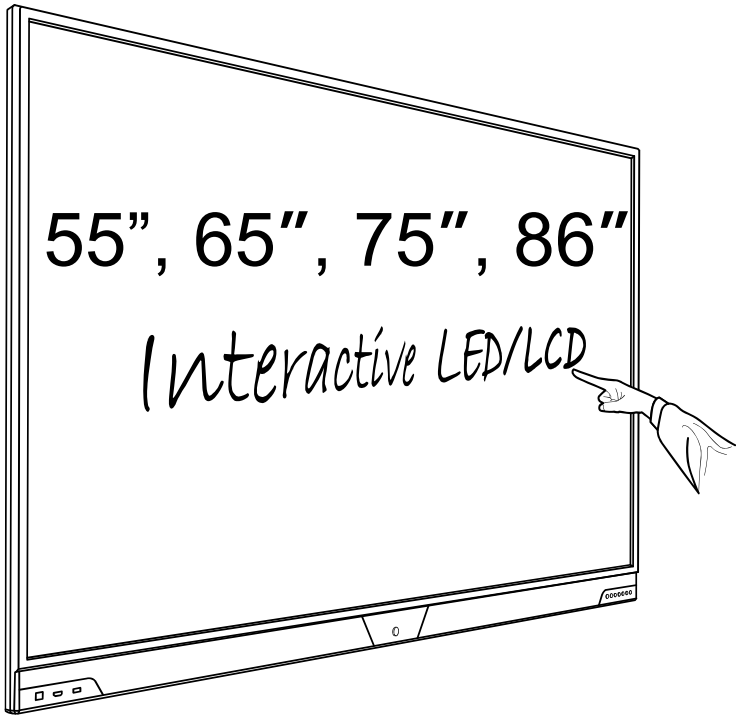
HITACHI
Inspire the Next

User Manual



Model:
HILS55205, HILS65205,
HILS75205, HILS86205
Interactive Flat Panel Display

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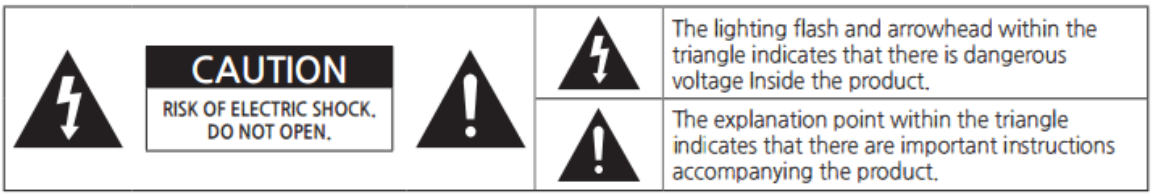
1. Important Safety instructions

[SAFETY 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.

◆ Icons used in this manual



[WARNING] means,

If you ignore the warning message, you may be seriously injured or there is a possibility of accident or death.

[CAUTION] means,

If you ignore the caution message, you may be slightly injured or the product may be damaged.

[NOTE] means,

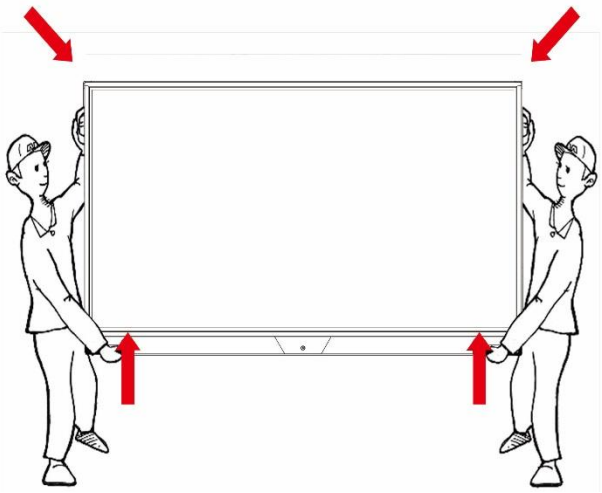
The note helps you understand and use the product safely. Please read the note carefully before using the product

◆ This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance with the FCC Rules could void the user's authority to operate this equipment.

◆ When moving the product, please grab the handles behind and the bottom of the product as shown below picture.

- The product must keep horizontal and upright position when moving.
- Do not hold the corner of the product when you grab the bottom of the product.



[Recycling Policy]

(For USA)

Dispose of this product in accordance with applicable environmental laws. For product recycling and disposal information, contact your local government agency or www.eRecycle.org (in California), the TIA at www.ecyclingcentral.com (in the US) or the Electronic Product Stewardship Canada at www.epsc.ca (in Canada). For more information, call 800.HITACHI.

1.1 SAFETY PRECAUTION

Note) The color and design may different by each model and the product specification are subject to change without notice for performance enhancement.

1.1.1 Power

[Warning]

- Do not use damaged power cord, plug nor loose socket. It may cause electric shock or fire.
- Do not connect multiple devices into a single s socket. It may cause fire due to overheating.
- Do not touch with wet hands when remove or plug the power cord to avoid electric shock.
- Insert the power plug into socket firmly. It may cause fire when the connectors are unstable.
- Connect the power cord to a grounded wall socket. There is risk of electric shock or injury.
- Do not bend nor pull the power cord and place heavy objects over the power cord. It may occur cord damage and this may result in fire.
- Please clean only with dry cloth when the plug pin or socket are dusty. It may cause fire.

[Caution]

- Do not unplug the power plug while the product is operating. It may damage the product due to electric shock.
- Only a power cord specified by product manufacturer are recommended.
  Do not use the power cord from other devices. It may cause electric shock or fire.
- Hold the plug itself when unplugging the power plug from the wall socket. If not, there is risk of electric shock or fire.
- Before moving or installing this product, be sure to turn off the power and disconnect the power cord. To turn this product off completely, you must pull the power plug out of the wall socket. Consequently, the power plug must be easily and readily accessible at all times.

1.1.2 Installation

[Warning]

- Do not install near any heat sources such as radiators, or other devices that produce heat. It may cause electric shock or fire.
- When mounting a product on the wall, make sure not to install the product by hanging the power and signal cables on the back of it.
- Consult with your local dealer or specialized engineer to mount the product on the wall, and use the screws and wall mounts that meet the VESA standard. Any damages or injuries by misuse or using an improper accessory are not covered by the warranty.

- Leave a 10 cm (4 inches) (minimum) space from the wall for proper ventilation. If not, it may cause fire.
- Keep the packing anti-moisture material or vinyl packing out of the reach of children. Anti-moisture material is harmful if swallowed. If swallowed by mistake, force the patient to vomit and visit the nearest hospital. Additionally, vinyl packing can cause suffocation. Keep it out of the reach of children.
- Please note than the product must be supported on proper stands or installed according to the manufacturer's recommendations. The product that are inappropriately situated on unstable shelves, inclined planes, or vibrating places, etc., may fall over, resulting in injury.
- To reduce the risk of fire or electrical shock, do not expose this product to rain, moisture or other liquids or dust. It may cause electric shock or fire.
- Keep the product away from direct sunlight.
- Keep the product of the reach of children and install on the stable and flat place. NEVER allow children to climb on or play on the product or the furniture and stands on which the product is placed.

[Caution]

- Do not allow an impact shock or any objects to fall into the product, and do not drop anything onto the screen.
- Make sure the product is turned off, unplugged, and all cables have been removed. It may take more than 4 people to than carry.
- Do not press or put stress on the front panel of the product.
- If the product is installed in a place where the operating conditions considerably, a serious quality problem may occur due to the surrounding environment. In this case, install the product only after consulting our dealer about the matter. (Places exposed to microscopic dust, chemicals, too high or low temperature, high humidity, airports or stations where the product is continuously used.)

1.1.3 Cleaning

[Warning]

- Before cleaning the product, unplug the power cord and wipe gently with a soft cloth to prevent scratching.
- Do not spray water or other liquids directly on the product as electric shock may occur.

[Caution]

- Do not push, rub, or hit the surface with your fingernail or a sharp object, as this may result in scratches on the screen and image distortions.

- Do not use any chemicals, such as waxes, benzene, alcohol, thinners, insecticides, air fresheners, or lubricants, as these may damage the screen's finish and cause discoloration.
- Do not spray liquid onto the surface. If water enters the product, it may result in fire, electric shock, or malfunction.

1.1.4 General Usage

[Warning]

- To reduce the risk of electric shock, do not open the cover or back. No user serviceable parts inside. Refer to qualified service personnel.
- Before moving or lifting the product, disconnect the power cord and all cables.
- The route cords and cables connected to the product so that they cannot be tripped over, pulled or grabbed.
- Do not stick metal objects or any other conductive material into the power cord. Do not touch the end of the power cord while it is plugged in. It may result in fire, electric shock.
- Unplug this product during lightning storms or when unused for long periods of time.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- To reduce the risk of fire or electrical shock, do not expose this product to rain, moisture or other liquids. Do not touch the product with wet hands. Do not install this product near flammable objects such as gasoline or candles, or expose to direct air conditioning.
- NEVER allow children to climb on or play on the product or the furniture on which it is placed. It may cause severe injury to children.
- Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the product. When a cart is used, be careful when moving the cart/product combination to avoid injury from tip-over.
- Install where it cannot be pushed, pulled over or knocked down.
- It is recommended to move the product in the box or packing material that originally came in.
- When holding the product, the screen should face away from you to avoid damage.

[Caution]

- If a fixed image displays on the screen for a long period of time, it will be imprinted and become a permanent disfigurement on the screen. This is image burn or burn-in and not covered by the warranty.
- Avoid displaying a fixed image on the screen for a long period of time (2 or more hours for LCD) to prevent image burn. Recommend to power off or set the screen saver mode when not in use.
- When watching the screen, take 5 to 15 minute breaks every hour. Viewing screen for a long period of time may cause fatigue or eye strain.

- Take care not to touch the ventilation openings. When watching the screen for a long period, the ventilation openings may become hot. This does not affect the performance of the product or cause defects in the product.
- Do not install this product on a wall if it could be exposed to oil or oil mist. This may damage the product and cause it to fall.
- To install batteries in remote control, open the battery cover, replace batteries matching (+) and (-) ends to the label inside the compartment, and close the battery cover. Failure to match the correct polarities of the battery may cause the battery to burst or leak, resulting in fire, personal injury, or ambient pollution.
- To prevent to swallow the small accessories for children, keep the accessories out of the reach of children.

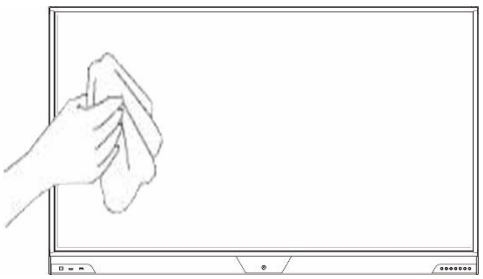
  - ❖ The product must keep horizontal and upright position when moving. Hold the top and bottom of the frame firmly. Handles are only for the supporting purpose.
  - ❖ When attaching the stand to the set, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches by more than 2 people,
  - ❖ Make sure that the screws are fastened tightly. (If they are not fastened securely enough, it may tilt forward after being installed.)

1.2 MAINTENANCE

1.2.1 Cleaning

[Warning]

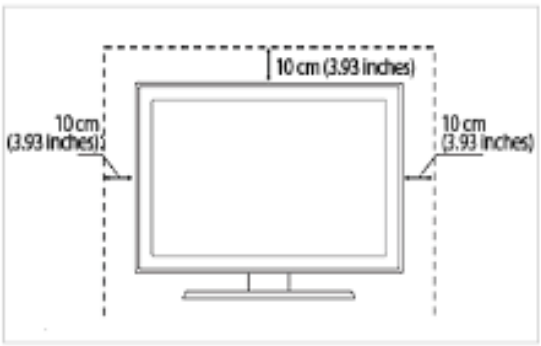
- When cleaning, unplug the power cord and wipe gently with a soft dry cloth to prevent scratching.
- Do not spray water or other liquids directly on the screen as electric shock may occur.
- Do not clean with chemicals such as alcohol, thinners, or benzene.



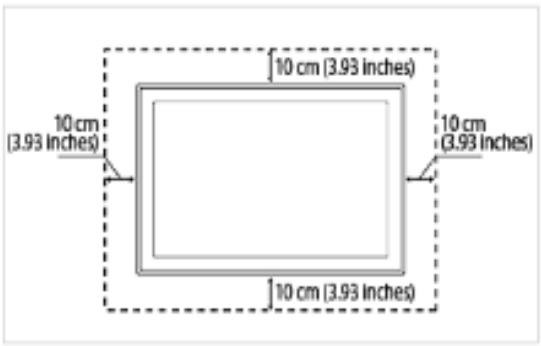
1.2.2 Installation

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

[When attaching the stand]



[When mounting on a wall]



1.2.3 Panel

- Avoid displaying a fixed image on the screen for a long period of time (2 or more hours for LCD) to prevent image burn. Recommend to power off or set the power saving mode or screen saver when not in use.
- Due to technological constraints of the Panel manufacturer, the images generated by this product may appear either brighter or darker than normal by appr. 1ppm (parts per million) pixel.

  The number of sub-pixels of a panel by size: The number of Sub-Pixels = Max. Horizontal Resolution x Max. Vertical Resolution x 3.

  For example, if the maximum resolution is 1920 x 1080, the number of sub-pixels is 1920 x 1080 x 3 = 6,220,800.

  [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

◆ Check your product box for the following items. If there are any missing accessories, contact the local dealer where you purchased your product.

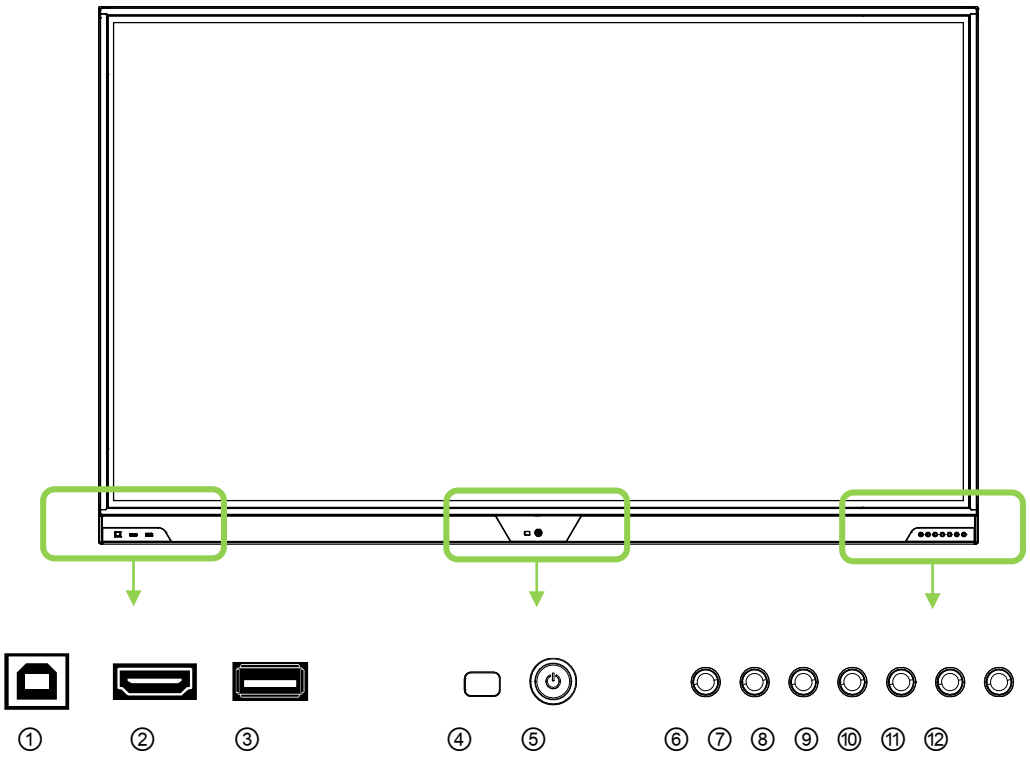
The illustrations in this manual may differ from the actual product and item.

LCD/LED Display

Accessory	User Manual	Warranty Card	
	HDMI Cable	USB Cable(for TOUCH)	Power Cable
	Remote Controller	Battery 1.5(AAA)	Pen & Pen tip

3. Product Description

3.1 Front View

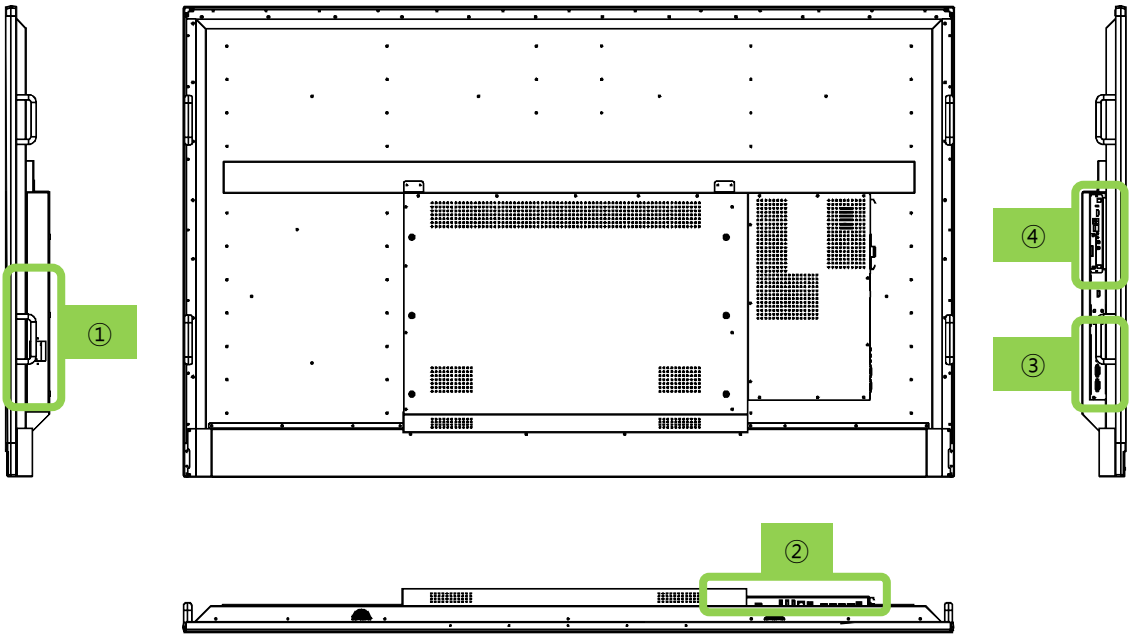


①	Touch-USB
②	Front HDMI
③	USB
④	Remote control reception
⑤	Power On/Off Switch, Power indicator (On : Blue, Off : Red)
⑥	SOURCE
⑦	MENU
⑧	VOL –
⑨	VOL +
⑩	◁(Left)
⑪	▷(Right)
⑫	Touch ON/OFF

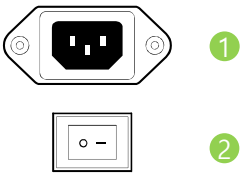
Important Notice

◆ The USB cable (3m) that we provide with this accessory box is for the Touch USB at the back. Therefore, in case of connecting the USB cable to Touch USB port in front, separate USB cable is required and the length of cable is strongly recommended to be less than 3m to make sure the signal intensity of touch sensor works properly.

