

USER'S MANUAL

AIO-200-ASL-3L Series

All IN One Touch Panel PC



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Prefaces

Revision

Revision	Description	Date
1.0	Manual Released	2025/01/06

Disclaimer

All specifications and information in this User's Manual are believed to be accurate and up to date. C&T Solution Inc. does not guarantee that the contents herein are complete, true, accurate or non-misleading. The information in this document is subject to change without notice and does not represent a commitment on the part of C&T Solution Inc.

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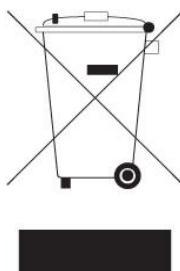
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Environmental Protection Announcement

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 by 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-ASL-3L 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
3-AI156040S10	AIO-W215 Panel Mount Bracket Kit
3-AI215040S10	AIO-W221 Panel Mount Bracket Kit
1-TPWR00118	3P Terminal Block(Female) To DC Plug

Available Models

Model No.	Description
AIO-W210-3L-N97	10.1" Full WXGA Capacitive All IN One Touchscreen Computer with Intel® Alder lake N97 Processor, 3x 2.5 GbE LAN
AIO-W210-3L-X7835RE	10.1" Full WXGA Capacitive All IN One Touchscreen Computer with Intel® x7835RE Processor, 3x 2.5 GbE LAN
AIO-W215-3L-N97	15.6" Full HD Capacitive All IN One Touchscreen Computer with Intel® Alder lake N97 Processor, 3x 2.5 GbE LAN
AIO-W215-3L-X7835RE	15.6" Full HD Capacitive All IN One Touchscreen Computer with Intel® x7835RE Processor, 3x 2.5 GbE LAN
AIO-W221-3L-N97	21.5" Full HD Capacitive All IN One Touchscreen Computer with Intel® Alder lake N97 Processor, 3x 2.5 GbE LAN
AIO-W221-3L-X7835RE	21.5" Full HD Capacitive All IN One Touchscreen Computer with Intel® x7835RE Processor, 3x 2.5 GbE LAN

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 Class A/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 30,000 Hours and 50,000 Hours



1.2 Hardware Specification

Display	AIO-W210-ASL-3L	AIO-W215-ASL-3L	AIO-W221-ASL-3L
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	12th Gen Intel® Alder Lake-N Processor N97, 6M Cache, up to 3.60 GHz, 4 core 12W - Intel® Atom® x7835RE Processor 6M Cache, up to 3.60 GHz, 8 core 12W
System Chipset	SoC integrated
LAN Chipset	GbE1: Intel i226V 2.5GbE LAN PXE Support GbE2: Intel i226V 2.5GbE LAN PXE Support GbE3: Intel i226V 2.5GbE LAN PXE Support
Audio Codec	Realtek ALC897 High Definition Audio CODEC
System Memory	1x 262-Pin DDR5 4800MHz SO-DIMM. Max. up to 16GB (Non-ECC)
BIOS	AMI uEFI 256MB SPI flash
Watchdog	Software Programmable Supports 1~255 sec. System Reset
TPM	TPM2.0

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 (Option)

Expansion

M.2	1x M.2 E Key Support WiFi 6E/Bluetooth (Option) 1x M.2 B Key Support NVMe/4G/5G (Option)
-----	---

I/O		Operating System	
DisplayPort	1x DP 1.4a up to 4096x2304 @60Hz	Windows	Windows 10 / Windows 11
HDMI	1x HDMI™ 1.4b up to 3840x2160 @30Hz	Linux	Linux Ubuntu 22.04
COM	- COM 1: RS-232/422/485 - COM 2: RS-232		
USB	2x USB 3.2 Gen 2 (10 Gbps)		
LAN	3x 2.5GbE LAN		
SIM	1x Dual Nano SIM		
Others	Support up to 6x Antenna (optional)		

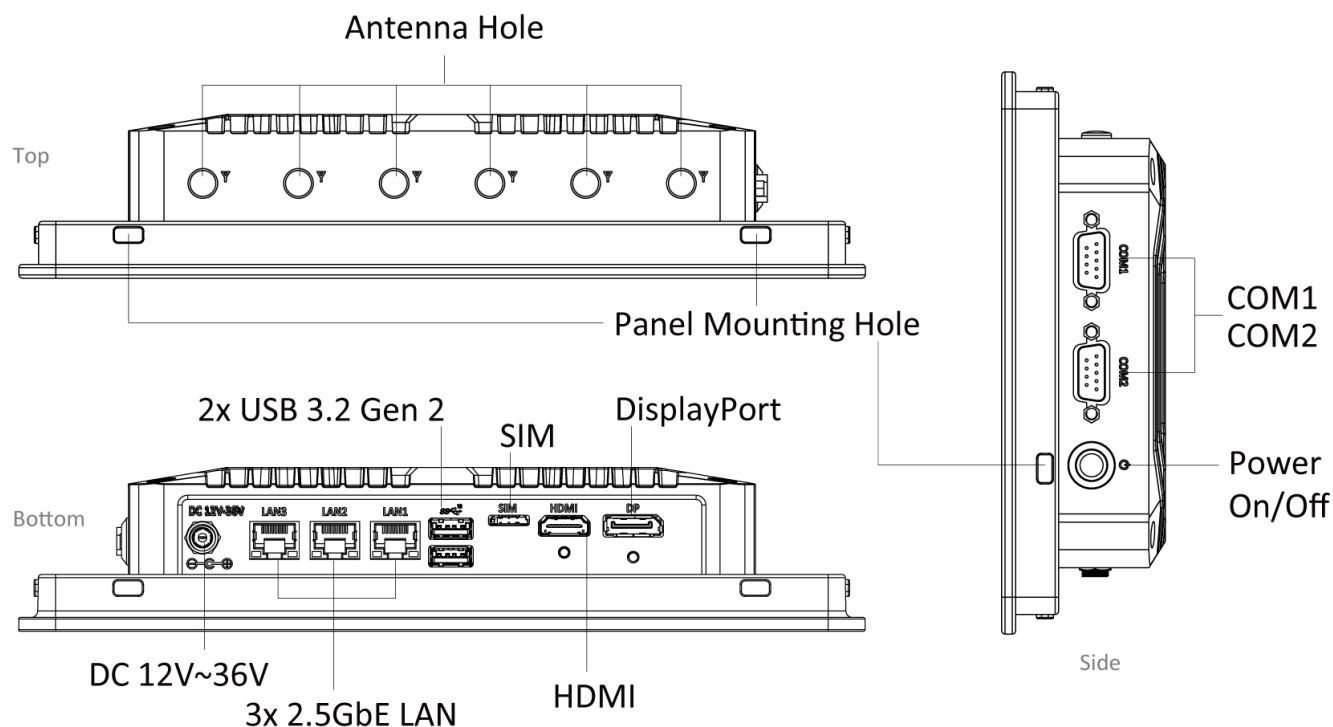
Power	
Power Adapter	60W (12V 5A, Default)
Power Supply Voltage	DC 12~36V
Power Connector	DC Jack 5.5mm/2.5mm

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 Class A, CB, UL Listed, 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-ASL-3L : 256 (W) x 170 (H) x 50 (D) mm - AIO-W215-ASL-3L: 400 (W) x 249 (H) x 50 (D) mm - AIO-W221-ASL-3L : 538 (W) x 329 (H) x 62 (D) mm
Weight	- AIO-W210-ASL-3L : 1.4 Kg - AIO-W215-ASL-3L : 2.3 Kg - AIO-W221-ASL-3L : 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-ASL-3L



