

User Manual

IFPD (Interactive Flat Panel Display)



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- The information given in this document is carefully checked and believed to be reliable.
 - All manual are subject to change without notification.

Model : AHA-8465-65

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1. Important safety instructions

Icon	Name	Meaning
	Warning	In case of electric shock, serious injury or death
	Caution	Minor injury or damage may occur

Please read this manual carefully before operating the product.

The product may differ depending on the model, and specifications are subject to change without notice for improvement.

Warning :

- To reduce the risk of fire or electric shock, do not expose this product to rain or moisture.
- To prevent injury, this product must be securely attached to the floor/wall in accordance with the installation instructions.
- To reduce the risk of electric shock, do not remove the back cover.
- Refer to qualified service personnel if needed.

Caution:

Any unauthorized damage to the inner side of the monitor will void the warranty. The manufacturer does not warrant against damage caused by improper maintenance and repair work by others.

Important safeguards for customers and their products:

Product has been tested to be safe in manufactured. However, improper use may result in electric shock or fire hazard. In order to implement the safety device built into the new product and to prevent accidents, careful read the user's manual and install it. Following safety precautions and keep it for future use.

Notice:

Display is not certified for use in patient diagnostics. It is the responsibility of the hospital or clinic to be used for the right diagnosis products. DICOM is a registered trademark of NEMA for standard publications Related to digital communication of medical information. The "IPS" mark/trademark and technology related patents are owned by their respective owners.

1.1 Safety precautions

1) Read the instruction manual carefully

2) Follow the instruction manual

All operations must follow the instructions in the instruction manual.

3) Maintenance of user manual

The instruction manual should be kept for future reference.

4) Warning

All warnings in the product and user manual instructions must be followed.

5) Cleaning

Disconnect power before cleaning.

Do not use abrasives. Do not use wet towels.

1. Do not use a sharp object except pens included as it may damage the screen. (nails, marker pens, etc.)
 - It may cause product malfunction.
2. Do not use chemicals such as wax, benzene, alcohol, thinner, pesticides and lubricants.
 - It may cause product malfunction.
3. When wiping the screen with water, do not spray it directly, but use a soft cloth to moisten it before wiping or cleaning the screen.
 - Water may enter the product and cause product failure.
4. When cleaning products with sensor filters attached to the top, bottom. Left and right sides of the screen.
 - Do not apply excessive shock or force to the sensor filter.
If the sensor filter is damaged, it may cause product failure.
 - Do not use water, but use a soft brush to remove dust.
If the sensor filter gets wet, it may cause product failure.

6) Water and moisture

Do not use the product near water or in a humid place.

7) Moving products

Be careful when moving the product, and use a cart to move it.

8) Ventilation

Do not block the ventilation.

Follow the instruction manual.

9) Power source

The power rating on the specification label must be followed.

10) Ground the power cord

This product is equipped with a 3-wire grounding type cord for safety. Do not remove the grounding terminal.

11) Power cord

Make sure the power is properly connected. Check that the plug and power cable are not twisted or pressed by other objects.

12) Lightning

Unplug this product during lightning storms or when unused for long periods of time.

13) Product grounding

This product must be properly grounded to comply with the safety regulations of the country of use. If you are unsure of these regulations, please contact a qualified engineer.

14) Service

Do not try to repair the product by yourself. If removing covers may expose you to hazardous voltages or other hazards. Refer all servicing to qualified service technicians. If the product do not work properly, turn off the power and contact your dealer.

15) Needs after service

Disconnect this product from the power supply and contact qualified service personnel under the following conditions.

1. The power cord or plug is damaged.
2. The protective glass is damaged.
3. There is water between the protective glass and the LCD screen.
4. If the product has been dropped or the case has been damaged.
5. Performance of the product has been low.

16) Installation

It is recommended to mount this product on the wall.

17) Power

This product operates on AC power and must use the voltage indicated on the label. The power cord must be always grounded.

18) Location

Do not install in unstable place, and secure enough space for safe use.

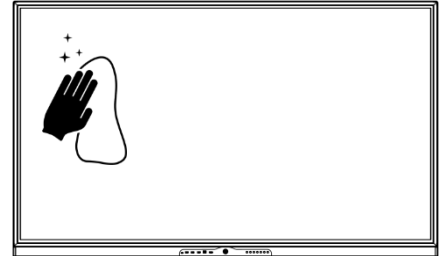


1.2 Maintenance

Cleaning

[Warning]

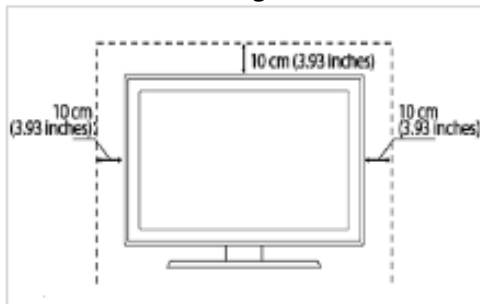
- When cleaning, unplug the power cord and wipe gently with a soft dry cloth to prevent scratching.
- Do not spray water or other liquids directly on the screen as electric shock may occur.
- Do not clean with chemicals such as alcohol, thinners, or benzene.



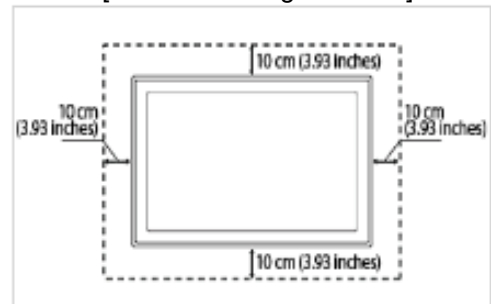
Installation

- Leave a 10 cm (4 inches) space from the wall for proper ventilation. If not, it may cause fire or malfunction due to the high temperature product inside.

[When installing with the stand]



[When mounting on a wall]



Panel

- Avoid displaying a fixed image on the screen for a long period of time to prevent image burn. Recommend to power off or set the power saving mode or screen saver when not in use.

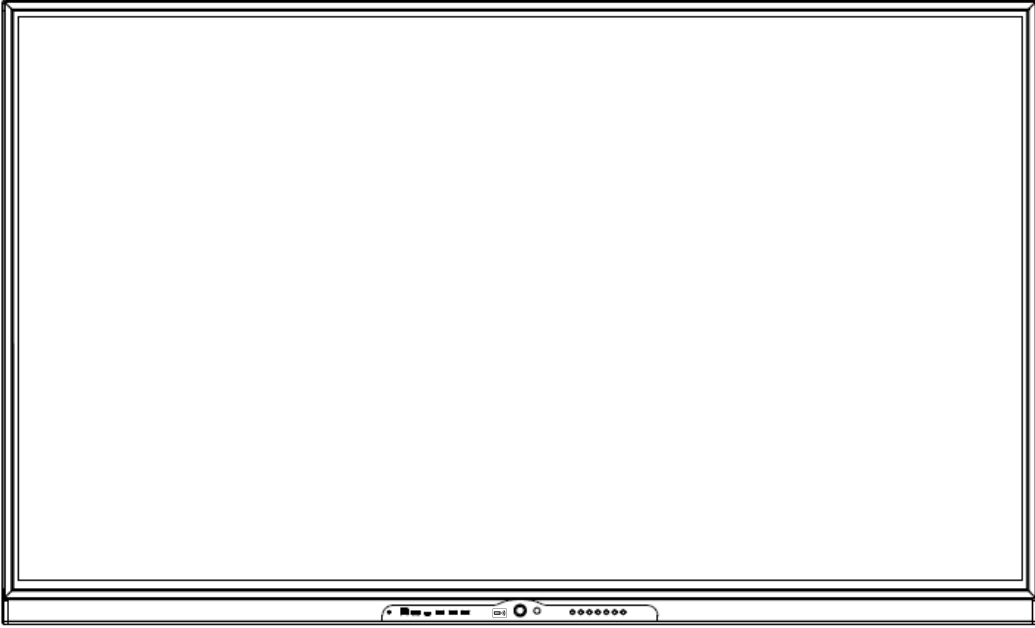
[Condensation on the glass surface]

- It may occur the dew condensation on the glass surface inside when the product is turn on for the first time or after it has not been used for a long time.
- This is a temporary phenomenon caused by the temperature difference between external and internal of the product, which is not a malfunction.
- If the symptom occurs, it disappears after a certain time (about 1 ~ 3 hours) after turning on the product.








2. Introduction

2.1 Components

- Check components for the following items. If there are any missing accessories, contact the local dealer where you purchased from.
The illustrations in this manual may differ from the actual product and components.

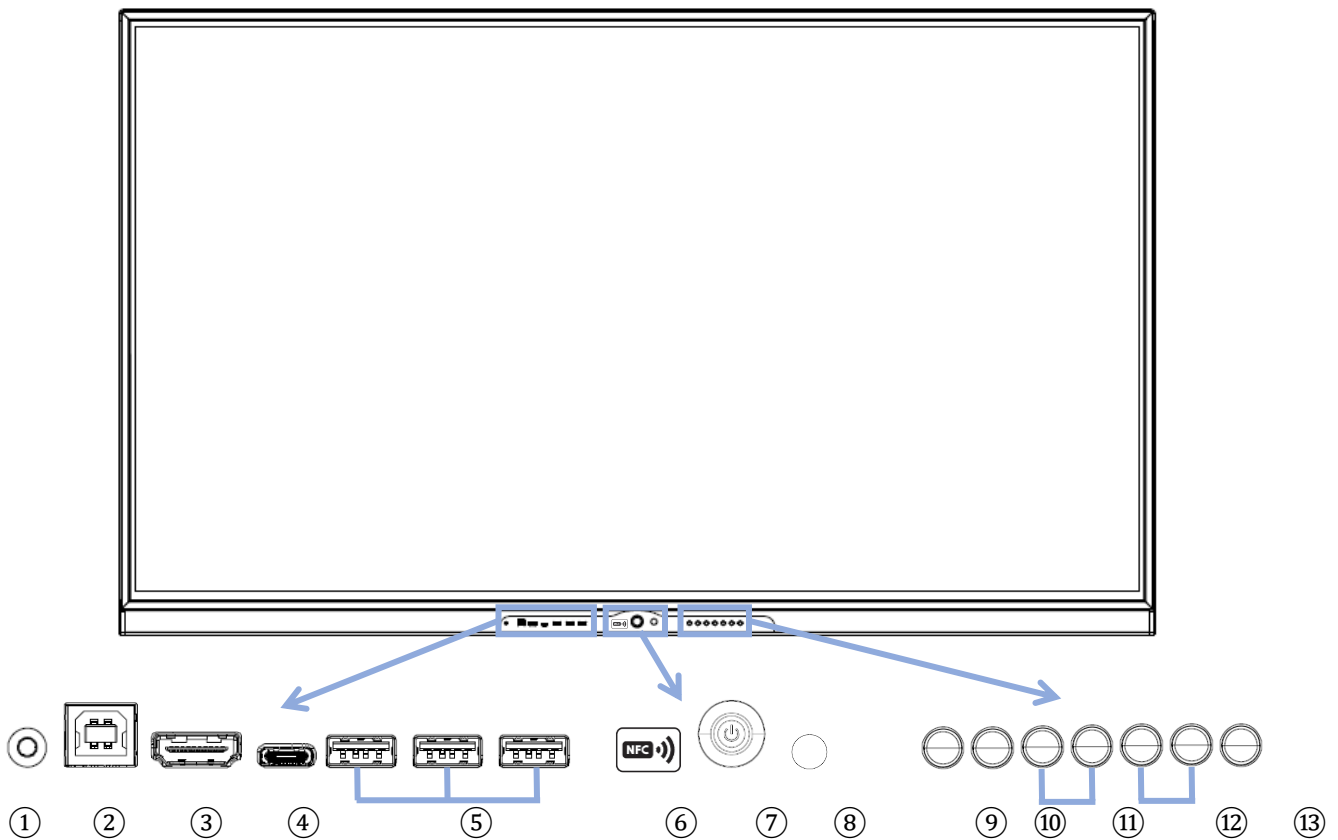


LCD/LED Display

Accessories	 <p>User manual</p>		
	 <p>Power cable ※Power cable vary by country</p>	 <p>HDMI cable</p>	 <p>USB cable (For Touch)</p>
	 <p>Remote controller</p>	 <p>Stylus pens (1 or 2 depending on product)</p>	 <p>NFC Card</p>

3. Product description

3.1 Front view



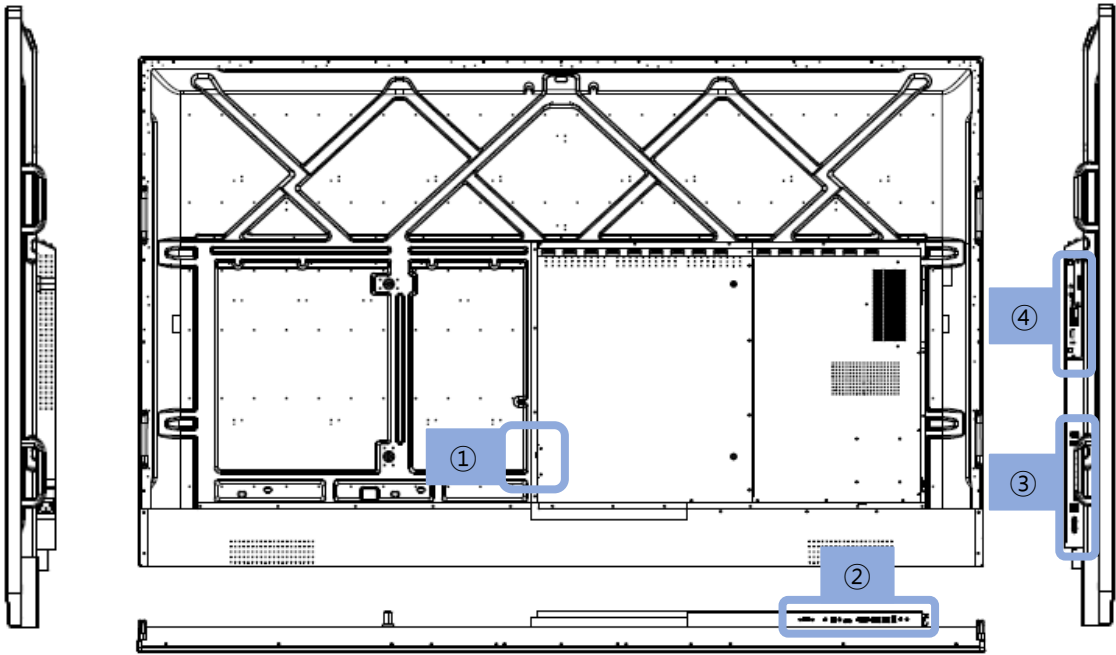
①	Light sensor
②	Front touch (USB-B Type)
③	Front HDMI
④	USB C-Type (Video and Audio Support)
⑤	USB 3.0
⑥	NFC Power On / Off Control (Card & Application)
⑦	Power On / Off switch, Power indicator (On : Blue, Off : Red)
⑧	Remote control
⑨	Source
⑩	Menu
⑪	Volume down, Volume up
⑫	Left, Right
⑬	Touch On / Off

Important notice

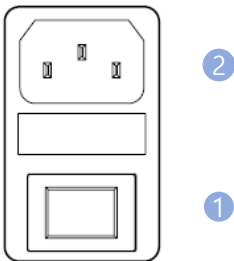
- The USB cable(3m) provided for front USB for Touch Output. Due to limitations in the USB standard, we recommend that the length of USB cables are less than 3m (10ft) to ensure optimum performance.