3.2 Rear View

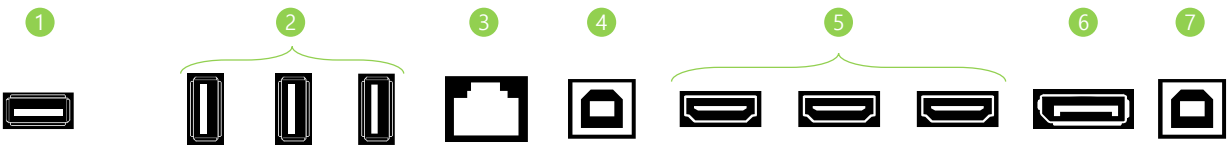


① Power Control and AC IN



1	AC IN 100V~240V 50/60Hz
2	ON / OFF Switch (I : ON, O : OFF)

② Rear Panel Connectors



1	Camera USB (Common USB)
2	USB (PC-less Only)
3	LAN (Ethernet & Serial communication)
4	Touch USB (HDMI 1, 2, 3)

5	HDMI Input 2.0 X 3
6	Display Port (DP)
7	Touch USB (DP, VGA)

③ Rear Panel Connectors

1	HDMI Output
2	Audio Output (Earphone)
3	MIC Input
4	VGA audio input
5	VGA input
6	RS232C(Serial communication)

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) HDMI/Display Port Connector

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	DisplayPort Input – PC/ LAPTOP connect to the DisplayPort cable

2) VGA Connector

In case of transmission 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 Connector

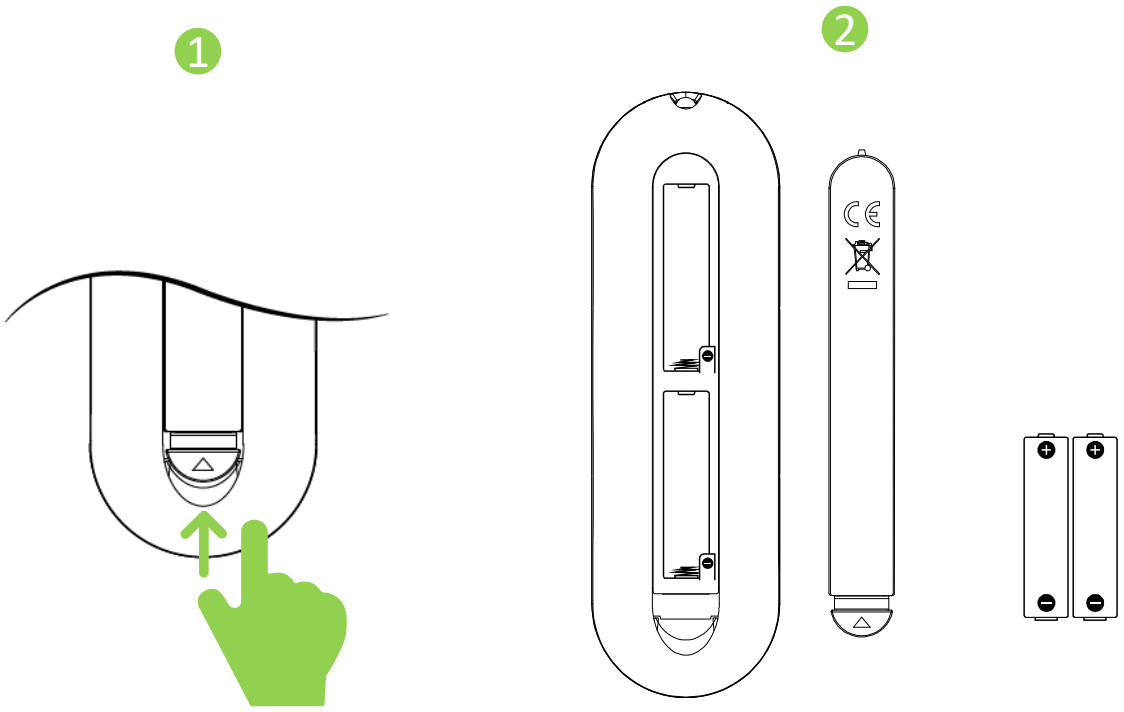
Do not connect touch USB cable to the port. Touch cable is already connected by internal OPS docking board.

4. Remote Controller

Key name	Description
⏻/I	Power ON/OFF
🔇	Mute
⎆	Activates OSD menu of input source selecting. Navigates input source downwards.
FREEZE	Allows you to capture and freeze an image from a moving image that you are watching.
HDMI	HDMI Input select Front HDMI →HDMI1→HDMI2→HDMI3
DP	DISPLAY PORT
ECO	Adjust screen bright (3 steps)
OPS	OPS PC select
VGA	VGA input select
DICOM	DICOM On / OFF
MIRROR	Mirroring with Eshare
EYE	Eye Protection On /Off
MENU	Activates main OSD menu.
EXIT	Closes main OSD menu.
INFO	Shows the current external input.
▲ ◀ ▼ ▶	Press these to adjust or select TV menu, or select APP under PC-less system
OK	Select the highlighted menu option.
PSM	Standard/Soft/Bright
SSM	Standard/Light ton/Bass
VOL +	Volume Up
VOL -	Volume Down
⏮	Press this key to go to the previous chapter or song
▶	Press this key to start to pause the playback in media and PC-less
■	Press this key to stop back
⏭	Press this key to go to the next chapter or song
	Activates Floating Menu
	Activates Home Screen
	TOUCH ON/OFF

4.1 How to insert battery

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



BATTERY PRECAUTIONS

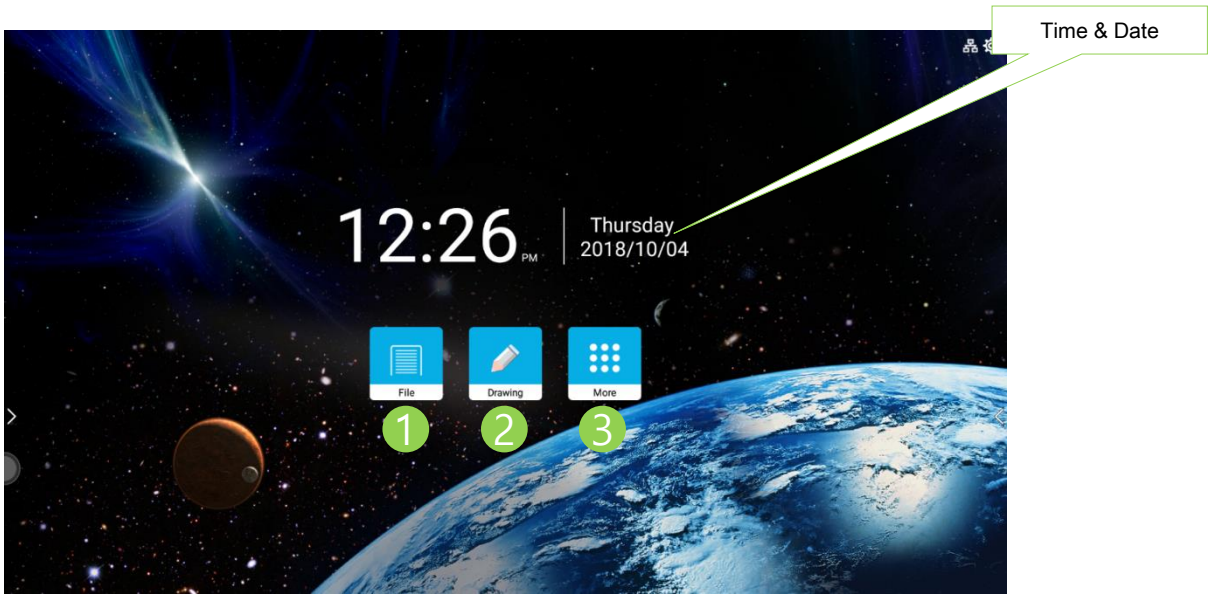
These precautions should be followed when using batteries in this device:

- The batteries may last approximately one year depending on how much the remote control is used. Replace batteries when the remote operation becomes erratic.
- Use only the size and type of batteries specified.
- Be sure to follow the correct polarity when installing the batteries as indicated in the battery compartment. Reversed batteries may cause damage to the device.
- Do not mix different types of batteries together (e.g. Alkaline, Carbon-zinc or Rechargeable) or old batteries with fresh ones.
- If the device is not to be used for a long period of time, remove the batteries to prevent damage or injury from possible battery leakage.
- Do not try to recharge batteries not intended to be recharged; they can overheat and rupture. (Follow battery manufacturer's directions.)
- Please use caution when inserting batteries to avoid battery damage. If the spring terminal in the remote control remains in contact with a side of a damaged battery it can cause a short circuit. Never 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

In the home screen, you can see the following buttons:



① **File Manager**
Run, move, copy or delete folders and files.

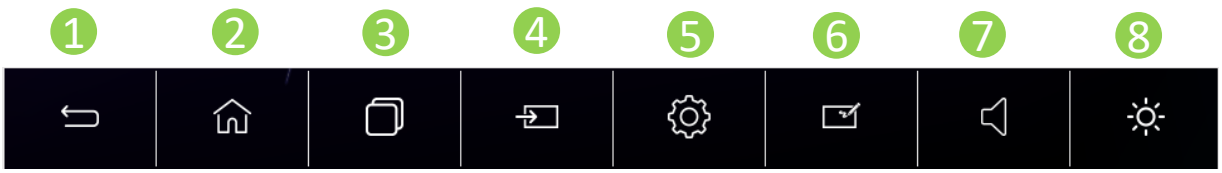
② **Drawing**
Select the button to use the Drawing, writing application equipped on Interactive flat panel display.

③ **More**
Users can choose more other applications, including multimedia player, system setup, WPS, Internet, camera, welcome AD, calculator, etc

5.2 Navigation Bar

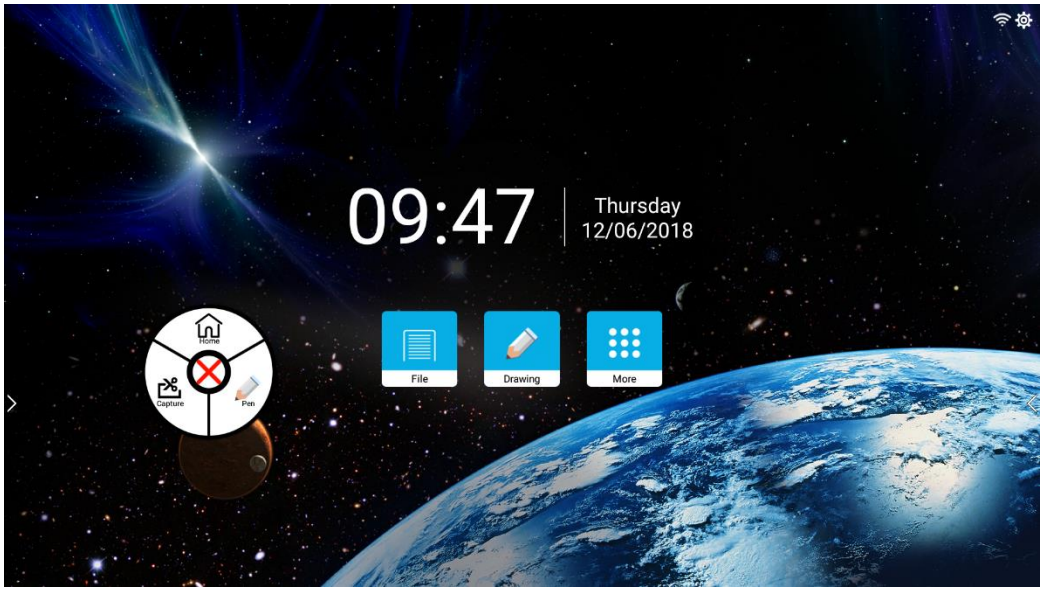
A navigation bar is created when the screen is sweep up from bottom to up or by touching the arrows on both edges with your finger.

5.2 Navigation Bar Overview

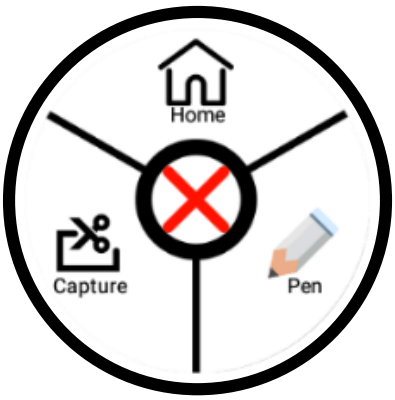


Navigation Bar UI	Description
Backward	Move to the previous screen step.
Home	Go to the home screen.
Manage	Switch and clear the program
Source	Call the external input window.
Setting	Go to the Setup
Whiteboard	Can be written on the system interface
Volume	Adjust the volume
Brightness	Adjust the brightness.

5.3 Floating Annotation



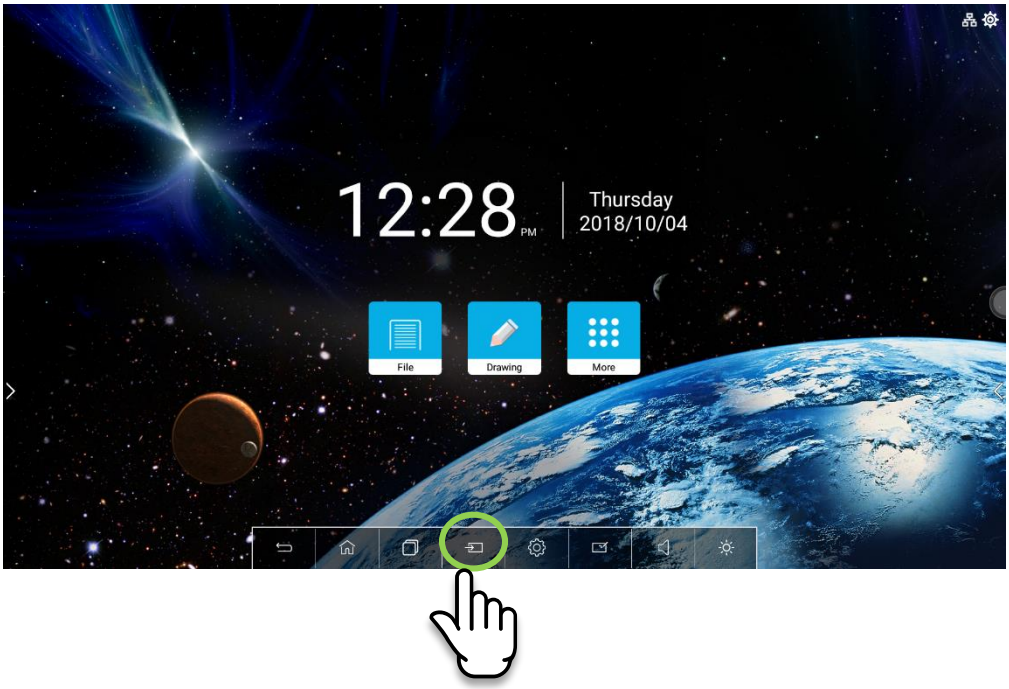
5.3.1 Floating Annotation overview

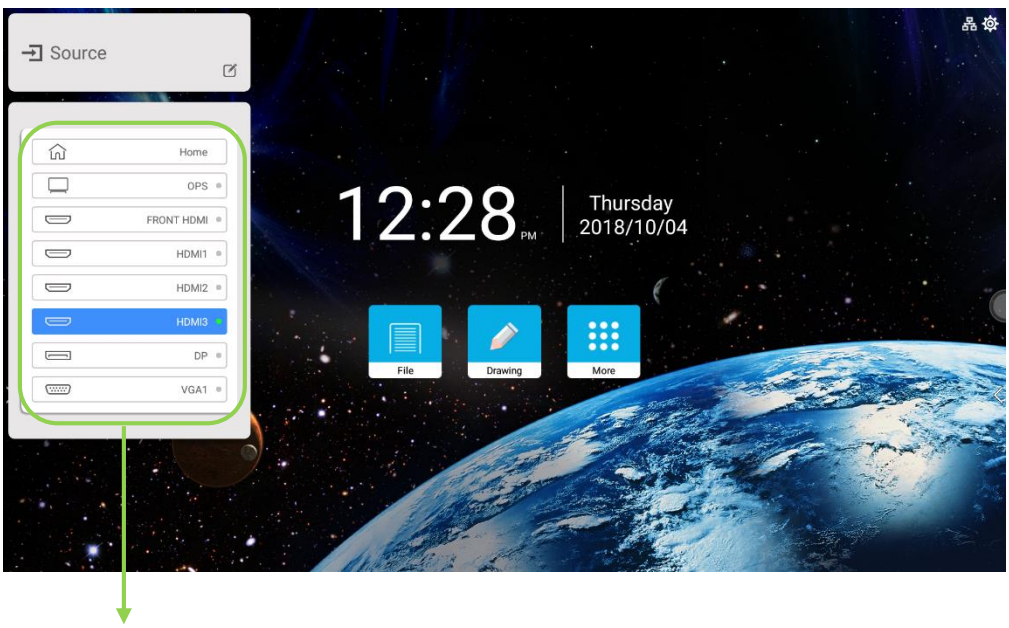


Icon	Name	Description
	Home	Return to the main interface
	Capture	Screen Capture (Make .bmp file)
	Pen	Switch to Pen Menu
	Exit	Close Annotation

5.4 External Source

Select External Source.

