USER'S MANUAL

AIO-200-ROK Series

All IN One Touchscreen Computer



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Prefaces

Revision

Revision	Description	Date
1.0	Manual Released	2025/7/15

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 Premio Inc website at https://premioinc.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-ROK Series All IN One Touchscreen Computer	1
2	Adapter 60W 12V	1

Ordering Information

Model No.	Description
3-AI101040S10	AIO-W210 Panel Mount Bracket Kit
3-AI156040S10	AIO-W215 Panel Mount Bracket Kit
1-TPCD00001	Power Cord, 3-pin UK Type, 180cm
1-TPCD00002	Power Cord, European Type, 180cm
1-TPCD00003	Power Cord, 3-pin Japan Type, 180cm
1-TPCD00005	Power Cord, US Type, 180cm
1-TPWR00197	3P Terminal Block(Female) To DC Plug 5.5x2.5 With Lock_100 mm_For AIO Series

Available Models

Model No.	Description
AIO-W210-RK3568J	10.1" WXGA Capacitive All IN One Touchscreen Computer with Rockchip ARM Cortex-A55 RK3568J
AIO-W215-RK3568J	15.6" Full HD Capacitive All IN One Touchscreen Computer with Rockchip ARM Cortex-A55 RK3568J

Chapter 1

Product Introductions

1.1 Overview





Key Features

- 10.1" / 15.6" All-in-One Touchscreen Computer
- Front IP65 for protection against water and dust
- Scratch Resistant 7H Glass Hardness IK07
- 2x USB 3.0 Type A, 2x RS-232/422/485, 1x HDMI, 2x LAN
- Backlight lifetime 50,000 Hours



1.2 Hardware Specification

Display	AIO-W210-RK3568J	AIO-W215-RK3568J
LCD Size	10.1" (16:10)	15.6" (16:9)
Max. Resolution	1280 x 800 (WXGA)	1920 x 1080 (FHD)
Brightness (cd/m2)	500	500
Contrast Ratio	800:1	1000:1
LCD Color	16.7M	16.7M
Pixel Pitch (mm)	0.169(H) x 0.1695 (V)	0.17925 (H) x 0.17925 (V)
Viewing Angle (H-V)	89/89/89/89 (Typ.) (CR>=10)	89/89/89/89 (Typ.) (CR>=10)
Backlight lifetime	50,000 Hours	50,000 Hours

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

System	
Processor	Rockchip RK3568J ARM Quad Cortex-A55, up to 2.0 GHz
System Chipset	SoC integrated
System Memory	LPDDR4 2133MHz 4 GB
LAN Chipset	GbE1: RTL8211FDI 10/100/1000 Mbps GbE2: RTL8211FDI 10/100/1000 Mbps

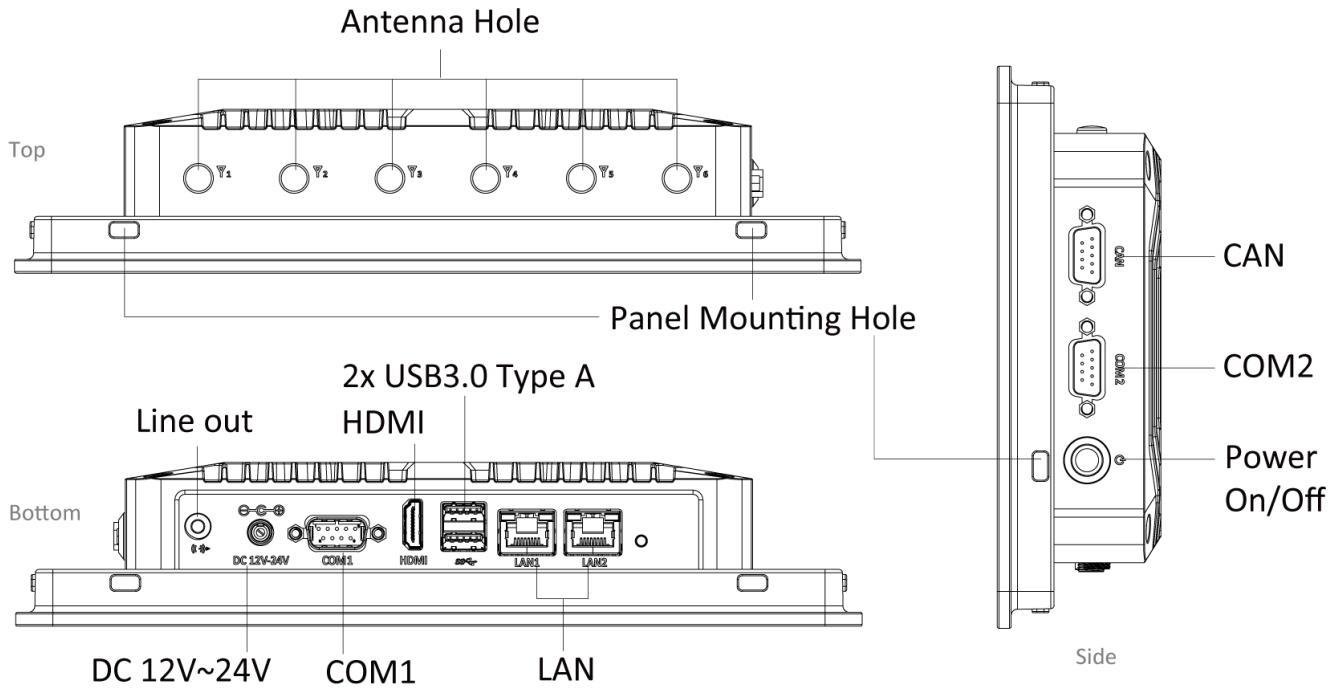
Storage	
eMMC	64GB of eMMC for OS

Expansion	
M.2	1x M.2 E Key 2230 (ENL-R8852BE, WIFI6, BT5.2, Optional) 1x M.2 B Key 3042 (LTE Module Support)

I/O	
COM	2x RS-232/422/485
USB	2x USB 3.0 Type A
LAN	2x 10/100/1000 Mbps
Audio	1x Line-Out
Others	Support up to 6x Antenna (optional)
Power	
Power	AT/ATX (Optional)
Power Adapter	60W (12V 5A, Default)
Power Supply Voltage	DC 12~24V
Power Connector	DC Jack 5.5mm/2.5mm
Operating System	
Linux	Debian 11 Ubuntu 22.04 LTS
Operating System	Android 13
Environment	
Operating Temperature	-20°C to 60°C
Storage Temp	-30°C to 80°C
Relative Humidity	10% to 80% (non-condensing)
Certification	UL 62368-1 Ed. 3, CE, FCC Class A
Vibration	With SSD: 2.4 Grms (5 - 500 Hz, 0.5 hr/axis)
Shock	With SSD: 20G half-sin 11ms
Physical	
Dimension	• AIO-W210-RK3568J : 256 (W) x 170 (H) x 50 (D) mm • AIO-W215-RK3568J : 400 (W) x 249 (H) x 50 (D) mm
Weight	• AIO-W210-RK3568J：1.4 Kg • AIO-W215-RK3568J：2.3 Kg
Mounting	VESA Mount (75mm x 75mm/100mm x 100mm) Panel Mount (optional)