3.2 Rear view

3.2.1 Rear view

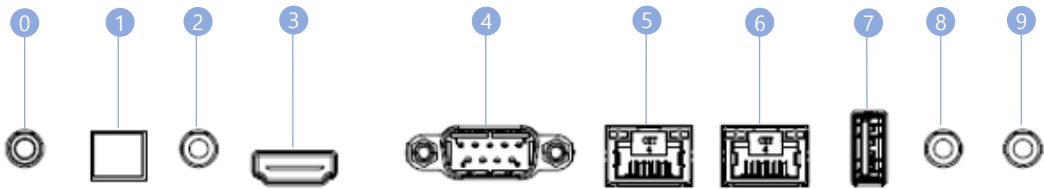


① Power control and AC in



1	On / Off Switch (I : On , O : Off)
2	AC in 100V~240V 50/60Hz

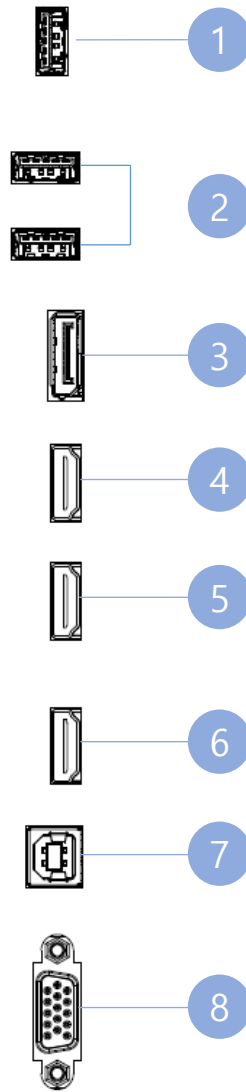
② Rear panel connectors



0	MIC
1	S/PDIF
2	Audio out
3	HDMI out
4	RS-232C

5	RJ45 in
6	RJ45 out
7	USB 2.0 (Android)
8	AV in
9	VGA audio in

③ Rear panel connectors



1	USB 2.0 (CAM)
2	USB 3.0 (Public)
3	DISPLAY PORT IN
4	HDMI IN 3

5	HDMI IN 2
6	HDMI IN 1
7	USB TOUCH (B-Type)
8	VGA IN

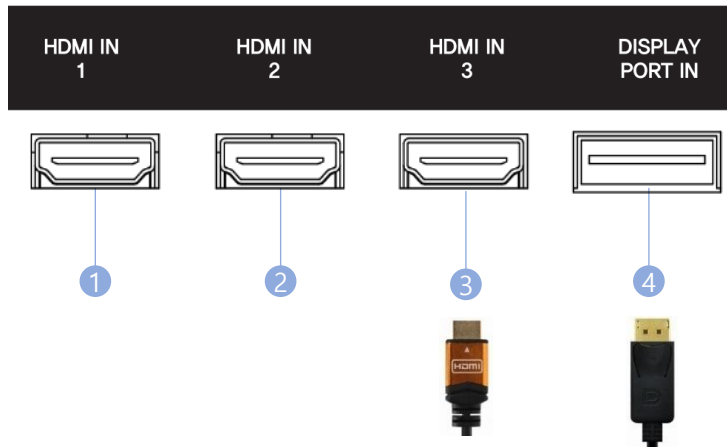
④ Installing an OPS PC

There is a slot on ④ for OPS PC. When you need to install an OPS PC, remove screws and existing cover first and screw up again after mounting OPS PC in the slot.

3.3 Connector

1) Connector of HDMI/Display port

In order to transmit (switching) digital video and audio signals from an external device to the screen, connect the HDMI/Display Port cables as shown in the following illustration.



1	HDMI 1 input – Pc / Laptop connect to the HDMI cable
2	HDMI 2 input – Pc / Laptop connect to the HDMI cable
3	HDMI 3 input – Pc / Laptop connect to the HDMI cable
4	Display port input – Pc / Laptop connect to the Display port cable

2) VGA connection

In case of transmit (switching) of digital video signal from an external device to the screen, connect the external device and the product with the VGA cable and to transmit an audio signal, connect an audio cable in VGA AUDIO IN port separately.

3) OPS PC connection

Do not connect USB for touch cable to the port. Touch cable is already connected by internal OPS docking board.

4. Remote controller (1)



Key name	Description
	Power On / Off
	Mute
	Activates OSD menu of input source selecting
FREEZE	Freeze current display
HDMI	HDMI Input select Front HDMI→HDMI1→HDMI2→HDMI3
DP	Display port→TYPE C type port
ECO	Adjust screen brightness (3 levels)
OPS	OPS PC select
VGA	VGA→AV
DICOM	DICOM ® Curve On / Off
MIRROR	Run E-Share app
EYE	Eye protection mode On / Off
MENU	Display main OSD menu.
EXIT	Close or exit main OSD menu.
INFO	Shows the current external input
	Adjust or select menu
OK	Select menu
PSM	Screen mode (Standard/Soft/Bright/User)
SSM	Sound mode (Standard/Sport/User)
VOL +	Volume up
VOL -	Volume down
	Go to previous media
	Start or pause media
	Stop media
	Go to the next media
	Activates annotation Screen
	Activates home screen
	Touch On / Off

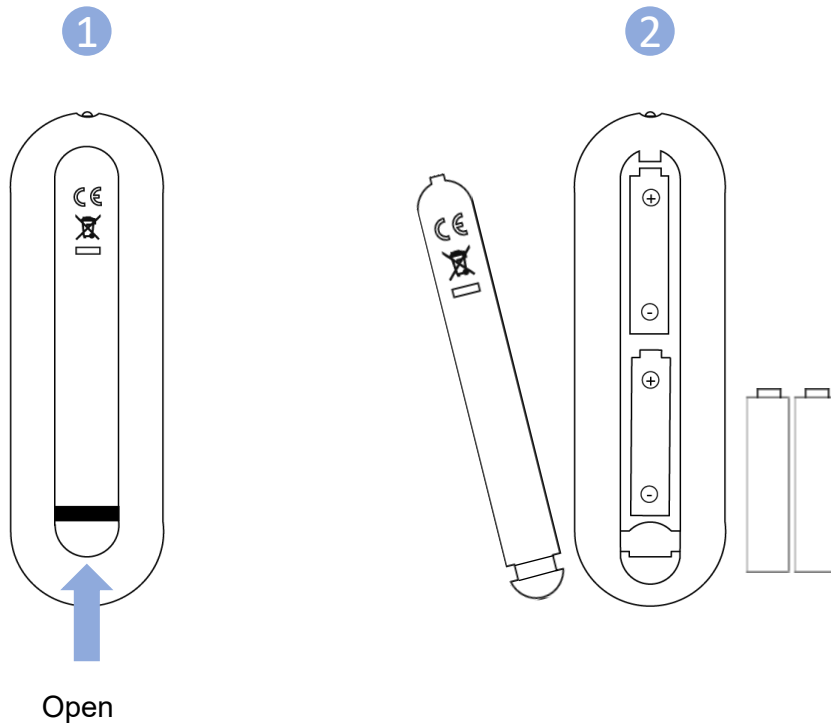
4.1 Remote Controller (2)



Key name	Description
	Power On / Off
	Shows the current external input
	Activates home screen
	Activates annotation Screen
	Touch On / Off
	TV Source select (not supported)
	OPS PC select
	Front HDMI→HDMI1→HDMI2→HDMI3
	Display port→TYPE C type port
	VGA→AV
	Go to previous media
	Start or pause media
	Stop media
	Go to the next media
	Display main OSD menu
	Select external input menu
	Internal camera On / Off (not supported)
	OSD Menu Exit and Back
	Select menu
	Adjust or select menu
	Volume down
	Mute
	Volume up
	Screen mode (Standard/Soft/Bright/User)
	Sound mode (Standard/Sport/User)
	Adjust screen brightness (3 levels)
	Freeze current display
	Run E-Share app
	Eye protection mode On / Off
	TV Channel search (not supported)
	Check the list of TV channels (not supported)
	Add and delete TV channels (not supported)

4.2 How to insert battery

Insert the battery into proper polarities
Battery model: Alkaline Battery 1.5V(AAA)



BATTERY PRECAUTIONS

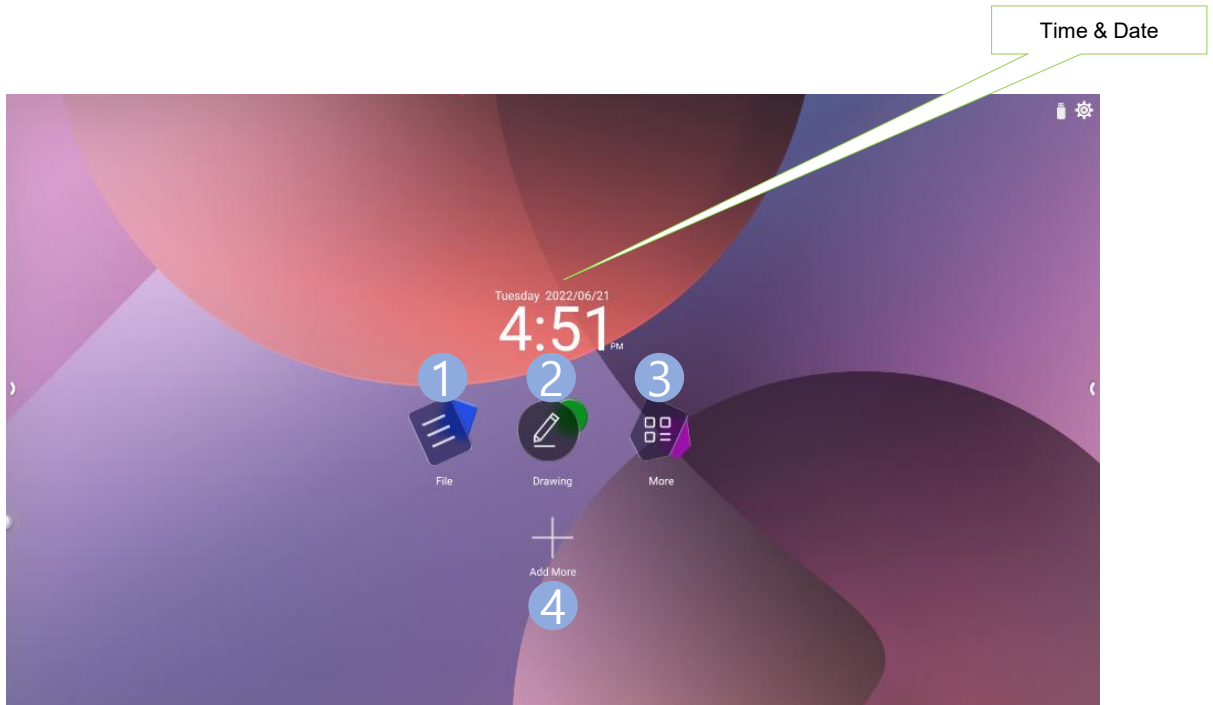
These precautions should be followed when using batteries in this device:

- The batteries may last approximately one year depending on using time of remote control. Replace batteries when the remote control does not working.
- Use only the size and type of batteries specified.
- Be sure to follow the correct polarity when inserting the batteries as upper image. Reversed batteries may cause damage to the device.
- Do not use different types of batteries together (e.g. Alkaline, Carbon-zinc or Rechargeable) or old batteries with new ones.
- If the device is not to be used for a long time, remove the batteries to prevent damage or injury from possible battery leakage.
- Do not try to recharge batteries not intended to be recharged. It may cause damaged to remote control. (Follow battery manufacturer's directions.)
- Do not use damaged batteries as they can become very hot and are dangerous.
- Never expose batteries (battery pack or batteries installed) to excessive heat such as sunshine, fire or the like.

5. Functions and description

5.1 Home screen

The home screen is displayed as illustrated below:



Menu		Description
①	File	Run, move, copy or delete folders and files
②	Drawing	Users can take notes on the screen or use videos and photos for lectures and presentations
③	More	Users can select more applications such as multimedia player, system settings, WPS, internet, camera, calculator, etc.
④	Add more	Adding applications on the home screen

5.2 Navigation bar

A navigation bar will be displayed when users swipe up from bottom or by tapping arrows on both edges.