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

DC IN

Used to plug a DC power input with terminal Block

COM port

COM 1: RS-232/422/485

COM 2: RS-232

SIM

Used to insert Dual Nano SIM card

LAN port

Used to connect the system to a local area network

DisplayPort

Used to connect a DisplayPort monitor

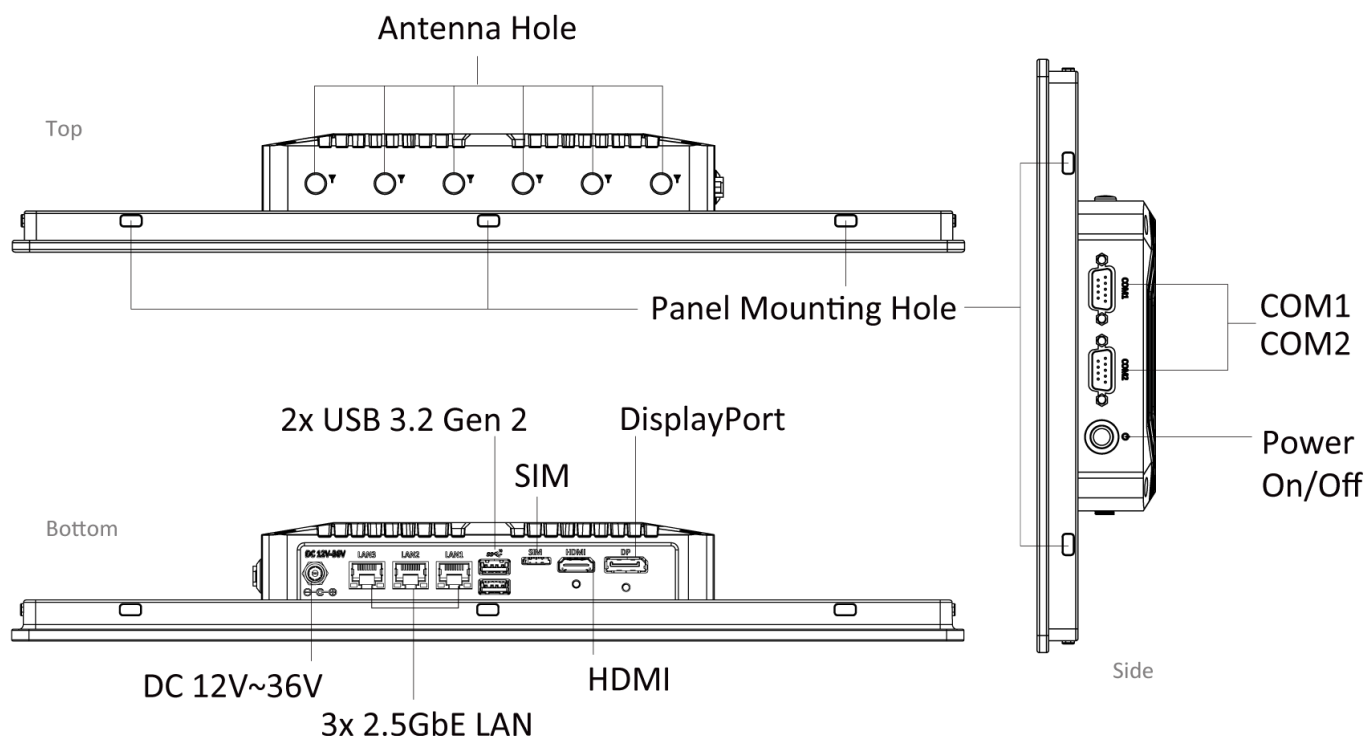
HDMI

Used to connect a HDMI monitor

Antenna hole

Used to connect an antenna for optional WiFi module

1.3.2 AIO-W215-ASL-3L



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

DC IN

Used to plug a DC power input with terminal Block

COM port

COM 1: RS-232/422/485

COM 2: RS-232

SIM

Used to insert Dual Nano SIM card

LAN port

Used to connect the system to a local area network

DisplayPort

Used to connect a DisplayPort monitor

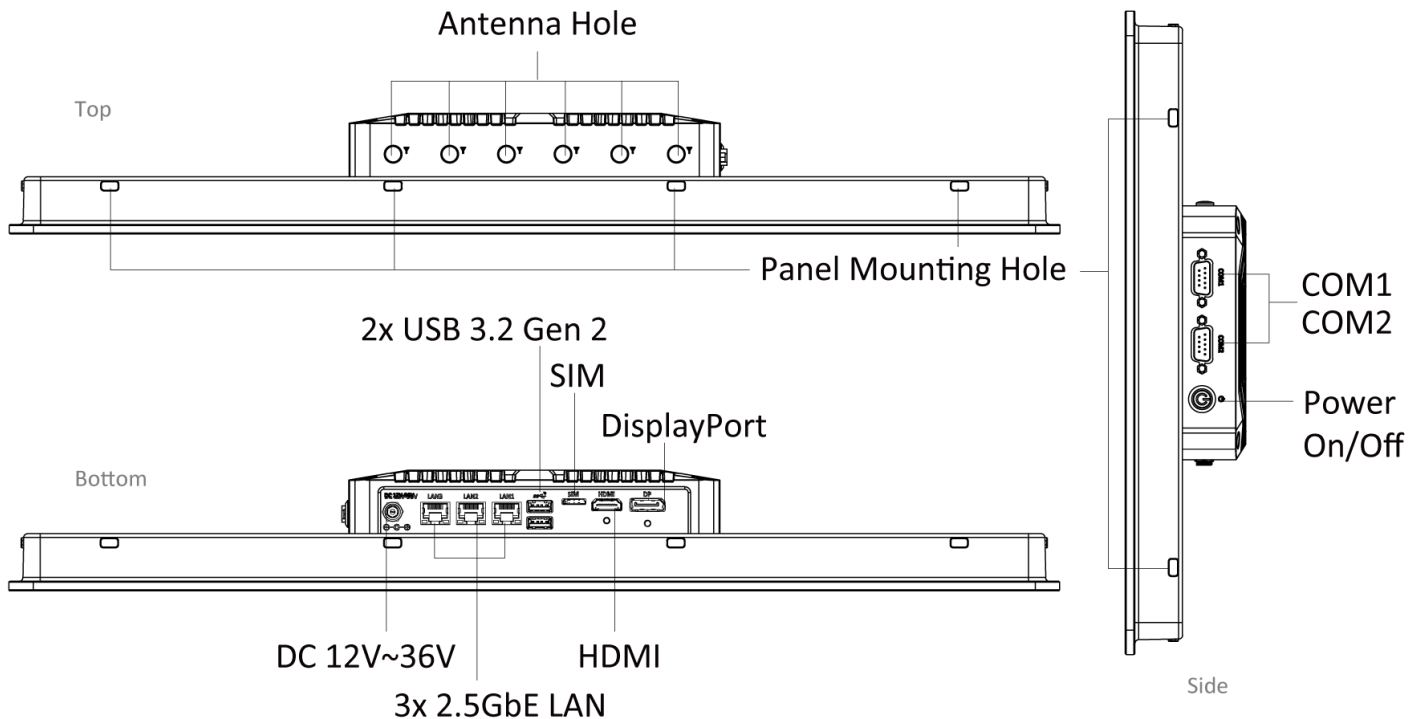
HDMI

Used to connect a HDMI monitor

Antenna hole

Used to connect an antenna for optional WiFi module

1.3.3 AIO-W221-ASL-3L



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

DC IN

Used to plug a DC power input with terminal Block

COM port

COM 1: RS-232/422/485

COM 2: RS-232

SIM

Used to insert Dual Nano SIM card

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

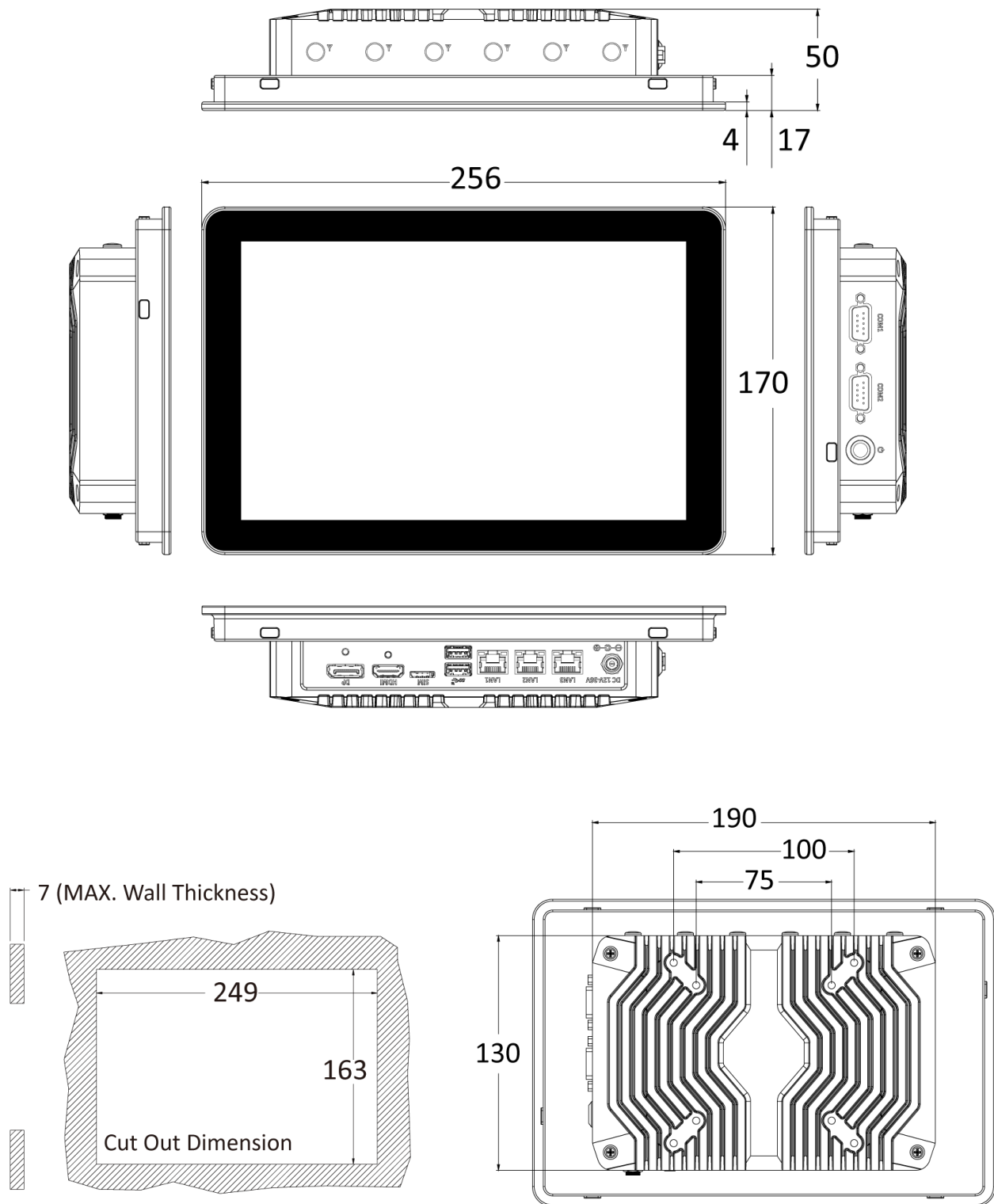
Antenna hole

Used to connect an antenna for optional WiFi module

1.4 Mechanical Dimensions

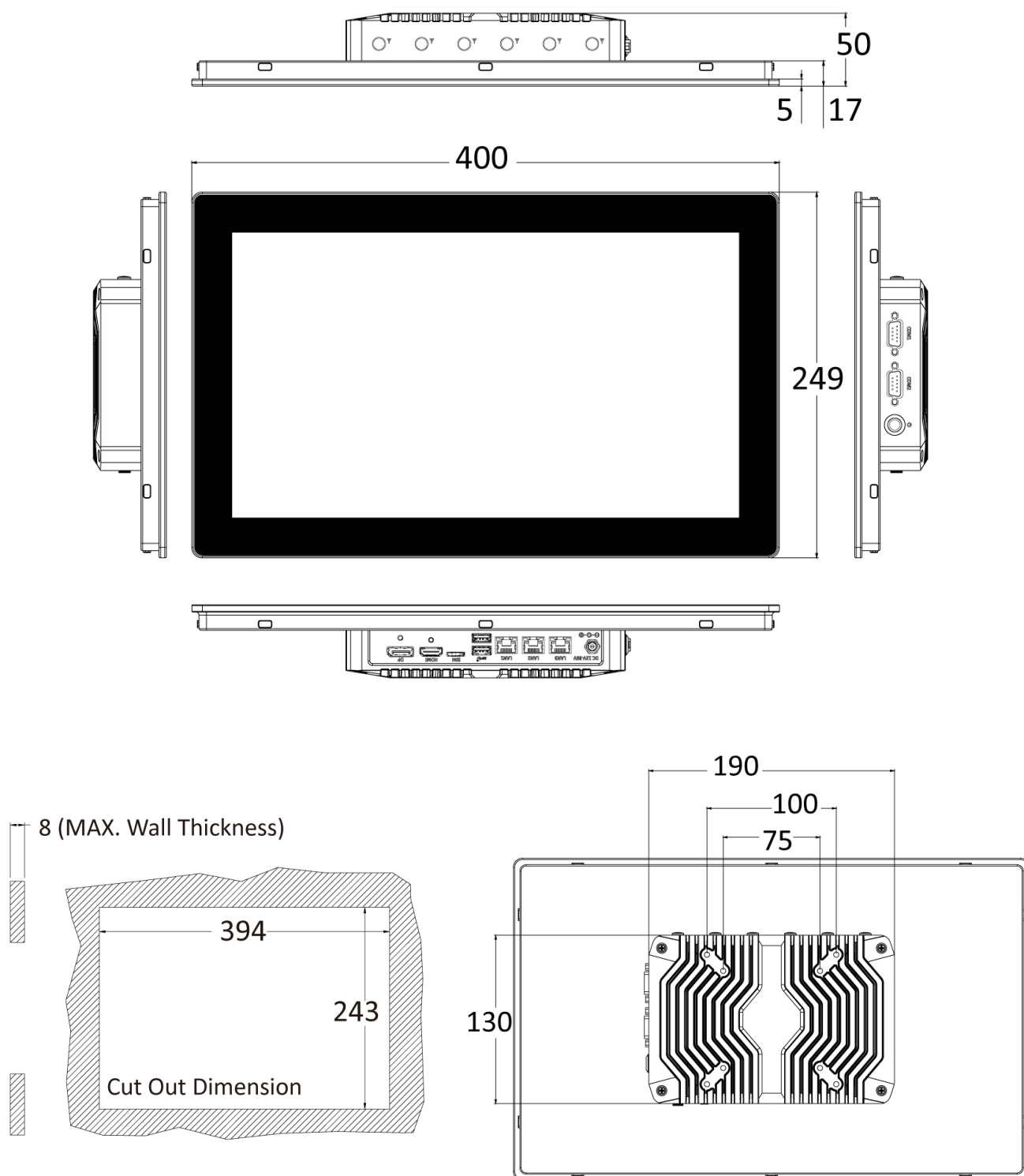
1.4.1 AIO-W210-ASL-3L

Unit: mm



