MAXHUB All-in-One Display

Raptor Series V3

User Manual

V1.1

MAXHUB

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Important Information

WARNING

Since this product is a Class A product, operating the equipment in a residential environment may cause radio interference.

Please read the following safety information before installing or operating the device:

1. Do not invert or throw the device during handling and storage;
2. Do not tilt and collide the device during installation to avoid scratches;
3. Do not drench or soak the device;
4. Do not close the air outlet of the air conditioner to the display;
5. Do not place or use the display in the environment with volatile, corrosive and flammable chemicals;
6. Do not use the product at the humidity above 80% or in outdoor rainy environment;
7. Do not use water or chemical solvents to clean the display;
8. Do not use electrical accessories not certified by the device manufacturer;
9. Ensure that the display and accessories are correctly and reliably grounded before use;
10. In case of abnormalities, such as peculiar smell, smoke, electric leakage and abnormal temperature, please cut off the power supply immediately, and then contact technical professional;
11. To disconnect the power supply from the equipment, you must disconnect both of the two power sockets.
12. Connect the equipment to 100-240V AC power supply.

To ensure optimal display performance, please adhere to the following precautions:

1. Wear anti-static gloves and anti-static wrist strap when installing and repairing the equipment;
2. Good ventilation on the back of the display must be considered when designing the cooling solution;
3. The storage environment of the equipment shall be ventilated and dry, and the humidity shall not exceed 85% RH;
4. In normal circumstances, please ensure that the display is powered on at least twice a week for a minimum of two hours each time;
5. If the display is installed in the seaside, saline areas, the areas with sulfurized gases, near the fume exhaust in kitchen, or the indoor and outdoor sites with large temperature difference, it may cause power-on failure or effect the service life of the equipment. If it is unavoidable, please consult our technical professional;
6. This equipement is only suitable for safe use at altitudes below 5000 m;
7. The operating ambient temperature of the equipment must not exceed - 10 ~ 40℃ .

Onsite service requirements for service provider:

1. Before going to the site, contact the customer in advance to confirm the onsite installation environment and communicate with the customer about the specific installation time;
2. According to the on-site installation situation, it is necessary to carry installation tools for drilling and flaring, and spirit level. In case of special requirements, it may be necessary to additionally carry such equipment as self-tapping screws and cutting machines;
3. It is necessary to arrive at the customer's site on time according to the time scheduled. In case of not arriving on time for special reasons, it is needed to communicate with the customer in advance to explain the reasons;
4. Before installation, the product and its accessory shall be checked according to the packing list attached with the product. In case of wrong delivery, omission or damage of equipment, photos shall be taken in time and communication shall be made with the agent and manufacturer for handling;
5. When installing the equipment, keep hands clean and wear anti-static gloves;
6. Installation must be carried out according to the marked cabinet number and the serial number of the LED panel;
7. During installation, attention shall be paid to the flatness and gap between the cabinet and the LED panel, and adjust it in time to avoid rework;
8. Check the status of the whole screen after the product is lit up to ensure the best display effect;
9. Provide unified training guidelines for customers to let them understand product functions and how to use them;
10. When the installation for a project is completed, fill in the record form required to be filled in on site, and take photos for record.

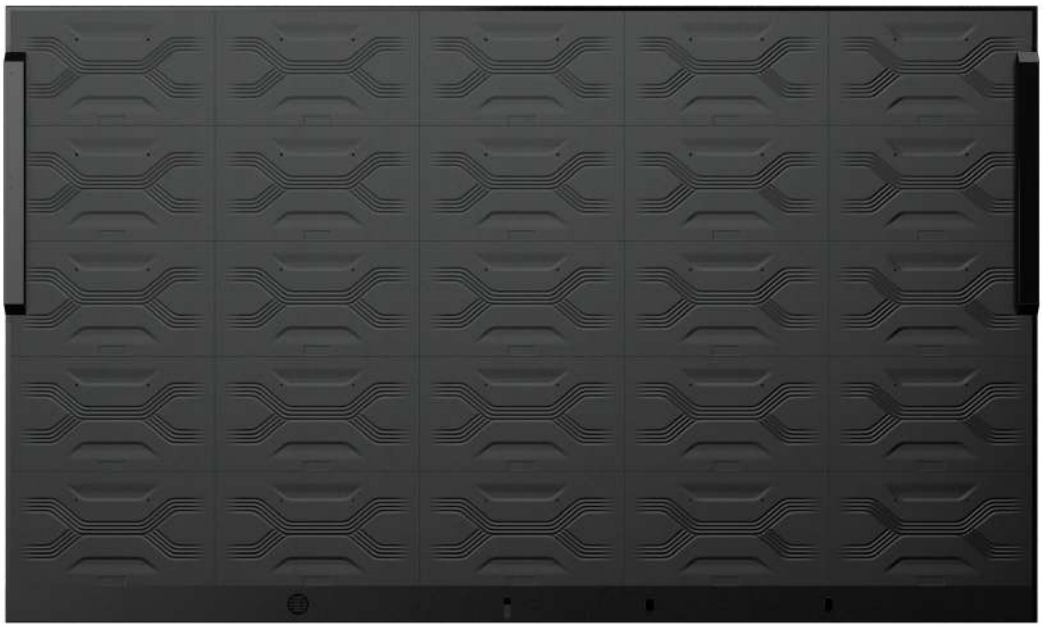
Precautions for construction:

1. Tools such as laser level, tape measure, lifting line for plane measurement, trepanning and punching tools, etc. should be available;
2. Upon arrival at the site, confirm that the reserved dimensions–including length, width, thickness, and the quantity and type of wires–meet the specifications;
3. The height above the ground and the center location must be confirmed with the user and clearly marked in the absence of a steel back frame;
4. Check the steel structure and wall flatness and levelness when installing wall mounting bars;
5. Check the flatness of the wall mounting bars and measure the distance between the top and bottom when installing them;
6. If it is found that the cabinet shakes up and down severely when installed, it is necessary to insert pads to the back beforehand until it does not shake;
7. It is necessary to check whether the gap between the display and the wall is consistent up and down after the cabinet is installed;
8. Back connection plates should be fastened at the splicing points when the upper and bottom rows of cabinets need to be joined;
9. Check the gaps between two rows of cabinets that were joined, and adjust them in time if they are too large;
10. After the screen is installed, it is necessary to check whether the four corners are flush with the decoration.

1. Introduction

1.1 Product Overview

Front View



Rear View

NOTE

This manual only takes the 138-inch device as an example.

1.2 Dimension and Specification

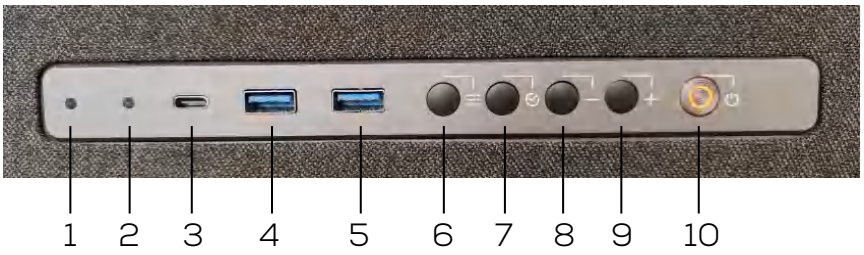
Model	LX120V07	LX138V07	LX150V07	LX165V07	LX180V07	LX220V07	LX220V18
LED Type	SMD	SMD	SMD	SMD	SMD	SMD	SMD
Size	120"	138"	150"	165"	180"	220"	220"
Aspect Ratio	16:9	16:9	16:9	16:9	16:9	16:9	16:9
Pixel Pitch (mm)	1.3	1.5	1.7	Q.9	2.0	2.5	1.2
Resolution	1920 × 1080	1920 × 1080	1920 × 1080	1920 × 1080	1920 × 1080	1920 × 1080	3840 × 2160
Overall Size (W*H) (mm)	2694 × 1624	3080 × 1840	3360 × 1998	3690 × 2183	4026 × 2373	4910 × 2869	4910 × 2869
Screen Thickness	28 mm	28 mm	28 mm	28 mm	28 mm	28 mm	28 mm
Net Weight (Wall-mounting bracket and mobile stand not included)	87 kg (192 lbs)	122 kg (269 lbs)	131 kg (289 lbs)	172 kg (379 lbs)	185 kg (408 lbs)	296 kg (652 lbs)	296 kg (652 lbs)
Recommended Viewing Distance	≥ 2.8 m (9.19 ft)	≥ 3.2 m (10.5 ft)	≥ 3.4 m (11.15 ft)	≥ 3.8 m (12.47 ft)	≥ 4 m (13.12 ft)	≥ 5 m (16.4 ft)	≥ 5 m (16.4 ft)
Maintenance Mode	Front Access	Front Access	Front Access	Front Access	Front Access	Front Access	Front Access
Installation Option	Mobile Stand/ Wall-mounting	Mobile Stand/ Wall-mounting	Mobile Stand/ Wall-mounting	Mobile Stand/ Wall-mounting	Wall-mounting	Wall-mounting	Wall-mounting
Operation Voltage	100~240 VAC 50/60 Hz	100~240 VAC 50/60 Hz	100~240 VAC 50/60 Hz	100~240 VAC 50/60 Hz	100~240 VAC 50/60 Hz	100~240 VAC 50/60 Hz	100~240 VAC 50/60 Hz
Average Power Consumption of Overall Unit	0.483 KW	0.521 KW	0.575 KW	0.731 KW	0.78 KW	1.101 KW	1.514 KW
Maximum Power Consumption of Overall Unit	1.611 KW	1.738 KW	1.916 KW	2.438 KW	2.6 KW	3.67 KW	5.046 KW

NOTE

For more details about the product dimensions, please refer to *https://www.maxhub.com/en/support/?#trigger-download-center.*

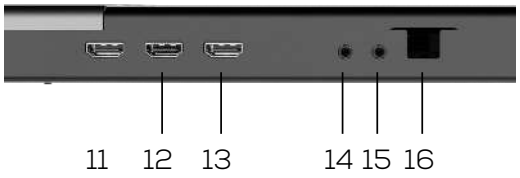
1.3 Interface and Button

1) Buiilt-in Interface:

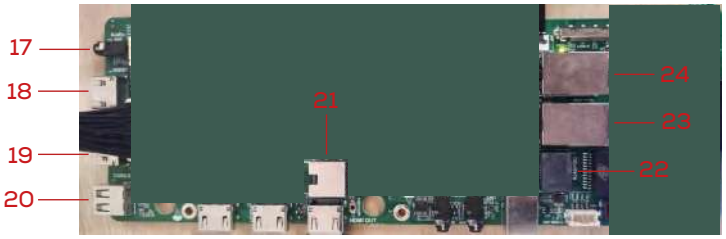


Forward Facing

No.	Description
1	Light Sensor (Intelligent space sensing, allowing for automatic brightness adjustment)
2	IR
3	Type C
4	USB 3.0
5	USB 3.0
6	Menu Button (Including brightness, color temperature, contrast, sound, signal source and other sub-menus)
7	Bright / OK (1. When the menu is Not called up, it is the brightness adjustment button, and the + and - keys are used to adjust the brightness; 2. When the menu is called up, it is used as confirm button.)
8	1. In the brightness adjustment mode, it is the brightness reduction key; 2. When the Menu is called up, it is the left/ down/ minus key; 3. The default is the volume down button.
9	1. In the brightness adjustment mode, it is the brightness increase key; 2. When the menu is called up, it is the right/ up/ Add key; 3. The default is the volume up button.
10	Standby/ Wake up button, dual-color indicator light (red/ blue)



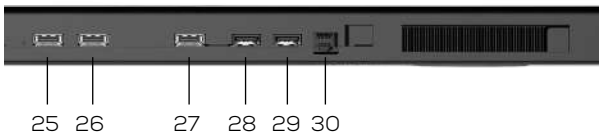
Downward Facing



Internal

No.	Description
11	HDMI Input (HDMI 1.4)
12	HDMI Input (HDMI 1.4)
13	HDMI Output (HDMI 2.0)
14	3.5mm Audio Output
15	3.5mm Audio Input
16	USB Out (The computer can access to USB devices connected to panel, when connected to the Raptor through HDMI input and USB out at the same time)
17	3.5mm Audio Output
18	HDMI Input (HDMI 2.0, supports CEC)
19	HDMI Input (HDMI 1.4)
20	USB 2.0
21	RJ45 (Support RS232 Protocal)
22	RJ45 (With POE + up to 30W, for Connection with MAXHUB PTZ Camera)
23	RJ45 OPS LAN
24	RJ45 Android LAN

2) Optional PC:



Downward Facing

No.	Description
25	HDMI Input (HDMI 1.4)
26	HDMI Input (HDMI 1.4)
27	HDMI Output (HDMI 2.0)
28	USB 3.0
29	USB 3.0
30	RJ45 LAN

3) Remote Control:

Button	Description
⏻	Standby/ Wakeup
	Up
	Down
	Confirm
	Left
	Right
+	Volume+
−	Volume-
↺	Return
☼	Brightness Adjustment
☰	Menu
⌂	Home Screen

2. Installation

Installation Environment Requirements:

- For wall-mounting, the wall should be load-bearing. special walls such as glass, marble, ceramic tiles, and hollow wall cannot bear the weight of the device. In such cases, special installation methods may be required, which could incur additional costs.
- Installation options only include load-bearing wall drilling, ceiling mount, or mobile stand installation. If special installation methods such as wall reinforcement or steel structure installation are required, the corresponding fees will be calculated separately based on actual costs.

If you insist on installing in a way that poses installation risks as specified by you, after being alerted by our installation personnel, the responsibility arising from this should not be borne by our company; if you use non-standard/self-purchased wall bracket not from our company and they cause damage to other items, our company will not bear any responsibility.

This installation guide contains two main sections:

1) Bracket Installation;

2) Display Installation.

- For bracket installation, you can choose wall mounting or mobile stand as needed.
- For display installation, it is recommended to follow the steps to complete the installation: cabinet assembly, bottom frame assembly, signal and power cable routing, led panel assembly and cover plate installation of bottom frame.

Mobile Stand Mounting

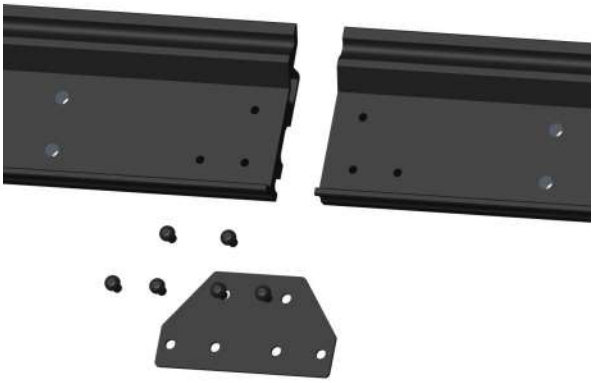
Wall Mounting

2.1 Bracket Installation

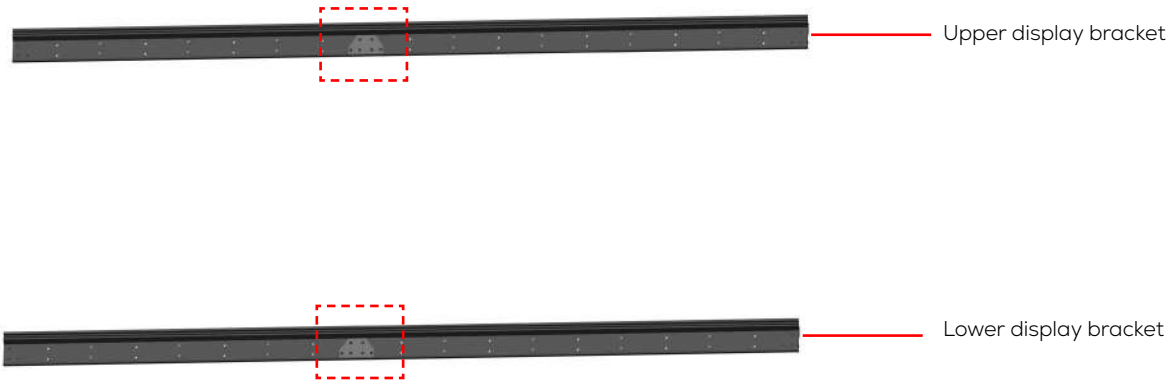
2.1.1 Display Bracket

Before wall mounting or mobile stand mounting, display bracket should be assembled first. The assembly method is as follows:

Step 1: Attach display brackets and place the butt cover plate onto each connection of display bracket.



