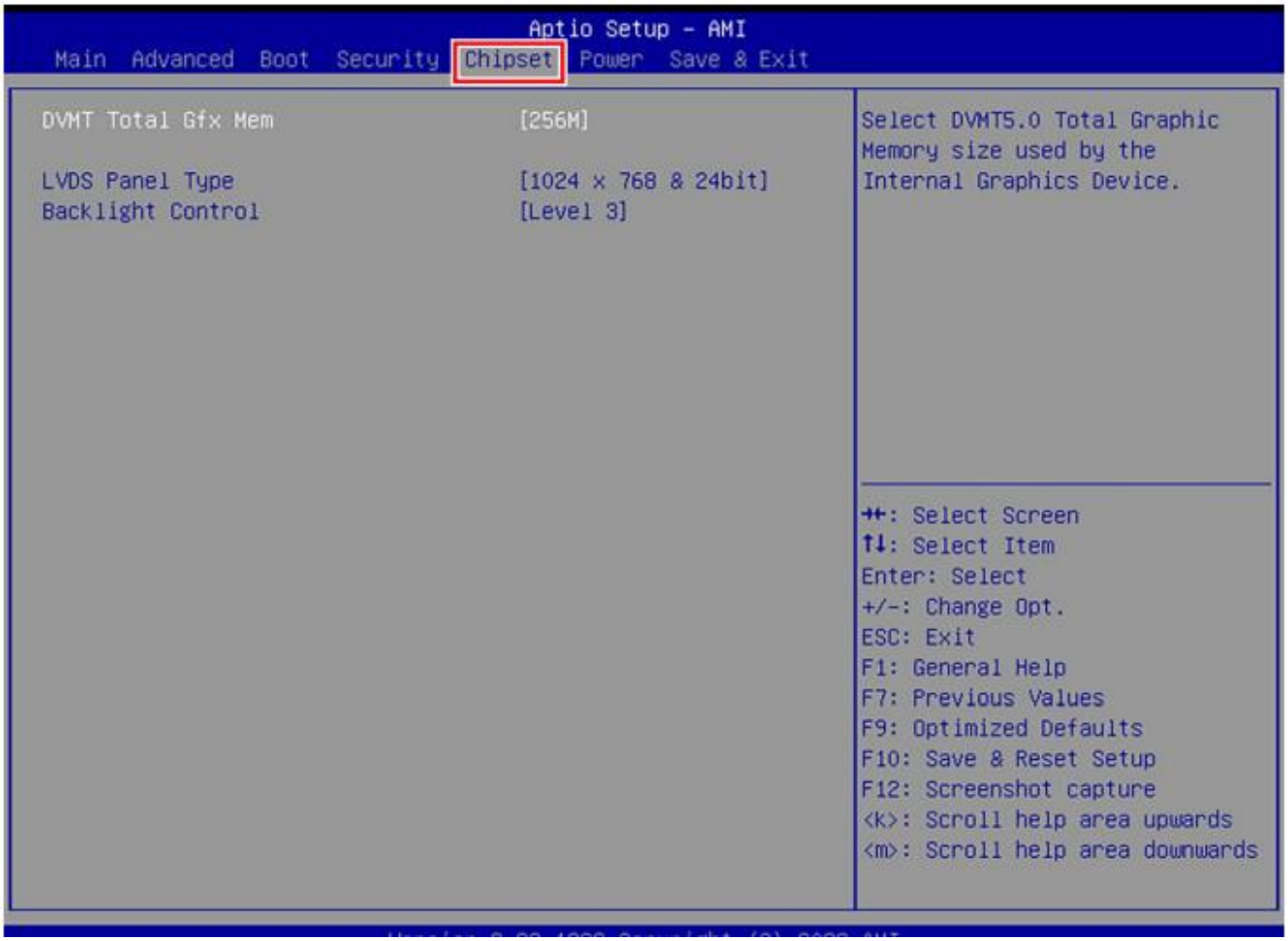
» Append Key

Loads an additional DBT from storage devices to your system.

» OsRecovery Singnatures (dbr):

Lists the available signatures for OS recovery.

3.8 Chipset



▶DVMT Total Gfx Mem

This setting specifies the total graphics memory size for Dynamic Video Memory Technology (DVMT).