1.3 System I/O

1.3.1 AIO-W210-RK3568J



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

USB 3.0 Type A
Used to connect USB 3.0 device

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

COM port
RS-232/422/485

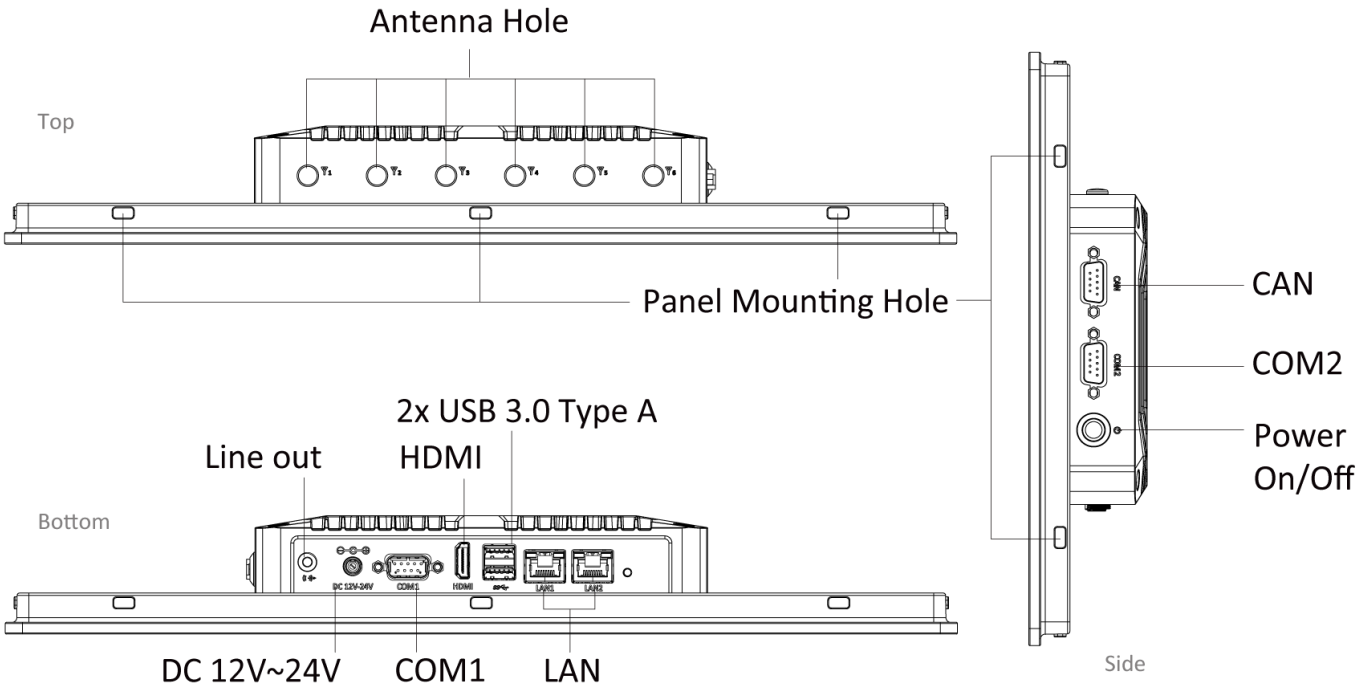
Line-out
Used to connect a speaker

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

HDMI
Used to connect a HDMI monitor

Antenna hole
Used to connect an antenna for optional WiFi module

1.3.2 AIO-W215-RK3568J



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

USB 3.0 Type A
Used to connect USB 3.0 device

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

COM port
RS-232/422/485

Line-out
Used to connect a speaker

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

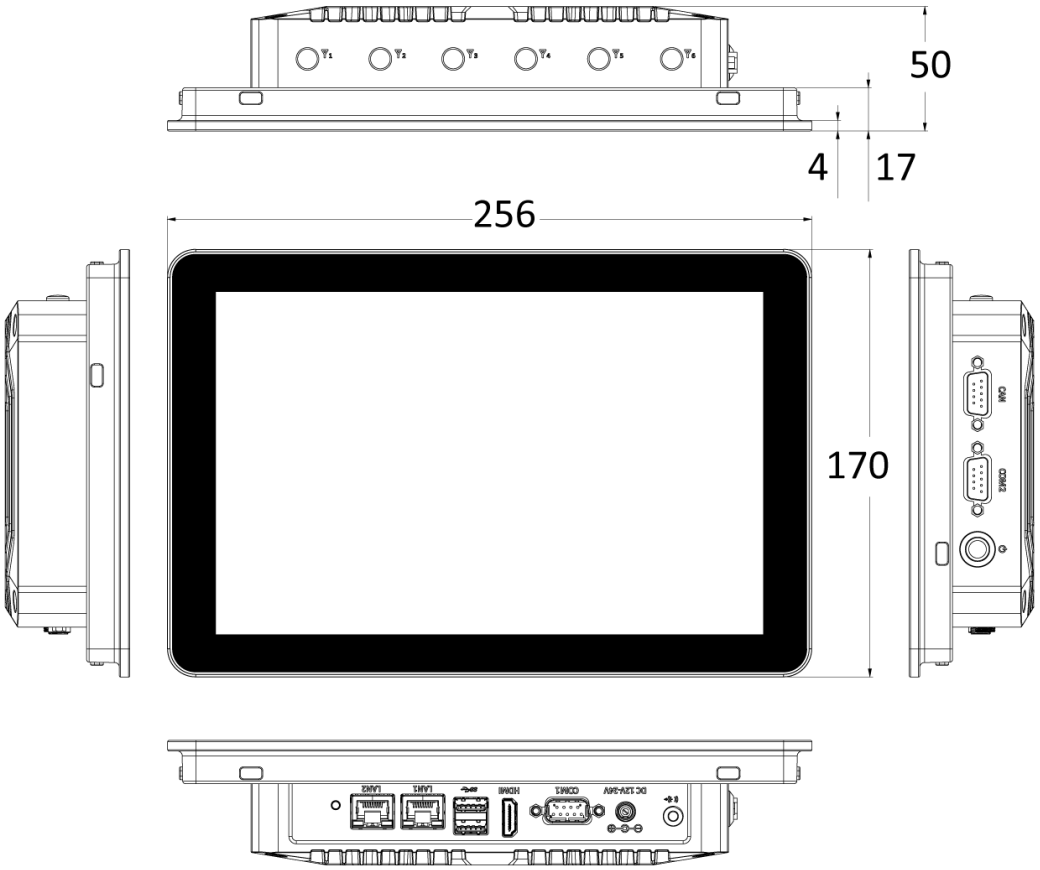
HDMI
Used to connect a HDMI monitor

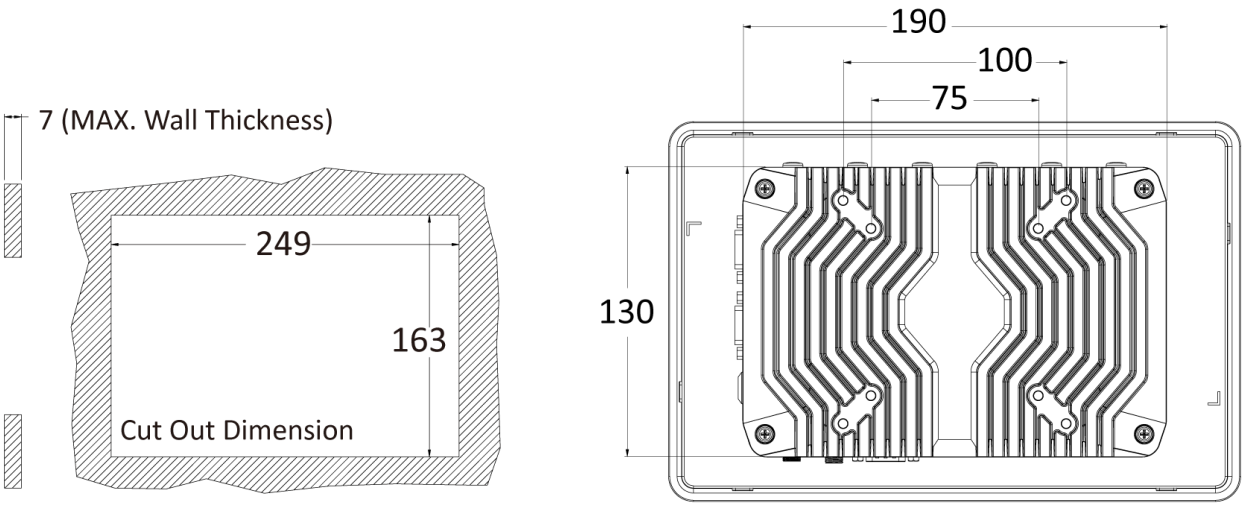
Antenna hole
Used to connect an antenna for optional WiFi module