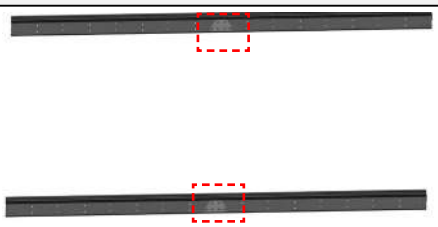
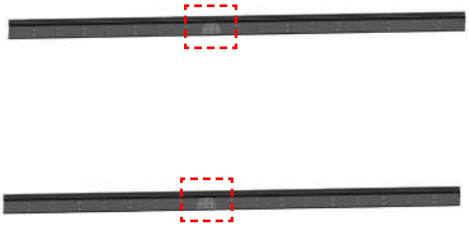
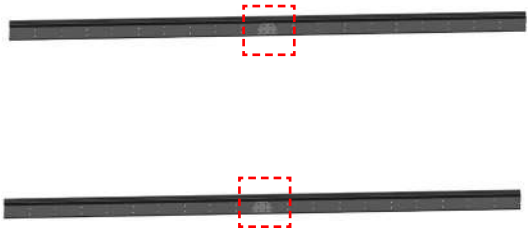
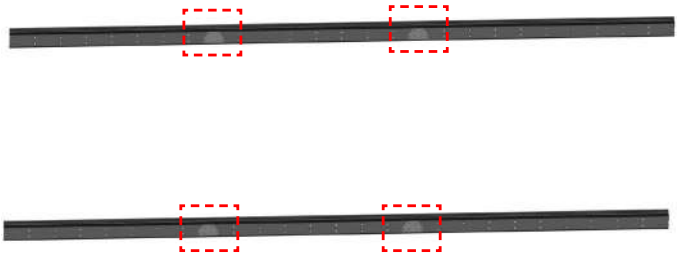
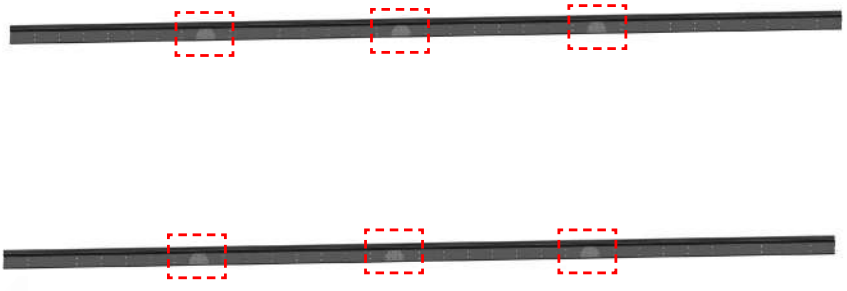
Step 2: Secure the butt cover plate onto the display bracket with 5 pieces of M6*10 screws. Other connections are as the same.



The package includes two kinds of display brackets, a short one (**A**) and a long one (**B**).
Each bracket of different diplay sizes are the combination of module A and module B.
The distance between each hole on the display bracket is 150 mm (5.9 in).

Module A

Module B

Display Dimension	Assembly Method	Illustration
120"	Module A+A	
138" / 150"	Module A+B	
165"	Module B+B	
180"	Module A+A+B	
220"	Module A+A+A+B	

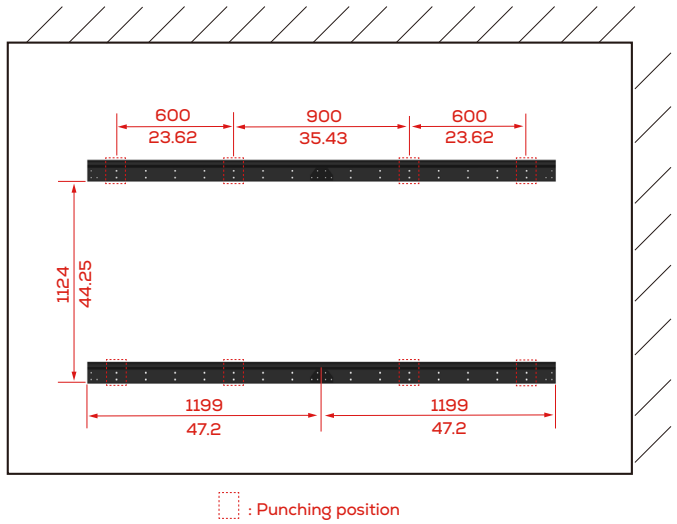
2.1.2 Wall Bracket

Step 1 :

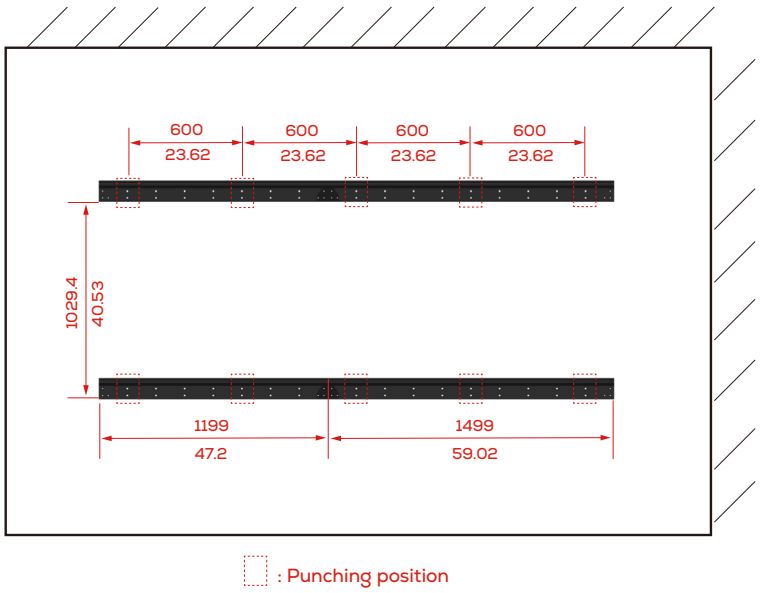
Make sure that the wall and the mounting hardware are capable of supporting the weight of the entire display configuration.
Determine and trace the punching position of the upper and lower wall-mounting bracket according to the height of the display from the floor. A spirit level is required to ensure the display is level.

The punching position of the wall mounting bracket holes is shown as below:

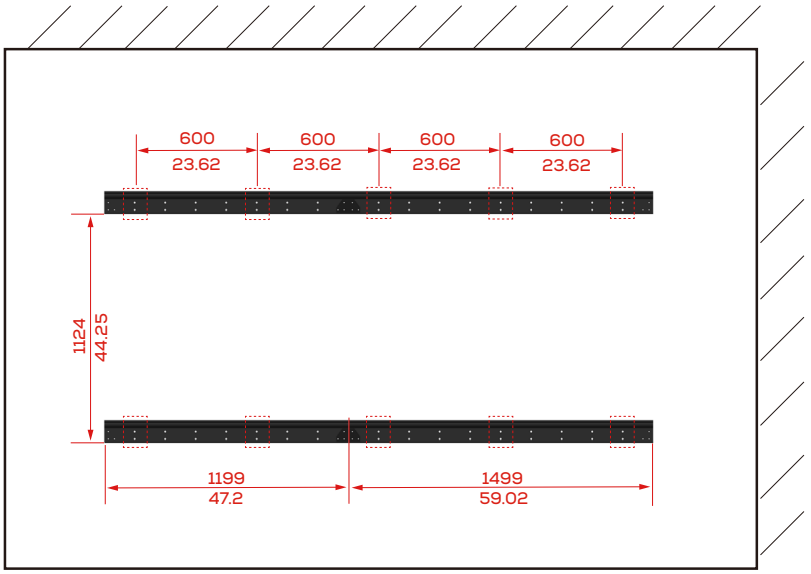
1) 120" (unit: mm / in):



2) 138" (unit: mm / in):

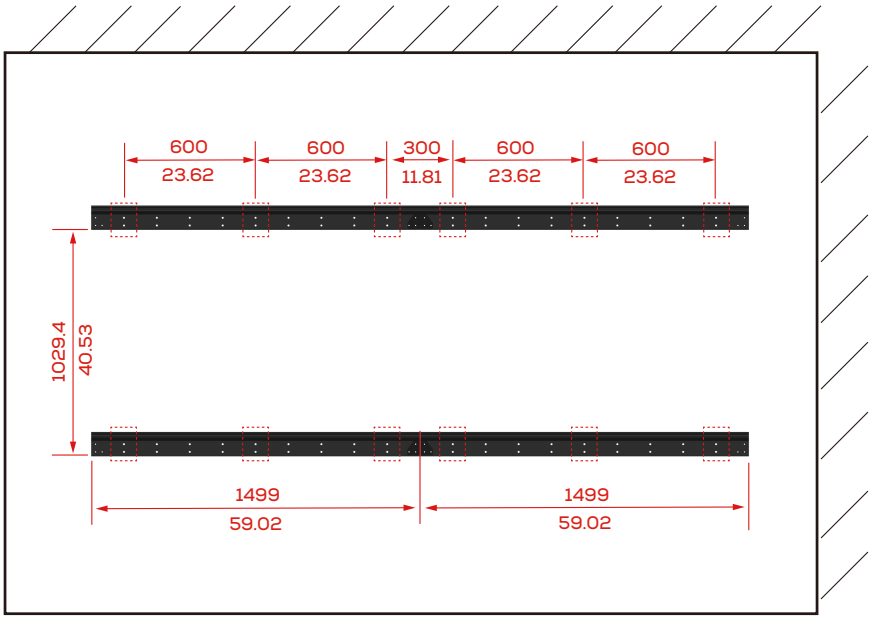


3) 150" (unit: mm / in):



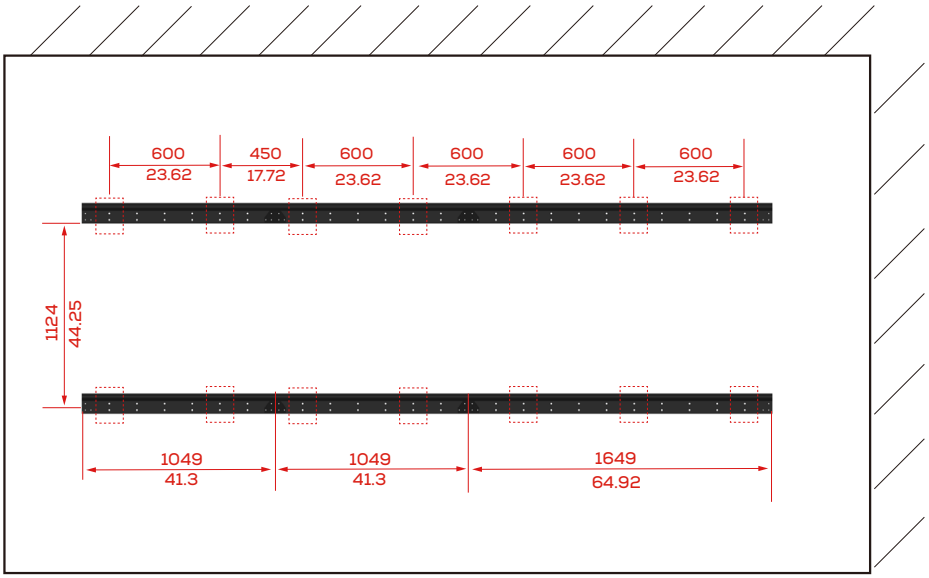
: Punching position

4) 165" (unit: mm / in):



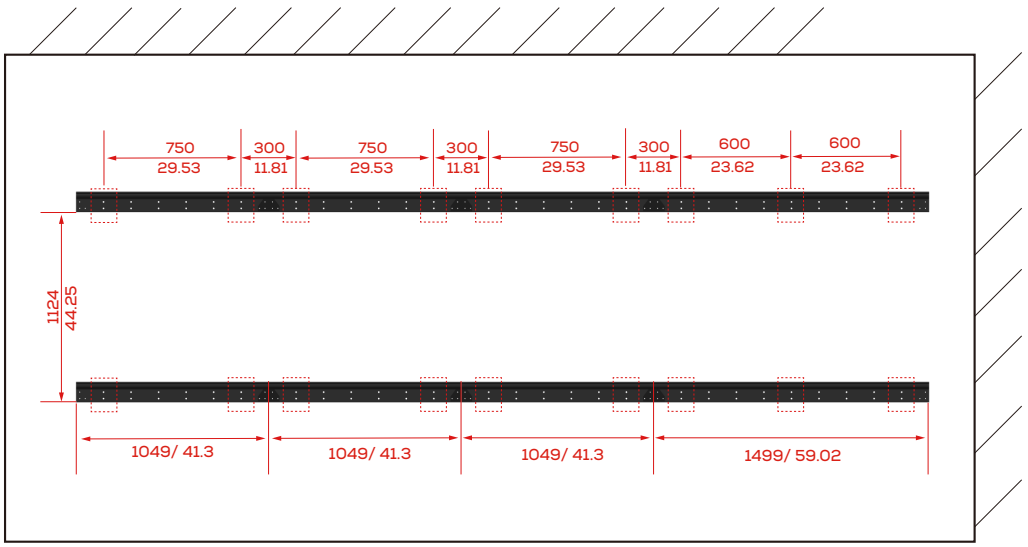
: Punching position

5) 180" (unit: mm / in):



: Punching position

6) 220" (unit: mm / in):

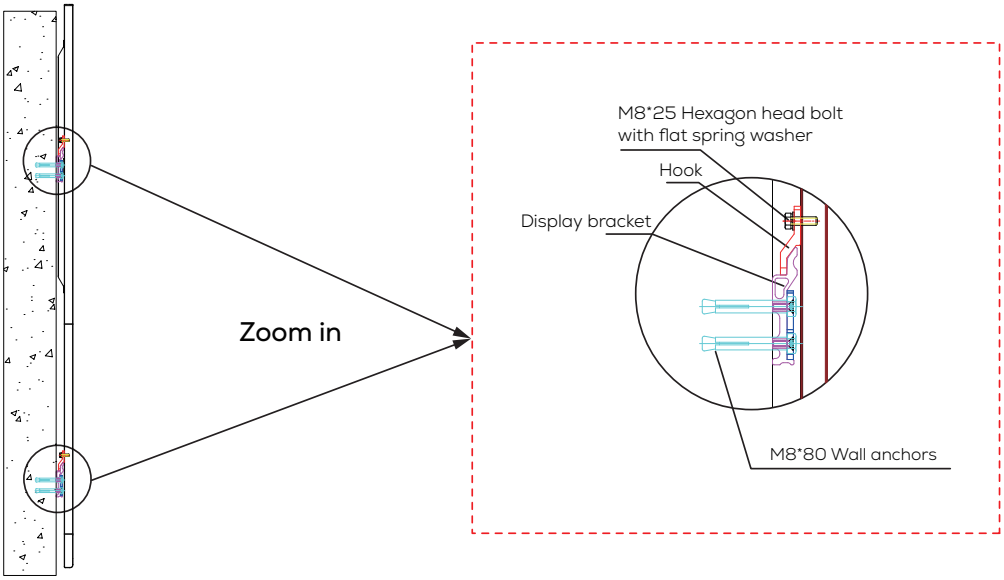


: Punching position

Step 2 :

Punch and screw the wall anchors (M8*80) into the corresponding punched holes. The wall anchors are as follows:

Side view of display bracket mounted on the wall:



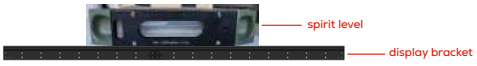
NOTE

To check whether the display brackets are installed properly, you need to make sure:

1) whether they are level;
2) whether the spacing between the upper and lower display brackets is proper.