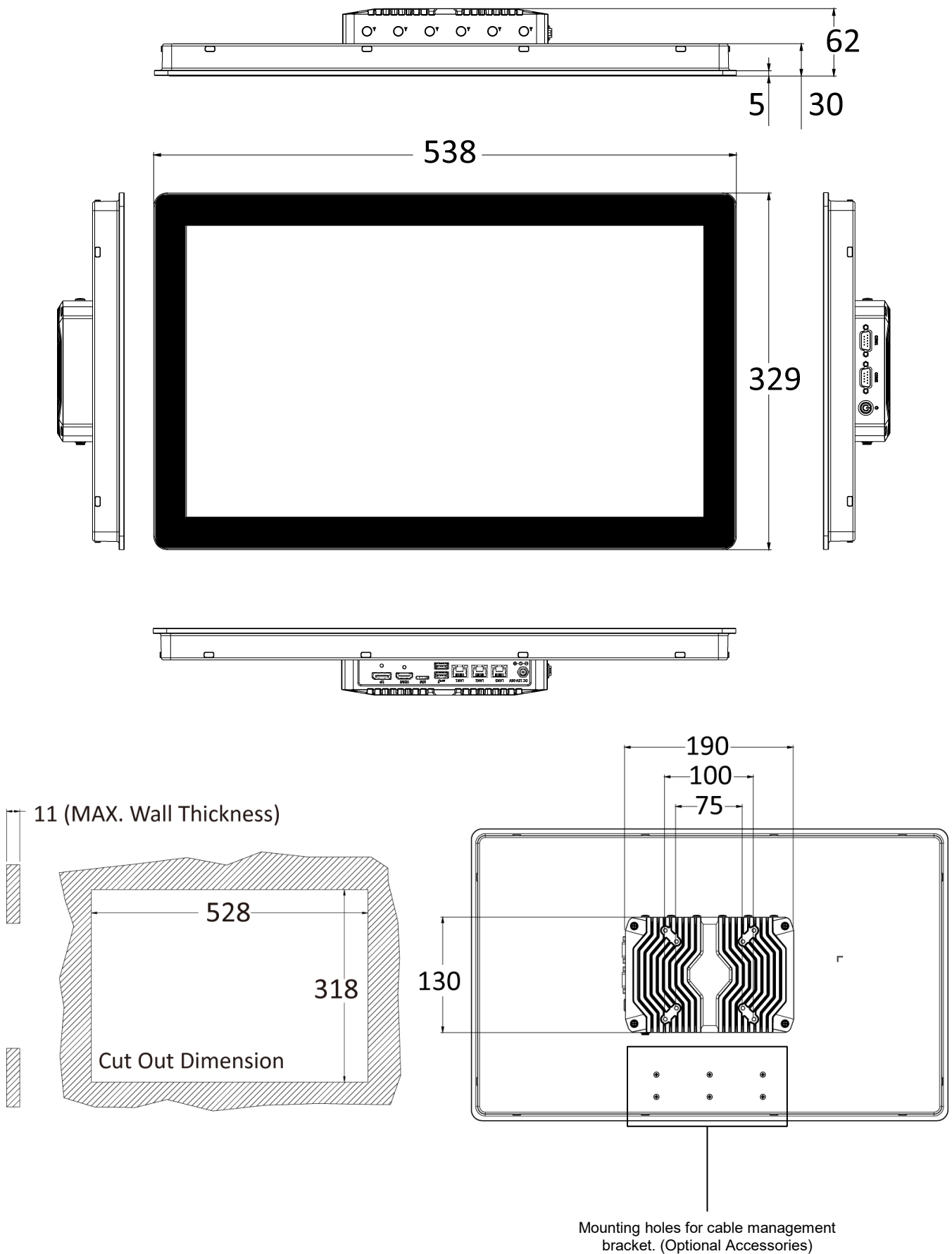
1.4.2 AIO-W215-ASL-3L

Unit: mm



1.4.3 AIO-W221-ASL-3L

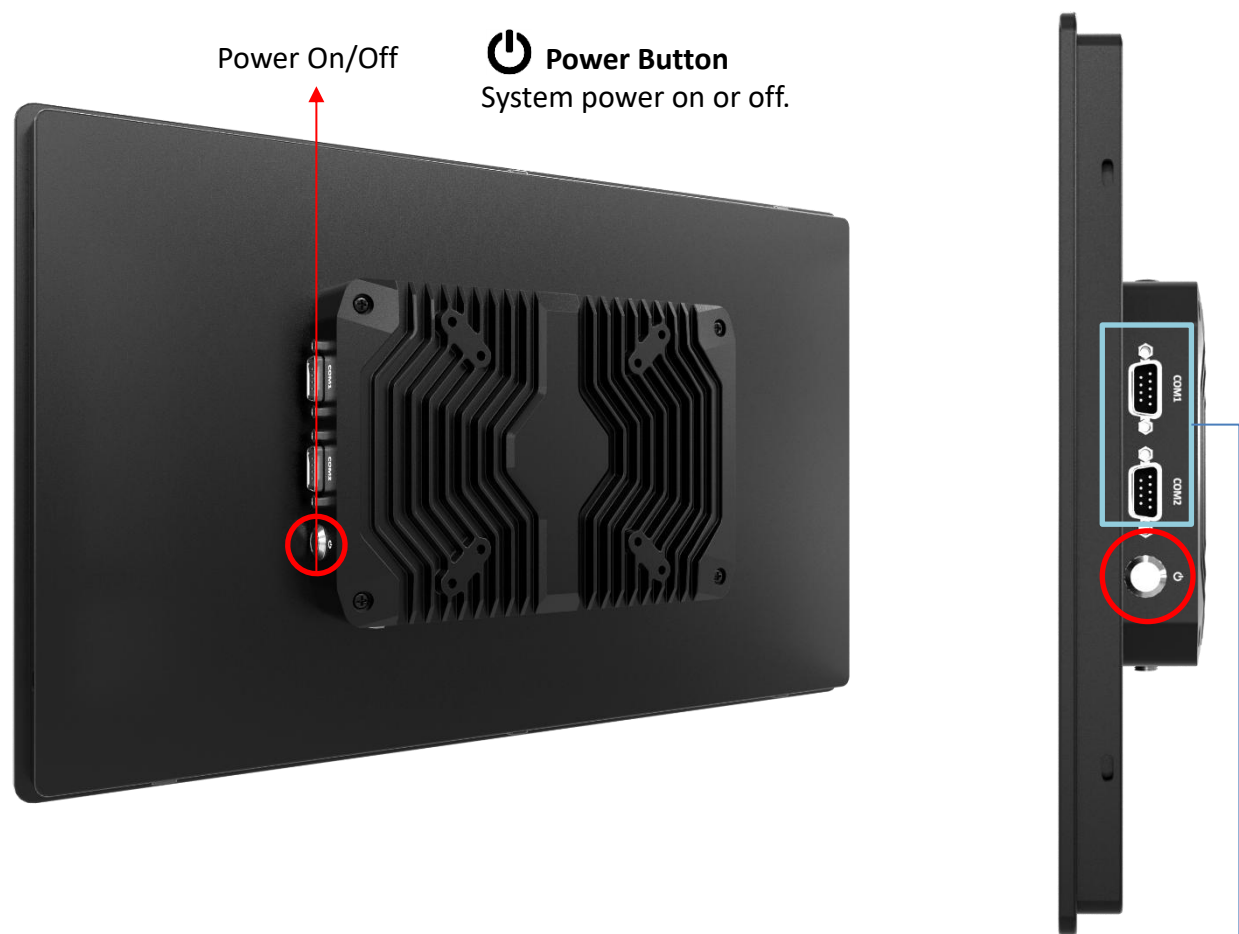
Unit: mm



Chapter 2

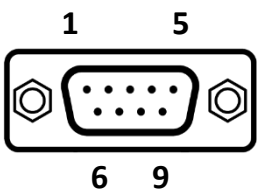
Panel Controls

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	VCC_COM	VCC_COM



COM1

RS232			RS422			RS485		
PIN	SIGNAL	DESCRIPTION	PIN	SIGNAL	DESCRIPTION	PIN	SIGNAL	DESCRIPTION
1	NDCD	Data Carrier Detect	1	422 TXD-	Transmit Data, Negative	1	TXD-	Transmit Data, Negative
2	NSIN	Signal In	2	422 TXD+	Receive Data, Positive	2	TXD+	Transmit Data, Positive
3	NSOUT	Signal Out	3	422 RXD+	Transmit Data, Positive	3	NC	No Connection
4	NDTR	Data Terminal Ready	4	422 RXD-	Receive Data, Negative	4	NC	No Connection
5	GND	Signal Ground	5	GND	Signal Ground	5	GND	Signal Ground
6	NDSR	Data Set Ready	6	NC	No Connection	6	NC	No Connection
7	NRTS	Request To Send	7	NC	No Connection	7	NC	No Connection
8	NCTS	Clear To Send	8	NC	No Connection	8	NC	No Connection
9	VCC_COM	VCC_COM	9	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

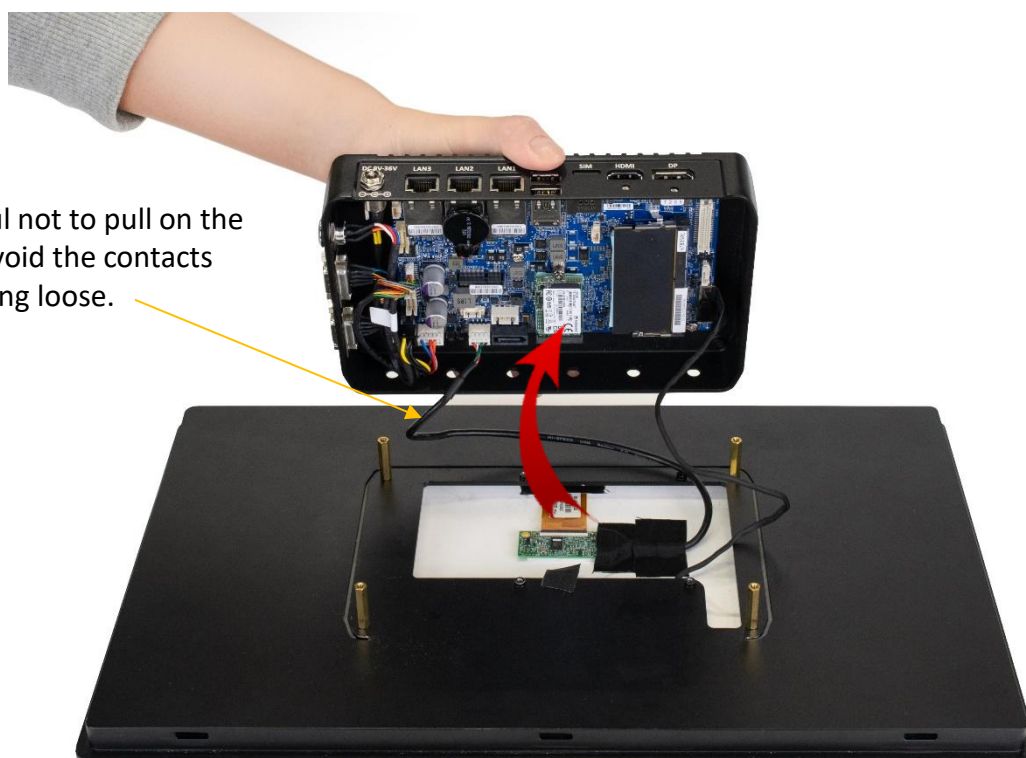
In order to prevent electric shock or system damage, before removing the chassis cover, must turn off power and disconnect the unit from power source.

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



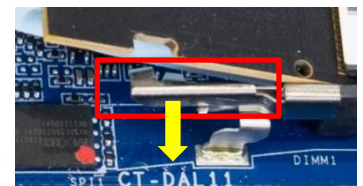
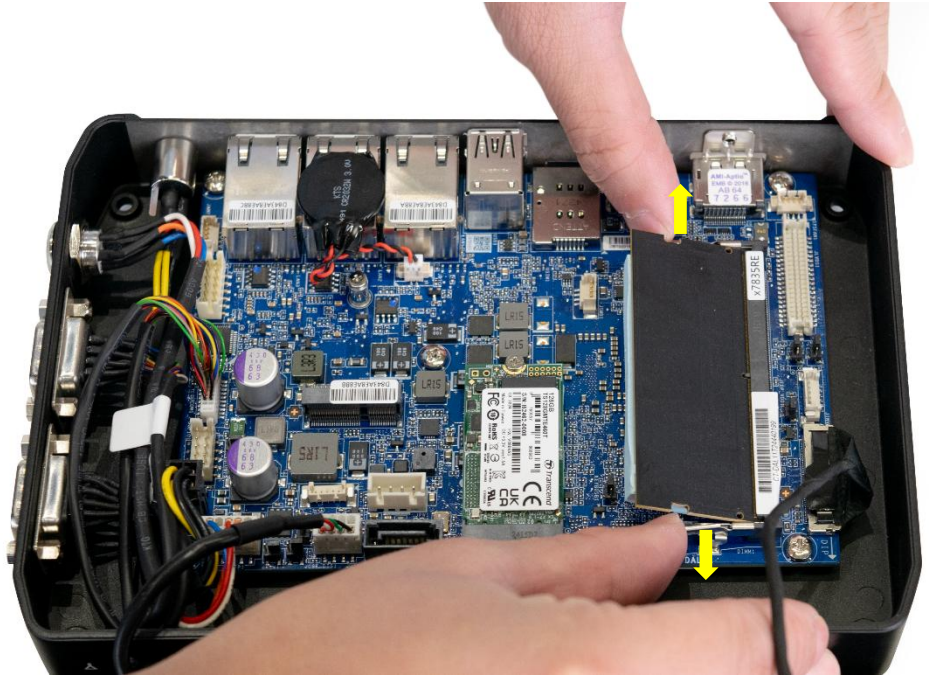
2. After removing the screws, detach the main unit from the screen.