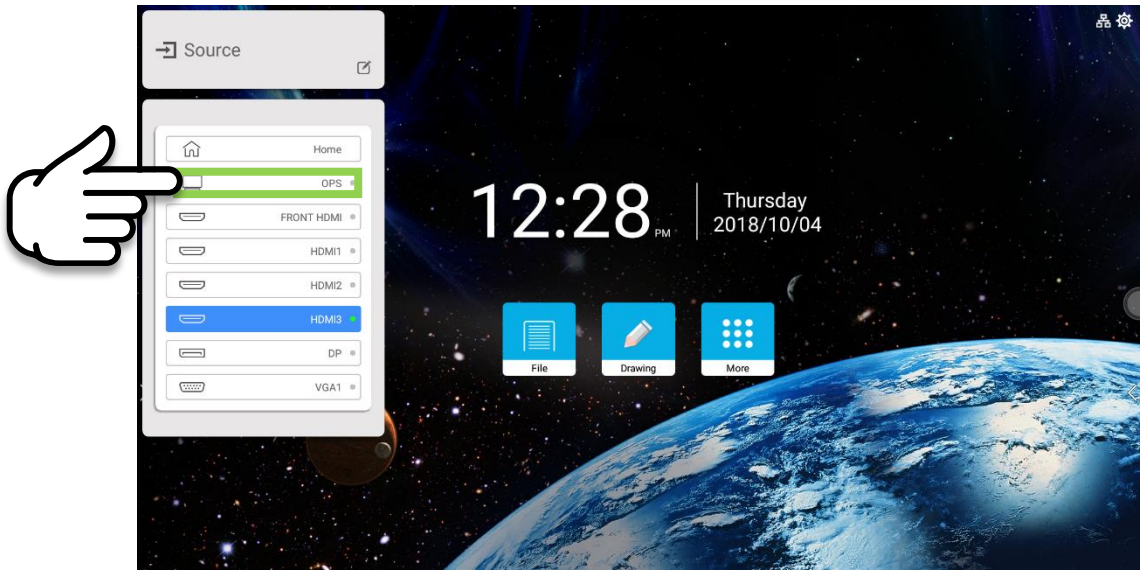


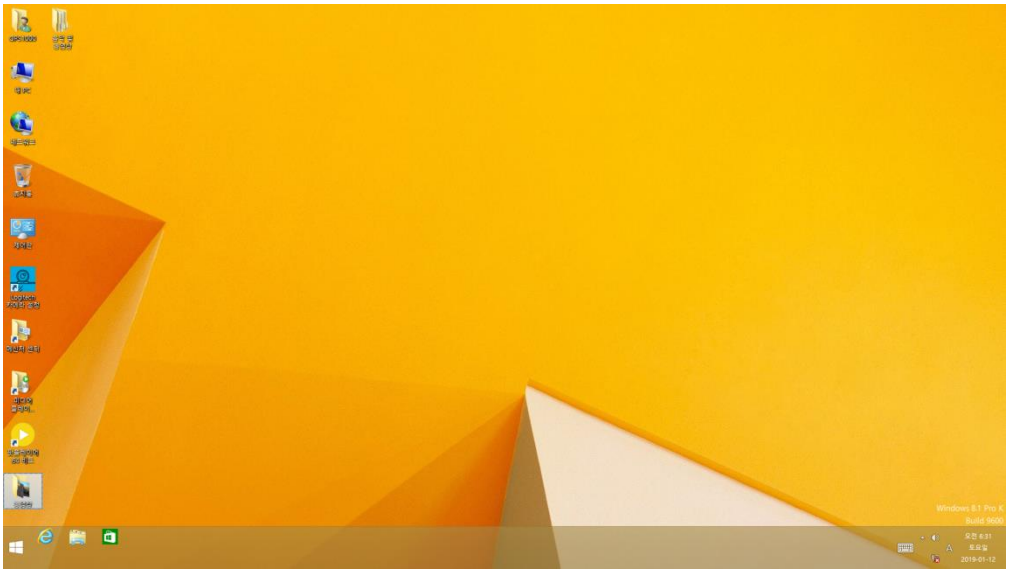


The green light cones on when the connection with the external device is successful.
On the corresponding external input screen, To move, touch the appropriate external input

5.4.1 OPS(Open Pluggable Specification)

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

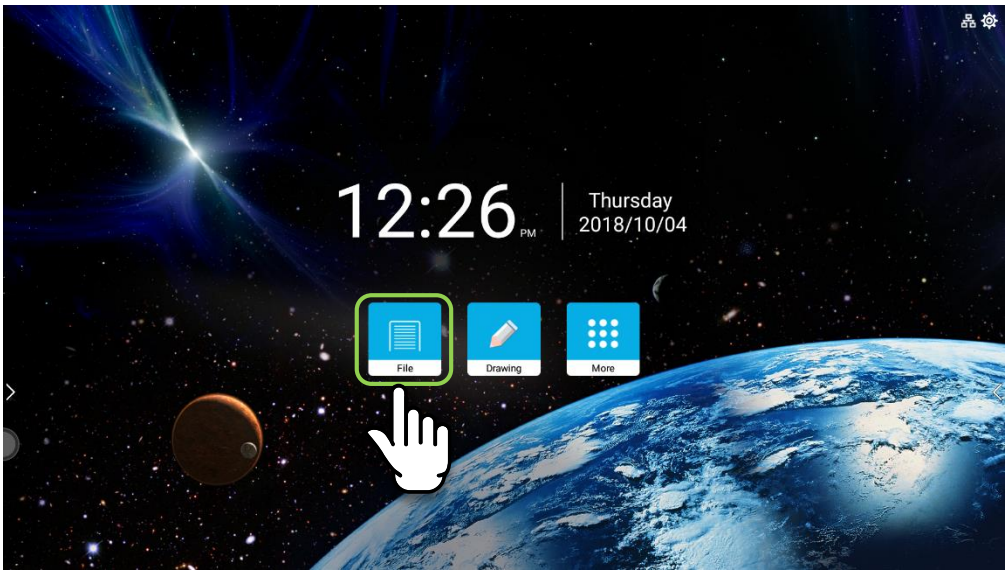




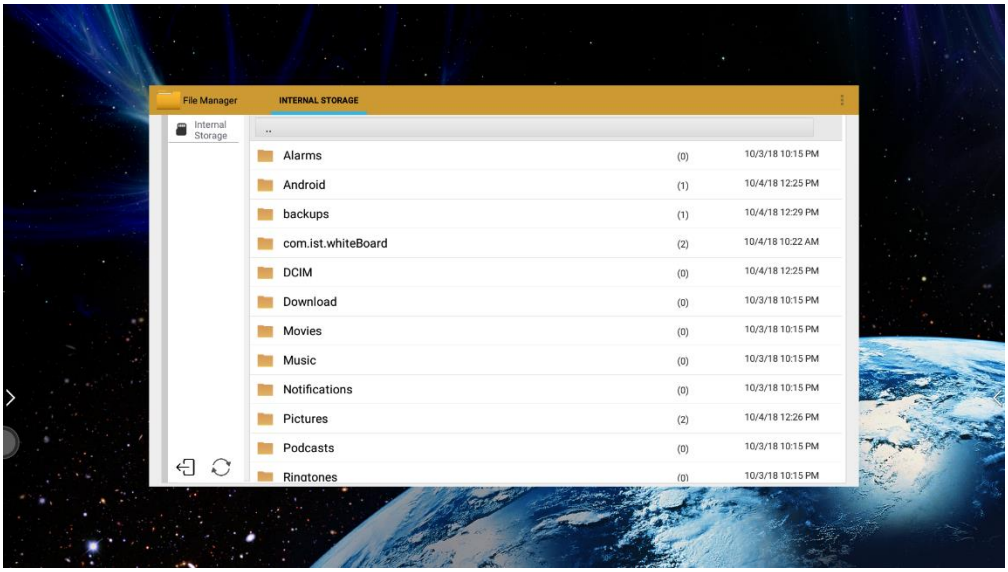
OPS Screen

5.5 File Manager

Create, open, copy, delete, and view folders and files



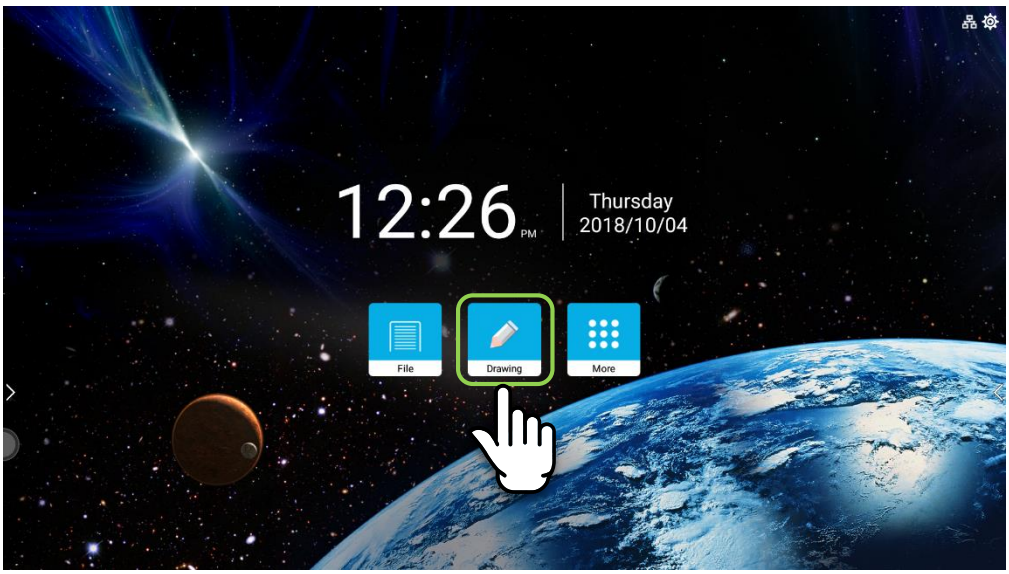
Tap



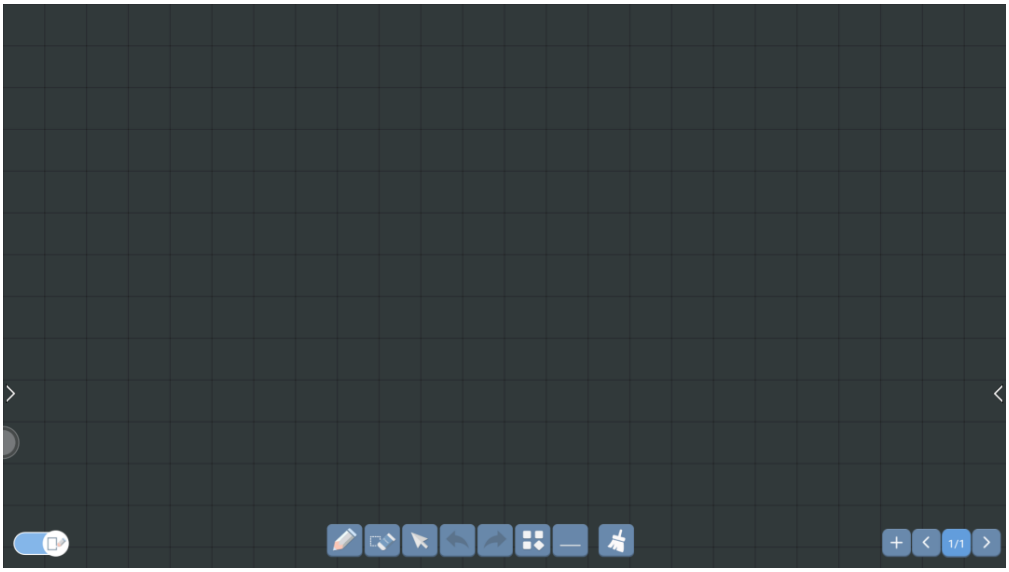
All Files

5.6 Drawing

Allows the user to write on screen. Can be used for lectures and presentations.

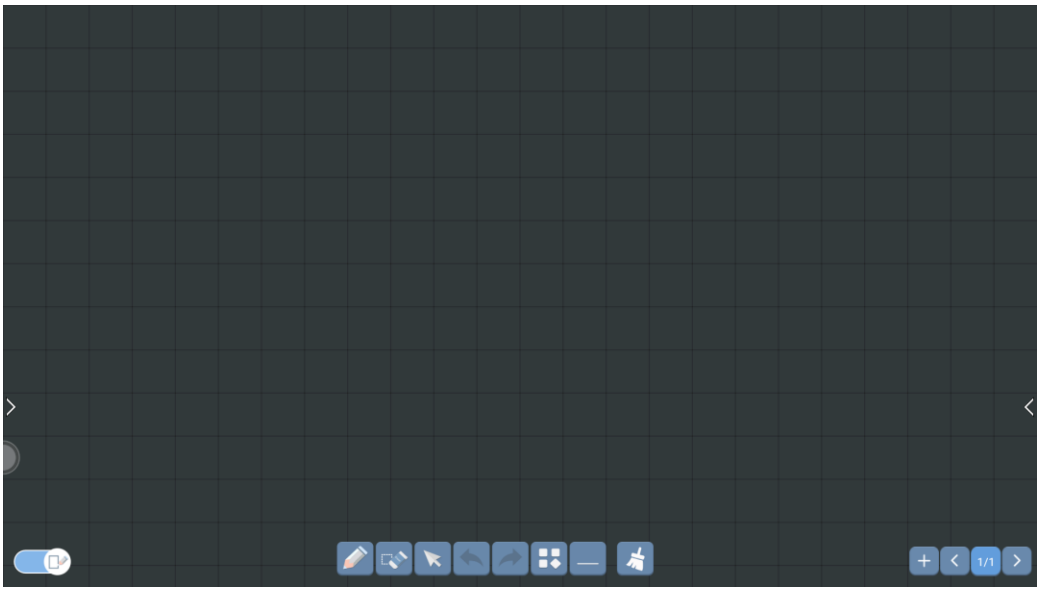


Tap



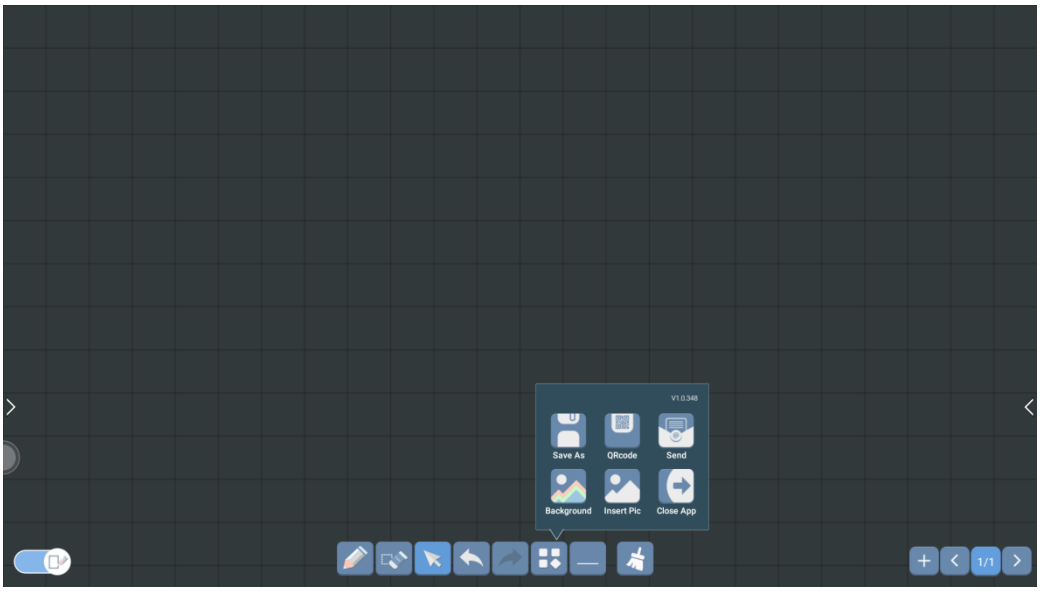
Drawing screen

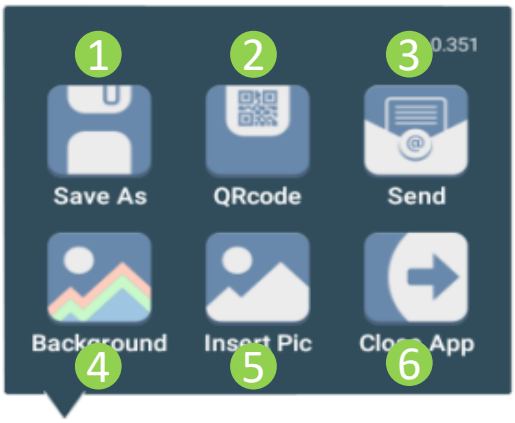
5.6.1 Icons on the main screen



Icon	Name	Description
	menu	Menu with extra options
	Pen	Pen with customizable line weight, transparency, and color
	Eraser	Erase entire page or choose precision eraser
	MinButton	Minimize the main screen
	Pointer	Selects a certain content.
	Undo	Undo the most recent action.
	Redo	Redo the most recent action.
	sweep	Clean all handwriting
	Add content	Add images saved on the device.
	Previous page	Move to the previous page.
	Next page	Move to the next page.
1/1	Page	Current page / Total page
	Background On/Off	Background On/Off function, when it's turned Off. It would writing on the most recent screen