If not, you can slightly adjust by the following methods:

1) Measure whether the display bracket is horizontal with a spirit level. If it is not horizontal, loosen the expansion bolts, gently push it to the level and then tighten the bolts;
2) Measure the distance between the upper and lower display brackets with a measuring tape. If it is not correct, adjust the distance by loosening the expansion bolt and tightening the bolt slightly.



2.1.3 Mobile Stand

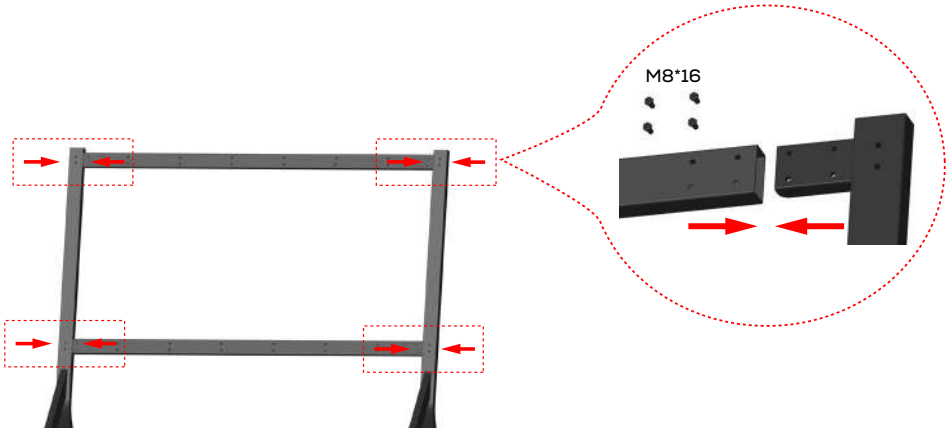
NOTE

Only the 120", 138", 150" and 165" displays can be mounted on a mobile stand, while the 180" and 220" displays can only be wall-mounted.

Step 1: Mount the mobile stand.

Find the corresponding parts of mobile stand in the bracket package.

Butt the mobile stand components together, attach and tighten the components with screws (M8*16 mm). As shown in the figure below:

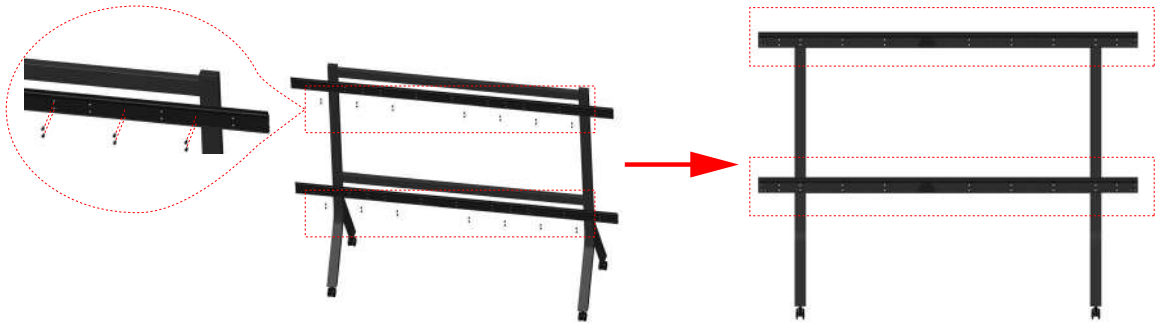


Step 2: Attach the display bracket to the mobile stand.

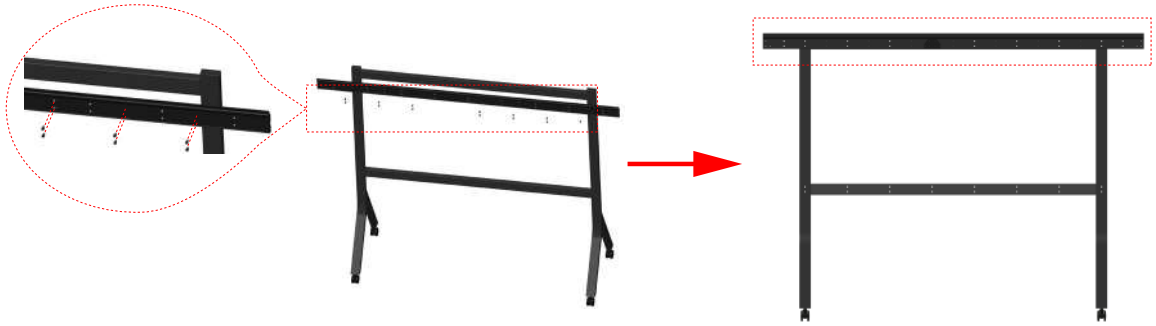
In the package list, the 120" and 150" displays have 2 brackets after mounting the bracket components (upper one and lower one), and the 138" and 165" displays have only one display bracket (upper one).

Attach the display brackets to the mobile stand with screws successively, as shown below:

138"/ 165" （2 display brackets):



120"/ 150" （1 display bracket):



2.2 Display Installation

After mounting the display brackets to the wall or mobile stand as needed, you need to install the components of the display:

1) Cabinet assembly;
2) Bottom frame assembly;
3) Routing of signal and power cables;
4) LED panel assembly;
5) Bottom frame cover installtion.

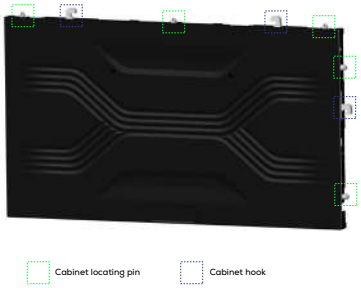
NOTE

The steps below take mobile stand as an example, and the installation steps for wall mounting are the same.

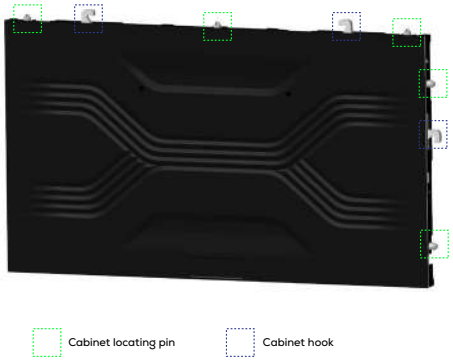
2.2.1 Cabinet Assembly

The display cabinet contains a certain number of single cabinet modules. And the size and number of cabinet modules vary for different display sizes.

- For 138", 165" and 220" displays, each display cabinet is assembled from the smaller cabinet modules (C: 27 inch).
- For 120", 150" and 180" displays, each display cabinet is assembled from the larger cabinet modules (D: 30 inch).

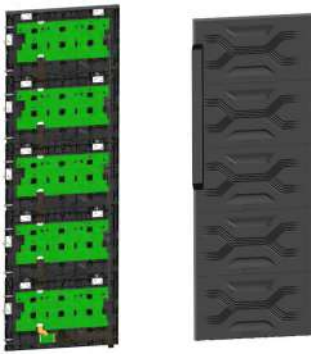


Smaller cabinet module (C)



Larger cabinet module (D)

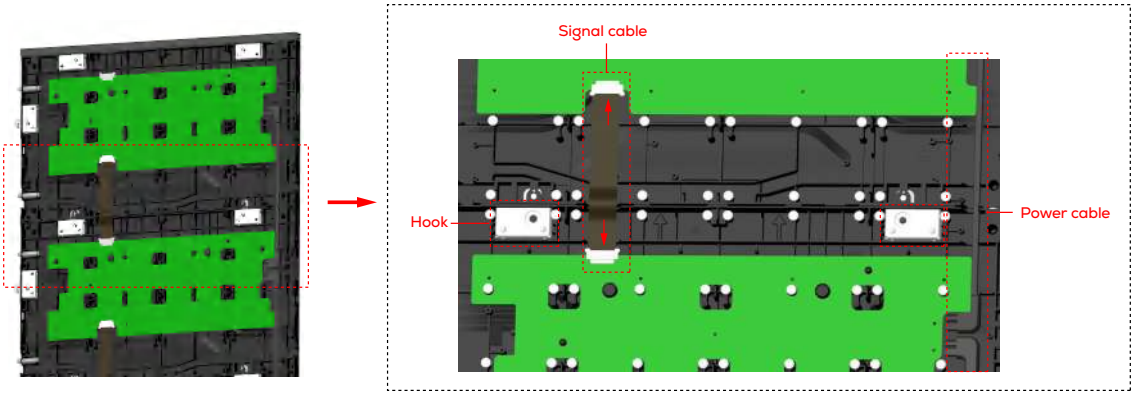
In the delivery package, you will receive the cabinet module groups assembled in a paticular row according to the cabinet number. Each cabinet module is pre-assembled with the edge cover, and the most marginal cabinet modules are pre-assembled with the speaker components.
All you need to do is assemble the module groups by module number to install a complete display cabinet.
The module group in the delivery package is as shown below (take the cabinet of 120" display as an example):



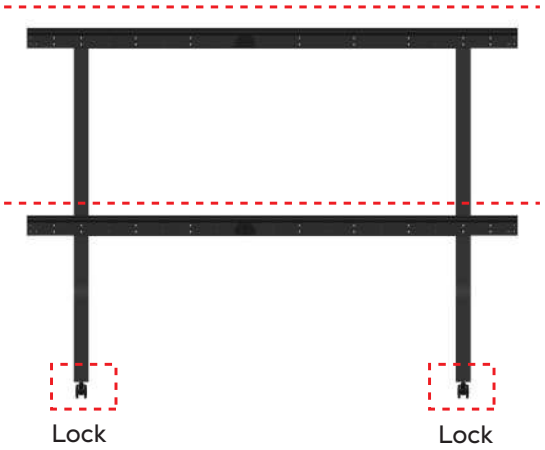
Front Rear

Step 1:

For 165", 180" and 220" displays, before hang the cabinet to the mobile stand, you need to assemble the top and bottom cabinet groups with the hooks first, and connect the signal and power cables, as shown below:

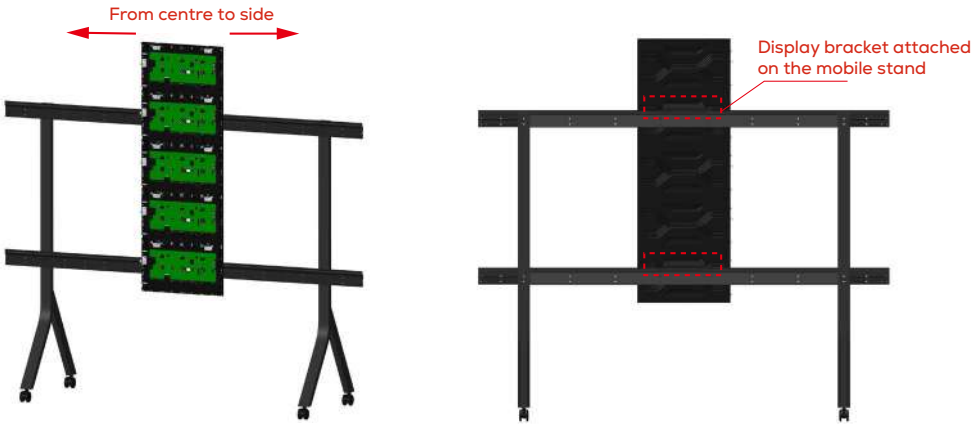


Also, ensure that the castors of the mobile stand are locked and the display brackets are level.



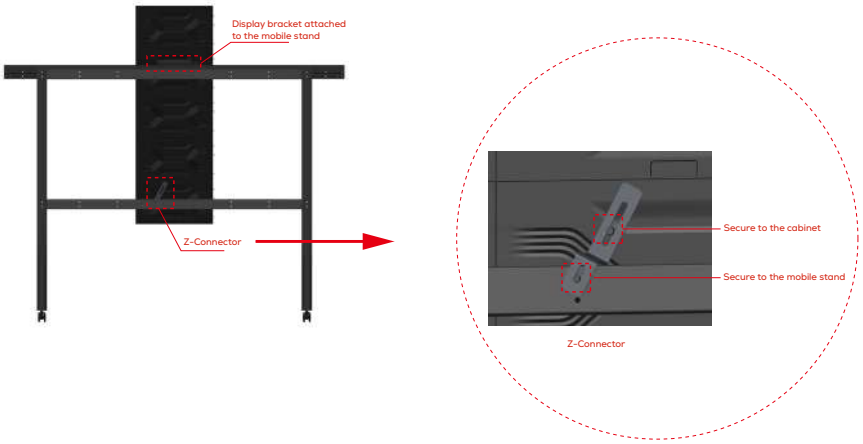
Step 2:

Hang the middle-most cabinet module group on the mobile stand first, making the display bracket attached with the mobile stand. To avoid the cabinet being skewed, please hang the cabinet in order from the centre to side.



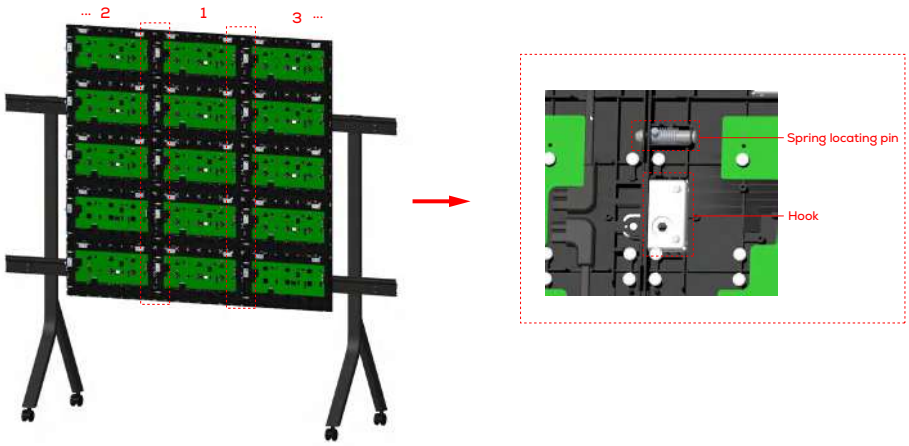
Front Rear

120" and 150" displays only have 1 display bracket, so you need to fix the lower cabinet to the mobile stand with Z-connector:



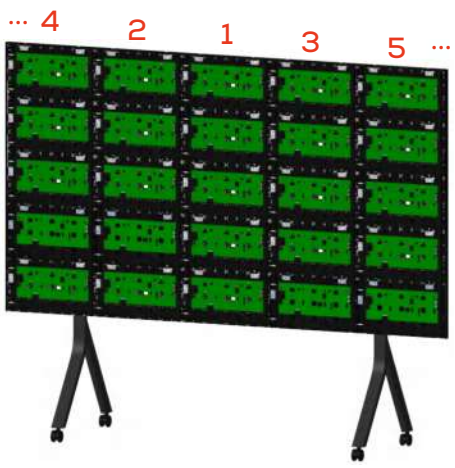
Step 3:

1) Hang the adjacent cabinet module groups on the mobile stand in the order of 1, 2, 3, with the cabinet groups close together.
2) Pull out the spring locating pin to insert into the matching locating hole, and then use the inner hexagonal wrench to rotate the side hook lock.