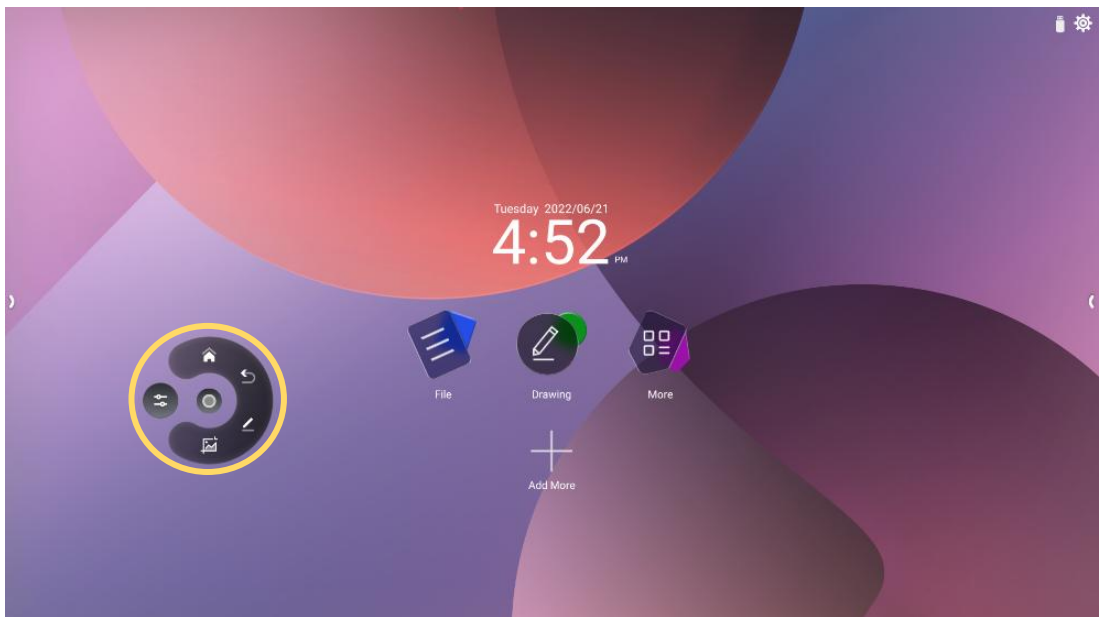
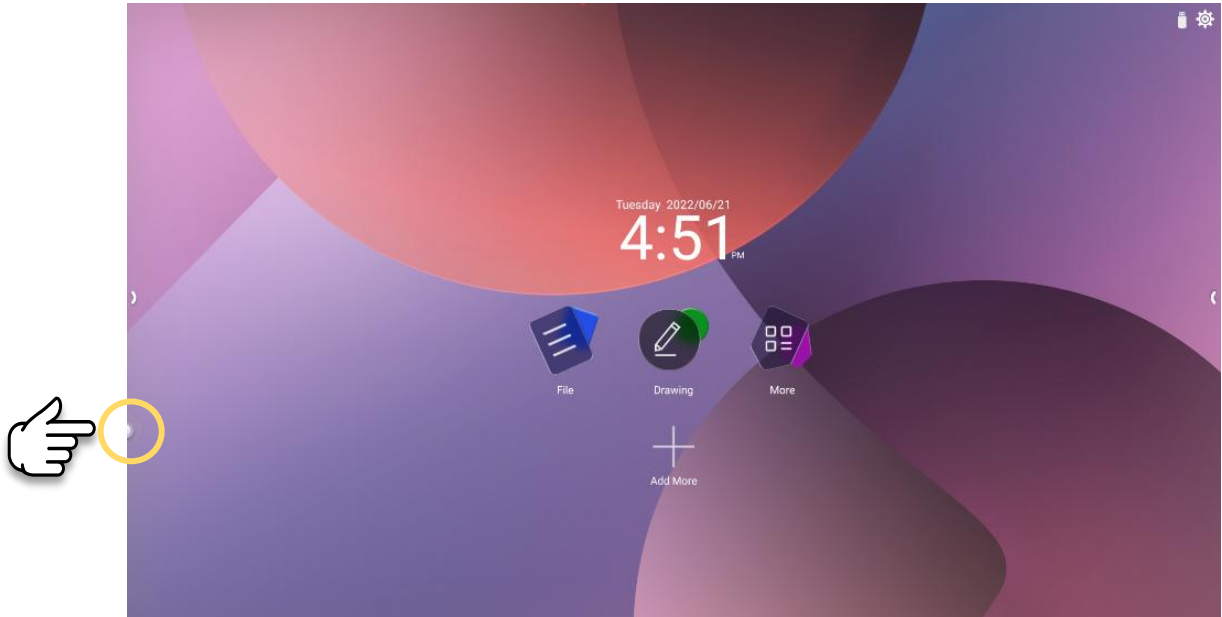
5.2.1 Navigation bar overview



Navigation bar UI		Description
①	Back	Move to the previous screen step
②	Home	Go to the home screen
③	Recent app	Show recent apps
④	Source	Display the external input source
⑤	Annotation	Annotation mode on the current screen
⑥	App list	List of installed apps
⑦	Sidebar lock	Lock sidebar menu
⑧	Hide/Show Sidebar	Show or hide the sidebar menu






5.3 Floating ball menu

Capture the screen, return to home screen, and pen functions are available with floating ball quick menu



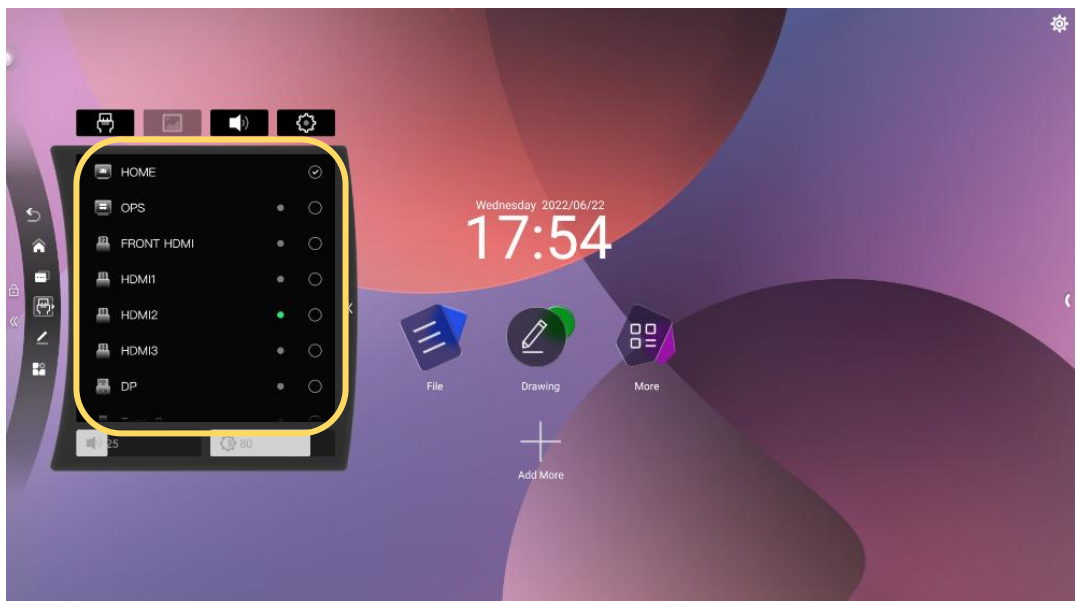
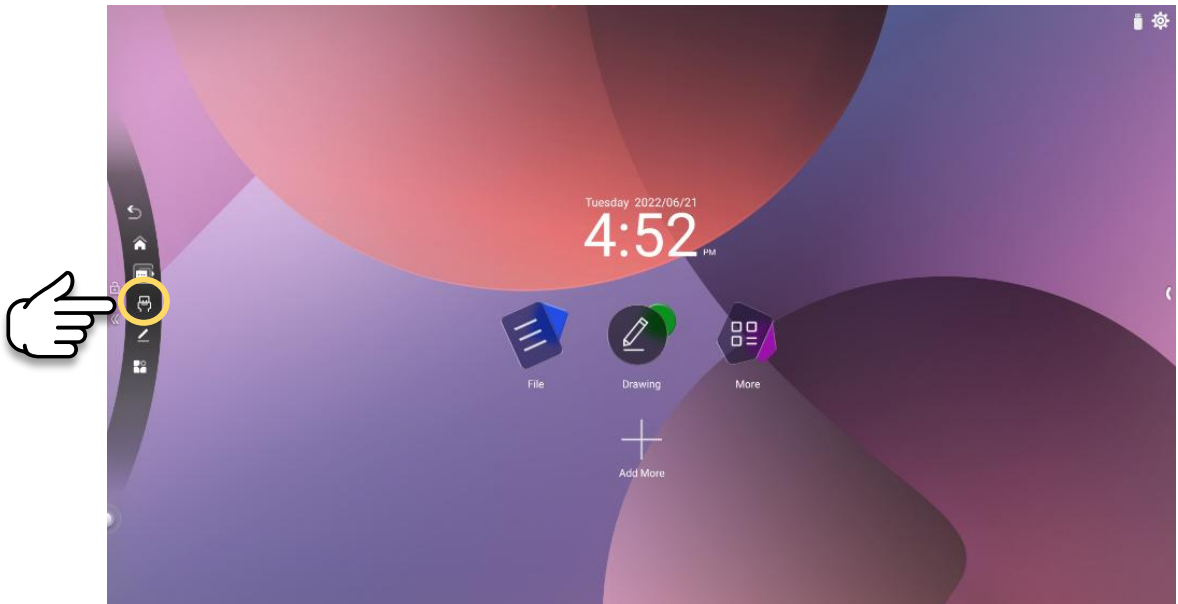
5.3.1 Floating ball menu overview



Icon	Name	Description
	Home	Return to the home screen
	Back	Return to previous screen
	Annotation	Annotate on the current screen
	Capture	Screen capture
	Settings	Floating menu settings

5.4 External input source

Select input external source



When product connected with external devices, green lights will be on next to the external input source name and in order to change display to externals devices', select the input source name.

5.4.1 OPS(Open pluggable specification)

Computing module plug-in format available for adding computing capability to IFPD. Computing modules in the OPS format are available on Intel- and ARM-based CPUs, running operating systems including Microsoft Windows and Google Android.



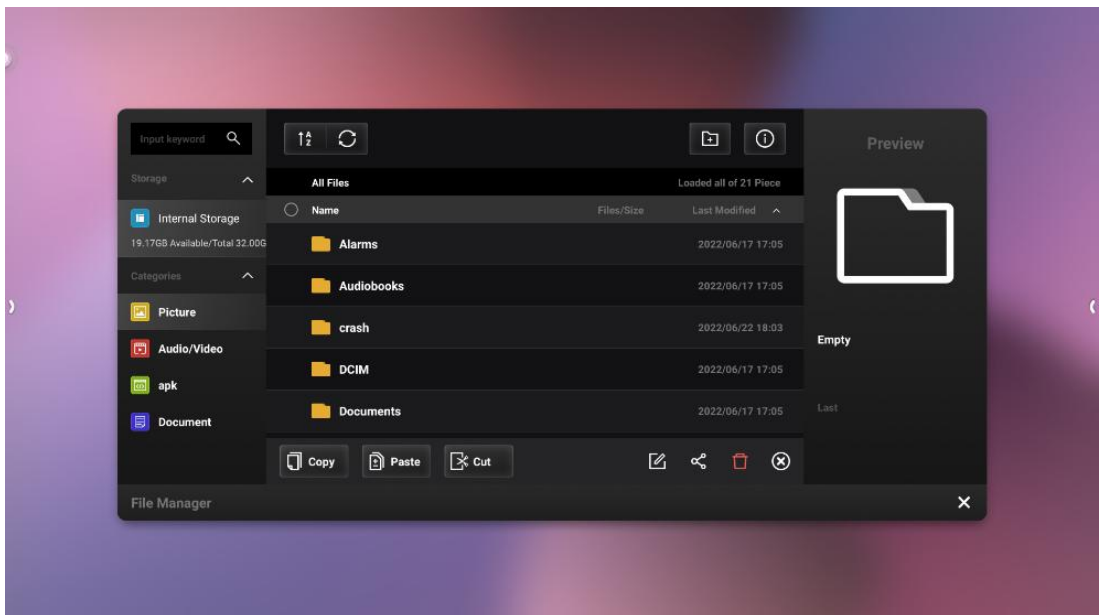
OPS Screen

5.5 File manager

The file manager allows to administer the local Android file system run, move, copy or delete folders and files. When using a USB memory, it is recommended to use FAT32 as the file system format. NTFS or exFAT file systems may have problems with USB recognition and read/write. (When running a photo file, touch the arrow on the screen to move to the next photo.)