5.6.2 Menu overview

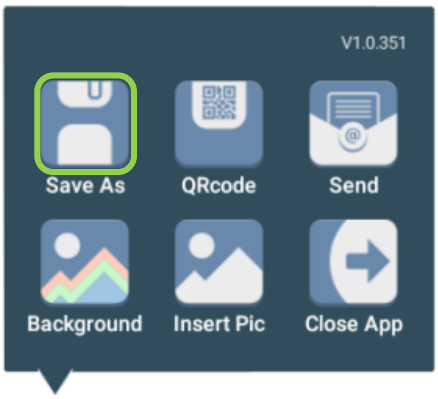


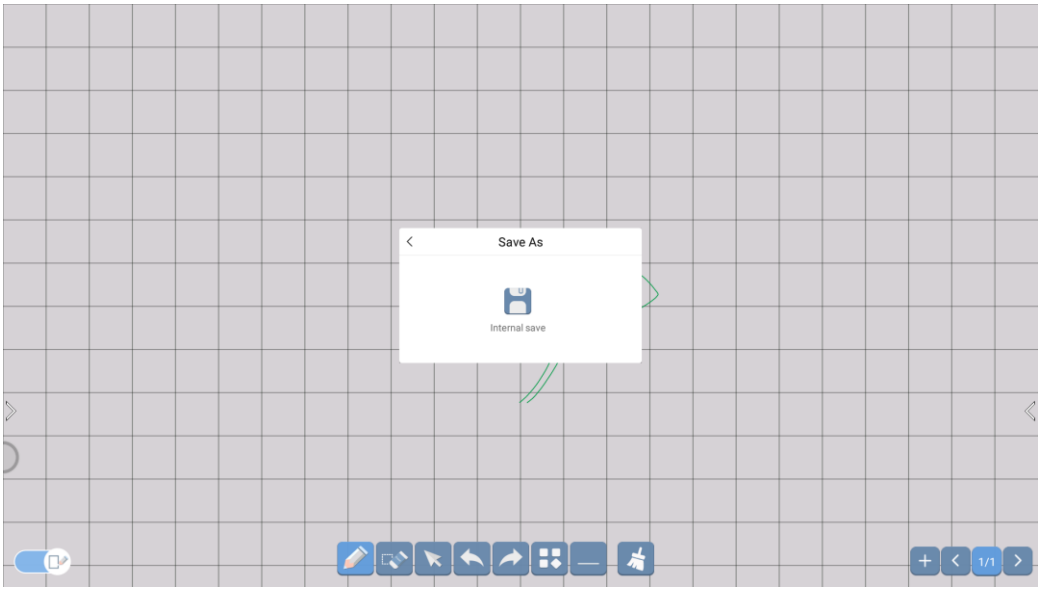


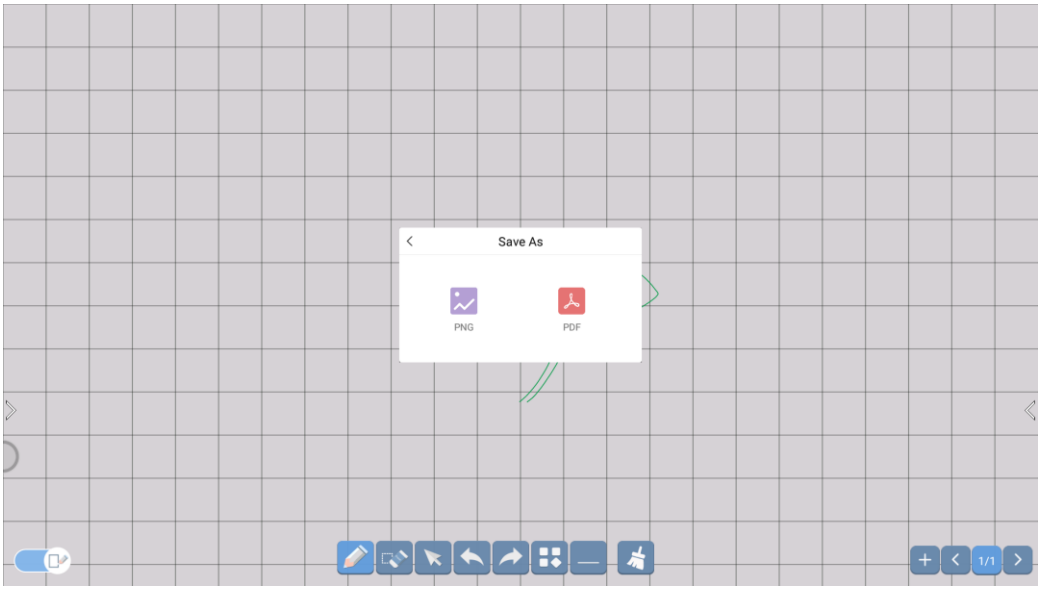
Option		Description
①	Save As	Save the content on the page. (You can customize the save path.)
②	QR code	Send the page content through the QR code
③	Mail send	Save the page and to be sent as an email
④	Background	Set the background pattern and color
⑤	Insert Pic	Insert the picture
⑥	Close APP	Close the program