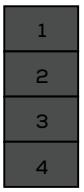
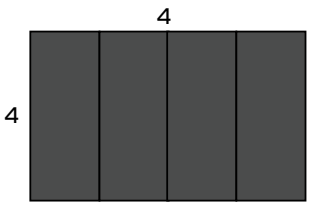
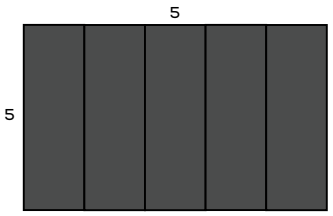
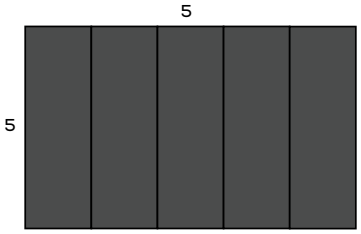
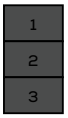
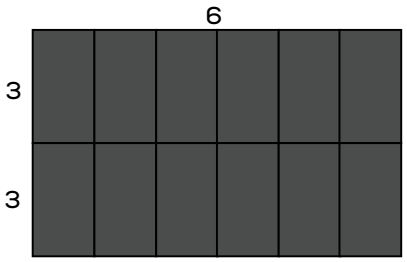
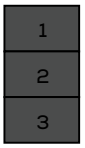
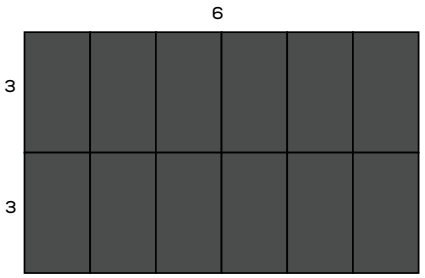
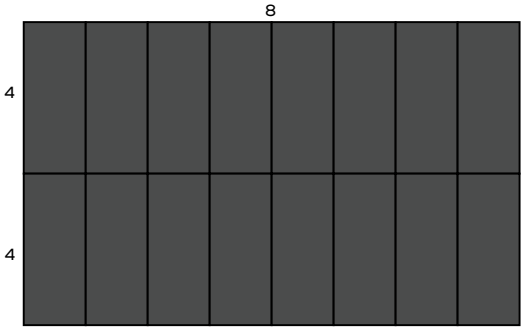


Step 4:

Repeat step 3 below to assemble and lock each cabinet group in turn until all the cabinet modules are assembled on the mobile stand.
If necessary, adjust the cabinet left or right to keep it centered.



The size, number and arrangement of cabinet modules for different display sizes are as shown below:

Display Size	Each Module Size (C: 27 inch; D: 30 inch)	Module Number	Cabinet Arrangement
120"	D		
138"	C		
150"	D		
165"	C		
180"	D		
220"	C		

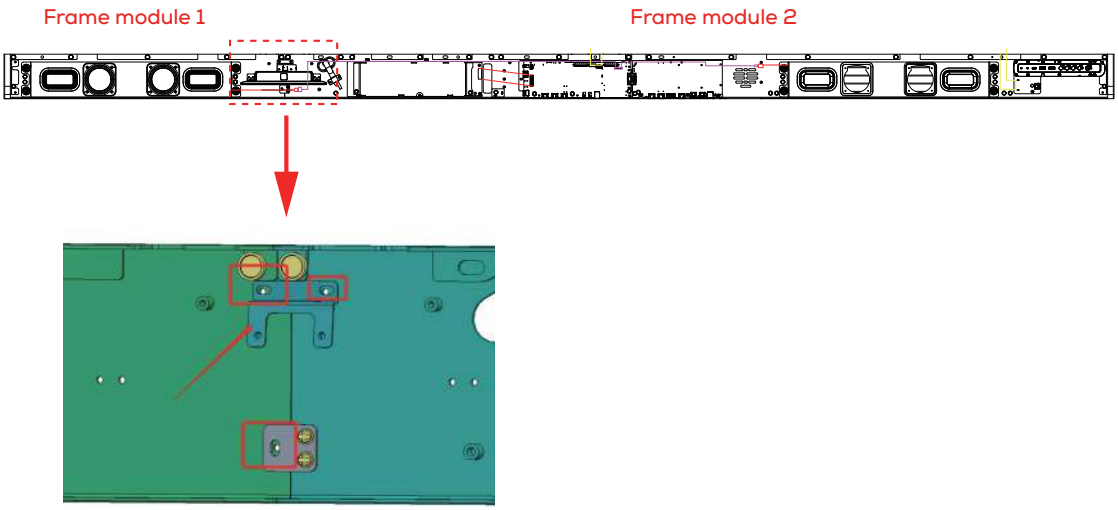
2.2.2 Bottom Frame Assembly

Step 1: Assemble the bottom frame modules.

The Bottom frame for each display size is made up of 2 or 3 frame modules.
You need to assemble these frame modules by means of connection plates and M3 screws.
As shown in the diagrams below:

1) 120" :

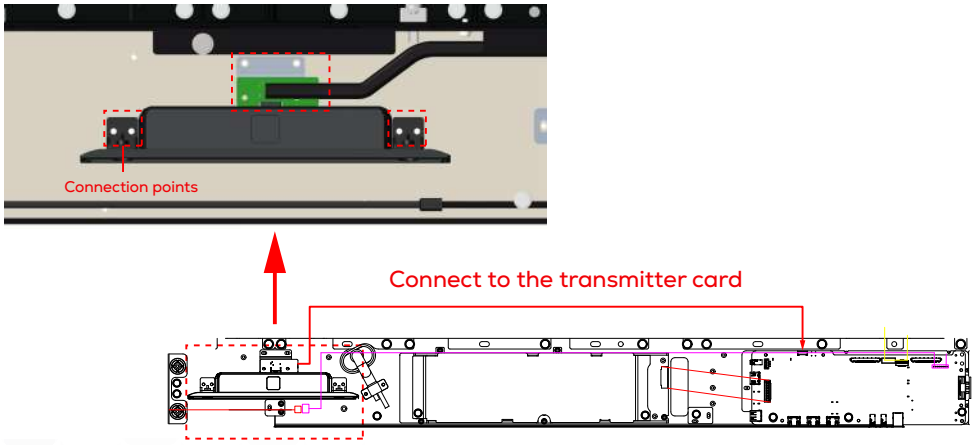
Display Size	Bottom Frame Number	Connecting Plate Number
120"	2	2



NOTE

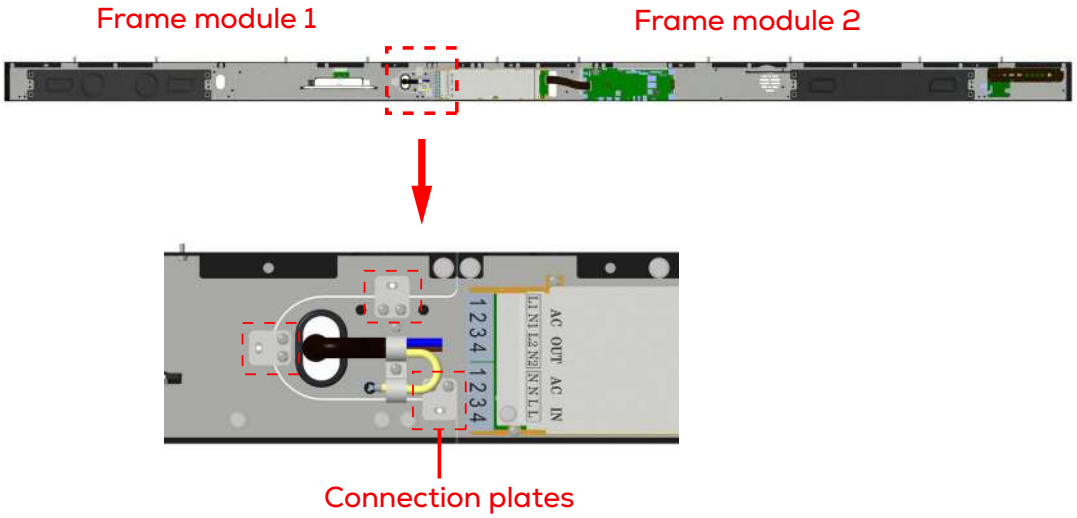
For 120" only:

The Wifi module of the 120" display is located at the junction of the two bottom frames. Therefore, you need to install the Wifi module after bottom frame assembly.
Step: Take out the Wifi module supplied and secure the 6 positions below with M3 screws. Please refer to the wiring diagram below for connecting the adapter cable to the transmitter card.



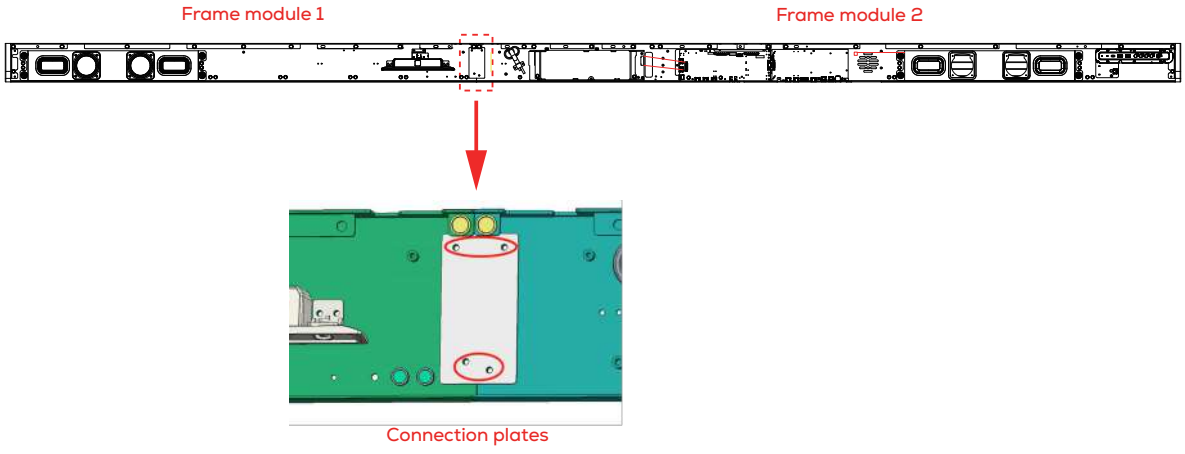
2) 138" :

Display Size	Bottom Frame Number	Connecting Plate Number
138"	2	3



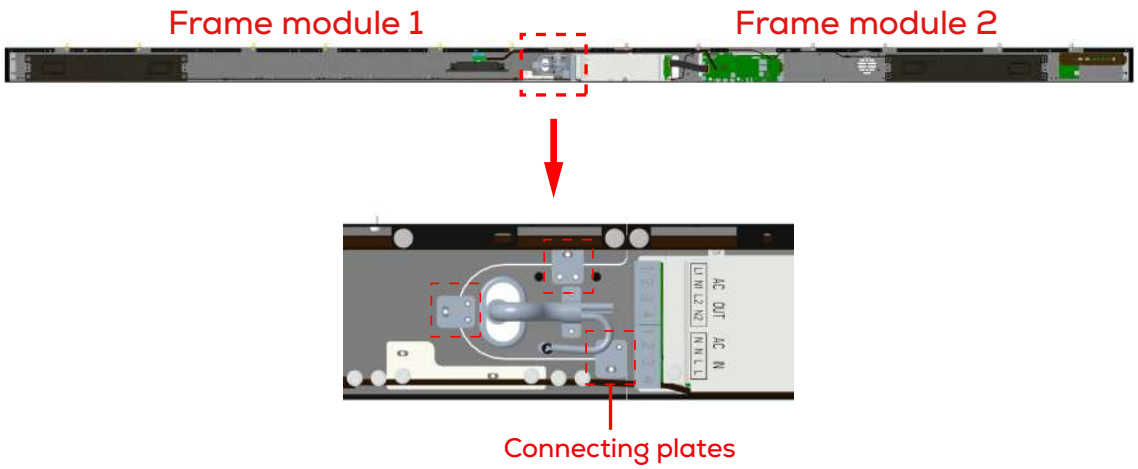
3) 150" :

Display Size	Bottom Frame Number	Connecting Plate Number
150"	2	1



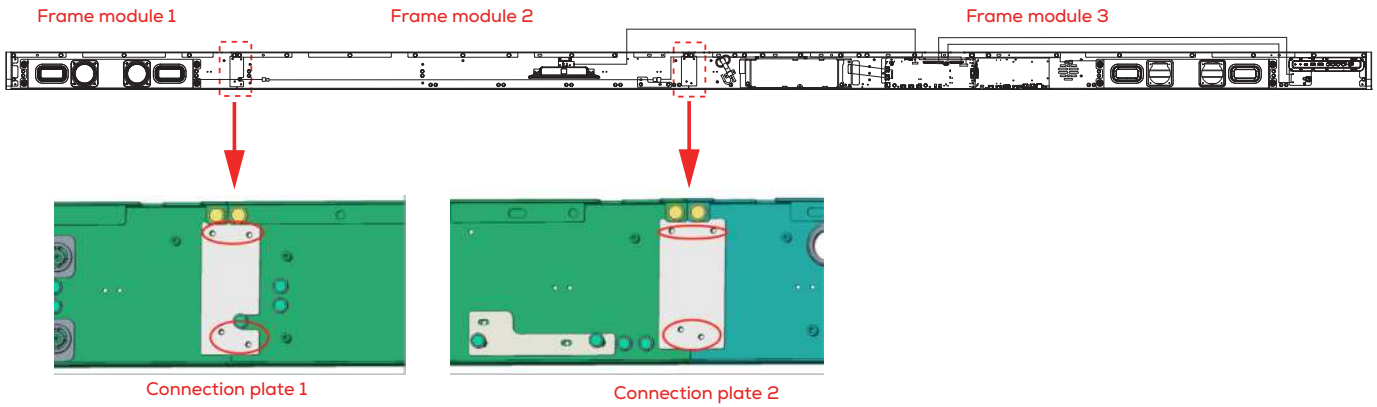
4) 165" :