1.4 Mechanical Dimensions

1.4.1 AIO-W210-RK3568J

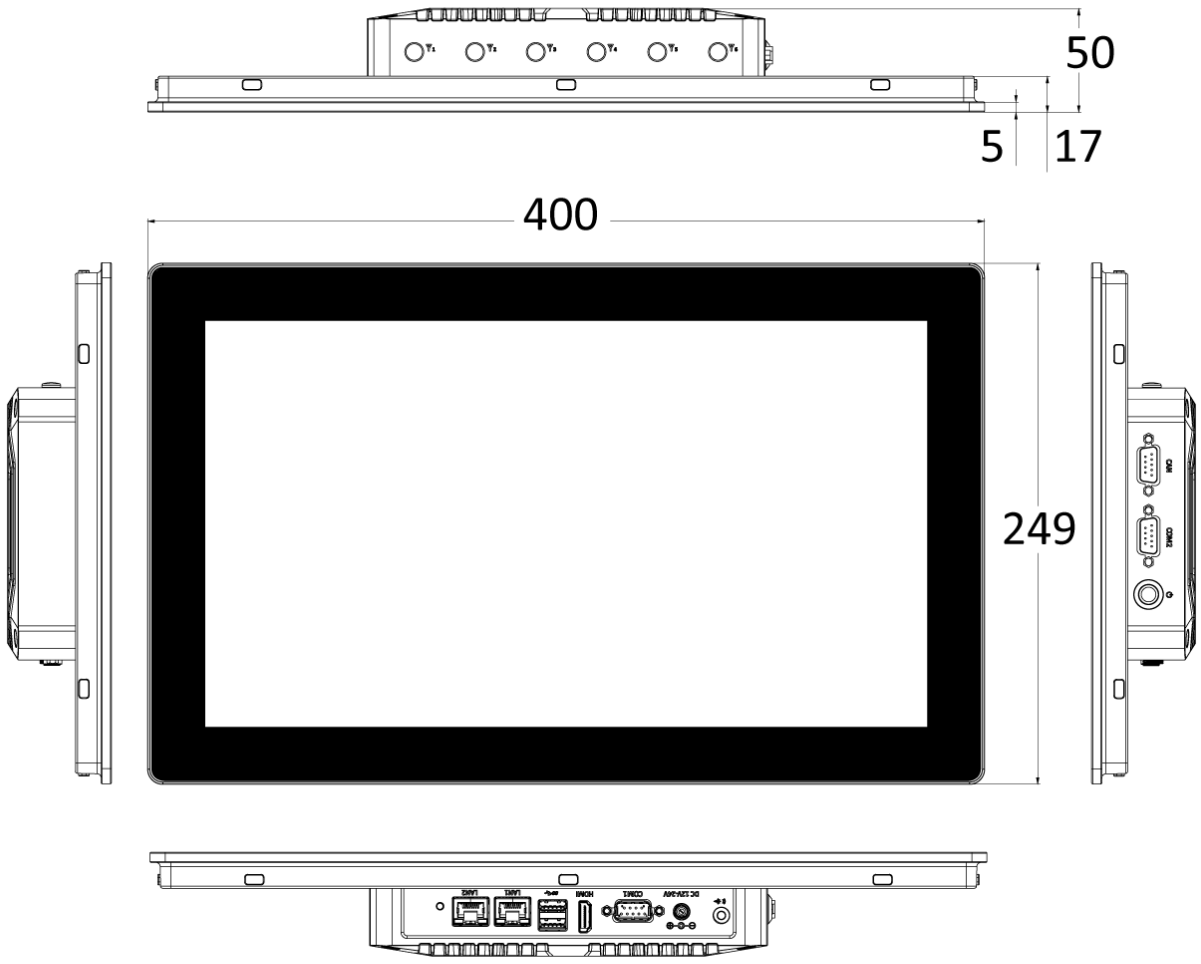
Unit: mm

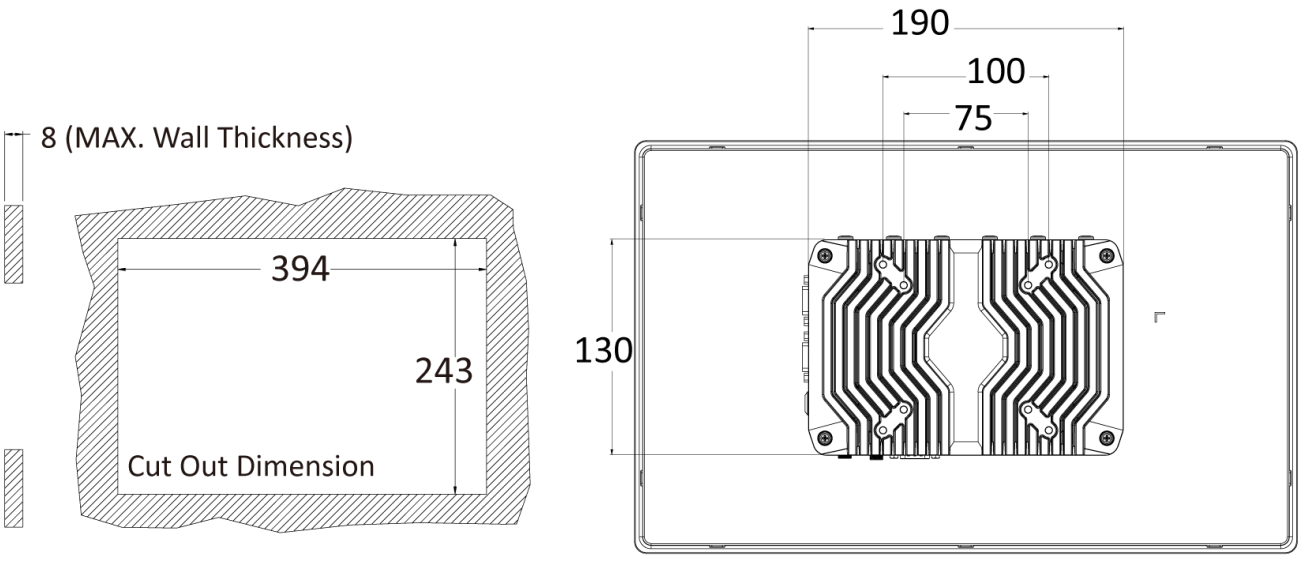




1.4.2 AIO-W215-RK3568J

Unit: mm

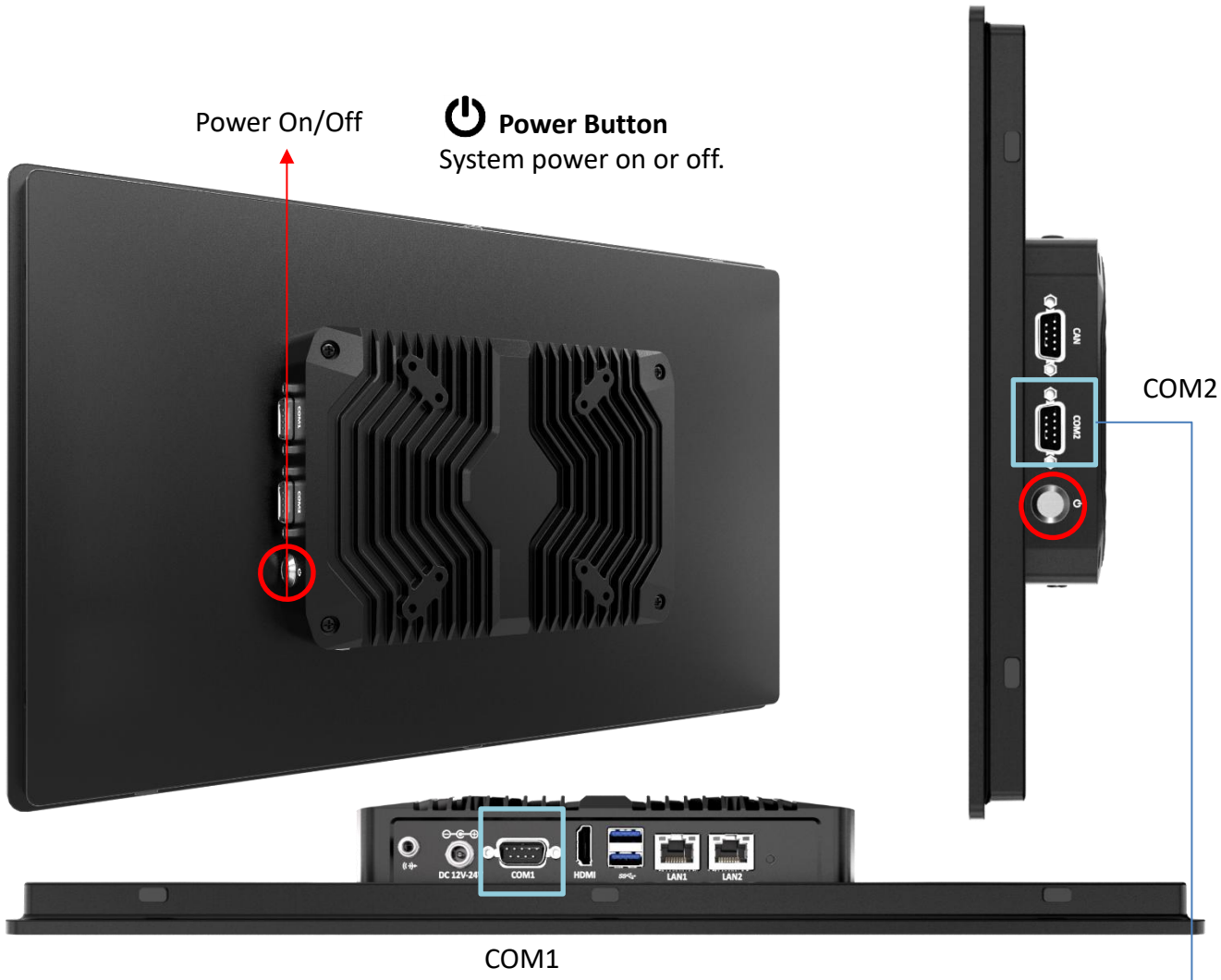




Chapter 2

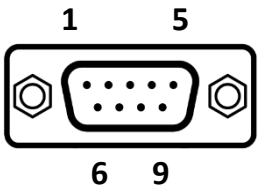
Panel Controls

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		
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	422TXD-	Transmit Data, Negative
2	422TXD+	Receive Data, Positive
3	422RXD+	Transmit Data, Positive
4	422RXD-	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

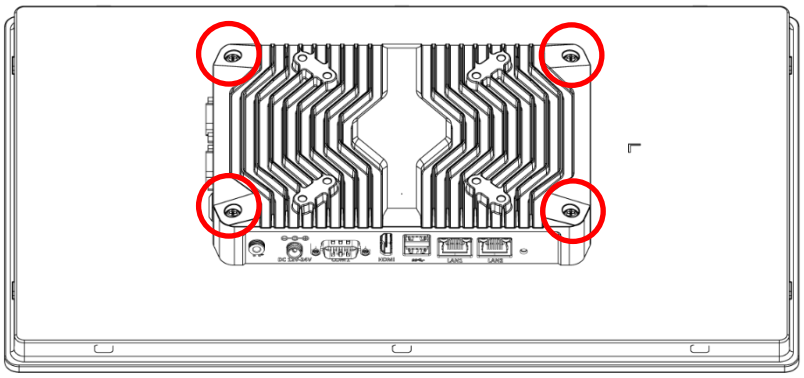
Set torque force to 3.5 kgf-cm to execute all the screwing and unscrewing.