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

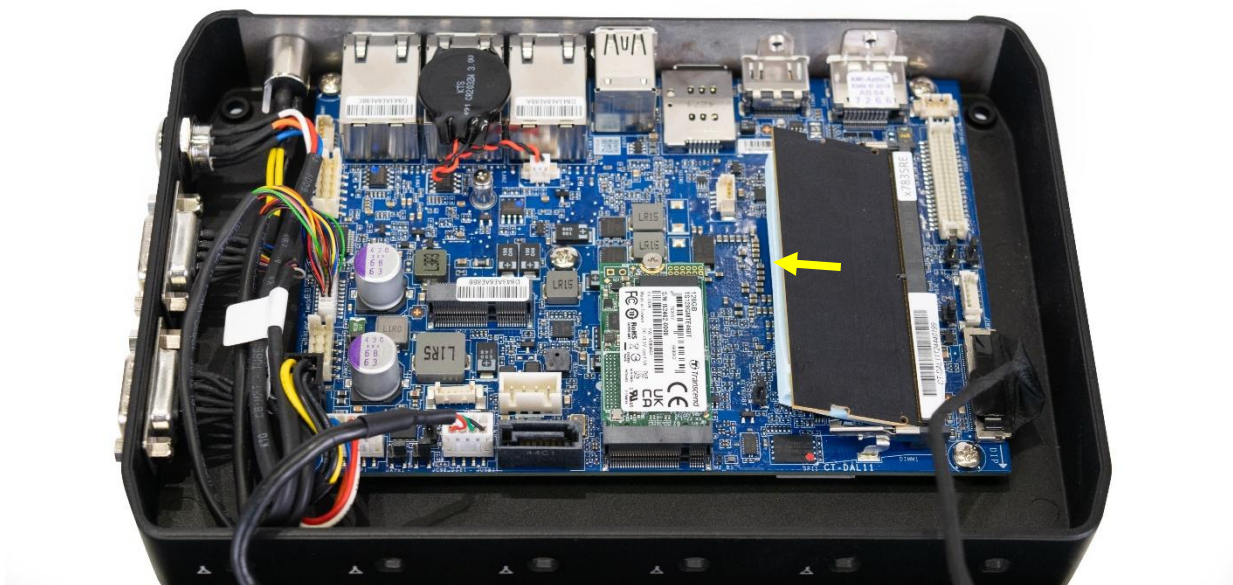


3.2 Replacement of Memory Module

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

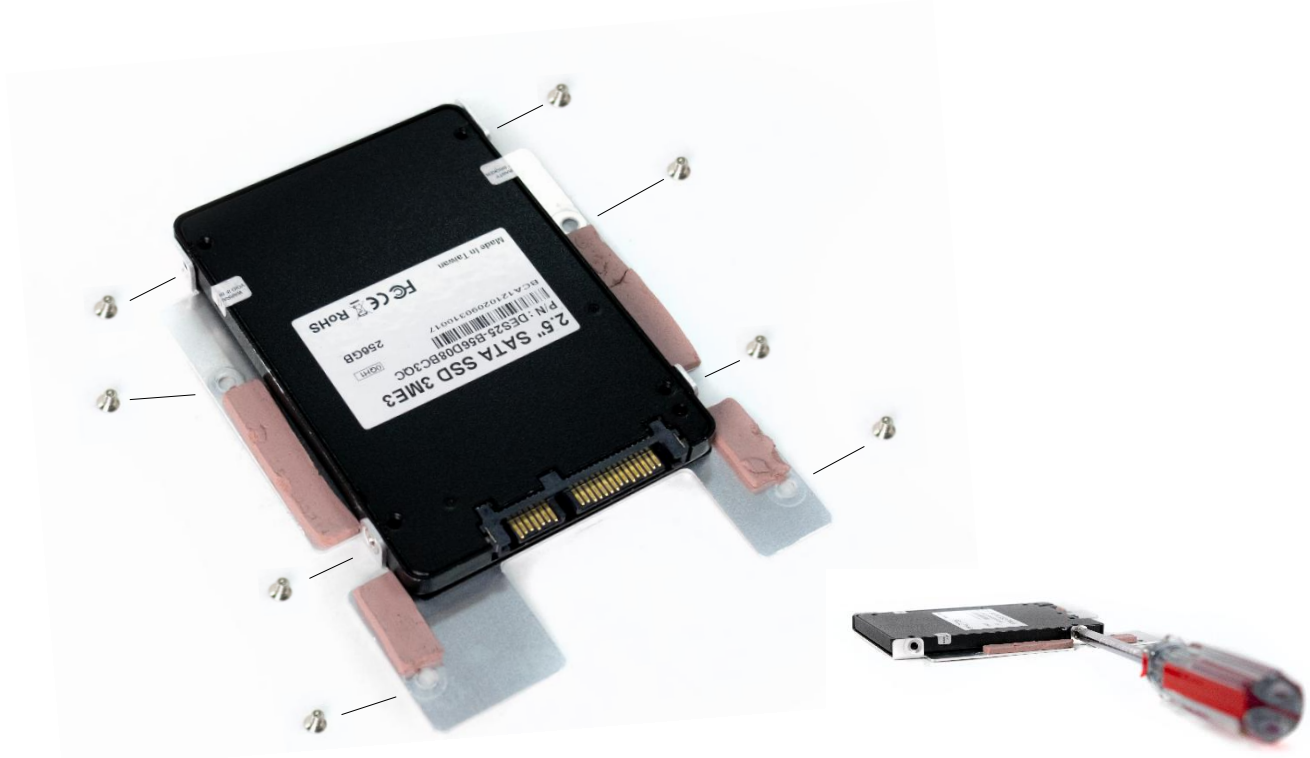
1.1 Standard SSD Mounting Bracket (without 5G module)

- 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



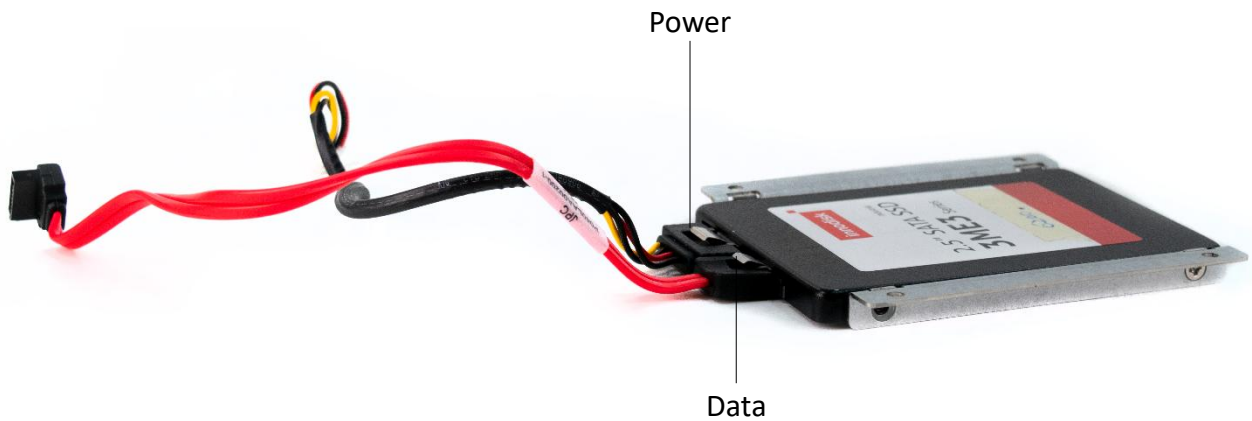
1.2 SSD Mounting Bracket (with 5G module attached)

- 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

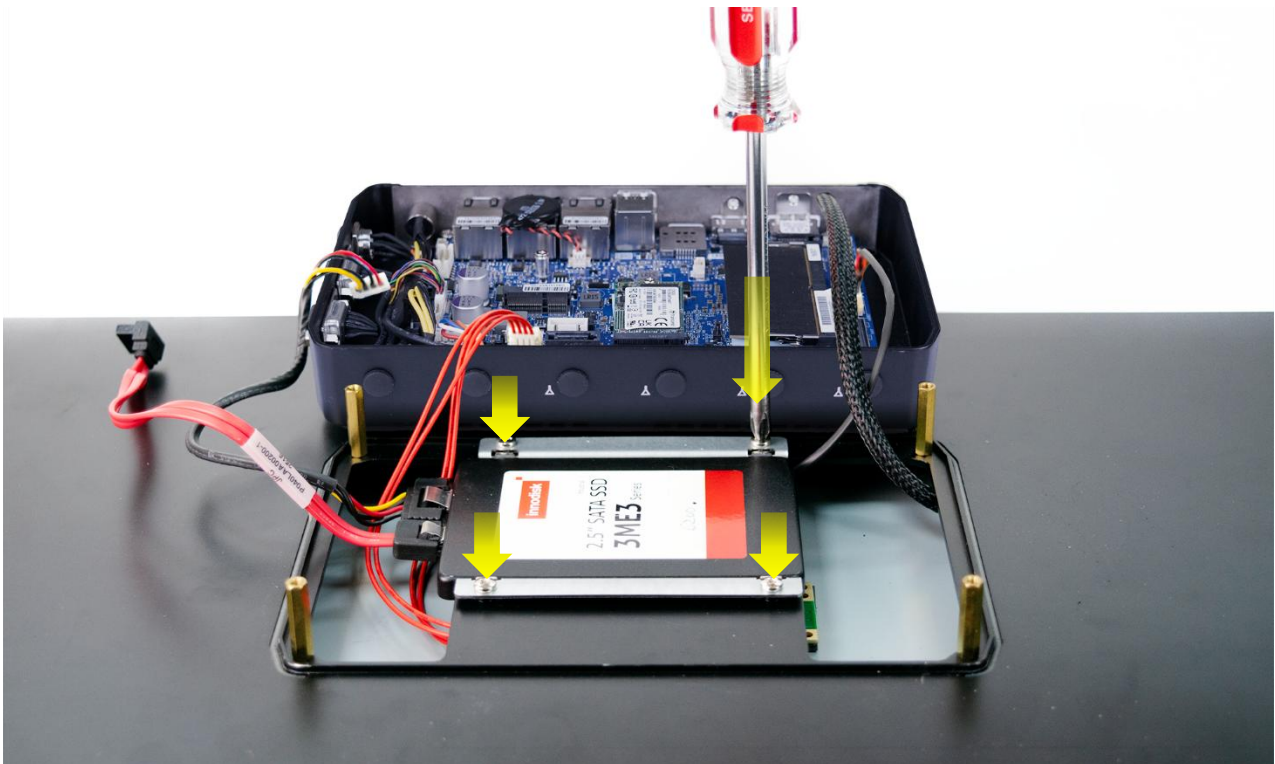


3.4 Replacement of 2.5" SSD Storage Module

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

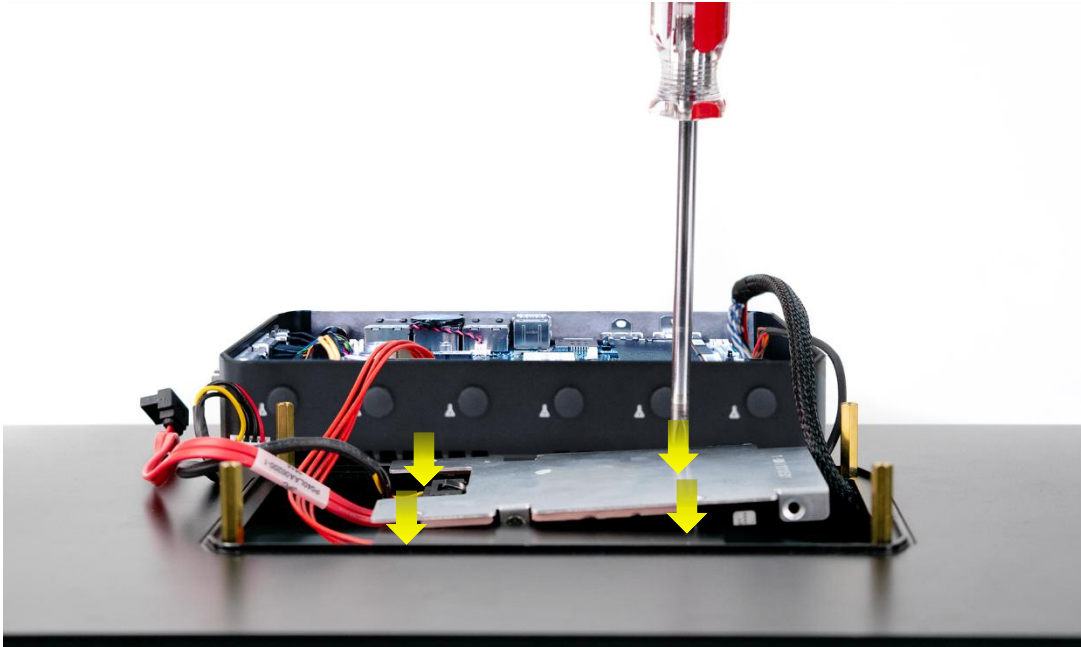


- 3.1 Use 4x screws to mount the SSD bracket onto the AIO display panel (standard SSD bracket, no 5G)