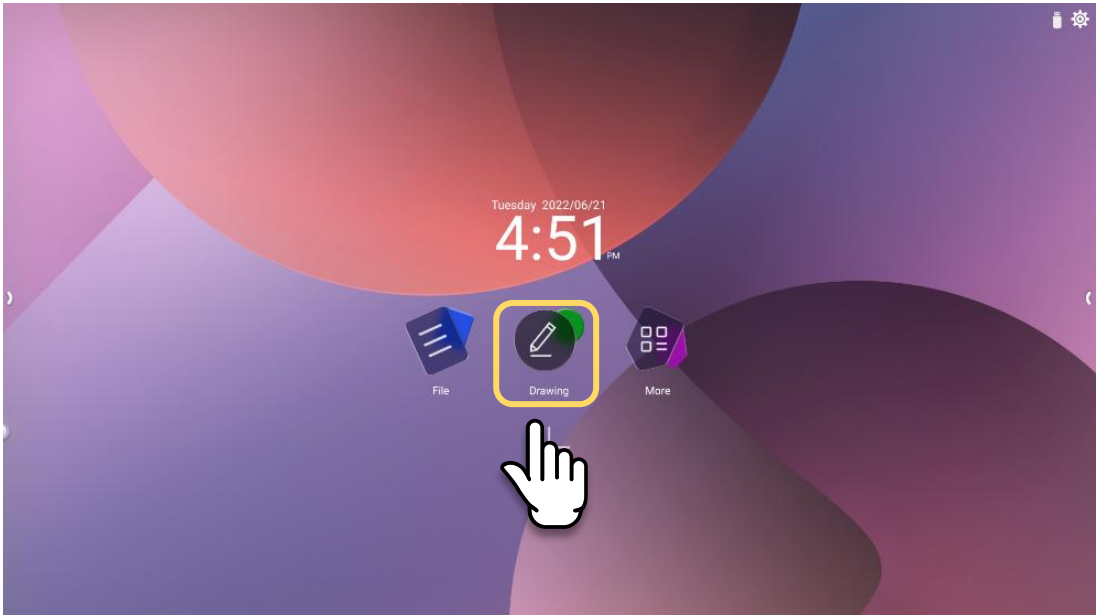
Select



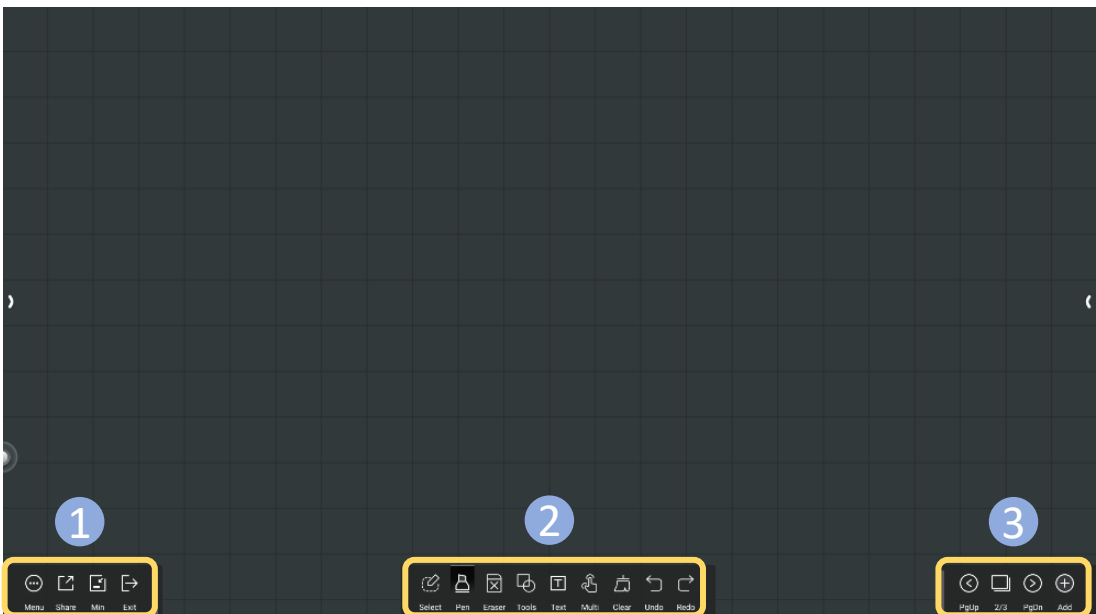
Screen displayed when selected Files

5.6 Drawing

Allows users to annotate notes on the screen or use videos and photos for lectures and presentations.



Tap

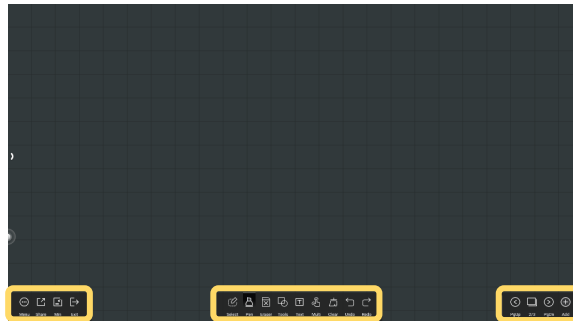


Drawing Screen

Whiteboard

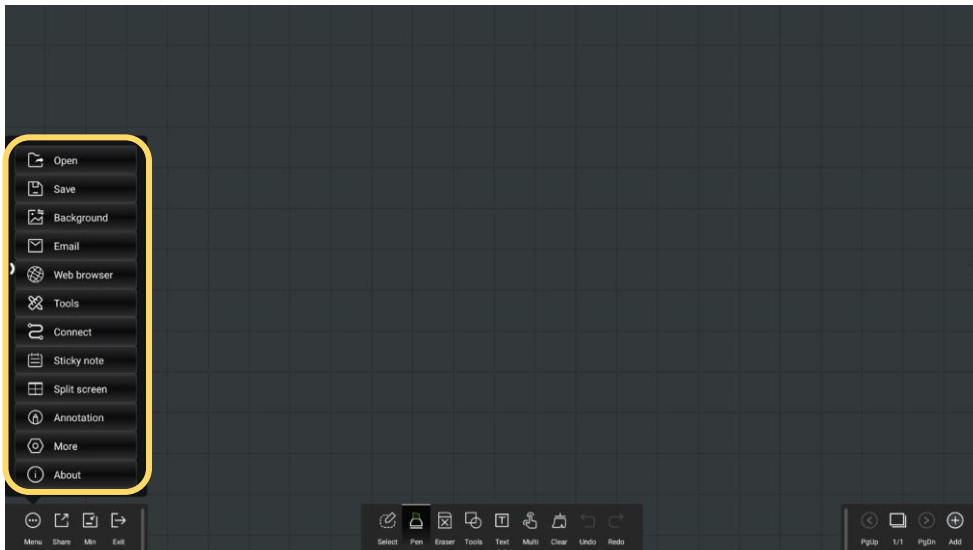
The whiteboard consists of ①general function, ②writing function and ③thumbnail.













5.6.1 Icons on the main screen



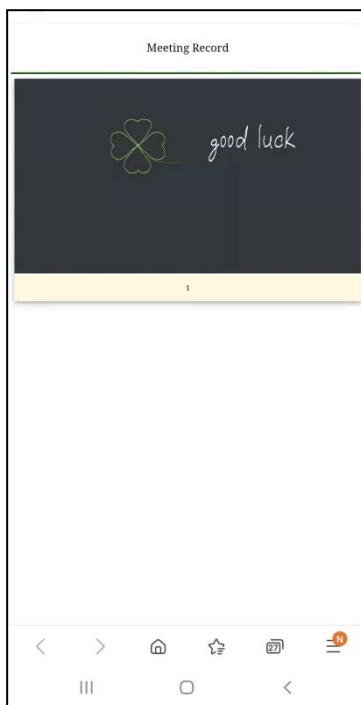
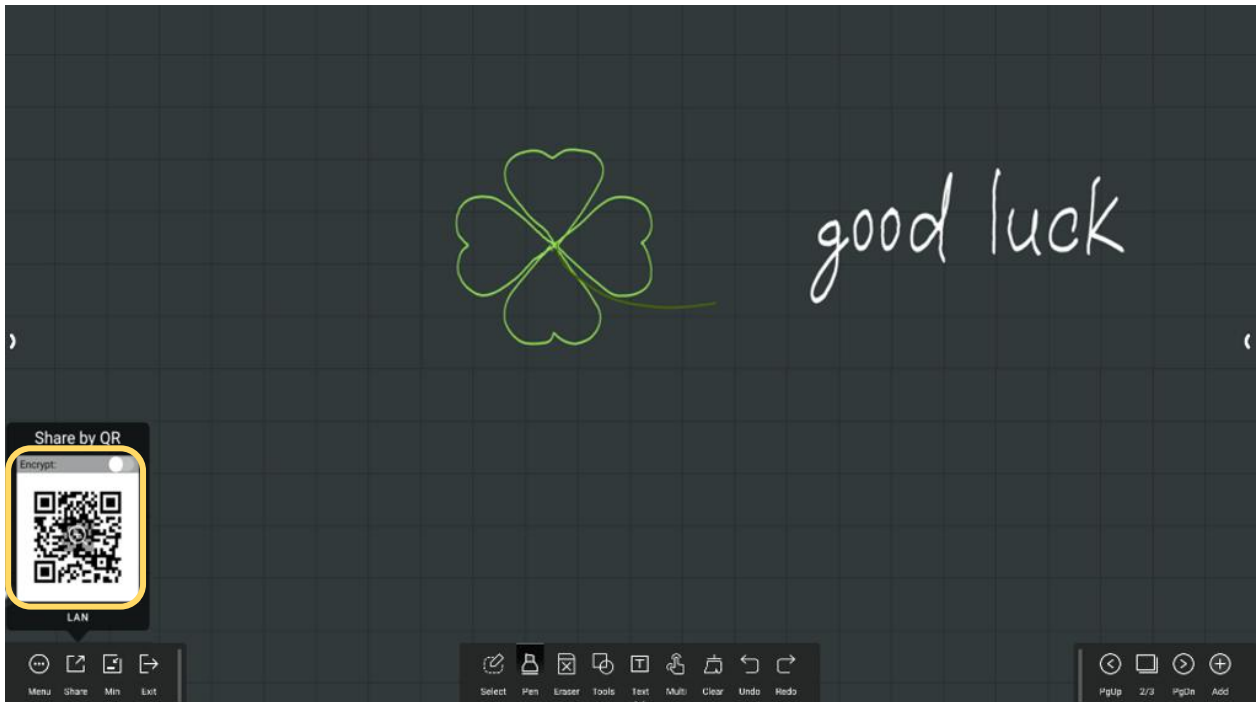
Function	Icon	Name	Description
General		Menu	Display more options
		Share	Share annotation
		Minimize	Minimize the whiteboard screen
		Exit	Quit whiteboard
Writing		Select	Select objects to zoom, rotate, copy, and more
		Pen	Pen setting such as color, thickness and shape
		Eraser	Erasing annotation
		Tools	Draw lines and shapes
		Text	Typing on the keyboard
		Touch	Select between multi-touch or single-touch
		Form	Insert row and column table
		Tools	Compass, ruler, protractor tool activation function
		Mind	Mind map activation function
		Clear all	Erase all writing on the screen
		Undo	Undo the most recent action
		Redo	Redo the most recent action
	Thumbnail		Previous page
		Page	Current page / Total page
		Next page	Move to the next page
		Add page	Add new pages

5.6.2 Menu overview



	Option	Description
1	 Open	Bringing up the content (JPG, PNG, PDF, WBF)
2	 Save	Save the content on the page (JPG, PNG, PDF, WBF)
3	 Background	Set the background pattern and color
4	 Email	Save the page and send it by email
5	 Web browser	Run web browser windowed mode and insert image
6	 Tools	Use the protractor, ruler, and compass tools
7	 Connect	Share your whiteboard screen by connecting to a network with products of the same type
8	 Sticky note	Insert notepad
9	 Split screen	Split the whiteboard screen
10	 Annotation	Switch to annotation mode
11	 More	Change the type of pen motion and eraser
12	 About	Program version

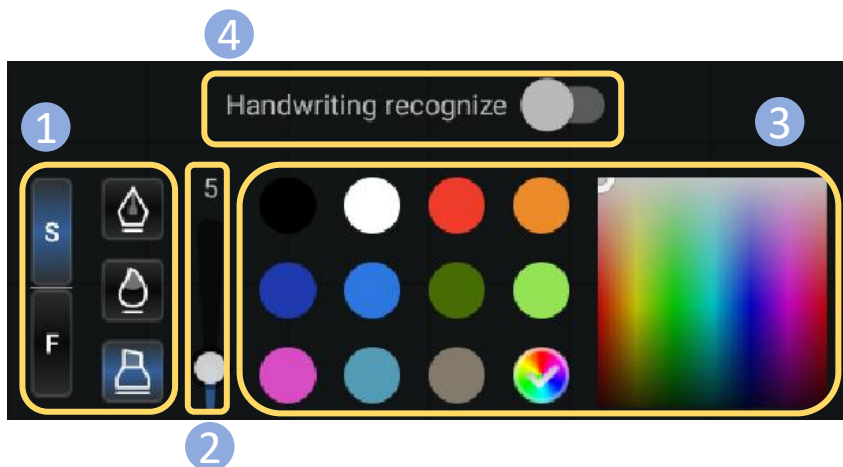
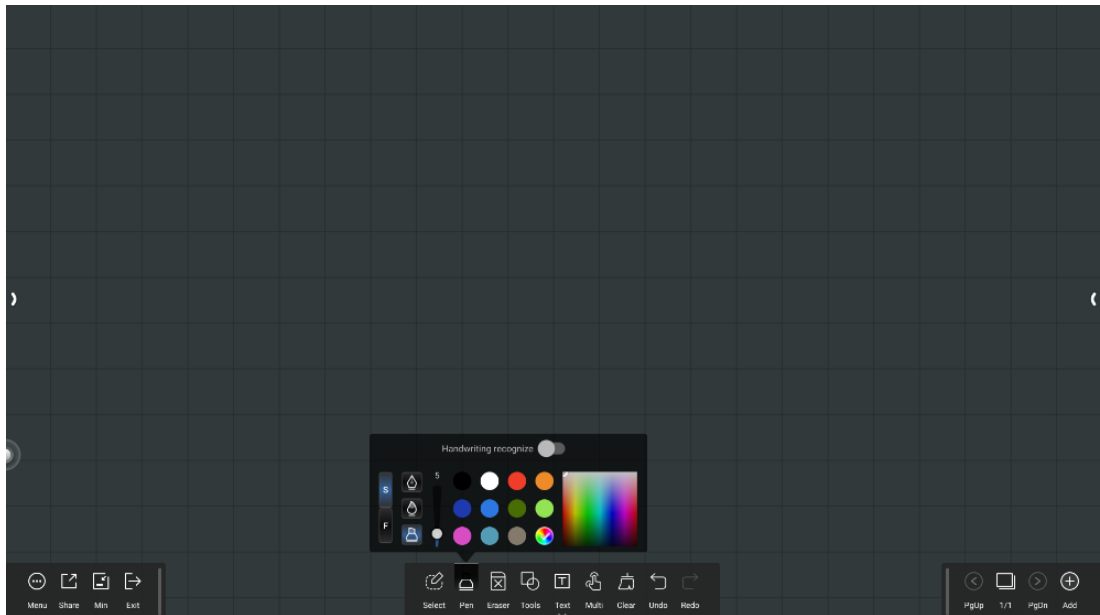
5.6.3 QR code