3.1 Replacement of Internal Modules

WARNING

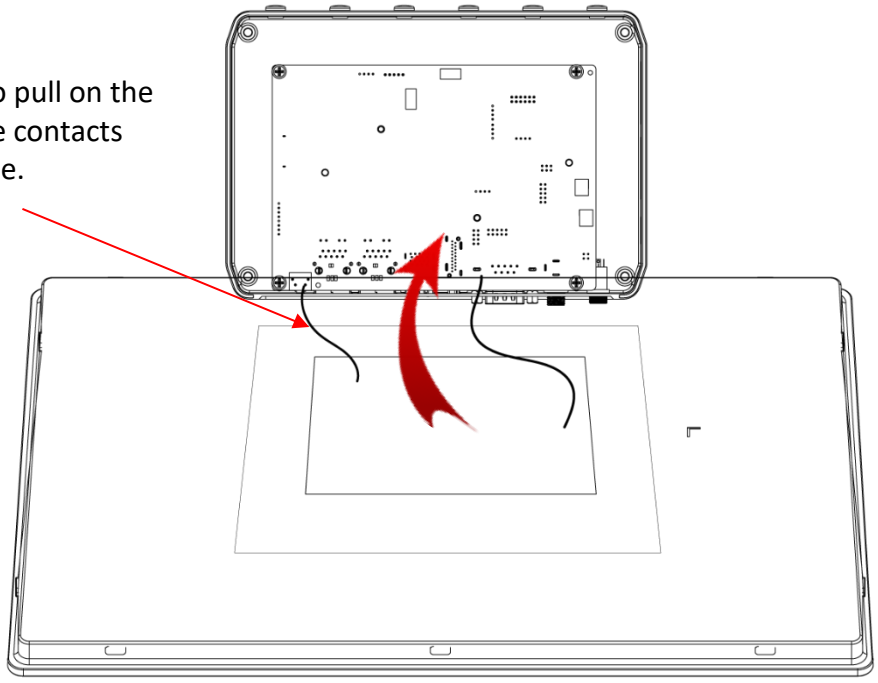
In order to prevent electric shock or system damage, before removing the chassis cover, must turn off power and disconnect the unit from power source.

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



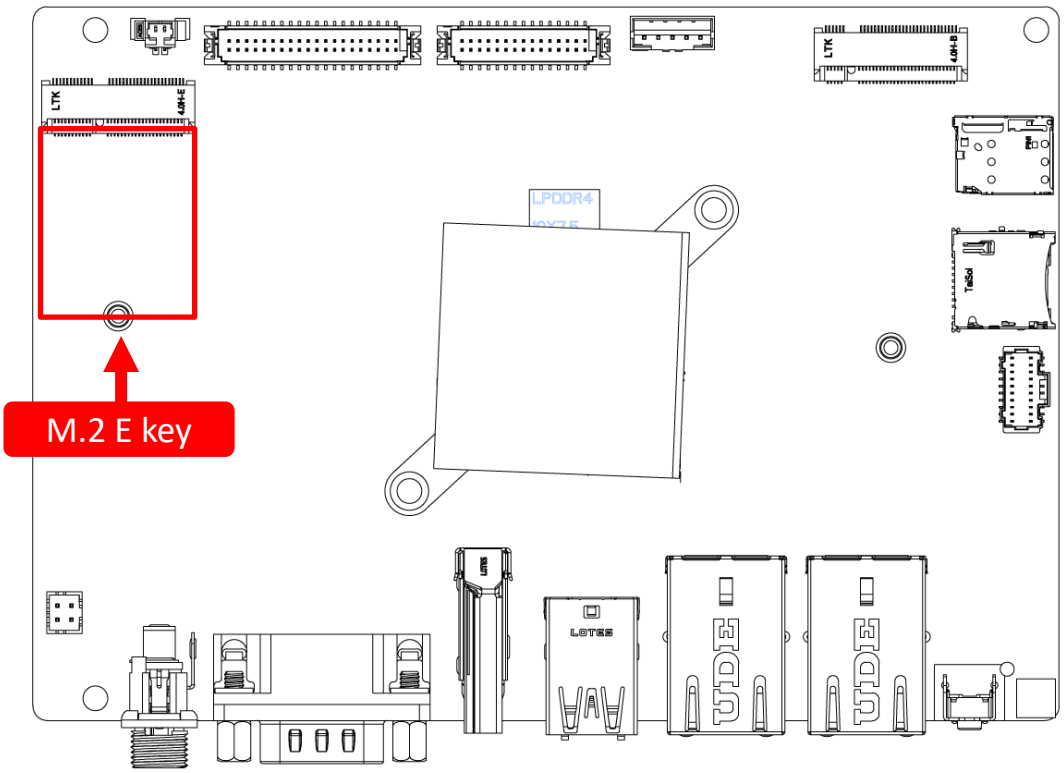
2. After removing the screws, detach the main unit from the screen.

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

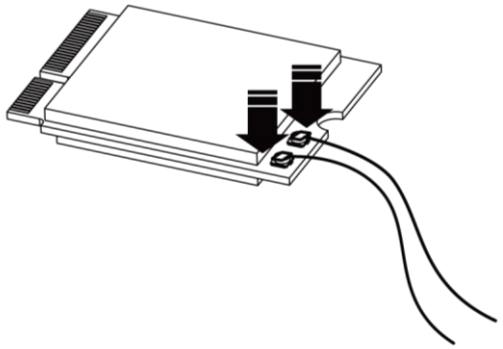


3.2 Install wireless network card and antenna

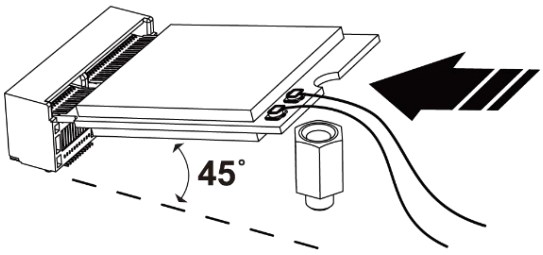
1. The M.2 E-Key supports Wi-Fi module, as highlighted in the picture below.



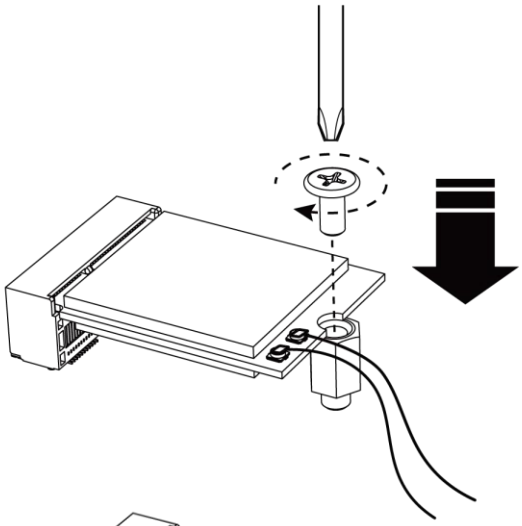
2. Connect the SMA cables to the Wi-Fi module.

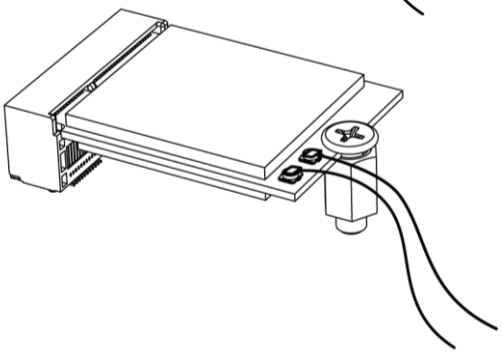


3. Insert the Wi-Fi module at a 45-degree angle.

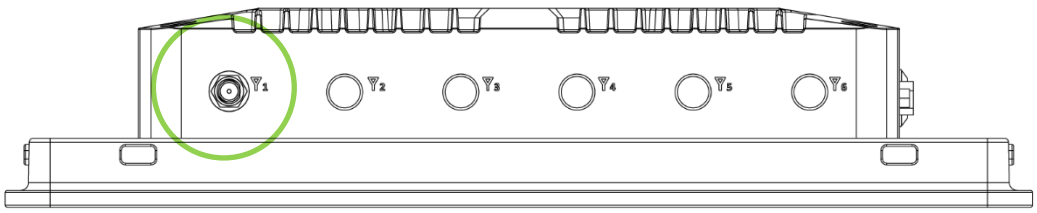


4. Press the Wi-Fi module down and secure it with one screw.

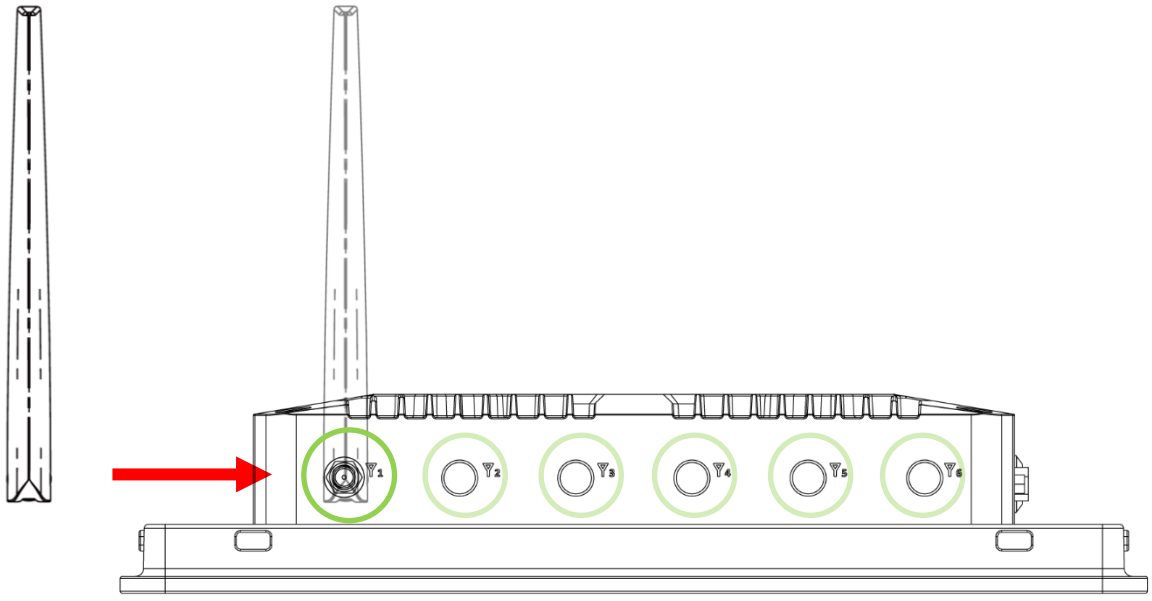




5. Ensure the internal antenna is securely connected to the network card, and the antenna interface is properly installed in the designated opening on the chassis cover.