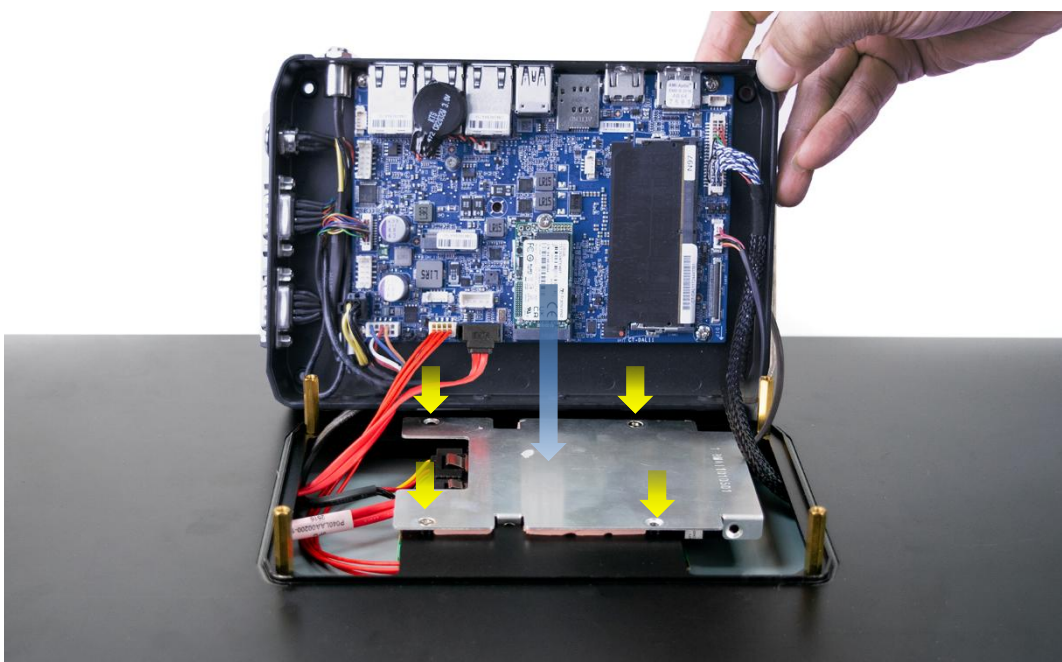


3.4 Replacement of 2.5" SSD Storage Module

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

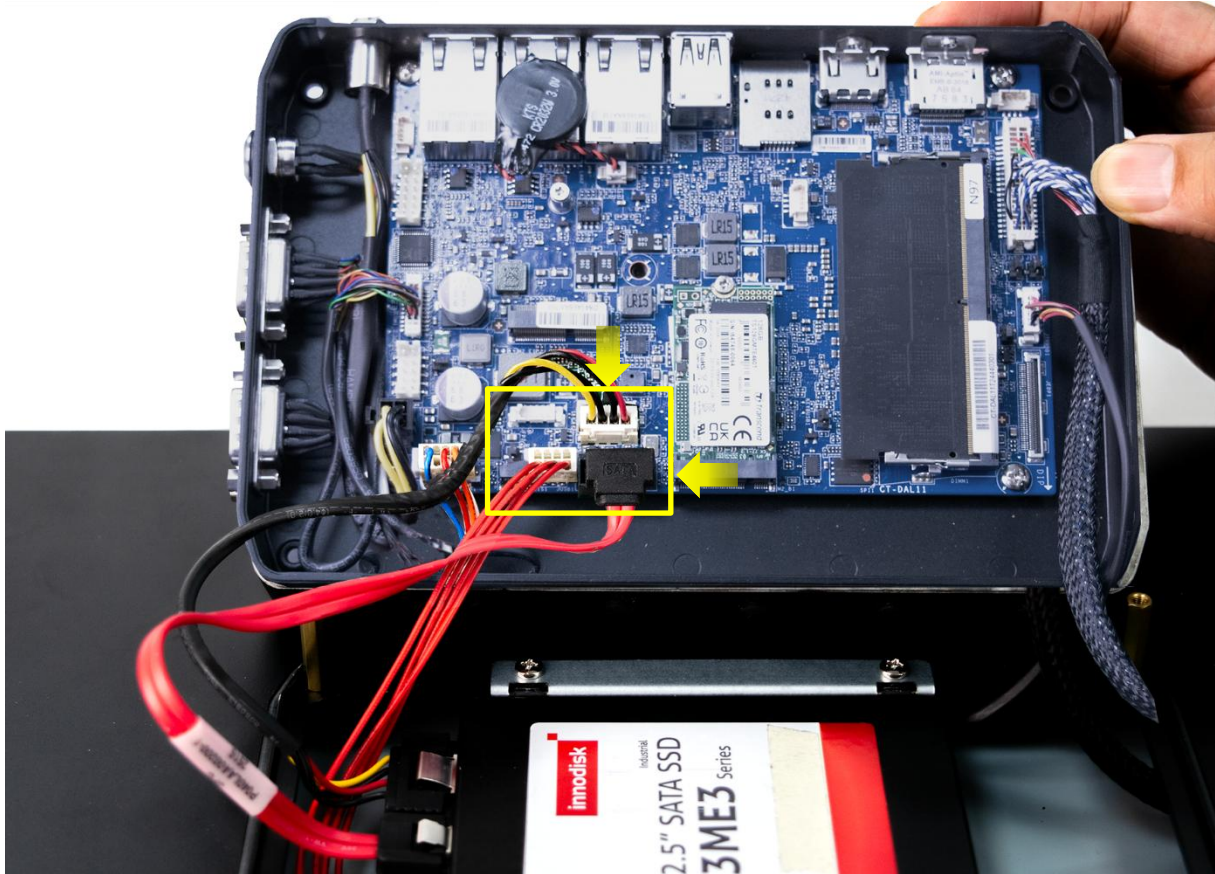


*The 5G module's thermal pad will be attached to the SSD bracket once the system is closed.



3.4 Replacement of 2.5" SSD Storage Module

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

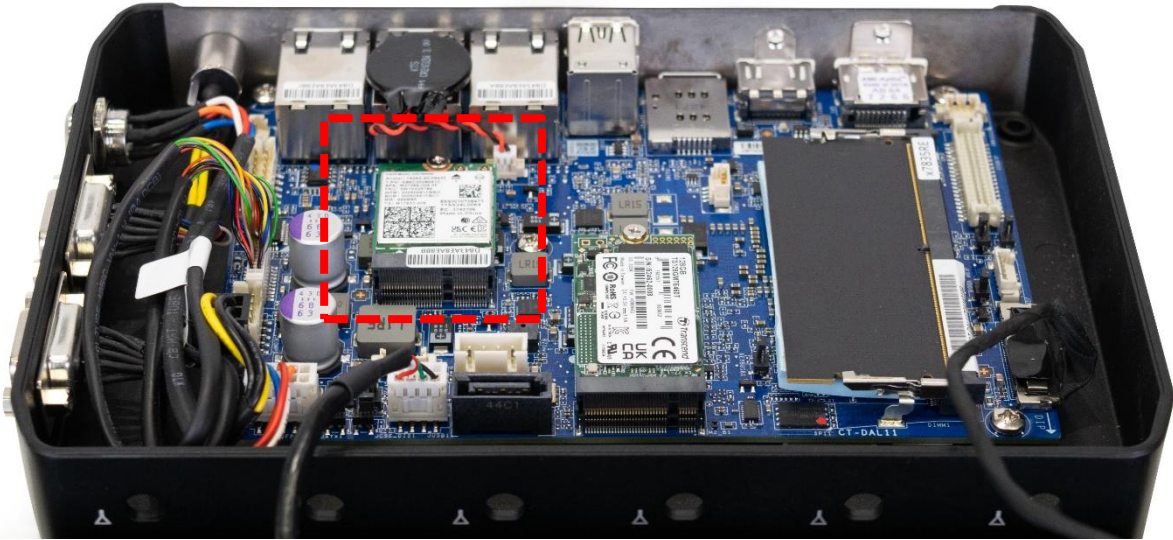


5. Carefully organize all of the cables before closing the whole system with 4x screws

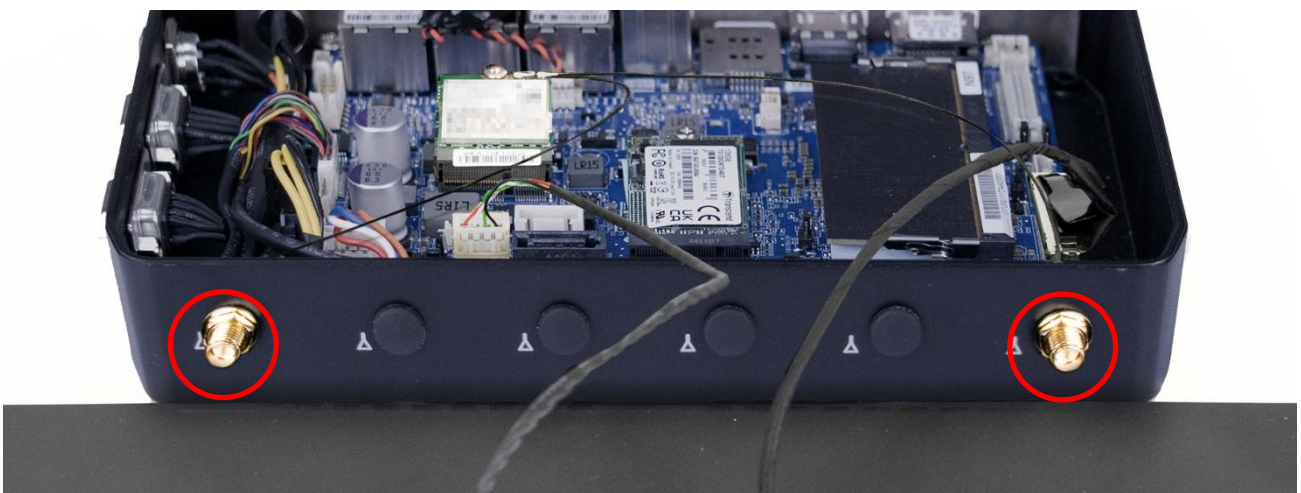


3.5 Install wireless network card and antenna

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.

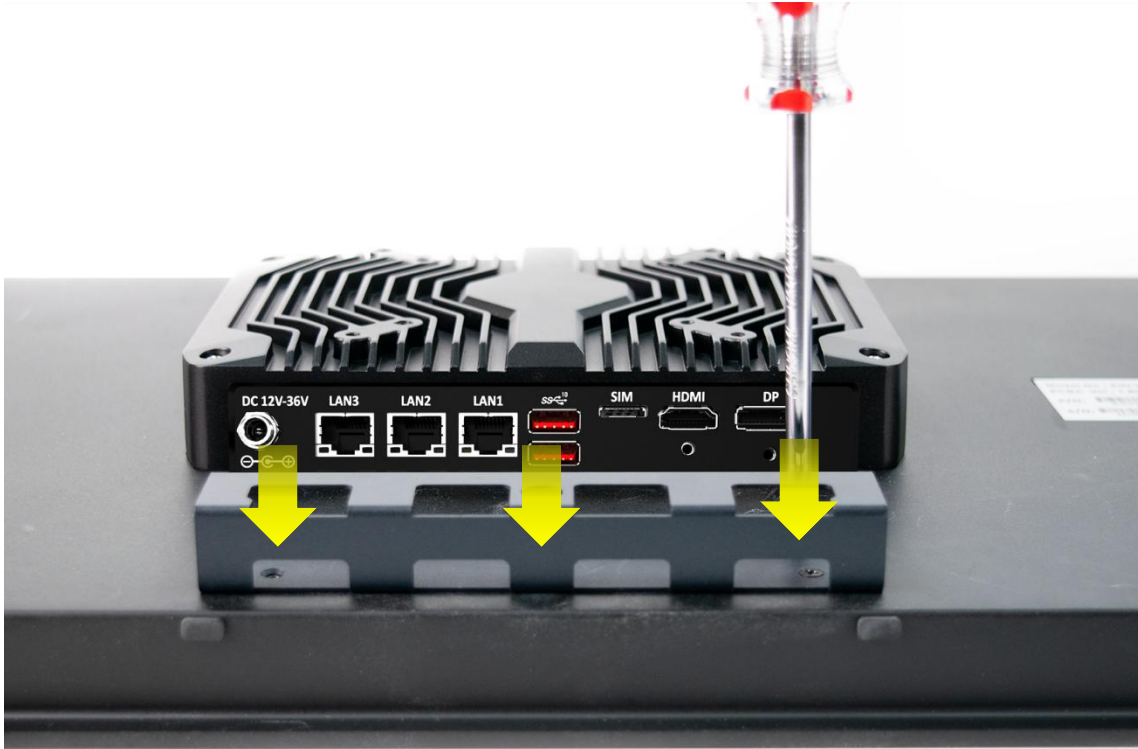


3. Connect the external antenna to the internal antenna, reattach the main unit to the screen following the original steps, and secure it with the four screws.