Share QR code

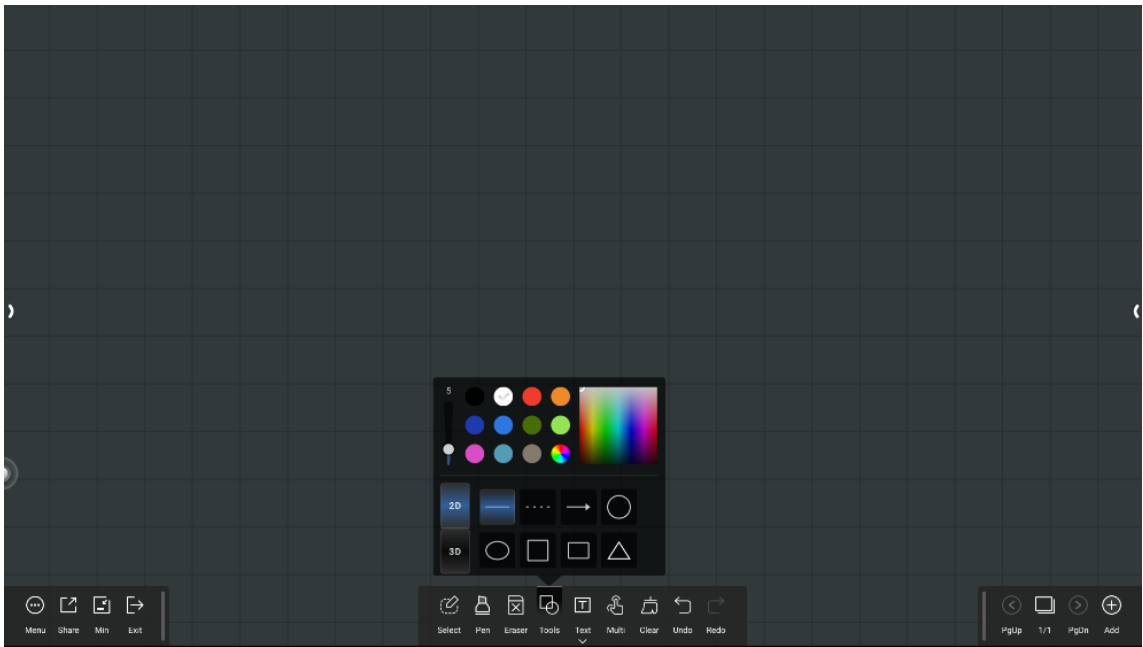
Allows you to share the screen of the whiteboard with a QR code. When the IFPD and the device are connected to the same network, the contents of the whiteboard can be shared on the screen of the device using the QR code.

5.6.4 Pen overview



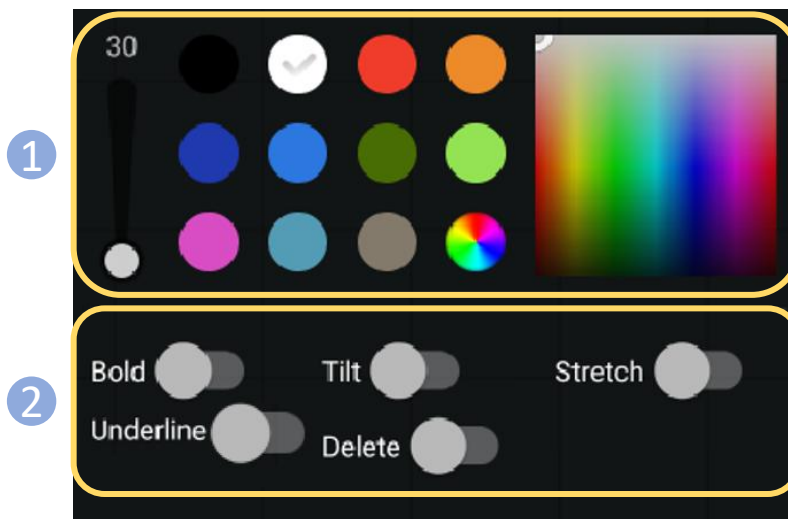
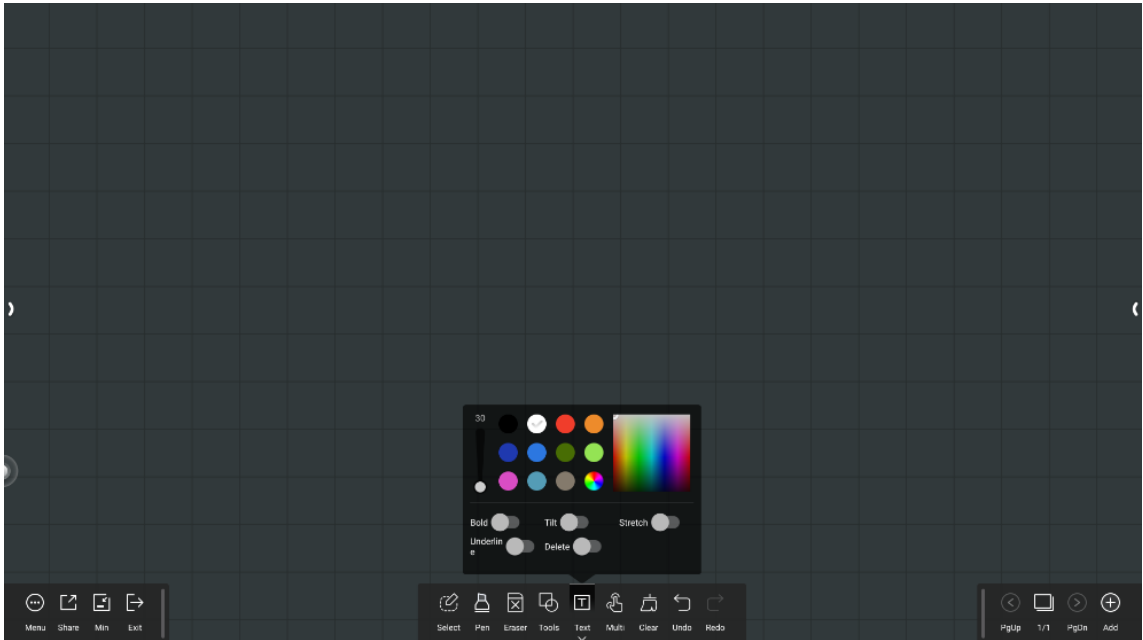
Option		Description
①	Pen	Stylus type and finger type, and the pen types can be used as pens, brushes and markers
②	Line thickness	Choose pen thickness
③	Color	Choose one of the 11 available colors or select color from custom colors
④	Handwriting recognition	Automatically change the text written on the screen to the font that matches the setting

5.6.5 Tool overview



Option		Description
①	Color	Choose one of the 11 available colors or select color from custom colors
②	Shape	Draw Shapes (supports 2D shapes and 3D shapes)

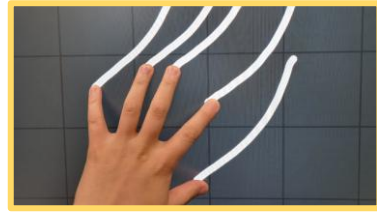
5.6.6 Text overview



Option		Description
①	Color	Choose one of the 11 available colors or select color from custom colors
②	Font	Set text Bold, Tilt, Stretch, Underline, Delete

5.6.7 Gesture

1) 1~20 point : Draw



2) 2 point : zoom in/out, adjust the size



3) 3 point : move the screen (Touch single mode setting)

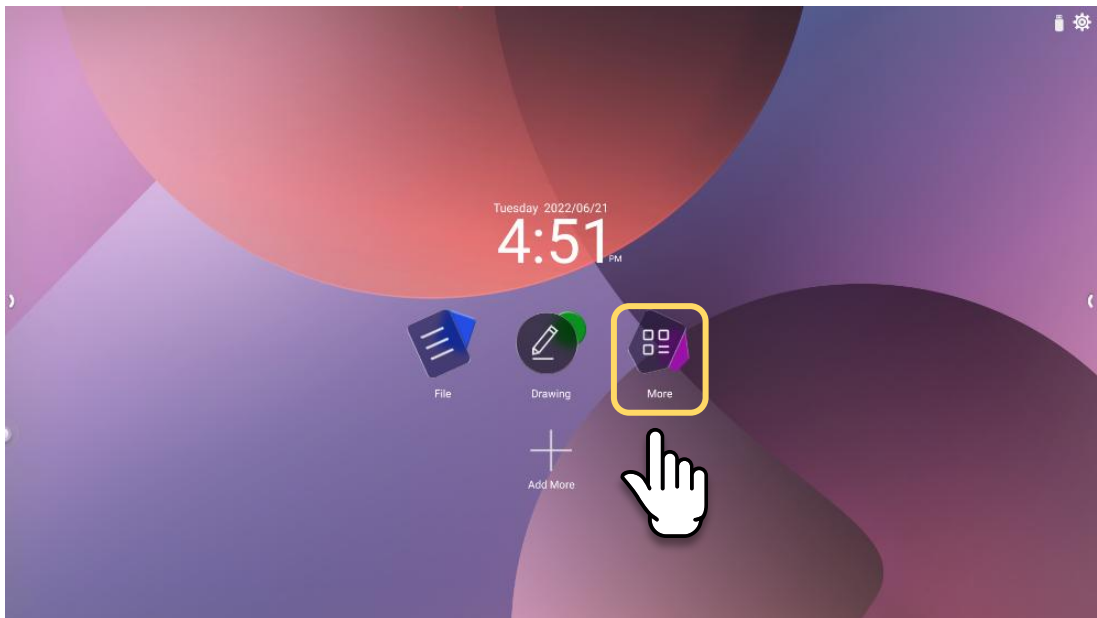


4) Area touch : Eraser



5.7 More applications

Select the application from other applications such as Internet, System Settings, Camera and Calculator. (RecordScreen App cannot be locked through App Lock.)



Tap



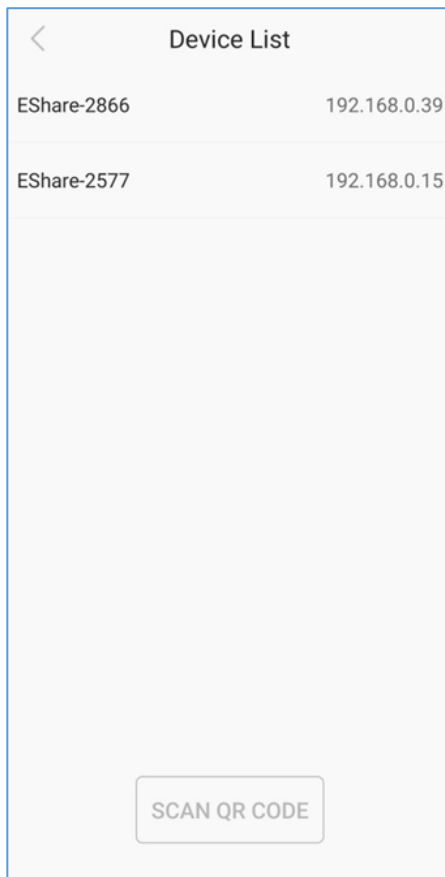
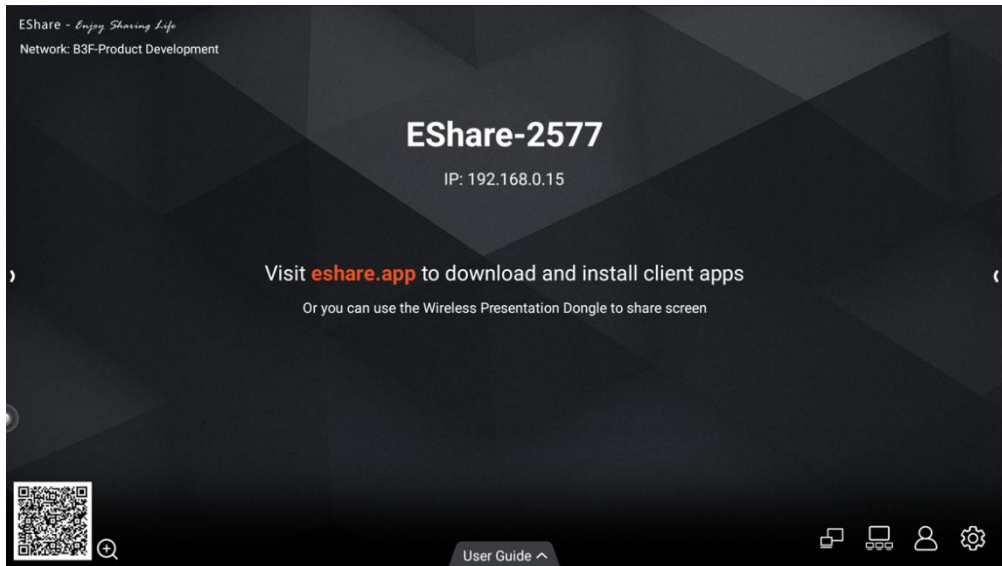
More applications

5.7.1 Eshare

EShare is a multi-screen interactive application for business and presentations using computers or mobile devices.

EShare-Mobile users

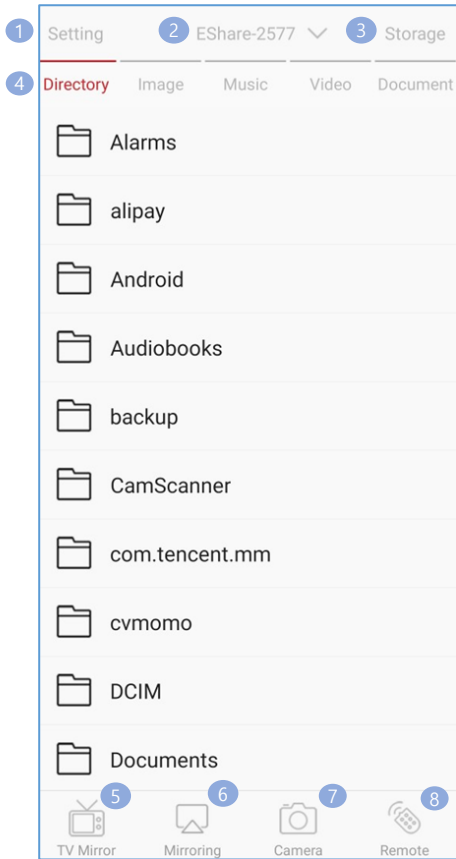
In order to connect the product with mobile device, the mobile device must be connected with same network and after that the mobile device shows the Eshare key.