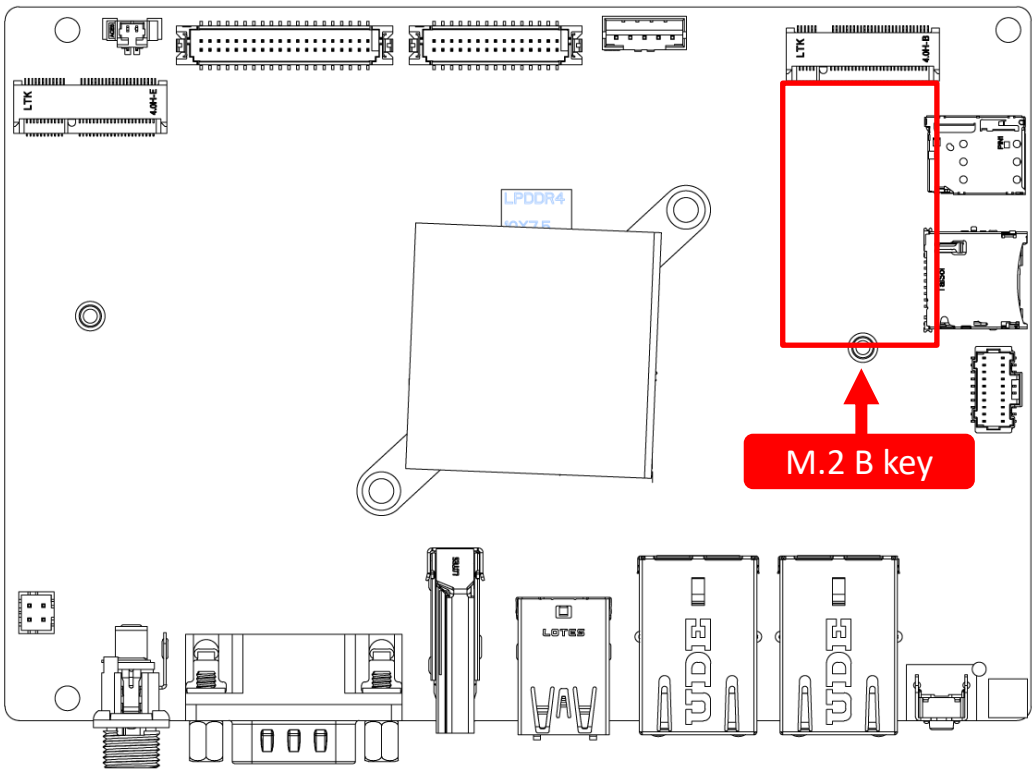


6. Attach the external antenna to the SMA jack by securely threading them together.

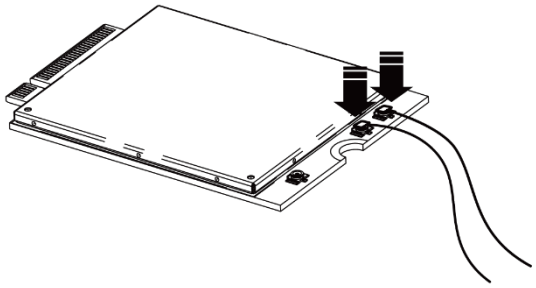


3.3 Install Communication Module and Antenna

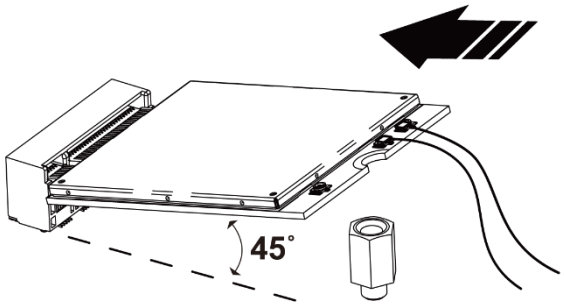
1. The M.2 B-Key supports communication (4G/LTE) module, as highlighted in the picture below.



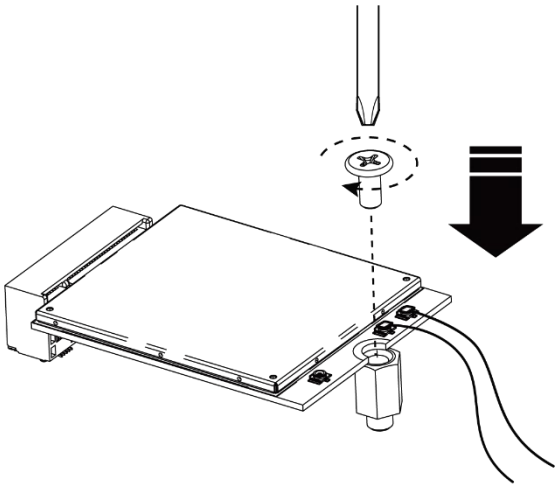
2. Connect the SMA cables to the communication (4G/LTE) module.

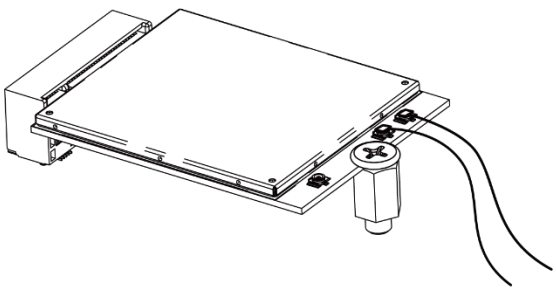


3. Insert the communication (4G/LTE) module at a 45-degree angle.

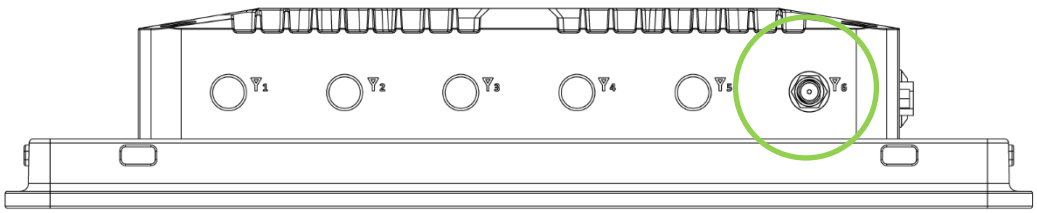


4. Press the communication module down and secure it with one screw.

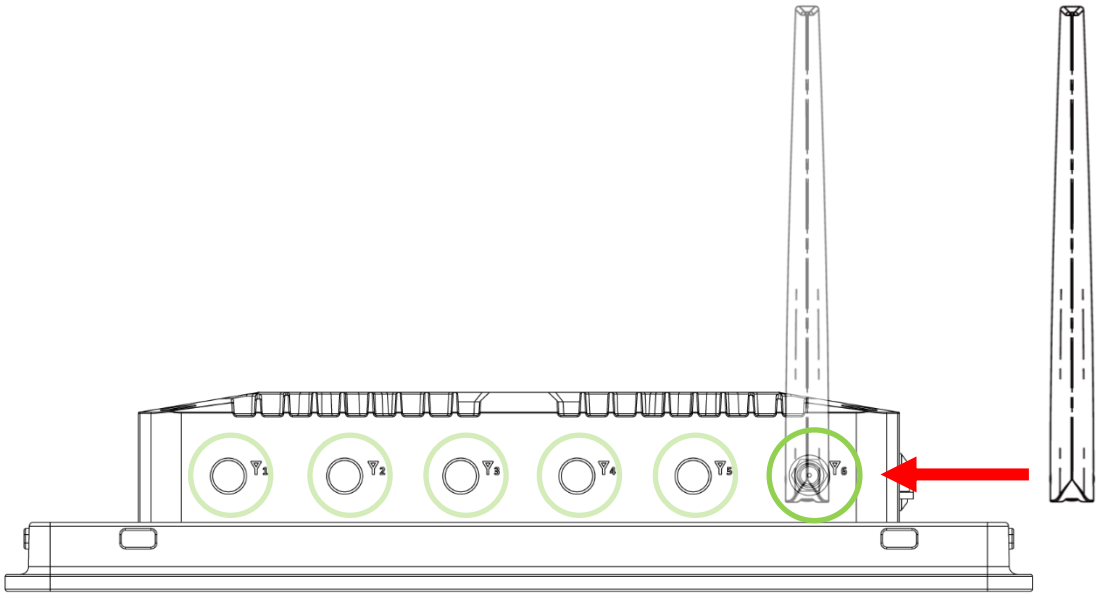




5. Ensure the internal antenna is securely connected to the network card, and the antenna interface is properly installed in the designated opening on the chassis cover.



6. Attach the external antenna to the SMA jack by securely threading them together.



Chapter 4

Firmware Flashing Guide (via RKDevTool)

4. Firmware Flashing Guide (via RKDevTool)

Version: V1.0.1
Date: 2025/07/16

4.1 Prepare the following items:

- One AIO-200-ROK device
- One Windows PC
- One USB Type-A to Type-A cable

4.2 Extract the image package:

The package includes:

- Drivers
- Flashing tool
- Image file

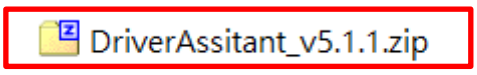
4.3 Important Notice:

The flashing tool must be located in a folder with English-only characters.