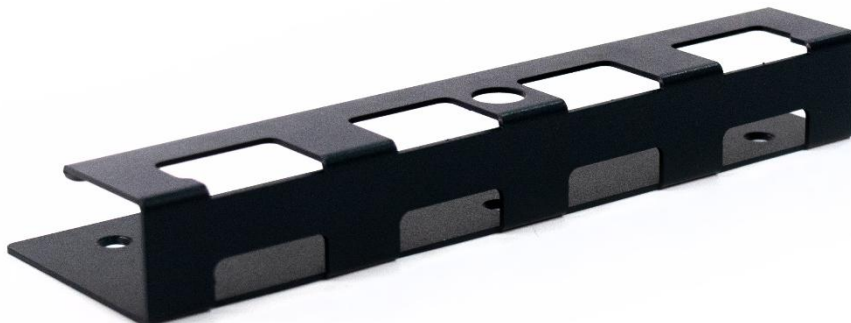
3.6 Cable Management Bracket Installation (21.5" only)

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 4

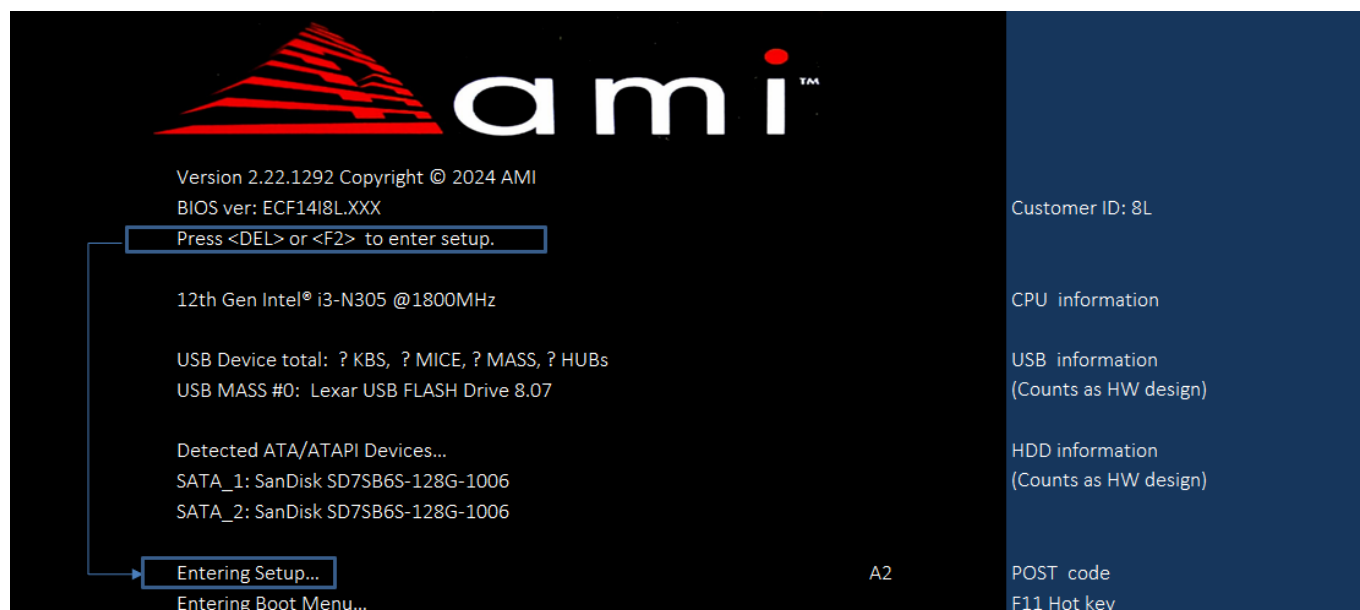
BIOS Setup

4.1 BIOS Setup

Versions

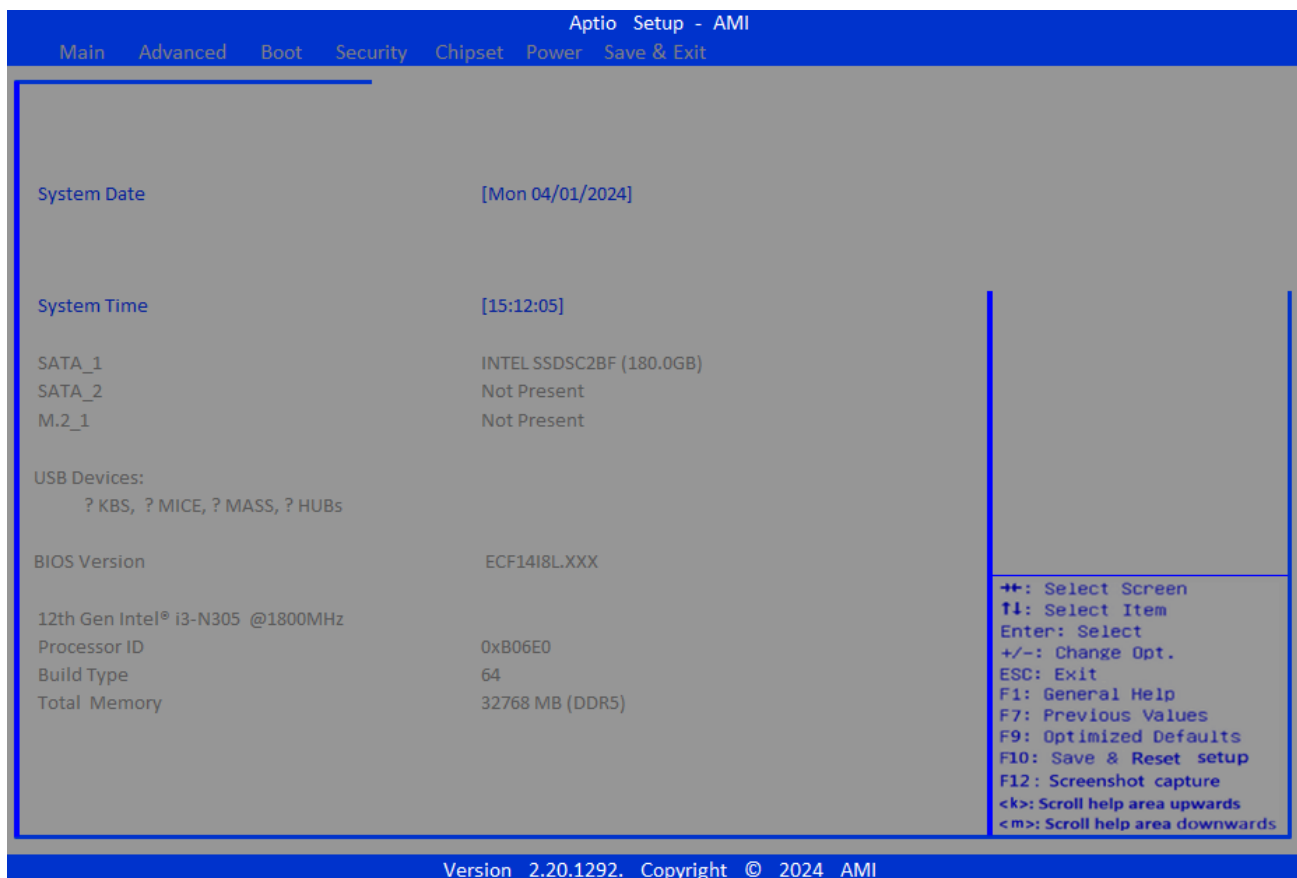
Date	Ver.	Note	Phase
2024/5/10	0.1	Initial release	MVT
2024/5/15	0.2	1. Modify some typo words for all sheet 2. Modify ASPM M2_M1 to M2_B1 3. add Data bit and Stop bit option	MVT
2024/5/27	0.3	1. Modify AC power loss default from power off to Last State. 2. Remove LVDS(via cable auto detect)	MVT
2024/6/4	0.4	1. Add item "M.2 B key Peripheral" for B key de specific B key device with USB. 2. Clean DMI DATA type 1/2 Manufacturer	MVT
2024/7/4	0.5	1. Remove item "M.2 B key Peripheral" for B key de specific B key device with USB. (default: enabled) 2. Add Backlight ctrl item in chipset page	MVT
2024/8/28	0.6	1. Add Key B USB3 interface 2. Add Intel VT-d in setup if CPU /PCH/platform support 3. Gray out panel related function when no panel detected. 4. Gray out Restore AC power loss when in AT mode. 5. Add Buzzer Beeps rule when ME disabled in BIOS Design rule sheet	MVT

POST



POST Hotkey	
Special Feature	Hot Key
Into BSU	"DEL", "F2"
boot oder menu	F11
PXE boot	F12

4.2 System Status

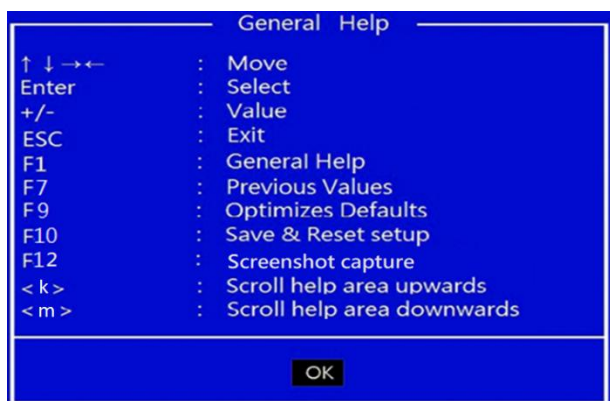


Fn Hotkey			
Special Feature	Location		Note
General Help	Hot Key"F1"		
Load Previous Values	Hot Key"F7"		
Load Optimizes Defaults	Hot Key"F9"		
Save & Reset setup	Hot Key"F10"		
Screenshot	Hot Key"F12"		

- Set the Date. Use Tab to switch between Date elements
- Default Ranges:
 - Year:2000-2099
 - Month: 1-12
 - Days: Dependent on month Range of Years may vary.

- SATA_2 for M.2 SATA
- M2_1 for PCIE x1

F1 screen



F10 screen



4.3 Advanced

Item String	Optimized Default	Option Name
Full Screen Logo Display	[Disabled]	Disabled/Enabled
Bootup NumLock State	[On]	On/Off
Key B USB3 interface	[Disabled]	Disabled/Enabled
>CPU Configuration		sub-menu
>Super IO Configuration		sub-menu
>H/W Monitor		sub-menu
>Smart Fan Configuration		sub-menu
>PCI/PCIE Device Configuration		sub-menu
>Network Stack Configuration		sub-menu
>GPIO Group Configuration		sub-menu
>PCIE ASPM Settings		sub-menu
>Engineer Mode		sub-menu

- Please be informed rule as below:
- 1. DO NOT adjust any items from this entry on executing formal test
- 2. Item should be hidden after MP candidate BIOS.