1. Smartphone settings

- (1) Open the Play store
- (2) Search Eshare app
- (3) Download and install the Eshare app
- (4) Run the Eshare app

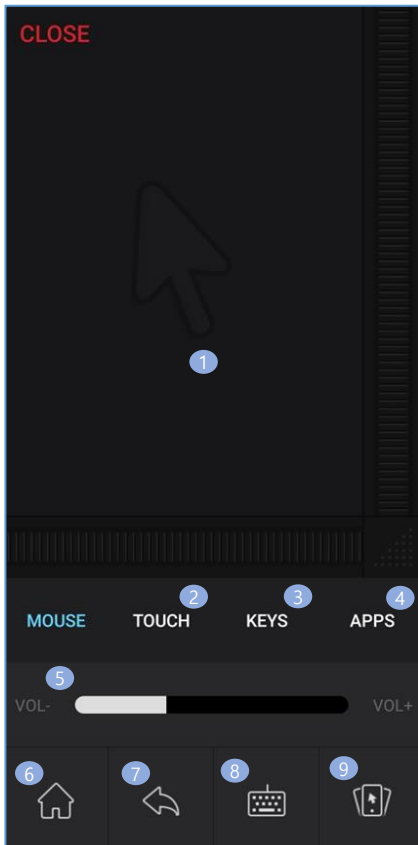
1) Eshare (App)



(1) Main screen

- ① Settings
- ② Eshare connect ID
- ③ Storage
- ④ Contents category (folder, image, music, video, document)
- ⑤ Remote mode
- ⑥ TV mirror mode
- ⑦ Mirroring mode
- ⑧ Camera mode

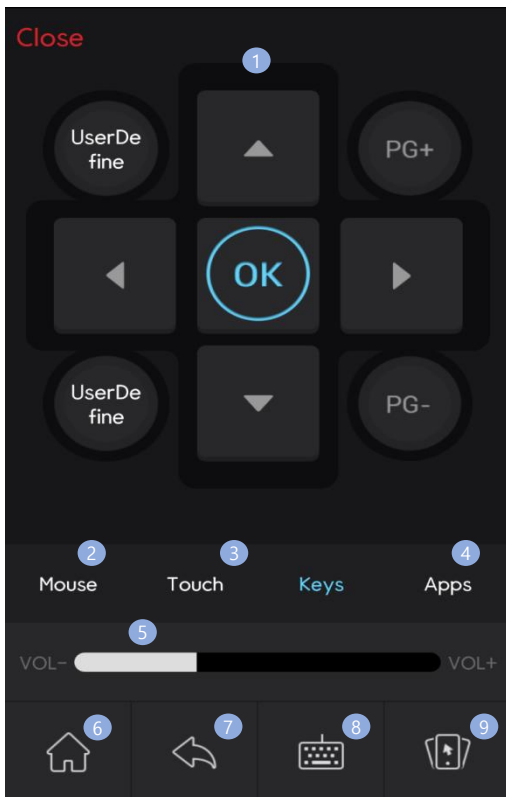
2) Remote mode



(1) Remote screen

- ① Mouse pad
- ② Virtual touch mode
- ③ Virtual key mode
- ④ App mode
- ⑤ Volume control
- ⑥ Go to home screen
- ⑦ Undo
- ⑧ Keyboard activation
- ⑨ Motion mode

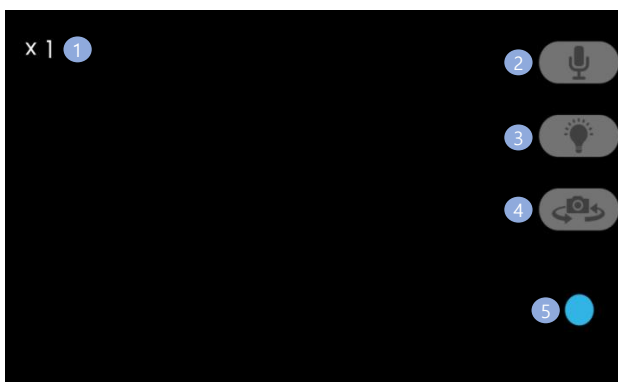
3) Keys



(1) Virtual keys screen

- ① Remote button
- ② Virtual mouse mode
- ③ Virtual touch mode
- ④ App mode
- ⑤ Volume control
- ⑥ Go to home screen
- ⑦ Undo
- ⑧ Keyboard activation
- ⑨ Haptic Mode

4) Camera mode



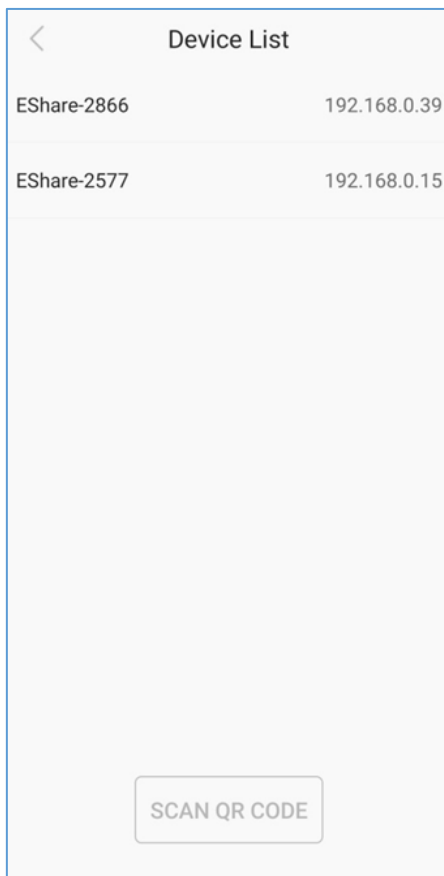
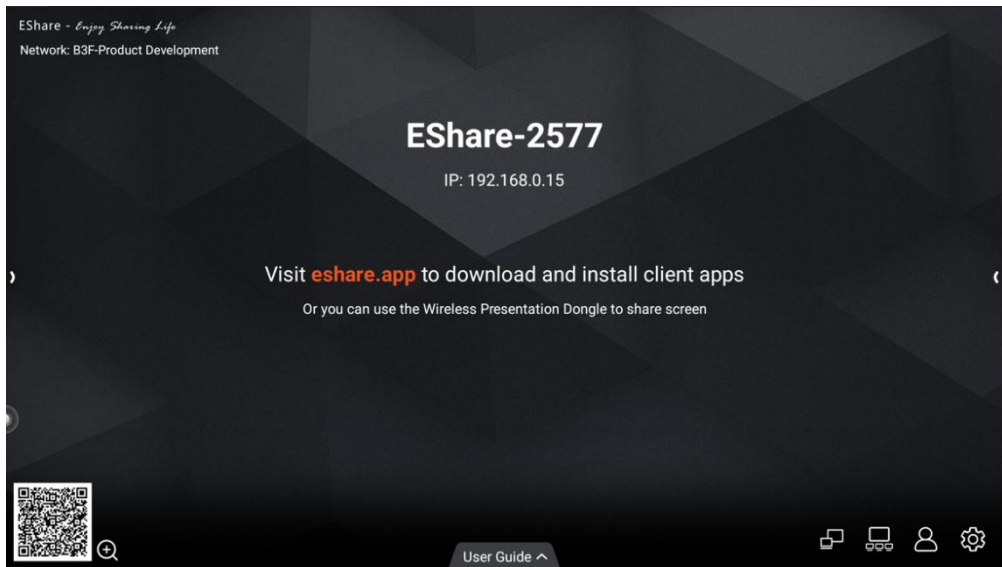
(1) Camera screen

- ① Zoom in/out
- ② Mic mute
- ③ Flash
- ④ Front / back camera selection
- ⑤ Shutter

Eshare-PC users

In order to connect the product with PC, PC must be connected with same network and after that the mobile device shows the Eshare key.

Download the program on <http://d.eshare.tech>



1) Pc settings

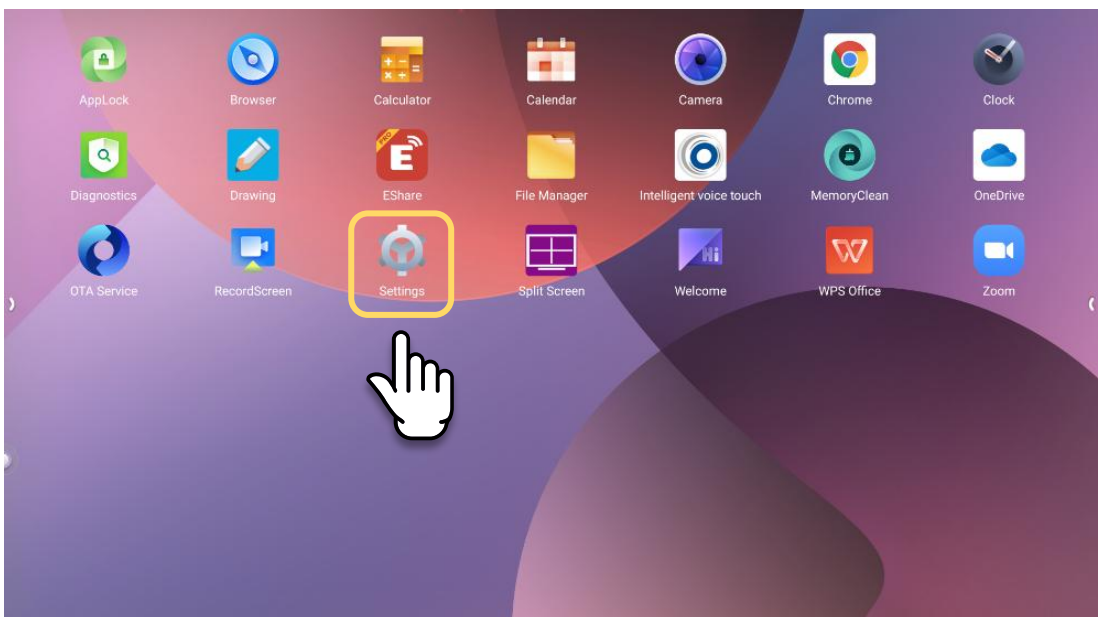
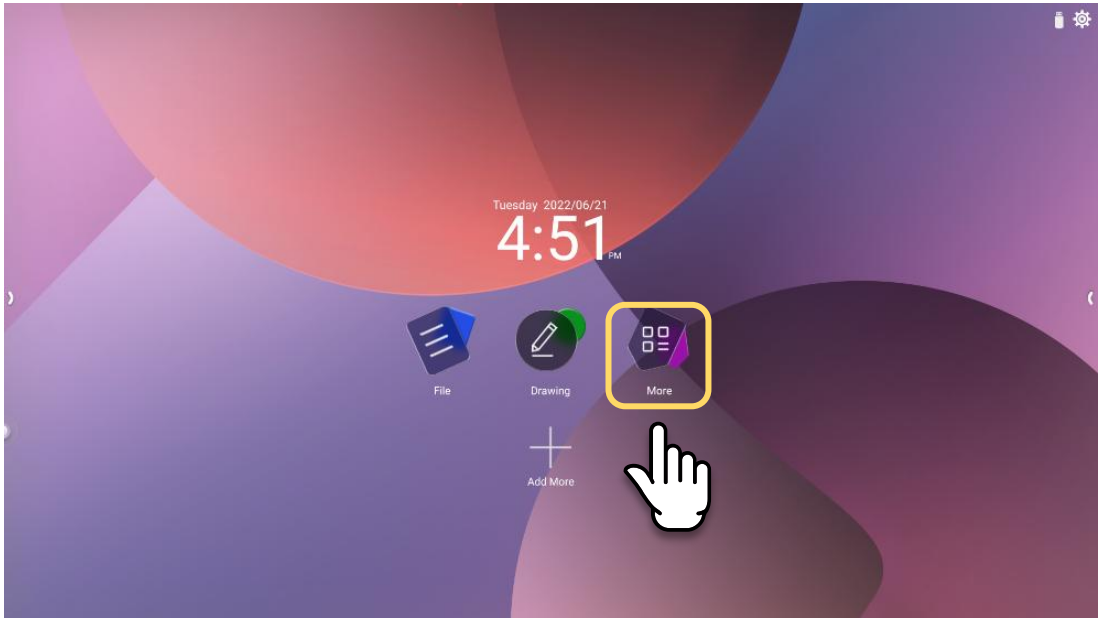
- (1) Download and install the EShare client program
- (2) Run the EShare client program
- (3) Select share screen
- (4) Control the Pc screen