① Save as

-save the contents of the page

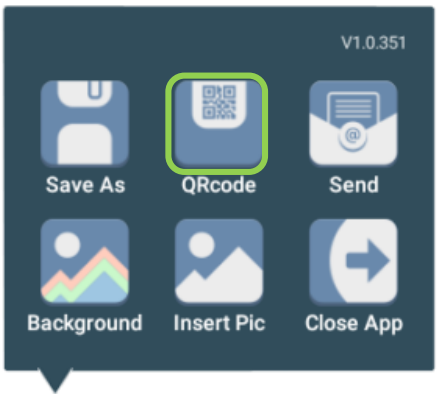


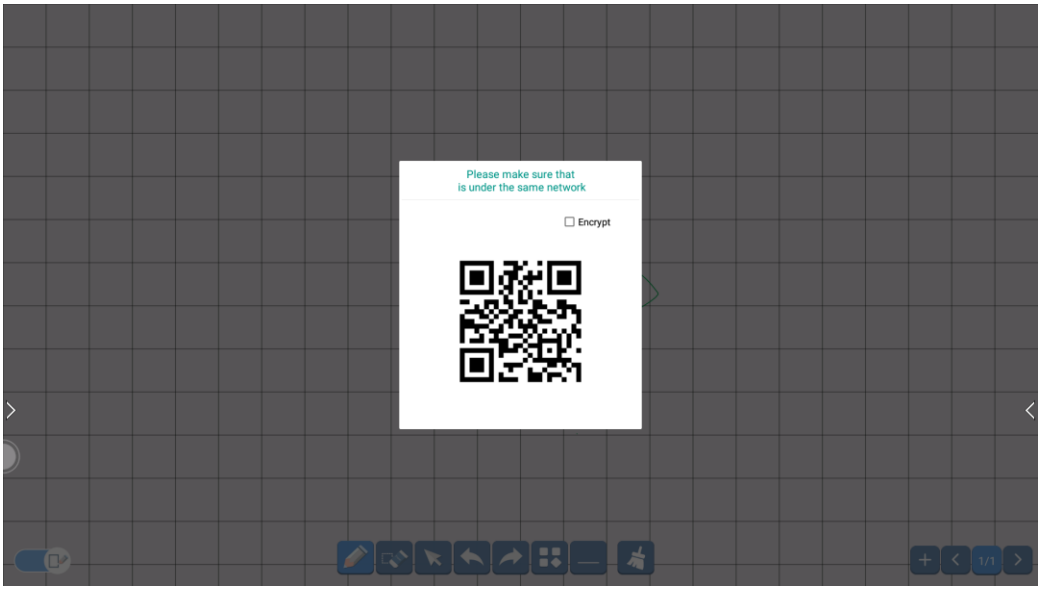




② QR code

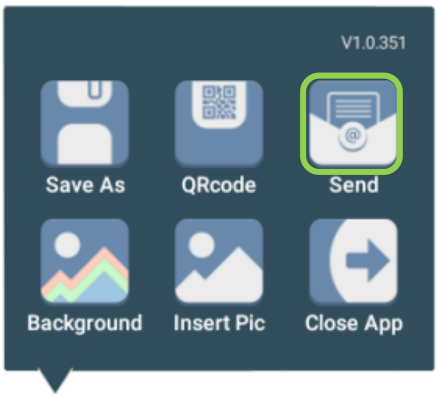
-Send page with QR code

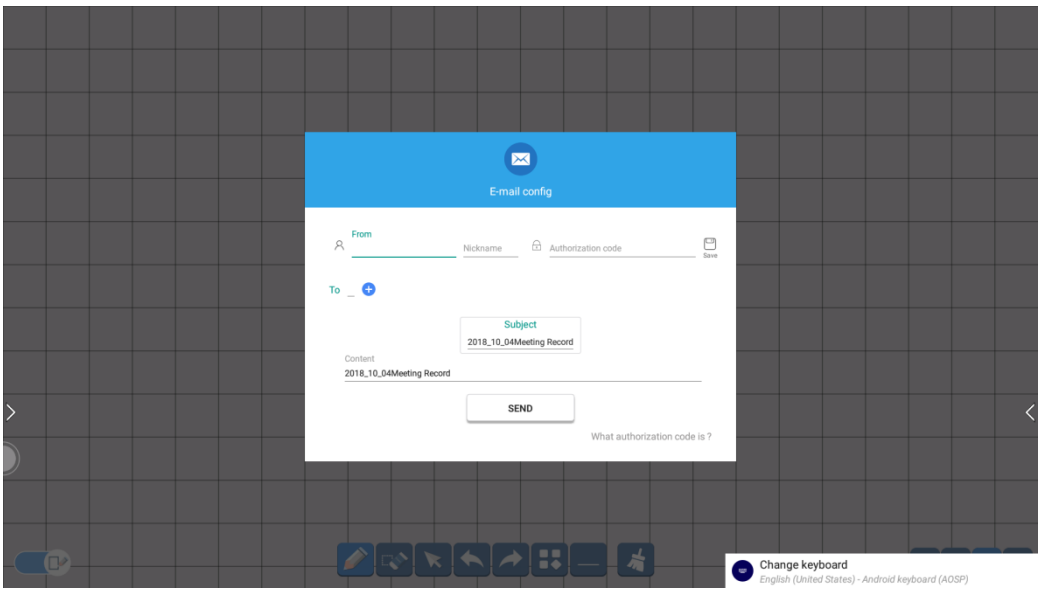




③ Send

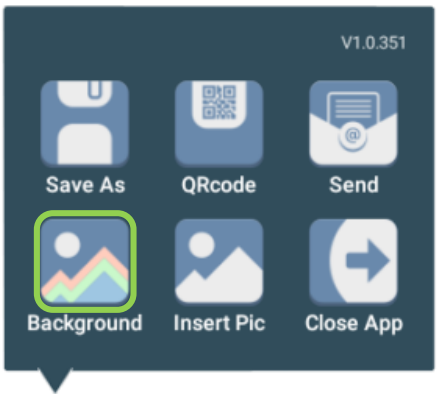
-Send E-mail

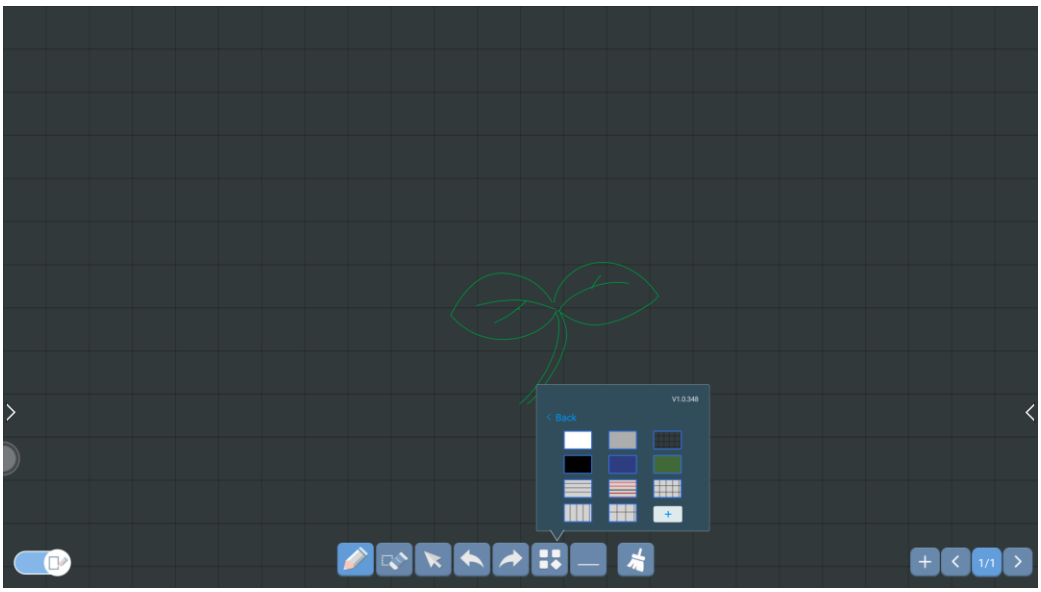




④ Background

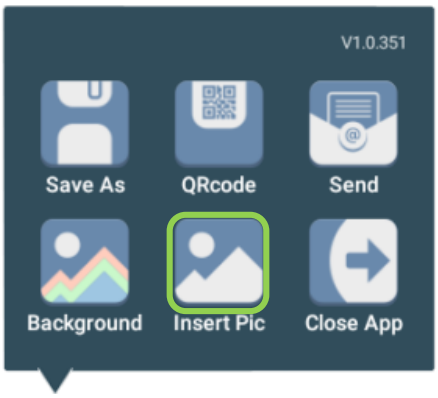
-select Background

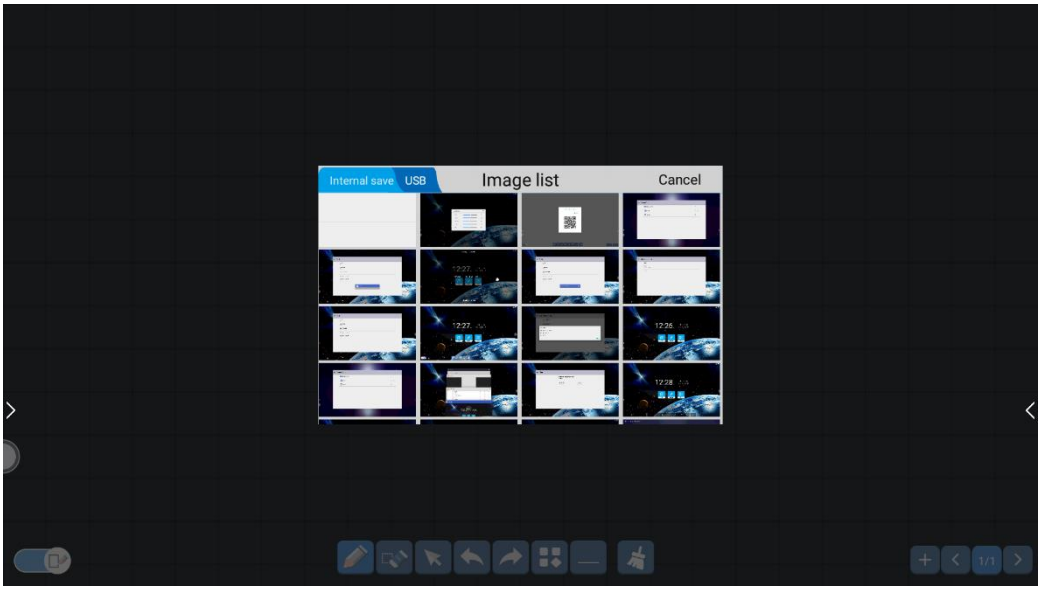




⑤ Insert Pic

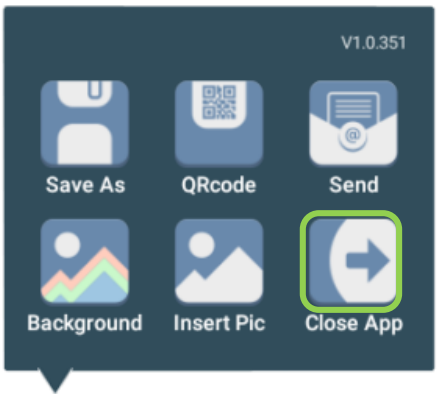
-Insert Picture

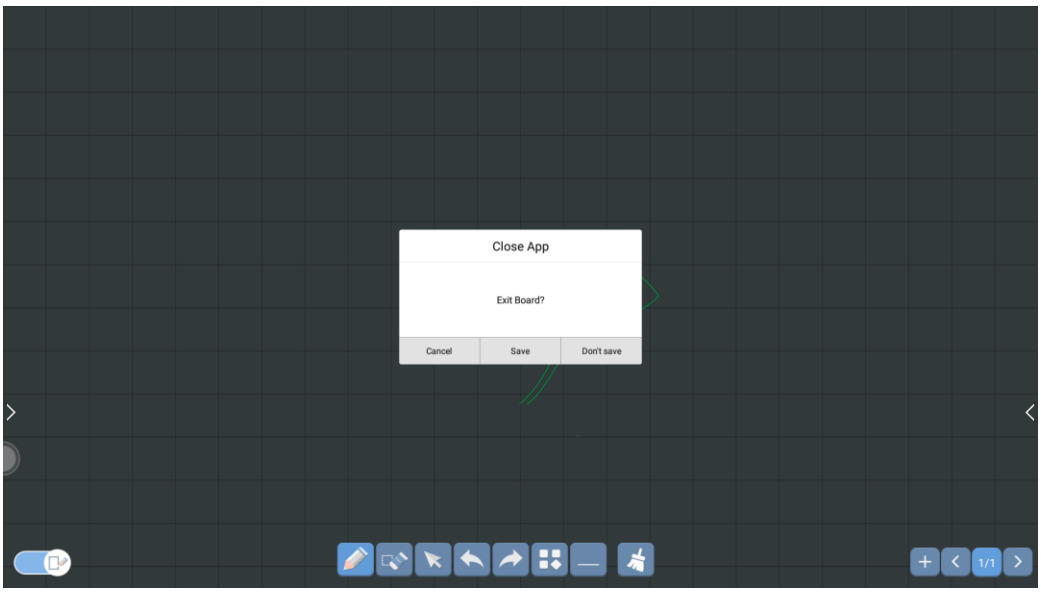




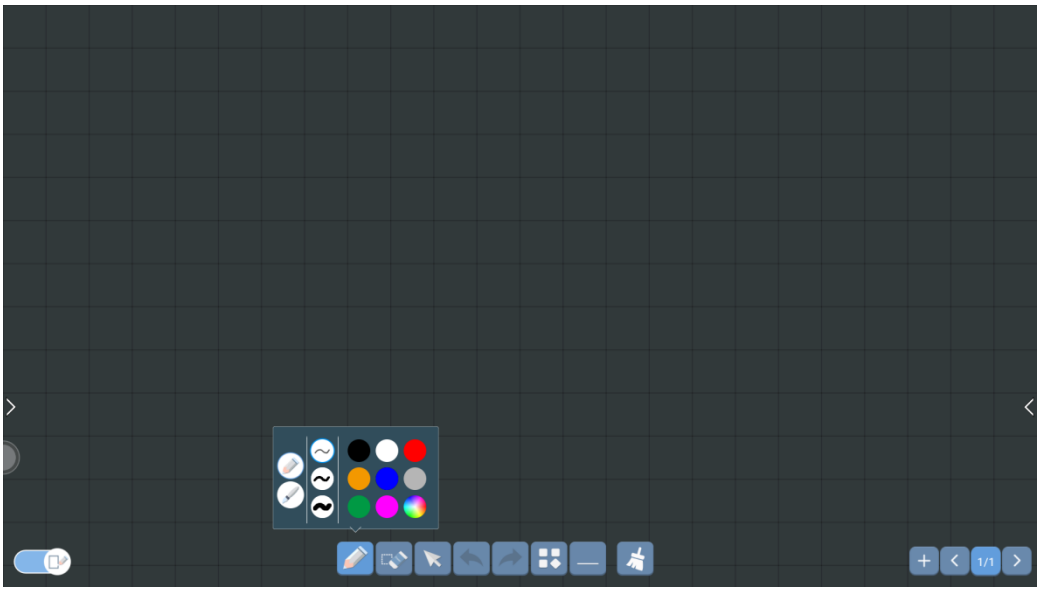
⑥ Close App

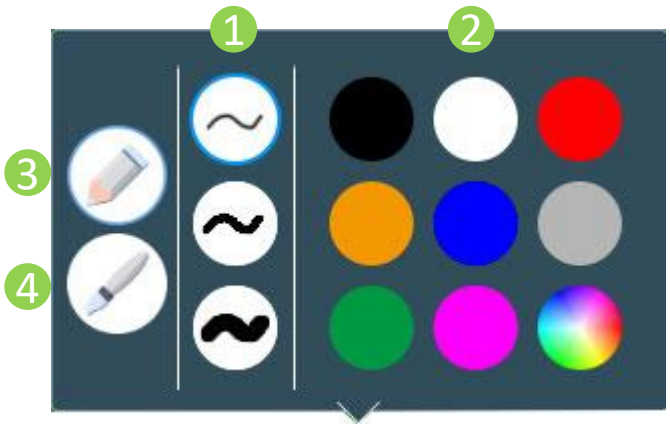
-close drawing





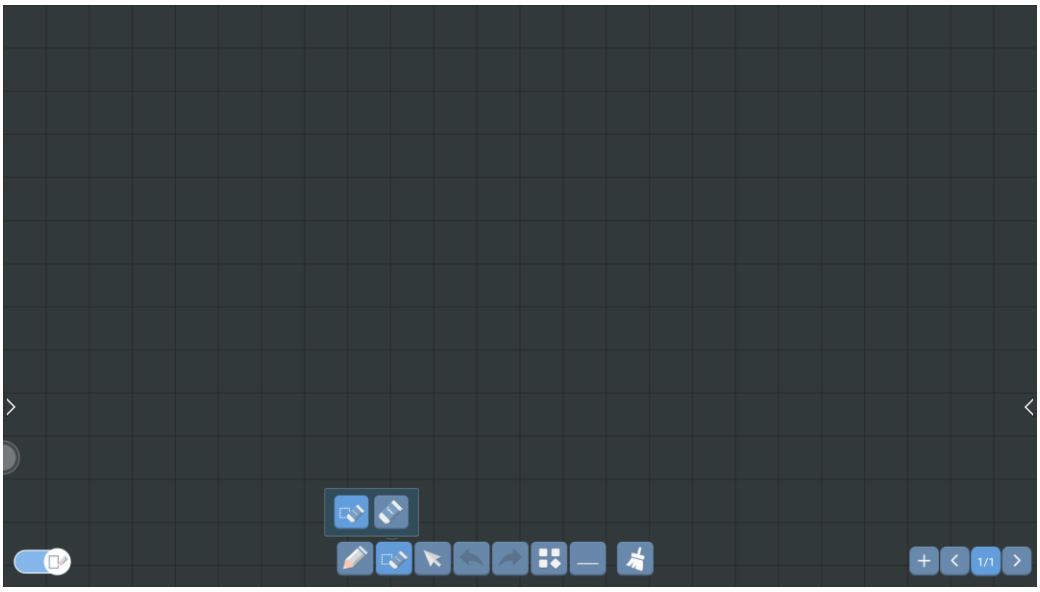
5.6.3 Pen overview





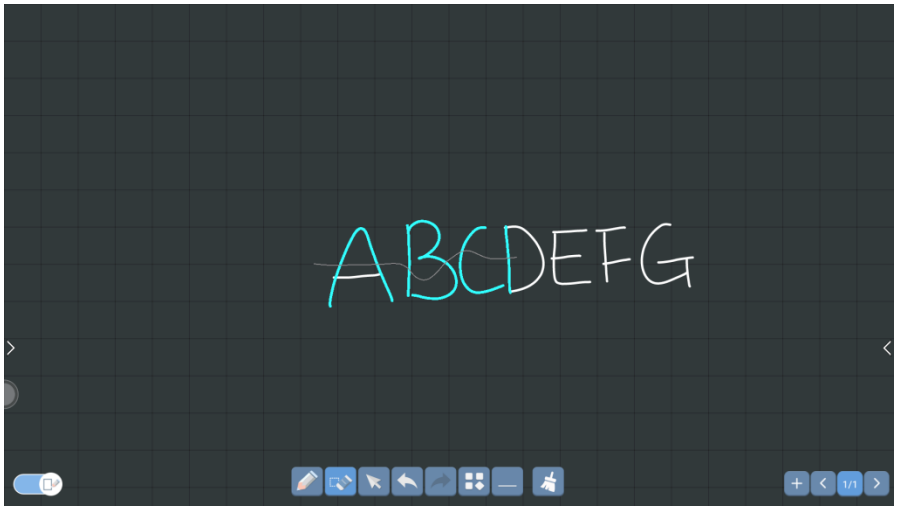
Option		Description
①	Line weight	Choose the thickness of the line left by pen.
②	Color	Choose one the 9 available colors red, white, black, purple, blue, gray, green, yellow and Custom colors.
③	Pen	The pen can be used immediately with preset line weight and color.
④	Brush pen	Can automatically identify the contact area to change the thickness of the line left by pen

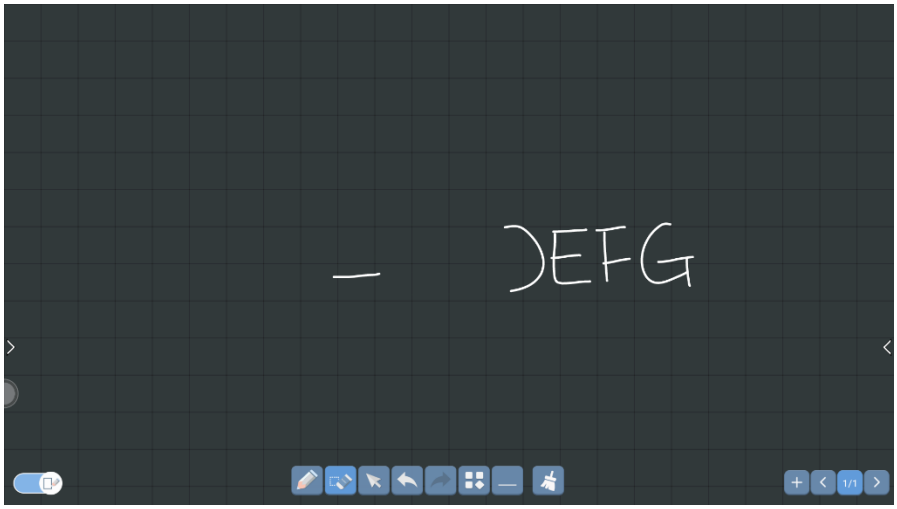
5.6.4 Eraser overview



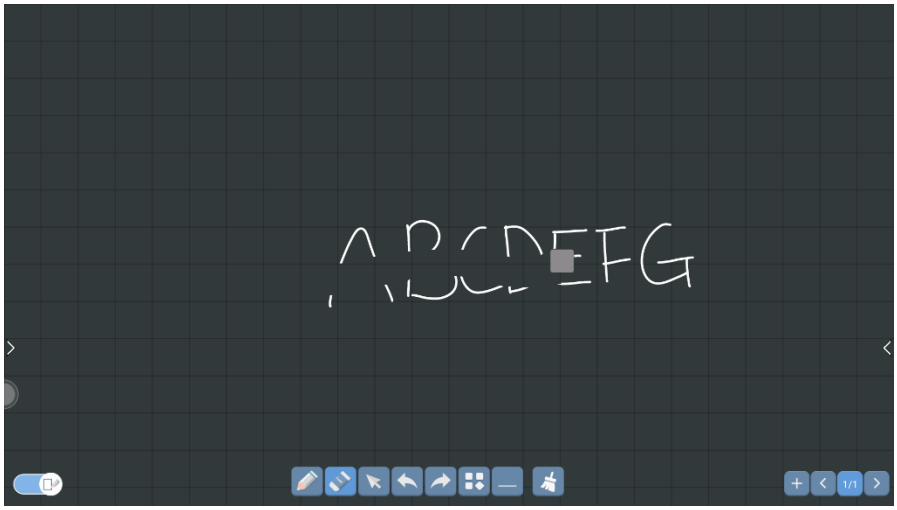
Option		Description
①	Eraser	Erases the content you touch.
②	Object Eraser	Select the object and remove

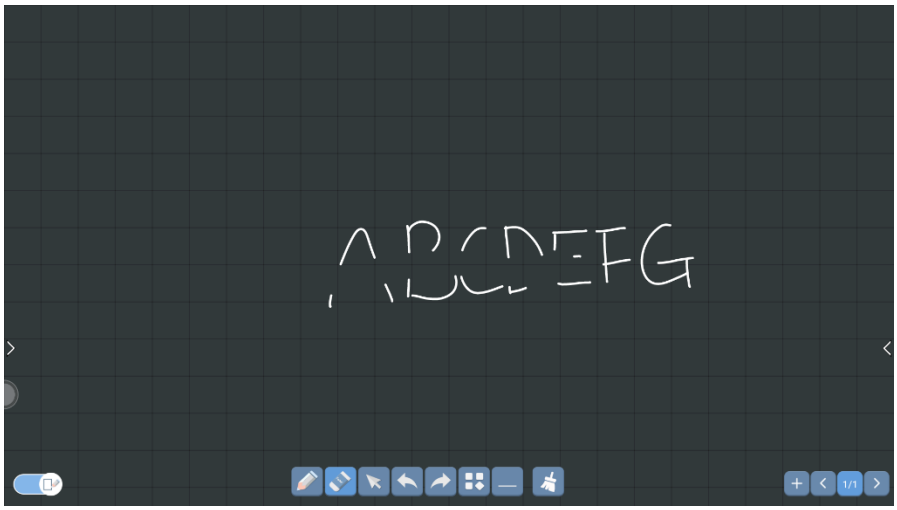
Eraser- ①Object eraser





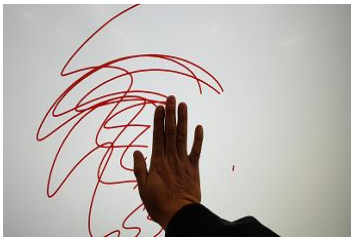
Eraser- ② Eraser





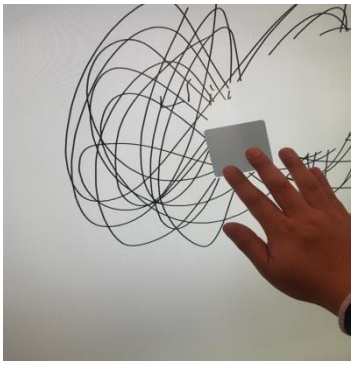
Gesture

1) 1~20 point : draw



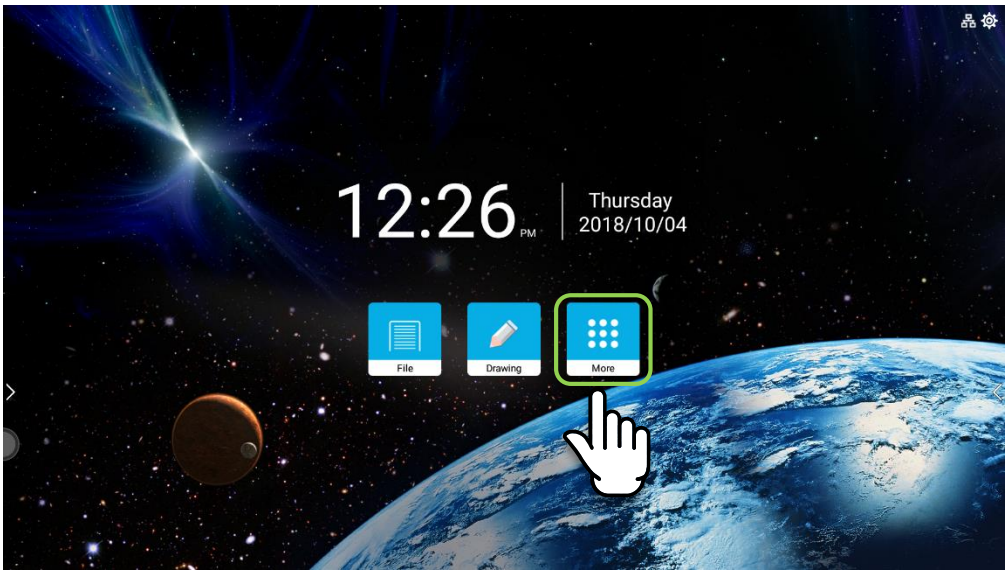
2) 2 point : zoom in/out, adjust the size.

3) Area touch : Eraser



5.7 More Applications

Show more other apps



Tap

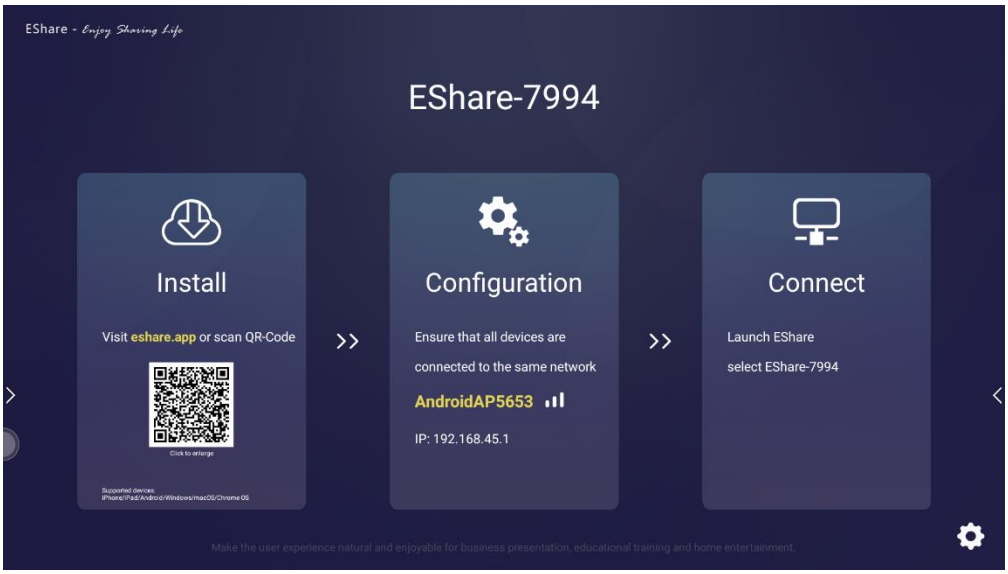
More applications

5.7.1 Eshare

Eshare is a multi-screen interaction application for business and presentation training using computers or mobile devices.