Display Size	Bottom Frame Number	Connecting Plate Number
165"	2	3



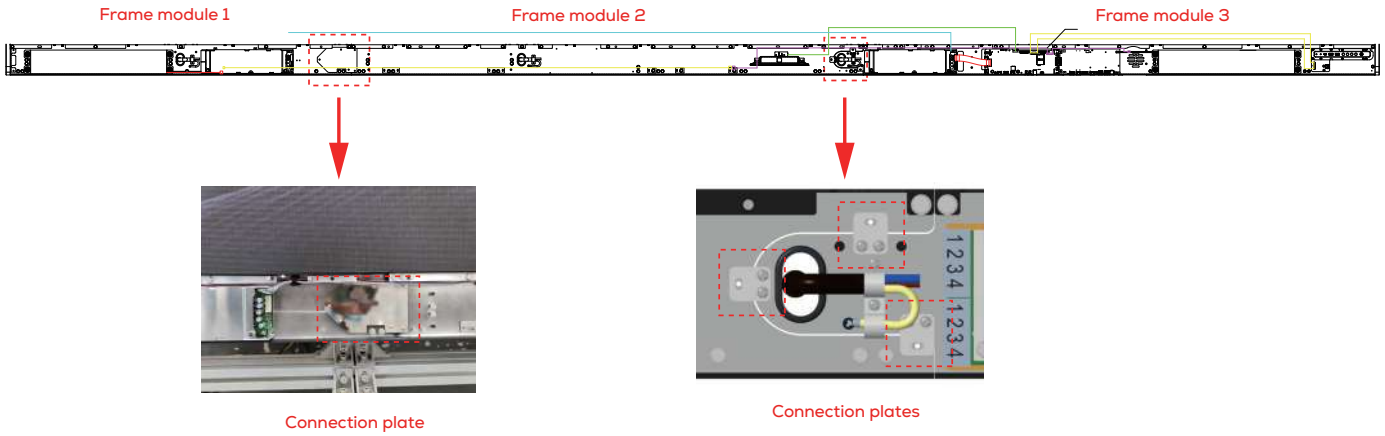
5) 180" :

Display Size	Bottom Frame Number	Connecting Plate Number
180"	3	2



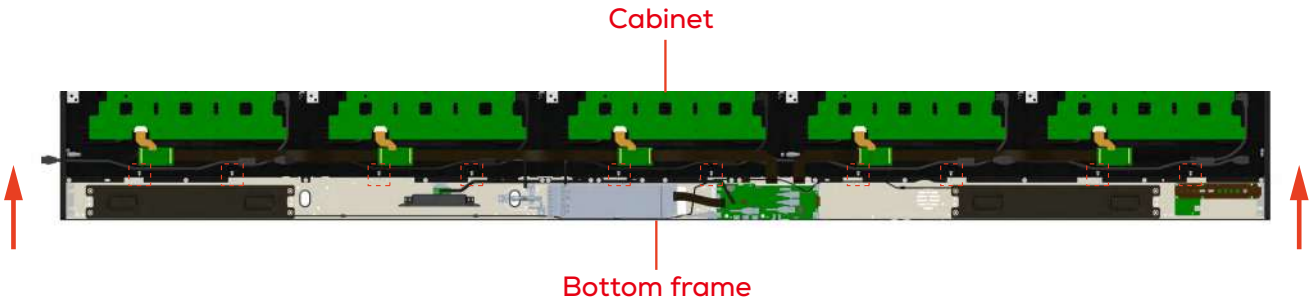
6) 220" :

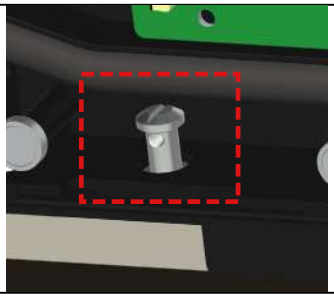
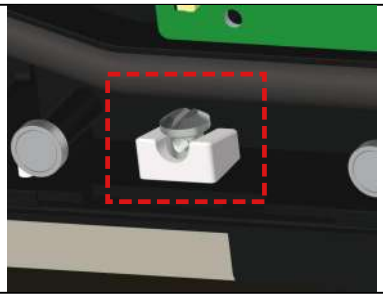
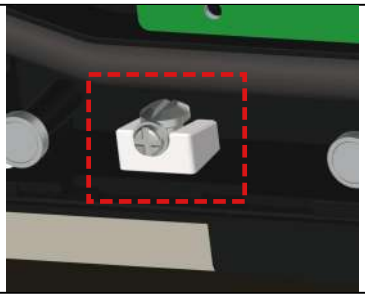
Display Size	Bottom Frame Number	Connecting Plate Number
138"	2	3



Step 2: Align the bottom frame with the cabinet.

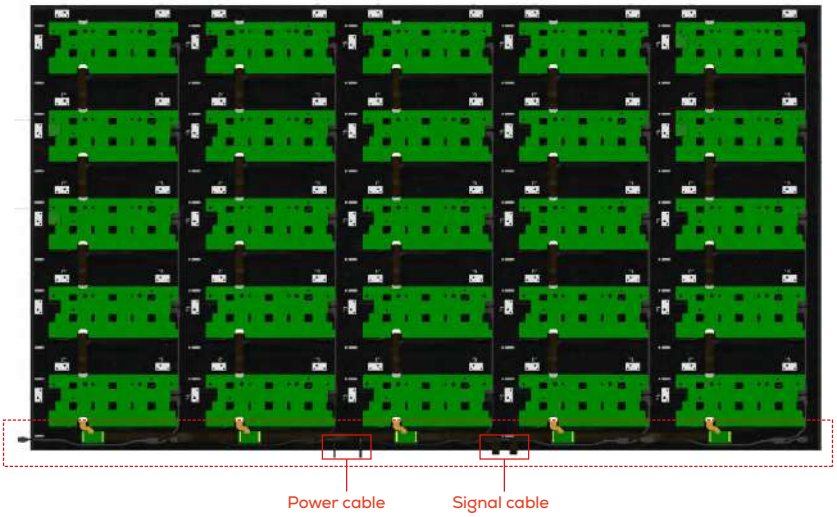
Align the bottom frame upwards with the assembled cabinet, and secure with the blocks and screws.

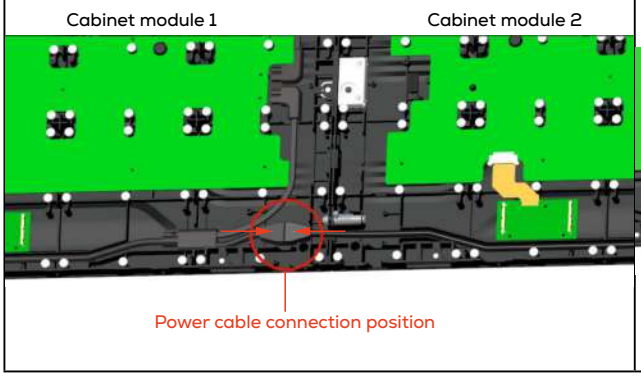
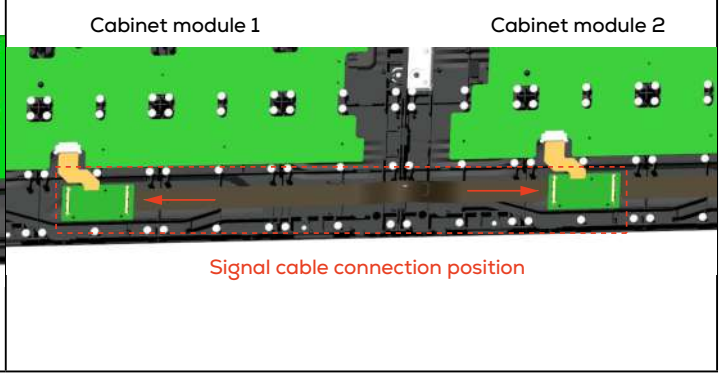


1) Insert the pin of the bottom frame into the hole on the cabinet.	2) Insert the block.	3) Fix with the screw.
		

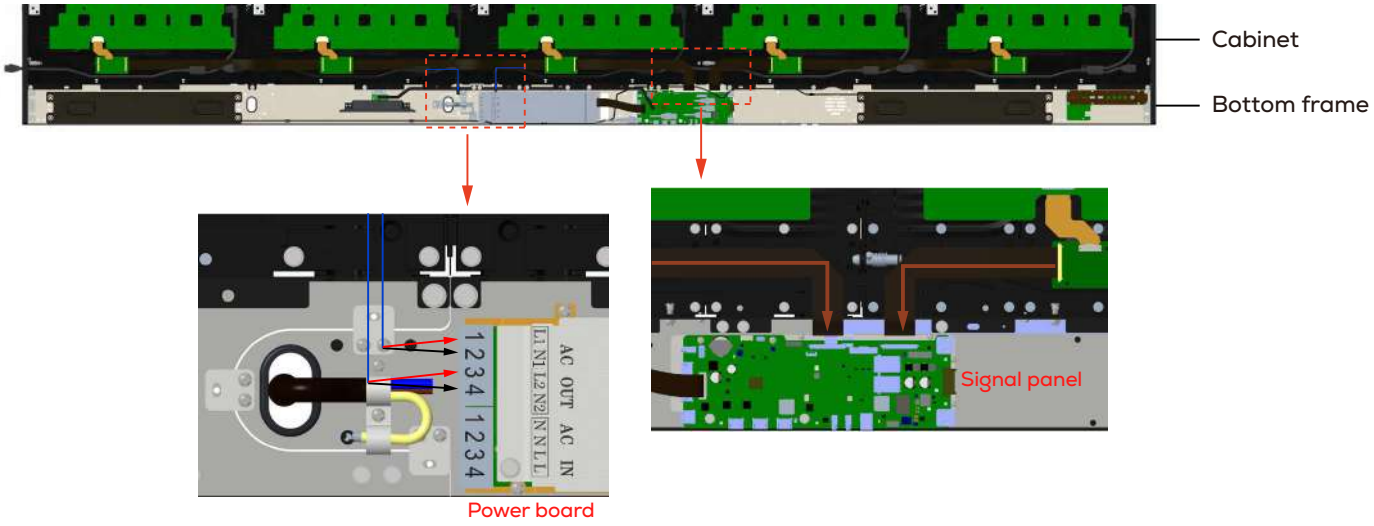
2.2.3 Routing of Signal and Power Cables

Step 1: Connect the power and signal cables between the cabient modules. Take 138" display as an example:



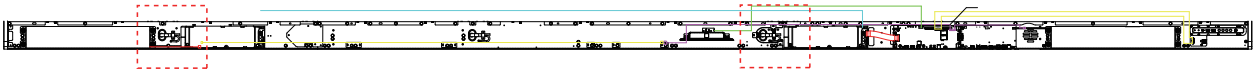
Connect the power cable:	Connect the signal cable:
	

Step 2: Connect the power and signal cables between the cabient and the bottom frame.



NOTE

220" display has two power boards, which need to be connected twice, as shown below:

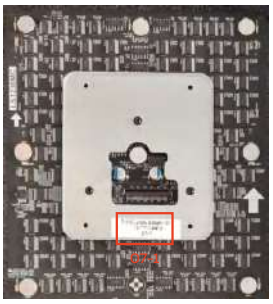


2.2.4 LED Panel Assembly

One cabinet module corresponds to eight LED panels. You must assemble the LED panels to the cabinet modules in order of the serial numbers.

- Each cabinet module is labeled with a serial number (01, 02, 03, ...) inside the top right corner. This number represents the corresponding position of the cabinet module during factory calibration.
- Each LED panel module is also marked with a serial number behind (1, 2, 3, ...). This number represents the corresponding position of the LED panel to the cabinet module.

For example: "07-1" marked on below LED panel represents that the led module is installed in the cabinet module 07, position 1.



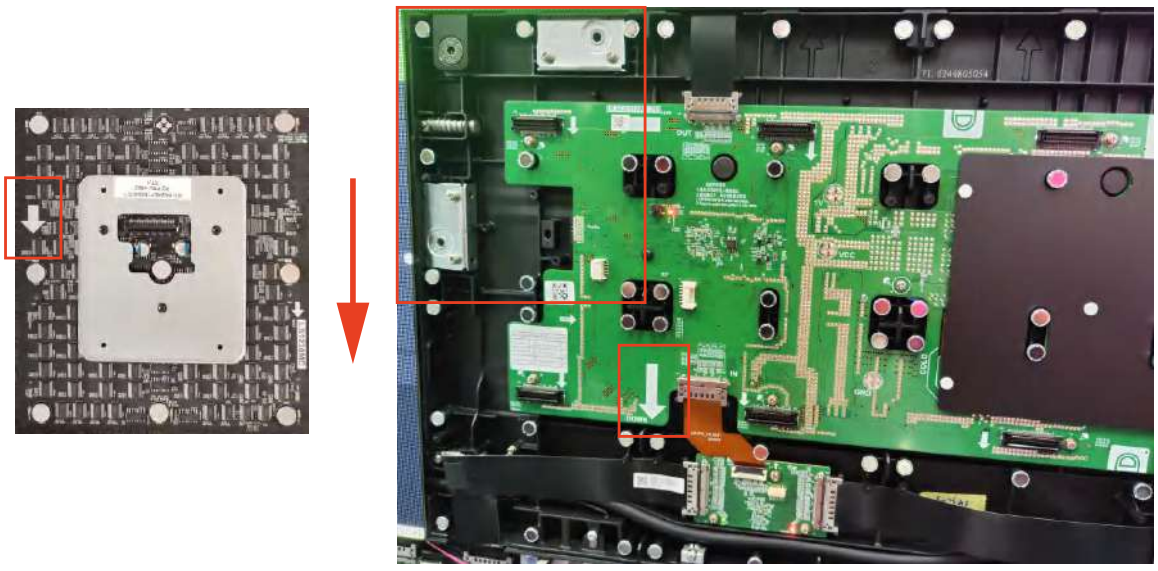
Back of the LED panel

NOTE

The assembly direction depends on the installation environment.
During installation, please check the flatness of the LED panel, and make adjustments when needed.
Assemble the LED panel with care. Do not force the insertion.

Assembly method:

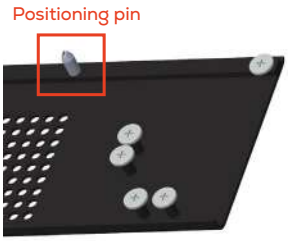
1) Align the magnet positioning point of the LED panel with that of the cabinet.
2) Assemble the LED panel to the cabinet through the plug and socket, ensuring that the arrow on the LED panel is aligned with that on the cabinet.
3) Repeat the steps below until all LED panel modules are installed on the cabinet.