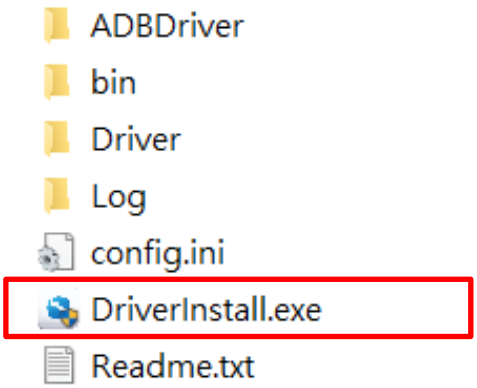
Avoid any folder names containing Chinese, Japanese, or other non-English characters.

4.4 Install the driver on the Windows PC:

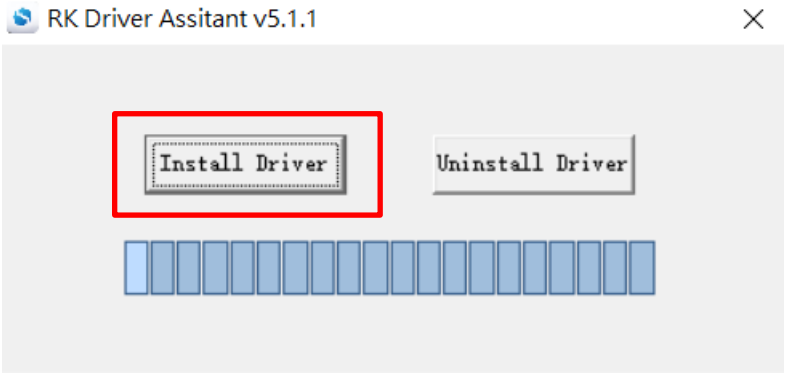
4.4.1. Extract DriverAssitant_v5.1.1.zip.



4.4.2. Run DriverInstall.exe.



4.4.3. Click the "Install Driver" button to complete installation.



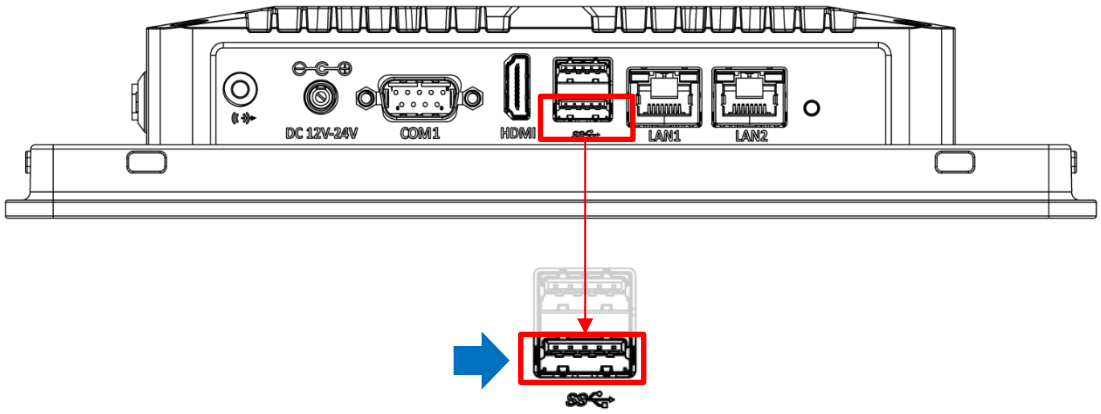
4.5 Enter Loader Mode on the AIO-200-ROK device:

4.5.1 Power on the AIO-200-ROK device.

4.5.2 Go to Settings > About tablet and tap Build number seven times.

Use the USB Type-A to Type-A cable to connect the Windows PC to the dedicated burning port on the AIO-200-ROK device.

The burning port is the bottom USB 3.0 port located beneath the top USB connector, next to the HDMI port.



4.6 Complete the process and reboot the device:

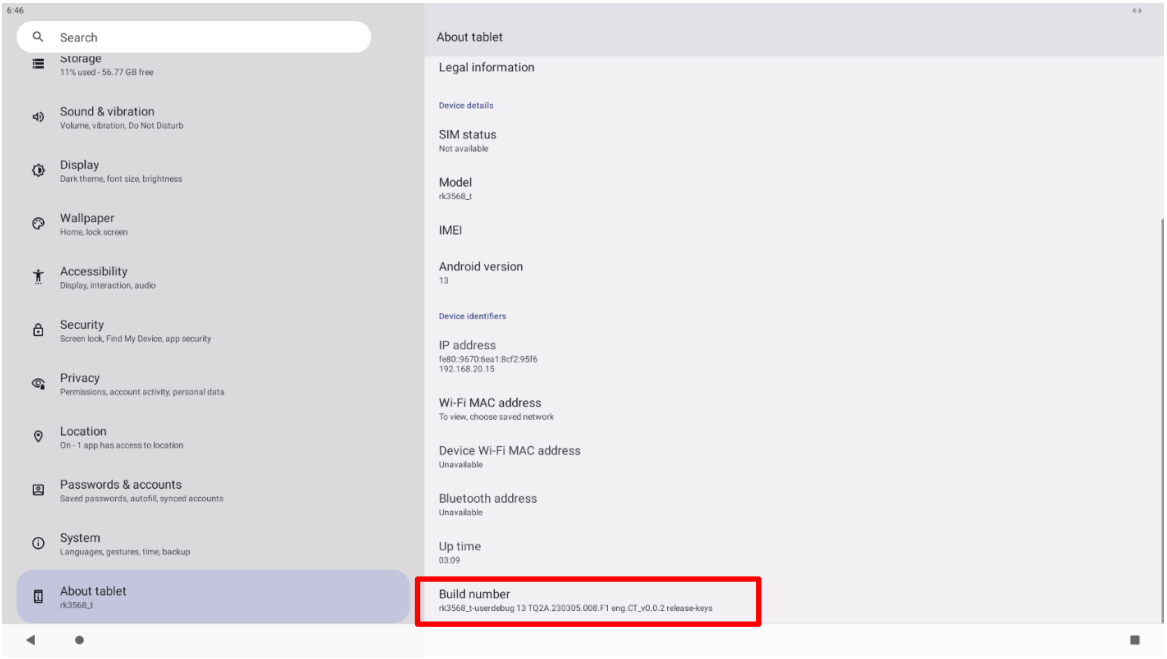
Once the upgrade is complete, the tool will display a success message.

Disconnect the USB cable and restart the AIO-200-ROK device.

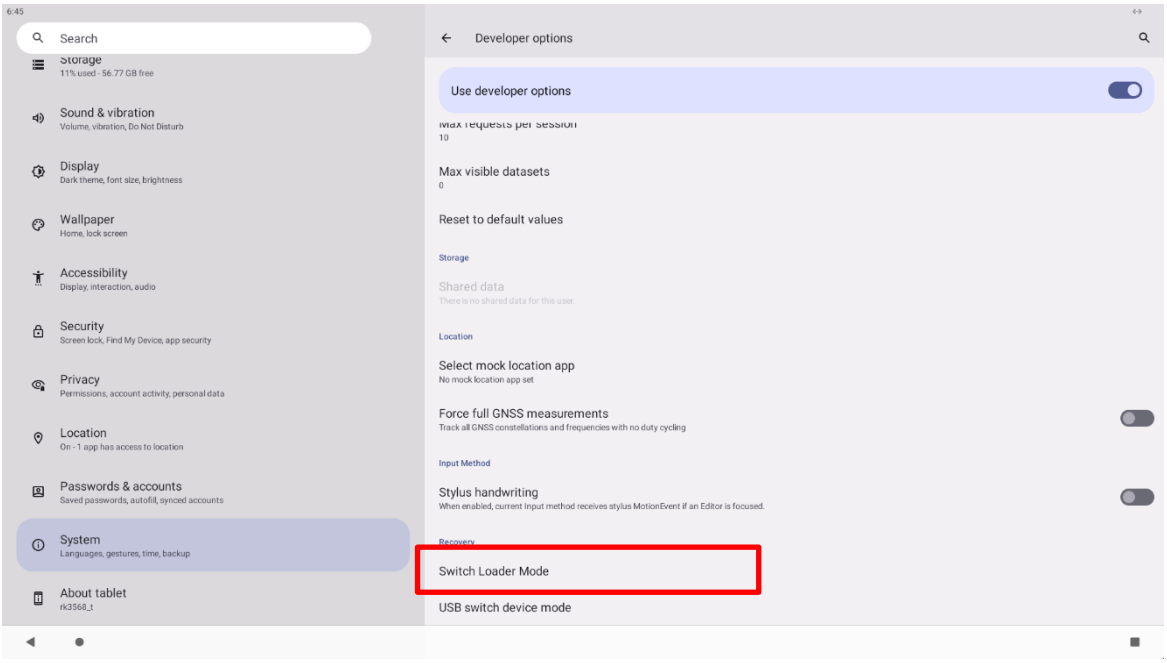
The device is now updated and ready for use.

- **Android**

Go to Settings → About tablet → tap Build number seven times to enable Developer options.



Go to Settings → System → Developer options, scroll to the bottom, and select Switch Loader Mode.