Eshare-Mobile User

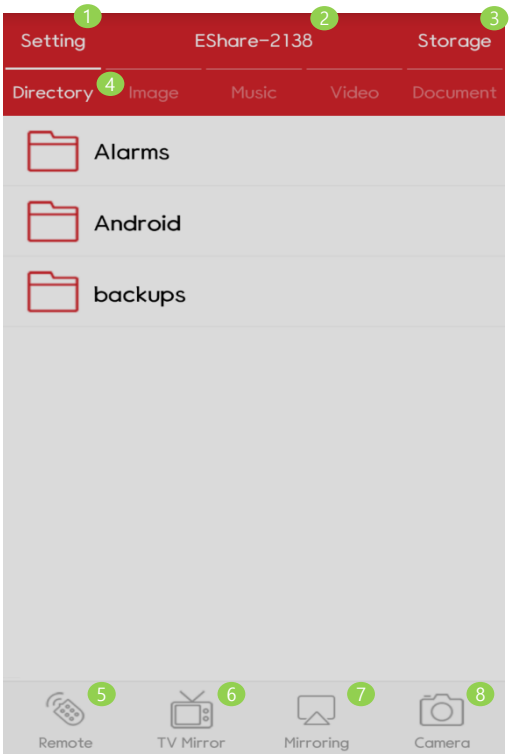
Precondition(To interwork, the device should be in the same network)



1) Smart phone setting

(1) Open PlayStore
(2) Search Eshare App
(3) Download and install Eshare App
(4) Execute Eshare App

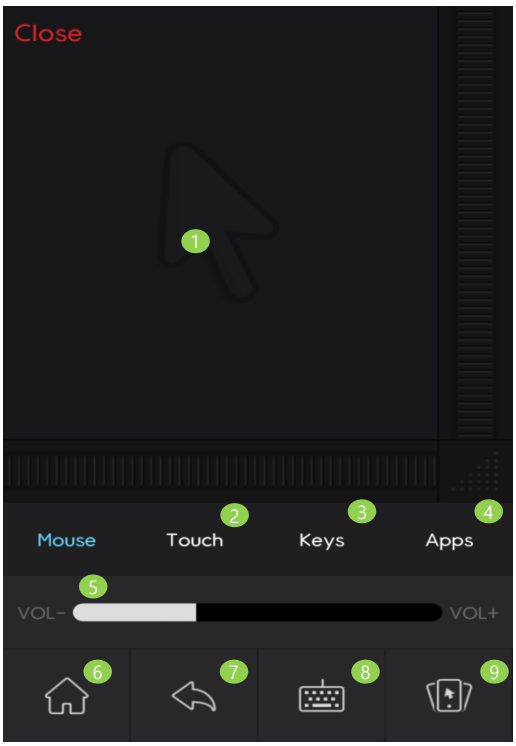
1) Eshare(App)



(1) Main Screen

① Setting
② Eshare Connect ID
③ Storage
④ Contents category
(Directory,Image,Music,Video,Document)
⑤ Remote mode
⑥ TV Mirror mode
⑦ Mirroring mode
⑧ Camera mode

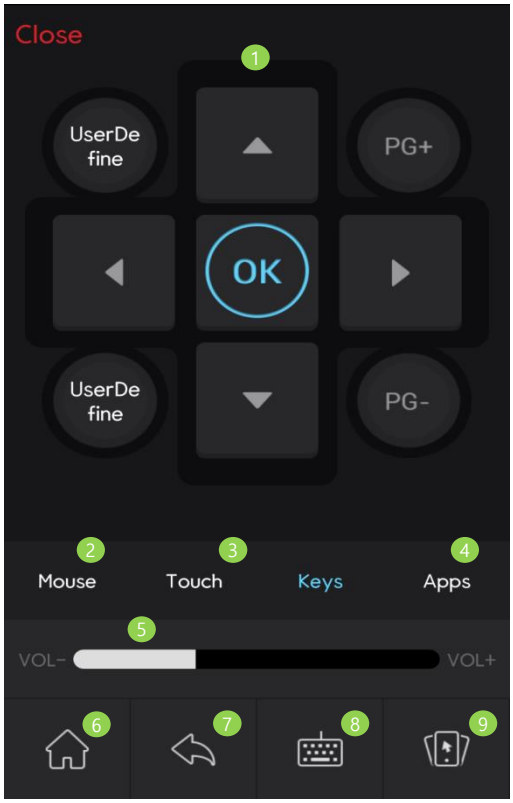
2) Remote mode



(1) Remote Screen

① Mouse pad
② Virtual touch mode
③ Virtual key mode
④ App mode
⑤ Volume Control
⑥ Move Main screen
⑦ Back
⑧ Keyboard activation
⑨ Motion mode

3) Virtual key mode



(1) Virtual key Screen

① Remote button
② Virtual mouse mode
③ Virtual touch mode
④ App mode
⑤ Volume Control
⑥ Move Main screen
⑦ back
⑧ Keyboard activation
⑨ Haptic mode

4) Camera mode

(1) Camera Screen

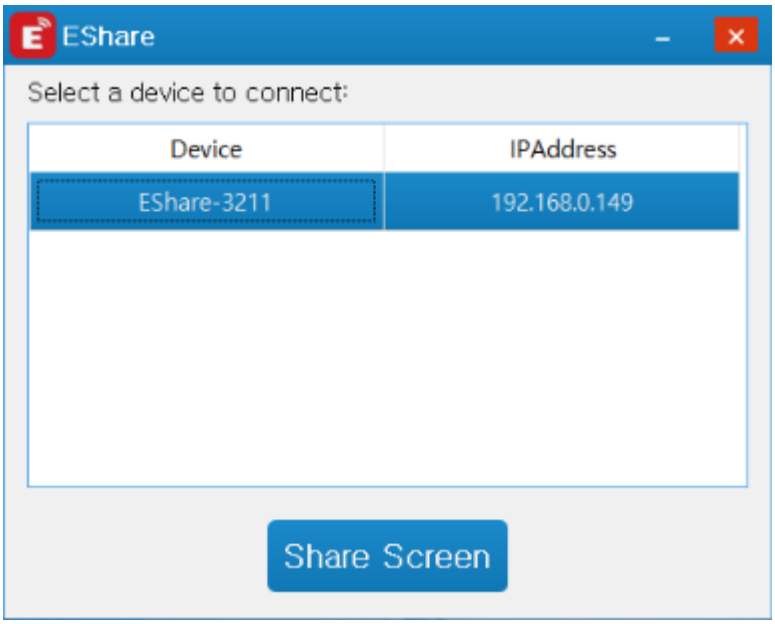
① Zoom state
② Mic Mute
③ Flash
④ Front/Back Camera selection
⑤ Shutter

Eshare-PC users

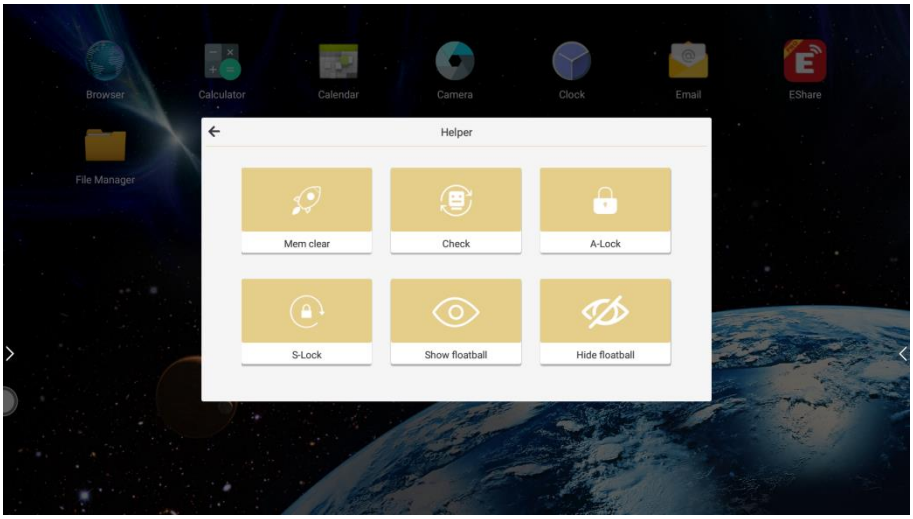
- Precondition(To interwork, the devices should be in the same network)
- Download the OS executable file from the following site.
  http://d.eshare.tech

1) Notebook setting

(1) Download and install Eshare Client.exe
(2) Execute Eshare Client.exe
(3) Share Notebook screen
(4) Allows you to control your notebook screen with an interactive LED/LCD



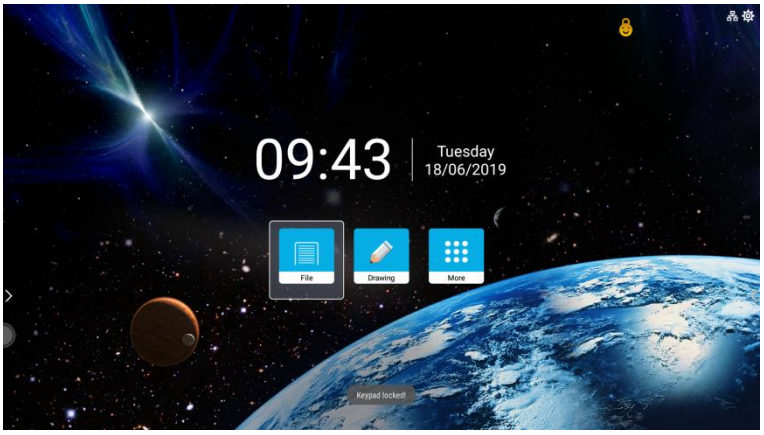
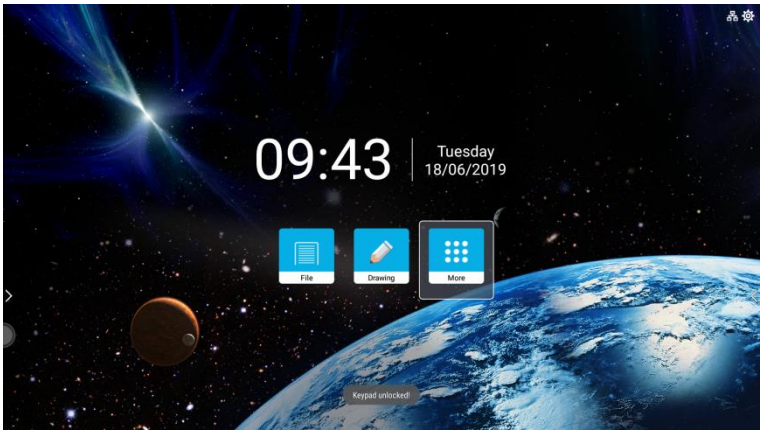
5.7.2 Helper



Category		Description
①	Memory clear	Clear unused processes.
②	Check	Inspecting the instrument, such as POS, Touch, Storage, Temperature, RTC status.
③	A-Lock	Password lock the desired app
④	S-Lock	Screen Lock setting (password, pattern, slide)
⑤	Show float ball	Show floating menu
⑥	Hide float ball	Hide floating menu

5.8 Key Lock & Unlock

Use to remote controller

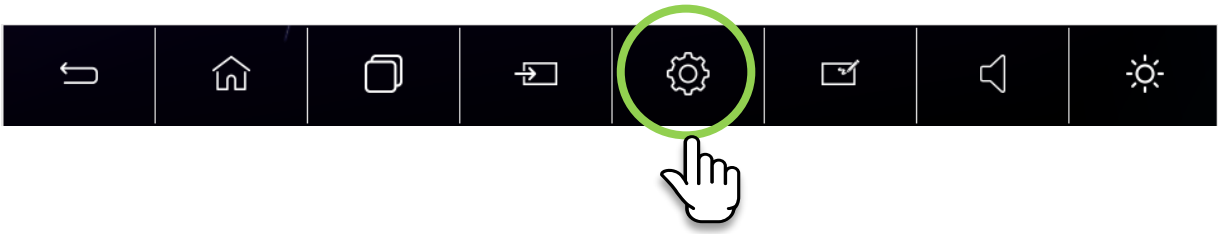
Method		Screen
Key Lock	PSM ◀◀◀◀ (PSM + ◀ button 4 times)	
Key Unlock	PSM ▶▶▶▶ (PSM + ▶ button 4 times)	

6. Settings Description

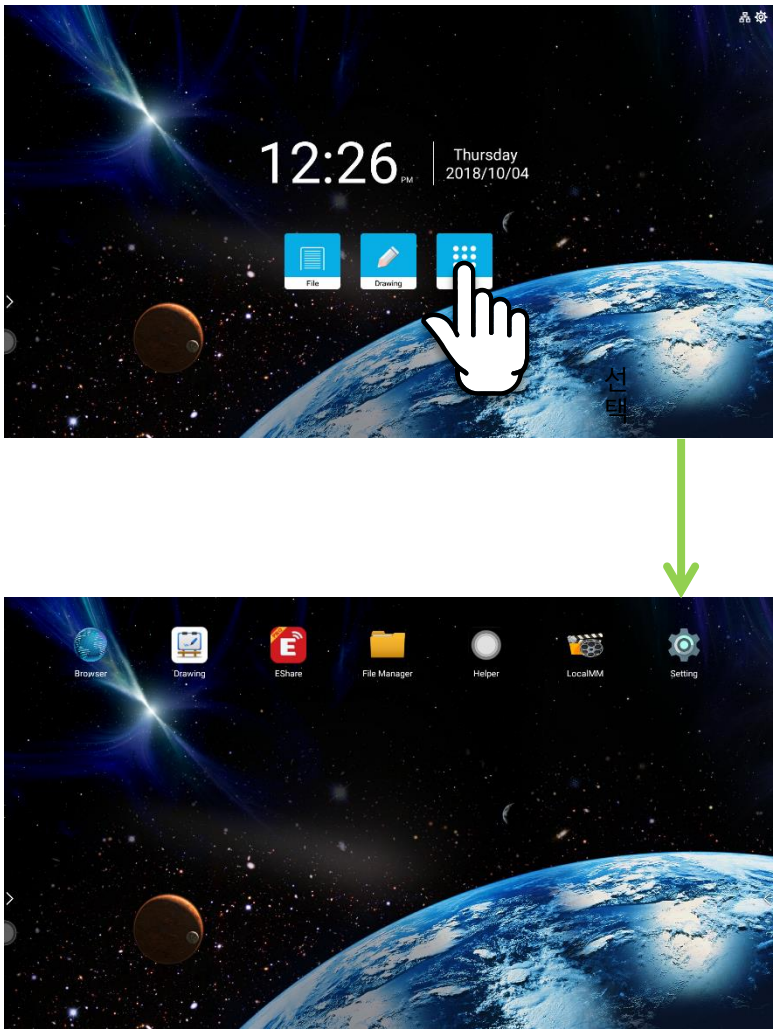
6.1 Setting Overview

Go to the Setup Menu through one of the following ways:

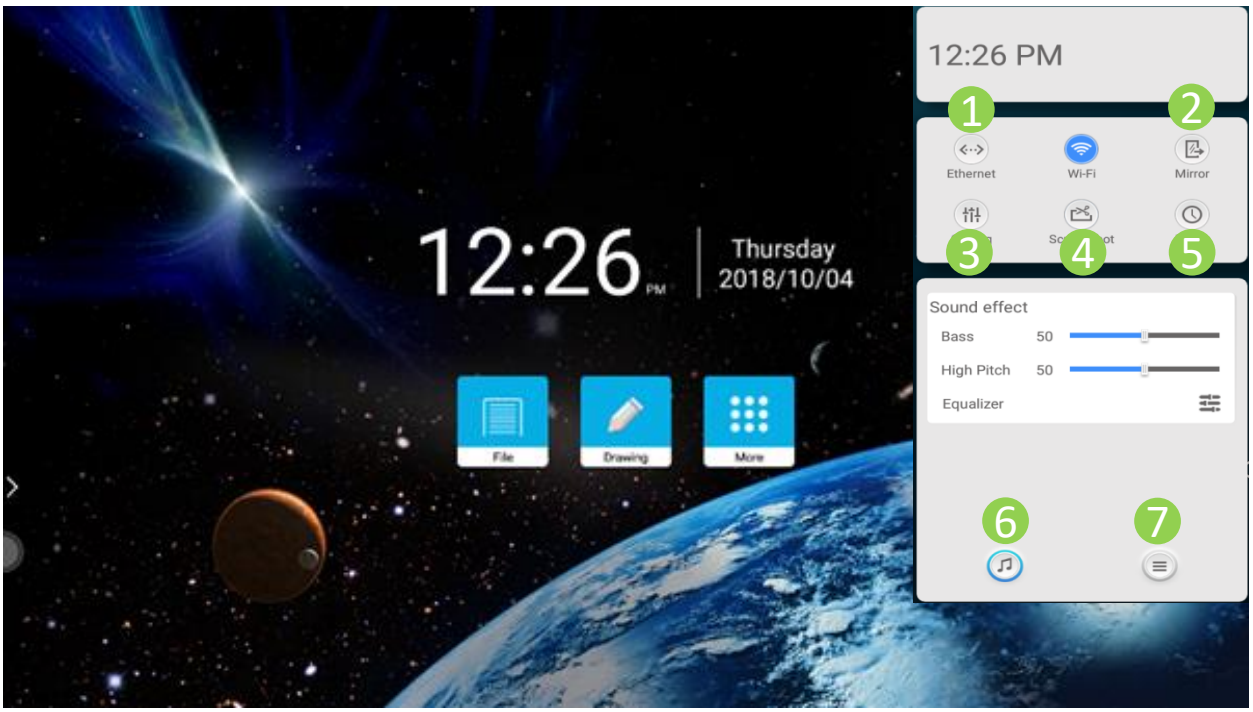
6.1.1 Settings form navigation bar



6.1.2 Settings from the Home screen



6.1.1 Navigation bar setting overview



① Ethernet : LAN setting

② Mirror : mirroring with Eshare

③ setting : Setup menu

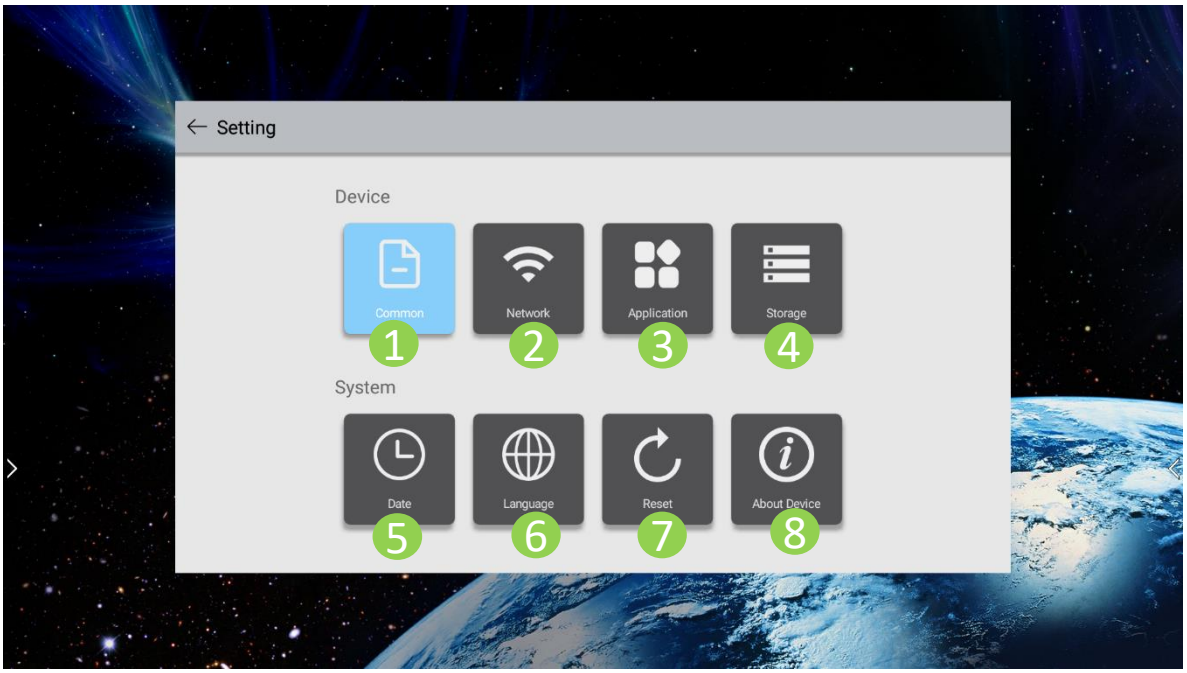
④ Screenshot ： Save the current screen

⑤ Timer : Time switch, a function that indicates that specified time has elapsed

⑥ Sound : Enter sound mode, you can select Bass, High pitch, Equalizer, SPDIF output