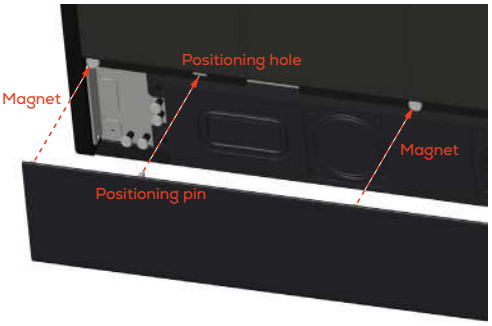


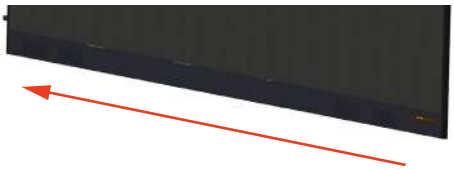
Refer to the diagram below for the arrangement of the LED panel (take 138" as an example):

2.2.5 Bottom Frame Cover Installation

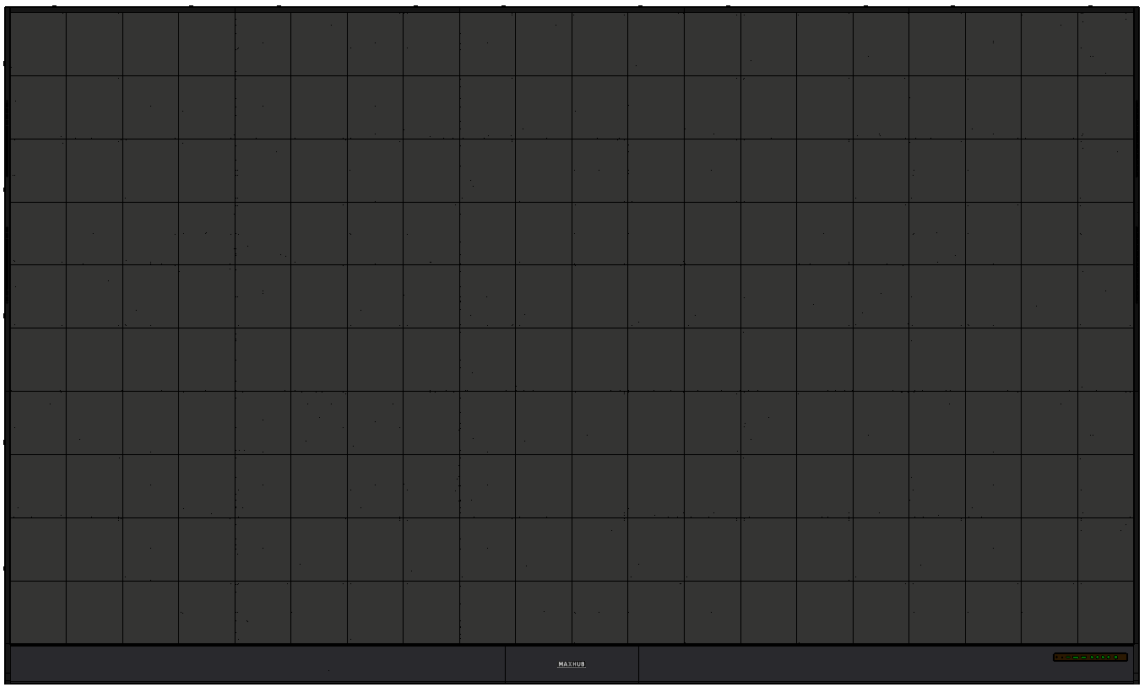
The cover plate of the bottom frame is equipped with positioning pins (see Figure 1). To install the cover plate of the bottom frame, simply insert the positioning pins into the corresponding holes and secure them with the magnet (see Figure 2). The cover modules must be attached to the bottom frame from right to left, with any necessary adjustment if needed.(see Figure 3).







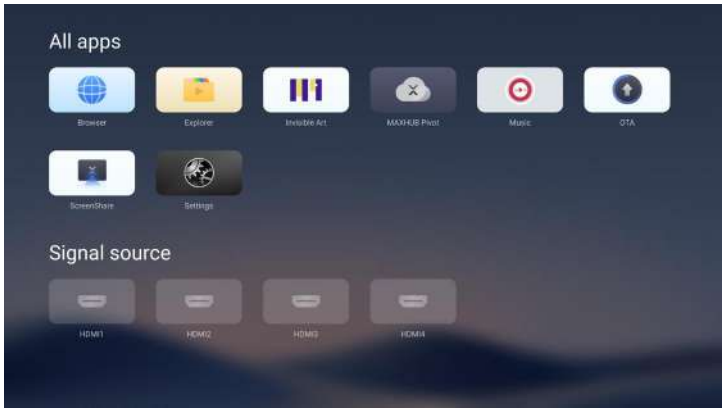
Refer to the diagram below for the display after installation (take 138" as an example):



3. Software and Deployment

3.1 Overview

Main Interface



Functions

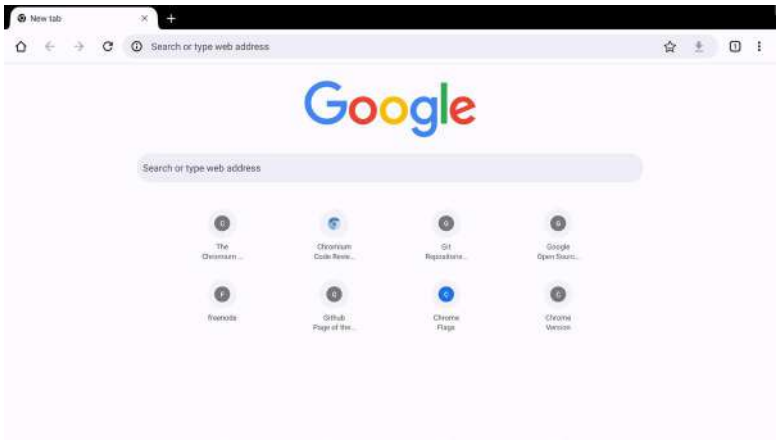
Side Bar

3.2 Functions

Click **All apps** on the main interface, then 8 function applications and HDMI signal sources are displayed. You can set up according to your actual usage habits.

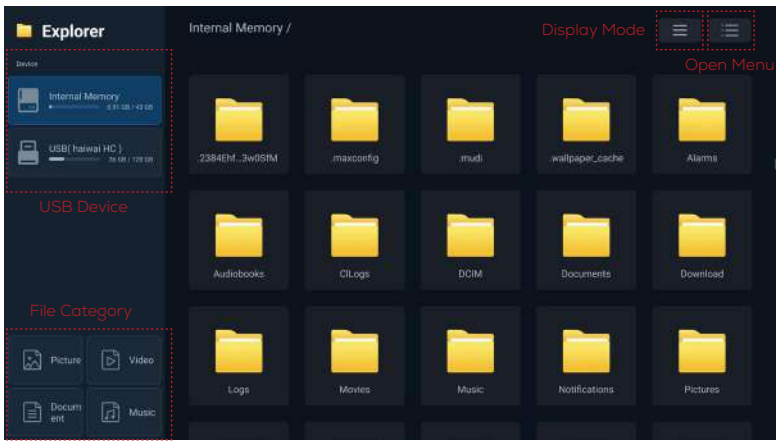
1) Browser

Search for information, including webpages, images, videos and more.

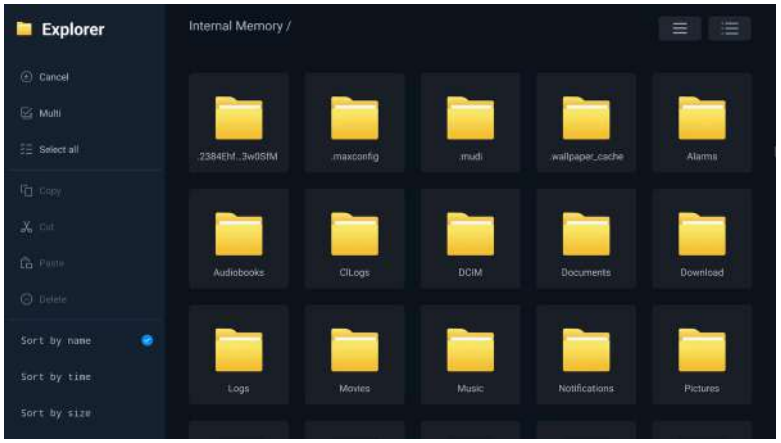


2) Explorer

Browse and work with your files.

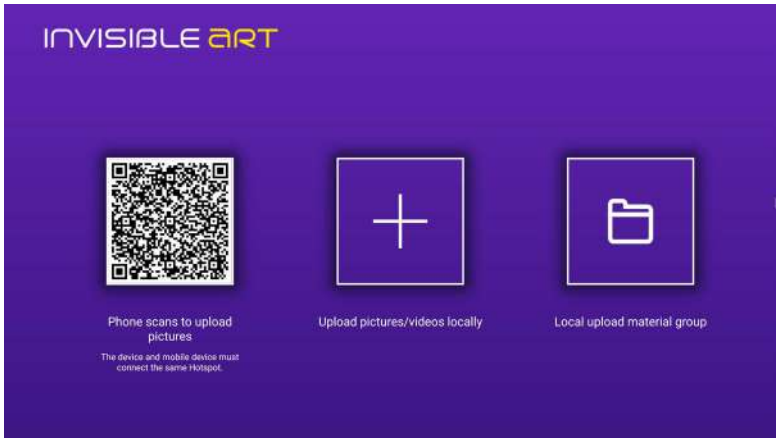


Open Menu:



3) Invisible Art

Choose wallpaper for your device.

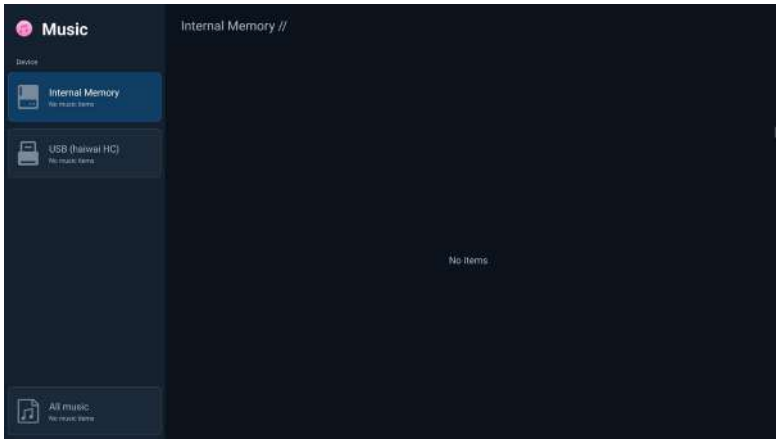


4) MAXHUB Pivot

This is a web-based device management platform that allows IT administrators to remotely configure and manage devices, including Windows system, UC peripherals, etc..

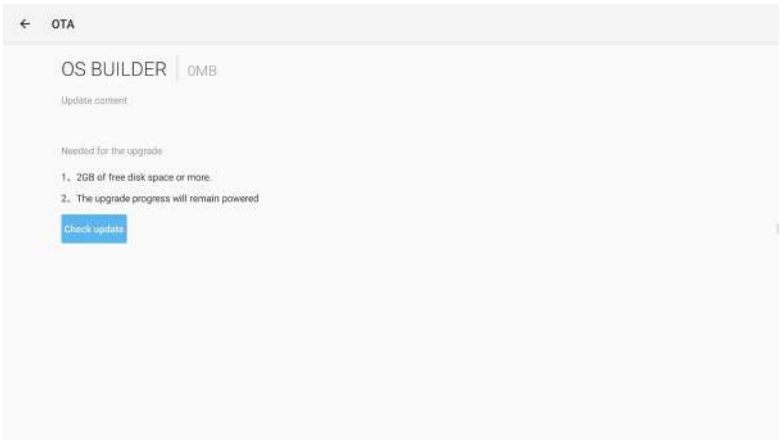
5) Music

Play music on your device.



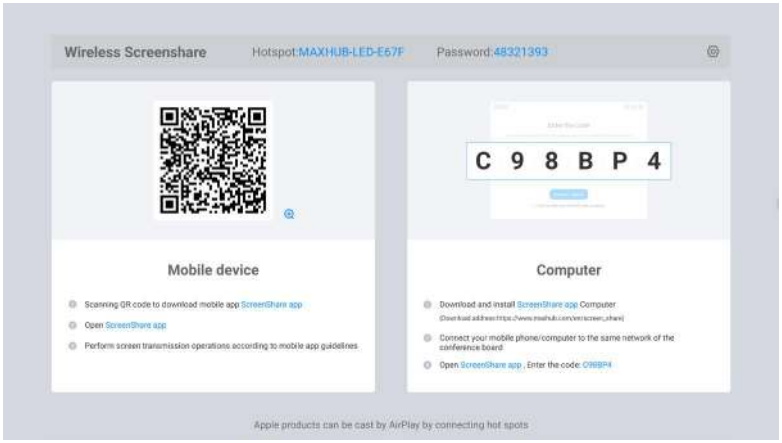
6) OTA

Update your applications.



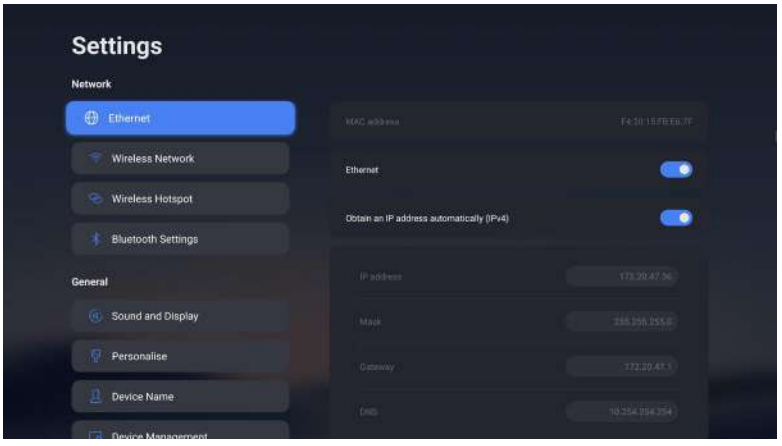
7) Screenshare

Connect your mobile device and computer through Screeshare.



8) Settings

Configure your device through Settings page.



9) Signal Source

Connect other devices through HDMI 1/2/3/4 port

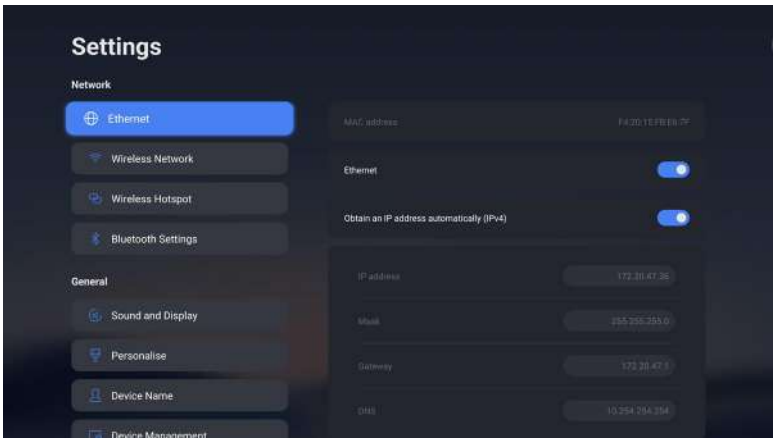
Settings

The Settings page includes three sections: Network, General and System.

1) Network:

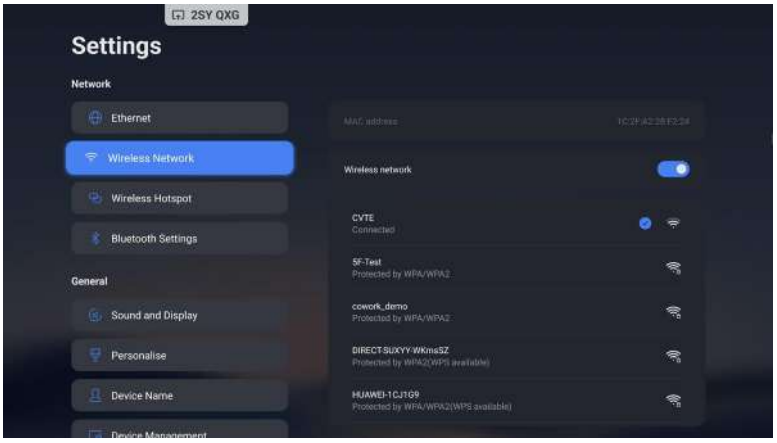
a. Ethernet

Turn on or turn off the wired network.