▶LVDS Panel Type

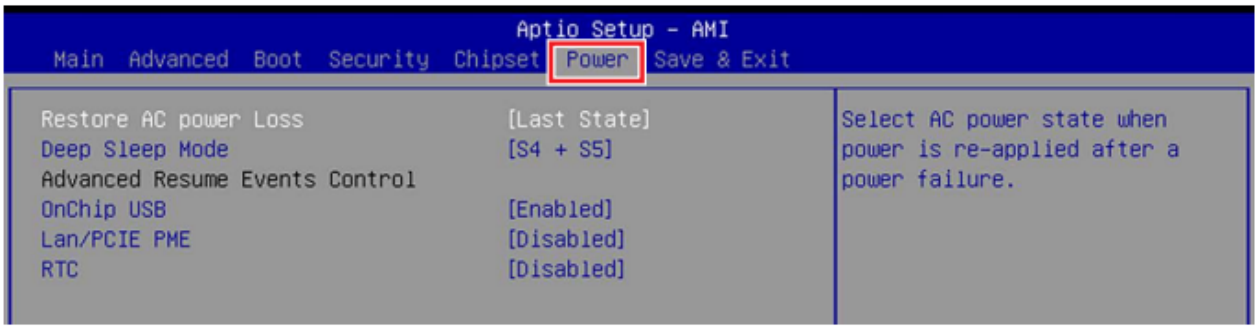
This setting specifies the LVDS Panel's resolution and distribution formats.

▶Backlight Control

This setting controls the intensity of the LED's backlight output. When lighting conditions are brighter, set it high for a clearer image and low when it is darker.

LED's backlight output	
[Level 1]	20%
[Level 2]	40%
[Level 3]	60%
[Level 4]	80%
[Level 5]	100%

3.9 Power



▶Restore AC Power Loss

This setting specifies whether your system will reboot after a power failure or interrupt occurs. Available settings are:

[Power Off]	Leaves the computer in the power off state.
[Power On]	Leaves the computer in the power on state.
[Last State]	Restores the system to the previous status before power failure or interrupt occurred.

▶ Deep Sleep Mode

The setting enables or disables the Deep S5 power saving mode. S5 is almost the same as G3 Mechanical Off, except that the PSU still supplies power, at a minimum, to the power button to allow return to S0. A full reboot is required. No previous content is retained. Other components may remain powered so the computer can "wake" on input from the keyboard, clock, modem, LAN, or USB device.

▶ OnChip USB

The item allows the activity of the OnChip USB device to wake up the system from S4/ S5 sleep state.

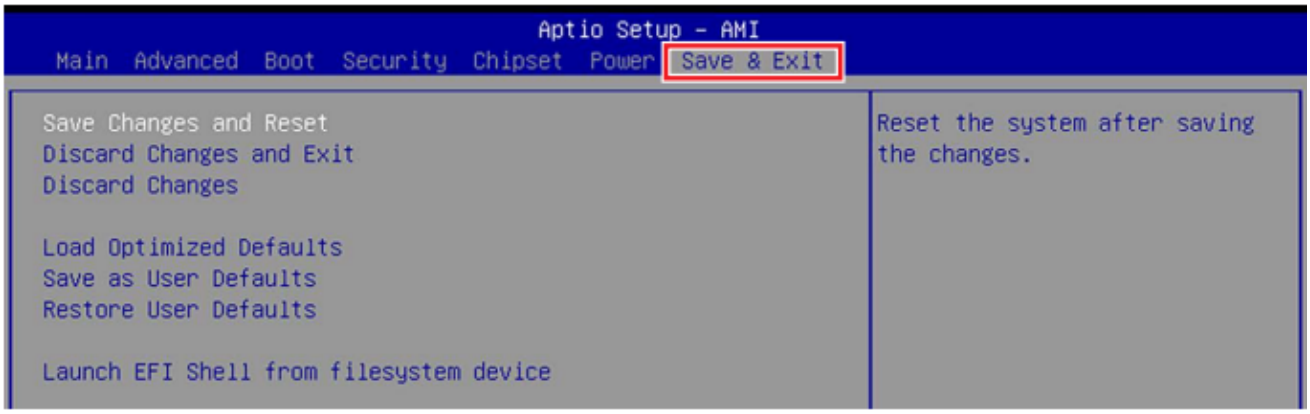
▶LAN/ PCIE PME

Enables or disables the system to be awakened from the power saving modes when activity or input signal of Intel LAN device and onboard PCIE PME is detected.

▶ RTC

When [Enabled], your can set the date and time at which the RTC (real-time clock) alarm awakens the system from suspend mode.

3.10 Save & Exit



▶Save Changes and Reset

Save changes to CMOS and reset the system.