CPU Configuration

Item String	Optimized Default	Option Name
CPU Configuration		
12th Gen Intel ® i3-N305		
Porcessor ID	0xB06E0h	
Porcessor Speed	1800MHz	
E-Core Information		
L1 Data Cache	32 KB X 8	
L1 Instruction Cache	64 KB X 8	
L2 Cache	2048 KB X 2	
L3 Cache	6 MB	
VT-d	[Enabled]	Disabled/Enabled
Intel Virtualization Technology	[Enabled]	Disabled/Enabled
Active Efficient-cores	[All]	All/1/2/3 (Base on counts of E-core)
Intel ® SpeedStep(tm)	[Enabled]	Disabled/Enabled
Intel ® Speed Shift Technology	[Enabled]	Disabled/Enabled
C states	[Enabled]	

Displayed base on supported CPU
There is mechanism to display
item for support CPU

Super IO Configuration

Item String	Optimized Default	Option Name
Super IO Configuration		
Serial Port 1 Device Settings	[Enabled] IO=3F8h; IRQ=4;	Disabled/Enabled
Change Settings	[Auto]	Auto IO=3F8h; IRQ=4; IO=3F8h; IRQ=3,4,5,6,7,9,10,11,12; IO=2F8h; IRQ=3,4,5,6,7,9,10,11,12; IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12; IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;
Mode Select	[RS232]	RS232 RS422 RS485 RS422 with TR RS485 with TR
Serial Port 2 Device Settings	[Enabled] IO=2F8h; IRQ=3;	Disabled/Enabled
Change Settings	[Auto]	Auto IO=2F8h; IRQ=3; IO=3F8h; IRQ=3,4,5,6,7,9,10,11,12; IO=2F8h; IRQ=3,4,5,6,7,9,10,11,12; IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12; IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;

Device Settings

Serial Port 1	Display STD IO port (3F8h,2F8h,3E8h,2E8h)
Serial Port 2	Display STD IO port (3F8h,2F8h,3E8h,2E8h)

Item String	Optimized Default	Option Name
Mode Select	[RS232]	RS232
FIFO Mode	[128-byte]	16/32/64/128
Watch Dog Timer	[Disabled]	Disabled/Enabled
Set Watch Dog Timer (Sec)	30	1-255(sec)

Mode Select	Item for MVT only. Hidden and default RS232 before MP candidate BIOS
Watch Dog Timer	Displayed when Watch Dog Timer enable

H/W Monitor

Item String	Optimized Default	Option Name
PC Health Status		
Thermal Shutdown	[Disabled]	Disabled/Enabled
CPU Temperature	: +36°C	
System Temperature	: +24°C	
SYSFAN	: N/A	
VCC_CORE	: +0.736 V	
VCC3	: +3.279 V	
VCC5	: +5.003 V	
+12V	: +12.144 V	
VS3V	: +3.280 V	
VS5V	: +4.992 V	
VBAT	: +3.040 V	

As Project type after MP candidate BIOS release

Motherboard (MS-98XX, MS-CFXX): Hidden

System (MS-C9XX): Display

Smart Fan Configuration

Item String	Optimized Default	Option Name
Configuration Smart Fan		
SYSFAN	[Disabled]	Disabled/40-70°C (per class 5 °C)
Min. Speed (%)	[50.0%]	0~87.5% (per class 12.5%)

PCI/PCIE Device Configuration

Item String	Optimized Default	Option Name
Audio Controller	[Enabled]	Disabled/Enabled

Network Stack Configuration

Item String	Optimized Default	Option Name
Network Stack	[Disabled]	Disabled/Enabled
Ipv4 PXE Support	[Disabled]	Disabled/Enabled
Ipv4 HTTP Support	[Disabled]	Disabled/Enabled
Ipv6 PXE Support	[Disabled]	Disabled/Enabled
Ipv6 HTTP Support	[Disabled]	Disabled/Enabled
PXE boot wait time	0	
Media detect count	1	

GPIO Group Configuration

Item String	Optimized Default	Option Name
GPIO Group Configuration		
GPO0	[Low]	Low/High
GPO1	[Low]	Low/High
GPO2	[Low]	Low/High
GPO3	[Low]	Low/High
GPO Status		
GPO0	: 1	
GPO1	: 1	
GPO2	: 1	
GPO3	: 1	
GPI Status		
GPI0	: 1	
GPI1	: 1	
GPI2	: 1	
GPI3	: 1	

1. Status as setting
2. item must be hidden after MP candidate BIOS.

PCIE ASPM settings

Item String	Optimized Default	Option Name
M2_B1	[Disabled]	Option Defined:
M2_E1	[Disabled]	PCH : Disabled/ L1/ Auto

Displayed as HW design when config as PCIE

4.4 Boot

Item String	Optimized Default
Boot Option Priorities	
Boot Option #1	[Windows Boot Manager (P0: WDC WD3200BPVT-22JJ5T0)]
Boot Option #2	[UEFI: Built-in EFI Shell]

SUT will return BIOS Setup when no disabled all boot option

4.5 Security

	Item String	Optimized Default	Option Name
	Administrator Password		
	User Password		
	Disabled Block Sid	[Disabled]	Disabled/Enabled
	>PCH-FW Configuration		sub-menu
	>Trusted Computing		sub-menu
	>Serial Port Console Redirection		sub-menu
	>Secure boot		sub-menu

Item only support for NVMe Device (TCG support)

PCH-FW Configuration

	Item String	Optimized Default	Option Name
	ME Firmware Version	16.X.XX.XXXX	
	ME Firmware Mode	Normal Mode	
	ME Firmware SKU	Consumer SKU	
	ME State	[Enabled]	Disabled/Enabled
	Comms Hub Support	[Disabled]	Disabled/Enabled
	JHI Support	[Disabled]	Disabled/Enabled
	Core BIOS Done Message	[Enabled]	Disabled/Enabled
	>Firmware Update Configuration		sub-menu
	>PTT Configuration		sub-menu
	>ME Debug Configuration		sub-menu
	>Anti-Rollback SVN Configuration		sub-menu

Displayed when ME
state enabled

Trust Computing

Item String	Optimized Default	Option Name
TPM2.0 Device Found		
Firmware Version:	7.85	
Vendor	IFX	
Security Device Support	[Enabled]	Disabled/Enabled
Active PCR Banks	SHA256	
Available PCR Banks	SHA256,SHA384,SM3	
SHA256 PCR Bank	[Enabled]	Disabled/Enabled
SHA384 PCR Bank	[Disabled]	Disabled/Enabled
Pending operation	[None]	None/TPM Clear
Platform Hierarchy	[Enabled]	Disabled/Enabled
Storage Hierarchy	[Enabled]	Disabled/Enabled
Endorsement Hierarchy	[Enabled]	Disabled/Enabled
Physical Presence Spec Version	[1.3]	1.2/1.3
TPM 2.0 Interfacetype	[TIS]	
PH Randomization	[Enabled]	Disabled/Enabled
Device Select	[TPM 2.0]	TPM 1.2/ TPM 2.0/ Auto

Information as your chosen TPM displayed(dTPM/fTPM)

Serial Port Console Redirection

Item String	Optimized Default	Option Name
COM1		
Console Redirection	[Disabled]	Disabled/Enabled
>Console Redirection Settings		sub-menu

Unlock when Console Redirection enabled

Secure boot

Item String	Optimized Default	Option Name
System Mode	Setup	
Secure boot	[Disabled]	Disabled/Enabled
Secure boot Mode	Not Active	
	[Custom]	Custom/Standard
>Restore Factory Keys		
>Reset To setup Mode		
>Key Management		

All secure boot function is by AMI Default, but keep customer request.

No OEM Key roll in default.(reserve once customizing chance)

Default Key need to roll in via clicking "Restore Factory keys"

Default

Secure boot: Disabled

Secure boot Mode: Custom

Firmware Update Configuration

	Item String	Optimized Default	Option Name
	Me FW Image Re-Flash	[Disabled]	Disabled/Enabled
	Local FW Update	[Enabled]	Disabled/Enabled

PTT Configuration

	Item String	Optimized Default	Option Name
	PTT Capability / State	1 / 0	
	TPM Device Selection	[dTPM]	dTPM/PTT

ME Debug Configuration

	Item String	Optimized Default	Option Name
	HECI Timeouts	[Enabled]	Disabled/Enabled
	Force ME DID Init Status	[Disabled]	Disabled 0 - Success 1 - No memory in Channels 2 - Memory Init Error
	CPU Replaced Polling Disable	[Disabled]	Disabled/Enabled
	HECI Message Check Disable	[Disabled]	Disabled/Enabled
	MBP HOB Skip	[Disabled]	Disabled/Enabled
	HECI2 Interface Communication	[Disabled]	Disabled/Enabled
	KT Device	[Enabled]	Disabled/Enabled
	End of Post Message	[Send in DXE]	Disabled/Send in DXE
	D0I3 Settig for HECI Disable	[Disabled]	Disabled/Enabled
	MCTP Broadcast Cycle	[Disabled]	Disabled/Enabled

Anti-Rollback SVN Configuration

	Item String	Optimized Default	Option Name
	Minimal Allowed Anti-Rollback SVN	0	
	Executing Anti-Rollback SVN	1	
	Automatic HW-Enforced Anti-Rollback SVN	[Disabled]	Disabled/Enabled
	Set HW-Enforced Anti-Rollback for current SVN	[Disabled]	Disabled/Enabled

Displayed when Automatic HW-Enforced Anti-Rollback SVN Disabled

As CRB define and Mechanism

Console Redirection Settings (COM1)

	Item String	Optimized Default	Option Name
	COM1		
	Console Redirection Settings		
			VT100
			VT100+
			VT-UTF8
	Terminal Type	[ANSI]	ANSI
			9600
			19200
	Bits per second	[115200]	38400
			57600
			115200
	Data Bits	[8]	7,8
			None
	Parity	[None]	Even
			odd
			Mark
			Space
	Stop Bits	[1]	1,2
	Flow Control	[None]	None
			Hardware RTS/CTS
	VT-UTF8 Combo Key Support	[Enabled]	Disabled/Enabled
	Recorder Mode	[Disabled]	Disabled/Enabled
	Resolution 100X31	[Disabled]	Disabled/Enabled
			VT100
			Intel Linux
	Putty KeyPad	[VT100]	XTERMR6
			SCO
			ESCN
			VT400

4.6 Chipset

Item String	Optimized Default	Option Name
DVMT Total Gfx Mem	[256M]	128M/256M/MAX
DVMT Pre-allocated	[64M]	64M/128M/256M/512M/1024M
LVDS Panel Type	1024 X 768 & 24bit	640 x 480 & 18bit
		640 x 480 & 24bit
		800 x 480 & 18bit
		800 x 480 & 24bit
		800 x 600 & 18bit
		800 x 600 & 24bit
		1024 x 600 & 18bit
		1024 x 600 & 24bit
		1024 x 768 & 18bit
		1024 x 768 & 24bit
		1280 x 768 & 18bit
		1280 x 768 & 24bit
		1280 x 800 & 18bit
		1280 x 800 & 24bit
		1280 x 960 & 18bit
		1280 x 960 & 24bit
		1280 x 1024 & 18bit
		1280 x 1024 & 24bit
		1366 x 768 & 18bit
		1366 x 768 & 24bit
		1440 x 900 & 18bit
		1440 x 900 & 24bit
		1400 x 1050 & 18bit
		1400 x 1050 & 24bit
		1600 x 900 & 18bit
		1600 x 900 & 24bit
		1680 x 1050 & 24bit
		1600 x 1200 & 24bit
Backlight Control	[Level 3]	Level 1-5

- DVMT Pre-allocated
2048 as platform supporting
- LVDS Panel Type
Gray out when no panel connected

4.7 Power

Item String	Optimized Default	Option Name	Remark
Restore AC power Loss	[Last State]	Power on Power off Last State	Function will work on ATX mode only Gray out in AT mode
Deep Sleep Mode	[S4+S5]	Disabled S4+S5	
Advanced Resume Events Control			
OnChip USB	[Enabled]	Disabled/Enabled	
LAN/PCIE PME	[Disabled]	Disabled/Enabled	
RTC	[Disabled]	Disabled Daily Dynamic Weekly	
wake up hour	0	0-23	When RTC set to Daily
wake up minute	0	0-59	
wake up second	0	0-59	
wake up minute increase	1	1-- 5	When RTC set to Dynamic
Monday	[Disabled]	Disabled/Enabled	When RTC set to Weekly
Tuesday	[Disabled]	Disabled/Enabled	
Wednesday	[Disabled]	Disabled/Enabled	
Thursday	[Disabled]	Disabled/Enabled	
Friday	[Disabled]	Disabled/Enabled	
Saturday	[Disabled]	Disabled/Enabled	
Sunday	[Disabled]	Disabled/Enabled	
Wake up hour	0	0-23	EX: When weekly's sub items set to Enabled
Wake up minute	0	0-59	
Wake up second	0	0-59	