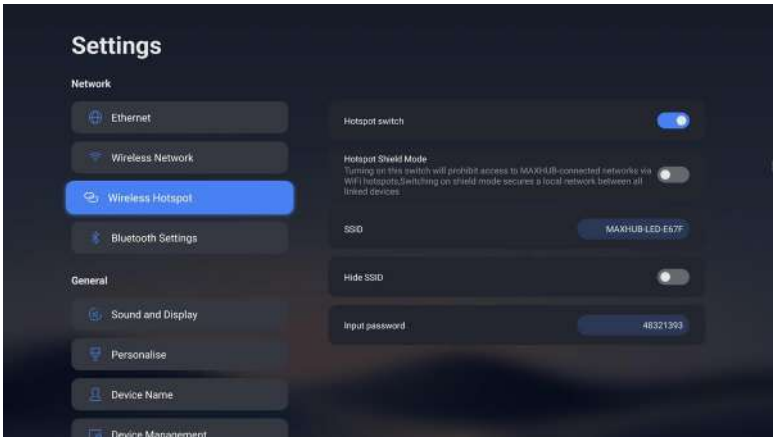
b. Wireless Network

Turn on the wireless network to automatically search for available networks.



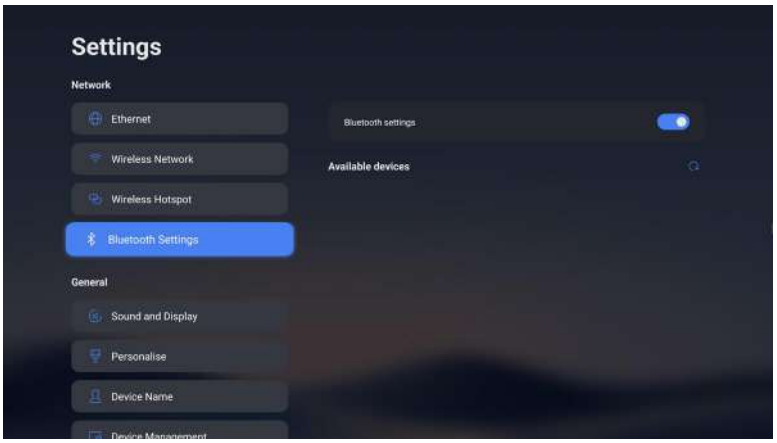
c. Wireless Hotspot

Configure the Hotspot mode, name, password, etc.



d. Bluetooth Settings

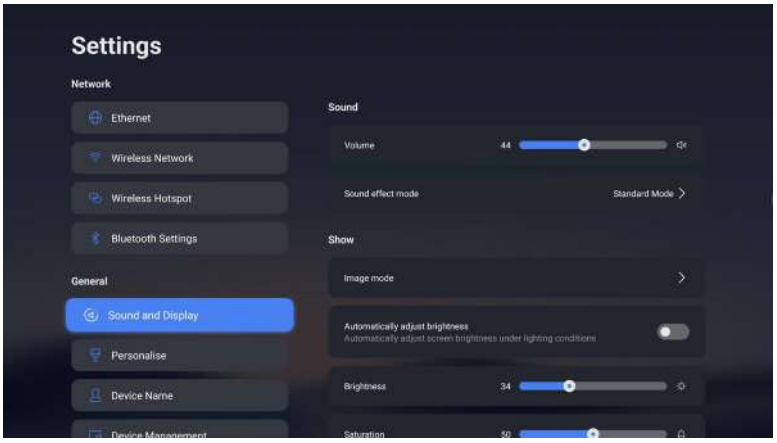
Turn on or turn off the Bluetooth.

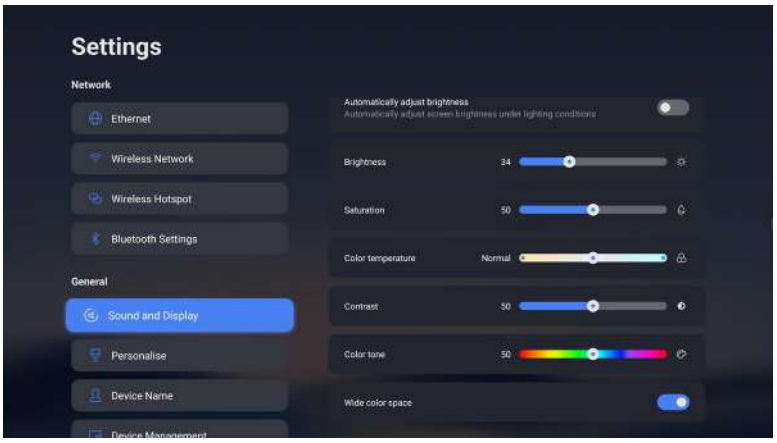


2) General

a. Sound and Display

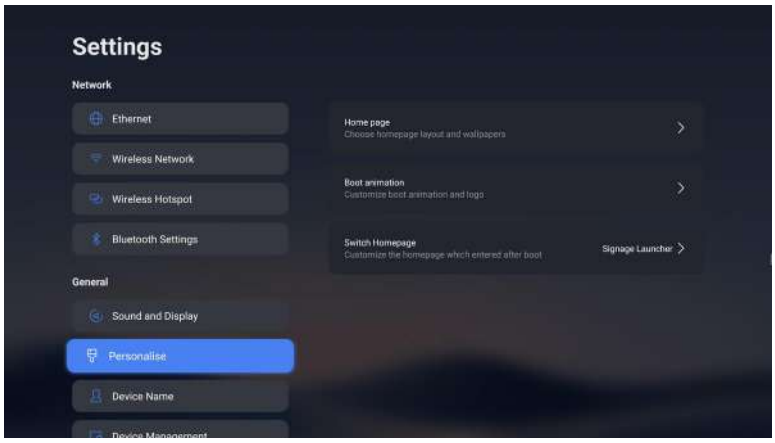
Configure the sound, volume, brightness, color, contrast, etc.





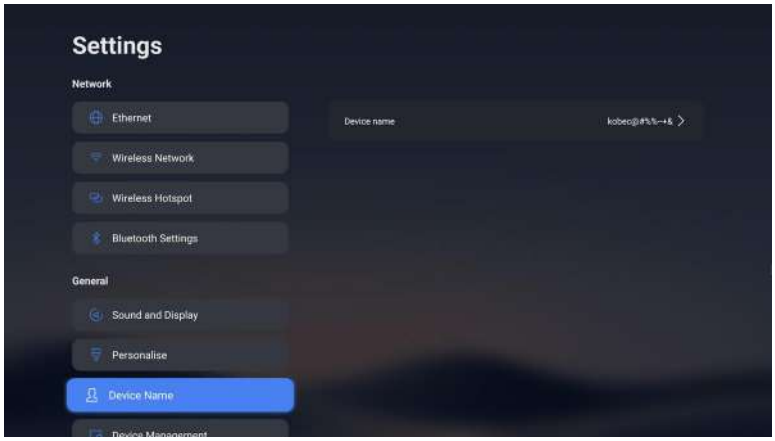
b. Personalise

Choose your homepage and boot animation.



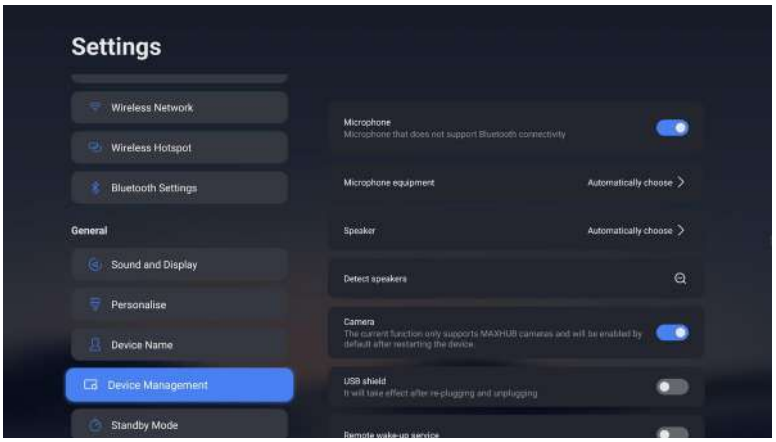
c. Device Name

Edit your device name.



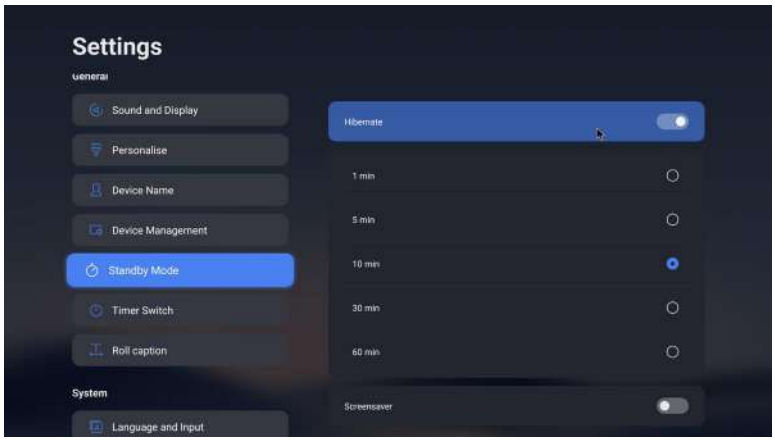
d. Device Management

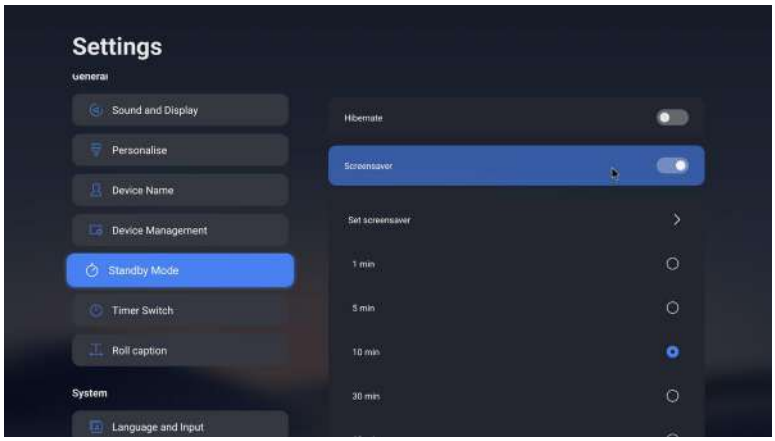
Configure your device parameters, such as microphone, speaker, camera, USB, etc.



e. Standby Mode

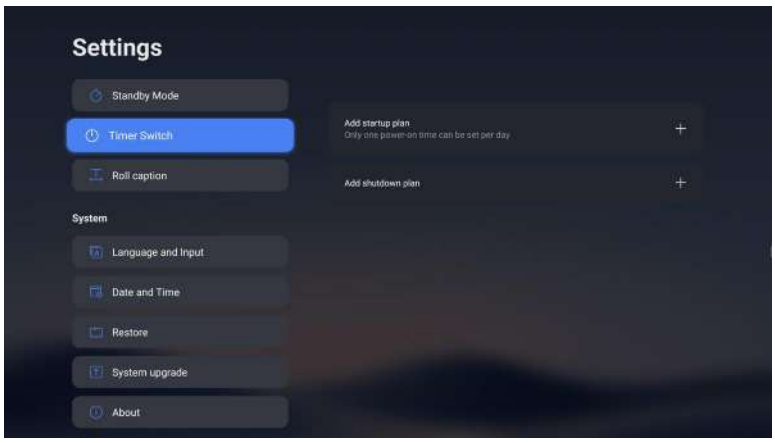
Set the sleep time according to your usage habits, and set the screen saver using the built-in Invisible Art function.





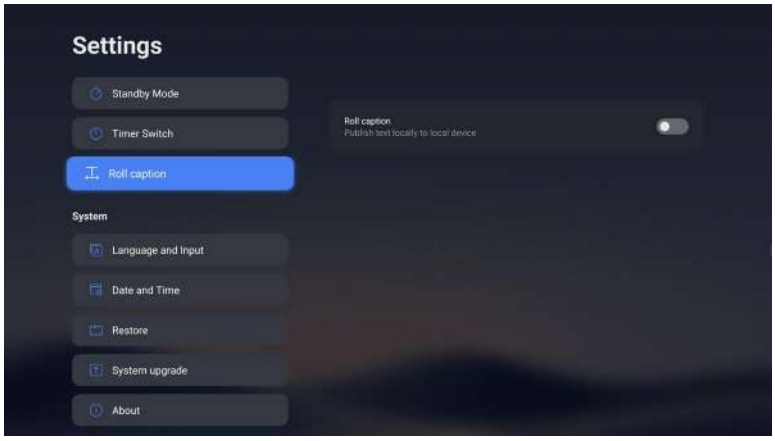
f. Timer Switch

Set the startup and shutdown time according to your actual usage.



g. Roll Caption

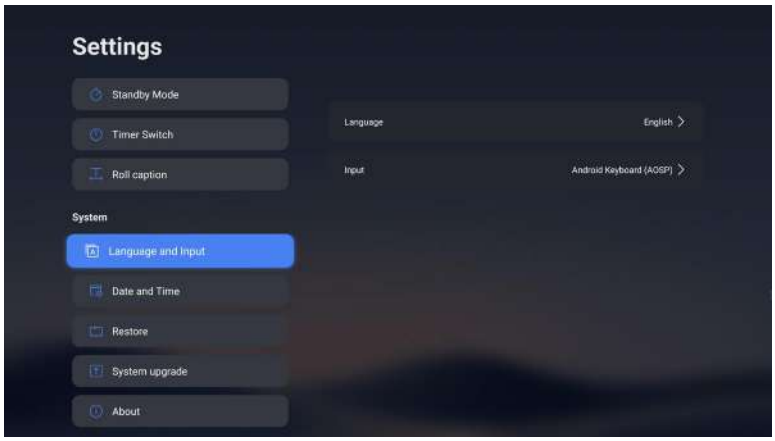
Set publishing text content, scrolling, size, color, etc.



3) System

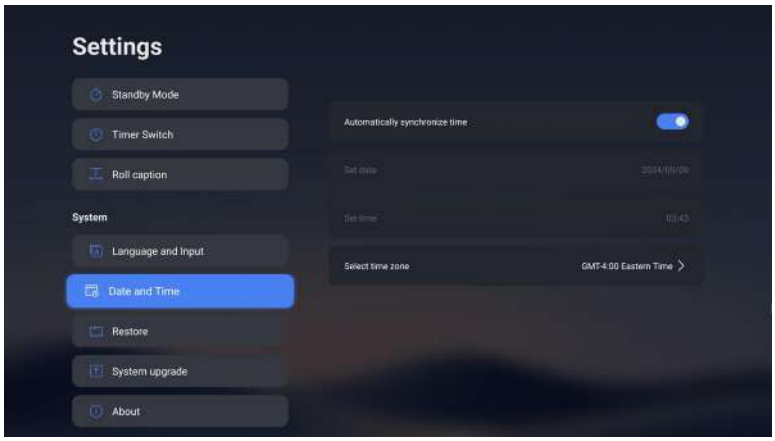
a. Language and Input

Choose the system language and input system.



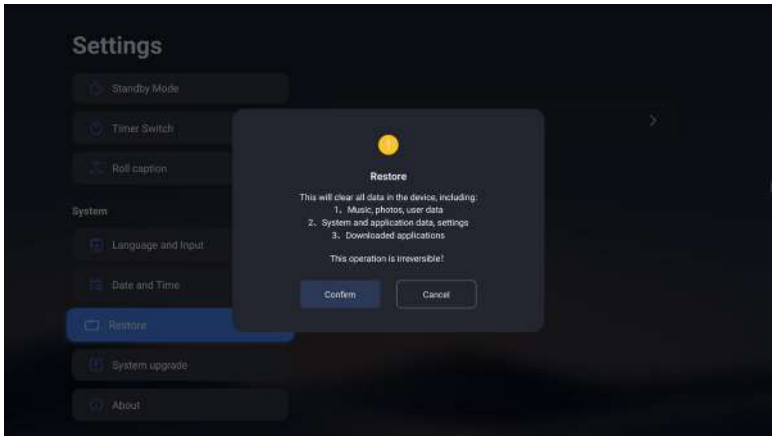
b. Date and Time

Synchronize time automatically or set date,time and zone yourself.