▶Discard Changes and Exit

Abandon all changes and exit the Setup Utility.

▶Discard Changes

Abandon all changes.

▶Load Optimized Defaults

Use this menu to load the default values set by the motherboard manufacturer specifically for optimal performance of the motherboard.

▶Save as User Defaults

Save changes as the user's default profile.

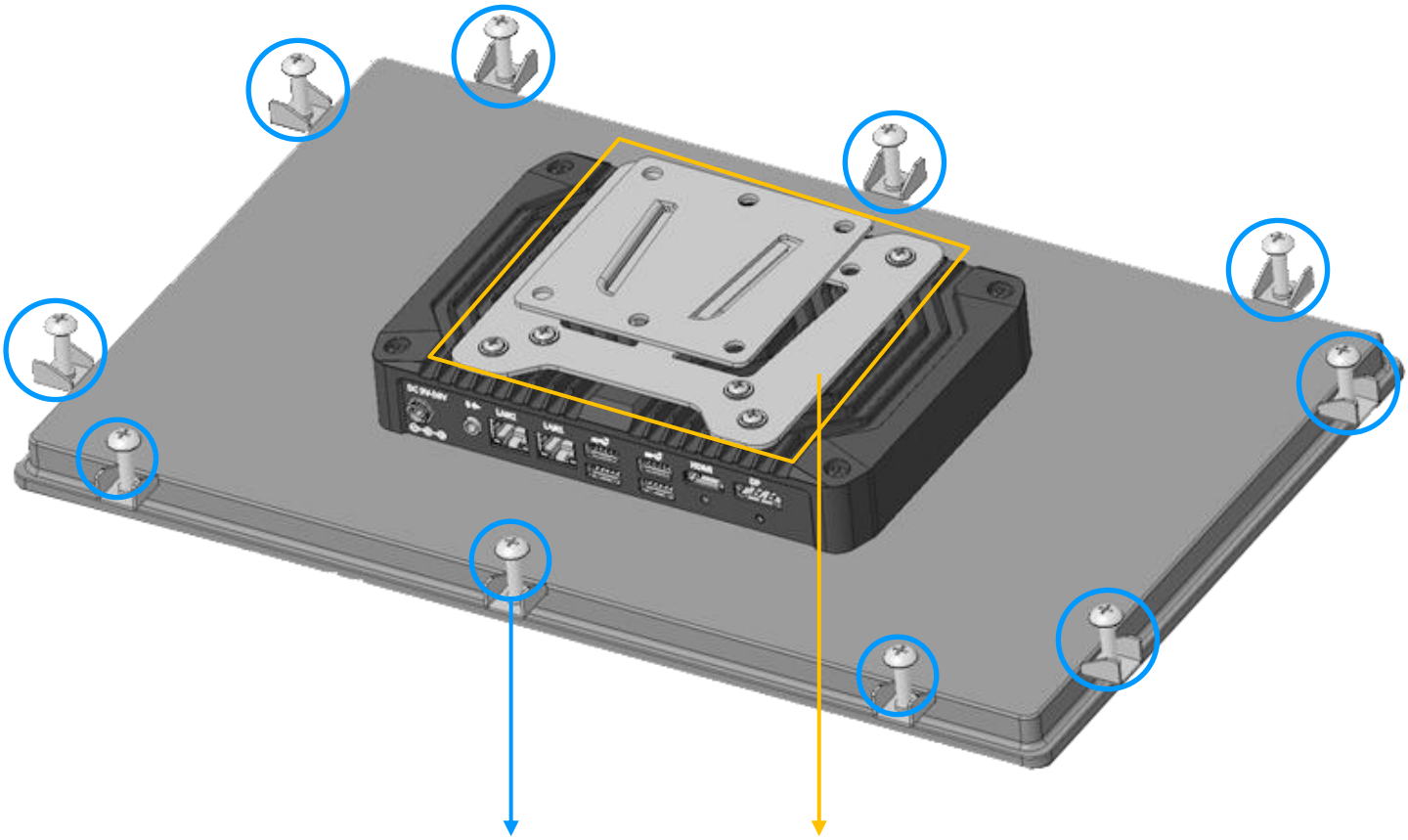
▶Restore User Defaults

Restore the user's default profile.

▶Launch EFI Shell from filesystem device

This setting helps to launch the EFI Shell application from one of the available file system devices.