6. Settings description

6.1 Settings overview

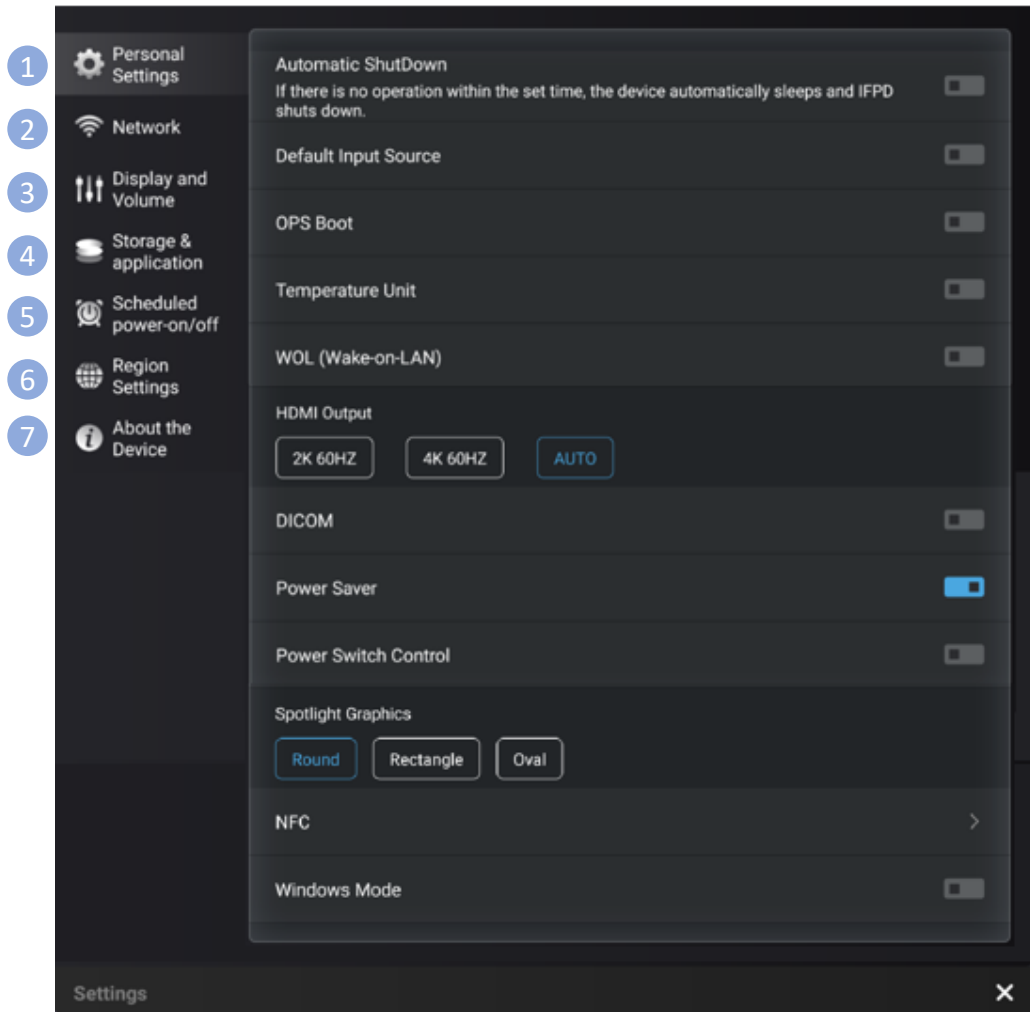
Go to the settings menu in the following ways:

6.1.1 Select Settings from the home screen



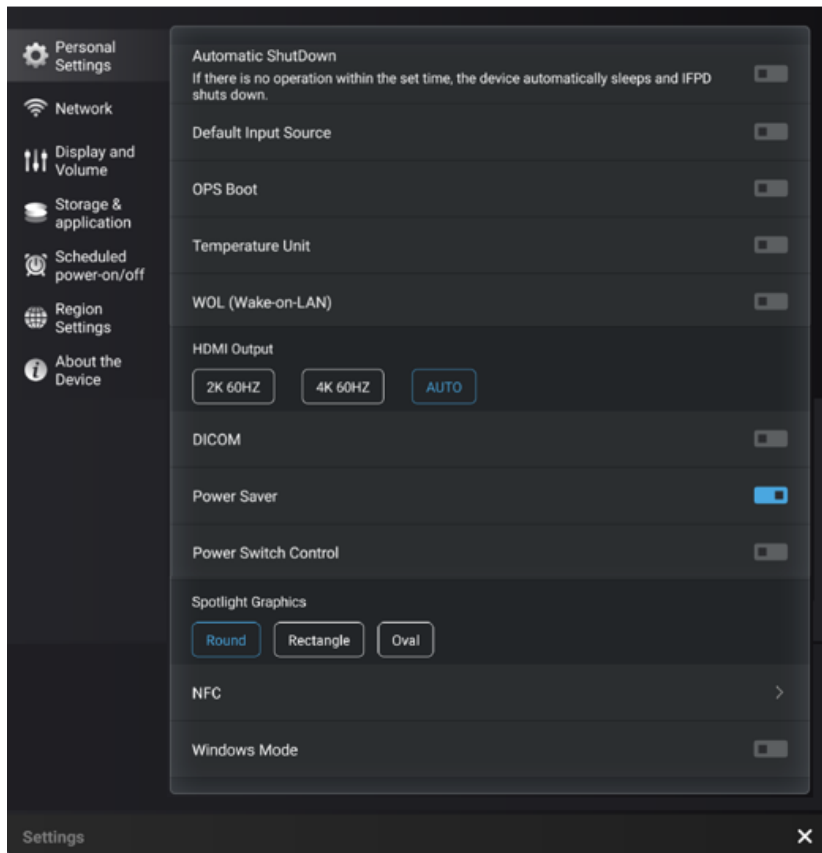
6.1.2 Navigation bar settings description

Description of setting menu



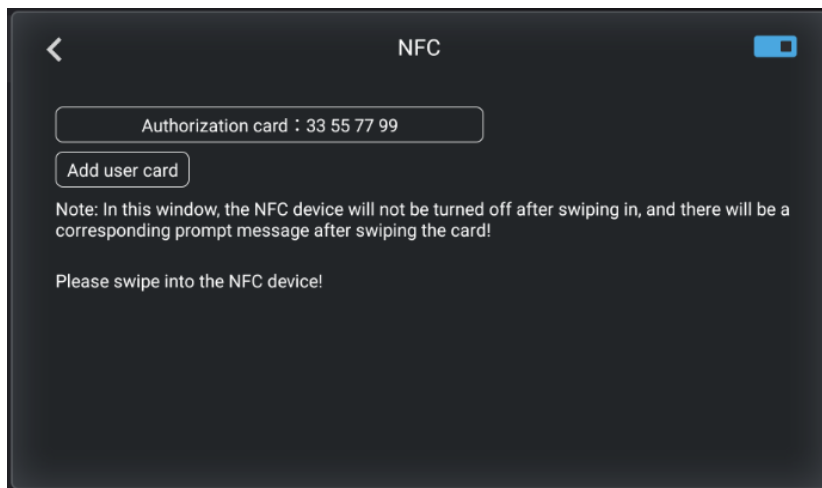
Category		Description
①	Personal Settings	Set for personal settings
②	Network	Set the network connector
③	Display and Volume	Display brightness configuration / Control volume
④	Storage and application	Manage the storage space
⑤	Scheduled power On /Off	Set power scheduling On / Off
⑥	Region Settings	Set country and region, time, date, language and keyboard, etc.
⑦	About the device	Display system and device related information

① Personal Settings



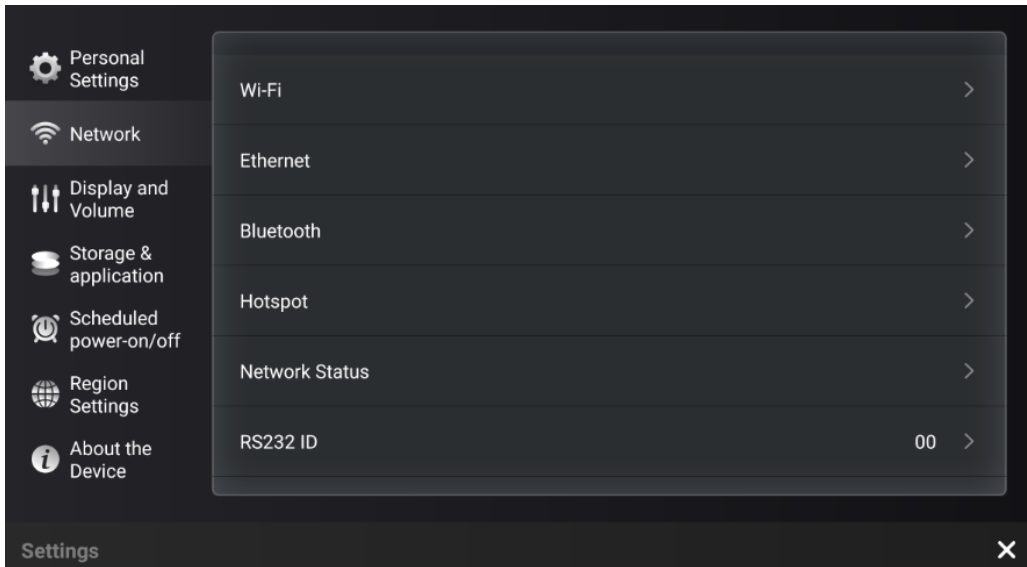
- Personal Settings
 - Users can set for common options such as power , Select source after booting, DICOM ® Curve, Power saver, Power switch control, NFC, Windows Mode etc.

①-1 NFC Setting



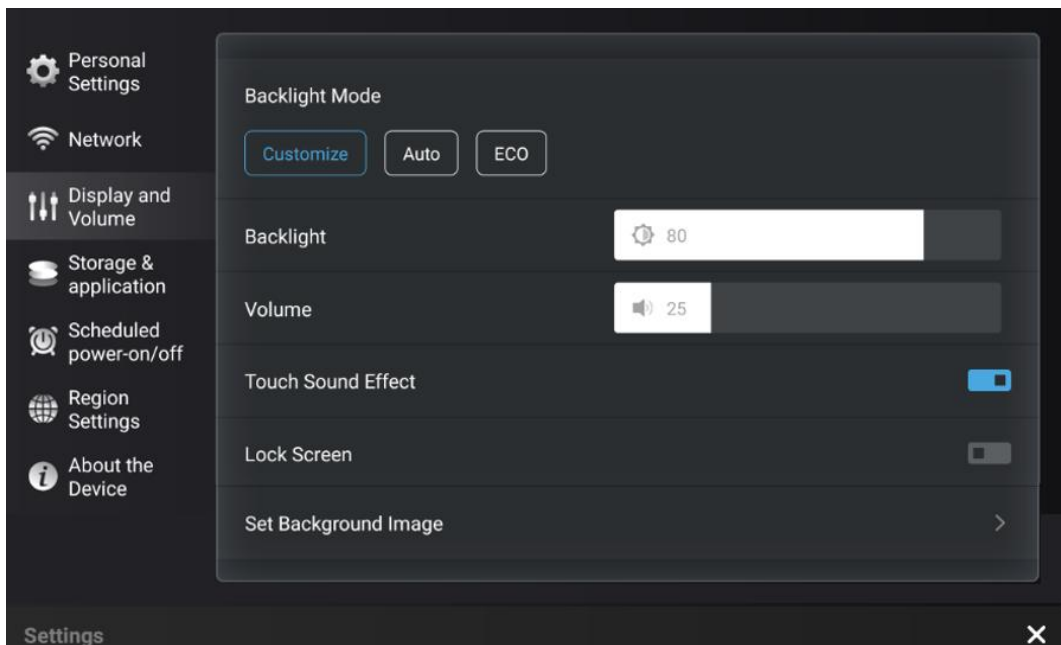
- NFC On/Off Setting
 - The on/off operation of the NFC function can be controlled only with the dedicated card, and when the NFC function is turned on, the product can be turned on only with the NFC card.

② Network



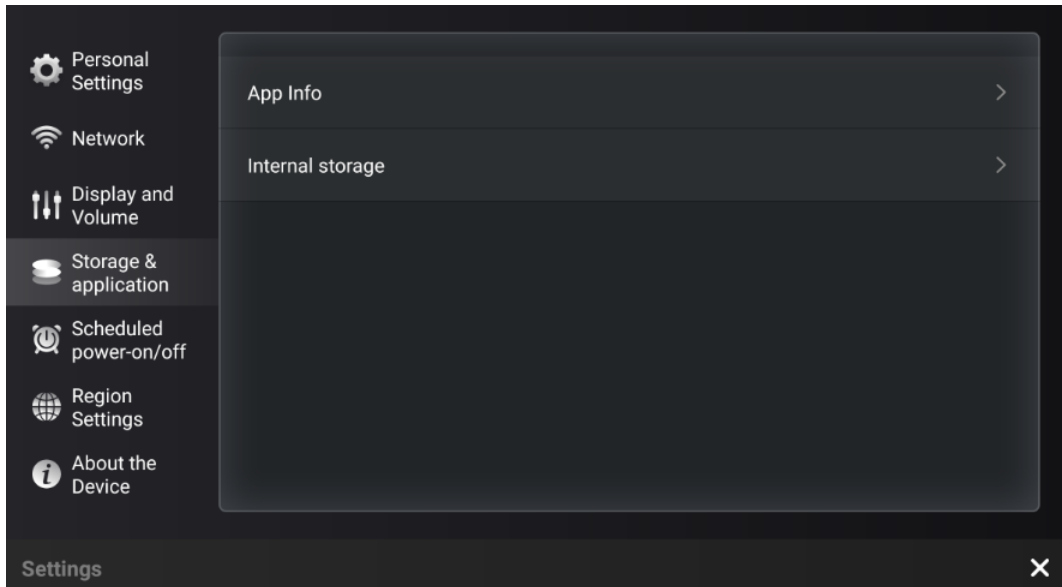
- Network
- Setting network connector
- Users can set Wi-Fi, Ethernet, Bluetooth, Hotspot and RS232 ID (Set ID), etc.

③ Display and Volume



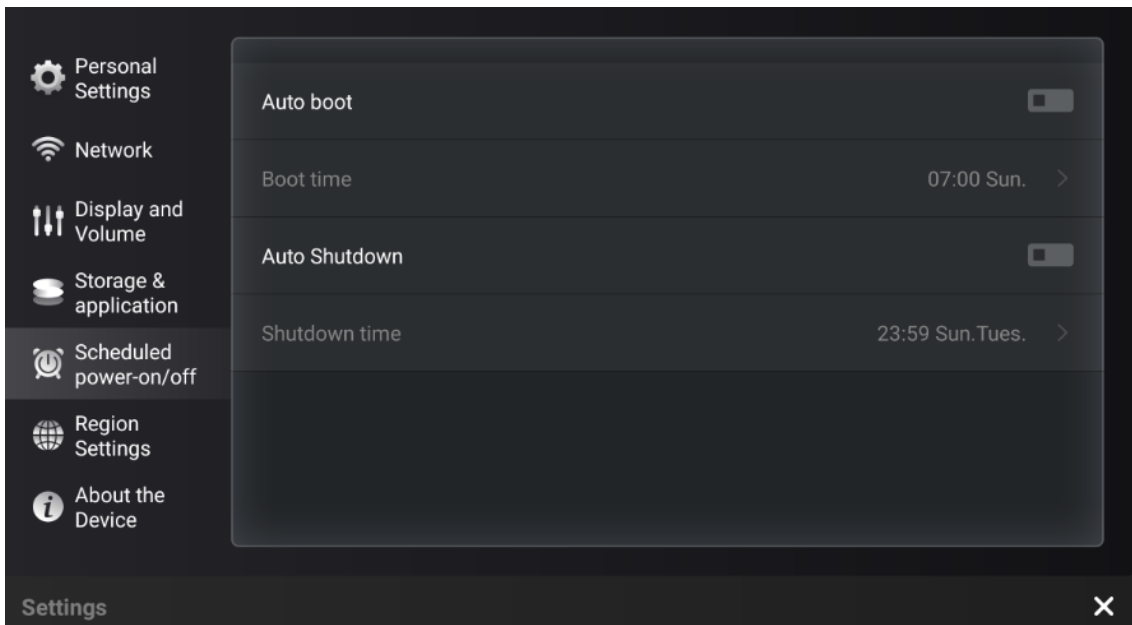
- Display and Volume
- Users can adjust the display's wallpaper, brightness and system sound.