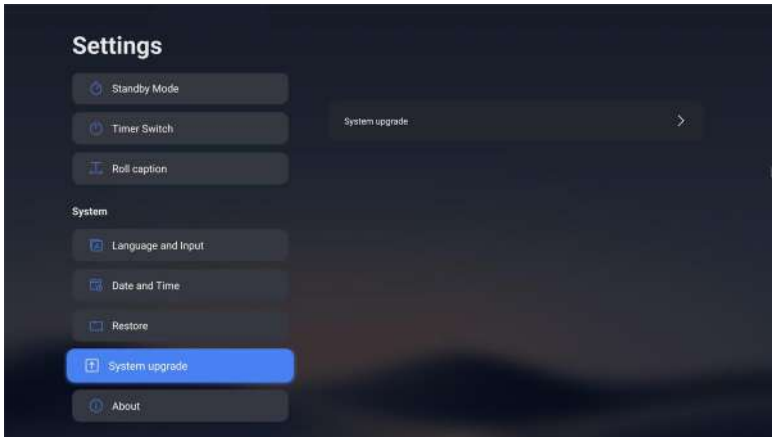
c. Restore

Clear all data in the device and restore.



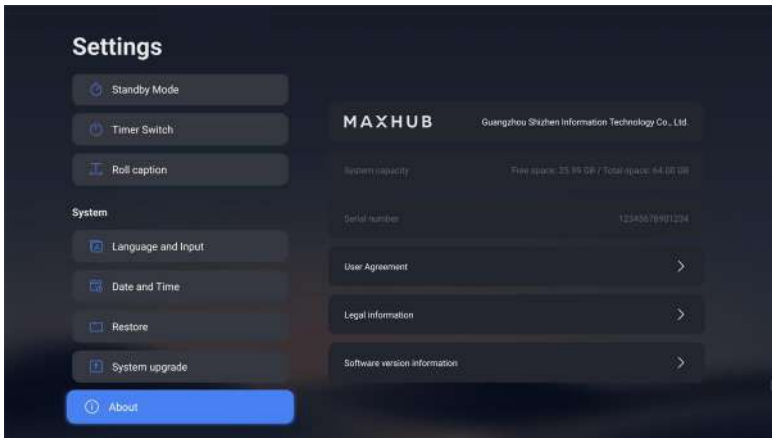
d. System Upgrade

Update your system to get the latest version.



e. About

Get related information about your device.



3.3 Side Bar

Access the side bar menu using the remote control or by clicking the Options button on the control panel.
Eight function keys are displayed: Home, Back, Input Source, Split Screen, Color, Brightness, Volume, Screenshot.

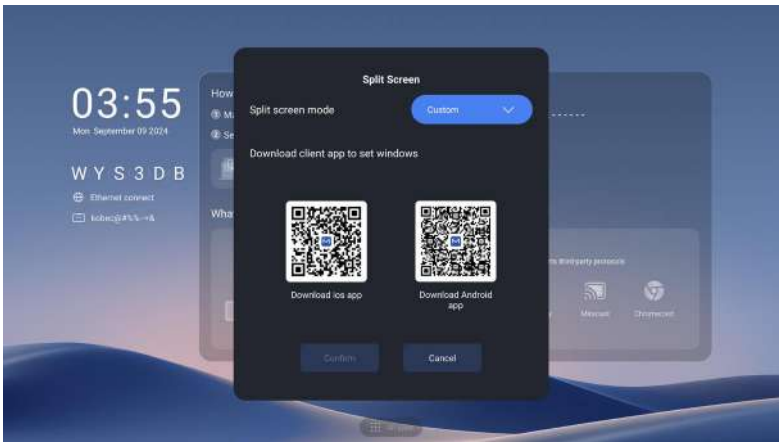
1) Home
Return to the main interface

2) Back
Go back to the last page

3) Input Source
Several kinds of input source are allowed: Android, HDMI 1/2/3/4.

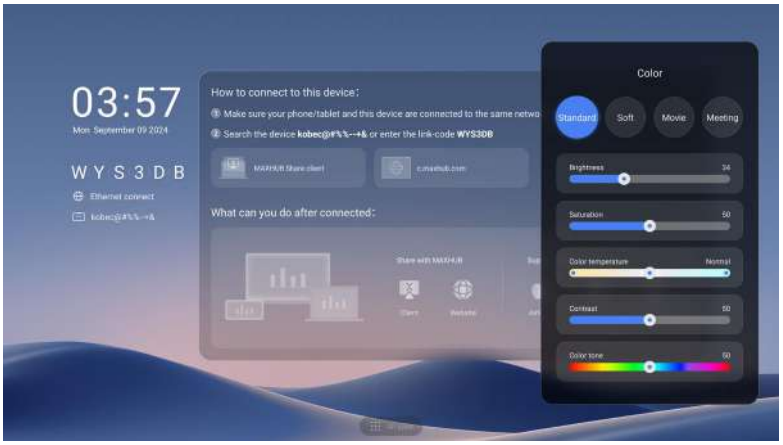
4) Split Screen

The screen can be split into 1, 2, 3, 4, or 5 parts, or you can customize it by scanning and download the client app woth your phone.



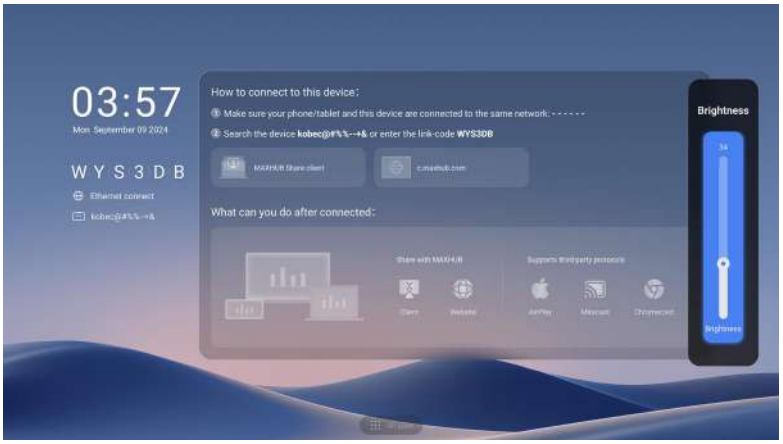
5) Color

You can set up the color style, and adjust the brightness, saturation, color temperature, contrast and color tone.



6) Brightness

You can adjust the brightness level using the “Up and Down” buttons on the remote control.

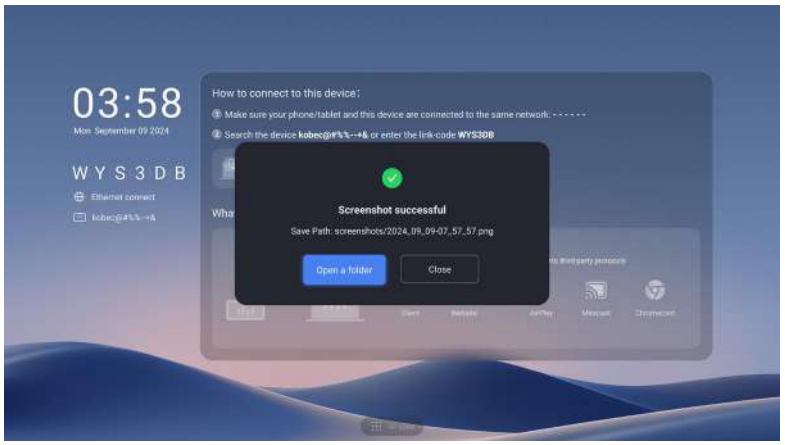


7) Volume

You can adjust the volume level using the “Up and Down” buttons on the remote control.

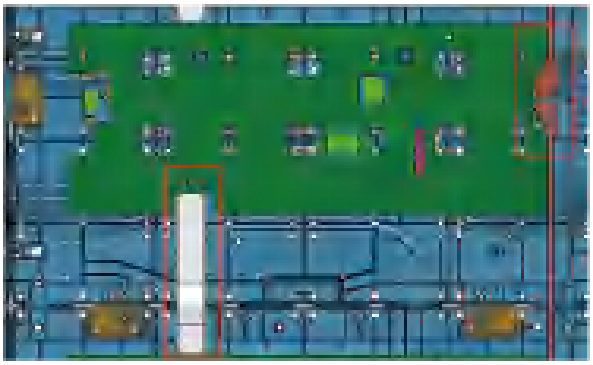
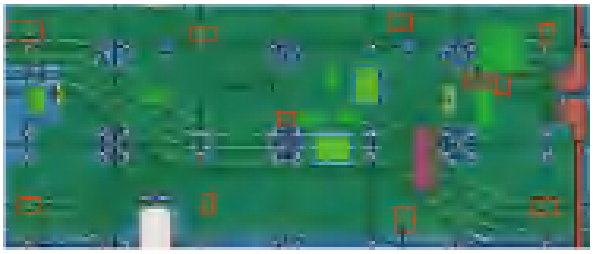
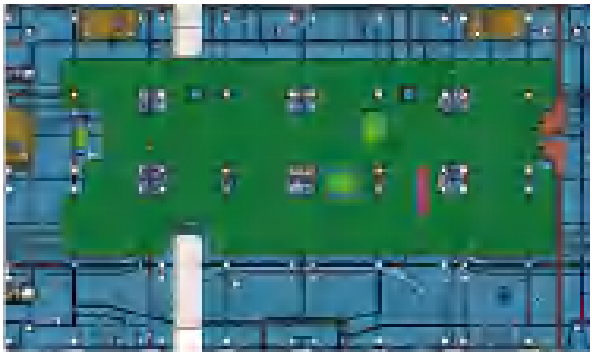
8) Screenshot

You can take screenshot by clicking this key.

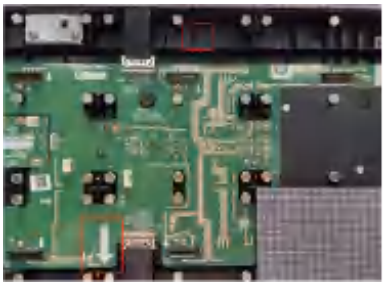


4. Parts Replacement

1) 3-in-1 Board Replacement

Step	Illustration	Method
Step 1		Find out the position of the faulty cabinet and remove all LED panels
Step 2		Disconnect the power cable, FFC cable
Step 3		Remove the 10 screws on the 3-in-1 board
Step 4		Take out the faulty 3-in-1 board and replace it with a new one

2) LED panel replacement

Step	Illustration	Method
Step 1		Find out the specific position of the faulty LED panel, and stick the side inclined plane of the front maintenance tool to the position directly below the LED panel
Step 2		Rotate the front maintenance tool upward, slowly transition from the arc surface to the bottom surface, and take out the LED panel in parallel direction after the LED panel is magnetically sucked
Step 3		Hold the LED panel in the palm of your hand and rotate the maintenance tool away from the LED panel
Step 4		*The arrow on the cabinet pointing upwards indicates the direction for hanging *The LED panel is installed with the arrow downwards according to the three-in-one board card arrow indication.

5. Quick Troubleshooting

1) Part of the display is not lit after power on

- Check if the Ethernet cables inside the cabinets are in good contact;
- Check if the power cables inside the cabinets are in good contact.

2) Wireless screen mirroring not working

- Check if the wireless screen mirroring device is securely inserted;
- Check if the wireless screen mirroring device is paired. To pair, insert the wireless screen mirroring device into the USB port of the integrated machine, wait for the prompt, and confirm the successful pairing;
- Check if the computer has the required driver software installed. If the screen mirroring device is inserted into the computer's USB port and automatic installation doesn't occur, manually go to "My Computer", locate the drive corresponding to the screen mirroring device, and double-click to install the driver.

3) Indicator light is not on

- Check if the power supply is normal;
- Check if the power switch of the system is turned on.

4) No image on the display after connecting it to the computer with HDMI cable

- Check if it is currently on HDMI channel;
- Check if the HDMI cable on the system and the external computer falls off or is defective.

6. Special Statement

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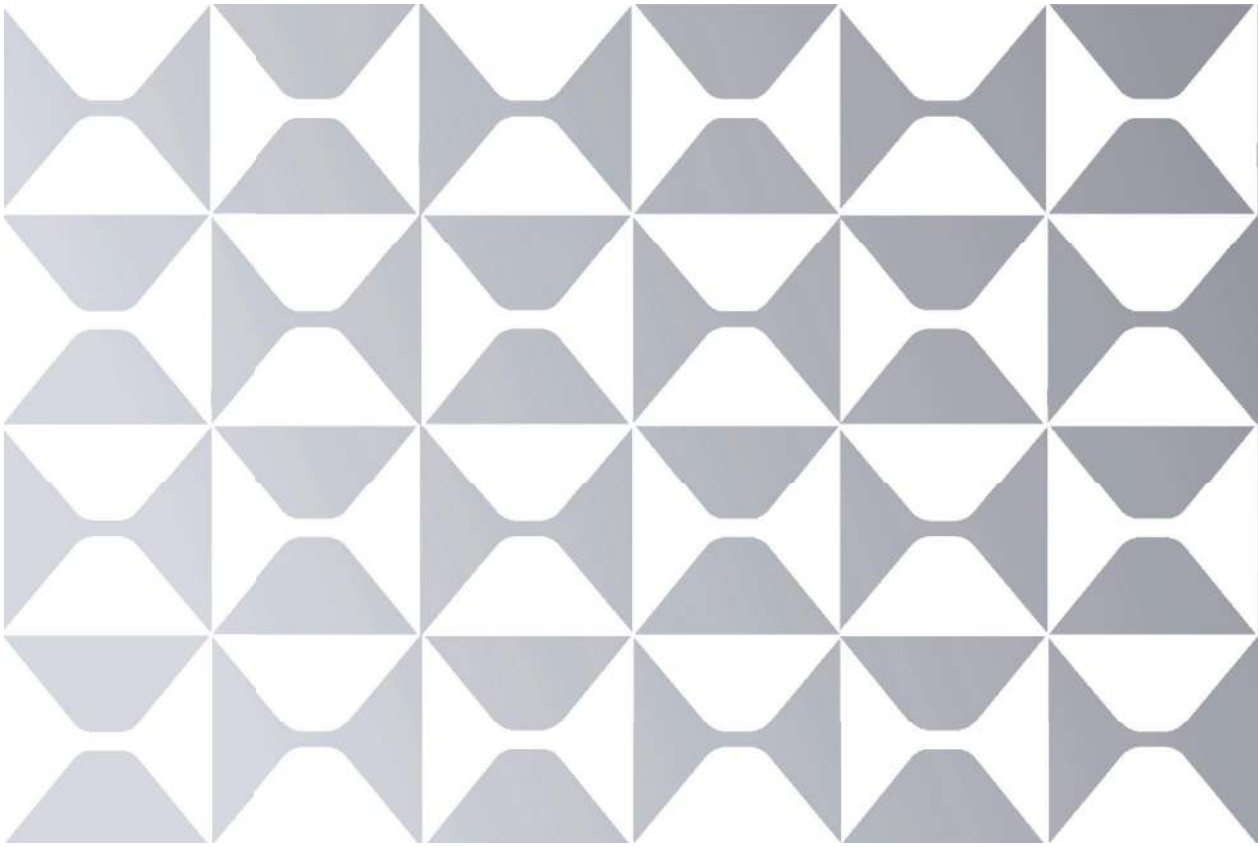
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