⑦ More : Enter more menu, you can select No signal standby, Signal identify, Eye protection

6.1.2 Setting menu overview



① Common: to set for common options
② Network : to setup network connector
③ Application : to set for installed applications
④ Storage: to check the storage space
⑤ Date: to check and set time zone, time, date
⑥ Language : to change language options
⑦ Reset : to reset the system
⑧ About Device : to view OS information

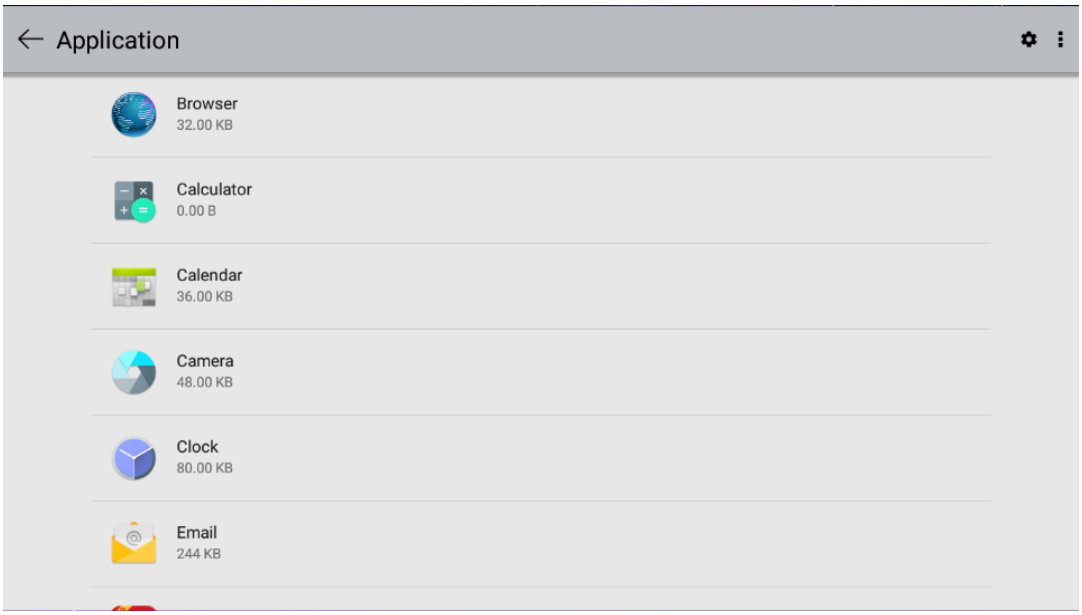
① Common

- Common
  - Users can set common functions including smart eye protection, WOL, Background, etc

② Network

- Network
  - Users can access the Ethernet for setting
  - User can access File Shared with other devices for data transfer
  - Users can access Proxy for Proxy Settings

③ Application



- Application
  - ➢ Users can click the application that needs operation is this interface, and can view the application information and delete, disable etc

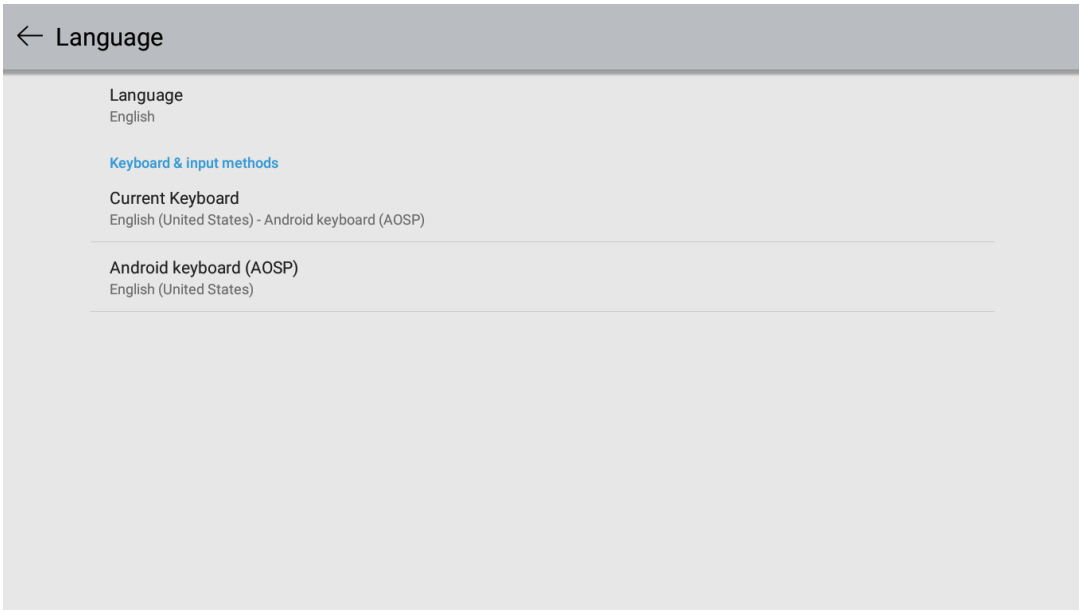
④ Storage

- Storage
  - ➢ Users can view the memory space
  - ➢ If the external storage device has been inserted, you can view the storage of the mobile storage device

⑤ Date

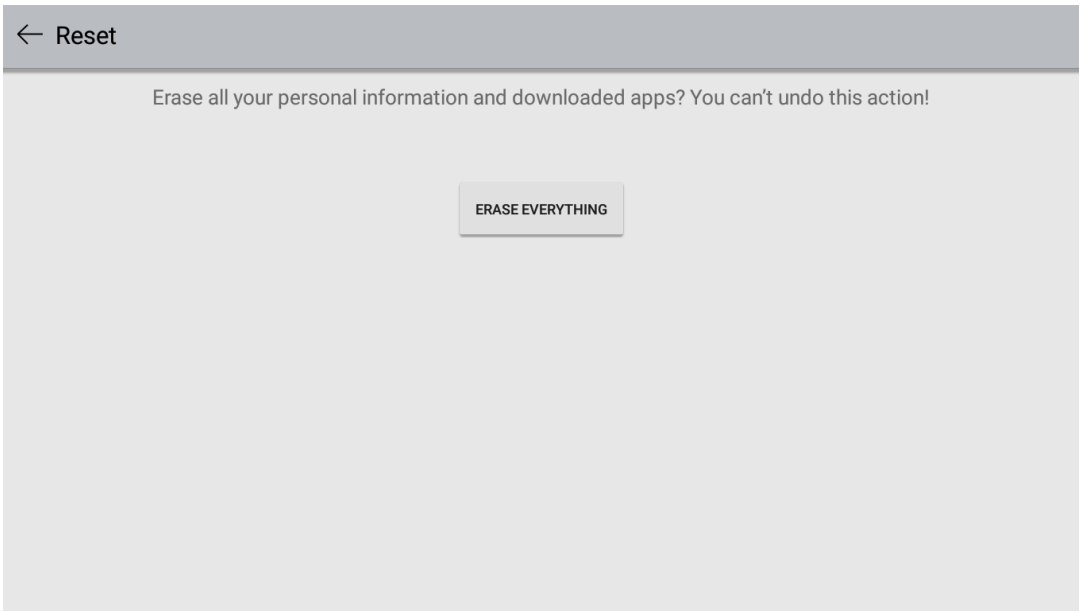
- Date
  - ➢ Users can set the date, time zone and time in detail
  - ➢ You can also turn on the network calibration function to automatically proceed time zone

⑥ Language



- Language
  - ➢ User can set the language
  - ➢ User can set the input method

⑦ Reset



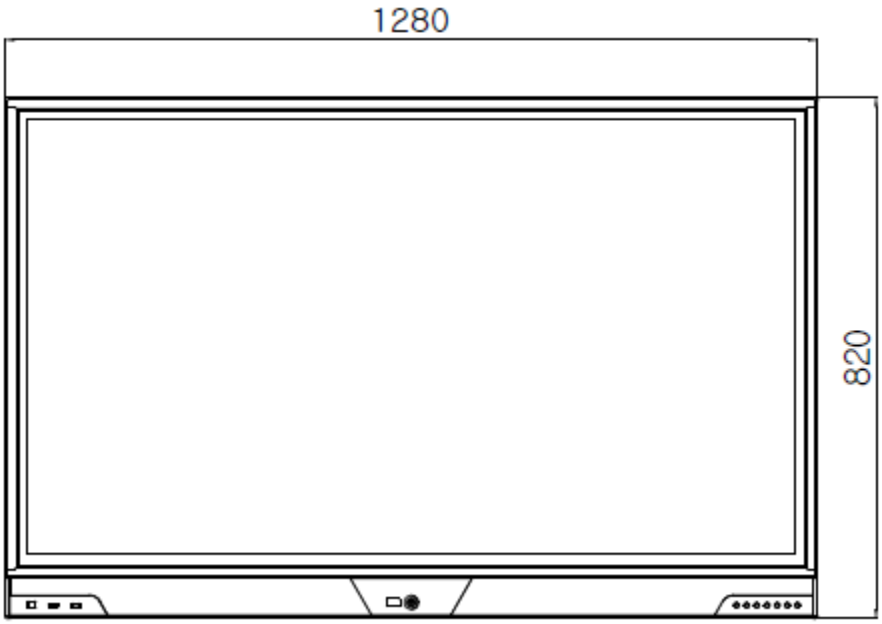
- Reset
  - Users can initialize the system
  - Please back up the data before initialization

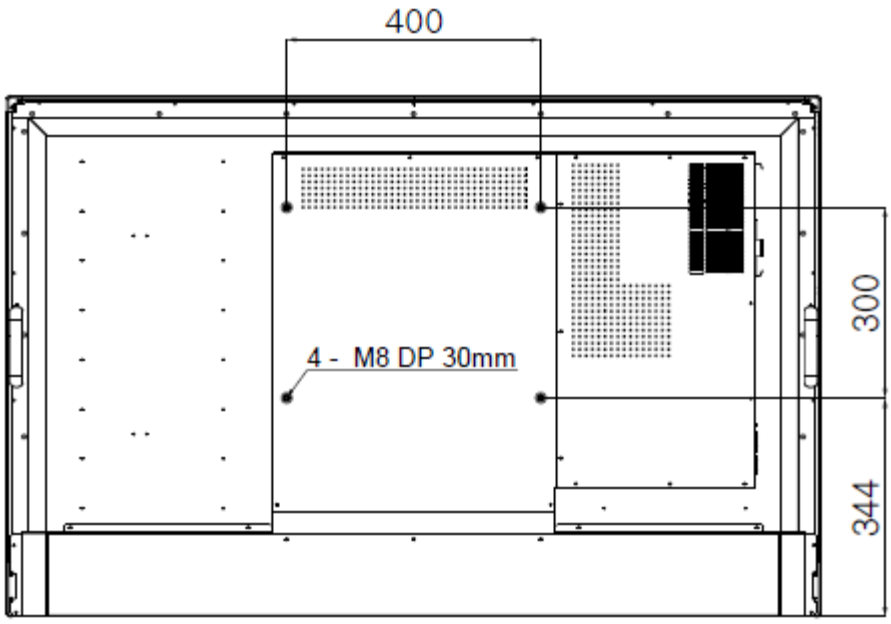
⑧ About Device

- About Device
  - Users can view the system information of the OS and other devices in this interface.

7.Product Dimensions

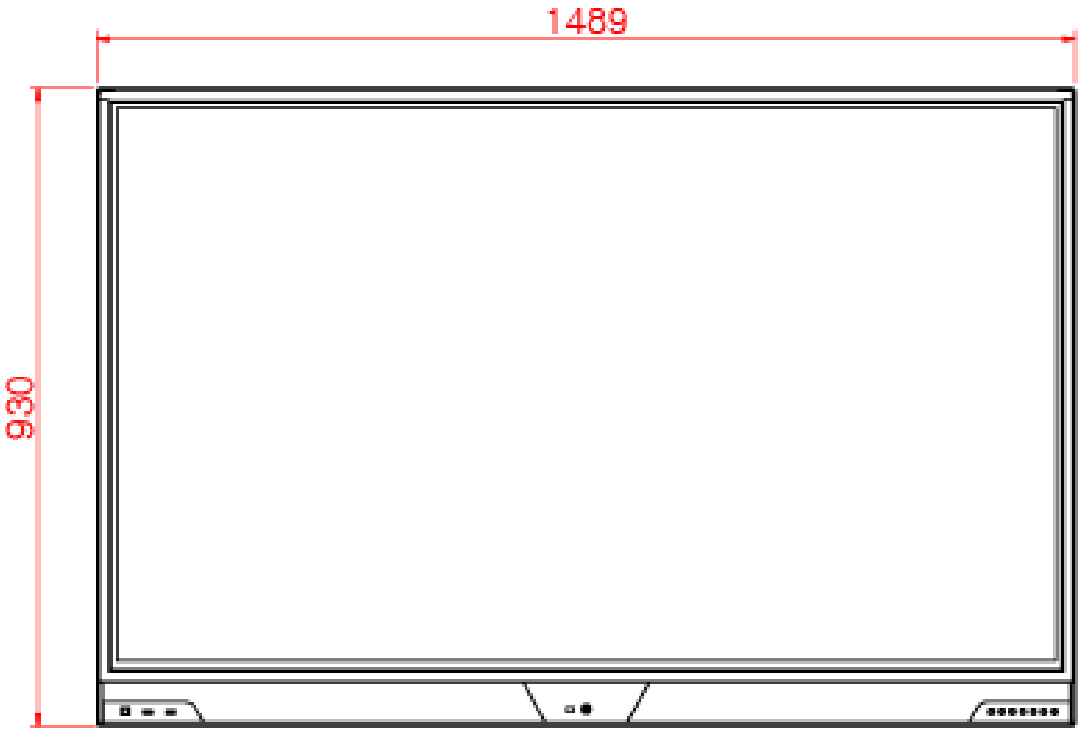
7.1 55”