④ System capacity



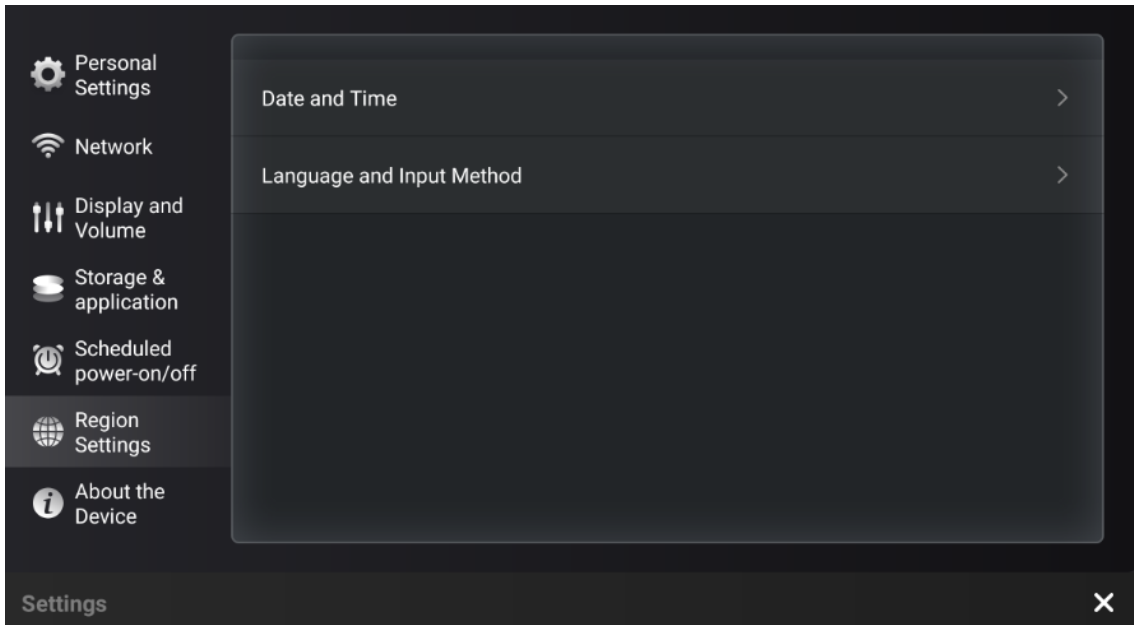
- System capacity
 - User can manage device's storage space.
 - User can check the allocation of memory.
 - User can check installed programs.

⑤ Scheduled power On / Off



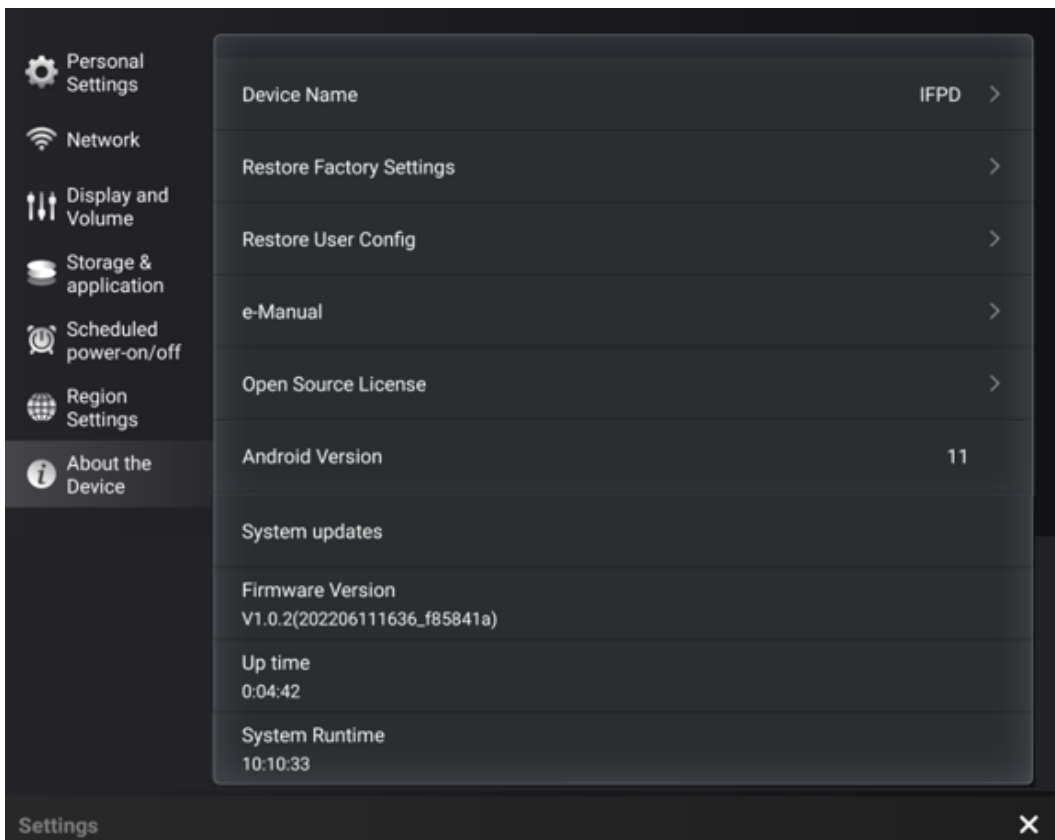
- Set power scheduling on / off
 - Users can set the time of power on and off

⑥ Region Settings



- Region Settings
 - User can set country, region, time, date and etc.
 - User can set the language input method.
 - Set the keyboard used by the product.

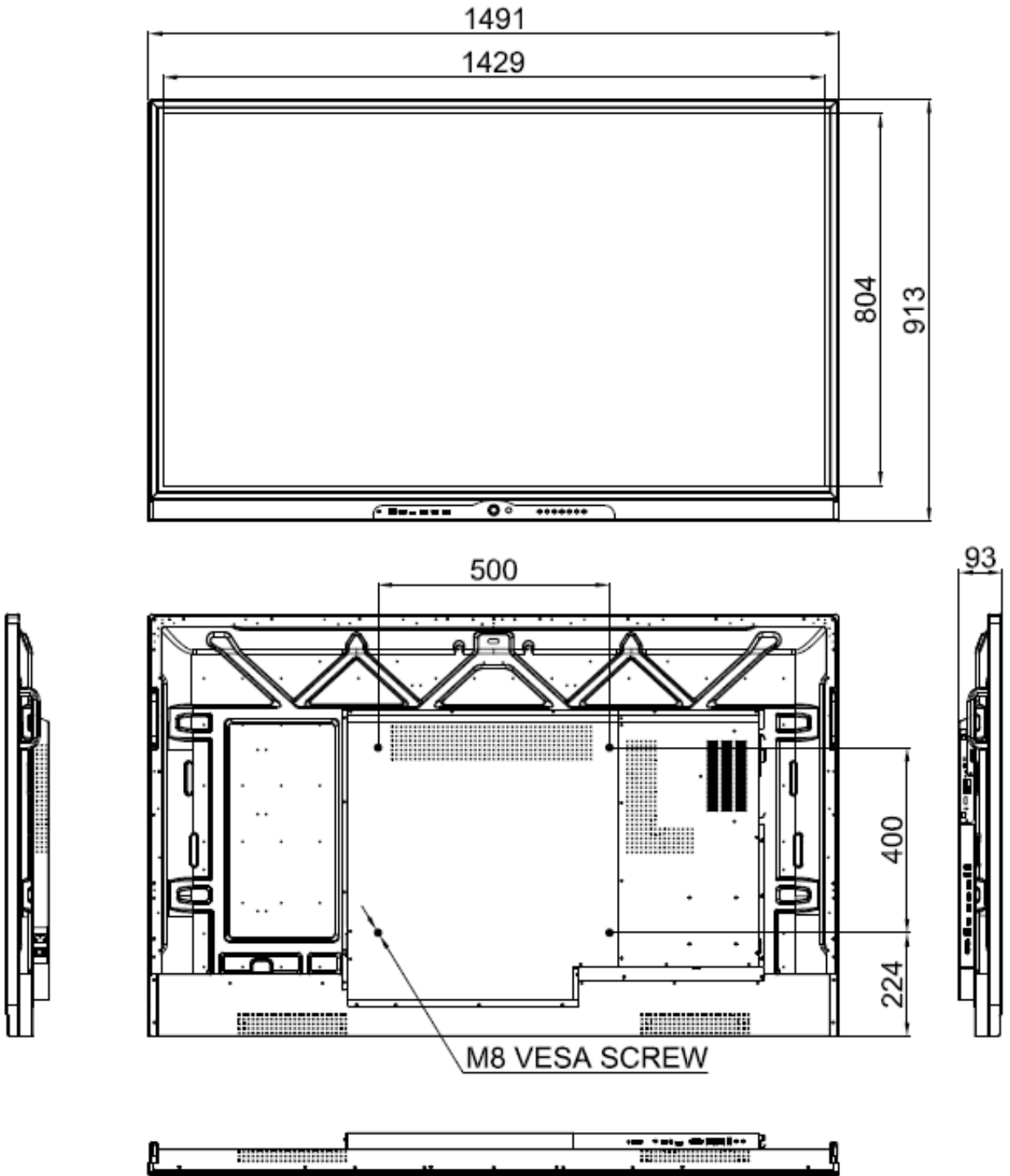
⑦ About the device



- About the device
 - Show system information of the OS and other devices program.

7. Product dimensions

7.1 65"



8. Product specification

8.1 65 Inch

LED Display	
Diagonal Size	65 Inch
Resolution	3840×2160
Brightness	410cd/m ² (Typ.)
Contrast	1300:1 (Typ.)
Glass	4T / Anti Glare + Anti Finger

Touch System	
Touch Technology	IR (USIR-Ultra Slim Infrared Ray)
Touch Point	Max 20 Points (Windows, Android)
	1 Point (Mac, Linux, Chrome OS Single Point Support)
Response Speed	<10 ms (1 Point By Point)
Accuracy	± 1 mm
Operating OS	Windows 10 or higher / Android / Mac / Linux / Chrome

Android System	
Android Version	Android 11.0
CPU	A73*4
RAM	5GB or 8GB
ROM	32GB or 128GB

I/O Port	
Front (Input)	USB-B(Touch) x 1, HDMI x 1, USB-C(DP Alt Mode) x 1, USB-A(3.0) x 3
Rear (Input & Output)	MIC x 1, VGA x 1, VGA Audio x 1, AV x 1, HDMI x 3, DP x 1
	USB-A(3.0) x 2, USB-B(Touch) x 1, USB-A(2.0) x 1, CAM USB-A(2.0) x 1
	HDMI Out x 1, Audio Out x 1, S/PDIF x 1
Communication Port	RS232 x 1, LAN x 2

Power	
Speaker	16W x 2
Power Consumption	≤ 230W
Standby Power	≤ 0.5W

Other	
Dimension (WxHxD)	1491(W) x 913(H) x 93(D) mm
VESA Mount	400 x 400 (mm), M8 Screw
Net Weight	41 Kg (Typ.)
Gross Weight	50 Kg (Typ.)

9. Troubleshooting

9.1. Product self-diagnosis

You can check if the product is working properly using the self-diagnosis function. If a blank screen is displayed and the Power LED blinks even if the product and the PC are properly connected, perform the self-diagnosis function according to the procedures below.

1. Turn the product and the PC off.
2. Remove the cable from the product.
3. Turn the product on.
4. If the product is working properly, the <Check Signal Cable> message appears.
In this case, if a blank screen is displayed again, make sure that there is no problem with the PC and the connector.

9.2 Before requesting service

Please check the following before requesting After-Sales service.
If the problem continues, please contact your nearest Service Center.

1) Problems related to screen

1. Screen is blank and power indicator is off.
 - Ensure that the power cord is firmly connected and the monitor is on.
2. <Video media error format unsupported> Message.
 - Check the maximum resolution and the frequency of the video adapter.
 - Compare these values with the data in the Standard Signal Mode Table.
3. Picture rolls vertically.
 - Check if the signal cable is securely connected. Connect it again securely.
4. Image is not clear. Picture is blurred.
 - Run frequency <Coarse> and <Fine> tuning.
 - Turn on again after removing all accessories (video extension cable, etc.) Set resolution and frequency to the recommended ranges.
5. The image is too light or too dark.
 - Adjust the <Brightness> and <Contrast>.
6. Screen is blank and the power indicator light blinks every 0.5 or 1 seconds.
 - The monitor is using its power management system. Press a key on the keyboard.

2) Problems related to audio

1. No sound
 - Ensure that the audio cable is firmly connected to both the audio-in port on your monitor and the audio-out port on your sound card.
2. The sound level is too low.
 - Check the volume level. If the volume is still too low after turning the control to its maximum, check the volume control on the computer sound card or software program.

3) Problems related to remote control

1. The remote control buttons do not respond.
 - Check the battery polarities (+/-).
 - Check if the batteries have been exhausted.
 - Check if the power is blackout.
 - Check if the power cord is securely connected.
 - Check if a special fluorescent or neon lamp is on in the vicinity.