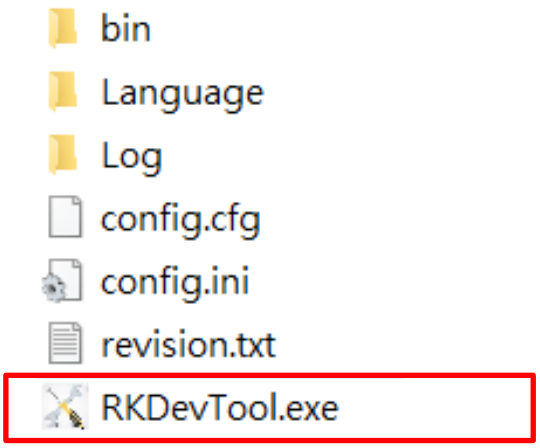
- **Debian & Ubuntu**

1. Open the terminal.
2. Execute the following command:

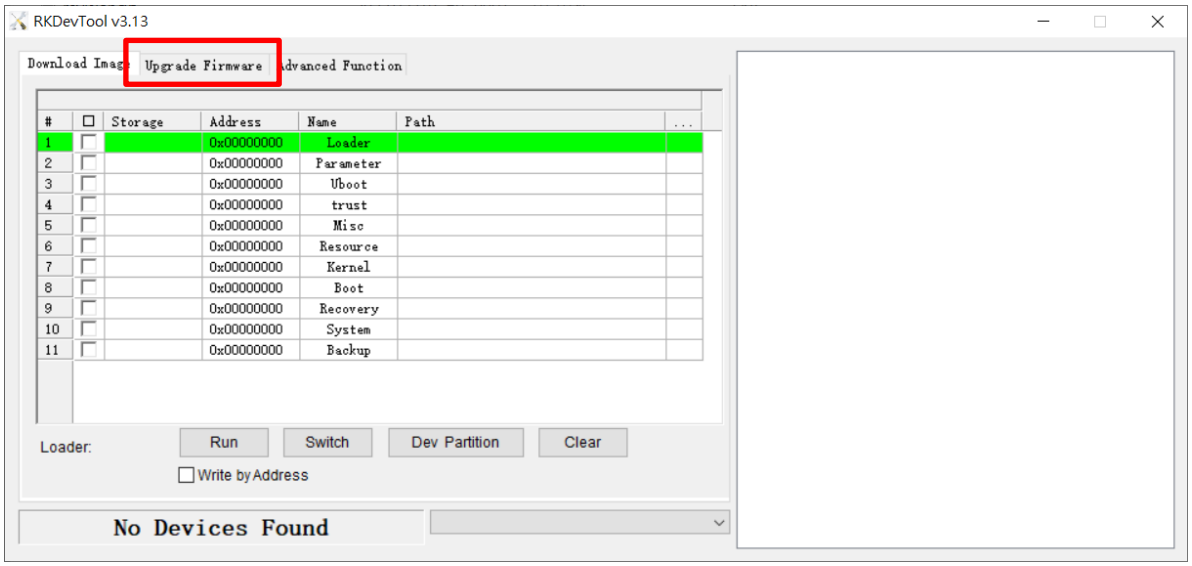
```
sudo reboot loader
```

4.7 Flash the firmware using RKDevTool:

4.7.1 Open the RKDevTool_v3.13_for_window folder, and run RKDevTool.exe.



4.7.2 Switch to the Upgrade Firmware tab.

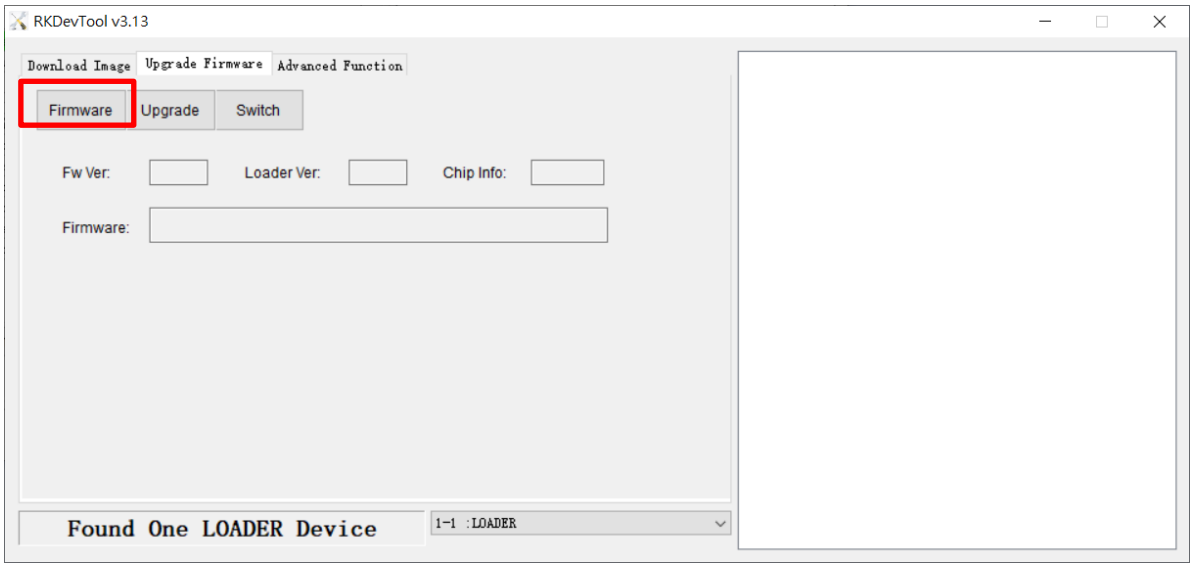


4.7.3 Click the Firmware button and select the update.img file from the image folder.

Image file example:

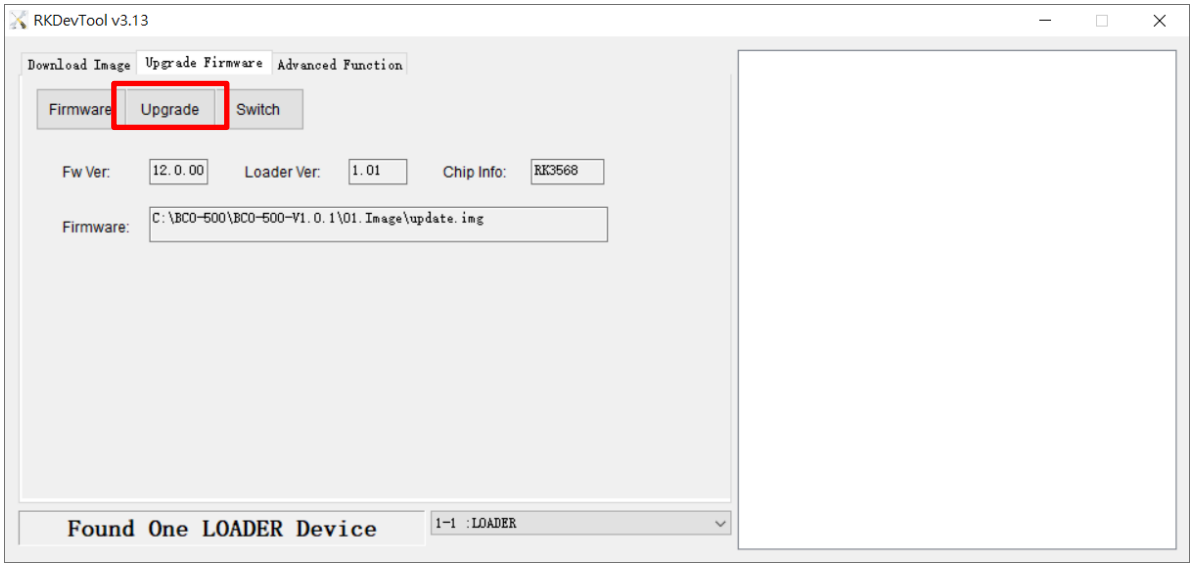


Firmware selection:



4.7.4 Confirm the tool displays "Found One LOADER Device" at the bottom.

Once detected, click the Upgrade button to start flashing.



⚠ Do not disconnect the device or close the tool during the flashing process.