4.8 Save&Exit

Item String	Optimized Default
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	

Build-in SHELL is necessary

4.9 DMI Data

	Data	Related SW
BIOS Information (Type 0)		
BIOS Vendor	American Megatrends International Inc.	
BIOS Version	ECF14I8L.XXX	
Release Date	4/1/2024	
ROM Size	As platform	
System Information (Type 1)		
Manufacturer		
Product Name	MS-CF14	SW Utility
Version	As M/B version	
Serial Number		
UUID	Generated at factory	
SKU Number		
Family		
Base Board Information (Type 2)		
Manufacturer		
Product Name	MS-CF14	SW Utility
Version	As M/B version	
Serial Number	Default String	
Asset Tag Number	Default String	

4.10 BIOS Design Rule

Admin/User PW

	OEM request		CRB Default			
	Admin	User	Admin	User		
Entry	Follow CRB default		BSU	POST	Into BSU/Before POST	
Length			20		<=20 characters	
A–Z			Yes		Case Sensitive or Not	
0–9			Yes		Yes or No	
PW state after clean CMOS	Follow CRB default		Clean		Keep or Clean	
Retry limited	Follow CRB default		3		Request by ODM	
	Restrict Page (Items)					
System Status	Follow CRB default		No restrict		Request by ODM and MSI estimate	
Advanced						
Boot						
Security						
Chipset						
Power						
Save&exit						

Buzzer

Event	Sounds
POST detect	1 short beep
No Con in/out Device detect	No beeps
Disabled ME	No beeps
Others	As AMI Default

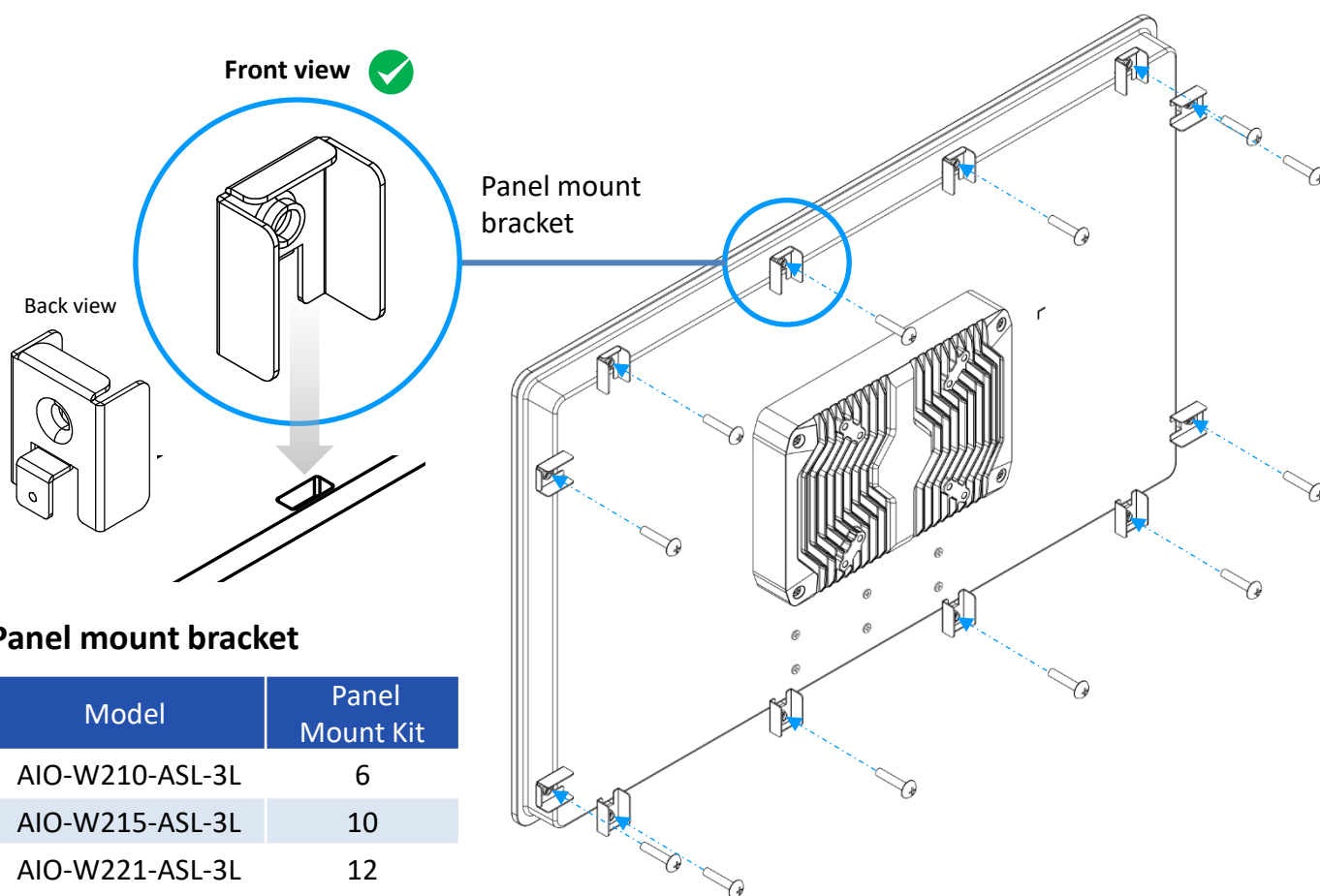
ASPM

	Add-on	onBoard
Default Vaule	Disabled	Enabled
Items	Display	Hidden

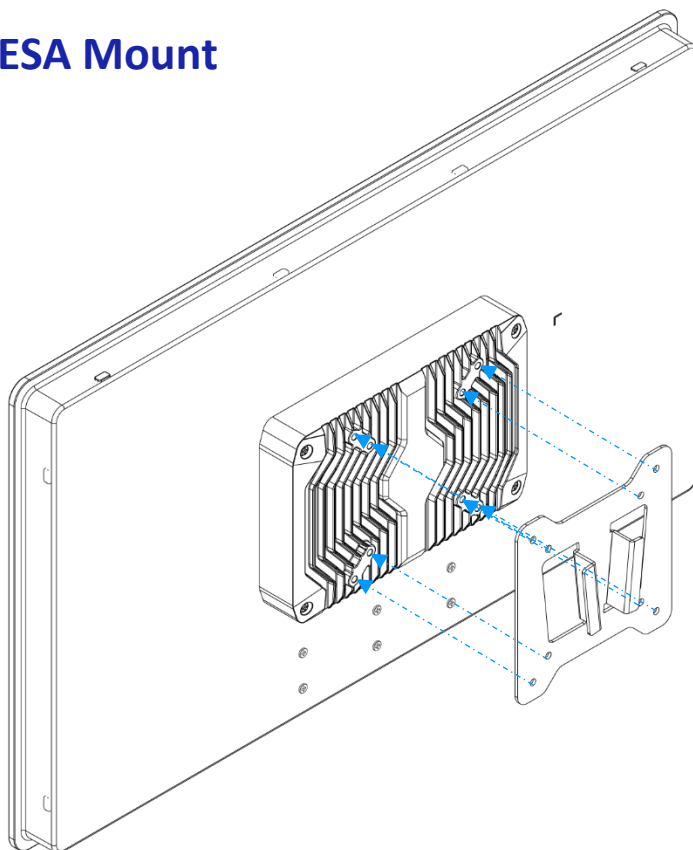
DMI Data Preserve

	Preserve
FPT tool flash (F32M.NSH)	NO
AFU tool flash (FLASH.NSH)	Yes
Clear CMOS	Yes

Panel Mount

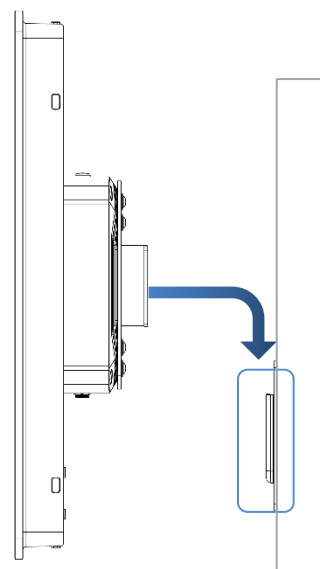


VESA Mount



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

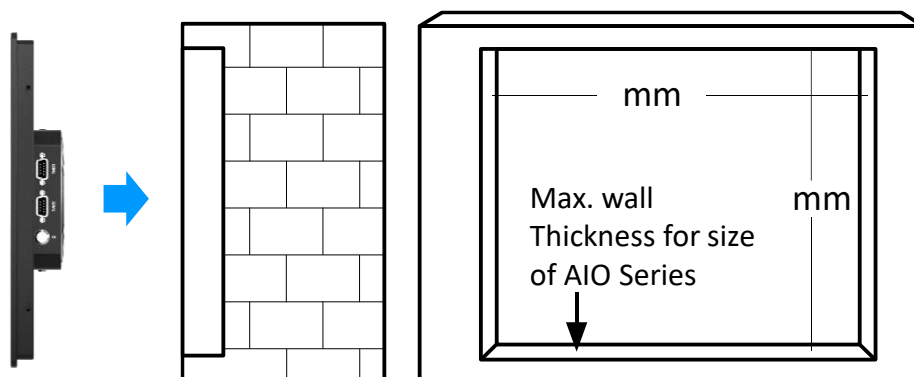
M4X6L x8 pcs



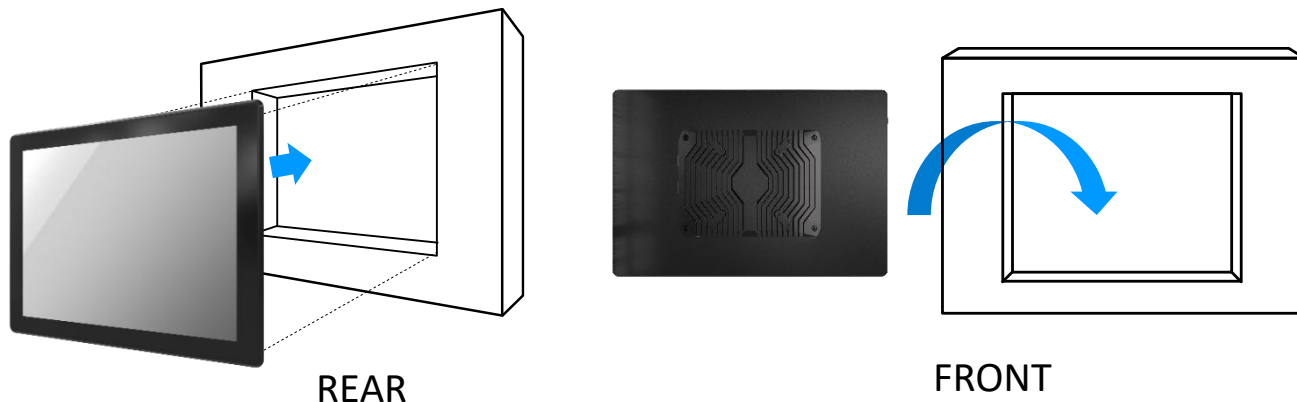
Mounting Guide

Flush Mount / Panel Mount:

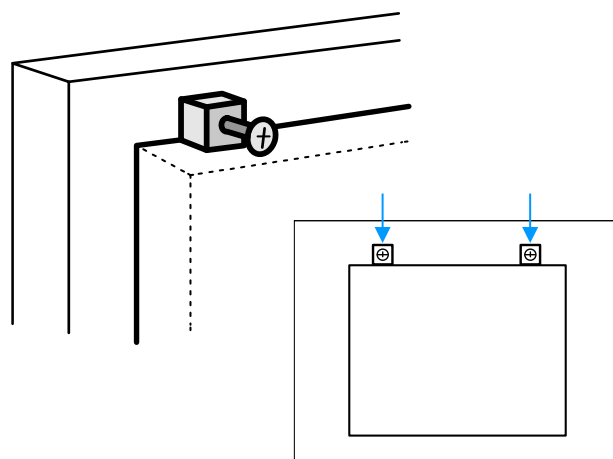
- Cut hole in the wall w/ dimensions according to the screen size you have purchased. Please refer to the next page for the list of cutout dimensions and max wall depths



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



- 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-ASL-3L	249 x 163	7
AIO-W215-ASL-3L	394 x 243	8
AIO-W221-ASL-3L	528 x 318	11