VESA Mount / Panel Mount:



Panel mount bracket

VESA mount bracket
(75mm x 75mm/100mm x 100mm)

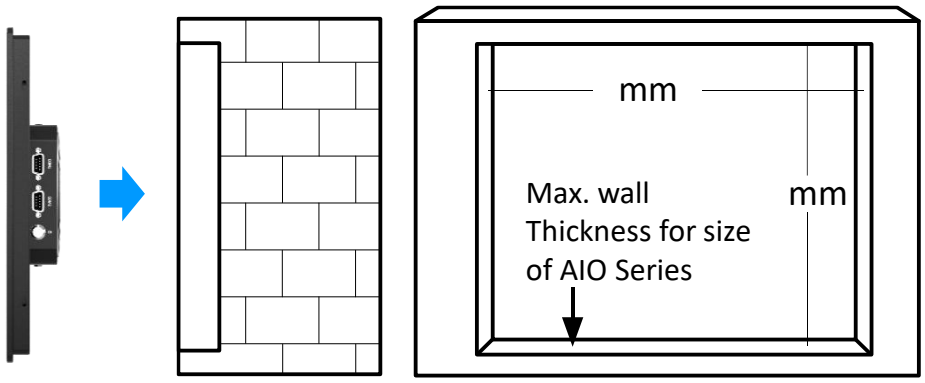
M4X6L x8 pcs

Model	Panel Mount Kit
AIO-W210-ADL	6
AIO-W215-ADL	10
AIO-W221-ADL	12

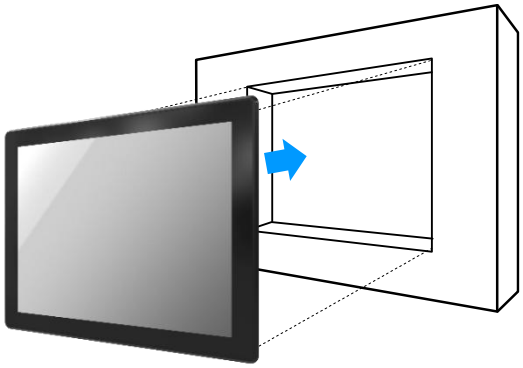
Mounting Guide

Flush Mount / Panel Mount:

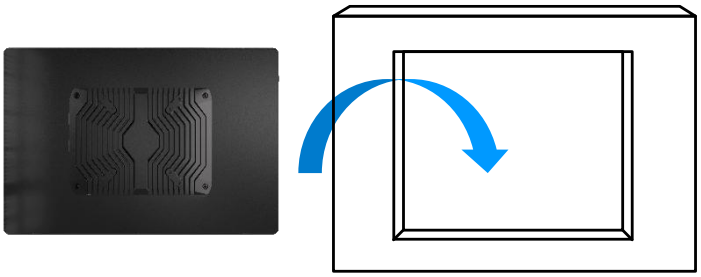
- Cut hole in the wall w/ dimensions according to the screen size you have purchased. Please refer to the next page for the list of cutout dimensions and max wall depths



- From the FRONT of the wall, place the AIO Panel PC with its rear (display screen forward) into the measured cutout hole.

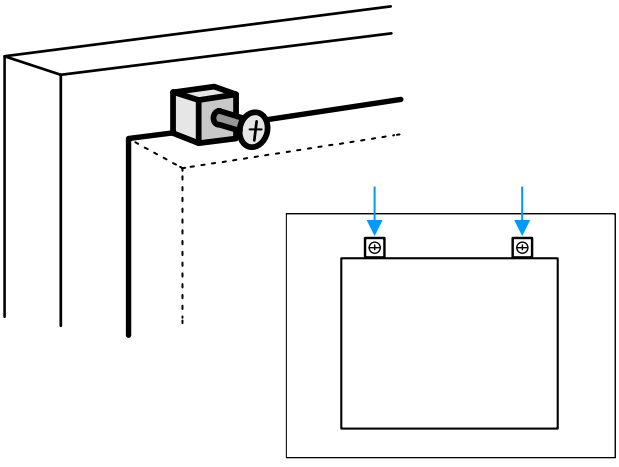


REAR



FRONT

- Install the mounting clips around the AIO and screw them in to secure against the wall. If the wall's thickness is greater than maximum wall thickness allowed, the clips will not fit. Please refer to the next page for the list of max wall depths



AIO Series

Model	Wall Cut-Out (W x H) Unit: mm	Max Wall Thickness (mm)
AIO-W210-ADL	249 x 163	7
AIO-W215-ADL	394 x 243	8
AIO-W221-ADL	528 x 318	11