4.8 Complete the process and reboot the device:

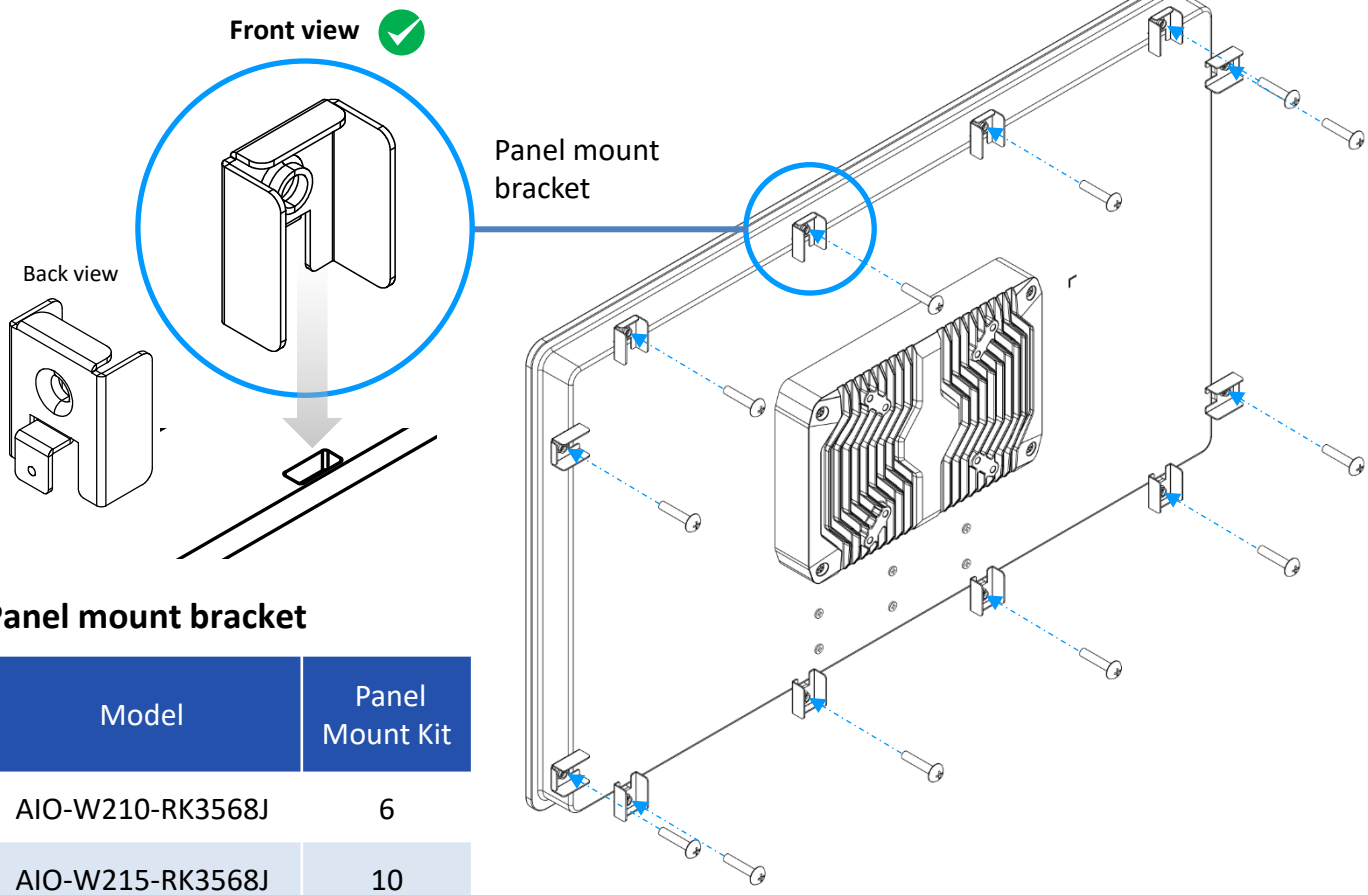
Once the firmware upgrade process is complete, you will see a "Download image OK" or "Upgrade successful" message in RKDevTool.

You can now safely disconnect the USB cable.

The AIO-200-ROK device will reboot automatically, or you may manually restart it.

The device is now updated and ready for use.

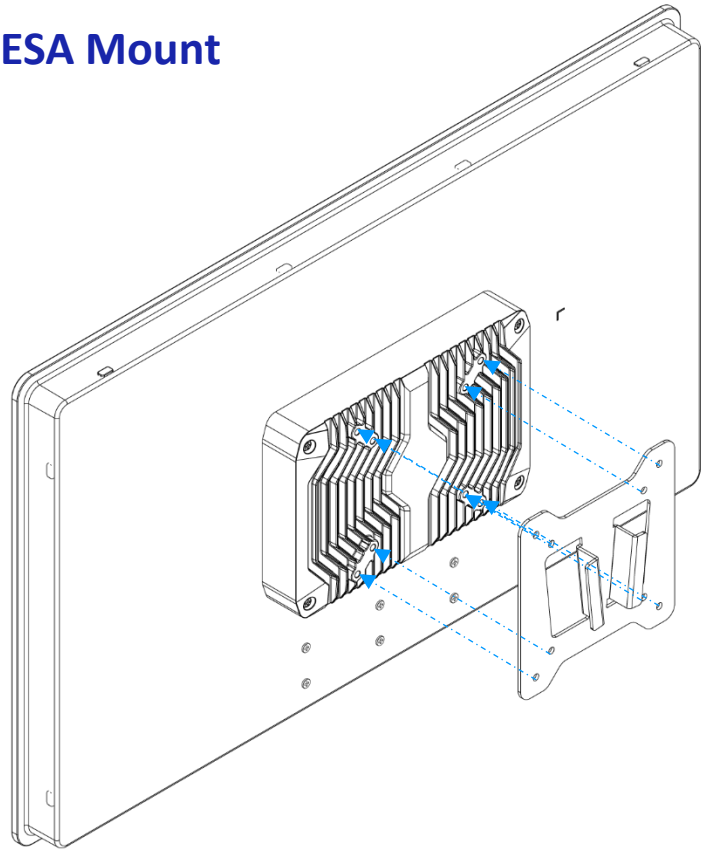
Panel Mount



Panel mount bracket

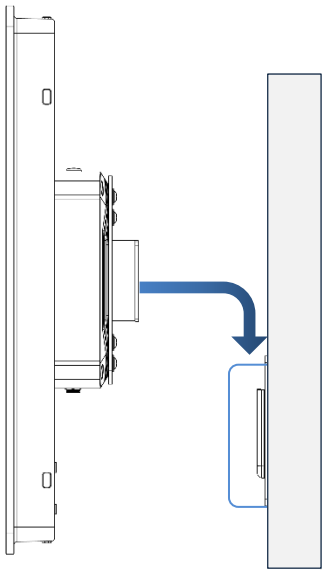
Model	Panel Mount Kit
AIO-W210-RK3568J	6
AIO-W215-RK3568J	10

VESA Mount



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

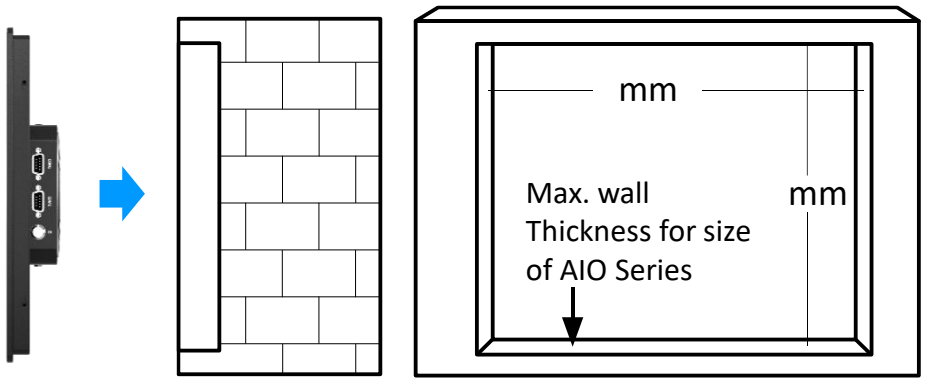
M4X6L x8 pcs



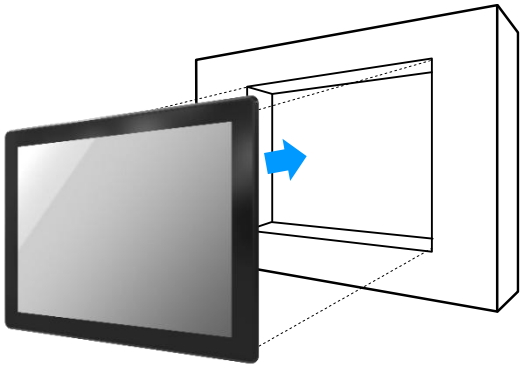
Mounting Guide

Flush Mount / Panel Mount:

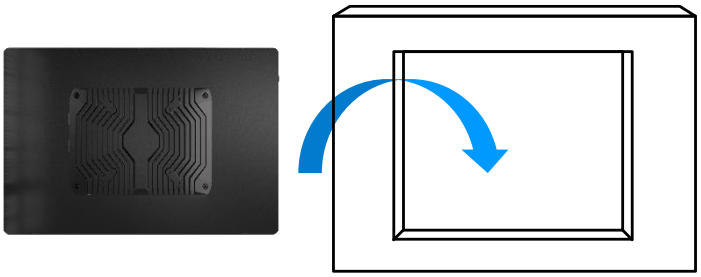
- Cut hole in the wall w/ dimensions according to the screen size you have purchased. Please refer to the next page for the list of cutout dimensions and max wall depths



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

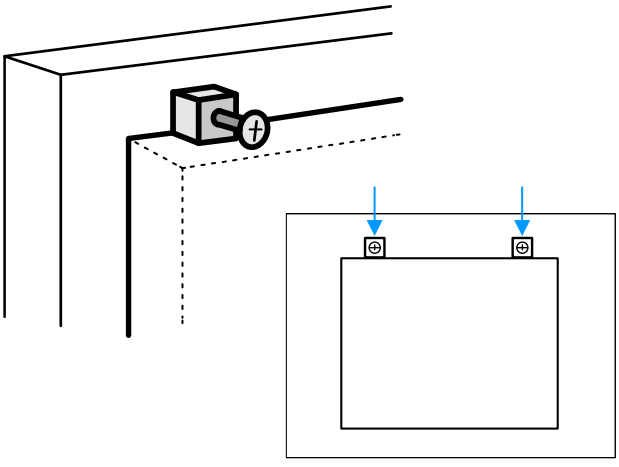


REAR



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-200-ROK Series

Model	Wall Cut-Out (W x H) Unit: mm	Max Wall Thickness (mm)
AIO-W210-RK3568J	249 x 163	7
AIO-W215-RK3568J	394 x 243	8

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