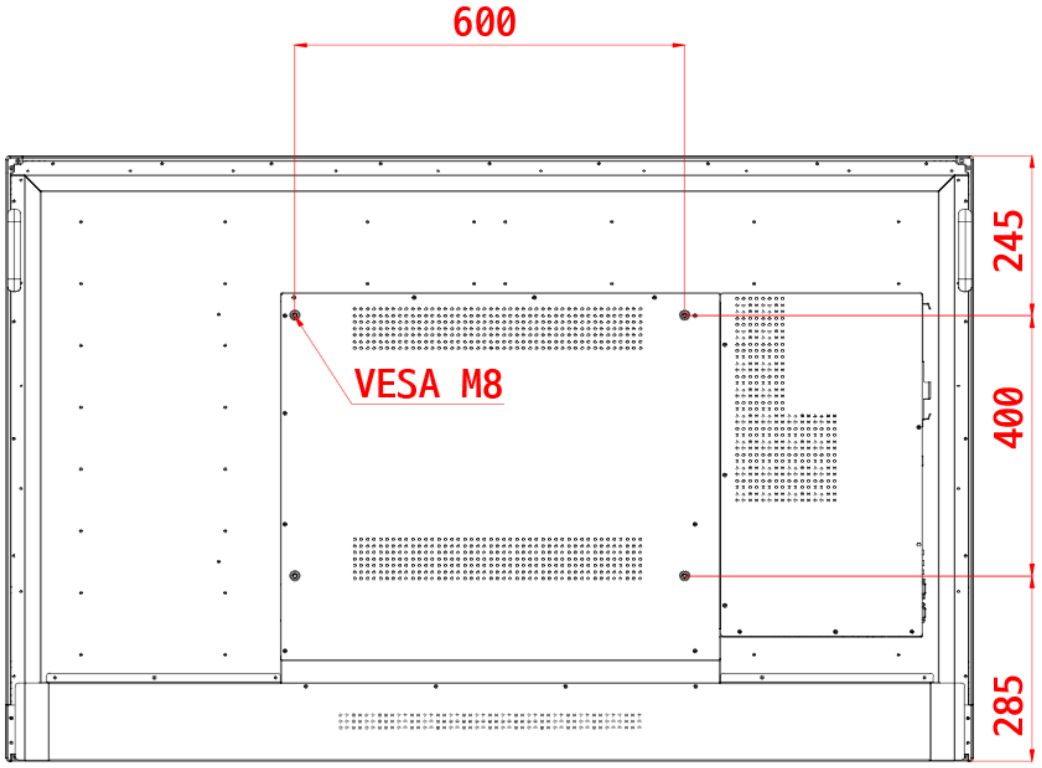




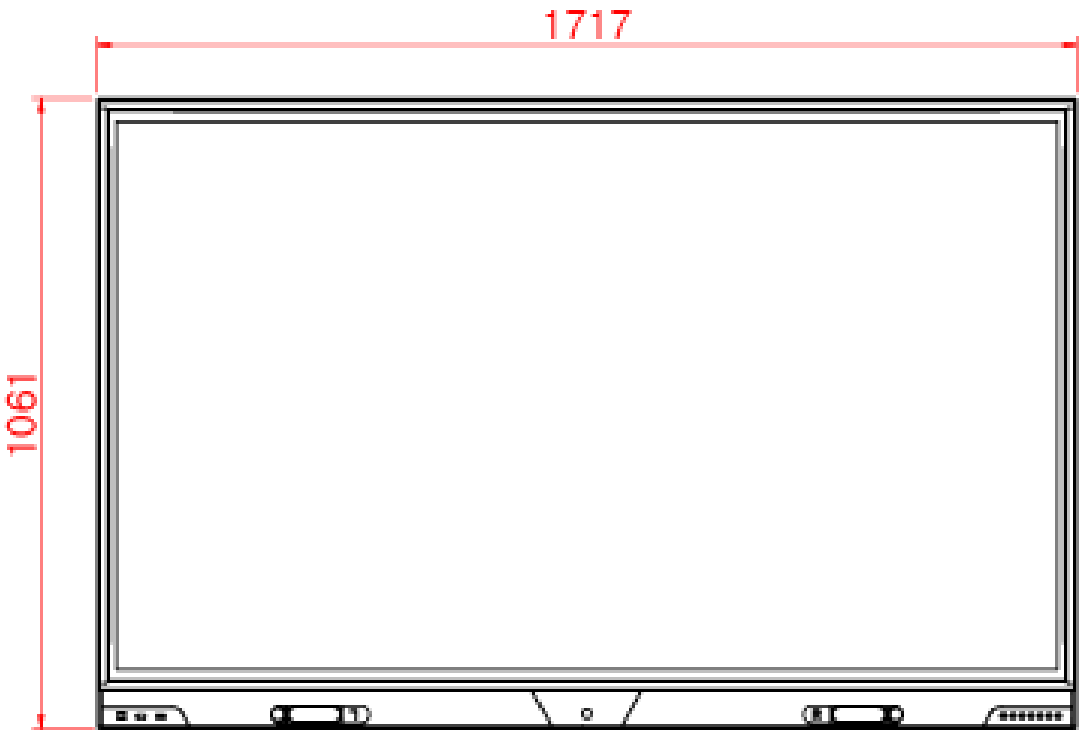
7.Product Dimensions

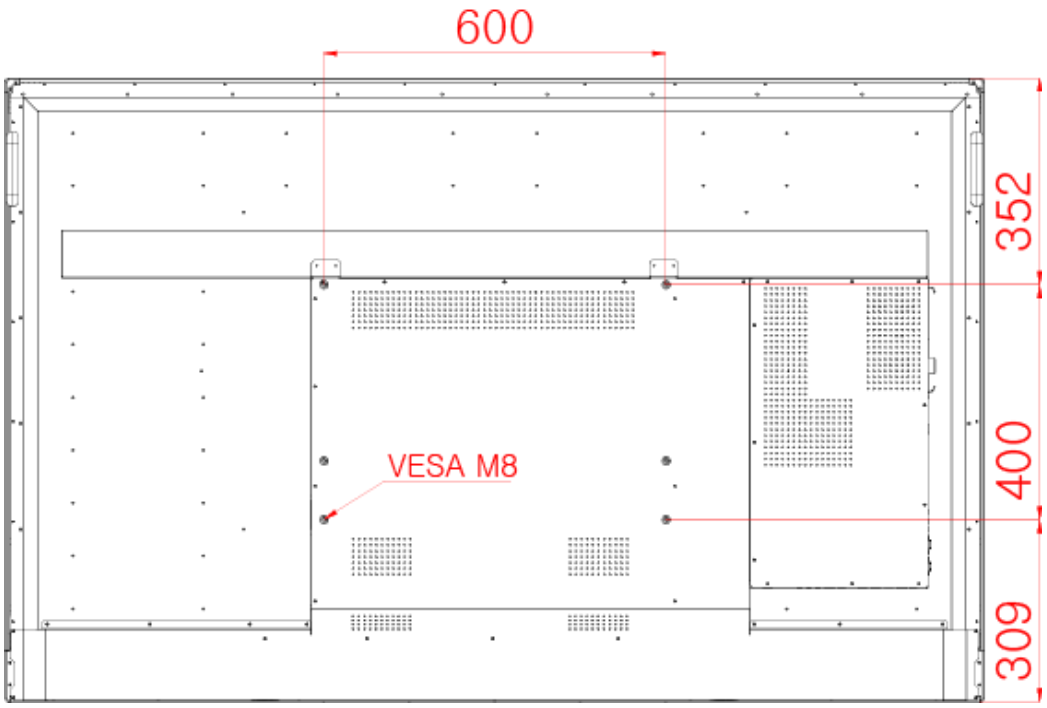
7.1 65”



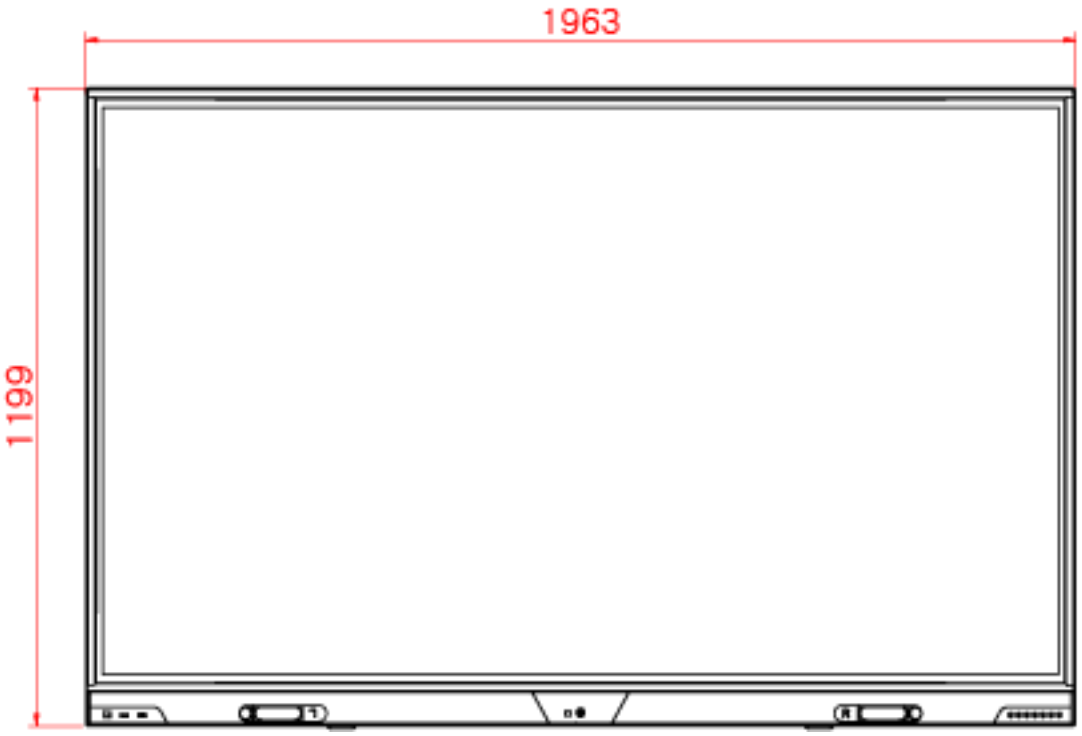


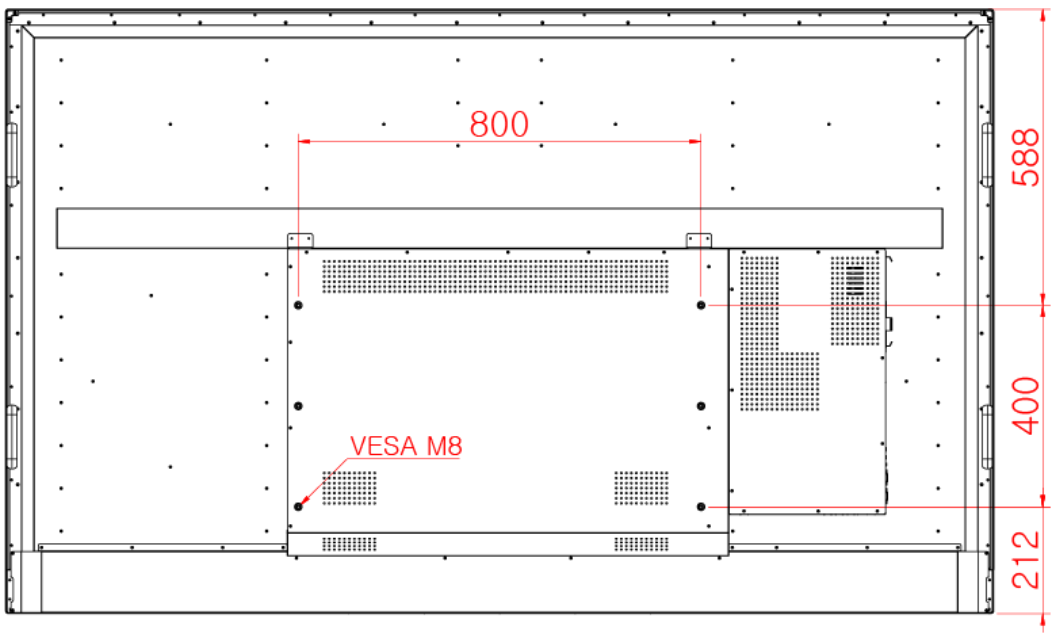
7.2 75”





7.3 86”





8. Product Specification

8.1 65”

LED Display	
Diagonal Size	64.53 inches(1639.1mm)
Aspect Ratio	16 : 9
Pixel Format	3840×2160
Pixel Pitch	0.372 mm x 0.372 mm
Brightness	350cd/㎡(Typ.)
Contrast Ratio	1200:1 (Typ.)
Response Time	8 ms (Typ., G to G)
BLU Type	D-LED type
Color Depth	10-bit(D), 1.07 Billion colors
Viewing Angle (CR>10)	(R/L 178 (Min.), U/D 178 (Min.)
Touch Panel	
Touch Technology	IR (USIR-UltraSlim Infrared Ray)
Detect Area	1428.5(H) x 803.5(V) mm
Touch Point	20 points (Windows)
	10 Points (PC-less) , Up to 20 Points
	2 Points (Mac with driver software)
Touch Tool	Hand or other Solid Object (Pen tip >Φ2.0mm)
Response Speed	<8 ms (1 Touch)
Accuracy	±1 mm
Operation System	Windows 7,8,10 /Mac 10.10-10.13
I/O Port	
Front (Input)	HDMI×1, USB×1, USB (For Touch)×1
Rear (Input)	HDMI×4 (1 for OPS), DP×1, VGA×1, PC Audio-In×1, MIC In
	USB(Camera Input), USB×3, USB (For Touch)×2
Rear (Output)	HDMI out×1, Earphone×1, DC 5V / 0.7A
Communication Port	RS232 (D-sub 9-Pin), LAN(RJ45)
PC-less System Specification	
System	Mstar648.2 (System Memory 2G, Storage 32G)
Version	6.0
OPS (Optional)	
OPS	OPS Slot Only (Intel Standard)
Others	
Front Panel Button	Power On/Off
	7-Function key for Source, Menu, Menu Up/Down, Vol. Up/Down, Touch On/Off
OSD Control Function	RS232C, IR Remote controller
Speaker Output	20W×2 with woofer
Safety Standard	CB, CE, FCC, NRTL, KC, RoHS
Power Supply	AC100-240V, 50/60 Hz
	Standby Power Consumption ≤ 0.5W
Operating Temperature	0 ~ 40ºC, 20% to 80% RH (no condensation)
Storage Temperature	- 20 ~ 60º C
Dimension (WxHxD)	1489 x 930 x 92 mm (± 5mm)
VESA Mount	600 x 400 (mm), M8 Screw
Net Weight	≒50 Kg
Gross Weight	≒60 Kg

8.2 75”

LED Display	
Diagonal Size	74.52 inches(1892.7mm)
Aspect Ratio	16 : 9
Pixel Format	3840×2160
Pixel Pitch	0.429 mm x 0.429 mm
Brightness	350cd/㎡(Typ.)
Contrast Ratio	1200:1 (Typ.)
Response Time	8 ms (Typ. G to G)
BLU Type	D-LED type
Color Depth	10-bit(D), 1.07 Billion colors
Viewing Angle (CR>10)	(R/L 178 (Min.), U/D 178 (Min.)
Touch Panel	
Touch Technology	IR (USIR-UltraSlim Infrared Ray)
Detect Area	1649.6(H) x 927.9(V) mm
Touch Point	20 points (Windows)
	10 Points (PC-less) , Up to 20 Points
	2 Points (Mac with driver software)
Touch Tool	Hand or other Solid Object (Pen tip >Φ2.0mm)
Response Speed	<9 ms (1 Touch)
Accuracy	±1 mm
Operation System	Windows 7,8,10 /Mac 10.10-10.13
I/O Port	
Front (Input)	HDMI×1, USB×1, USB (For Touch)×1
Rear (Input)	HDMI×4 (1 for OPS), DP×1, VGA×1, PC Audio-In×1, MIC In
	USB(Camera Input), USB×3, USB (For Touch)×2
Rear (Output)	HDMI out×1, Earphone×1, DC 5V / 0.7A
Communication Port	RS232 (D-sub 9-Pin), LAN(RJ45)
PC-less System Specification	
System	Mstar648.2 (System Memory 2G, Storage 32G)
Version	6.0
OPS (Optional)	
OPS	OPS Slot Only (Intel Standard)
Others	
Front Panel Button	Power On/Off
	7-Function key for Source, Menu, Menu Up/Down, Vol. Up/Down, Touch On/Off
OSD Control Function	RS232C, IR Remote controller
Speaker Output	20W×2 with woofer
Safety Standard	CB, CE, FCC, NRTL, KC, RoHS
Power Supply	AC100-240V, 50/60 Hz
	Standby Power Consumption ≤ 0.5W
Operating Temperature	0 ~ 40ºC, 20% to 80% RH (no condensation)
Storage Temperature	- 20 ~ 60º C
Dimension (WxHxD)	1717 x 1061 x 112 mm (± 5mm)
VESA Mount	600 x 400 (mm), M8 Screw
Net Weight	≒60 Kg
Gross Weight	≒70 Kg

8.3 86”

LED Display	
Diagonal Size	85.60 inches(2174.3 mm)
Aspect Ratio	16 : 9
Pixel Format	3840×2160
Pixel Pitch	0.4935 mm x 0.4935 mm
Brightness	350cd/㎡(Typ.)
Contrast Ratio	1200:1 (Typ.)
Response Time	8 ms (Typ. G to G)
BLU Type	D-LED type
Color Depth	10-bit(D), 1.07 Billion colors
Viewing Angle (CR>10)	(R/L 178 (Min.), U/D 178 (Min.)
Touch Panel	
Touch Technology	IR (USIR-UltraSlim Infrared Ray)
Detect Area	1895.8(H) x 1066.7(V)mm
Touch Point	20 points (Windows)
	10 Points (PC-less) , Up to 20 Points
	2 Points (Mac with driver software)
Touch Tool	Hand or other Solid Object (Pen tip >Φ2.0mm)
Response Speed	<11 ms (1 Touch)
Accuracy	±1 mm
Operation System	Windows 7,8,10 /Mac 10.10-10.13
I/O Port	
Front (Input)	HDMI×1, USB×1, USB (For Touch)×1
Rear (Input)	HDMI×4 (1 for OPS), DP×1, VGA×1, PC Audio-In×1, MIC In
	USB(Camera Input), USB×3, USB (For Touch)×2
Rear (Output)	HDMI out×1, Earphone×1, DC 5V / 0.7A
Communication Port	RS232 (D-sub 9-Pin), LAN(RJ45)
PC-less System Specification	
System	Mstar648.2 (System Memory 2G, Storage 32G)
Version	6.0
OPS (Optional)	
OPS	OPS Slot Only (Intel Standard)
Others	
Front Panel Button	Power On/Off
	7-Function key for Source, Menu, Menu Up/Down, Vol. Up/Down, Touch On/Off
OSD Control Function	RS232C, IR Remote controller
Speaker Output	20W×2 with woofer
Safety Standard	CB, CE, FCC, NRTL, KC, RoHS
Power Supply	AC100-240V, 50/60 Hz
	Standby Power Consumption ≤ 0.5W
Operating Temperature	0 ~ 40ºC, 20% to 80% RH (no condensation)
Storage Temperature	- 20 ~ 60º C
Dimension (WxHxD)	1963 x 1199 x 112mm (± 5mm)
VESA Mount	800 x 400 (mm), M8 Screw
Net Weight	≒78 Kg
Gross Weight	≒90.5 Kg

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.
  Turn the product and the PC off.
  Remove the D-Sub cable from the product.
  Turn the product on.
  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.
4. The remote control buttons do not respond.
   » Check the battery polarities(+/-).
   » Check if the batteries have been exhausted.
   » Check if the power is on.
   » Check if the power cord is securely connected.
   » Check if a special fluorescent or neon lamp is on in the vicinity.